ASTEER
PLANNING

Environmental Impact Assessment: Scoping Report

JPA 1.2 Northern Gateway
Residential-Led Development

On behalf of Northern Gateway Development Vehicle LLP
August 2026

CONTENTS

1 INTRODUCTION 1
2 TOPICS TO BE 'SCOPED-IN' AND LAYOUT OF THE ES 7
3 THE EIA ASSESSMENT APPROACH 12
4 SITE DESCRIPTION 28
5 THE DEVELOPMENT PROJECT 31
6 PLANNING POLICY CONTEXT 35
7 ENVIRONMENTAL TOPICS WHICH ARE NOT SIGNIFICANT 37
8 LANDSCAPE AND VISUAL IMPACT 49
9 ECOLOGY 66
10 TRANSPORT AND ACCESS 80
11 AIR QUALITY 93
12 NOISE 101
13 HYDROLOGY, FLOOD RISK AND WATER RESOURCES 109
14 SOCIO-ECONOMICS & HUMAN HEALTH 119
15 CLIMATE CHANGE 133
16 STRUCTURE OF THE ENVIRONMENTAL STATEMENT 143
17 ENVIRONMENTAL STATEMENT SCOPING SUMMARY 145

APPENDICES

APPENDIX 1.1 EIA Assessment Boundary Plan

APPENDIX 3.1 EIA Legislative Requirements

APPENDIX 7.1 Agricultural Land Classification

APPENDIX 7.2 Heritage Asset Plan

APPENDIX 7.3 Geo-environmental and Geotechnical Desk Study

Appendix 8.1: LVIA EIA Methodology

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Version: V3 – FINAL

Date: August 2026

1 INTRODUCTION

Overview

1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared on behalf of the Northern Gateway Development Vehicle LLP (NGDV) (the "Applicant") in respect of a proposed residential-led development at the Simister Bowlee site, (the "Site") which forms part of a major residential development allocation, known as 'Northern Gateway', in the adopted Greater Manchester Places for Everyone Plan.

1.2 The Site is situated within the administrative areas of Bury Council and Rochdale Borough Council. The forthcoming application will therefore be submitted to Bury Council (BC) and Rochdale Borough Council (RBC) as the local planning authorities (LPAs).

1.3 This Scoping Report has been prepared to accompany a formal EIA Scoping Request under Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (amended 2018)[1] (the 'EIA Regulations').

1.4 To ensure that all likely significant effects are identified and assessed, the EIA will consider the whole of the development project. This is considered to be the entire allocation, alongside supporting highways infrastructure. The whole of the comprehensive development project is referred to as the 'Project for Assessment'. The spatial footprint of this is defined in **Appendix 1.1**. The boundary of the site is referred to as the 'EIA Assessment Boundary'.

Site Context

1.5 The Site is allocated for residential-led development under Policy JP Allocation 1.2 ("JPA1.2") of the Places for Everyone Joint Development Plan ("PfE"). Policy JPA 1.2 identifies the site as a residential-led development opportunity that is allocated to deliver up to 1,550 new homes, supported by community and other infrastructure.

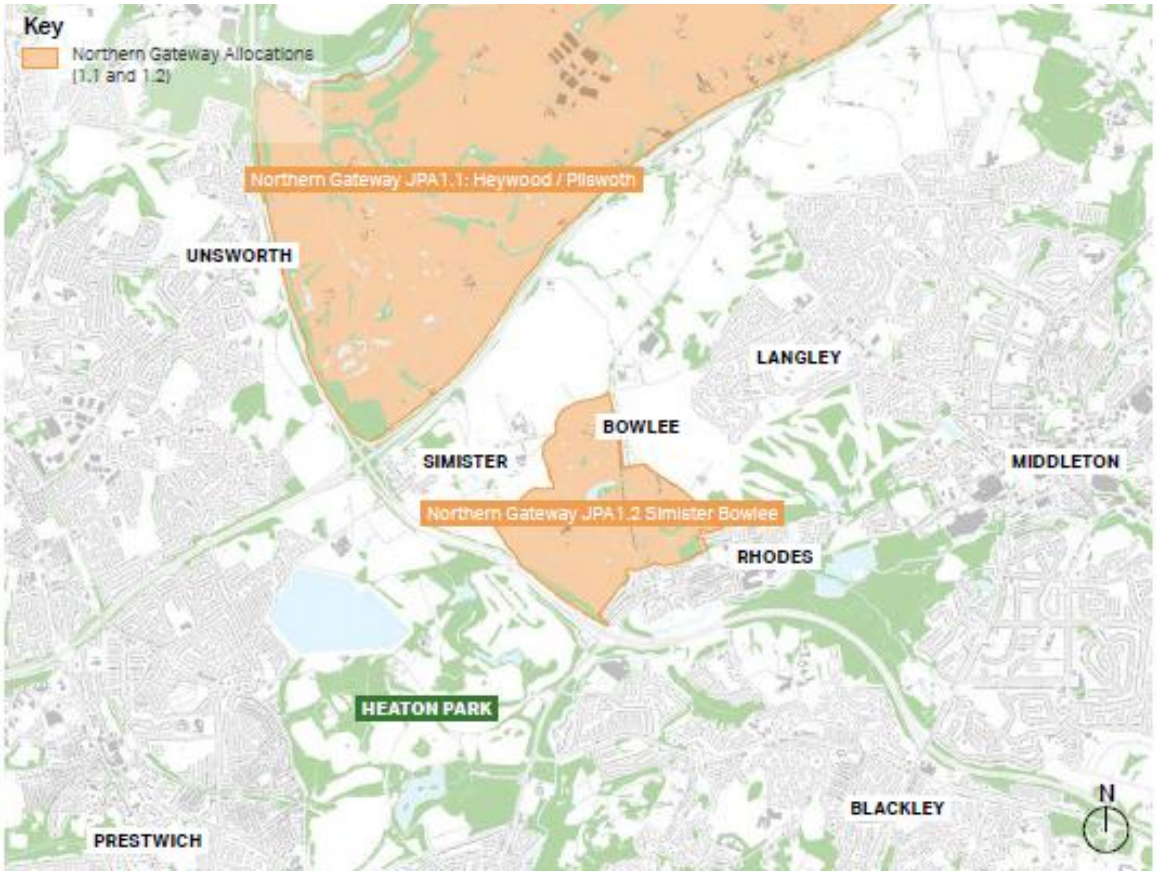
1.6 The site forms part of the wider Northern Gateway development which incorporates a significant employment development opportunity to the north of the M62. This site is allocated under PfE Policy Allocation 1.1: Heywood / Pilsworth (Northern Gateway) ("JPA1.1"), and subject to a separate planning application that was submitted in April 2025 to RBC (reference: 25/00418/OUT); as well as the consented South Heywood

[1] **The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/571).**

development for 1000 homes, employment, a primary school and local centre (reference: 16/01399/HYBR)

1.7 Both the JPA 1.1 and JPA 1.2 allocations are shown on the Image below.

Image 1.1: Plan showing Northern Gateway allocations JPA 1.1 and JPA 1.2.



1.8 The Scoping Report seeks to agree the content of the forthcoming Environmental Statement (ES) to support an outline planning application for a residential-led development on the JPA 1.2 allocation. A description of the proposed development is provided in **Section 5** of this report.

Requirements of the Environmental Impact Assessment Process

1.9 The procedures for carrying out an EIA of a development project are set out within the EIA Regulations. The procedure is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. It is a "*decision support tool to ensure that relevant environmental information is available to a decision-maker*

before they decide whether to grant consent for a future development"[2]. The document produced as a result of the EIA process is known as the Environmental Statement (ES).

1.10 EIA Regulations require that for certain projects, an EIA must be undertaken. Schedule 1 of the EIA Regulations lists developments that always require EIA. Schedule 2 of the EIA Regulations lists developments that may require EIA if it is considered that they could give rise to significant environmental effects.

1.11 The Proposed Development is not Schedule 1 development, for which EIA would be mandatory. However, developments such as the one proposed are classified as Schedule 2, Class 10 '*Infrastructure Projects', Subsection (b) Urban development project, including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas*.

1.12 The EIA Regulations identify a series of thresholds for Schedule 2 projects to assist with establishing whether the potential for significant environmental effects exists such that an EIA would be required. The EIA Regulations state that for 'Urban Development Projects' an EIA may be required if:

"(i) The development includes more than 1 hectare of urban development which is not dwellinghouse development; or

(ii) the development includes more than 150 dwellings; or

(iii) the overall area of the development exceeds 5 hectares."

1.13 The EIA Regulations therefore define 'EIA Development' as either "Schedule 1 development" or "Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location".

1.14 Given the nature and scale of the proposals, which also exceed the thresholds in Schedule 2, the Applicant intends to submit an ES in support of the planning application. This is to determine if there is a likelihood for significant environmental effects, the content or 'scope' of which is set out and discussed throughout this document.

1.15 The EIA will assess all likely significant effects of the defined 'development project' in accordance with the EIA Regulations. This is considered to be the JPA 1.2 allocation,

[2] As defined by the Institute of Environmental Management and Assessment (IEMA) Impact Assessment Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction (August 2024).

including the Proposed Development for which planning permission is sought. As such, the EIA will assess the entire JPA1.2 allocation as the development project (referred to as the 'Project for Assessment'). The exact defined boundary of the future planning application is not finalised at this stage, but it is anticipated that it will largely reflect or be no greater than that of the allocation boundary.

1.16 Further detail on this approach is provided in **Section 3**.

Purpose of the Scoping Opinion Request

1.17 This Scoping Report has been prepared to accompany a formal EIA Scoping Opinion request under Regulation 15 of the EIA Regulations 2017. The request is made to both BC and RBC given the cross-boundary nature of the application. Therefore, the purpose of the Scoping Opinion request is to seek a formal view from both BC and RBC (and other consultees where relevant) on the information to be contained within the ES which will accompany the forthcoming planning application on the site.

1.18 In accordance with Regulation 15(2), this Scoping Report contains:

- A plan sufficient to identify the land (refer to the EIA Assessment Boundary plan contained in **Appendix 1.1**);
- A brief description of the nature and purpose of the development, including its location and technical capacity (refer to **Sections 4 and 5** of this report);
- An explanation of the likely significant effects of the development on the environment. This has informed the subsequent topics to be 'scoped-in' to the EIA to be reported in the ES (refer to **Sections 8-15** of this report); and
- Such other information or representations as the person making the request may wish to provide or make.

1.19 Specifically, this Scoping Report seeks to identify those likely significant environmental effects which could occur as a result of the Project for Assessment and are subsequently proposed to be assessed in the EIA process and reported within the resultant ES. Discussion and reasoned justification are also provided within this report on topics which are proposed to be 'scoped out' of the EIA process (refer to **Section 7**).

1.20 This Scoping Report is submitted to both BC and RBC as part of the formal request for a Scoping Opinion from each authority. Given the cross-boundary nature of the Proposed Development to which this request relates, it is anticipated that the Scoping Opinion to be

issued by BC and RBC will be co-ordinated. In doing so, it is expected that in forming the Opinion, BC and RBC will take a co-ordinated approach in liaising with statutory consultees and ensure that the same or similar Opinion is issued from each authority.

The Environmental Assessment Team

1.21 The ES will be compiled using a wide range of source with inputs from competent experts. The organisations and their roles in the project team are listed in Table 1.1 below.

1.22 Asteer Planning are also a corporate partner of the Institute of Sustainability and Environmental Professionals (ISEP), (formerly known Institute of Environmental Management and Assessment (IEMA)).

Table 1.1: The Environmental Assessment Team

Discipline	Organisation
EIA Project Management and Coordination	Asteer Planning
Ecology	Tyler Grange
Landscape and Visual	Tyler Grange
Transport	Tetra Tech
Air Quality	Redmore Environmental
Noise and Vibration	Sharps Redmore
Socio-economics and Health	Turley
Climate Change	Turley
Hydrology, Flood Risk and Water Quality	Tetra Tech
Built Heritage	Turley
Archaeology	Orion
Ground Conditions and Contamination	Tetra Tech
Soils and Agricultural Land	Land Research Associates

Structure of the Scoping Report

1.23 The remainder of the EIA Scoping Report will be divided into the following Sections:

- **Section 2: Topics to be 'scoped in' and Layout of the ES**
    - Each proposed environmental topic to be considered in the ES.

- **Section 3: The EIA Assessment Approach**
    - A summary of the relevant EIA legislation and EIA process.
- **Section 4: Site Description**
    - An overview of the Site and surrounding area.
- **Section 5: The Development Project and Alternatives**
    - An overview of the development project to be assessed and consideration of alternatives.
- **Section 6: Planning Policy Context**
    - A summary of the relevant planning policy and history
- **Section 7: Topics proposed to be 'Scoped Out' of the ES**
    - Each environmental topic not proposed to be considered in the ES is discussed in turn.
- **Section 8-15: Technical Chapters**
    - Individual discussions on each topic to be assessed within the ES, including information regarding specific methodology
- **Section 16: Structure of the Environmental Statement**
- **Section 17: Environmental Statement Scoping Summary**

2 TOPICS TO BE 'SCOPED-IN' AND LAYOUT OF THE ES

Environmental Topics

2.1 Regulation 4 of the EIA Regulations states that 'EIA' is "*a process consisting of—*

(a) the preparation of an environmental statement;

(b) any consultation, publication and notification required by, or by virtue of, these Regulations or any other enactment in respect of EIA development; and

(c) the steps required under regulation 26 ('consideration of whether planning permission or subsequent consent should be granted')".

2.2 It states that the "*EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors –*

(a) population and human health;

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC (1) and Directive 2009/147/EC(2);

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape;

interaction between the factors referred to in sub-paragraphs (a) to (d)"

(3) The effects referred to in paragraph (2) on the factors set out in that paragraph must include the operational effects of the proposed development, where the proposed development will have operational effects.

(4) The significant effects to be identified, described and assessed under paragraph (2) include the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development"

2.3 **Table 2.1** lists the environmental topics specified within the EIA Regulations as to potentially be considered as part of the EIA process. The table also summarises whether these topics are considered relevant to include within the EIA process, and where such topics will be considered within the ES where applicable. Where a topic has been scoped out from further assessment, the reasoning is fully explained within **Section 7**.

Table 2.1: Summary of Proposed ES Scope

EIA Topic (as defined by Regulation 4 (2) of the EIA Regulations)	Scoped In / Out	Where Addresses with ES (if applicable)
Population	Scoped in	To be assessed within the Socio-economics and Human Health Chapter
Human Health	Scoped in	To be assessed within the Socio-economics and Human Health Chapter
Biodiversity	Scoped in	To be assessed within the Ecology Chapter
Land (i.e. land take) and Soil (for example organic matter, erosion, compaction, sealing)	Scoped out	See Section 7 of this EIA Scoping Report. No significant effects considered likely due to the baseline nature of the site and therefore scoped out from further assessment.
Water (for example hydro morphological changes, quantity and quality)	Scoped in	To be assessed within the Hydrology, Flood Risk and Water Quality Chapter
Air	Scoped in	To be assessed within the Air Quality Chapter.
Climate (for example greenhouse gas emissions, impacts relevant to adaptation)	Scoped in	To be assessed within the Climate Change Chapter.
Material Assets	Scoped out	See Section 7 of this EIA Scoping Report. No significant effects considered likely and therefore Material Assets is scoped out from further assessment.
Cultural Heritage (including architectural and archaeological aspects)	Scoped out	See Section 7 of this EIA Scoping Report. No significant effects considered likely due to the baseline nature of the site and therefore scoped out from further assessment.
Landscape	Scoped in	To be assessed within the Landscape and Visual Chapter
Accidents and Disasters	Scoped out	See Section 7 of this EIA Scoping Report. No significant effects considered likely due to the nature of the application and therefore scoped out from further assessment.
Interrelationship between above factors	Scoped in	Within each topic chapter and / or in Summary chapter

2.4 In the context of the above environmental topics, it is proposed that the resultant ES will include the following disciplines / chapters each of which is discussed in this EIA Scoping Report:

- **Introduction**
- **EIA Scope and Methodology**
- **Site Description**
- **The Development Project and Alternatives**
- **Planning Policy Context**
- **Landscape and Visual Impact**
- **Ecology**
- **Transport and Access**
- **Air Quality**
- **Noise**
- **Hydrology, Flood Risk and Water Resources**
- **Socio-Economics and Human Health**
- **Climate Change**
- **Residual Effects and Mitigation Summary**
- **Glossary**
- **A separate Non-Technical Summary will also be provided.**

Introduction

2.5 This chapter of the ES will provide an introduction to the document and present details of the ES's structure and context, in addition to how consultees and members of the public can comment on the document or obtain additional copies.

EIA Scope and Methodology

2.6 This chapter provides a summary of the agreed scope of assessments to be considered within the ES, with reference to consultation responses and explains the methodology used to prepare the technical chapters, including reference to the general approach in determining significance. Information in relation to cumulative effects is also set out within this chapter, along with any limitations or assumptions used throughout the ES. Refer to **Section 3** for a description of the Assessment Approach.

The Site

2.7 This chapter will describe the Site's location, context, existing use and features. Refer to **Section 4** for an overview of the Site.

The Development Project and Alternatives

2.8 This chapter will provide a comprehensive description of the Project for Assessment, including the construction process, and any relevant details on assumed timescales and phasing.

2.9 The EIA will be based on a series of plans submitted for approval. It is currently assumed, these plans alongside the site extent, written description of development and construction information will form the basis of the assessment.

2.10 Refer to **Section 5** for a description of the Project for Assessment as known at this stage and a description of the proposed approach to the consideration of Alternatives.

Planning Policy Context

2.11 This chapter will provide a review of the relevant policy and guidance and will provide a planning history for the Project for Assessment.

Discipline Specific Chapters

2.12 Each discipline will be covered in an individual chapter with the further information on disciplines to be included and assessment methodologies are provided below in **Section 8 – 15**. Each chapter will also provide an assessment of cumulative effects where relevant to each individual assessment.

Summary Chapter and Non-Technical Summary

2.13 A chapter summarising each of the above discipline's findings will be presented. A separate Non-Technical Summary will also be provided in accordance with the EIA Regulations.

3 THE EIA ASSESSMENT APPROACH

3.1 In line with the requirements of Schedule 4 of the EIA Regulations set out above, the proposed approach to the EIA as to be reported in the ES will follow the process set out below in order to identify and assess likely significant environmental effects. The assessment approach as set out below, which specifically sets out the following:

- Description of the Development Project, including the full extent of development to be assessed (i.e. the Project for Assessment).
- The approach to the consideration of Alternatives.
- Description of the Baseline to ensure consistency across each technical assessment.
- Description of the factors likely to be significantly effected by the Development Project.
- The approach to assessing likely significant effects to ensure a consistent approach to adopted across each technical assessment and an outline of the scenarios for assessment.
- The approach to defining mitigation and residual effects.
- The approach to assessing cumulative effects.
- Confirmation of how the ES will be presented, including the Non-Technical Summary.

Description of Development

3.2 The EIA Regulations require that the ES provides *"(a) a description of the development comprising information on the site, design, size and other relevant features of the development"* (Regulation 13(3)). In addition, Schedule 4 of the EIA Regulations provides further detail on what should be contained in the ES and outlines that it should contain:

"A description of the development, including in particular: (a) a description of the location of the development; (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land use requirements during the construction and operational phases; (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; (d) an estimate, by type and quantity, of

expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases".

3.3 In adhering to the requirements of the Regulations set out above, the EIA must define what constitutes the 'development project' at an early design stage in order to identify, describe and assess potential "direct and indirect significant effects" on the environment. In defining the development project for assessment purposes, it is acknowledged that consideration needs to be given to all component parts of the project. This is referred to as the 'Project for Assessment' and includes the maximum extent of any permanent and temporary works associated with delivering the development project. This is further described in **Section 5** and includes;

- The Proposed Development for which outline planning permission is sought.
- Potential highways infrastructure – including the site access works, upgrades to Blueball Lane and active travel improvements or measures.
- Other works required to facilitate construction.
- The extent of these works, as anticipated at this stage, are shown on the EIA Assessment Boundary plan [refer to **Appendix 1.1**].

3.4 Further consideration will also be given to mitigation that could be delivered outside of the EIA Assessment Boundary, which may include:

- Potential off-site highway infrastructure – such as junction improvements or active travel measures.
- Additional land that may be required to deliver Biodiversity Net Gain (BNG).
- Off-site utilities infrastructure (such as water mains, foul or electricity infrastructure). At this stage it is assumed that such connections or extensions of services will be made to/from existing infrastructure and networks.

3.5 The ES will contain a detailed description of development which will form the basis of the assessment to be reported in the ES.

3.6 A high-level description of the Development Project is set out in **Section 5** of this Scoping Report.

Alternatives

3.7 Schedule 4 Paragraph 2 of the EIA Regulations require that the ES provide:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

3.8 The EIA Regulations do not require an Applicant to consider alternatives, but where they have been considered, then these should be described.

3.9 Therefore, the ES will define the following types of alternatives considered by the Applicant:

- **The 'do nothing' alternative**: Consideration of the impacts in the absence of the development; and
- **Alternative layout and designs**: A description of the design evolution based on environmental constraints, potential effects and other considerations, with a description and account of the main reasons why alternative layouts were dismissed and why the preferred design option was selected.

3.10 There is no specific guidance on the methodology to be adopted for the assessment of alternatives nor the criteria to be used to inform the assessment of reasonable alternatives. Therefore, in outlining the Alternatives considered, the ES will be based on professional experience of similar projects and will draw on other application documents to be prepared to support the planning application, such as the Design and Access Statement.

Description of the Baseline

3.11 Schedule 4, Paragraph 3 of the EIA Regulations states that an ES should include:

"a description of the relevant aspects of the current state of the environment (baseline scenario)"

3.12 Likely significant effects as a result of the Project for Assessment will largely be described in the ES in relation to the deviation from the current baseline environment (i.e. the prevailing existing environmental characteristics and conditions of the site). Therefore, it is necessary to establish the existing baseline environmental conditions within relevant technical study areas, which will be based upon gathering data from sources such as from

site visits and surveys; desk-based studies and consultation with the relevant statutory consultees through the EIA process. The baseline characteristics will be defined by gathering relevant data during the assessment process using data collected between 2024 and 2026 from varies sources as set out above.

3.13 The approach to data collection is further set out in **Sections 8-15** of this Scoping Report.

Consideration of the Future Baseline and Receptors

3.14 Schedule 4, Paragraph 3 of the EIA Regulations states that an ES should include:

'…an outline of the likely evolution thereof (without implementation of the development) as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of availability of environmental information and scientific knowledge'.

3.15 The ES will set out a future baseline scenario under a 'do nothing' alternative, as set out above. However, the future baseline scenario will also be described within each of the Technical Chapters contained in the ES.

3.16 The assessments presented in the ES will largely be based on the deviation from the existing baseline scenario and future baseline conditions are presented to describe conditions in the absence of development. However, for a number of effects (predominantly effects relating to Transport, Air Quality and Noise), future assessment years are utilised to assess effects (refer to **Sections 8 – 15** below).

3.17 Consideration will also be given to future sensitive receptors of the Proposed Development (i.e. future residents). Although the consideration of such receptors is not specifically required by the EIA Regulations, these receptors have been considered to provide certainty to that the proposals are robustly assessed and mitigation provided where required as part of the design.

Assessment of Likely Significant Effects

3.18 The EIA Regulations require that the ES identifies '*likely significant effects of the Proposed Development on the environment*'. It is recognised in the EIA Regulations however that not all environmental effects are considered significant.

3.19 The evaluation and determination of significant effects will be carried out using specific criteria defined within each of the technical chapters of the ES. Where available, published standards and guidelines will be used as the basis for the significance criteria.

3.20 The proposed methodologies for individual environmental topics are discussed in the subsequent section. However, in many disciplines the following basic approach is utilised:

- The sensitivity of the receiving environmental receptor is evaluated using defined criteria.
- The nature of the impact is established in terms of its duration, extent, frequency, likelihood of occurrence, reversibility, and compliance with recognised standards;
- The magnitude of the impact is determined. The magnitude of change is a consideration of how much the impact alters the baseline condition.
- The significance of the effect is determined by cross referencing the sensitivity of the receptor with the magnitude of change on the receptor.

3.21 An example of this 'matrix' process is indicated below in **Table 3.1**; however, it should be noted that this is provided as a general guide only. Discipline-specific methodology is often used rather than generic criteria, as it is recognised that broad criteria does not always cater for all disciplines, particularly where best practice and guidance require subtle differences. Therefore, the significance criteria to be adopted within each technical assessment will be clearly explained in each Technical Chapter to be contained in the ES.

Table 3.1: Example degrees of Significance based on Magnitude/Sensitivity

	Sensitivity of Receptor				
Magnitude of Change		**High**	**Medium**	**Low**	**Negligible**
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor to Moderate	Negligible
	Low	Moderate	Minor to Moderate	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

3.22 Schedule 4 Paragraph 5 of the EIA Regulations state that the description of significant effects include:

"Direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development".

3.23 Therefore, the ES will consider likely significant direct and indirect or secondary effects are as a result of both the enabling works phase and construction phase (often short or medium term and /or temporary effects) and following completion of the development (often long term or permanent effects). Cumulative effects will also be considered (as discussed below) in accordance with the EIA Regulations. Given the nature and intended longevity of the development's operational life, decommissioning is not appropriate to consider. Accordingly, the ES will focus on the potential likely significant effects, which can either be positive or negative as a result of the enabling and construction phase and the operational phase.

Assessment Scenarios

3.24 In accordance with the EIA Regulations, the likely significant effects associated with both the enabling and construction works (including site preparation and any preparatory earthworks) and the completed and operational phases of the Project for Assessment will be assessed. The following scenarios will therefore be assessed and reported in the ES:

- **Enabling and Construction Stage**: the assessment will include an assessment of the enabling and construction stage from commencement and to completion.
- **Operational Stage**: the assessment will include an assessment of the operational phase of development.
- **Decommissioning Stage**: Given the nature and intended longevity of the Proposed Development's operational life, decommissioning effects are scoped out of the assessment. It is assumed that, if decommissioning takes place, an assessment of effects will be undertaken at that stage and if required, an EIA undertaken.

Mitigation Measures and Residual Effects

3.25 Schedule 4 Paragraph 7 of the EIA Regulations require that the ES provide:

"A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any

proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases".

3.26 Regulation 26 states that when determining an application consideration should be given to '*whether it is appropriate to impose monitoring measures*' including the parameters to be monitored and the duration of the monitoring.

3.27 Therefore, the ES will identify relevant mitigation measures which are required to reduce and avoid identified likely significant effects. Mitigation measures considered may include modification of the proposals i.e. primary mitigation, secondary mitigation (that which requires further action) or tertiary mitigation (actions that would occur with or without input from the EIA).

3.28 Each technical assessment will consider and define relevant primary (and if relevant tertiary) mitigation for each assessment scenario to inform the assessment of likely significant effects. Consideration will then be given to secondary mitigation for each likely significant effect identified. Any residual effects following the implementation of mitigation measures will be determined accordingly. The residual effects represent the overall likely significant effect of the Proposed Development on the environment having taken account of practicable/available mitigation measures.

Cumulative and In-combination Effects

3.29 Schedule 4 Paragraph 5(e) of the EIA Regulations ES must provide a description of the likely significant effects of a project on the environment resulting from *"…the culmination of effects with other existing and / or approved projects..."*

3.30 This is further supported by the Planning Practice Guidance which states "*There are occasions.... when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development."* (Paragraph: 024 Reference ID: 4-024-20170728).

3.31 Regard will therefore be had to relevant *"existing and/or approved projects",* which alongside the development of the proposals at the site, could potentially result in cumulative significant effects (discussed further below). It is relevant to note however that not all these projects will necessarily have the potential for cumulative effects.

3.32 It is also acknowledged that there may be other proposals which are considered as "reasonably foreseeable" as referred to within the European Guidance in relation to the definition of cumulative effects. It is important to recognise that it is not the role of the ES to assess all these types of potential developments and a staged approach in identifying which 'other sites' are relevant to consider is appropriate.

3.33 A review has therefore been undertaken of relevant "existing and/or approved projects" and other potential developments which have been subject to planning applications which may be consented during the time at which this ES is prepared. Committed or approved projects from the last five years, within 5km, have been taken into consideration which are above the Schedule 1 or 2 screening criteria thresholds set out in Schedule 3 of the EIA Regulations. In some instances, a wider search area has been used for consideration of larger schemes with the potential for cumulative transport effects. This review is set out in the table below. At this stage, planning applications which meet the search criteria are also listed, which will be monitored during the course of preparing the EIA. Planning applications which are approved during this time, will be scoped in to the cumulative assessment. Where developments are fully operational, these will be included in the baseline where relevant to the technical assessment. Whilst this Scoping Report seeks to identify relevant schemes to be considered, it is to be acknowledged that the extent to which schemes need to be considered within each environmental discipline will inevitably vary.

3.34 A review has been taken of Bury Council (BC) Rochdale Borough Council (RBC) and nearby councils (located in the search area) online register of projects. This included Oldham Council (OC) and Manchester City Council (MCC).

3.35 The below table summarises the above process and sets out the potential ‘cumulative schemes' and whether these are considered appropriate to assess and in what manner.

Table 2.1 Cumulative Developments

No.	Application Reference	Description	Location	Status	EIA Development	Assessment Consideration
1	RBC 16/01399/HYBR	Part full/part outline planning application for the development of land at South Heywood, including the demolition of a number of existing on-site buildings and structures, construction of a new link road between Junction 19 of the M62 and Pilsworth Road, and the widening of part of Pilsworth Road, together with associated junction improvements. Outline consent for residential uses comprising up to 1000 dwellings (Class C3); employment uses (Classes B2/B8) comprising up to 135,460m2 Gross Internal Area (GIA); a new primary school (Class D1); Class A1/A2/A3/A5 uses comprising up to 2500m2 GIA which includes no more than 499m2 of A1 uses; together with associated landscaping, open space and sports pitches,	South Heywood Land Bound by Manchester Road, Hareshill Road and Pilsworth Road West of Junction 19 Of the M62 Rochdale 200m to the northwest	Approved 31/03/2020	EIA	Under construction – cumulative scheme only where development is not yet complete. Otherwise, forms part of baseline

No.	Application Reference	Description	Location	Status	EIA Development	Assessment Consideration
		drainage, ecological enhancements, cycleway and footpath linkages, infrastructure and other works ancillary thereto.				
2	RBC 21/00744/FUL	Residential development of 311 dwellings (Use Class C3) with associated infrastructure, landscaping and access	Land Off Don Street, Middleton 3.1km east	Approved 13/09/2022 S73 approved 20/11/2023	Not EIA	Under Construction - cumulative scheme
3	RBC 23/00650/HYBR	Hybrid planning application (EIA development) for a residential development of 233 dwellings (Use Class C3) with associated landscaping and access, and Outline planning permission with access for residential development of up to 1147 dwellings (Use Class C3), mixed-use development, land for primary school extension, local centre and MUGA, landscaping, and supporting infrastructure.	Land At Stakehill, Off Rochdale Road, Middleton 4.9km northeast	Pending Determination	EIA	To be kept under review through scoping
4	RBC 25/00381/OUT	Outline planning application (with all matters reserved except the means access) for the development of up to 314	Land North and East of Stakehill Industrial Estate, Middleton	Pending Determination	EIA	To be kept under review through scoping

No.	Application Reference	Description	Location	Status	EIA Development	Assessment Consideration
		residential dwellings (Use Class C3) and employment uses (Use Class B2/B8 including ancillary office space (Use Class E)) comprising up to 13,047sqm Gross External Area together with associated parking, highway infrastructure, works to public rights of way, areas of public open space, landscaping, drainage, ecological enhancements and other works ancillary thereto	5 km northeast			
5	RBC 24/00805/OUT	Outline application with all matters reserved for the development of land within Use Classes E(g)(iii) (industrial processes), B2 (general industrial), B8 (storage and distribution) and removal of existing structures and hard standing and associated works	Plot H4 Heywood Distribution Park Pilsworth Rd Heywood 200m north	Approved 20/05/2025	Not EIA	Construction not started – cumulative scheme
6	Proposed PfE site allocation (JPA 1.1) RBC 25/00418/OUT	Application for outline planning permission (all matters reserved) for a national-scale employment	Land bound to the north by Brightley Brook, Pilsworth Fisheries,	Pending determination	EIA	Considered as a cumulative scheme, together with the residual elements of

No.	Application Reference	Description	Location	Status	EIA Development	Assessment Consideration
		development, comprising Storage & Distribution (Use Class B8) and Industrial (Use Classes B2, E(g)(ii) and E(g)(iii)) uses (including, but not limited to, Logistics, Manufacturing Processes and Data Centres), with supporting ancillary uses including Hotel (Use Class C1), Commercial & Business & Service (Uses Class E(a - g)), Education (Use Class F1(a)), Local Community (Use Class F2(a - c) uses, Sui Generis uses (in accordance with the Uses Schedule), and associated demolition works, landscaping, drainage, ecological enhancements, highway works, cycleway and footpath linkages and other ancillary infrastructure.	Pilsworth Road & Heywood Distribution Park; to the west by Whittle Brook; to the east by Birch Industrial Park & fields; and to the south by the M62 corridor 600m northwest			the JPA 1.1 allocation.
Nationally significant infrastructure project (NSIP)						
7	Nationally Significant Infrastructure Project M60 / M62 /M66 Simister Island	Construction of a new free-flow link (northern loop) from the M60eastbound to M60 southbound carriageways. Realignment	M60 Junction 18, three miles south of Bury	Approved 09/09/2025	EIA	Construction not started – cumulative scheme

No.	Application Reference	Description	Location	Status	EIA Development	Assessment Consideration
		of the M66 southbound carriageway on the approach to the junction. Construction of a new two-lane free-flow road from the M60 northbound to the M60 westbound to replace the existing single lane and widen the M66 southbound to four lanes through junction 18. Conversion of the hard shoulder into a permanent traffic lane between M60 junctions 17 and 18, providing five lanes in both directions. Other works will include improvements to signage, signalling and drainage.	Located to the west of the Site.			

3.36 On review of recent planning approvals and planning application submissions in the surrounding area, the team is not aware of any other projects within the vicinity of the Site which would be required to be considered as part of a cumulative assessment, however the Applicant welcomes confirmation.

Cumulative Assessment Approach for Transport Effects

3.37 As part of the assessment of the JPA1.1 transport related effects, a 'development log' has been produced to inform the Transport Assessment submitted as part of planning application ref. 25/00418/OUT, which is based on assumptions about project timelines. Therefore, traffic related effects in that assessment have been based on a greater number of cumulative schemes than identified in that assessment. In addition, the projects included within the development log have been included in the baseline traffic scenarios (including future baseline). It is proposed that the same approach is adopted in the assessment of likely significant effects for the JPA 1.2 proposals. Therefore, a separate cumulative assessment is not required for the assessment of traffic effects associated with the JPA 1.2 proposals, as this is already inherent in proposed approach to the transport assessment. However, a separate cumulative traffic scenario will be assessed to consider the JPA 1.1 and JPA 1.2 in combination, given the relationship with both proposals and their inclusion in the Northern Gateway PfE allocation. This reflects the approach taken to the assessment of transport related effects associated with the JPA 1.1 proposals.

Preparation of the ES

3.38 In accordance with the Regulations, the ES will be prepared by "competent experts", as listed at the outset of this report. A statement outlining the relevant experience of the experts who have undertaken the assessment and drafted the technical chapters within the ES will be provided. For example, **Section 18** of the EIA Regulations state:

"(5) In order to ensure the completeness and quality of the environmental statement— (a)the developer must ensure that the environmental statement is prepared by competent experts; and

(b)the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts".

3.39 Asteer Planning are also a corporate partner of the Institute of Sustainability and Environmental Professionals (ISEP), formerly known as 'The Institute of Environmental Management and Assessment' (IEMA).

The Planning Application Package

3.40 The planning application will be supported by a range of other documents, plans and technical reports as required by the Local Planning Authority. This is likely to include the following and which will be agreed with BC and RBC as part of pre-application discussions;

- Planning Statement.
- Design and Access Statement and Design Code.
- Development Specification (defining the maximum development quantum's for each use).
- Agricultural Land Classification Report.
- Arboricultural Impact Assessment.
- Archaeological Desk Based Assessment.
- Crime Impact Assessment.
- Health Impact Assessment.
- Economics Benefits and Social Value Statement.
- Heritage Statement.
- Historic Environment Desk-Based Assessment.
- Biodiversity Net Gain Assessment (including Metric and report).
- Minerals Safeguarding Assessment.
- Ground Investigation Report.
- Sustainability, Energy and Carbon Statement.
- Digital Connectivity Statement.
- Statement of Community Involvement

Co-ordination with Habitat Regulations Assessment

3.41 Regulation 27 of the EIA Regulations states:

'*Where in relation to EIA development there is, in addition to the requirement for an EIA to be carried out in accordance with these Regulations, also a requirement to carry out a Habitats Regulation Assessment, the relevant planning authority or the Secretary of State, as the case may be, must, where appropriate, ensure that the Habitats Regulation Assessment and the EIA are co-ordinated*'.

3.42 A number of ecological designated sites are present within 10km of the Site (refer to **Section 4**). Given the proximity of these sites, an assessment will be undertaken in accordance with the Habitat Regulations and will be co-ordinated with the EIA process. The planning application will therefore be supported by a 'Shadow Habitat Regulations Assessment'.

4 SITE DESCRIPTION

The Site

4.1 The JPA 1.2 Site extends to approximately 98 ha. The location and extent of the site is shown on the Assessment Boundary Plan provided at **Appendix 1.1**.

4.2 The Site occupies a highly accessible location close to a strategically important motorway interchange where the M60, M62 and M66 converge. It lies immediately north of Junction 19 of the M60 and adjacent to Junction 18 of the M62 (Junction 4 of the M66). The Site extends across land on both sides of Heywood Old Road (A6045) and is situated between Whitefield and Prestwich to the west and Middleton to the east. Land allocated as JPA 1.1 lies immediately to the north beyond the M62.

4.3 Simister Roundabout is located to the north of the Site, with the M60 forming its southern boundary. The M62 and Junction 18 lie to the west. Heaton Park and Heaton Park Golf Course are located to the south and south-west beyond the M60.

4.4 The northern boundary of the Site comprises predominantly agricultural land to the south of Simister village, defined by established field boundaries and hedgerows. Agricultural land also extends to the northeast, beyond which lie North Manchester Golf Club and the built-up areas of Langley and Middleton. The settlement of Rhodes lies to the south and southeast of the Site.

4.5 Heywood Old Road (A6045) runs through the site on a broadly north–south alignment. A number of dispersed farmsteads and residential properties are located within the Site, together with existing properties fronting onto Heywood Old Road on both sides.

4.6 The Site is characterised by undulating topography, which generally rises towards the north. Surface water features include an unnamed watercourse flowing north to south through the Site, together with a fishing lake. The site generally slopes towards an unnamed weir.

4.7 Several Public Rights of Way cross the site, predominantly aligned in a north–south direction.

Overview of Environmental Designations

Ecological Designations

4.8 The Site is not located in, or within a 2km radius of a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar.

4.9 The Site is located in the SSSI Impact Risk Zone for the Rochdale Canal SSSI, which is located approximately 3.7km to the west of the Site. The scheme does not fall into once of the classifications for which consultation with Natural England is required. The Rochdale Canal is also designated as a SAC.

4.10 The South Pennine Moors SAC is located 14.9km to the west of the Site. Manchester Mosses SAC is located 15km east of the Site. Holcroft Moss Site of Special Scientific Interest (SSSI) is also part of Manchester Mosses SAC.

4.11 Peak District Moors SPA is located 12km to the east of the Site.

4.12 There are two Local Nature Reserves (LNR) within a 2km radius of the Site; Blackley Forest, 0.5km to the south, and Alkrington Woods, 1km to the east.

4.13 The Site is characterised by largely low-quality modified grassland associated with cattle grazing and silage with some areas of other neutral grassland. There are hedgerows across the Site, with ponds and a large fishing lake evident on land to the west of Heywood Old Road. A stream runs north to south through the central area of the western part of the site, featuring a riparian corridor in moderate condition. Additionally, a woodland block is adjacent to the M60. A Site of Biological Importance ("SBI") at Bradley Hall Farm, is located on the eastern part of the Site.

Heritage

4.14 There are no World Heritage Sites, Scheduled Monuments, Registered Battlefields or Protected Wrecks within the Site or within a 1km study area.

4.15 There are nine Listed Buildings within 1km:

- Heaten Hall – Grade I – 910m south
- Temple to Northeast of Heaton Hall – Grade II* - 720m south
- Smithy Lodge to East of Heaton Hall – Grade II*- 530m south
- Rhodes Schools – Grade II – 170m east
- Dower House Cottage to North of Heaton Hall – Grade II – 820m south
- Sundial in Front of Orangery of Heaton Hall – Grade II – 860m south
- Church of St. George – Grade II - 350m to the west

- 31-37, Broad Street – Grade II – 320m to the east
- Church of All Saints War Memorial, All Saint's Church, Manchester Old Road. Middleton – Grade II – 130m to the southeast

4.16 There is one Registered Park and Garden within 1km of the Site, Heaton Park, which is a Grade II Registered Park and Garden located 80m to the south of the Site, separated by the M60.

Flood Risk

4.17 There are no main rivers within the Site. The Environment Agency flood maps identify that the Site is located entirely within Flood Zone 1, therefore at the lowest risk of flooding (assessed as having a lower than 1 in 1000 annual probability of river or sea flooding).

4.18 There is a generally low risk of surface water flooding across the Site. Small areas of low to medium surface water flood risk are associated with localised variations in topography and existing buildings at Heaton Farm. An increased risk of surface water flooding is present to the south of the Site in association with the M60, and within the central part of the Site in association with an existing weir.

4.19 There is a localised risk of groundwater flooding across the northern part of the Site adjacent to the unnamed watercourse which flows north south through the Site.

Landscape

4.20 The Site is located within National Character Area (NCA) 54 Manchester Pennine Fringe, with NCA 55 Manchester Conurbation located to the south.

4.21 The Site is not located within a National Landscape (previously known as an Area of Outstanding Natural Beauty).

Air Quality and Noise

4.22 The Site is partly located within the Greater Manchester Air Quality Management Area (AQMA), with vehicle exhaust emissions from the M60 to the west, and to a lesser extent Heywood Old Road to the east, the principal sources of atmospheric pollution in the area

4.23 The closest Noise Important Areas are ID 6974, located 100m to the south of the Site along the M60 and ID 1659 located 150m to the east of the Site associated with the junction between Middleton Road, the A578 and Heywood Old Road, the A6045.

5 THE DEVELOPMENT PROJECT

Project for Assessment

5.1 As set out in **Section 1**, the Site is allocated for residential-led development under Policy JP Allocation 1.2 (JPA 1.2) of the PfE Development Plan. Policy JPA 1.2 identifies the Site as a residential-led development opportunity that is allocated to deliver up to 1,550 new homes, supported by community and other infrastructure. The Simister Bowlee Development Framework has been developed to demonstrate how such proposals could be delivered in accordance with the requirements of the PfE policy. It is therefore proposed to create a new sustainable, high-quality neighbourhood, aligning with the vision as set out in the masterplan for the site.

5.2 The proposals are still developing and will be informed by technical assessments being undertaken, as well as local community and stakeholder engagement. At this stage, a preliminary description of development is provided to set out the likely maximum extent of the proposals for EIA Scoping purposes (i.e. the Project for Assessment). This is important in being able to provide flexibility for the emerging development proposals and to allow consideration of the likely significant effects as part of the assessment process. However, it is likely the planning application will seek outline permission for the following:

- Up to 1550 residential homes;
- Supporting community facilities, including a 2 Form Entry ('FE') Primary School and local centre uses, which may include local retail, community and health facilities;
- Open Space to include elements of play space, walking and cycle routes, ecological enhancements, retention of existing trees where possible and areas of new planting to align with biodiversity net gain requirements;
- Points of vehicular access from Heywood Old Road and potential improvements such as widening and surface upgrades to Blueball Lane;
- Public transport and active travel connections;
- Other associated infrastructure (such as sustainable drainage measures), internal access arrangements, parking and pedestrian and cycle connections.

5.3 Further consideration will also be given to mitigation that could be delivered outside of the EIA Assessment Boundary, which may include:

- Potential off-site highway infrastructure – such as junction improvements or active travel measures.

- Additional land that may be required to deliver Biodiversity Net Gain (BNG).

5.4 Off-site utilities infrastructure (such as water mains, foul or electricity infrastructure). The heights of buildings will reflect the residential led nature of the scheme. As such, no tall buildings are proposed. Given the topography of the Site, regrading of existing ground levels to form development plateaus will be required and therefore buildings heights will be taken from a proposed ground level.

Highways and Accessibility

5.5 The site comprises two areas on either side of Heywood Old Road. To the east of Heywood Old Road, it is proposed that this parcel will be accessed via two priority junctions with suitable footways to provide access for pedestrians and cyclists. To the west of Heywood Old Road two primary access points are proposed, with one providing access to the northern parcel of the site and one to provide access to the southern parcel, connected via an internal spine road. The southern access point is proposed to be designed to accommodate public transport access by bus. In addition, both emergency and pedestrian and cycle routes will also be provided to provide permeability.

5.6 Vehicle access is not proposed from the site through to Simister Village, which is instead likely to be restricted to provide bus and active travel access only, and access for Simister residents only. This is to be explored further within the planning application. There is thus th opportunity to provide an active travel and public transport (bus) only route, connecting from Heywood Old Road through to Simister Village via the proposed internal spine road. This may require infrastructure works outside of the JPA 1.2 Allocation to accommodate this as shown on the image below.

5.7 The access strategy will be informed by the EIA process, stakeholder and community engagement and through discussions with both highway Authorities and key stakeholders. As noted above, any off-site infrastructure works will form part of the Project for Assessment and fully assessed within the EIA and reported within the ES.

Image 5.1: Proposed points of Accessibility



Surface Water, Foul Drainage and Utilities

5.8 The proposals will incorporate Sustainable Urban Drainage Systems (SuDS) on-site to attenuate surface water runoff prior to discharging into the local watercourses. Detailed future designs for the development will ensure there is no increase to flood risk on the site or elsewhere as a result of the development.

5.9 Existing utilities connect to Heywood Old Road (surface water, water main, electricity, gas, and BT). Existing infrastructure includes a 15-metre-wide sludge main easement located in the northern section of the site, a localised gas main is located in the northern section of the Site, and a 275kV overhead line running east-west within the southern section of the Site. At this stage, it is anticipated that the proposals will connect to existing services and provide new on-site infrastructure where required to ensure sufficient capacity to accommodate the development.

5.10 A surface water and foul drainage strategy will be developed and inform the EIA process.

Enabling and Construction Phase Activities

5.11 At this stage, it is reasonable to assume for assessment purposes, that construction could commence 2029, with first occupation likely in 2030. Full site completion is anticipated to occur by c. 2046.

5.12 A programme of earthworks to facilitate suitable building platforms will likely be required given the existing topography and therefore outline details will be provided within the ES to ensure any consequential likely significant impacts can be identified.

Parameters for Assessment

5.13 Given the outline nature of the application, the EIA will be based upon a set of defined parameters, which will identify the extent of different land use areas, maximum heights of buildings and key landscape mitigation proposals integral to the scheme. Therefore, the assessment for EIA purposes will be parameter based, thus following the 'Rochdale Envelope' principle.

5.14 It is anticipated that the assessment parameters include the following:

- Site Location Plan;
- Land Use Parameter Plan, including areas for built development and landscaping;
- Maximum building heights Parameter Plan (taken from a proposed ground level);
- Access Plan(s).

5.15 A Development Specification document is also intended to be submitted as part of the forthcoming planning application, which will set out the proposed land uses and a schedule of accommodation to be approved and assessed as part of the EIA.

6 PLANNING POLICY CONTEXT

6.1 This section provides a review of the planning policy context, including the adopted Development Plan.

Planning Background

6.2 Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town & Country Planning Act 1990 require planning applications to be determined in accordance with the statutory development plan, unless material considerations indicate otherwise. The statutory development plan for Bury and Rochdale.

6.3 Planning permission has not been granted for any significant uses within the allocation.

6.4 Within Bury, the adopted Development Plan comprises:

- Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 ('PfE') (adopted 21 March 2024).
- Saved policies of the Bury Unitary Development Plan ('Bury UDP') (adopted 29 August 1997).
- Greater Manchester Joint Minerals Plan ('GMJMP') (adopted 26 April 2013).
- Greater Manchester Joint Waste Plan ('GMJWP') (adopted 1 April 2012).

6.5 Within Rochdale, the adopted Development Plan comprises:

- PfE (adopted 21 March 2024).
- Rochdale Core Strategy ('Rochdale CS') (adopted 19 October 2016).
- Saved policies of the Rochdale Borough Unitary Development Plan ('Rochdale UDP') (adopted June 2006).
- Greater Manchester Joint Minerals Plan ('GMJMP') (adopted 26 April 2013).
- Greater Manchester Joint Waste Plan ('GMJWP') (adopted 1 April 2012).

National Policy

6.6 The Government published the National Planning Policy Framework (NPPF) in December 2024. Relevant NPPF policies are considered in **Sections 8-15** of this Scoping Report.

Other Considerations

- Adopted and emerging Supplementary Planning Documents ('SPD') and Guidance ('SPG'); particularly the Northern Gateway Development Framework ('NGDF') (JPA1.1) SPD (March 2025);
- The emerging Local Plans for Bury and Rochdale and the emerging Greater Manchester Joint Waste & Minerals Plan; and
- Simister Bowlee Development Framework (JPA1.2) SPD February 2026.

7 ENVIRONMENTAL TOPICS WHICH ARE NOT SIGNIFICANT

Waste Materials and Assets

7.1 Construction of the proposals would lead to an increase in waste produced, which will be reused and recycled where possible. Construction waste would be managed in accordance with all applicable legislation and disposed of in line with best practice. Other sources of waste during the construction stage are assumed to relate to construction materials (including packaging). It is anticipated that waste produced during enabling and construction works phase would be controlled through the implementation of a Construction Environmental Management Plan ('CEMP'), secured by planning condition. The CEMP will be informed all applicable legislation and will set out the principles and legal requirements relating to waste (including hazardous waste). The CEMP will also describe how materials will be managed efficiently and disposed of legally during construction. It will also outline the aims, objectives and on-going management responsibilities, including management practices, to be implemented during the construction stage. Considering the volume of waste generation during the enabling works and construction phase and the implementation of management measures as described above, it is not considered that the proposals will generate significant waste and it is therefore scoped out of the ES.

7.2 Once operational, a quantity of domestic and commercial type waste will be generated. The proposals will not include for any land uses or activities that will give rise to particularly contaminative or hazardous waste materials. Operational waste would be disposed of in line with Council requirements and managed in accordance with all applicable legislation. Therefore, given the nature of the proposals, waste material is not considered significant and therefore does not warrant further assessment within the resultant ES.

7.3 Material assets in EIA is a very broad term which considers both physical and non-physical sectors that could be said to have material value. On review of the Site's location and context, it is not considered there are any further 'material assets' to those already addressed within other EIA topics, and therefore no further consideration of material assets is proposed within the EIA and resultant ES.

Lighting

7.4 Any new lighting proposed as part of the proposals will be in accordance with British Standards, The Institution of Lighting Professionals ("ILP") and The Chartered Institution

of Building Services Engineers ("CIBSE") which prescribes required lighting levels. Whilst temporary construction lighting would be used during construction, this would be controlled through the CEMP. Any lighting proposed as part of the completed development will adhere to the requirements with the above standards. The effect of artificial lighting on ecological receptors will be assessed in the Ecology Technical Chapter of the ES. As the Site is not situated within, or in proximity to, a designated Dark Sky Park or an associated buffer zone, is not located within a National Park or National Landscape, the effect of lighting on landscape and visual amenity is proposed to be scoped out of the EIA.

Major Accidents and Disasters

7.5 Schedule 4, Paragraphs 5 and 8 of the EIA Regulations require a description of the expected effects of the Proposed Development on the environment deriving from the vulnerability of the Proposed Development to risks of major accidents and / or disasters that are relevant to the project concerned.

7.6 There is no recognised standard methodology for the assessment of major accidents and disasters within EIA. In September 2020, the Institute of Environmental Management and Assessment (IEMA) now known as ISEP, in partnership with Arup, published 'Major Accidents and Disasters in EIA: A Primer' which is a risk assessment (using a source-pathway-receptor) based approach. Therefore, the assessment of Major Accidents and Disasters in relation to the proposals has been based on a combination of the IEMA Primer and professional judgement.

7.7 The IEMA Primer states that the major accidents and disasters topic can be scoped out of the EIA if it can be demonstrated that:

"*1. There is no source-pathway-receptor linkage of a hazard that could trigger a major accident and/ or disaster or potential for the scheme to lead to a significant environmental effect; or*

2. All possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures[3] or compliance with legislation and best practice"

[3] **For instance, altering the internal spatial layout of a scheme to simply avoid a hazard could be embedded as a primary mitigation measure at the scoping stage.**

7.8 In respect of the above, given the nature of the proposed uses, the proposals will not result in a significant environmental effect as a result of a hazard or accident. No Control of Major Accident Hazard or Hazardous Substance Storage has been identified for the site as a whole or within 250m of the boundary. However, the following hazards have been identified:

- **Presence of Power Lines:** High Voltage overhead cables (275kV National Grid Electricity Transmission) run from east to west through the southwest of the parcel, with three associated pylons. The proposals will respond to the presence of these power lines by retaining in-situ in appropriate easements.

- **Presence of other Utilities**: These include a 15-metre sludge main located in the northern parcel of and a gas main along a section of Simister Lane. The proposals will respond to the presence of these utilities through retention in-situ in appropriate easements.

- **Coal Mining:** The site falls within a Coal Mining Reporting Area however is not within a Development High Risk Area defined by the Mining Remediation Authority. No mine entries or outcrops are present on or close to the site in data sets available from the Mining Remediation Authority. The risk to the site from historic coal mining has been assessed as low.

- **Fishing Lake / Reservoir:** within the western parcel, there is a reservoir/ lake present, currently used as a fishing pond. The pond has been created by damming of a watercourse via an embankment constructed at the southwestern end of the pond. A breach analysis of this pond will be undertaken as part of the flood risk assessment.

7.9 There is very low potential for a major accident and disaster to occur from the identified potential hazards present within the Site. However, primary mitigation measures are taken into consideration to determine if, through them, the risk is adequately mitigated. In the relation to the proposals and given the embedded design measures, which includes adequate easements and standoff zones from the utility assets, the probability or likelihood is considered to be very low. It is acknowledged that other utility infrastructure is present within the site, but these can be either retained in situ or diverted in accordance with established legislative requirements. In relation to the presence of the fishing lake, an assessment of a potential breach will be undertaken and form part of the flood risk assessment and presented in the Hydrology, Flood Risk and Water Resources Technical Chapter of the ES. Therefore, it is proposed Major Accidents and Disasters is scoped out of the ES.

Wind

7.10 The proposals will not comprise buildings of a sufficient size and scale to affect wind flow and dynamics such that significant environmental effects could result. As such, due to the expectation of no potential for significant effects in relation to wind microclimate, this topic is proposed to be scoped out of the EIA.

Daylight and Sunlight

7.11 Development in densely urbanised locations or of a high-rise nature can cause impacts to the levels of light received by adjacent properties. The Proposed Development is in an open area of land and is not high-rise in nature. There would be no potential for issues of overshadowing or light obstruction to adjacent properties such that an assessment would need to be undertaken to quantify the impact and proposed mitigation. It is therefore proposed that an assessment of daylight, sunlight and overshadowing effects can be scoped out of the EIA.

Agricultural Land and Soils

7.12 Enabling and construction activities will result in the permanent loss of agricultural land. However, the site has been subject to a detailed Agricultural Land Classification survey carried out by Land Research Associates. The survey has concluded that none of the site is classified as Best Most Versatile (BMV) agricultural land (refer to **Appendix 7.1**). As there is no loss of BMV agricultural land, and the loss of lower quality agricultural land is not considered to be significant due to the land not being utilised for crop production. Therefore, loss of lower quality agricultural land will not be considered further in the EIA or reported in the ES.

7.13 Soil is a finite and valuable resource that provides a range of essential ecosystems functions and services. During the construction, there is the potential for damage to, or loss of topsoil if it is not handled and stored appropriately. To minimise these impacts, a Soil Resource Management Plan (SRMP) will be prepared as part of a Material Management Plan and form part of the CEMP, to be secured through a planning condition. The SRMP will identify the different soil types present on site, establish the most appropriate re-use strategy and set out procedures for the handling, storage and reinstatement of soils. The plan will seek to maximise the re-use of surplus soils within the design of open spaces and landscaped area, while maintaining soil quality through adherence to recognised good practice for soil handling and storage, including measures to avoid compaction. With these mitigation measures in place, soils will continue to perform their ecosystem functions and provide suitable medium for habitats, biodiversity

and landscape planting. Therefore, the loss or degradation of soils is not considered to be significant and is scoped out from further assessment in the ES.

Built Heritage

7.14 There are no designated heritage assets within the Assessment Boundary. A 1km Study Area and review of the Zone of Theoretical Visibility (ZTV) prepared by Tyler Grange (refer to Figure 8.3) have been used as tools alongside site visits undertaken between 2020 and 2024, to identify heritage assets beyond the Assessment Boundary, which may be effected by the proposals. As identified in **Section 4**, the designated heritage assets within that Study Area comprise nine Listed Buildings (of differing grades) and one Registered Park and Garden (Heaton Park RP&G, Grade II). In addition, there is one locally listed building within the Assessment Boundary (Little Nook) and a further eight within the 1km Study Area.[4] The Greater Manchester Historic Environment Record (HER) was consulted in February 2026. There are no monument and building entries within the Assessment Boundary and there are ten entries within 1km of the Site. Designated and non-designated heritage assets and entries on the HER (buildings and monuments only) are included on the Heritage Asset Plan (HAP) at **Appendix 7.2.**

7.15 An Initial Heritage Appraisal was prepared by Turley's specialist Heritage Team in 2020/21 in connection with the allocation of land at Northern Gateway (Site JPA 1.2 Simister/Bowlee) through 'Places for Everyone' and updated in August 2024 to inform the SPD and provides an evidence base for this ES Scoping Report, which is summarised below.

7.16 Heaton Park (Grade II Registered Park and Garden) is principally of significance for the quality and completeness of its 18th century redesign by William Emes (1729-1803) and John Webb (1754-1828). The principal building is Heaton Hall (Grade I Listed Building, HAP1) designed by James Wyatt for Sir Thomas Edgerton. The Temple to the Northeast of Heaton Hall (Grade II* Listed Building, HAP 2), Smithy Lodge to the East of Heaton Hall (Grade II* Listed Building, HAP 3), Dower House Cottage to North of Heaton Hall (Grade II Listed Building, HAP 4) and Sundial in front of orangery of Heaton Hall (Grade II Listed Building, HAP 5) are all within the 1km Study Area and located within the RP&G.

7.17 The extensive setting of the park has changed fundamentally since it was originally laid out and it is now almost entirely enclosed by the urban areas of Prestwich, Blackley and

[4] **Bury Council's local list is in draft -** Local list - Bury Council

Middleton, comprising both urban and rural areas of Greater Manchester, with the M60 motorway immediately to the northwest. From within the designed landscape, views to the wider area are largely restricted by topography and trees. From the high point around Heaton Hall and the temple, long distance views are available to the south towards Manchester City centre where the towers in the urban core are visible. Views to the north are however more limited by the density of trees but available where gaps in the tree belts exist. Views from the northern part of the park (now the golf course) are available into the land to the north, but these are filtered by the varying topography and trees, and the M60 which forms a significant visual and physical barrier in the landscape. Setting therefore makes a limited contribution to the setting of the RP&G.

7.18 Of the nine listed buildings within the Study Area, only the Temple to the northeast of Heaton Hall has been identified as having potential to be effected by the proposals. It was designed by Samuel Wyatt (1795-1802) and is of significance as a good example of a late 18th century temple, which were often situated within the landscape to add incidence and interest, in conformity with the prevailing picturesque principles of landscape design typical of the period. The temple is experienced as part of a group of late 18th and early 19th century estate buildings within the parkland and this relationship contributes to their significance. Long distance views from the temple contribute to the significance of the temple as the intent of placing the temple within a landscape to add interest and to create a viewing point at an elevated position in the Hall's grounds remains legible, despite the presence of urban development in such views.

7.19 The Site is functionally and visually separated from much of the designated area by the motorway network and the dense trees within the northern part of the park. Notwithstanding, there is a break in the tree belt proximate to the temple which does allow some glimpsed views towards the Site. The Zone of Theoretical Visibility (ZTV) indicates very limited, and filtered potential intervisibility from the more significant parts of the RP&G. Where experienced, the proposals would be experienced alongside existing residential development and the visual and physical barrier of the M60 motorway, and as a small part of the park's expansive and varied setting.

7.20 Heaton Hall, the Smithy Lodge and the Dower House Cottage are all situated within Heaton Park which defines their setting. Due to the relative enclosure of that setting, the intervening distance, topography and development, it is concluded that their significance would not be effected by the proposals. The Sundial is functional in nature and experienced in a very localised setting that would not be effected by the proposals.

7.21 Outside of the RP&G, Rhodes Schools (Grade II Listed Building, HAP 6), Church of St George (Grade II Listed Building), 31-37 Broad Street (Grade II Listed Building, HAP 8) and the Church of All Saints War Memorial (Grade II Listed Building, HAP 9) whilst proximate to the Assessment Boundary, due to their location, and the intervening development and topography have no visual connection to the Site. There is also no known functional connection. For these reasons it is not considered that the proposals would not impact upon their significance.

7.22 The remaining heritage receptors are either locally listed buildings or entries included on the HER and therefore in EIA terms and in reference to **Table 3.1** are of low or negligible sensitivity. Only Little Nook (locally listed, HAP 17) is within the Site and would be retained as part of the proposals. Due to the intervening distance, landscape, topography and existing development, none of these receptors would experience change of a sufficient magnitude to result in significant environmental effects.

7.23 For the reasons set out above, no significant effects are anticipated in relation to heritage, and this topic will be scoped out of the forthcoming ES. As part of the planning application submission, a detailed Heritage Statement that meets the requirements of the NPPF and local planning policies relating to Built Heritage, will be prepared.

Archaeology

7.24 Preliminary archaeological conditions for the purposes of this scoping exercise have been established for a 1km search area from the site using the following sources:

- National Heritage List for England for designated heritage assets;
- Greater Manchester Historic Environment Record (HER) data; and
- Historic mapping.

7.25 There are no designated assets of archaeological interest recorded within the 1km search area.

7.26 There are no HER records of prehistoric date located within the Site. Unsworth Moss (3878.1.0), a natural feature, may have potential for prehistoric and later archaeological remains.

7.27 A Roman settlement is suggested to be possibly located within the Site, identified by the cropmarks of enclosures, roundhouses, associated field systems and trackways. However, evaluation trench survey provide inconclusive results. The trenches revealed a

number of cut features, although one included a plastic bag in its fill, suggesting a modern date. A geophysical survey was also undertaken across the site, and this too did not identify anomalies that would otherwise suggest Iron Age or Roman settlement (ASWYAS 2020). The find spot of a brooch (MGM17742), identified towards the western extent of the search area, also dates to the Roman period.

7.28 The locations of a settlement have been identified on historic mapping towards the eastern extent of the Site, at Rhodes Green (5059.1.0). A settlement was also located at Bowlee (5058.1.0), immediately adjacent to the Site's eastern boundary and Rhodes (5228.1.0), c. 430m to the south-east of the Site. The line of the former Manchester to Rochdale Road (15977.1.0) extended through the south-western portion of the search area which likely had medieval origins. Further evidence of medieval activity across the search area includes the site of Heaton Hall (90.1.0) and the find spots of a spindle whorl (MGM17744) and a dagger (MGM17745).

7.29 There are no HER records of post-medieval to modern date located within the Site. The majority of records dating to these periods relate to buildings and structures, including a number associated with Heaton Park Registered Park and Garden (1000854), which is located c. 90m to the south-west of the Site. Some of the buildings also reflect an agricultural use of the search area during these periods, although the identification of sand pits (159531.0), mills (15958.1.0, 2002.1.0, 5324.1.0 & 9609.1.0), printworks (2411.1.0) and bleachworks (682.1.0) indicate some industrial activity.

7.30 An army camp was established in September 1914 in Heaton Park (15978.1.0) and was initially used to house and train battalions of the Manchester Pals, with training including firing practice and the digging of trenches. An aircraft dispatch centre (15979.1.0) was also located in Heaton Park during World War Two.

7.31 The historic landscape of the Site has been characterised as agglomerated fields, surveyed enclosure and farm complex. Cartographic evidence shows the Site as fields with the only noticeable changes on later maps relating to the removal and alteration of field boundaries. Copies of historic aerial photographs and satellite images held by the Historic England Aerial Photograph Explorer and Google Earth also indicate the agricultural nature of the Site.

7.32 Given the known archaeological potential of the Site, particularly in relation to possible Roman remains, together with evidence for medieval and later activity within the wider study area, any surviving archaeological assets within the Site are considered likely to be of no greater than medium (borough) to low (local) significance. Any archaeological

requirements arising from the Proposed Development can be appropriately addressed through a programme of archaeological investigation and mitigation, to be agreed with the archaeological advisor to the Local Planning Authority, in accordance with the NPPF, local planning policy and relevant industry guidance. The implementation of standard archaeological mitigation measures would ensure that the Project for Assessment would not result in significant environmental effects on the archaeological resource for the purposes of the EIA Regulations. Therefore, Archaeology is proposed to be scoped out of the EIA. Notwithstanding this, a standalone Historic Environment Desk-Based Assessment will be prepared to support the planning application and inform any subsequent archaeological requirements.

Ground Conditions and Contamination

7.33 A preliminary assessment of ground conditions and contamination has been undertaken by Tetra Tech and is presented in document Geo-environmental and Geotechnical Desk Study for the Site (refer to **Appendix 7.3**).

7.34 The western parcel has comprised agricultural land since at least 1849. A reservoir in the centre of the two parcels of land and several small ponds across the western parcel have been mapped since 1894 and 1849 respectively and are still present today. The southwestern boundary was reprofiled in circa. 1974 as the M60 motorway was developed but the western parcel has otherwise remained largely the same since 1849.

7.35 The eastern parcel has comprised agricultural land since at least 1849. An historical road, Bagley Brown Road, ran north-south through the centre of the parcel until circa. 2001. Small scale localised sand/ gravel pits were mapped within the parcel from 1848 and are anticipated to have been infilled. A bleach works / chemical works was mapped immediately south of the site from 1849 to circa. 2001 when the land was redeveloped as residential housing.

7.36 The mapped superficial geology within the western parcel comprises Morainic Deposits across the entire parcel with a small area of Glaciofluvial Sheet Deposits in the south and Head Deposits associated with the route of the watercourse in the east of the parcel. The mapped bedrock geology comprises Pennine Middle Coal Measures (PMCM) in the west and the Pennine Lower Coal Measures (PLCM) in the east. The Chester Formation (CHES) and Manchester Marls formation are mapped in the southwest and southeast respectively. The level of top of bedrock, as indicated by the British Geological Survey (BGS), is expected to be between +60m OD in the south to +70m OD in the north. The western parcel is not within a groundwater source protection zone. The largest Superficial

aquifer (Morainic deposits) is designated as a Secondary Undifferentiated Aquifer with medium vulnerability. The PMCM and PLCM are designated as Secondary A Aquifers. The CHES is designated a Principal Aquifer; both have low vulnerability. A watercourse orientated northwest - southeast passes through the western parcel. The watercourse is located in a small valley and flows towards the southeast.

7.37 The mapped superficial geology in the eastern parcel comprises Morainic Deposits across the entire site. Head Deposits are mapped associated with the route of the watercourse in the southwest of the eastern parcel. The mapped bedrock geology comprises the Pennine Lower Coal Measures (PLCM). The level of top of bedrock, as indicated by the British Geological Survey (BGS), is expected to be between +60m OD in the south to +70m OD in the north. The eastern parcel is not within a groundwater source protection zone. The largest Superficial aquifer (Morainic Deposits) is designated as a Secondary Undifferentiated aquifer with medium vulnerability. The PLCM are designated as a Secondary A aquifer of low vulnerability. There are three small watercourses, all flowing southwest, within the eastern parcel.

7.38 The western and eastern parcels are within a Coal Mining Reporting area but not within a Development High Risk Area. No mine entries or coal outcrops are present within the parcels and there is no evidence of shallow coal workings. Risks associated with coal mining have been assessed as Low.

7.39 The potential risks from contamination to site users are considered to be Moderate / Low during the construction an operational phases. There has not been any significant historical development on either parcel of land and so contamination, most probably associated with Made Ground, is likely to be localised and neither vertically nor laterally extensive. A ground investigation report will accompany the planning application and include a risk assessment and a refined conceptual site model. If contamination linkages requiring mitigation are identified the mitigation works and associated verification process will be detailed in a remediation strategy. Remediation will be undertaken as part of the enabling works and development works as required. Remediation as part of the enabling works will include the removal of hotspots of contaminated soils, if required. Remediation during the development works will include measures relating to the development such as cover layers in landscaped areas, gas protection measures or the protection of water supply pipes, if assessment following ground investigation establishes that these are required. These are common practices for dealing with contamination and are not complex in nature.

7.40 Exposure to contamination during construction, including any sources associated with the construction process itself, will be mitigated through the implementation of a CEMP. The potential effects from exposure to contamination to future site users are not considered to be significant and it is considered that it can be scoped out of the EIA.

7.41 The potential risk of release / migration of contamination to controlled waters is considered to be Moderate / Low. Both parcels are predominantly used for pastural farming / as grazing land. Potential contamination is likely to be associated with localised areas of Made Ground or hydrocarbon spills which are unlikely to be widespread and are unlikely to remain a significant source of contamination following periods of leaching. Furthermore, historical contamination from pesticides is not considered to be a significant risk since they are generally short lived. There are no abstraction licenses within 1km of the site and the Secondary A / Principal bedrock aquifers are considered to be of low vulnerability due to the approximately 10.00m of superficial deposits anticipated above them. As noted above, the ground investigation report to accompany the planning application will include a risk assessment and a refined conceptual site model. If contamination linkages requiring mitigation are identified the mitigation works and associated verification process will be detailed in a remediation strategy. Measures to prevent the release of contamination to controlled waters during construction activities will be controlled through the implementation of a CEMP in line with CIRIA C532 (2001) and may inform a Piling Risk Assessment if significant contamination is encountered. The risk to controlled waters from onsite contamination is not considered to be significant and it is considered that it can be scoped out of the EIA.

7.42 The potential risks from ground gas to site users and the built environment are considered to be Low. Ground gas may arise from significant deposits of putrescible Made Ground. Such deposits are unlikely to be present at the site. This is not considered to be significant, and it is considered that it can be scoped out of the EIA.

7.23 Un-engineered Made Ground may be present in historically infilled sand / gravel pits across both parcels of land and may present risks related to unstable and compressible ground (non-mining related) to site users and the built environment. These areas of the site will be targeted during ground investigation, and where mitigation is assessed to be required it will be designed into the earthwork's strategy and specification, and the foundation design. These mitigation measures would be considered an integral part of the development proposals and would likely comprise excavation and replacement with suitable engineered fill or re-engineering of the fill material if deemed suitable in line with Specification for Highway Works Series 600 Earthworks. Therefore, the risks from the

presence of unstable and compressible ground (non-mining related) on human health and the built environment are low. This is not considered to be significant, and it is considered that it can be scoped out of the EIA.

Summary

7.43 The environmental topics for which no likely significant environmental effects have been identified are:

- Waste Materials and Assets
- Lighting
- Major Accidents and Disasters
- Wind
- Daylight and Sunlight
- Agricultural Land and Soils
- Built Heritage
- Archaeology
- Ground Conditions and Contamination

8 LANDSCAPE AND VISUAL IMPACT

Introduction

8.1 This chapter of the ES will assess the effects of the Project for Assessment on landscape character and visual amenity, both on site and within the surrounding area. The chapter will be produced by Tyler Grange Group Limited (TG).

8.2 The aim of the landscape and visual impact assessment will be to identify, as far as is reasonably practical, the nature of the landscape and visual changes that would arise from the proposals, to assess the significance of such changes, and to make appropriate recommendations for the future mitigation of any resulting effects.

8.3 The Landscape and Visual Impact Assessment (LVIA) will be undertaken in accordance with the methodology and approach set out in the *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013), produced by the Landscape Institute (LI) and the Institute of Environmental Management and Assessment (IEMA). This guidance is the most thorough and current in relation to the assessment of landscape character and visual effects.

8.4 In the context of this definition, the assessment process seeks to consider the likely significant effects of the Project for Assessment on landscape and visual receptors in an objective and systematic manner, whilst recognising the perceptual and therefore subjective response to the landscape. Whilst subjectivity can never be completely removed from the assessment process, by following a systematic and structured framework of assessment, a more robust assessment can be performed, and more rational and transparent conclusions drawn.

Relevant Policy and Guidance

National Planning Policy

National Planning Policy Framework (December 2024)[5]

8.5 The NPPF sets out three dimensions to achieving sustainable development that include economic, social and environmental considerations. It places an onus on the planning system to perform a role in relation to the environment that *"contributes to the protection and enhancement of our natural, built and historic environment..."* The NPPF goes on to note

[5] National Planning Policy Framework - GOV.UK

that sustainable solutions should take account of local circumstances and reflect the character of each area. This underpins the strategic guidance set out in the NPPF in relation to landscape and visual matters.

8.6 Sections 12 and 15 are of particular relevance to landscape and visual matters.

Planning Practice Guidance (February 2024)[6]

8.7 The PPG section on the 'Natural Environment' addresses green infrastructure, biodiversity and landscape. Paragraphs 036 and 037 are of particular relevance to landscape and visual matters. The section on 'Light Pollution' is also of relevance.

Local Planning Policy

8.8 Relevant local planning policies include:

Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039

- Policy JP-G1: Landscape Character
- Policy JP-G2: Green Infrastructure Network
- Policy JP-G7: Trees and Woodlands
- Policy JP-G9: The Green Belt
- Policy JP-P1: Sustainable Places
- Policy JP Allocation 1.2: Simister and Bowlee (Northern Gateway) (and associated Supplementary Planning Document)

Bury Council

Saved policies of the Bury Unitary Development Plan (adopted 29 August 1997):

- Policy EN1 - Built environment
- Policy EN6 - Conservation of the natural environment
- Policy EN8 - Woodland and trees

[6] Planning practice guidance - GOV.UK

- Policy EN9 - Landscape

Rochdale Borough Council

Rochdale Core Strategy (adopted 19 October 2016):

- Policy G4 - Protecting Green Belt land
- Policy G5 - Managing protected open land
- Policy G6 - Enhancing green infrastructure

Saved policies of the Rochdale Borough Unitary Development Plan (adopted June 2006):

- No relevant saved policies

Guidance

8.9 Current technical guidance relating to LVIAs comprises:

- Landscape Institute/ Institute of Environmental Management and Assessment (2013), *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition* [GLVIA3];
- Landscape Institute (2024), *Technical Guidance Note 2024-01: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition* [TGN 2024-01];
- Natural England, (October 2014), *An Approach to Landscape Character Assessment*;
- Landscape Institute (2019), *Technical Guidance Note 06/19*: *Visual Representation of Development Proposals* [TGN 06/19]; and
- Landscape Institute (2021) *Technical Guidance Note 02/21: Assessing Landscape Value Outside National Designations* [TGN 02/21].

Preliminary Assessment of Baseline Conditions

Landscape Character of the Site and Its Environs

8.10 The Site comprises approximately 98 ha of predominantly pastoral farmland between the settlements of Rhodes, Simister and Bowlee.

8.11 The land within the Site is made up of multiple fields, bounded by an arrangement of hedgerows with hedgerow trees and occasional tree belts and small woodlands. The boundary of the Site is generally similarly marked by hedgerows or tree belts. Surrounding

land use is a mix of settlements and settlement-edge farmland, and there are three golf courses to the east, southwest (part of Heaton Park), and northwest of the Site.

8.12 The undulating topography varies from approximately 75 -115m Above Ordnance Datum (AOD), with a high point near Bowlee in the northern part of the Site. The surrounding topography is similarly undulating.

8.13 There are a number of small watercourses and ponds within the Site, with a slightly larger reservoir/fishing pond within Assessment Boundary to the west of Heywood Old Road.

8.14 There are four public footpaths (FPs) within the Site:

- Within the Bury Council area, FPs 30PRE and 46PRE cross the western parcel; and
- Within the Rochdale Council area, FPs MidFP94 and MidFp93 cross the eastern parcel, connecting to RUPP (Road Used as a Public Path) 93a.

8.15 There are a number of other Public Rights of Way (PRoWs) within the wider surrounding landscape. The promoted Rochdale Way passes adjacent to the Site where it aligns with Ellis Lane/Boardman Lane.

8.16 Heywood Old Road (A6045) passes between the eastern and western parcels of the Site, and Ellis Lane/Boardman Lane follows the eastern boundary. The M60 motorway lies to the immediate southwest of the Site on a northwest-southeast alignment, while the M62 lies to the north of Simister on a southwest-northeast alignment. The intersection between the two motorways lies to the immediate west of Simister.

8.17 Beyond the adjoining settlements of Rhodes, Simister and Bowlee there are extensive urban areas within the Greater Manchester conurbation.

8.18 In summary, the Site predominantly comprises undulating farmland, intersected by riparian, hedgerow and woodland corridors. The surrounding area is more developed, mainly for residential and industrial uses, giving the Site a settled context.

Landscape Designations

8.19 The Site lies outside of any national/statutory or local/non-statutory landscape designations. The nearest such designations are:

- Heaton Park Registered Park and Garden (RP&G) lies to the immediate southwest of the M60, approximately 100m from the Site at its closest;

- The Alkrington Woods Local Nature Reserve (LNR) lies approximately 475m to the east of the Site;
- The Blackley Forest LNR lies approximately 500m to the south of the Site;
- Listed Buildings (LBs):
  - A number of Grade I, II*, and II LBs within Heaton Park;
  - Three Grade II LBs in Rhodes, approximately 200-250m from the Site;
- Conservation Areas (CAs) at:
  - Birch, approx. 1.3km to the north-northeast of the Site;
  - Middleton Town Centre, approx. 1.75km to the east of the Site;
  - Manchester Old Road, approx. 1.1km to the east of the Site;
  - Higher Blackley, approx. 1km to the south of the Site.

8.20 The north-western part of the Site lies adjacent to the Greater Manchester Green Belt. Whilst not strictly a landscape designation, aspects of Green Belt policy do relate to landscape matters.

Published Landscape Character Assessments

8.21 The Site lies within or near the following published national character areas (NCA), landscape character types (LCTs), and Landscape Character Areas (see Figure 8.1 National and Regional Landscape Character Context and Figure 8.2 Local Landscape Character Context):

- National Character Areas:
  - NCA 54 - Manchester Pennine Fringe (host);
  - NCA 55 - Manchester Conurbation (to the south);
- Greater Manchester Landscape Character and Sensitivity Assessment (2018):
  - Urban Fringe Farmland LCT/LCA 27: Simister, Slattocks and Healds Green (host);
  - Historic Parks and Wooded Estate Farmland LCT/LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands (to the southwest); and

- Mosslands and Lowland Farmland LCT/LCA 26: Prettywood, Pilsworth and Unsworth Moss (to the northwest);

- Bury Landscape Character Assessment (2009):

  - Fringe Settled Valley Pasture LCT/Castle, Whittle and Brightley LCA (host);

Views and Visual Amenity

8.22 The visual envelope is the area of landscape from which a proposed development would potentially be visible. It accounts for general judgements on the theoretical visibility of a site and sets a broad context for the study area within which to address landscape and visual impacts.

8.23 The extent of a visual envelope will be influenced by the physical landscape components of an area, such as topography, hedgerows, woodlands or buildings, and can also be influenced by distance from a site.

8.24 A preliminary Zone of Theoretical Visibility (ZTV) has been modelled for the Proposed Development, with building heights set at 15m - see Figure 8.3. Much of the Project for Assessment would be lower than this, and the ZTV therefore illustrates the worst-case scenario for potential visibility. The ZTV has used LiDAR data (1m resolution, 2022 dataset) to include the screening effects of existing vegetation and built form. The ZTV has been modelled out to a radius of 2km from the Site to match the Study Area. Beyond this the Project for Assessment is unlikely to be discernible in the view, even with clear visibility conditions.

8.25 Based on the ZTV, the main visual envelope extends:

- approximately 1.5-2km to the north;
- approximately 0.5km to the east;
- approximately 0.5-1km to the south; and
- up to approximately 0.75km to the west.

8.26 There may be some restricted/intermittent visibility beyond these distances in all directions.

Identification of Likely Significant Effects

8.27 The initial assessment findings have identified the following receptors which could be effected by the Proposed Development:

Landscape Receptors:

- Effects on the landscape character of the Site and its immediate environs, within:
  - Urban Fringe Farmland LCT/LCA 27: Simister, Slattocks and Healds Green; and
  - Fringe Settled Valley Pasture LCT/Castle, Whittle and Brightley LCA.
- Effects on the landscape character of the wider local landscape, within the above NCA, LCTs, and LCAs, and also within:
  - Historic Parks and Wooded Estate Farmland LCT/LCA 19: Heaton, Prestwich, Whitefield and Stand Parklands (to the southwest); and
  - Mosslands and Lowland Farmland LCT/LCA 26: Prettywood, Pilsworth and Unsworth Moss (to the northwest).
- Effects on the non-statutory designated landscape of the Grade II RP&G at Heaton Park.

Visual Receptors

- Effects on views experienced by PRoW users and recreational visitors:
  - users of PRoWs within the Site, as detailed above;
  - users of restricted PRoWs to the north of the Site, between the M62 and the A6045;
  - users of restricted PRoWs to the west of the Site, including the promoted Rochdale Way;
  - users of restricted PRoWs to the south of the Site;
  - visitors to Heaton Park, and users of the bridleway between the M60 and Heaton Park;
  - users of PRoWs to the west of the Site, notably FP 29b PRE between the Site and Simister;
- Effects on views experienced by road users (including cyclists and pedestrians):

  - users of Heywood Old Road (A6045) and Ellis Lane/Boardman Lane which run adjacent to the Site;
  - users of Simister Lane, particularly the section to the east of Simister;
  - users of restricted sections of the M60, M62 and M66;
  - users of the northeastern end of A576 adjacent to Heaton Park;
  - users of restricted sections of some other minor roads (typically glimpsed/fleeting views towards the Site only);

- Effects on views experienced by residential occupiers:
  - in certain properties in Simister;
  - in certain properties in Bowlee;
  - in certain properties on Old Heywood Road; and
  - in certain properties on the northern edge of Rhodes.

8.28 The proposals may also affect views from certain other rural or more isolated properties within the wider surrounding landscape, and from a very limited number of properties within the wider surrounding settlements.

8.29 It should be remembered that views from individual residential properties are not protected by UK planning law. The assessment of effects on visual amenity as experienced from residential properties will generally therefore be based on groups of properties in similar locations or with similar views, rather than individual properties. In line with GLVIA3, the assessment of such effects will be undertaken from publicly accessible locations, with reference to publicly accessible mapping and aerial imagery where appropriate.

Representative Viewpoints

8.30 21 representative viewpoints have been selected to aid the assessment of effects on visual amenity, as shown on **Table 8.1**. These are shown on the ZTV at Figure 8.3. The location and extent of representative viewpoints will be agreed through ES scoping process outlined within this document.

Table 8.1: Representative Viewpoints

VP No.	Location	Receptor(s)	Distance from Site	Direction of View
1	PRoW FP 30PRE on northwest edge of Site	PRoW users	Edge of Site	SE
2	PRoW FP 46PRE on eastern edge of western parcel	PRoW users Residential occupiers	Edge of Site	SW
3	PRoW FP 30PRE at junction with Heywood Old Road on northern edge of Rhodes	PRoW users Residential occupiers	Edge of Site	NW
4	Pedestrian/cycle bridge over M60	Pedestrians Cyclists	104m	N
5	PRoW Bridleway 27aPRE on bridge over M60	Bridleway users	61m	NE
6	Heaton Park Temple within Heaton Park RPG	Park visitors	767m	NE
7	PRoW FP 29bPRE near Nutt Lane to south of Simister	PRoW users	165m	E
8	Simister Lane at bridge over M60	Road users	691m	E
9	Simister Lane at eastern end of Simister village	Road users Residential occupiers	324m	SE
10	Blueball Lane between Simister and Bowlee	Road users	Edge of Site	S
11	PRoW FP 8WHI near Sandfield Farm and bridge over M62	PRoW users Residential occupiers	718m	S
12	PRoW FP 8WHI/RUPP MidRupp108 between A6045 and M62	PRoW users	509m	S
13	A6045 Old Heywood Road at entrance to Bowlee Community Park	Road users	1.04km	SW
14	PRoW RUPP MidRupp95 to south of Bowlee Park Golf Driving Range Part of the Rochdale Way	PRoW users	475m	SW
15	PRoW FP MidFp96 to northeast of Ellis Lane Part of Rochdale Way	PRoW users	130m	SW
16	Ellis Lane/Boardman Lane at junction with RUPP MidRupp93a	Road users PRoW users Residential occupiers	24m	S
17	Junction of RUPP MidRupp93a, FP MidFp94 and FP MidFp93 between Ellis Lane/Boardman Lane and Old Heywood Road	PRoW users Residential occupiers	Edge of Site	W

VP No.	Location	Receptor(s)	Distance from Site	Direction of View
18	Boardman Lane on northern edge of Rhodes Part of Rochdale Way	Road users Residential occupiers	15m	W
19	Wilton Street, Rhodes	Road users Residential occupiers	71m	NW
20	Pedestrian bridge over M60 between Higher Blackley and Rhodes	PRoW users	434m	NW
21	PRoW FP MidFp86 near Alkington Hall	PRoW users	1.53km	W

Non-Significant Effects

8.31 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

- Impacts on NCAs have been scoped out of the EIA on the basis that, given the scale and nature of the proposals, significant effects on NCA-level landscape character are not anticipated;
- Effects on receptors beyond the 2km radius study area; and
- Effects on people at their place of work.

Scope and Methodology of Assessment (including significance criteria)

Geographic and Temporal Scope

8.32 The study area for the LVIA will cover a 2 km radius from the Site, as it is considered that even with clear visibility there would be only limited visibility of the Project for Assessment beyond this distance.

8.33 Effects on landscape and visual receptors will be assessed during the construction phase, and during the operational phase at Years 1 and 15. The latter assessment will consider the effects (on landscape character and on views towards the Project for Assessment) of the growth and development of any proposed mitigation planting.

Approach

8.34 The LVIA will be written by a Chartered Member of the Landscape Institute (CMLI) with extensive experience of landscape and visual assessments across a range of development types.

8.35 Landscape and visual effects will be assessed through professional judgements on the sensitivity of landscape elements, landscape character, visual receptors and representative viewpoints combined with the predicted magnitude of change arising from the proposals. The landscape and visual effects will be assessed separately for:

- Effects on landscape character, including physical landscape features and elements; and,
- Effects on visual amenity.

8.36 Landscape character is defined in GLVIA3 as the *"distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."*

8.37 The assessment of effects on landscape character considers how the introduction of new landscape elements physically alters the landform, landcover, landscape pattern and perceptual attributes of the site or how visibility of the proposals changes the way in which the surrounding landscape character is perceived.

8.38 Direct effects on landscape features and elements are limited to within the Site and includes the direct physical change to the fabric of the land, such as the construction of the proposed plant.

8.39 Effects on visual amenity relate to perceived changes to views from different locations and routes, as experienced by different visual receptors (people).

Significance of Effects

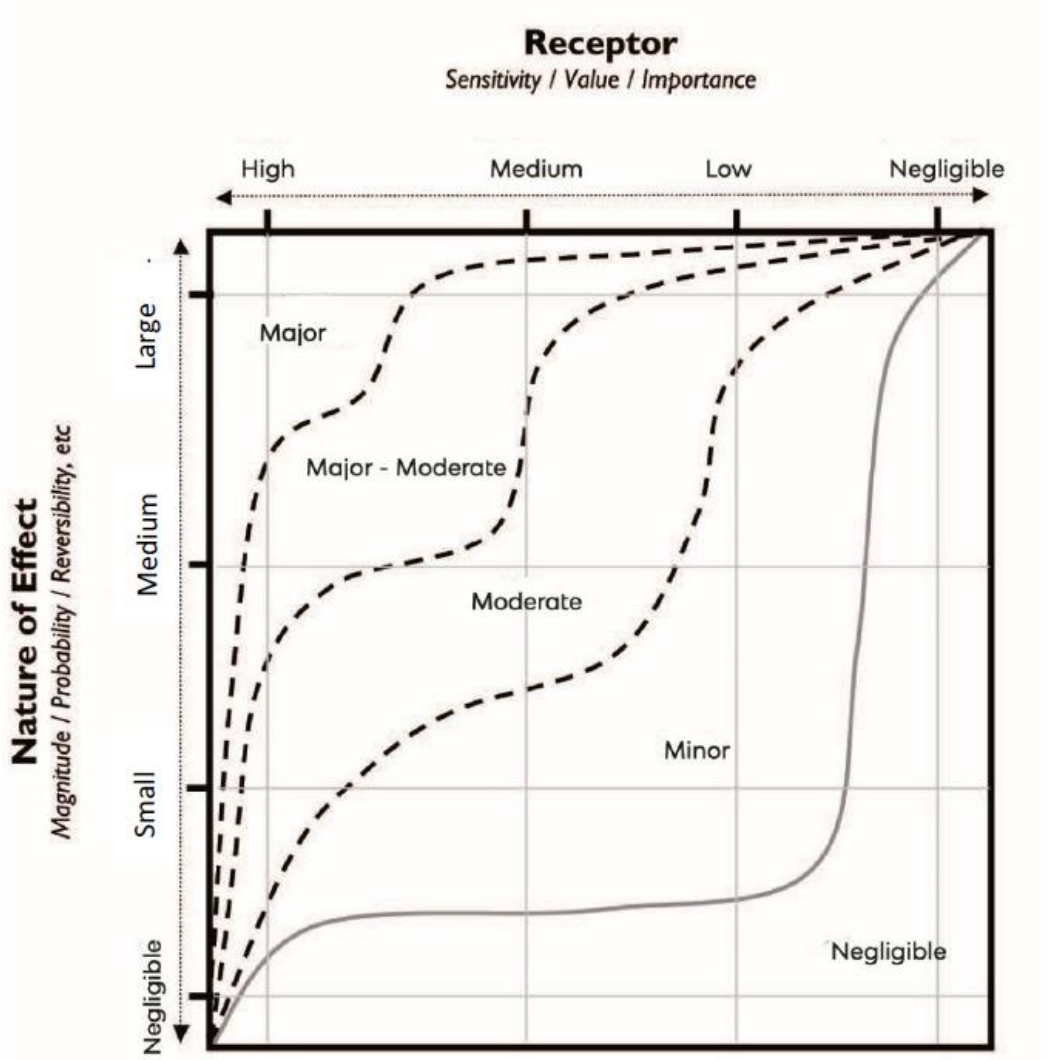
8.40 Sensitivity is defined in GLVIA3 as *"a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."*

8.41 Magnitude of change is defined in GLVIA3 as *"a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration."* Various factors contribute to

the magnitude of change on landscape elements, landscape character, and visual receptors.

8.42 The approach used to determine receptor value, susceptibility and sensitivity, and the magnitude of change that would arise as a result of the Project for Assessment, will be set out in full in the detailed LVIA EIA methodology (see **Appendix 8.1**).

8.43 In order to consider the likely level of any effect, the sensitivity of each receptor is combined with the predicted magnitude of change to determine the level of effect. Having taken such a wide range of factors into account when assessing sensitivity and magnitude at each receptor, the level of effect can be derived by using professional and reasoned judgement to combine the sensitivity and magnitude in line with Matrix 8.1:



Matrix 8.1: Significance of Effects (after IEMA, 2011[7])

[7] IEMA (2011) Special Report – The State of Environmental Impact Assessment Practice in the UK

8.44 GLVIA3 recognises that *"…professional judgement is a very important part of LVIA. While there is some scope for quantitative measurement of some relatively objective matters much of the assessment must rely on qualitative judgements."* While the detailed LVIA methodology makes initial use of tables and matrices, the assessment will be refined using professional judgement.

8.45 The purpose of an LVIA when produced in the context of an EIA is to identify and describe any significant effects on landscape and visual amenity arising from the Project for Assessment.

8.46 Neither EC Directive 2011/12/EU nor the EIA Regulations 2017 define a threshold at which an effect may be determined to be significant. In certain other environmental disciplines, there are regulatory thresholds or quantitative standards which help to determine the threshold of what constitutes a significant effect.

8.47 The Tyler Grange LVIA EIA methodology sets out that effects of Major-Moderate and above are considered Significant.

Nature of Effects

8.48 GLVIA3 includes an entry that states: *"…effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity."* GLVIA3 does not, however, state how negative or positive effects should be assessed, and it therefore becomes a matter of subjective judgement rather than reasoned criteria.

8.49 Due to inconsistencies with the assessment of negative or positive effects, a precautionary approach is typically applied to LVIAs that assumes all landscape and visual effects are considered to be negative or adverse unless specifically otherwise stated.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

8.50 Existing landscape features will be protected where possible, such as safeguarding of the on-site Site of Biological Importance (SBI). This non-statutory designated site is identified for its ecological / local nature conservation value but as a physical feature of the Site. Landscape features to be retained, can be safeguarded during construction through best practice sensitive working methods which can be controlled through CEMPs, which can be secured through planning condition. Retained landscape features can be safeguarded during the operational phase of the development through targeted species planting to act as natural screening/ barriers (i.e. hedgerows) and fencing-off.

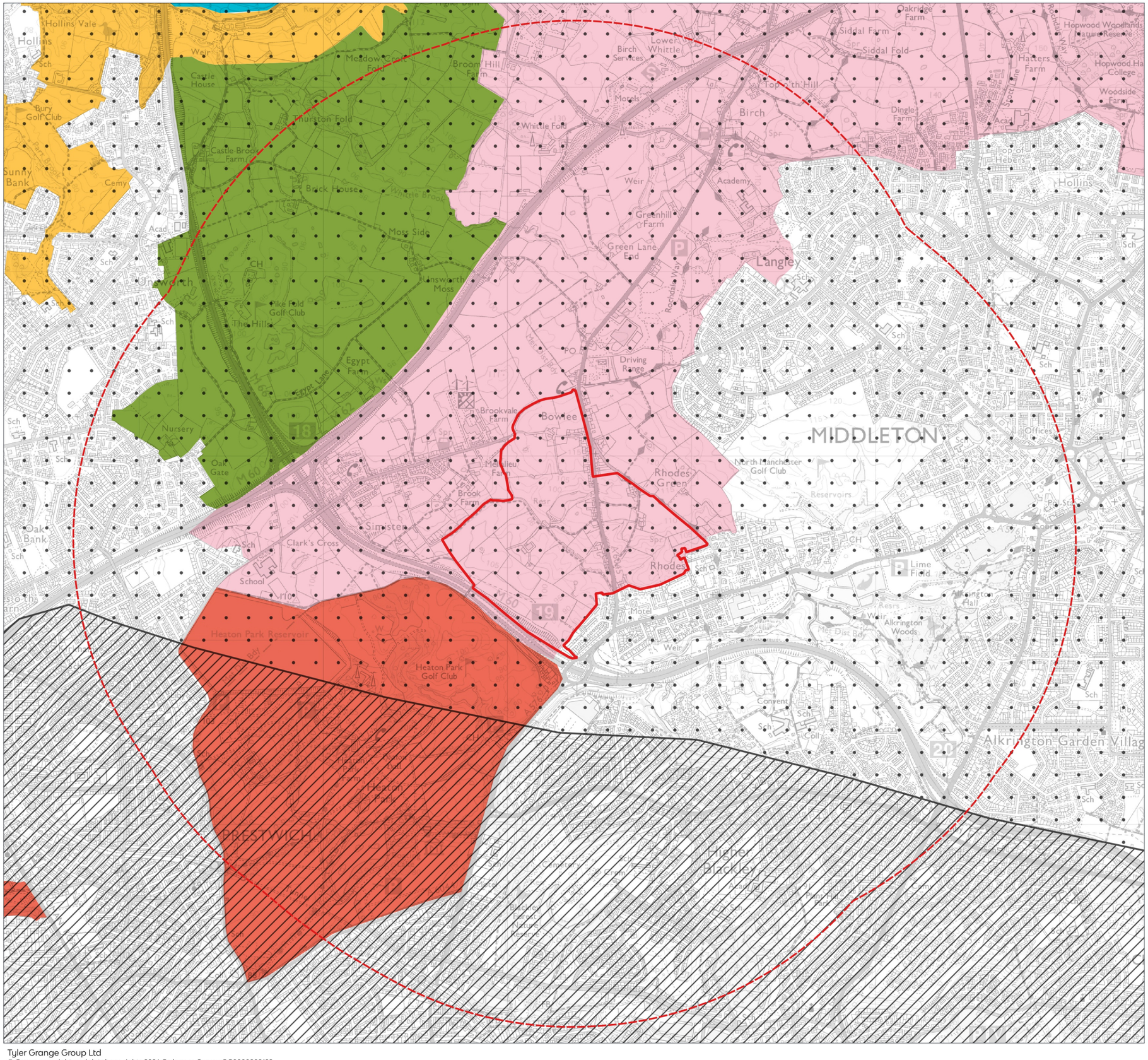
Approach to the Assessment of Cumulative Effects

8.51 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Project for Assessment in conjunction with any committed developments within the vicinity of the sites identified through the scoping process (refer to **Section 3**).

8.52 GLVIA3 Paragraph 7.13 advises that all existing or 'under-construction' schemes within the study area are considered as part of the baseline, rather than being considered as cumulative schemes. GLVIA3 also notes the need for cumulative assessments to be appropriate and proportionate to the proposed scheme under consideration. As advised in GLVIA Paragraph 7.5, the cumulative assessment will focus on likely significant cumulative effects, rather than considering every conceivable cumulative landscape and visual effect that might occur.

8.53 Cumulative effects will be assessed on the basis of 'additional cumulative effects', i.e., that the cumulative schemes would be constructed first, with effects arising from the Project for Assessment being in addition to this. This approach is considered to be in line with Paragraph 7(3) of LI TGN 2024-01.

Figure 8.1: Published Landscape Character



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LEGEND

- Assessment Boundary
- 2km Buffer

Greater Manchester Landscape Character and Sensitivity Assessment - Landscape Characer Types

- Historic Parks and Wooded Estate Farmland
- Incised Urban Fringe Valleys
- Mosslands and Lowland Farmland
- Reclaimed Land / Wetlands
- Urban Fringe Farmland

National Character Areas

- Manchester Conurbation
- Manchester Pennine Fringe

Revision	Description
-	First Issue

0 0.5 1 km

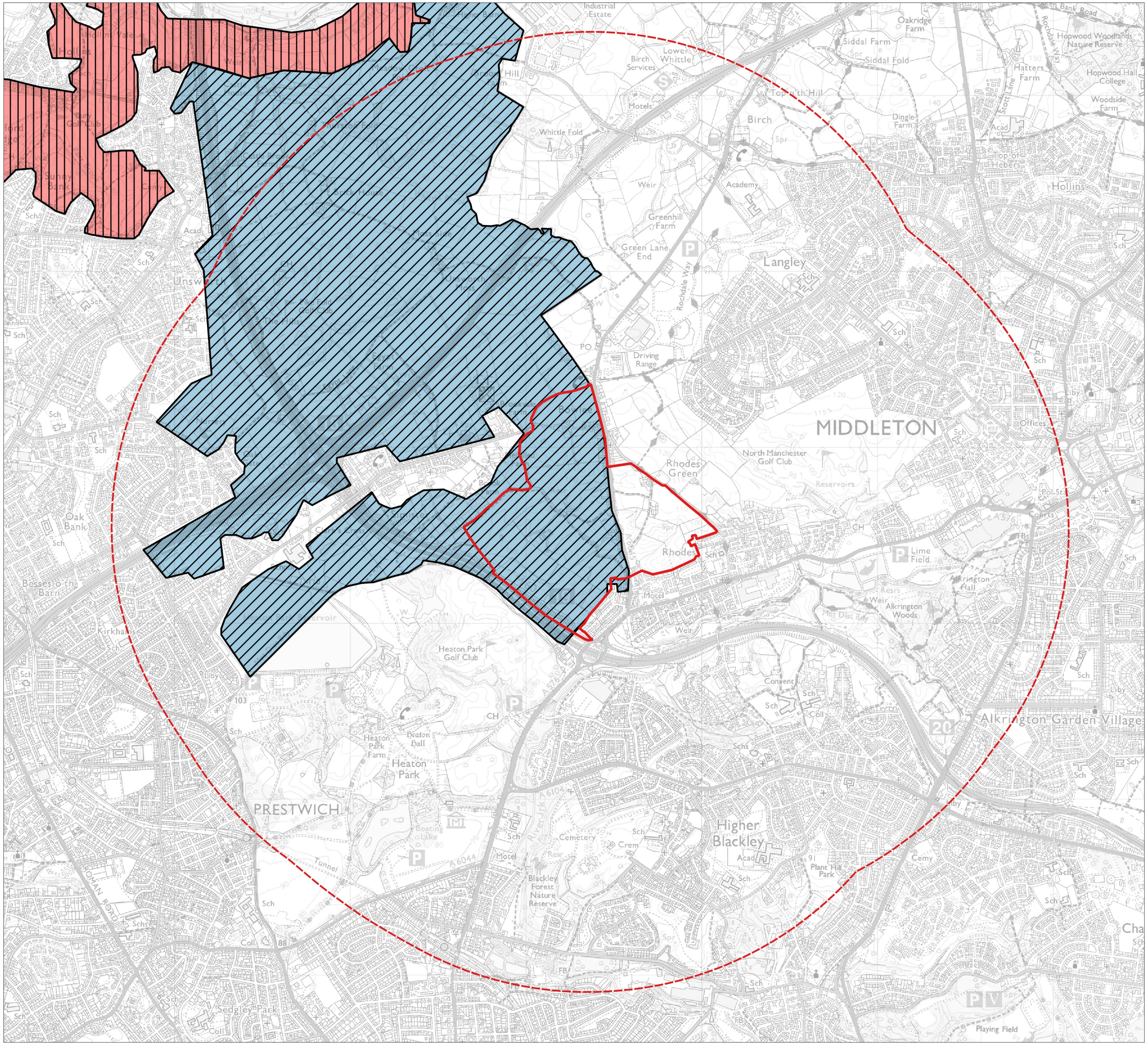
Project	Northern Gateway JPA 1.2
Title	Figure 8.1 Published Landscape Character
Scale	1:21,000 @ A3
Drawing No.	16552_P07
Date	July 2026
Checked	IJ/JJ

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Figure 8.2: Published Landscape Character



LEGEND

- Assessment Boundary
- 2km Buffer

Bury Landscape Character Assessment - LCAs

- Fringe Industrial Brook
- Fringe Settled Valley Pasture

Bury Landscape Character Assessment - LCTs

- 54/1c Hollins & Parr
- 54/2 Castle, Whittle, Brightley

Revision	Description
-	First Issue

0 0.5 1 km

Project	Northern Gateway JPA 1.2
Title	Figure 8.2: Published Landscape Character
Scale	1:22,000 @ A3
Drawing No.	16552_P13
Date	July 2026
Checked	IJ/JJ

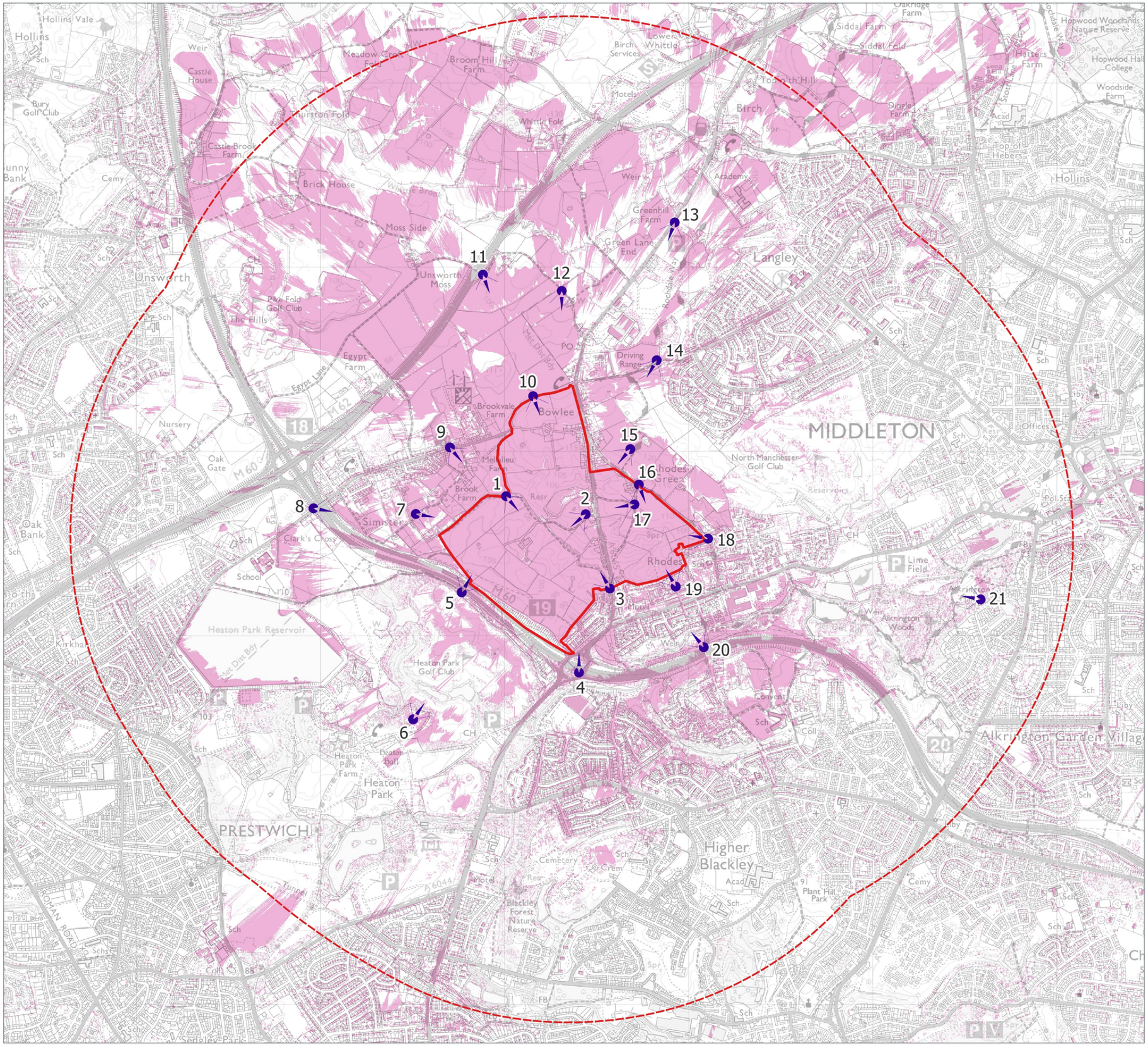
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Figure 8.3: Zone of Theoretical Visibility and Photo Viewpoint Locations



LEGEND

- Assessment Boundary
- 2km Buffer
- Photoviewpoint Locations
- Zone of Theoretical Visibility (ZTV)

Notes:
This ZTV illustrates the extent to which the development is potentially visible assuming a receptor with an eye height of 1.6m within a 5km radius. Building heights are set at 15m. The ZTV has been modelled using GIS computer software (QGIS) and LIDAR 1m DSM, and as such does not take into account built form or vegetation present within the landscape. Field verification is required to refine the accuracy of the ZTV.

Revision	Description
-	First Issue

0 0.5 1 km

Project	Northern Gateway JPA 1.2
Title	Figure 8.3: Zone of Theoretical Visibility and Photoviewpoint Locations
Scale	1:21,000 @ A3
Drawing No.	16552_P03
Date	July 2026
Checked	EB/WL

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9 ECOLOGY

Introduction

9.1 This chapter of the ES will assess the effects of the Project for Assessment on Ecology and Nature Conservation both on site and within the surrounding area. The assessment will be undertaken by Tyler Grange Group Ltd.

Relevant Legislation, Policy and Guidance

9.2 Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Environment Act 2021;
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerows Regulations 1997; and
- The Protection of Badgers Act 1992.

9.3 The following section summarises National Planning Policy, which have relevance to ecology:

- The National Planning Policy Framework (NPPF), December 2024

Local Planning Policy

9.4 The Site is situated within the administrative boundaries of Bury and Rochdale Councils. Within Bury, the relevant adopted Development Plan comprises:

- Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 ('PfE') (adopted 21 March 2024)

- Saved policies of the Bury Unitary Development Plan ('Bury UDP') (adopted 29 August 1997)[8]

9.5 Within Rochdale, the adopted Development Plan comprises:

- Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 ('PfE') (adopted 21 March 2024)
- Rochdale Core Strategy ('Rochdale CS') (adopted 19 October 2016)9
- Saved policies of the Rochdale Borough Unitary Development Plan ('Rochdale UDP') (adopted June 2006) [10]
- Simister Bowlee Development Framework SPD (February 2026)

9.6 The following PfE policies are relevant to both Bury and Rochdale:

- PfE Policy JP-Strat13 (Strategic Green Infrastructure)
- PfE Policy JP-G2 (Green Infrastructure Network)
- PfE Policy JP-G3 (River Valleys and Waterways)
- PfE Policy JP-G8 (A Net Enhancement of Biodiversity and Geodiversity) aims
- PfE Policy JP Allocation 1.1 (Heywood / Pilsworth (Northern Gateway))

Preliminary Assessment of Baseline Conditions

9.7 The Study Area (Zone of Influence, ZoI) for the identification of designated sites follows best practice guidelines[11]. Sites of International importance were considered at 10km

[8] PfE Appendix A Table A.2 sets out the policies of the Bury UDP which have been superseded following adoption of PfE and are therefore no longer relevant.
[9] PfE Appendix A Table A.5 sets out the policies of the Rochdale CS and Rochdale UDP which have been superseded following adoption of PfE and are therefore no longer relevant.
[10] PfE Appendix A Table A.5 sets out the policies of the Rochdale CS and Rochdale UDP which have been superseded following adoption of PfE and are therefore no longer relevant.
[11] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

from the Site, with National, County and Locally designated sites being considered at 2km from the Site.

Statutory Designated Nature Conservation Sites

9.8 One site of international importance is present within the 10km ZoI, namely Rochdale Canal Special Area of Conservation (SAC). The SAC is located 4.3 km east of the Site and is designated for floating water plantain *Luronium natans*.

9.9 One site of national importance is present within the 2km ZoI, namely Rochdale Canal Site of Special Scientific Interest (SSSI). The SSSI boundary is coincident with the SAC boundary and therefore shall be included as part of the same assessment criteria.

9.10 There are two statutory designated Local Nature Reserves (LNRs), namely:

- Blackley Forest LNR, located 0.5 km south of the Site; and,
- Alkrington Woods LNR, located 1 km southeast of the Site.

Non-statutory Designated Nature Conservation Sites

9.11 There are seven non-statutory designated sites within 2 km of the ZoI, they are detailed in **Table 9.1**.

Table 9.1: Ecological Designations

Designation	Designation Name and Distance from the Site	Ecological Importance
Non-statutory	**Streams and flushes near Bradley farm** Site of Biological Importance (SBI); Onsite	County
Non-statutory	**Hazlitt** SBI; 0.78 km West	County
Non-statutory	**Heaton Park reservoir** SBI; 0.74 km West	County
Non-statutory	**Alkrington woods and Rhodes lodges** SBI; 0.94 km Southeast	County
Non-statutory	**Lakeside woodland in Heaton Park** SBI; 1km Southwest	County
Non-statutory	**Boardman brook** SBI; 1.4km Southeast	County

Non-statutory	**Blackley forest and Heaton vale reservoirs** SBI; 1.5 km Southwest	County

9.12 The Site is located within a SSSI Impact Risk Zone of Rochdale Canal SAC, SSSI. However Natural England consider that the proposals do not match the criteria for the type and scale of development which could result in likely adverse effects (see Figure 9.1). Although consultation with Natural England is not required, due to the reasons outlined above, a Screening HRA, providing further evidence obtained from the Air Quality consultants should still be provided. As such, a HRA Screening report will be submitted with the application and co-ordinated with the assessment to be contained in the ES.

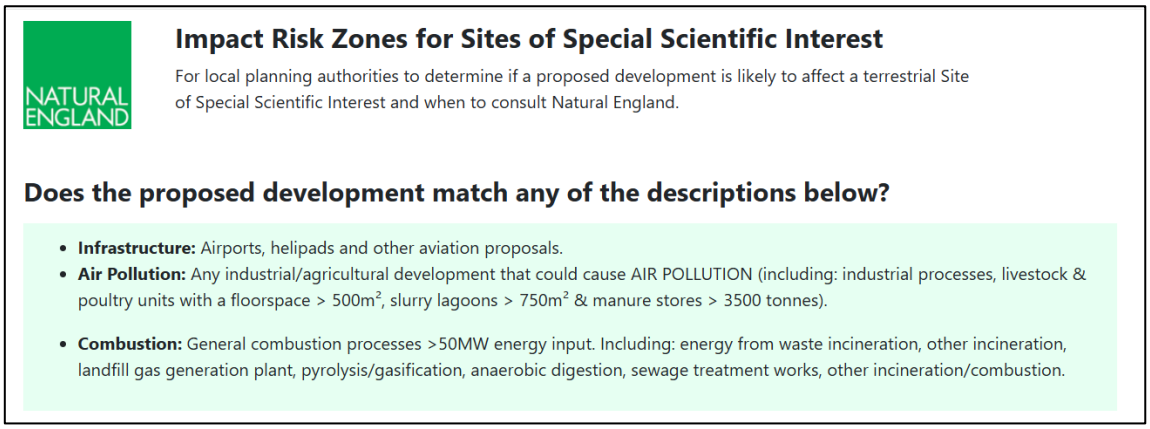


Figure 9.1: Extract from MAGIC Maps[12]

9.13 It should be noted that, although outside of the 10km ZoI, the draft Habitat Regulations Assessment (HRA) of the Places for Everyone (PfE)[13] scoped the Site (referred to as GMA1.2) in for potential impacts on the South Pennine Moors SAC from cumulative air pollution caused by increased traffic generation. An assessment undertaken by Ricardo as part of the PfE HRA[14] describes the potential for airborne ammonia, nitrogen and acid deposition to "*have only a marginal effect on the South Pennine Moors and would not result in any measurable reduction in the extent of blanket bog or other specified habitats*" for the

[12] MAGIC Maps [online] [Accessed 01/07/2026]: https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0300000430000&notes=&location=387670,439176%20%20(IRZ%20polygon%20centre)
[13] Draft Habitats Regulations Assessment of the Places for Everyone Joint Development Plan, June 2021
[14] Habitats Regulations Assessment of the Places for Everyone Joint Development Plan [online [Accessed 01/07/2026] https://www.greatermanchester-ca.gov.uk/media/5669/110301-pfe-hra-submission-2022.pdf

PfE plan. Therefore, no impacts arising from airborne pollution during the construction and operational phases are anticipated.

9.14 Furthermore, The Draft South Pennine Moors Supplementary Planning Document[15], which provides guidance on the implementation of the PfE policy, to ensure that new development will not result in an adverse effect on the South Pennine Moors SPA/SAC, states that:

"Since adoption of the PfE Plan, Natural England has now indicated that there is no credible risk to the habitats and species on the SAC and SPAs from recreation impacts. Consequently, Natural England considers that new development within the PfE area, specifically the three areas of Oldham, Tameside and Rochdale, does not need to provide mitigation in accordance with part 7c of JP-G5".

9.15 Therefore, due to being outside of the ZoI, and the justification detailed above, the South Pennine Moors SAC, SPA are scoped out for further assessment.

Habitats

9.16 The site is characterised by largely species-poor modified grassland (negligible importance) associated with cattle grazing and silage with some areas of other neutral grassland (local importance) mainly located to the east of the Site. There are hedgerows (local importance) across the Site, with ponds (local importance) and a large fishing lake evident on land to the west of Heywood Old Road. An unnamed brook (local importance) runs north to south through the central area of the western part of the site, featuring a riparian corridor in moderate condition. Additionally, a plantation woodland block is adjacent to the M60, for the purpose of screening the motorway, with small pockets of semi-natural deciduous woodland (local importance) features around the Site. A Site of Biological Importance ("SBI") named Streams and flushes near Bradley Farm, is located within the eastern part of the Site. Invasive species (Himalayan balsam *Impatiens glandulifera* and Japanese knotweed *Reynoutria japonica*) are present in pockets across the site, particularly found along the watercourse embankments, which are of negligible ecological importance, but require mitigation.

[15] **Draft South Pennine Moors Supplementary Planning Document. 24th September 2024. Director of Economy and Place.**

9.17 Refer to Habitat Features Plan – Figure 9.1 for results of the habitat survey undertaken to date.

Fauna

9.18 Based on the habitats recorded at the Site, there is potential for the Site to support the following species:

- Amphibians;
- Badgers *Meles meles*;
- Bats;
- Birds (non-breeding and breeding);
- Brown hare *Lepus europaeus*;
- Hedgehog *Erinaceus europaeus*;
- Invertebrates;
- Otter *Lutra lutra*; and
- Water Vole *Arvicola amphibius*;

Identification of Likely Significant Effects

9.19 The initial assessment findings have identified the following receptors which could be effected by the Project for Assessment, detailed in **Table 9.2**:

Table 9.2: Potential Effects scoped-in to the Assessment

Effect	Receptor(s)	Applicable Stage
Degradation through nitrogen deposition and recreational pressure	Rochdale Canal SAC and SSSI	Construction and Operation
Degradation through air quality, dust pollution and recreational pressure	Non-Statutory nature conservation sites (all SBI's listed in Table 9.1)	Construction and Operation

Effect	Receptor(s)	Applicable Stage
Overall loss of habitat and degradation of retained habitat	Deciduous woodland (loss) Hedgerows (loss) Neutral grassland (loss) Ponds (loss) Mixed scrub (loss) Degradation (retained habitats)	Construction and Operation
Risk of killing/injury/ loss of habitat and disturbance to populations of wildlife	Amphibians, badgers, bats, birds [non-breeding and breeding], brown hare, hedgehog, invertebrates, otter and water vole within the Site and +250m surrounding Site in the case of Great Crested Newt/Amphibians	Construction and Operation

9.20 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

- Reptiles have been scoped out of the assessment due to a lack of suitable habitat and no local records of reptiles returned from the local record centre.

Scope and Methodology of Assessment (including significance criteria)

9.21 The following background surveys have been/will be completed at the Site and are detailed in **Table 9.3**. At this stage, access has been permitted for all areas of the Site.

Table 9.3: Background Surveys Pending/ Confirmed

Survey/Study/ Analysis/ Evaluation	Methodology	Date of Completion
Statutory nature conservation sites[16]	Statutory nature conservation sites are assessed in line with CIEEM EIA Guidelines, where a Zone of Influence (ZoI) from the development Site is assessed at geographical ranges from 10 km for Internationally designated sites, and	Ongoing

[16] **Impacts on the internationally important nature conservation sites will also be addressed through a Habitat Regulations Assessment. Initially, this will comprise a Stage 1 screening assessment, followed by a Stage 2 Appropriate Assessment if Likely Significant Effects are anticipated.**

Survey/Study/ Analysis/ Evaluation	Methodology	Date of Completion
	2 km for National, County and locally designated sites.	
Non-statutory nature conservation sites	An assessment of impacts on non-statutory sites will be undertaken.	Ongoing
Amphibians (including Great Crested Newt)	Surveys for great crested newt have been undertaken at all ponds within the Site and in adjacent land within 250m, where access permitted. There were 15 ponds either onsite or within 250 m of the Site. In June 2024, eight of those ponds were accessible, two were dry; eDNA samples were successfully taken from six ponds, all of which came back negative for GCN. eDNA surveys for four offsite ponds to the east of the site (Rhodes Green Farm) were carried out in June 2025. All four ponds were dry. Due to historic records of GCN at pond P11, a second eDNA sample was taken in June 2026, which also came back negative. The results of the GCN eDNA surveys concluded that all accessible ponds had negative results for GCN.	June 2024, June 2025 & June 2026
Badger	Badger surveys across the Site have been completed in 2025, with update surveys ongoing in 2026. Surveys undertaken in the appropriate season to identify setts and areas of foraging. A single badger sett was recorded to the north of the Site. The entrances and tunnels are on the opposite side of the embankment to the Site. Further bait-marking surveys may be considered if it is apparent that different badger territories occupy the Site.	June 2024, June 2025 & June 2026
Bats (roosting and foraging)	Preliminary roost assessment surveys of all buildings within the Site have been undertaken. Following this, further nocturnal surveys have been undertaken in line	May 2025 – September 2025 (bat roosts) & May 2025 – Ongoing (bat activity)

Survey/Study/ Analysis/ Evaluation	Methodology	Date of Completion
	with the building's suitability for bats[17]. An alternative approach of climbed assessments will be used for trees where this is deemed necessary or a more accurate/proportionate approach due to the transient nature of tree roots. In addition, the accessible land is generally perceived to offer moderate habitat quality for foraging and commuting bats owing to its predominant agricultural use. Certain areas (i.e. neutral grassland, watercourses) offer higher value, but in the general context of the wider site's suitability, an assessment of overall moderate habitat quality is considered proportionate. In line with this assessment, seasonal transect surveys of the Site are ongoing in the appropriate season (Spring, Summer, Autumn) and supplemented by static automated detector deployments once per month from April – September.	
Birds	Detailed breeding bird surveys have been undertaken at the Site. A full suite of breeding bird surveys, comprising a minimum of three early-morning visits have been undertaken, including a fourth nocturnal visit, to assess for nocturnal and crepuscular species, in line with best practice guidance[18]. Targeted barn owl surveys have been undertaken on the central farm buildings and horse stable. The breeding bird surveys found mostly common and widespread bird species, with few ground	Breeding Birds 2024-2026 Non-breeding Birds 2023-2024

[17] **Bat Surveys for Professional Ecologists: Good Practice Guidelines, BCT, 4th Edition 2023**
[18] **Bird Survey Methodology [online] [Accessed 01/07/2026]:** https://birdsurveyguidelines.org/methods/survey-method/

Survey/Study/ Analysis/ Evaluation	Methodology	Date of Completion
	nesting bird territories which may otherwise be expected in similar habitat types. A full suite of non-breeding bird surveys has been undertaken, comprising a minimum of five early morning surveys and one nocturnal survey in the appropriate season, to establish presence of overwintering bird species. The non-breeding bird surveys found mostly common and widespread over-wintering species, such as winter thrushes. No overwintering geese were recorded.	
Brown hare	Desk based records for this species will be included in the assessment, along with visual evidence noted during other protected species surveys such as wintering and breeding bird surveys and badger surveys, where the site is being covered during daytime and evening walkovers.	Ongoing – as part of other protected species surveys
Habitats	Detailed 'extended' phase one habitat survey and UK Habs survey has been undertaken at the Site. Condition assessments of each habitat, including hedgerows, as per Defra Metric guidance has been undertaken to inform Biodiversity Net Gain calculations[19]. Additionally, River MoRPH surveys have been undertaken to establish the baseline condition of the onsite watercourses. A draft Habitat Features Plan is accompanying this Scoping Report[20]. It should be noted however that although the Assessment boundary (allocation boundary) remains fixed, the application redline	June 2024 & June 2025 & Update walkovers have been undertaken in May 2026

[19] https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides
[20] 16552_P09_DRAFT Habitat Features Plan

Survey/Study/ Analysis/ Evaluation	Methodology	Date of Completion
	boundary may change. Therefore, a finalised Habitat Features Plan will accompany the EIA.	
Hedgehog	Desk based records for this species will be included in the assessment, along with visual evidence noted during other protected species surveys such as wintering and breeding bird surveys and bat surveys, where the site is being covered during dawn and dusk walkovers.	Ongoing – as part of other protected species surveys
Invertebrate	The neutral grassland fields in the Eastern area of the Site could support protected and notable invertebrates and therefore targeted surveys are being undertaken.	Ongoing
Otter/Water Vole	Although it is acknowledged that the Brooks / watercourses at the Site will be retained in any event, proximate development or crossings could incur adverse impacts. For this reason, surveys (one early season April – June and a second late season July – September) have been undertaken on the central (unnamed) watercourse	June 2025, September 2025

9.22 The methodologies and results of the surveys will be presented in the ES Chapter and associated Technical Appendices.

9.23 Standardised significance criteria used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;

- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

9.24 The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- **Major effect**: where the Project for Assessment is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
- **Moderate effect**: where the Project for Assessment is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- **Minor effect**: where the Project for Assessment is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Project for Assessment is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change or/and can recover from the change; and
- **Negligible**: where the Project for Assessment is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change

9.25 The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

9.26 Existing ecological features will be protected where possible, specifically in relation to safeguarding of the on-Site Site of Biological Importance (SBI). This non-statutory designated site is identified for its ecological nature conservation value but as a physical feature of the Site. Ecological features can be safeguarded during construction through best practice sensitive working methods which can be controlled through CEMPs, to be secured through planning conditions. These retained habitats can be safeguarded during

the operational phase of the development through targeted species planting to act as natural screening/ barriers (i.e. hedgerows) and fencing-off.

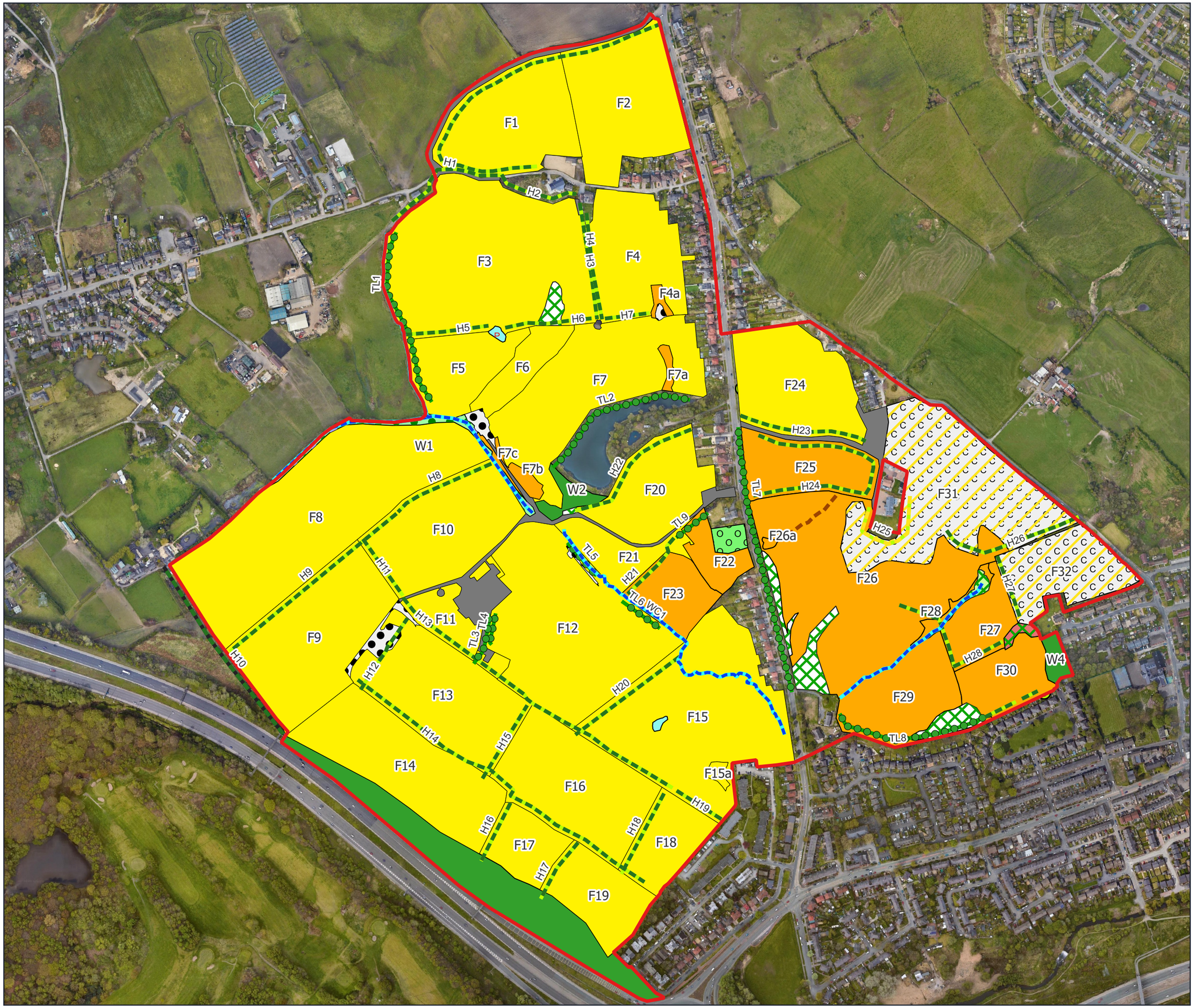
Approach to the Assessment of Cumulative Effects

9.27 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Project for Assessment in conjunction with any committed developments within the vicinity of the sites identified through the scoping process (refer to **Section 3**).

9.28 In line with EIA Regulations, the study area for the cumulative assessment will be the same as for the rest of the assessment, i.e., 10 km for international designated site and 2 km for nationally designated sites, non-statutory designated site and protected and notable species.

9.29 Cumulative effects will be assessed on the basis of 'additional cumulative effects', i.e., that the cumulative schemes would be constructed first, with effects arising from the Project for Assessment being in addition to this.

Figure 9.1: Habitat Features Plan



Legend

Redline boundary

Baseline Habitats

- Cropland — Cereal crops
- Grassland — Traditional orchards
- Grassland — Other neutral grassland
- Grassland — Modified grassland
- Woodland and forest — Lowland mixed deciduous woodland
- Woodland and forest — Other woodland; broadleaved
- Heathland and shrub — Hawthorn scrub
- Heathland and shrub — Mixed scrub
- Heathland and shrub — Willow scrub
- Lakes — Ponds (priority habitat)
- Lakes — Ponds (non priority habitat)
- Urban — Developed land; sealed surface
- Urban — Bare ground

Linear Baseline

- Dry ditch
- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Non native and ornamental hedgerow
- Other rivers and streams

Baseline Trees

- Small >7.5cm to 30cm
- Medium >30cm to 60cm

0 — 200 m

Project	Northern Gateway 1.2
Drawing Title	DRAFT Habitat Featues Plan
Scale	1:5,312
Drawing No.	16552 P09
Date	July 2026
Checked	NB

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10 TRANSPORT AND ACCESS

Introduction

10.1 This chapter of the ES will assess the effects of the Project for Assessment on Traffic and Transport both on site and within the surrounding area. The assessment will be undertaken by Tetra Tech.

10.2 This chapter will be informed by the Transport Assessment ('TA') that will be prepared for submission as part of the planning application.

Relevant Policy and Guidance

National Planning Policy

10.3 This chapter of the ES will be prepared in line with the following national policies listed below

- National Planning Policy Framework (December 2024)

Local Planning Policy and Guidance

10.4 This chapter of the ES will be prepared in line with the following local policies listed below.

- Places for Everyone Joint Development Plan (March 2024)
- Greater Manchester Local Transport Plan – Renewing Our Vision (December 2023)
- TfGM's NG Transport Framework Document (NG TFD) (January 2025)
- Simister Bowlee Development Framework SPD (February 2026)

Preliminary Assessment of Baseline Conditions

10.5 Baseline conditions are described below for the Local Highway Network serving the Site.

A6045 Heywood Old Road

10.6 The A6045 Heywood Old Road forms part of the A6045, extends with a north to south alignment between its junctions with Blueball Lane in the north and A576 Manchester Old Road/ A576 Middleton Road signalised junction in the south. The A6045 continues northwards under the M62 where it becomes the A6045 Manchester Road.

10.7 In this locality, Heywood Old Road is subject to a 30mph speed limit and has street lighting along its length. Generally, it has a residential character with footways provided on both sides separated by a verge.

10.8 It features painted cycle lanes on both sides of the carriageway which are intermittent along the carriageway. It is also a bus route although there are no bus services currently routing along it.

10.9 Travelling south to north from Manchester Old Road, it features an average slope 4.5% rising towards its junction with Simister Lane and then around a 5% slope dropping towards Blueball Lane.

A576 Manchester Old Road/ Middleton Road

10.10 The A576 extends with an east to west alignment between its junctions with A6045 Heywood Old Road signalised junction in the west and Boardman Lane in the east. The A576 continues east towards Middleton town centre and in the west where it connects to the M60 Motorway via M60 Junction 19.

10.11 In this locality, A576 is subject to a 30mph speed limit and has street lighting along its length. Generally, it has a residential character with pedestrian crossing points and footways provided on both sides of the carriageway.

10.12 It is also a bus route and accommodates several bus services and features both In-Lane and Pull-Out bus stops along its extent.

10.13 It features an average slope 0.6% which can be classified as flat terrain.

Boardman Lane

10.14 Boardman Lane extends with a north to south alignment between its junctions with Hilton Walk in the north and A576 Manchester Old Road in the south. Boardman Lane continues northwards where it connects with the A6045 Heywood Old Road.

10.15 In this locality, Boardman Lane is subject to a 20mph speed limit within the built-up zone and has street lighting along its length. Generally, it has a residential character with footways provided on both sides of the carriageway.

10.16 Beyond the residential zone it is subject to a speed of 30mph, with no footways and it is not street lit.

10.17 It features an average slope 5.5% rising towards its junction with Hilton Walk.

Public Right of Way (PRoWs)

10.18 PRoWs have been identified which are located within the boundaries of Bury Council and Rochdale Borough Council in the locality of the Site.

10.19 Within Bury Council boundary;

- PRoW – 30PRE traverses in a northwest to southeast direction. In the south it connects to PRoW-46PRE which both connect to A6045 Heywood Old Road.
- PRoW – 46PRE traverses in a west to east direction. In the west it connects to PRoW-30PRE and in the east it connects to A6045 Heywood Old Road.
- Bridleway – 27Apre (Bridle Road) traverses in a west to east direction under the M60 motorway. In the east it connects to the site's southwestern boundary and Heywood Road in the west.

10.20 Within Rochdale Borough Council boundary;

- Footpath along Rhodes Green connecting to Heywood Old Road in the west and Rhodes Green in the east.
- Footpath from Rhodes Green junction traversing towards the south. In the south it connects to Heywood Old Road.
- Restricted byway along Rhodes Green traversing towards the north. In the north it connects to Boardman Lane/Ellis Lane.
- Footpath from Ellis Lane traversing towards the north. In the north it connects to a restricted byway.

Identification of Likely Significant Effects

10.21 The initial assessment findings have identified the following receptors which could be effected by the Project for Assessment:

- Heywood Old Road
- Heywood Old Road / Manchester Road
- M60 Junction 19

10.22 The assessment will be informed by TA modelling, and proportional mitigation will be identified with input from the key stakeholders:

- Highways Authority (Rochdale and Bury)
- Transport for Greater Manchester ('TfGM')
- National Highways ('NH')

Scope and Methodology of Assessment (including significance criteria)

10.23 The baseline traffic data to be used within the assessments will be derived from the Northern Gateway Transport Model (NGTM) model.

10.24 The following data sets will be extracted from the model and used as the basis for the assessment of the Study Area:

- Without Development Traffic Volumes; and
- With Development Traffic Volumes.

10.25 The EIA is likely to consider the following after a number of assessment scenarios. These are anticipated to align with the anticipated commencement and completion years as set out in paragraph 5.8 of this Scoping Report. Further details regarding the traffic assessment scenarios are to be agreed by the Key Stakeholders and will be set out within a JPA 1.2 Transport Assessment Scoping Note (TASN).

10.26 The Study Area for the EIA Chapter will be based on the study area considered by the TA, which will be set out in the TASN. The TASN will identify junctions in the vicinity of the Site where the Site would have the most significant vehicular impacts. The ES requires the assessment of Links (or Roads), rather than junctions. Therefore, the links on approach to the junctions identified in the TASN will form the Study Area.

10.27 Assessments will be conducted according to the Institute of Environmental Management (IEMA) Guidance: Environmental Assessment of Traffic and Movement (2023). The IEMA Guidelines for the Assessment of Road Traffic relate to evaluating the environmental impact of road traffic associated with major new developments. This provides the basis for the systematic, consistent, and comprehensive coverage for the appraisal of traffic effects for a wide range of development projects.

10.28 The guidelines indicate that:

- The environmental effects of traffic will be dependent on existing conditions and adjacent land uses as well as changes in traffic levels;
- Assessments should consider the period at which the effect is greatest and the period at which the effects exhibit the greatest change;
- Peak environmental impacts may occur at other times than the 'peak' hour;
- Environmental assessments may need to be undertaken separately for different scenarios; and
- Assessment should be undertaken in the year of opening (or first year of a scenario) when, generally, the perceived environmental impact is the greatest.

10.29 The assessments will therefore take account of daily traffic volume changes (18 and 24 hour), as well as peak hour.

10.30 This section sets out the methodology which will be adopted in the assessment of the likely significant transport and accessibility effects of the development proposals, in relation to the changes on the local highway network traffic flows.

10.31 The IEMA document identifies that as a guide; two broad rules should be applied to identify the links (roads) for assessment. Those are:

- Links that experience a 30% increase in daily traffic or HGV flow; and
- Highly Sensitive Links that experience a 10% to 30% increase in traffic.

10.32 For the links within the Study Area, the above two broad rules will be applied through a Net Impact Assessment (comparing the Without Development scenario against the With Development Scenario). The Net Impact Assessment will be undertaken based on the 2-way Annual Average Daily Traffic flow (AADT) on a link (carriageway) in accordance with IEMA guidelines.

10.33 The net impact assessment will provide a provisional list of "Links for Assessment". Following completion of the net impact assessment, each link will be subject to a qualitative assessment to establish whether it should be included in the assessment, for example, a link may be forecast to be subject to 2 HGV's a day in the Without Development Scenario, and 4 HGV's a day in the With Development scenario, which is a 100% increase and therefore the broad rules would capture this link in the Links for Assessment. However, an increase of 2 HGV's a day is clearly not a significant impact and therefore

this link would be removed from the Links for Assessment. On completion of the quantitative review, a final list of "Links for Assessment" will be established, and those links will be taken forward in the Assessment within the ES.

10.34 The assessment will be undertaken against the following effects:

- Severance;
- Pedestrian Delay;
- Pedestrian Amenity;
- Fear and Intimidation;
- Driver Delay; and
- Accidents and Safety.

10.35 The IEMA Guidelines for the Environmental Assessment of Road Traffic sets out the broad principles of how to assess the magnitude of change/impact for each of the effects. The assessment principles are summarised below.

Severance

10.36 The IEMA guidance states that severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery. However, the guidance acknowledges that the measurement and prediction of severance is extremely difficult. The assessment of severance pays full regard to specific local conditions, in particular the location of pedestrian routes to key local facilities and whether crossing facilities are provided.

10.37 The IEMA guidance references that the LA 112 'Population and Human Health' of the Design Manual for Roads and Bridges (DMRB) provides further guidance on this aspect of severance within a community. LA 112 provides criteria against which the magnitude of change shall be reported, and the LA 112 is quoted in the IEMA Guidance, as shown in **Table 10.1**.

Table 10.1 Severance Thresholds

Magnitude of Impact (Change)	Typical Description
Large	90% or more Change in traffic flow
Medium	60% to 89% Change in traffic flow
Small	30% to 59% change in traffic flow
Negligible	29% or lower change in traffic flow

Pedestrian Delay

10.38 Pedestrian delay refers to the changes in the volume, composition or speed of traffic that may affect the ability of people to cross a road. The IEMA guidance suggests that assessors use their judgement to determine whether pedestrian delay is a significant effect.

10.39 The links of interest will be assessed against the magnitude of change/impact and shall be reported, as shown in **Table 10.2**, which are Tetra Tech's in house threshold which have been used on ES assessments previously.

Table 10.2 Pedestrian Delay Thresholds

Magnitude of Impact (Change)	Total vehicles: peak hour two-way hourly flow (frequency)
Large	Greater than 720 (1 vehicle every 5 seconds)
Medium	360-720 (1 vehicle between 5 to 10 seconds)
Low	120-360 (1 vehicle between 10 and 30 seconds)
Negligible	Less than 120 (less than 1 vehicle every 30 seconds)

Pedestrian Amenity

10.40 Pedestrian amenity is broadly defined as the relative pleasantness of a journey. It is effected by traffic flow, traffic composition and pavement width / separation from traffic. The guidance suggests that assessors use their judgement to determine whether change to pedestrian amenity is a significant effect. The IEMA guidelines suggest a tentative threshold for judging the significance of a change in pedestrian amenity where traffic flow (or its HGV component) is halved or doubled. They note that the assessment of amenity should pay full regard to local conditions. Based on this, the impact magnitude thresholds are set out in **Table 10.3**.

Table 10.3 Pedestrian Amenity Thresholds

Magnitude of Impact (Change)	Increase in vehicles per hour (peak hour)
Large	Greater than 150%
Medium	100%-150%
Low	50%-100%
Negligible	Less than 50%

Fear and Intimidation

10.41 Fear and intimidation are dependent upon the volume of traffic, the level of HGV's, the proximity of traffic to people and the lack of protection caused by such factors as narrow pavement widths. The guidance states that there are no commonly agreed thresholds for estimating this from known traffic and physical conditions, but it does nevertheless suggest some thresholds which could be used, based on previous research, and these are shown in **Table 10.4.**

Table 10.4 Fear and Intimidation Thresholds

Magnitude of Impact (Change)	Average Hourly Traffic Flow over 18hr Day (vehicles per hour)	18hr HGV Flow (vehicles per hour)	Average vehicle speed)
Large	1,800+	3,000+	40+
Medium	1,200 – 1,799	2,000 –2,999	30-40
Small	600 – 1,199	1,000 – 1,999	20-30
Negligible	599 or less	999 or less	20 or Lower

Driver Delay

10.42 Driver Delay is likely to be significant when the traffic on the network surrounding the Site is already at, or close to, the capacity of the system. Driver delay is a result of the net impact generated by a development when compared to the baseline.

10.43 The guidance suggests that assessors use their judgement and modelling forecast software to determine whether driver delay is a significant effect.

10.44 The Junction Modelling Results in the Transport Assessment will be used to establish which of the "Links for Assessment" are operating at, or close to capacity. Any arms of

junctions which are forecast to operate at or over 90% of its theoretical capacity will be assessed in terms of driver delay.

10.45 The links of interest will then be assessed against the magnitude of impact/change and shall be reported, as shown in **Table 10.5**, which are Tetra Tech's in house threshold which have been used on ES assessments previously.

Table 10.5 Driver Delay Thresholds

Magnitude of Impact (Change)	Change in delay
Large	Over 180 seconds
Medium	>120 to <180 seconds
Small	>60 to <120 seconds
Negligible	<60 seconds

Accidents and Safety

10.46 The guidance suggests that professional judgement is used to assess the implications of local circumstances or factors which may elevate or lessen risks of accidents.

10.47 The online website CrashMap will be used to analyse Personal Injury Accident statistics within the area, and to identify any collision hotspots and safety concerns.

10.48 The safety information will be contained within the Transport Assessment with the magnitude of change for accidents and safety to be assessed qualitatively, using professional judgement.

Determining the Level of Effect and Significance

10.49 The significance of potential effects will be determined using criteria developed from best practice techniques and expert knowledge. Significance will be derived from measures of the sensitivity of the receptor effected and the magnitude of the change.

10.50 The sensitivity of a road can be defined by the vulnerability of the groups who may use it, such as elderly people or children. A more sensitive area may be where pedestrian activity is high, such as in the vicinity of a school, or where there is already an existing safety issue. It should be noted that receptor sensitivity is judged on the sensitivity of road users (primarily pedestrians). It also takes account of the nature of the road; for example, an 'A' road is likely to have lower sensitivity than a minor residential road. The sensitivity of receptors is show in **Table 10.6**.

Table 10.6 Receptor Sensitivity

Receptor Sensitivity	Receptor Type
High	Schools, colleges, playgrounds, accident blackspots, retirement homes, urban/residential roads without footways that are used by pedestrians.
Medium	Congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, un-segregated cycleways, community centres, parks, recreation facilities.
Low	Places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision.
Negligible	Any with low sensitivity to traffic flows and those sufficiently distant from effected roads and junctions.

10.51 The receptor sensitivity will be used for two purposes:

1. Identifying which of the links subject to traffic increases of 10-30% are Highly Sensitive and therefore to be included in the "Links for Assessment".

2. For the links included in the "Links for Assessment", which are subject to a 30% or more increase in vehicles or HGV, a Receptor Sensitivity level will be assigned.

10.52 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor to moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

Summary and Results

10.53 The results relating to the effects of severance, pedestrian delay, pedestrian amenity, fear and intimidation and driver delay will be presented in the ES Chapter. The results of the Accidents and Safety review will be presented in the Transport Assessment.

10.54 The standardised significance criteria used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;

- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

Construction Traffic

10.55 The effect of the Project for Assessment during construction will be temporary and lower than those in the operational period, particularly with the implementation of mitigation measures such as a CEMP and Construction Traffic Management Plan (CTMP).

10.56 A CEMP is a comprehensive document that outlines how a construction project will manage and mitigate its environmental impacts. It includes strategies for compliance with environmental regulations, protection of natural resources, and minimisation of negative effects on the surrounding environment. Key components of a CEMP include environmental policy, impact assessments, mitigation measures, and monitoring protocols.

10.57 The CTMP will focus on managing the movement of construction-related traffic to minimise disruption and ensure safety. It details routes for construction vehicles, schedules to avoid peak traffic times, and measures to reduce the impact on local communities and infrastructure.

10.58 The CEMP and CTMP will manage the impact of construction to the local area, agreeing with the Planning Authorities reasonable measures to accommodate the needs of network users, which will include accommodating the requirements of NMUs (e.g. maintaining PROW connectivity).

10.59 Given this, the assessment of the operational phase in traffic terms, is a robust assessment which will assess higher levels of traffic than are expected in the Construction Phase.

10.60 Therefore, construction traffic effects will be considered against the operation assessment and will be reported as part of a qualitative assessment.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

10.61 A CEMP and CTMP is likely to be required by a condition. This will define the number, distribution and types of construction vehicles expected and will include details of routeing to prevent the use of inappropriate routes by HGVs and delivery timings to ensure that HGV deliveries avoid the peak hours. This will help to mitigate potential adverse effects during construction.

10.62 A framework travel plan will be prepared for the proposals to minimise single occupancy car use by residents and users of the Site. The framework travel plan will set out a number of measures to promote sustainable alternatives to the car, including walking, cycling, public transport and car sharing.

10.63 PfE JPA 34 outlines required transport improvements including localised junction improvements M62 J19 / A6046 Heywood junction, improvements on A576 Middleton Road / Manchester Old Road in vicinity of M60 J19 and active travel improvements including introduction of local bus services to and from the Site.

10.64 There are various on-going studies, the purpose of which is to determine the nature of active travel local improvements in the locality, which include:

- TfGM A576 Corridor Study (Package of 50+ measures for sustainable travel and vehicular travel improvements).
- TfGM Active Travel Strategy – includes a route improvement scheme along Heywood Old Road to deliver high quality pedestrian and cycle infrastructure along with bus stop improvements.

10.65 The TA will determine the requirement for off-site highway improvements and will inform the strategy for infrastructure delivery in line with PfE requirements, alongside consultation with Stakeholders and each Highway Authority.

The Approach to the Assessment of Cumulative Effects

10.66 As part of the assessment of the JPA1.1 transport related effects, a ‘development log’ has been produced to inform the Transport Assessment submitted as part of planning application ref. 25/00418/OUT, which is based on assumptions about project timelines. Therefore, traffic related effects in that assessment have been based on a greater number of cumulative schemes than identified in that assessment. In addition, the projects included within the development log have been included in the baseline traffic scenarios (including future baseline). It is proposed that the same approach is adopted in the

assessment of likely significant effects for the JPA 1.2 proposals. Therefore, a separate cumulative assessment is not required for the assessment of traffic effects associated with the JPA 1.2 proposals, as this is already inherent in proposed approach to the transport assessment. However, a separate cumulative traffic scenario will be assessed to consider the JPA 1.1 and JPA 1.2 in combination, given the relationship with both proposals and their inclusion in the Northern Gateway PfE allocation. This reflects the approach taken to the assessment of transport related effects associated with the JPA 1.1 proposals.

11 AIR QUALITY

Introduction

11.1 This chapter of the ES will assess the effects of the Project for Assessment on air quality at sensitive receptors both on site and within the surrounding area. The assessment will be undertaken by Redmore Environmental.

Relevant Policy and Guidance

National Planning Policy

- National Planning Policy Framework (December 2024): Chapter 15, 2024[21].

Regional Planning Policy

- Places for Everyone Plan: Policy JP:S-5, JP-P1 and JPA1.2[22].

Local Planning Policy

- Bury Unitary Development Plan 1997: Policy EN7 and EN7/123; and,
- Rochdale Adopted Core Strategy 2016: Policy C6 G9 and DM1[24].

Guidance Documents and Additional Policy

- Clean Air Strategy 201925;
- Department for Environment, Food and Rural Affairs (DEFRA) (2023) 'The Air Quality Strategy for England, Scotland, Wales and Northern Ireland '26;
- DEFRA (2022) 'Local Air Quality Management Review and Assessment Technical Guidance LAQM.TG (22)27;
- DEFRA particulate matter with an aerodynamic diameter of less than 2.5µm ($PM_{2.5}$) $PM_{2.5}$ Targets: Interim Planning Guidance, n.d[28];

21 National Planning Policy Framework, Ministry of Housing, Communities and Local Government, 2024.
22 Places for Everyone Plan, Greater Manchester Combined Authority, 2024.
23 Bury Unitary Development Plan, Bury Council, 1997.
24 Rochdale Adopted Core Strategy, RBC, 2016.
25 Clean Air Strategy 2019, DEFRA, 2019
26 AQS: Framework for Local Authority Delivery, DEFRA, 2023.
27 Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.
28 PM2.5 Targets: Interim Planning Guidance, DEFRA, n.d.

- IAQM Land-use Planning & Development Control: Planning for Air Quality, 201729;
- IAQM Guidance on the Assessment of Dust from Demolition and Construction, 202430;
- National Highways LA:105 Air Quality (Vertical Barriers), 202431;
- National Planning Practice Guidance, 201632;
- Institute of Air Quality Management (IAQM) A guide to the assessment of air quality impacts at designated nature conservation sites 202033;
- Natural England (NE) Air pollution and development: advice for local authorities 202534; and,
- NE's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations 2018[35].
-

Preliminary Assessment of Baseline Conditions

11.2 Bury Council (BC) has undertaken Review and Assessment of air quality within its area of jurisdiction. This process has indicated that annual mean concentrations of nitrogen dioxide (NO_2) are above the Air Quality Objective (AQO) within its administrative extents. As such, one Air Quality Management Area (AQMA) has been designated. This is described as follows:

"This is the part of the Greater Manchester Combined Authority AQMA located within the Bury Council area."

11.3 Rochdale Borough Council (RBC) has also undertaken Review and Assessment of air quality with its area of jurisdiction. This process has also indicated that annual mean

29 Land-use Planning & Development Control: Planning for Air Quality 2017, IAQM, 2017.
30 Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2024.
31 LA 105 - Air Quality (Vertical Barriers), Highways England, 2024.
32 https://www.gov.uk/guidance/air-quality--3.
33 A guide to the assessment of air quality impacts on designated nature conservation sites v1.1, IAQM, 2020.
34 Air pollution and development: advice for local authorities, NE, 2025.
35 Natural England's approach to advising competent authorities on the assessment of road traffic. emissions under the Habitats Regulations, NE, 2018

concentrations of NO_2 are above the AQO within its administrative extents. One AQMA has therefore been designated. This is described as follows:

"This is the part of the Greater Manchester Combined Authority AQMA located within the Rochdale Council area."

11.4 The Site is partly located within the BC AQMA and is approximately 1.4km south of the RBC AQMA. As such, there is the potential for emissions associated with the proposals to increase pollution levels in this sensitive area, as well as the exposure of future residents to elevated pollutant concentrations.

11.5 Air quality monitoring is undertaken by BC and RBC throughout their areas of jurisdiction. Data has also been collected by the Greater Manchester Combined Authority to inform the Clean Air Plan. The closest monitoring positions to the site are approximately 160m south and 980m north-west of the site. Review of the results indicated NO_2 levels were below the annual mean AQO of 40µg/m^3 in recent years at these locations.

11.6 Monitoring of particulate matter with an aerodynamic diameter of less than 10µm (PM_{10}) concentrations is undertaken approximately 3.4km north-west of the Assessment Boundary. Review of the results indicated PM_{10} concentrations at this location were below the AQO of 40µg/m^3 in recent years.

11.7 BC and RBC do not undertake monitoring of $PM_{2.5}$ concentrations within the vicinity of the Site.

11.8 A review of the background mapping concentrations produced by DEFRA[36] indicated that background annual mean NO_2 and PM_{10} concentrations at the site were below the AQOs of 40µg/m^3 and annual mean $PM_{2.5}$ concentrations were below the Concentration Target of 10µg/m^3.

Identification of Likely Significant Effects

11.9 The initial assessment findings have identified the following receptors which could be potentially effected by the Project for Assessment:

- Enabling and Construction Phase Fugitive Dust Emissions - during the construction of the proposals there is the potential for air quality effects as a result of fugitive dust emissions from demolition, earthworks, construction and trackout activities. These

[36] http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021.

activities have the potential to effect existing human receptors within the vicinity of the Site;

- Enabling and Construction Phase and Operational Phase Road Vehicle Exhaust Emissions - during construction and operation of the proposals there is the potential for air quality effects as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site. These have the potential to effect existing human and ecological receptors; and,

- Operational Phase Future Exposure - during operation of the proposals there is the potential for future residents at the Site to be exposed to elevated pollutant concentrations due to the proximity of the site to the M60 and associated vehicle exhaust emissions.

11.10 The initial assessment findings have identified the following receptors which could be effected by the Project for Assessment:

- Enabling and Construction Phase Fugitive Dust Emissions - Residential properties located off Simister Lane and Heywood Old Road within 250m of the site and 50m of the access route up to 250m from the site entrance. There are no ecological designations located within 50m of the site or 250m from the site entrance;

- Enabling and Construction Phase and Operational Phase Road Vehicle Exhaust Emissions - Residential properties within 200m of roads that vehicles may use to access the site; and,

- Operational Phase Future Exposure - future residents of the proposals.

11.11 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

- Operational Phase Odour Emissions - during of operation of the Proposed Development there is the potential for odour emissions as a result of Mellodew Farm. These have the potential to cause amenity effects for future residents at the Site. However, the farm primarily operates as a horse boarding stable, with horses housed in partly enclosed buildings that provide partial containment for any odour emissions. The Site is also distanced approximately 130m east of the farm, in an upwind location farm with respect to the prevailing meteorological conditions. As such, any odour emissions generated by Mellodew Farm are not anticipated to impact the amenity of future residents and are considered to be not significant.

Scope and Methodology of Assessment (including significance criteria)

11.12 Standardised significance criteria used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

Enabling and Construction Phase

11.13 During enabling and construction of the proposals there is the potential for air quality effects as a result of fugitive dust emissions from demolition, earthworks, construction and trackout activities. It is proposed to assess these in accordance with the IAQM guidance 'Assessment of Dust from Demolition and Construction V2.2'[37].

11.14 The potential for dust emissions will be assessed for each activity that is likely to take place and will consider three separate dust effects:

- Annoyance due to dust soiling; and,
- The risk of health effects due to a significant increase in exposure to PM_{10};

11.15 The significance of potential effects and suitable mitigation to control emissions throughout construction will be defined based on the IAQM guidance.

37 Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2024.

Enabling and Construction Phase - Road Vehicle Exhaust Emissions

11.16 During enabling and construction of the Proposed Development there is the potential for air quality effects as a result of exhaust emissions associated with vehicles travelling to and from the Site. It is proposed to assess these effects qualitatively using the findings of the operational phase road vehicle exhaust emissions assessment.

Operational Phase - Road Vehicle Exhaust Emissions

11.17 The proposals has the potential to increase concentrations of NO_2, PM_{10} and $PM_{2.5}$ as a result of exhaust emissions associated with vehicles travelling to and from the site during operation. These will be assessed through detailed dispersion modelling using ADMS-Roads in order to fully quantify pollution levels at sensitive locations both with and without the development in place.

11.18 ADMS-Roads is a commonly used software package for the prediction of emission dispersion and the results are accepted by Local Authorities throughout the UK.

11.19 The assessment will be undertaken using 1-year of meteorological records taken from the Manchester Airport Meteorological Station. The modelling outputs will be verified against local monitoring data in accordance with the DEFRA TG22[38] methodology.

11.20 Predicted pollutant concentrations at human receptors will be compared against the Air Quality Objectives and Concentration Target, as defined in the UK Air Quality Strategy and associated regulations. The significance of potential impact will be determined based on the predicted magnitude of change in pollutant concentrations and the criteria provided within the IAQM guidance document.

Operational Phase - Future Exposure

11.21 The proposals have the potential to expose future residents to elevated pollutant concentrations. In order to assess NO_2, PM_{10} and $PM_{2.5}$ concentrations across the Site, detailed dispersion modelling will be undertaken using the methodology outlined above in order to quantify pollutant concentrations across the Site.

11.22 The results of the dispersion modelling will be compared with the relevant AQOs and Concentration Target to determine the significance of potential effects on future residents of the proposals.

38 Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

11.23 Measures to mitigate fugitive dust emissions during demolition, earthworks, construction and trackout will be based on the IAQM 'Assessment of Dust from Demolition and Construction V2.2' guidance[39]. This is anticipated to control effects associated with fugitive dust emissions arising from construction works to an acceptable level.

11.24 If required, mitigation measures to control effects associated with vehicles travelling to and from the site during construction and operation will be identified. The measures will reduce air quality effects to an appropriate level with reference to the recommendations included within the IAQM guidance.

11.25 Any mitigation measures required as a result of future resident exposure will be in accordance with best practice and relevant guidance.

The Approach to the Assessment of Cumulative Effects

11.26 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Project for Assessment in conjunction with any committed developments within the vicinity of the sites identified through the scoping process (refer to Section 2).

11.27 The approach to the assessment of Cumulative Effects for this assessment will be as follows:

- Enabling and Construction Phase Fugitive Dust Emissions - Should construction phase activities such as demolition, earthworks, construction and trackout take place at any identified cumulative schemes within 500m of the site boundary, it is possible that cumulative dust impacts may occur. These will be considered and assessed in accordance with the IAQM guidance[40];

- Enabling and Construction Phase and Operational Phase Road Vehicle Exhaust Emissions - Vehicle movements associated with cumulative schemes will be incorporated within the traffic data used for dispersion modelling. This will identify the potential for cumulative effects as a result of road vehicle exhaust emissions

39 **Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2024.**
40 **Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2024.**

during construction and operation and will be assessed in accordance with the IAQM guidance[41]; and,

- Operational Phase Future Exposure - As outlined above, vehicle movements associated with cumulative schemes will be incorporated into the traffic data used for dispersion modelling. The modelling results will therefore identify the potential for cumulative effects on future residents' exposure to vehicle exhaust emissions resulting from cumulative traffic flows on the local road network.

41 Land-use Planning & Development Control: Planning for Air Quality 2017, IAQM, 2017.

12 NOISE

Introduction

12.1 This chapter of the ES will assess the effects of the Project for Assessment on Noise both on site and within the surrounding area. The assessment will be undertaken by Sharps Redmore.

12.2 This Chapter will be accompanied by a noise technical report that will be prepared as part of the planning application.

Relevant Policy and Guidance

National Planning Policy and Guidance

- National Planning Policy Framework[42]
- Noise Policy Statement for England (NPSE)[43]
- Planning Practice Guidance (PPG): Noise[44]
- Control of Pollution Act[45]

Local Planning Policy

- Greater Manchester's Places for Everyone (PfE) Joint Development Plan Document (March 2024): Policy Allocation JPA 1.2
- Rochdale Borough Unitary Development Plan 2001 – 2016: Policy EM/2 Pollution; Policy EM/3 Noise and New Development
- Bury Unitary Development Plan (Adopted 1997): EN 7/2 – Noise Pollution

Guidance Documents

- British Standard (BS) BS 5228:2009+A1:2014:[46;]

[42] National Planning Policy Framework, Ministry of Housing, Communities and Local Government, December 2024
[43] Planning Practice Guidance: Noise, Ministry of Housing, Communities and Local Government, July 2019
[44] Noise Policy Statement for England, Department for Environment, Food and Rural Affairs, March 2010
[45] Control of Pollution Act 1974
[46] BS 5228:2009+A1:2014: Code of practice for noise and vibration control on construction and open sites – Part 1: Noise & Part 2: Vibration

- BS 4142:2014+A1:2019[47];
- World Health Organisation: Guidelines for Community Noise (1999)[48];
- BS 8233: 2014[49];
- Professional Practice Guidance on Planning and Noise for new residential development[50]
- Design Manual for Roads and Bridges (DMRB) LA 111 Noise and Vibration
- Calculation of Road Traffic Noise (CRTN)[51].

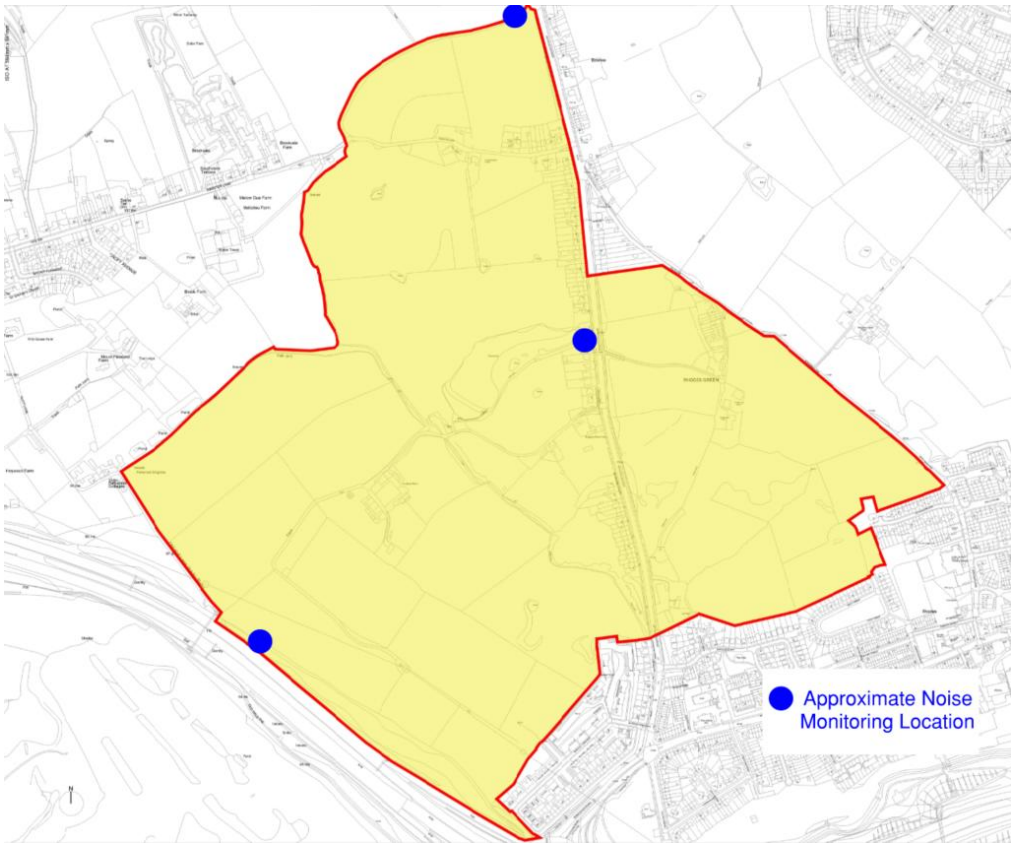
Preliminary Assessment of Baseline Conditions

12.3 A site visit has been undertaken and observations made at various locations in and around the Site. Road traffic noise was observed to be the dominant noise source across the Site and surrounding area. The principal source of noise was the M60 to the south of the Site along with Heywood Old Road. The M62 which is located around 600m to the north and north west, was also audible in the northern part of the Site.

12.4 A noise survey has been undertaken in June 2024 with the scope of the survey agreed with the Environmental Health Officer (EHO) at Bury Council (BC). Measurements were collected over a period of approximately 48 hours at two locations which were located on the site boundary adjacent to the M60 and also adjacent to Heywood Old Road. Additional short term attended measurements were collected during both daytime and night-time periods adjacent to the northern boundary of the Site. The noise survey locations are presented in Figure 12.1 overleaf and the results of the survey will be reported in the ES.

[47] British Standards Institution [BS] 4142:2014+A1:2019, Methods for rating and assessing industrial and commercial sound
[48] World Health Organisation (1999), "Guidelines for Community Noise"
[49] British Standards Institution [BS] 8233:2014 'Guidance on Sound Insulation & Noise Reduction for Buildings'
[50] Chartered Institute of Environmental Health (CIEH), the Association of Noise Consultants (ANC) and the Institute of Acoustics (IOA), May 2017, Professional Practice Guidance on Planning and Noise for new residential development (ProPG)
[51] Department of Transport, Welsh Office (1988) Calculation of Road Traffic Noise

Figure 12.1. Noise Monitoring Location Plan



12.5 With regard of the eastern part of the Site, Boardman Lane / Ellis Lane, which is a 30mph lane, bounds the Site to the east and has a very low traffic flow[52]. Noise from this road would have a negligible effect at the Site. The A576 is located over 150m to the south of the Site with existing residential dwellings, which provide screening to the site to further reduce noise, located in the intervening land. Whilst it is also considered that noise from this link would have a negligible effect at the Site, as the A576 is a main road, this link will be included in noise modelling using traffic data in relation to future residential receptors which would present a proportionate and robust approach. Therefore, it is considered that the survey undertaken is valid to inform the assessment of likely significant effects across the EIA Assessment Boundary.

[52] **Baseline 18 hour Annual Average Weekday Traffic flow of less than 100 total vehicles (Based on traffic data provided by the traffic consultant for Northern Gateway JPA 1.1)**

Identification of Likely Significant Effects

12.6 The initial assessment findings have identified the following receptors which could be potentially effected by the Project for Assessment:

- Noise and vibration effects (Construction Phase): Existing residential receptors.
- Existing residential receptors along the local road network with respect to development generated road traffic during the operational phase.

12.7 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

Operational Industrial and Commercial Noise Sources (Local Centre and School)

12.8 A small scale local centre which may include local retail, community and health facilities is proposed. In addition a primary school is proposed. However, as the Proposed Development is outline in nature, there are no fixed details of buildings or location of operational noise generating sources (i.e from plant noise). The design of buildings and other features such as the location of plant, is a matter that would be considered in detail during detailed design and at the Reserved Matters planning application stages.

12.9 The likely principal sources of noise from such uses that could arise include noise from servicing at the local centre, vehicle movements within car parking areas and plant noise. Consideration may also be required to be given to potential use of any commercial use associated with multi use games areas (MUGA) associated with the school.

12.10 There are various standard practice design measures that could inter-relate to control noise. Such measures could include, the positioning of the service yard where practicable, the introduction of enclosures around delivery yards and/or limiting delivery and trading hours. Similar measures would also be applicable for the control of MUGA's. In relation to noise from any mechanical services, it is a typical requirement that noise from any plant should be designed to not exceed the existing background noise level at existing residential receptors and, depending on context, proposed residential receptors.

12.11 Given the nature of these ancillary uses associated with the Project for Assessment, the control of noise from likely end uses are considered to be common with similar developments. This is considered relevant within the context of aligning with the NPPF's holistic approach to sustainable development encompassing social, economic and

environmental aspects such as the proximity of services and amenities to residents as well as accessibility to public transport.

12.12 Following consultation with the BC EHO it has been agreed that a noise survey relating to proposed commercial uses, which would form part of such assessment, is not required at this outline planning stage. Such surveys would be undertaken during future Reserved Matters applications. Assessments would be undertaken with respect to the relevant guidance such as BS 4142 or other appropriate guidance. This can be secured by way of a planning condition.

12.13 Therefore, operational noise associated with commercial noise sources to existing and proposed receptors is not considered to be significant and will not be considered further in the EIA or reported in the ES. However, outline acoustic design measures will be presented as part of a noise technical report to accompany the planning application to provide good acoustic design principles to inform the design of the development at Reserved Matters stage.

Effects of existing and proposed noise sources on proposed residential receptors

12.14 A baseline noise survey has been undertaken in June 2024 with road traffic on the M60 and Heywood Old Road being the key existing noise sources relevant to the Site. Other noise sources that may require consideration include noise generating sources associated with the proposed local centre and school for which details, as noted above, are not fixed at this outline stage. However, the presence of such features and the relationship with future residential receptors is considered to be common with similar developments.

12.15 The design of buildings and other features is a matter to be considered in detail at Reserved Matters stage. With the incorporation of suitable design measures, as is standard practice for developments of this nature, it is considered that significant adverse noise effects could be avoided.

12.16 However, an assessment to demonstrate the suitability of the Site for residential development will be undertaken to accompany the planning application. The results of baseline noise survey and subsequent analysis will be included in the noise assessment. The assessment will consider the impact of noise, including road traffic along with the proposed local centre and school, in relation to proposed residential receptors.

12.17 The assessment will be undertaken within the context of standard guidance documents including the ProPg[53] and BS 8233[54]. Following standard practice, the assessment will include consideration of typical design measures such as landscape buffers, building orientation / massing, acoustic barriers / bunds and a suitable scheme of sound insulation to dwellings with respect to existing and proposed noise sources. There are various design measures that would inter-relate and the guidance provided within relevant documents and standards including the ProPg provides a basis for such assessment. At this outline planning stage, outline design measures would be presented.

12.18 The requirement to undertake further assessment when detailed design information is available at Reserved Matters or discharge of planning condition stage could be secured by a suitably worded planning condition.

12.19 Therefore, effects of noise on proposed residential receptors associated with the Proposed Development is not considered to be Significant and will not be considered further in the EIA or reported in the ES.

Operational Vibration

12.20 Based on the type of proposed end-use associated with the Proposed Development, it is not considered that adverse effects would occur with respect to vibration in the operational phase.

12.21 Therefore, operational vibration to receptors is not considered to be Significant and will not be considered further in the EIA or reported in the ES.

Scope and Methodology of Assessment (including significance criteria)

Noise and vibration effects (Construction Phase)

12.22 With regard to noise and vibration generating activities during the construction phase, in the absence of mitigation, adverse effects could potentially occur. Such activities could include, but are not limited to:

[53] British Standards Institution [BS] 8233:2014 'Guidance on Sound Insulation & Noise Reduction for Buildings'
[54] Chartered Institute of Environmental Health (CIEH), the Association of Noise Consultants (ANC) and the Institute of Acoustics (IOA), May 2017, Professional Practice Guidance on Planning and Noise for new residential development (ProPG)

- Noise from site preparation / enabling works including earthworks and infrastructure, construction of site substructures and infrastructure and site compounds; and
- Vibration from compacting and piling.

12.23 It has been assumed that construction traffic will be less than operational traffic.

12.24 Typically, through the use of industry standard noise and vibration control measures it is considered that likely residual effects would be not Significant. However, the detail in these control measures is not yet known. Therefore, proportionate to outline planning stage, a qualitative assessment of such effects will be established and necessary mitigation measures to control noise effects outlined in the ES.

12.25 The nature of activities that would occur during the decommissioning phase are likely to be comparable to that associated with the construction phase. The general principles and likely effects of noise and, to a lesser extent vibration, that have been stated above, would be comparable during both phases.

Noise from Development Generated Road Traffic (Operational Phase)

12.26 Large changes in traffic flow are required to result in perceptible changes to road traffic noise levels. However, as traffic flow data is not available at this stage, an assessment of effects of development generated road traffic noise at existing residential receptors along the local road network has been scoped-in to the ES.

12.27 Basic noise level calculations would be undertaken to establish the change in noise level on links surrounding the Site. If deemed appropriate, noise modelling would be undertaken to supplement the basic noise level calculations. An assessment of off-site road traffic noise at residential receptors along the local road network would be undertaken with reference to the guidance provided within CRTN and DMRB.

12.28 A comparison of the level of road traffic noise 'without' and 'with' the Proposed Development will be undertaken. Assessment years and scenarios are to be confirmed as the assessment progresses. However, given that the Proposed Development will be phased and traffic will be introduced on the local road network progressively, as a minimum, a comparison of the 'Do Minimum' in the opening year and 'Do Something' in the future design year (either full development completion date or 15 years after opening) will be undertaken. The results of which will be presented in the ES Chapter.

12.29 Standardised significance criteria used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

12.30 Significant effects will be determined following this through professional judgment.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

12.31 Large changes in traffic flow are required to result in perceptible changes to road traffic noise levels. However, as traffic flow data is not available at this stage, an assessment has not been undertaken to make an informed judgement of where mitigation measures may be required or feasible. This will be determined through the assessment process.

The Approach to the Assessment Cumulative Effects

12.32 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Proposed Development in conjunction with any committed developments within the vicinity of the sites identified through the scoping process (refer to **Section 3**).

13 HYDROLOGY, FLOOD RISK AND WATER RESOURCES

Introduction

13.1 This chapter of the ES will assess the effects of the Project for Assessment on Hydrology, Flood Risk and Water Resources both on site and within the surrounding area. The assessment will be undertaken by Tetra Tech.

13.2 This chapter will be informed by a flood risk assessment (FRA), a drainage strategy, and hydraulic modelling of the unnamed watercourse within the site. These will be prepared for submission as part of the planning application.

Relevant Policy and Guidance

National Planning Policy

13.3 The following national guidance will be used to support this ES chapter:

- National Planning Policy Framework (NPPF) (December 2024);
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017;
- Flood and Water Management Act 2019;
- DEFRA National standards for sustainable drainage systems 2025;
- 2015 CIRIA SuDS Manual (C753F).

Local Planning Policy and Guidance

13.4 The following local planning policy and guidance will be used to support this ES chapter:

- Rochdale Borough Council (RBC) Local Plan Adopted 2016;
- Bury Borough Council (BBC) Local Plan (Consultation closed May 2024);
- RBC Flood Risk Management Strategy;
- BBC Local Flood Risk Management Strategy;
- Greater Manchester Combined Authority (GMCA) Level 1 Strategic Flood Risk Assessment (SFRA) (2020);
- Oldham and Rochdale Urban Design Guide Supplementary Planning Document;

- North West SuDS Pro-forma Guidance for completing your pro-forma.

Preliminary Assessment of Baseline Conditions

Water Features

13.5 The River Irk, situated approximately 250 m to the south of the site is classified as an EA Main River and flows in a generally south-westerly direction.

13.6 There is an unnamed ordinary watercourse going through the western parcel generally flowing from northwest to southeast.

13.7 There is a private fishing lake/ reservoir located to the east of the unnamed watercourse and to the west of Heywood Old Road, situated between the east and west application parcels.

13.8 There are several small ponds situated within the western parcel (to the west of Heywood Old Road) and within the vicinity of the site (to the northwest of the site).

13.9 Refer to Figure 13.1 and Figure 13.2.

Flood Risk

13.10 The ground levels within the site range from approximately 120m AOD in the north to approximately 71m AOD in the south, at the downstream end of the unnamed watercourse.

13.11 The site is entirely located within Flood Zone 1, with the nearest fluvial Flood Zone 3 extent 160m south of the Site adjacent to the River Irk.

13.12 There are areas of surface water flooding indicated in mapping throughout the Site, including areas at risk in a 3.3% AEP event.

13.13 A review of Defra's online 'Magic' mapping indicates the Site is underlain by Secondary A and Secondary (undifferentiated) Superficial deposits and by bedrock deposits which are classified as Secondary A. A review of the Long-Term Flood Risk website indicates that groundwater flooding is considered to be unlikely in this area, therefore the risk of groundwater flooding is considered to be low.

Drainage

13.14 There are no known public sewers within the Site, however, there may be private drainage systems associated with the existing agricultural infrastructure and buildings.

13.15 Based on the nature of the existing Site largely as agriculture fields, the site walkover and topographic data, it is understood that surface water runoff generated within much of the existing site currently discharges to the nearby watercourses predominantly via overland flows.

13.16 Public sewer records obtained from United Utilities (UU) indicates a Public Rising Main and a 225mm diameter Public Sewer located approximately 420m to the northwest of the site beneath Simister Lane.

Water Availability

13.17 There are potable water connections to the north, east, and south of the site located beneath Simister Lane, Blueball Lane, Heywood Old Road, Ellis Lane and Manchester Old Road.

Future Baseline

13.18 It is anticipated that flood risk will increase in future baseline conditions as a result of climate change.

13.19 It is anticipated that there will be increased pressure on water availability in future baseline conditions as a result of population growth.

Identification of Likely Significant Effects

13.20 The initial assessment findings have identified the following effects which will be considered further in the assessment:

- Decrease in surface and ground water quality as a result of runoff during construction activities;
- Increase in surface water and fluvial flood risk as a result of runoff during construction activities on the site;
- Decrease in surface water quality as a result of runoff during operation;
- Increase in surface water flood risk as a result of increased overland flows from changes to topography and increased areas of hardstanding during operation;
- Increase in fluvial flood risk as a result of areas of hardstanding within the floodplain during operation;
- Flood risk as a result of flooding from reservoirs (e.g. fishing lake /reservoir) during construction and operation;

- Depending on the scale of any on-site features, flood risk as a result of flooding from failure of onsite attenuation features installed as part of drainage strategy during construction and operation;
- Changes to hydromorphological conditions of the watercourse during operation and construction;
- Increased demand on existing drainage networks and Wastewater Treatment Works during construction and operation;
- Increased demand on water resources and associated infrastructure during operation;
- Decrease in groundwater quality as a result of infiltration of contaminated surface waters through SuDS during operation;
- Changes to the groundwater hydrological regime as a result of changes to hardstanding areas during construction and operation.

13.21 The initial assessment findings have identified the following receptors, as shown in Figure 13.1, which could be effected by the Proposed Development:

- River Irk
- Unnamed Watercourse
- Fishing Lake / Reservoir
- Offsite Ponds
- Onsite Small Ponds
- Heywood Old Road Residential Area (More Vulnerable)
- Manchester Old Road Residential Area (More Vulnerable)
- Simister Residential Area (More Vulnerable)
- Heaton Farm Buildings (More Vulnerable)
- N Manchester Carboniferous Aquifers
- Manchester and East Chesire Permo-Triassic Sandstone Aquifers

13.22 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

Increased demand for water supply as a result of water use during construction activities

13.23 There is expected water use during construction activities e.g. dust suppression and high-pressure cleaning. The amount of water used during the construction activities is anticipated to be insignificant.

13.24 Therefore, an increase in demand on water supply as a result of water use during construction activities is not considered to be significant and will not be considered further in the EIA or reported in the ES.

Scope and Methodology of Assessment (including significance criteria)

Technical Scope

13.25 This EIA Scoping chapter will consider the potential effects of activities on all potential sources of flood risk including watercourses, surface water and overland flow routes, groundwater, sewers, and reservoirs.

13.26 The potential effects of proposed surface water management will be considered, including any changes to existing water courses, as well as and the potential effects on the water quality of surface water bodies and groundwater bodies.

Temporal Scope

13.27 The risk to flooding will be assessed for the present day and when accounting for climate change using the furthest available epoch to assess for the lifetime of the development where data allows. Therefore, the period for assessment includes the construction and operational phases of the project.

13.28 The nature of the project is expected to make changes to the water environment that are considered permanent; therefore, the operational phase is included within the scoping assessment and will be assessed against the future baseline.

Spatial Scope

13.29 The spatial scope of this assessment covers the entirety of the application site boundary. The spatial scope extends to the River Irk approximately 450 km to the southeast of the site as this includes areas and receptors downstream of the site. Additionally, it extends to the northwest to capture the watershed feeding into the site, covering any potential

effects on the hydrological catchment. Figure 13.2 shows the proposed spatial assessment for this Scoping Chapter.

Assessment Methodology

13.30 The value of receptor sensitivity will be undertaken based on professional judgement and a review of the key receptors as part of the initial review process is set out as follows:

- Very High - Attribute has a high quality and rarity on a regional or national scale;
- High - Attribute has a high quality and rarity on a local scale;
- Medium - Attribute has a medium quality and rarity on a local scale;
- Low - Attribute has a low quality and rarity on a local scale.

13.31 Standardised significance criteria used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

13.32 The nature of environmental effects will be as the following:

- Adverse or beneficial;
- Direct or indirect;
- Temporary or permanent;
- Short, medium or long term;
- Reversible or irreversible; and,

- Cumulative.

13.33 The results of the above will be presented in the ES Chapter.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

13.34 Prior to construction works taking place a Construction Environmental Management Plan (CEMP) will be produced to detail the appropriate measures and practices to be followed in relation to the identified receptors. The CEMP will include;

- A Pollution Prevention Plan
- A Biosecurity Plan
- Best practice guidance for working near watercourses

13.35 The contractors appointed for construction will follow the CEMP and relevant guidance.

13.36 The provision of a CEMP will mitigate the risk of flooding from fluvial and pluvial sources during construction, the risk of pollution and contamination of all receptors and will mitigate the risk of introducing non-native species. For example, the CEMP will include instructions for efficient water use, the use of silt barriers when reprofiling the ground and will detail the procedure to avoid spillages from construction plant. It will also stipulate that the cleaning of plant (in particular, those involved with concrete) will be undertaken offsite where the wastewater will be treated.

13.37 A drainage strategy plan will be developed to ensure current onsite risk can be managed effectively with no increase in surface water flood risk elsewhere as a result of the proposals. Surface water is proposed to discharge into several drainage basins adjacent to the development parcels and then discharge into the unnamed watercourse at a rate equivalent to the existing greenfield runoff. Details of the proposed strategy will inform the assessment within the ES Chapter.

13.38 Any proposed bridge crossings will span sections of the unnamed watercourse to avoid interaction with the channel. There is no intention to culvert the unnamed watercourse in the interests of flood management and biodiversity. Therefore, it is expected that the bridges will include mitigation by design, this will be confirmed and further assessed within the ES Chapter.

The Approach to the Assessment of Cumulative Effects

13.39 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Proposed Development in conjunction with any committed developments within the vicinity of the sites identified through the scoping process (refer to Section 3). It is assumed that all other upcoming developments will adhere to best practice and standards during construction and operation limiting off site impact, nevertheless, these will be assessed.

Figure 13.1: EIA Assessment Extent

Northern Gateway JPA1.2

Simister, Manchester
National Grid Reference: 384304, 405613

Northern Gateway
Development Vehicle

Figure 13.1 ES Assessment Extent

Legend

- EIA Assessment Boundary JPA 1.2
- Main Rivers
- Ordinary Watercourses

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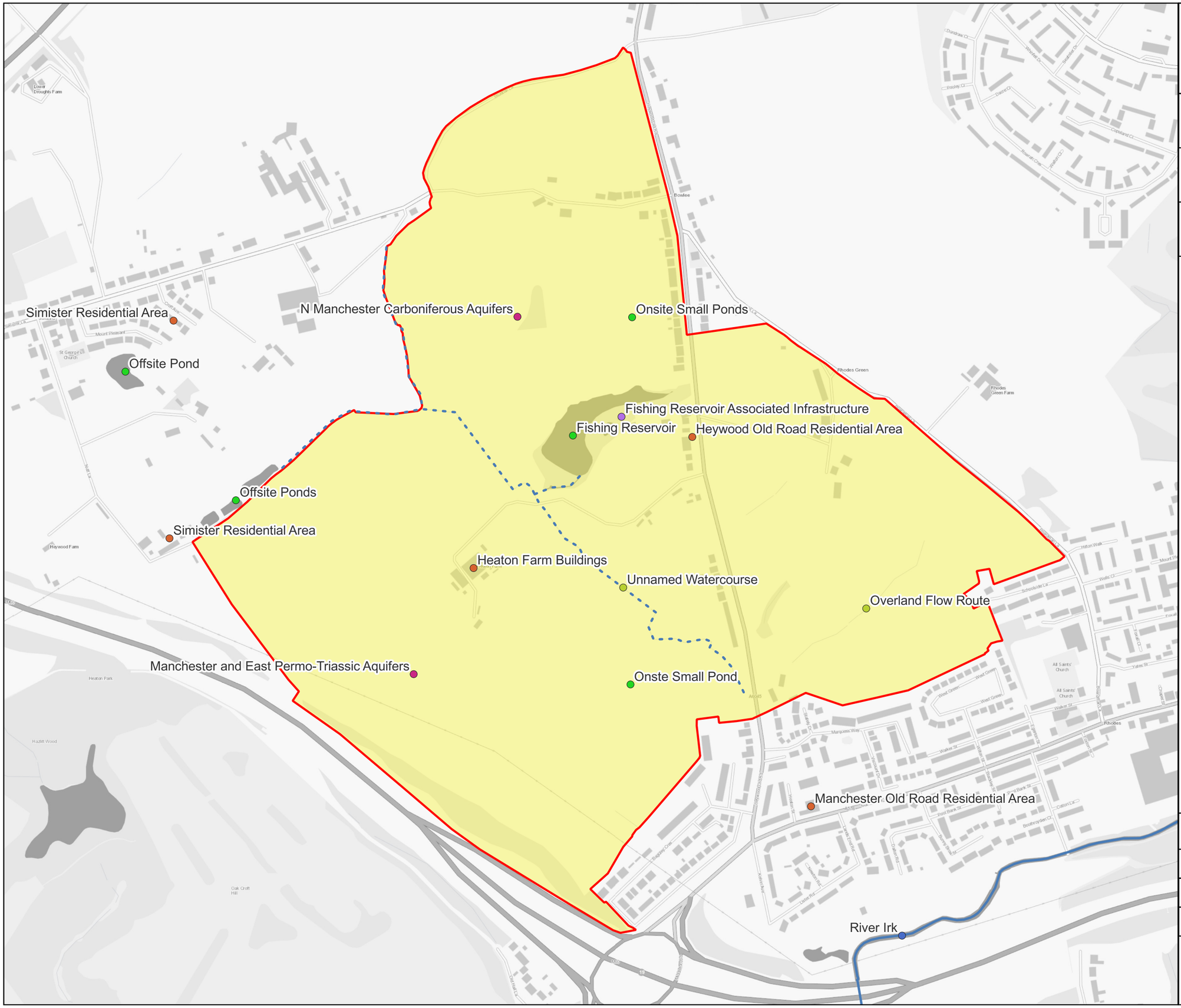
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Figure 13.2: Location of Sensitive Receptors



Northern Gateway JPA1.2

Simister, Manchester
National Grid Reference: 384304, 405613

Northern Gateway
Development Vehicle

Figure 13.2 Location of Sensitive Receptors

Legend

- EIA Assessment Boundary
- Main Rivers
- Ordinary Watercourses

Receptors

- Aquifer
- Less Vulnerable Infrastructure
- Main River
- More Vulnerable Infrastructure
- Ordinary Watercourse
- Waterbody

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14 SOCIO-ECONOMICS & HUMAN HEALTH

Introduction

14.1 This chapter of the ES will assess the effects of the development on Socio-economics & Health both on site and within the surrounding area. Both the assessment and subsequent Socio-Economics ES Chapter will be prepared by Turley Economics.

Relevant Policy and Guidance

National Planning Policy

14.2 The following national planning policies and guidance provide relevant context and inform the assessment of Socio-Economics and Human Health:

- National Planning Policy Framework (NPPF)[55];
- Homes & Communities Agency (HCA), Additionality Guide (4th Edition)[56];
- NHS Healthy Urban Development Unit (HUDU), Rapid Health Impact Assessment (HIA) Toolkit (4th Edition)[57];
- Institute of Sustainability and Environmental Professionals (ISEP), Social Impact Assessment in Environmental Impact Assessment in the UK[58];
- ISEP, Effective scoping of Human Health in Environmental Impact Assessment in the UK[59]; and
- ISEP, Determining Significance for Human Health in Environmental Impact Assessment[60].

Local Planning Policy

[55] Ministry of Housing, Communities & Local Government (MHCLG) (2024) National Planning Policy Framework (NPPF)
[56] Homes and Communities Agency (HCA) (2014) Additionality Guide (4th Edition)
[57] NHS Healthy Urban Development Unit (HUDU) (2019); Rapid Health Impact Assessment Toolkit (4th Edition)
[58] Institute of Sustainability & Environmental Professionals (ISEP) (2025) Social Impact Assessment in Environmental Impact Assessment in the UK
[59] Institute of Sustainability & Environmental Professionals (ISEP) (2022); Effective Scoping of Human Health in Environmental Impact Assessment
[60] Institute of Sustainability Professionals (2023); Determining Significance of Human Health in Environmental Impact Assessment

14.3 The following local planning policy documents provide relevant context and inform the assessment of Socio-Economics and Health:

- Greater Manchester Combined Authority (GMCA), Places for Everyone, Joint Development Plan 2022-2039[61];
- Bury Unitary Development Plan[62],
- Rochdale Core Strategy63,
- The emerging Local Plans for Bury and Rochdale and the emerging Greater Manchester Joint Waste & Minerals Plan, and
- Simister Bowlee Development Framework (JPA1.2) SPD February 2026.

Preliminary Assessment of Baseline Conditions

Socio-economic and Human Health Impact Areas

14.4 The Site spans the administrative boundaries of BC and Rochdale Borough Council (RBC). The combined boroughs are therefore considered to be the suitable 'local impact area' with regard to socio-economic and human health-related effects, with the Greater Manchester Combined Authority (GMCA) area serving as the defined 'wider impact area'. The North West region as a whole is defined as the 'regional impact area'.

14.5 Therefore, the technical baseline is primarily presented on this basis (see 'Assessment Methodology of Effects Likely/Significant' section in relation to this topic for further details.

Working-age Population and Travel to Work

14.6 The 2021 Census[64] recorded the resident population of Bury and Rochdale as c. 417,600, equating to around 15% of the GMCA's total population of c. 2.87 million. The working-age cohort of the local population (residents aged 16 to 64 years) accounts for 62% of the Bury and Rochdale population, which is slightly lower than the 64% recorded across the GMCA as a whole, as well as the rates across the wider North West region and nationally (both 63%).

[61] Greater Manchester Combined Authority (2024) Places for Everyone Joint Development Plan 2022 - 2039
[62] Bury Council (1997) Unitary Development Plan
[63] Rochdale Borough Council (2016) Core Strategy for the Local Plan
[64] ONS via Nomis (2022) 2021 Census

14.7 The 2021 Census[65] recorded that c. 54% of people working in Bury and Rochdale who do travel outside of the home to a workplace (i.e. do not mainly work from home) also resided in the boroughs. Of those people travelling to a workplace in Bury and Rochdale, 89% lived within the wider GMCA area.

Economic Activity and Employment

14.8 There are an estimated 186,600 economically active people of working age living in Bury and Rochdale[66]. The economic activity rate amongst the combined boroughs' working-age population is slightly lower (at 74%) in comparison with that recorded across the GMCA as a whole (76%), which in turn is lower than regional (77%) and national (79%) levels.

14.9 Similarly, the working-age employment rate across Bury and Rochdale combined (69%) is lower than across the GMCA as a whole (72%), the North West (74%) and nationally (76%)[67].

14.10 As of May 2026, approximately 8,755 people aged over 16 in Rochdale 6.0% of working aged residents, were recorded as claiming benefits associated with being out of work[68]. This is higher than in Bury (5,370, or 4.4% of working aged residents), as well as the rate recorded across Greater Manchester (4.9%), the North West (4.2%) and England (4.1%).

14.11 The ONS Business Register & Employment Survey [69] (BRES) recorded c. 163,750 employee jobs in Bury and Rochdale as of 2024, accounting for c. 11% of the total c. 1.5 million across the GMCA.

14.12 The 10,000 jobs supported in the construction sector across both local authority areas represents 6.1% of employment locally in Bury and Rochdale, which is slightly higher than the rates in the GMCA (4.8%), the North West, and nationally (both 5.0%).

Housing

14.13 PfE[70] sets out that Bury and Rochdale have respective requirements to deliver 7,678 and 10,472 dwellings over the period 2022-2039. This equates to an annual average of 452

[65] ONS via Nomis (2022) 2021 Census: Origin-destination data, England and Wales
[66] ONS via Nomis (2024) Annual Population Survey: January 2025 – December 2025
[67] Ibid.
[68] ONS via Nomis (2026) Claimant Count: May 2026
[69] ONS via Nomis (2026). Business Register and Employment Survey: 2024
[70] Greater Manchester Districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan) (2024) Places For Everyone Joint Development Plan Document

dwellings per annum (dpa) in Bury and 616 dpa in Rochdale over this period. It is noted that the housing targets step up over time; for the initial years 2022-2025, the targets were 246 dpa in Bury and 568 dpa in Rochdale.

14.14 Ministry of Housing, Communities and Local Government (MHCLG) data indicates that over the ten years to 2024/25, Bury and Rochdale respectively delivered 2,979 and 6,545 new homes. This is the equivalent of 298 dpa in Bury and 655 dpa in Rochdale.

14.15 Between 2022/23 and 2024/25, Bury and Rochdale respectively delivered 836 and 1,925 dwellings, equivalent to an average of 279 dpa in Bury and 642 dpa in Rochdale[71]. Therefore, both Bury and Rochdale exceeded their housing delivery requirements (respectively 246 dpa and 568 dpa) for the initial years of targets under PfE up to 2025.

14.16 It is also noted that historic delivery in Rochdale (655 dpa over the past 10 years) has slightly exceeded its long-term PfE requirements (616 dpa between 2022 and 2039), whereas historic delivery in Bury (298 dpa over the past 10 years) has fallen below long-term PfE requirements (452 dpa between 2022 and 2039).

Early Years

14.17 A wide range of early years education facilities are located in the Site's surrounding settlements, and provision includes both those operated by private providers and those co-located with primary schools[72].

14.18 The closest early years education provider to the Site is Heaton Park View Nursery[73], located in the settlement of Middleton, to the south. Further early years provision is also available in Middleton, such as Happy Tots[74] (also to the south) as well as Clever Clogs Day Nursery[75] (to the east)[76]. Bowker Vale Primary School[77] (to the south) also has nursery classes (c. 1.7 miles)[78].

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[71] Department for Levelling Up, Housing and Communities (2025). Live tables on housing supply: net additional dwellings (Table 122: housing supply; net additional dwellings, by local authority district, England)
[72] The 1996 Education Act states that the maximum travel distance that a child under the age of 8 should travel to school is 2 miles. The identified early years providers are not exhaustive list, and any early years education provision relevant to consider as part of the assessment of the Site's impacts would be dependent of the location of new homes within the Site.
[73] Located in Manchester City Council Local Authority Area
[74] Located in Manchester City Council Local Authority Area
[75] Located in Rochdale Metropolitan Borough Council Local Authority Area
[76] Day Nurseries (2026) 'Find the right nursery (postcode M24 4RP)' [Online]. Available at: https://www.daynurseries.co.uk/
[77] Located in Manchester City Council Local Authority area
[78]Department for Education (2026) 'Get information about schools' [Online]. Available at: https://get-information-schools.service.gov.uk/

Primary Education

14.19 There are a number of other primary schools within the locality of the Site[79], including:

- Little Heaton Church of England Primary School[80] (to the east) has 42 primary school places available; and
- Bowker Vale Primary School[81] (as stated above, to the south), with 26 places available.

Secondary Education

14.20 Local secondary education provision within the locality of the Site[82] includes schools in the settlements of:

- **Heywood** (to the north of the Site), including Edgar Wood Academy[83];
- **Blackley** (to the south and south-east of the Site), including Our Lady's RC High School and Co-Op Academy Manchester[84];
- **Crumpsall** (to the south of the Site), including The King David High School[85];
- **Prestwich** (to the South of the Site), including St Monica's RC High School[86]; and
- **Middleton** (to the East of the Site), including St Anne's Church of England Academy[87].

14.21 Across these schools, a total of 505 places are currently available, with the majority of this capacity being concentrated within Edgar Wood Academy (with 263 places available) and St Monica's RC High School (with 84 places available).

[79] The 1996 Education Act states that the maximum travel distance that a child under the age of 8 should travel to school is 2 miles. The identified primary school providers are not exhaustive list, and any primary education provision relevant to consider as part of the assessment of the Site's impacts would be dependent of the location of new homes within the Site.
[80] Located in Rochdale Metropolitan Borough Council Local Authority Area
[81] Located in Manchester City Council Local Authority area
[82] The 1996 Education Act states that the maximum travel distance that a child over the age of 8 should travel to school is 3 miles. As with primary education, the identified secondary schools are not exhaustive list, and any secondary education provision relevant to consider as part of the assessment of the Site's impacts would be dependent of the location of new homes within the Site.
[83] Located in Rochdale Metropolitan Borough Council Local Authority area
[84] Both located in Manchester City Council Local Authority area
[85] Located in Manchester City Council Local Authority area
[86] Located in Bury Metropolitan Borough Council Local Authority area
[87] Located in Rochdale Metropolitan Borough Council Local Authority area

Special Educational Needs (SEN) Schools

14.22 There are a number of schools for pupils with Special Educational Needs (SEN) within a reasonable travel distance to the Site, including:

- Manchester Jewish School for Special Education[88] (located to the south of the Site), which DfE data[89] suggests has 24 places available;
- Prospect House Specialist Support Primary School[90] (also to the south of the Site), with 7 places available; and
- North Ridge High School[91] (to the south-east of the Site), which is oversubscribed by 7 places.

14.23 Given the bespoke nature of SEN education provision, which is dependent on the individual needs of children, capacity at the most local provision is not necessarily a reflection of overall availability in the locality, with provision typically being planned over larger geographies than is the case for mainstream provision.

Primary Healthcare

14.24 The NHS 'Find a GP' online search tool[92] identifies that the closest GP surgery to the Site is the Peterloo Medical Centre, located c. 2.0 miles travel distance to the east of the Site.

14.25 Further primary healthcare provision is available to the east of the Site in and around the settlement of Middleton and Blackle , with the closest being the Middleton Health Centre (c.2.2 miles travel distance), the Beacon Medical Centre (c. 2.6 miles) and the Avenue Medical Centre (c. 2.6 miles).

14.26 As outlined in the NHS Healthy Urban Development Unit (HUDU) guidance[93], the Royal College of GPs recommends that a ratio of one GP (assumed Full Time Equivalent [FTE[94]]) per 1,800 registered patients is a suitable benchmark to consider the capacity of primary

[88] Located at the Jewish Cultural Centre, Jubilee School, within Manchester City Council Local Authority area
[89] Department for Education (2026) 'Get Information About Schools' [Online]. Available at: https://get-information-schools.service.gov.uk/
[90] Located within Manchester City Council Local Authority Area
[91] Located within Manchester City Council Local Authority Area
[92] NHS (2026) 'Find a GP' [Online]. Available at: https://www.nhs.uk/service-search/find-a-gp
[93] Healthy Urban Development Unit (2009) HUDU Planning Contribution Model: Guidance Notes
[94] FTE is a unit measuring an employee's workload, where 1 FTE job equals a standard full-time position (e.g. 35-40 hours per week), allowing consolidation of full-time, part-time and other staff into a single, comparable number.

healthcare facilities[95]. Data[96] suggests that Peterloo Medical Centre is operating at a patient per GP ratio under the guideline benchmark, at 1,420 patients per FTE GP.

14.27 Across all GP surgeries within a c. 3 mile travel distance of the Site[97], the patient per GP ratio, however, exceeds the guideline benchmark, at 2,188 patients per FTE GP.

Active Travel and Sustainable Transport Accessibility

14.28 There are multiple Public Right of Way (PRoW) crossing through the Site including: in Bury: 30 PRE (east-north east) and 46 PRE (also north east), providing active travel options to connect across the Heywood Old Road (A6045), to Bowlee and onwards to centre of Middleton, where there a multiple tram stops, providing connections across Greater Manchester, such as to the city centre, Bury, Rochdale, Oldham, Sale. In Rochdale, MidFP93 and 94 cross the Site boundary, providing connections into Rhodes, and the surround business park, by partially the A6045, Heywood Old Road.

14.29 The closest bus stops to the Site are located on Manchester Old Road, adjacent to the Site, to the east (Kelvin Avenue and Bonny Brow Street). These are served by bus routes 59, 125 156, which provide regular services to the city centre and Middleton. From here, there are several train stations, which provide regular services to Manchester Airport, Hull, Liverpool, London Euston, as well as other destinations across the country.

General Indicators of Health

14.30 The Office for Health Improvement & Disparities' (OHID) Public Health Outcomes Framework[98] (PHOF) provides an overview of health outcomes in Bury, Rochdale and the North West[99]. Key indicators are presented at **Table 14.1** and summarised as follows:

- Average male and female life expectancies in Bury are relatively in line with those across the North West region as a whole. However, there are lower life expectancies in Rochdale when compared to the wider region.

[95] Note that this is only an indicative measure of healthcare capacity, and cannot account for Site-specific factors, such as the floorspace, age, quality and configuration of individual facilities. The presented data relates to fully-qualified GPs only (i.e. excludes all levels of trainee GPs) as a conservative scenario.
[96] NHS Digital (2026) General Practice Workforce: 31 May 2026
[97] Whilst there is no recommended access standards in relation to primary healthcare facilities, an indicative 3-mile travel distance from the Site has informed the assessment, aligning with the maximum travel distance that pupils can be expected to attend secondary education.
[98] Office for Health Improvement & Disparities (2024) Public Health Outcomes Framework
[99] Comparative aggregate data unavailable at the scale of the combined boroughs of Bury and Rochdale for these indicators. Therefore data is presented for each of Bury and Rochdale individually.

- The adult obesity rate across Bury is lower than comparator geographies, whilst across Rochdale, is slightly higher than the proportion across the North West. Childhood (Year 6) is similar across all geographies.

- Similarly, adult physical activity rates in Bury and the North West are broadly aligned, whilst in Rochdale the rate is significantly lower than in both comparator geographies.

Table 14.1: Public Health Profile Indicators

Indicator	Bury	Rochdale	North West
Life expectancy at birth (Male)	78.7	76.7	78.3
Life expectancy at birth (Female)	82.3	81.9	82.5
Adult obesity	65%	68%	67%
Childhood (Year 6) obesity	25%	25%	24%
Adults physically active	66%	59%	66%

Source: OHID, 2025

14.31 Approximately 6.0% of residents across Bury and Rochdale reported themselves to be in 'Bad' or 'Very Bad' health at the 2021 Census, which is broadly in line with the equivalent figure for the GMCA (5.9%) and regionally (6.2%), albeit higher than England as a whole (5.0%) [100]. Aligning with other baseline findings, the rate of people who consider themselves to be in bad health is higher in Rochdale (6.4%) than in Bury (5.6%).

14.32 The 2021 Census records 19% of Bury and Rochdale residents as being disabled under the Equality Act and being limited to some extent in their day-to-day activities, which is slightly higher than in the GMCA (18%) and nationally (17%) albeit in line with the regional rate[101].

Identification of Likely Significant Effects

14.33 The below sets out the proposed scope of assessment based on an understanding of the characteristics of the Site, surrounding area and the Project for Assessment as described in **Section 5**.

- Employment generated during construction;

[100] ONS via NOMIS (2021) 2021 Census
[101] ONS via NOMIS (2021) 2021 Census

- Provision of new housing during operation;
- Access to early years, primary, secondary and Special Educational Needs (SEN) education facilities, during operation; and
- Access to primary healthcare facilities (GPs).

14.34 The initial assessment findings have identified the following receptors which could be effected by the Proposed Development:

- Labour Force.
- Existing and future residents;
- Local education facilities and pupils; and
- Local healthcare facilities and patients.

14.35 The initial assessment findings have identified the following effects which are not considered significant and therefore are scoped out from further assessment:

Scope and Methodology of Assessment (including significance criteria)

14.36 The assessment will consider the scale of impact (i.e. magnitude) of each effect in the context of the sensitivity of the relevant receptor in order to establish the overall level of effect and its significance.

14.37 Residual effects will be reported in relation to each of the Proposed Development and the Development Project during both of the above phases, following identification of any relevant mitigation measures.

14.38 Appropriate study areas will be defined, which – in the absence of formal guidance – will be based on an understanding of relevant local and wider economic geographies and a consideration of the extent to which socio-economic and health effects are likely to be contained therein. The proposed Socio-economics and Health study areas are as follows:

- A **Local Impact Area**, comprising the administrative boundary of RBC and BC;
- A **Wider Impact Area**, comprising the administrative boundary of the GMCA; and
- A **Regional Impact Area**, comprising the Noth West region.

14.39 These are established geographical areas that also reflect existing patterns of labour force containment, recorded by the 2021 Census[102].

14.40 Best practice and methodological guidance will be drawn upon as appropriate to inform key elements of the assessment. This includes the Additionality Guide [103] and Employment Density Guide[104], produced by the (now known as Homes England), as well as ISEP guidance regarding the effective assessment of social[105] and health[106] impacts and determining significance in EIA [107]. Net additional economic impacts will be presented, accounting for a range of economic additionality factors such as leakage[108], displacement[109] and multiplier effects[110].

14.41 The sensitivity of receptors will be determined by way of observed change in receptors locally compared to local, regional and national trends. Through observation of a receptor's capacity for change relative to wider comparator areas and / or national standards, the sensitivity of receptors locally will be observed. Consideration will also be given to the priority attributed to specific receptors in strategy and policy terms, particularly in the case of qualitative receptors and those where quantitative evidence is not available.

14.42 In the absence of industry-wide guidance on assessing the significance of socio-economic and health effects, **Table 14.2** provides a general overview of the sensitivity criteria which have been applied in the assessment. Given the broad range of effects to be assessed, it is not possible to define specific criteria that would be applicable across all receptors. The sensitivity of each specific receptor will therefore be discussed and justified in turn in the context of each effect, based on these general principles.

[102] As outlined in the baseline section.
[103] Homes & Communities Agency (2014. Additionality Guide (4th Edition)
[104] Homes & Communities Agency (2015) Employment Densities Guide (3rd Edition)
[105] Institute of Sustainability and Environmental Professionals (2025) Social Impact Assessment in Environmental Impact Assessment in the UK
[106] Institute of Environmental Management and Assessment [now Institute of Sustainability and Environmental Professionals] (2022) Effective Scoping of Human Health in Environmental Impact Assessment
[107] Institute of Environmental Management and Assessment [now Institute of Sustainability and Environmental Professionals] (2022) Determining Significance for Human Health in Environmental Impact Assessment
[108] The measure of the extent to which impacts (such as employment) will occur outside of the defined local and wider impact areas.
[109] The measure of the extent to which the Proposed Development will lead to existing businesses or employees within the defined local and wider impact areas relocating activities to the Proposed Development, as opposed to the attraction of new investment and employment arising from the Proposed Development.
[110] The measure of further economic activity (such as employment, expenditure or income) associated with supply chain expenditure, additional local income (from employment) and longer-term expenditure effects.

Table 14.2: Definition of sensitivity of receptors (socio-economics and health)

Sensitivity	Definition
High	Receptor of national importance, with little ability to absorb, adapt to or recover from change.
Medium	Receptor of regional or local importance, with medium ability to absorb adapt to or recover from change.
Low	Receptor of local importance, with some ability to absorb, adapt to or recover from change.
Negligible	Receptor of limited or no importance.

14.43 Once the sensitivity of the receptor has been identified, the change attributable to the Project for Assessment will be benchmarked against the observed rate of change in the corresponding social, economic or health-related baseline. This will allow for a relative assessment of the magnitude of change that is attributable to the Proposed Development to be conducted.

14.44 In the absence of industry-wide guidance on assessing the magnitude of change with respect to socio-economic and health effects**, Table 14.3** provides a general overview of the criteria applied in the assessment.

Table 14.3: Definition of magnitude of change (socio-economics and health)

Sensitivity	Definition
High	The change will result in substantial difference from baseline conditions and is likely to affect large numbers of people and / or businesses over the long term.
Medium	The change will result in a notable difference from baseline conditions and is likely to affect a reasonable number of people and / or businesses over a medium duration.
Low	The change will result in a perceptible difference from baseline conditions and is likely to affect a small number of people and / or businesses over a short duration.
Negligible	The change does not result in variation beyond baseline conditions and is unlikely to measurably affect people and / or businesses.

14.45 The level of effect will be informed by the magnitude of change due to the Proposed Development and the evaluation of the sensitivity of the effected receptor. The level of effect will be determined using professional judgement and **Table 14.4** is a tool which will assist with this process.#

Table 14.4: Definition of magnitude of change (socio-economics and health)

	Sensitivity of Receptor				
Magnitude of Change		**High**	**Medium**	**Low**	**Negligible**
	High	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Low	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

14.46 Whilst **Table 14.4** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. As such, standardised significance criteria to be used to describe the significance of effects is as follows:

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

14.47 The results of the above process will be presented in the ES Chapter.

14.48 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- The assessment is desk-based and therefore reliant on data and information obtained from a variety of official published sources (such as the ONS's 2021 Census[111] and BRES[112]). No further verification of these sources will be undertaken (unless otherwise stated in the ES). Each data source has methodological limitations related to data collection and surveys only represent the socio-economic context at a specific point in time;

- The future baseline will draw upon employment forecasts produced by Experian[113] and education forecasts produced by the DfE[114]. There are known uncertainties to using such trend-based forecasts (especially in the current context of economic uncertainty), however, the use of such forecasts is considered appropriate for drawing conclusions about how the economy and labour market might change in the future; and

- Where necessary, professional and realistic assumptions will be made and applied.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

Primary Mitigation

14.49 The following primary mitigation measures will be considered through the EIA process:

- Enabling and Construction Phase
    - None applicable.
- Completed and Operational Phase
    - The Proposed Development will deliver primary education infrastructure to contribute towards meeting the demand generated for these facilities.

Secondary Mitigation

14.50 The following secondary mitigation will be considered through the EIA process:

- Enabling and Construction Phase

[111] ONS via Nomis (2025) Census 2021
[112] ONS via Nomis (2025) Business Register and Employment Survey: 2024
[113] Experian (2026) Local Market Forecasts Quarterly: June 2026
[114] Department for Education (2026) School capacity: Academic year 2024/25

- Measures to be included within a CEMP.

- Completed and Operational Phase

14.51 Possible and proportionate planning contributions secured via a S106 agreement where this is required to mitigate significant effects identified through the assessment process.

The Approach to the Assessment of Cumulative Effects

14.52 Cumulative effects will be assessed within each topic chapter of the ES. This will assess the cumulative effects of the Proposed Development in conjunction with any committed developments within the vicinity identified through the scoping process (refer to Section 2).

14.53 In relation to Socio-Economics and Human Health, this assessment would consider the likely cumulative effect associated with all assessed effects.

15 CLIMATE CHANGE

Introduction

15.1 This chapter of the ES will assess the effects of the Project for Assessment on Climate Change, and potential effects of Climate Change on the Proposed Development. The assessment will be undertaken by Turley.

15.2 The assessment has been prepared in line with guidance prepared by the Institute of Sustainability and Environmental Professionals (ISEP, formerly IEMA), including; Assessing Greenhouse Gas Emissions and Evaluating their Significance. Edition 2.1 (including April 2026 Supplementary Guidance)[115] (GHG Assessment guidance), which sets out how GHG emissions should be considered and assessed; and the EIA Guide for Climate Change Resilience and Adaptation[116] (Climate Change Adaptation guidance), which sets out guidance on the scope and consideration of climate projections and effects on development.

Relevant Policy and Guidance

National Planning Policy

15.3 The National Planning Policy Framework (NPPF)[117] explains (paragraph 7) the purpose of the planning system is to contribute to sustainable development. Paragraph 164 states that new development should be planned for in ways that:

- avoid increased vulnerability to the range of impacts arising from climate change through suitable adaptation measures such as green infrastructure and sustainable drainage systems; and
- help to reduce GHG emissions, such as through its location, orientation and design.

15.4 The National Design Guide[118] forms part of Planning Practice Guidance (PPG)[119], and explains how well-designed places address both climate change mitigation and climate change resilience. The PPG advises on the identification of suitable mitigation

[115] https://www.isepglobal.org/content/iema-guide-assessing-greenhouse-gas-emissions-and-evaluating-their-significance/
[116] https://www.iema.net/media/mabhqino/iema-eia-climate-change-resilience-june-2020.pdf
[117] MHCLG (2024). National Planning Policy Framework (NPPF). Available at: National Planning Policy Framework - Guidance - GOV.UK
[118] MHCLG, MHCLG, and DLUHC (2021). National Design Guide. Available at: National design guide - GOV.UK
[119] MHCLG, MHCLG, and DLUHC (2024). Planning Practice Guidance (PPG). Available at: Planning practice guidance - GOV.UK

and adaptation measures in the planning process to address the impacts of climate change.

Local Planning Policy

15.5 The Rochdale Core Strategy[120] includes a number of climate change related policies, including Policy G1, Tackling and Adapting to Climate Change which expects new development to be zero carbon in line with national targets, and address the impacts of climate change by incorporating adaptation measures;

15.6 The Bury Unitary Development Plan[121] was adopted in 1997 and subsequent changes, including adoption of other documents, such as the Places for Everyone Strategy have superseded key climate change related policies; and

15.7 The Places for Everyone Joint Development Plan 2022 to 2039[122] sets out the strategic spatial plan for Greater Manchester, including Bury and Rochdale. It sets out a number of climate change related policies and requirements, including JP-S2 Carbon and Energy, which requires development to be Net Zero (regulated operational carbon emissions), and from 2028 Net Zero in relation to construction emissions.

Preliminary Assessment of Baseline Conditions

Greenhouse Gas Emissions

15.8 Current baseline conditions regarding greenhouse gas (GHG) emissions have been established at the local authority (Rushcliffe and Bury) and the regional level (Southwest) from the latest (2023) UK Government local authority and regional carbon dioxide emissions national statistics: 2005 to 2024[123], as presented in **Table 15.1**.

15.9 The Site's current GHG emissions are unknown in quantitative terms and for the purposes of the GHG emissions assessment, baseline GHG emissions from the Site are assumed to be zero.

[120] Rochdale Council (2016), Core Strategy. Available at : https://www.rochdale.gov.uk/downloads/file/405/core-strategy
[121] Bury Council (1997), Unitary Development Plan. Available at: https://www.bury.gov.uk/planning-building-control/policy-and-projects/planning-policy/bury-unitary-development-plan
[122] Greater Manchester Combined Authority (GMCA), (2024). Places for Everyone Joint Development Plan Document. Available at : https://www.greatermanchester-ca.gov.uk/media/3ccbetc4/post-adoption-places-for-everyone-joint-development-plan.pdf
[123] DESNZ (2026). UK local authority and regional greenhouse gas statistics. Available at: https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics

Table 15.1: Baseline Local & Regional GHG Emissions

Geographical Area	2024 GHG Emissions (tonnes CO2e)
Site	0
Rochdale	853,000
Bury	826,200
Northwest	38,333,900

15.10 The future baseline conditions regarding GHG emissions have been established in the form of carbon budgets set for the UK[124] as presented in **Table 15.2**. These will be used to contextualise GHG emissions from the proposals in order to establish the magnitude of its net GHG effect.

Table 15.2: UK Carbon Budgets (tonnes CO2e)

Period	UK
2018 – 2022	2,544,000,000
2023 – 2027	1,950,000,000
2028 – 2032	1,725,000,000
2033 – 2037	965,000,000
2038 – 2042	535,000,000*
2043 – 2047	Not yet set

[124] DEFRA (2021). Carbon Budgets. Available at: https://www.gov.uk/guidance/carbon-budgets

Period	UK
2048 - 2100	Not yet set
* Published by the Committee on Climate Change in February 2025 but not yet incorporated into law**125**.	

Climate Conditions

15.11 Current baseline climate conditions for the Site have been established from the Met Office's closest automatic weather station, located at Rochdale[126]. Average monthly climatic conditions for the 1991 – 2020 period[127] are summarised below in **Table 15.3** showing summer maximum temperature and average summer and winter rainfall and providing the baseline against which future climate projections reported in **Table 15.4** are based.

Table 15.3: Current climate baseline

Description	Temperature / Rainfall
Summer maximum temperature (°C)	21.8
Average summer rainfall (mm per month)	62.1
Average winter rainfall (mm per month)	77.0

15.12 Future baseline climate conditions for the Site have been established from the Met Office's latest climate projections UKCP18[128] for the 25km OS grid square within which the Site is located (387500,412500).

[125] Climate Change Committee (2025) 7th carbon budget. Available at: https://www.theccc.org.uk/publication/the-seventh-carbon-budget/
[126] Met Office (2026). Location Specific Long Term Climate Averages – Rochdale. Available at: Rochdale Location-specific long-term averages - Met Office
[127] The closest data available to the assessment period used in the preparation of the UK Climate Projections
[128] Met Office (2018). UK Climate Projections. Available at: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index

15.13 These projections comprise forecast changes relative to 1991 to 2020 baseline conditions for annual and seasonal temperatures and rainfall. While the UKCP18 projections are based on data related to earlier averages (1981-2010), this dataset presents the closest data available for assessment. In accordance with ISEP's Climate Change Resilience guidance, projections are taken from the "high" emissions scenario (known as "RCP8.5"), 50th percentile (i.e. median) scenario for the 2030s, 2050s, and 2080s which encompass the anticipated construction and operational stage of the Proposed Development.

15.14 In addition to increasing temperatures and changing rainfall patterns, other potential climatic changes include increasing wind speed and winter storms, including more severe storms. Specific metrics for these changes are not available. It is noted that while wind speeds may increase, these changes are small compared to differences between individual years, and further research is required to determine long term projections of winter storm activity.

15.15 Projected changes to seasonal and annual temperature and rainfall relative to baseline conditions, which could result in severe weather effects such as droughts, floods and heat waves, are provided in **Table 15.4.**

Table 15.4: Future climate baseline

		2030s		2050s		2080s	
Description	**Temp / Rainfall baseline**	**Change to baseline**	**Future Temp / rainfall**	**Change to baseline**	**Future Temp / rainfall**	**Change to baseline**	**Future Temp / rainfall**
Summer maximum temperature (°C)	20.0	1.2	21.2	2.26	22.3	4.8	24.8
Average summer rainfall (mm per month)	93.3	-5%	88.3	-16%	78.3	-31%	64.6
Average winter	118.4	2%	120.4	7%	126.5	13%	134.4

rainfall (mm per month)							

Identification of Likely Significant Effects

15.16 As noted above, the UK Climate Projections provide guidance on the anticipated effects of climate change. Using these projections, the UK Climate Change Risk Assessment (UKCCRA)[129], updated in 2026, identifies potential risks and impacts of climate change across a number of areas including Infrastructure, Health, Communities and the Built Environment.

15.17 The Climate Change Resilience guidance identifies potential receptor groups which may be impacted by climate change, these include:

- Buildings and infrastructure receptors (including equipment and building operations);
- Human health receptors (e.g. construction workers, occupants and site users);
- Environmental receptors (e.g. habitats and species); and
- Climatic systems.

15.18 **Table 15.5** sets out key risks from the UKCCRA which relate to the proposals, including a high-level summary of the potential impacts, and receptors which could be effected by the proposals:

Table 15.5: Potential risks, impacts and receptors

Risks	Impacts and Receptors
N1 – Risks to species and habitats from climate change	Changing rainfall patterns and temperatures can impact Site **Species and Habitats** through reduced climate space.
N2 - Risks to terrestrial species and habitats from pests, pathogens and INNS	Changing rainfall patterns and temperatures can impact **Site Species and Habitats** by favouring Invasive Non-Native Species (INNS).
N12 - Risks to freshwater species and habitats from pests, pathogens and INNS	Changing rainfall patterns and temperatures can impact **Site Species and Habitats** by favouring Invasive Non-Native Species (INNS).

[129] The Committee on Climate Change (2026). UK Climate Change Risk Assessment. Available at: https://www.theccc.org.uk/publication/independent-assessment-of-uk-climate-risk/

Risks	Impacts and Receptors
N5 – Risks to natural carbon stores and sequestration from changing conditions	Changing climate conditions can impact on **Soils** ability to sequester carbon through increased risk of wildfires, droughts and permafrost thaw. Flooding can disrupt soil structure, leading to higher erosion rates, which removes topsoil and releases stored carbon.
H1 – Risks to health and wellbeing from high temperatures	Increasing temperatures can impact on **Human Health** as a result of overheating which can affect construction workers and site users.
H3 – Risks to people, communities and buildings from flooding	Increasing winter rainfall can increase fluvial and surface water flood risk impacting **Site Structures** and **Human Health** (construction workers and site users).
H5 – Risks to building fabric	Higher summer temperatures can impact **Building Materials** and **Site Structures**, increasing degradation of materials and maintenance requirements.
H7 – Risks to health and wellbeing from changes in air quality	Changes in air quality can impact **Human Health** leading to an adverse effect on construction workers and site users.
H10 – Risks to water quality and household water supplies	Decreasing summer rainfall may restrict water supply impacting **Site Operations**. Water pollution can impact **Human Health** leading to an adverse effect on construction workers and site users.
B1 – Risks to businesses from flooding	Increasing winter rainfall can increase fluvial and surface water flood risk impacting **Site Operations**.
B3 – Risks to business from water scarcity	Decreasing summer rainfall may restrict water supply impacting **Site Operations**.
B5 – Risks to business operations due to high temperatures	Increasing temperatures can impact on **Human Health**, and **Site Infrastructure** (i.e. electrical substations) as a result of temperature and overheating.
I2 – Risks for infrastructure from flooding	Increasing winter rainfall can increase fluvial and surface water flood risk impacting **Construction Operations, Site Compounds** and **Site Equipment**, as well as operational **Site Infrastructure**.
I7 – Risks to infrastructure from subsidence	Changing rainfall patterns and temperatures can impact ground conditions, causing cracking, subsidence which can impact **Site Infrastructure** and **Site Structures**.

15.19 The proposals will also impact on climate change as a result of release of GHG emissions to atmosphere impacting on the **Global Climatic System.**

Scope and Methodology of Assessment (including significance criteria)

Greenhouse Gas Emissions

15.20 The assessment of GHG emissions will be undertaken in accordance with ISEP's GHG Assessment guidance.

15.21 The Site will form the principal study area for the assessment; however the assessment will include off-site GHG emissions such as those associated with the manufacture and transportation of construction materials, and those associated with the off-site generation (e.g. at a power station) of grid electricity consumed by the operational stage.

15.22 The GHG assessment of the proposals will consider both the construction and operation stages.

15.23 GHG emissions from the construction and operation of the proposed buildings will be estimated using recognised industry benchmarks/targets, for example RIBA 2030 Climate Challenge[130]/ LETI 2020 Design targets[131] which set out targets on embodied carbon and operational energy demand.

15.24 In line with ISEP's GHG Assessment guidance, GHG emissions resulting from the construction and operation stages of the proposals will be evaluated in the context of baseline GHG emissions from the Site, local authority's administrative area and UK region, as well as the future carbon budgets for the UK.

15.25 Furthermore, and in accordance with ISEP's GHG Assessment guidance, consideration will also be given to the contribution of the proposal to a science-based net zero trajectory in line with the 2015 Paris Agreement's[132] 1.5°C pathway.

15.26 The global climate system is the receptor for GHG emissions and is considered highly sensitive in accordance with ISEP guidance.

15.27 The significance of the proposal's net GHG effect will then be determined by considering the magnitude of its net GHG emissions effect in conjunction with whether it makes an

[130] RIBA 2030 Climate Challenge. Available at: https://www.architecture.com/about/policy/climate-action/2030-climate-challenge

[131] LETI Climate Emergency Design Guide. Available at: https://www.leti.london/_files/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

[132] UNFCCC (2016). Conference of the Parties, Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015. FCCC/CP/2015/10 (online). Available at: https://unfccc.int/sites/default/files/resource/docs/2015/cop21/eng/10a01.pdf

appropriate contribution to the UK's net zero trajectory for a project of its type and also using professional judgment.

15.28 The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible for adverse effects or to determine a beneficial effect. It should be noted that the ISEP guidance does not seek to differentiate between different levels of beneficial effect.

Climate Conditions

15.29 The assessment of climate change adaptation and resilience will be carried out in accordance with ISEP's Resilience & Adaptation Guidance.

15.30 The assessment will include the establishment of baseline climate conditions for the Site from long term monitoring data from the closest Met Office automatic weather station, a review the Met Office's latest climate projections for the Site to establish predicted changes to the baseline climate conditions, and consideration of the UKCCRA alongside the UKCP18 impacts to identify potential risks and receptors.

15.31 A Climate Change Risk Assessment and Briefing will be prepared setting out potential risks and receptors for the project team to consider mitigation measures, and incorporate climate change into appropriate intra-project cumulative assessment topics.

15.32 The Climate Change ES chapter will include an assessment of potential effects, drawing on input from cumulative topics to provide a consolidated summary of potential effects where these are assessed, or climate change is incorporated into other topics.

15.33 The sensitive of receptors will be based on the ISEP Climate Resilience and Adaptation guidance and the Susceptibility and Vulnerability of receptors to climate change. Potential effects which may impact on Human Health or endanger safety critical infrastructure are considered to have a high sensitivity. The magnitude of effect will be based on the Probability and Consequences of the effects taking place.

15.34 The significance of the climate change adaptation and resilience effects will be determined using a scale of major, moderate, minor and negligible for adverse effects or to determine a beneficial effect.

The Approach to the Assessment of Cumulative Effects

Greenhouse Gas Emissions

15.35 ISEP's GHG Assessment Guidance recognises the cumulative contributions of all GHG emissions sources to global climate change and the climatic system as sensitive receptor. For this reason, the approach to cumulative effects assessment of GHGs differs from many other EIA topics where projects within a geographically bounded study area are considered.

15.36 For GHGs, unlike air pollution for example, there is no greater climate change effect from a local GHG emissions source than from one on the other side of the world. Indeed, all global cumulative GHG sources are relevant to the effect on climate change, which is taken into account when defining the global climatic system receptor as being of high sensitivity to further emissions.

15.37 Effects of GHG emissions from specific cumulative projects therefore in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other.

15.38 Instead, the contextualisation of GHG emissions incorporates, by its very nature, the cumulative contributions of other GHG sources which make up that context, whether geographical (in the case of UK carbon budgets) or sector bounded. Therefore, a form of cumulative assessment of GHG emissions / savings has already been undertaken.

Climate Conditions

15.39 The assessment of Climate Change relates to effects on the Proposed Development, as such there are no cumulative effects with regards to inter-project effects.

15.40 A cumulative approach has been considered with respect to potential intra-project climate change effects which impact on other EIA disciplines incorporated into the wider ES. These cumulative effects and assessment are inherent to the assessment methodology and primarily relate to Hydrology, Flood Risk and Water Quality, Ecology, and Air Quality.

16 STRUCTURE OF THE ENVIRONMENTAL STATEMENT

16.1 The ES will report the findings of the EIA and will address the requirements of Schedule 4 of the EIA Regulations, as set out in **Section 3**.

16.2 The ES is anticipated to include 2 volumes:

- Volume 1: Environmental Statement Main Text: sets out the findings to each of the environmental disciplines, including accompanying Figures (i.e. plans/drawings).
- Volume 2: Accompanying Technical Appendices: supports the main assessments within Volume 1.
- Non-Technical Summary (NTS) would also be provided as a separate document.

16.3 The anticipated structure and content of Volume 1 (and Volume 2 where applicable) of the ES is likely to be as follows:

- Chapter 1 Introduction
- Chapter 2 Assessment Scope and Methodology
- Chapter 3 Site Description
- Chapter 4 The Development Project and Alternatives
- Chapter 5 Planning Policy Context
- Chapter 6 Landscape and Visual Impact Assessment;
- Chapter 7 Ecology;
- Chapter 8 Transport and Access;
- Chapter 9 Air Quality;
- Chapter 10 Noise;
- Chapter 11 Hydrology, Flood Risk and Water Resources;
- Chapter 12 Socio-economics & Human Health;
- Chapter 13 Climate Change;

- Chapter 14 Residual Effects and Mitigation Summary; and
- Chapter 16 Glossary

16.4 Within each of the assessment chapters the main structure of the information presented, although not exclusively, will be as per the following headings:

- Introduction;
- Assessment Approach (including methodology, assessment of significance, legislative and policy framework, scoping criteria, limitation);
- Baseline Conditions;
- Assessment of Likely Significant Effects (Assessment of Impacts, including enabling works, construction and operation);
- Mitigation, Enhancement and Residual Effects;
- Cumulative and in-combination effects;
- Summary.

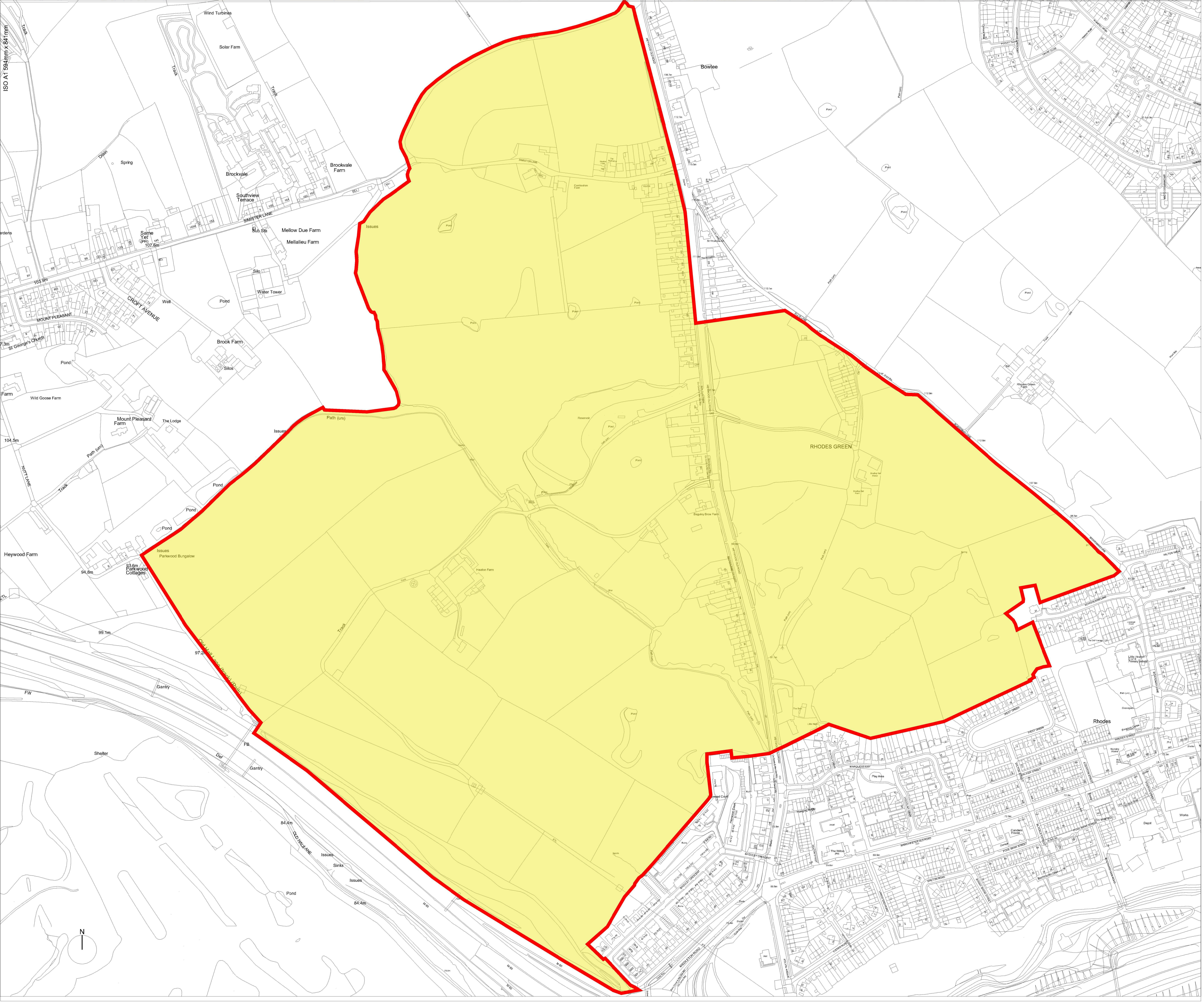
17 ENVIRONMENTAL STATEMENT SCOPING SUMMARY

17.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared on behalf of Northern Gateway Development vehicle (NGDV) (the "Applicant") in respect of the proposed residential-led development at JPA 1.2 (the "site"), approximately 98 hectares in size.

17.2 This Scoping Report has been prepared to accompany a formal EIA Scoping Opinion to Bury and Rochdale Council under Regulation 15 of the Town and Country Planning (EIA) Regulations 2017 (as amended) and has set out the proposed scope of the EIA and resultant Environmental Statement (ES) which is anticipated to support a planning application for an employment-led development at the Site.

17.3 We would welcome feedback on the proposed approach to the EIA and would be grateful if BC and RBC would respond by way of a formal Scoping Opinion within the requisite five weeks in accordance with Regulation 15(5) of the EIA Regulations.

APPENDIX 1.1 – EIA Assessment Boundary



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Key

EIA Assessment Boundary

CHECKING/VERIFICATION

DRAWN: WD		CHECKED:	LS
VERIFIED: RG		DATE:	13/7/26

ISSUE/REVISION

I/R	DATE	DESCRIPTION

SHEET TITLE

EIA Assessment Boundary Plan

PROJECT NUMBER

60724535

SHEET NUMBER

01_065

SCALE

1 / 2,500 @ A1

DATE CREATED

13/07/2026

APPENDIX 3.1 – EIA Legislative Requirements

SCHEDULE 4

INFORMATION FOR INCLUSION IN ENVIRONMENTAL STATEMENTS

1. A description of the development, including in particular:

(a) a description of the location of the development;
(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;
(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.

2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

4. A description of the factors specified in regulation 4(2) likely to be significantly effected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.

5. A description of the likely significant effects of the development on the environment resulting from, inter alia:

(a) the construction and existence of the development, including, where relevant, demolition works;
(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
(g) the technologies and the substances used.

The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC (1) and Directive 2009/147/EC(2).

6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.

8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU (3) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(4) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

9. A non-technical summary of the information provided under paragraphs 1 to 8.

10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement

APPENDIX 7.1 – Agricultural Land Classification

AGRICULTURAL QUALITY
OF LAND EAST OF HEYWOOD OLD ROAD

Report 2674/2

16th September 2025

Land Research ASSOCIATES
www.lra.co.uk

AGRICULTURAL QUALITY

OF LAND EAST OF HEYWOOD OLD ROAD

M A Worsley, BSc, MSc

Report 2674/2
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16th September 2025

SUMMARY

An agricultural land quality survey has been undertaken of 21.1 ha of land east of Heywood Old Road, Greater Manchester in July 2025.

The land has soils with imperfect or poor drainage and, in places, strong slopes and complex topography (microrelief). The land is of Subgrade 3b, Grade 4 and Grade 5 agricultural quality. The principal limitations to agriculture are soil wetness, gradient and topography (microrelief).

1.0 Introduction

1.1 This report provides information on the agricultural quality of 21.1 ha of land east of Heywood Old Road, Greater Manchester. The report is based on a survey of the land in July 2025.

SITE ENVIRONMENT

1.2 The survey area is comprised of numerous agricultural fields to the north of Rhodes, west of Middleton and east of Heywood Old Road.

1.3 The survey area varies from gently to steeply sloping and has complex topography in places, particularly in the south. It has an average elevation of approximately 90 m AOD.

1.4 At the time of survey the land was under grassand maize , with scrub in the far south comprised of grasses and shrubs.

PUBLISHED INFORMATION

1.5 British Geological Survey 1:50,000 scale information records the basal geology of the survey area as Pennine Lower Coal Measures. Overlying surface deposits are recorded throughout: glacial sand and gravel and locally derived drift (Head).

1.6 The National Soil Map (published at 1:250,000 scale) records the survey area as belonging to the Newport 1 and Brickfield 3 Soil Associations. Newport 1 is mainly an association of sandy and coarse loamy soils formed from glaciofluvial drift. Brickfield 3 is mainly an association of fine loamy, fine loamy over clayey or clayey soils, formed from drift derived from sandstones and shale[1].

[1] Jarvis, R.A., et al., 1984. *Soils and their use in Northern England*. Soil Survey of England and Wales Bulletin No. 10, Harpenden.

2.0 Soils

2.1 A soils and agricultural quality survey was carried out in July 2025 in accordance with MAFF (1988) Agricultural Land Classification guidelines[2]. During this survey soils were examined by auger borings and soil pits to a maximum depth of 1.2 m. Observations were made at a density of one per hectare. Observations were aligned to intersects of a 100 m grid where possible. However, in fields of mature maize observations were located on the edge of flattened trackways.

2.2 Soil auger records, soil pit descriptions and a map showing the location of each investigation point (Map 1) are attached to this report as appendices. Additional pit observations are included from a related survey on land west of Heywood Old Road.

2.3 A typical soil profile has a coarse loamy topsoil over a permeable fine loamy upper subsoil and a slowly permeable fine loamy lower subsoil. However, there is a degree of variation in the composition of soil parent material and subsoils often have coarse loamy, sandy and/or clayey bands. The subsoils are brownish or reddish. Stone content is low, with stoneless to very slightly stony topsoil and subsoil. The stones present are small, medium and large hard stones of varying type.

2.4 Almost all these soils are gleyed[3] at shallow depth. Despite the variation outlined above, most soils have a slowly permeable horizon within 80 cm depth. The soils are mostly judged to belong to Wetness Class III or IV. They are imperfectly or poorly draining and are likely to suffer periodic or prolonged waterlogging between autumn and spring.

2.5 Occasionally there are soils with coarse or sandy subsoil to depth which lack a slowly permeable horizon. These soils are judged to belong to Wetness Class I or II. They are freely or moderately freely draining and may suffer slight seasonal waterlogging.

[2]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

[3]Gleying – greyish and pale soil colours with associated ochreous mottles resulting from reduction and mobilisation of iron compounds under anaerobic conditions (indicates periodic waterlogging).

3.0 Agricultural land quality

3.1 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF ALC system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.

3.2 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification[4].

3.3 The relevant site data for an average elevation of 90 m and a central point at grid reference SD 848 055 is given below.

- Average annual rainfall: 1040 mm
- January-June accumulated temperature >0°C 1338 day°
- Field capacity period 240 days
- Summer moisture deficits for: wheat: 65 mm
potatoes: 47 mm

3.4 The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for ALC issued in 1988 by MAFF. Due to the relatively wet climate at this locality, land quality is limited to a maximum of Grade 2.

SURVEY RESULTS

3.5 Agricultural land of Subgrade 3b, Grade 4 and Grade 5 quality has been identified. The principal limitations to agriculture are soil wetness, gradient and microrelief. Other factors have been assessed but do not alter the land grade.

Subgrade 3b

3.6 This land is mapped where soil wetness, slope gradient and topography (microrelief) are moderately severe limitations to agricultural use. The soil wetness limitation is a result of imperfect or poor soil drainage (Wetness Class III or IV) and a relatively wet local climate. The gradient and topography limitations are a result of gradients between 7 and 11

[4]Meteorological Office, (1989).*Climatological Data for Agricultural Land Classification*.

degrees and/or quite complex topography (microrelief[5]). Such land is likely to be capable of regular arable cropping and improved grassland.

Grade 4

3.7 This land is mapped where slope gradient and topography (microrelief) are severe limitations to agricultural use. This land has slopes between 11 and 18 degrees and/or complex topography. Cultivation and harvesting operations are increasingly difficult, and agricultural use is likely to be limited to improved grassland.

Grade 5

3.8 This land is mapped where slope gradient and topography (microrelief) are very severe limitations to agricultural use. This land has particularly complex topography and, locally, slopes in excess of 18 degrees. It is likely that such land is limited to rough grazing or environmental / habitat set aside only.

Other land

3.9 This land includes a road.

Grade areas

3.10 The land grades are shown on Map 2 and the areas occupied shown below.

Table 1: Areas occupied by the different land grades (ha)

Grade/subgrade	*Area (ha)*	*% of the land*
Subgrade 3b	9.6	46
Grade 4	8.7	41
Grade 5	2.4	11
Other land	0.4	2
Total	21.1	100

[5]Complex changes of slope angle over short distances which would present difficulties in the use of cultivation machinery.

APPENDICES:

1. SOIL AUGER LOG

2. SOIL PIT DESCRIPTIONS

3. MAPS

Land east of Heywood Old Road: Details of Soils and ALC survey

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-25	MSZL	<5	25-46	SCL fmn	xxx	46-80+	SCL	xxx	12	IV	4	G, T
2	0-22	MSZL	<5	22-47	MCL	xxx	47-80+	rHCL	xxx	9	IV	4	T
3	0-20	MSZL	<5	20-45	MSL/SCL	xxx	45-80+	rSCL	xxx	12	IV	4	G, T
4	0-22	MSZL	<5	22-45	SCL	xxx	45-80+	rHCL	xxx	5	IV	3b	W
5	0-28	MSZL	<5	28-42	MSZL	x	42-56 56-80+	SCL rHCL	xxx xxx	3	III	3b	W
6	0-28	MSZL	<5	28-78	FSZL	xxx	78-100+	rSCL	xxx	4	III	3b	W
7	0-30	MSZL	<5	30-65	SCL	xxx	65-90+	rSCL	xxx	2	IV	3b	W
8	0-35	SCL	<5	35-80+	SCL	-	Disturbed			2	-	-	-
9	0-30	SCL	<5	30-62	SCL	xxx	62-80+	rSCL	xxx	4	IV	3b	W
10	0-24	MSL	<5	24-90+	LMS	-	Disturbed			8	-	5	T
11	0-30	MSZL	<5	30-48	SCL	xxx	48-80+	rSCL	xxx	8	IV	3b	W, G
12	0-26	MSZL	<5	26-50	MSZL	xxx	50-80+	rSCL	xxx	6	IV	3b	W
13	0-35	MSZL	<5	35-50	MSZL	o	50-60 60-90+	MSZL rSCL	xxx xxx	4	III	3b	W
14	0-45	MSZL	<5	45-80+	MSZL	xxx				8	II	3b	G
15	0-35	MSL	<5	35-50	MSL	xxx	50-80+	rSCL	xxx	6	IV	3b	W
16	0-30	MSZL	<5	30-68	SCL	x	68-90+	MS	xxx	9	I	4	T
17	0-26	MSZL	<5	26-45	SCL	xxx	45-80+	rHCL	xxx	12	IV	4	G, T
18	0-42	MSZL	<5	42-75	MSZL	xxx	75-100+	rSCL	xxx	4	III	3b	W
19	0-45	MSZL	<5	45-90+	LMS	xx				10	I	4	T
20	0-23	MSZL	<5	23-46	SCL	xxx	46-80+	rSCL	xxx	5	IV	3b	W
21	0-10	MSZL	<5	10-40	MSZL	o	40-56 56-80+	SCL SCL	o xxx	13	III	4	T, G

Soil log key

Gley indicators[1]

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils))[3]
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles or f-m concentrations and pale ped faces (gleyed horizon)
xxxx	dominantly blueish/greenish matrix, often with some reddish mottles (gleyed horizon)
xx(x)	Subsoils where gleying evidence is unclear in auger boring (especially reddish soils)

Texture[2]

C – clay

ZC - silty clay
SC - sandy clay
CL - clay loam (H-heavy, M-medium)
ZCL - silty clay loam (H-heavy, M-medium)
SZL - sandy silt loam (F-fine, M-medium,C-coarse)
LS - loamy sand (F-fine, M-medium, C-coarse)
SL - sandy loam (F-fine, M-medium, C-coarse)
S - sand (F-fine, M-medium, C-coarse)
SCL - sandy clay loam

P - peat (H-humified, SF-semi-fibrous, F-fibrous)

LP - loamy peat; PL - peaty loam

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
G - gradient
T – topography/microrelief
Tx – texture
C - Climate

Suffixes & prefixes:

o - organic

(vsl, sl, m, v, x)**st** – (very slightly, slightly, moderately, very, extremely) **stony**[6]

(vsl, sl, m, v, x)**ca**
(very slightly, slightly, moderately, very, extremely) **calcareous**[7]

Slowly permeable layers[4]

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer

A wavy underline (e.g. 50 indicates the top of a layer borderline to slowly permeable

Wetness Class[5]

I (freely drained) to VI (very poorly drained)

Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer; chky - chalky
R – bedrock (CH – chalk, SST – sandstone LST – limestone, MST – Mudstone)
gn – greenish

[1]Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5
[2]Texture in accordance with particle size classes in Hodgson (1997)
[3] Occasionally recorded in the texture box
[4]Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in: Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)
[5]Soil Wetness Classes are defined in Hodgson (1997)
[6]stoniness classes as defined in Hodgson (1997)
[7]calcareous classes as defined in Hodgson (1997)

Grades shown as intergrade e.g. **3a**/3b are close to the grade boundary. The estimate of which side of the boundary the grading falls is the shown first (in bold here)
grades in brackets eg. (3a) raised by one grade due to calcareous topsoil

Soil pit descriptions

Pit 18

0-42 cm Very dark grey (10YR 3/1) medium sandy silt loam; 1-5% variable hard stones; moderately developed fine subangular blocky structure; very weak; many fine fibrous roots; wavy diffuse boundary to:

42-75 cm Pale brown to light yellowish brown (10YR 6/3 to 6/4) medium sandy silt loam; 1-5% variable hard stones; weakly developed medium subangular blocky structure; moderately weak; common fine fibrous roots; >0.5% macropores; smooth gradual boundary to:

75-100+ cm Reddish brown and reddish grey (5YR 5/3 + 5/2) sandy clay loam with common fine and medium strong brown and yellowish brown (7.5YR 5/6 + 10YR 5/6) mottles and pinkish grey (5YR 6/1) ped faces, with subordinate bands of sandy loam and loamy sand of similar colouring; stoneless; moderately developed very coarse prismatic structure; moderately firm (sandy clay loam) to very weak (loamy sand); a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: III

Grade: 3b. Limitation: soil wetness.

Pit at 384050, 405550[6]

0-24 cm Very dark grey (10YR 3/1) medium sandy loam with common dark brown (7.5YR 3/4) mottles; stoneless; moderately developed medium subangular blocky structure; moderately weak; abundant fine fibrous roots; smooth gradual boundary to:

24-39 cm Light brownish grey to light yellowish brown (10YR 6/2 to 6/4) sandy clay loam with many yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) mottles; stoneless; weakly developed medium to coarse subangular blocky structure; moderately weak to moderately firm; common fine fibrous roots; *c*. 0.5% macropores; smooth gradual boundary to:

39-80+ cm Reddish brown (5YR 5/3) heavy clay loam to clay with many medium and coarse strong brown (7.5YR 5/8) and many coarse light bluish grey (10B 7/1) mottles; stoneless; weakly developed very coarse prismatic structure; moderately firm; a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: IV

Grade: 3b. Limitation: soil wetness.

Pit at 383850, 405450

0-20 cm Very dark grey (10YR 3/1), becoming dark grey (10YR 4/1) towards base, sandy clay loam; 1-5% variable hard stones; weakly developed medium to coarse subangular blocky structure; moderately firm; common fine fibrous roots; wavy gradual boundary to:

20-45 cm Dark greyish brown (10YR 4/2) medium sandy loam to sandy clay loam; 1-5% variable hard stones; weakly developed diagonally aligned medium to coarse platy structure; very strong in situ, very firm ex situ; a few becoming no roots.

45+ cm Stopped, too firm.

Slope: 3°. Wetness Class: V

Grade: 4. Limitation: soil wetness.

[6] Soil pits dug during related survey on adjacent land with comparable geology.

Pit at 384250, 405450

0-25 cm Very dark grey (10YR 3/1) medium sandy silt loam; stoneless; moderately developed fine subangular blocky structure; moderately weak; abundant roots; smooth gradual boundary to:

25-38 cm Light brownish grey (10YR 6/2) medium clay loam with common fine and medium yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6); stoneless; weakly developed medium subangular blocky structure; moderately weak; many fine fibrous roots; >0.5% macropores; smooth gradual boundary to:

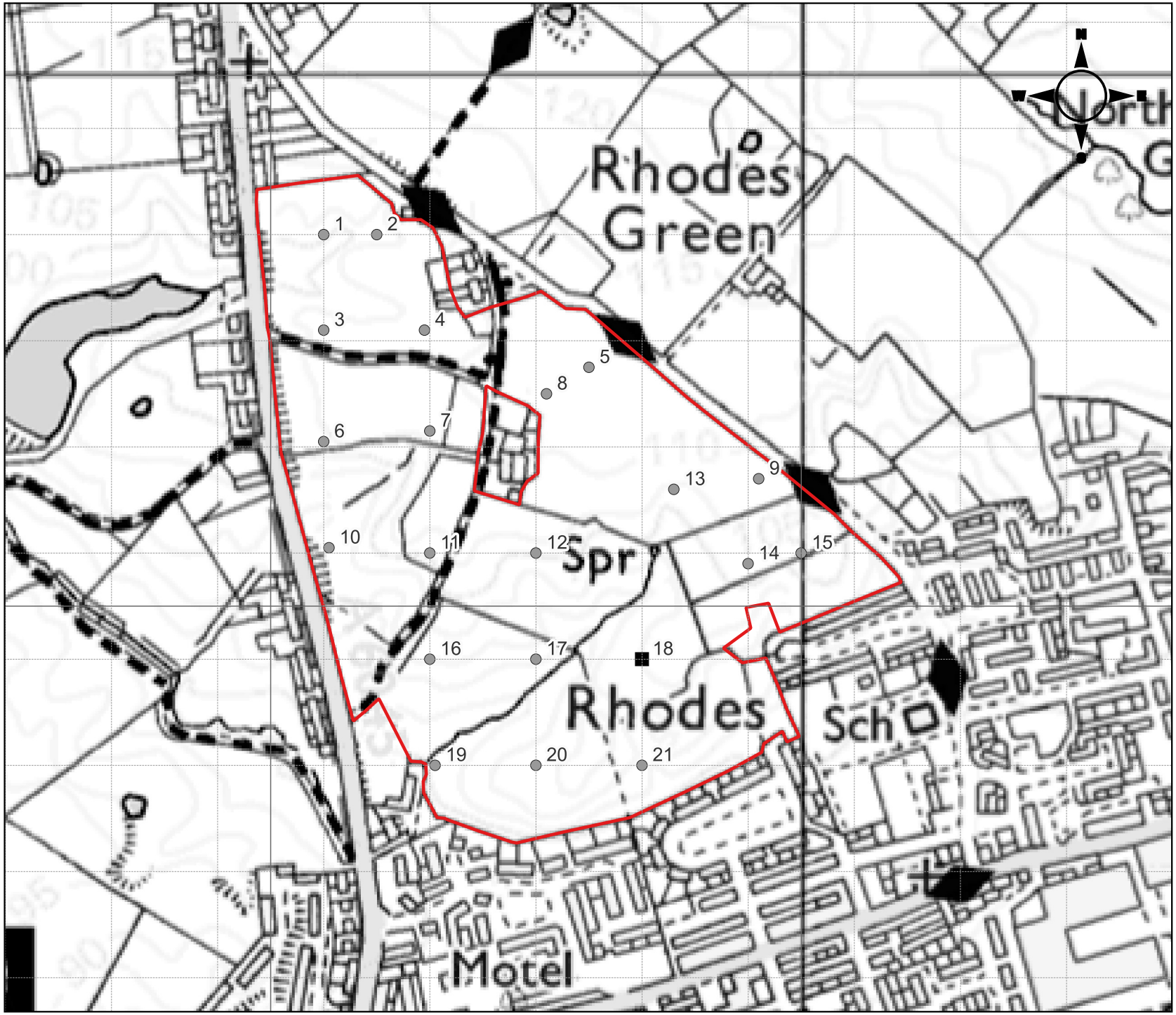
38-55 cm Pale brown to yellowish brown (10YR 6/3 to 6/4) sandy clay loam; stoneless; weakly developed coarse angular blocky structure; moderately firm; common fine fibrous roots; <0.5% macropores; wavy gradual boundary to:

55-75 cm Pinkish grey and white (5YR 7/2 + 8/1) fine sandy silt loam with common medium strong brown (7.5YR 5/6) mottles; stoneless; weakly developed coarse platy to massive structure; moderately firm (dry); a few fine fibrous roots; >0.5 macropores; clear irregular boundary to:

75-100 cm Pink (5YR 6/2) heavy clay loam with many medium strong brown (7.5YR 5/8) mottles; stoneless; weakly developed very coarse prismatic structure; moderately firm; a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: IV

Grade: 3b. Limitation: soil wetness.



Key

- Survey area
- Soil pit
- Soil auger

Site:

Heywood Old Road East

Map:

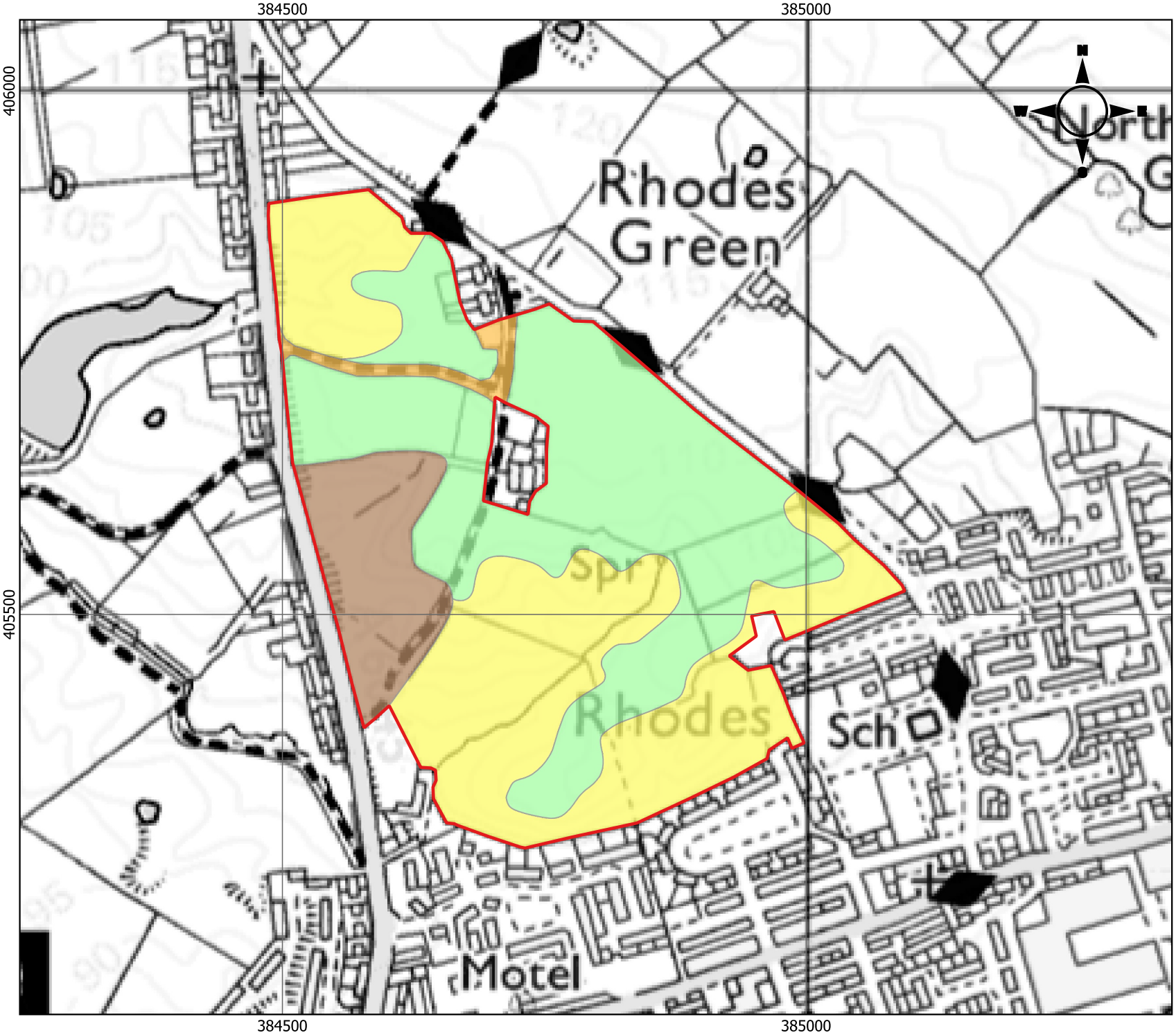
Map 1 - Observations

Date: 16 / 09 / 2025

Scale: 1 : 5,000 at A4

Land Research Associates

Tapton Park Innovation Centre
Brimington Road
Chesterfield
S41 0TZ
www.lra.co.uk



Key

- Survey area
- Subgrade 3b
- Grade 4
- Grade 5
- Other land

Site:

Heywood Old Road East

Map:

Map 2 - Agricultural Land Classification

Date: 16 / 09 / 2025

Scale: 1 : 5,000 at A4

Land Research Associates

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AGRICULTURAL QUALITY
OF LAND WEST OF HEYWOOD OLD ROAD

Report 2674/1

28th August 2025

Land Research ASSOCIATES
www.lra.co.uk

AGRICULTURAL QUALITY

OF LAND WEST OF HEYWOOD OLD ROAD

M A Worsley, BSc, MSc

Report 2674/1
Land Research Associates Ltd
Tapton Park Innovation Centre
Brimington Road
Chesterfield
S41 0TZ
www.lra.co.uk

28th August 2025

SUMMARY

An agricultural land quality survey has been undertaken of 62.6 ha of land west of Heywood Old Road, Greater Manchester in July 2025.

The land has undisturbed soils, typically with imperfect or poor drainage, or disturbed soils with very poor drainage. The land has strong slopes and complex topography in places. The land is of Subgrade 3b, Grade 4 and Grade 5 agricultural quality. The principal limitations to agriculture are soil wetness, gradient and microrelief.

1.0 Introduction

1.1 This report provides information on the agricultural quality of 62.6 ha of land west of Heywood Old Road, Greater Manchester. The report is based on a survey of the land in July 2025.

SITE ENVIRONMENT

1.2 The survey area is comprised of numerous agricultural fields to the north of the M60, west of Heywood Old Road and east of the M62. The fields are in two blocks: one larger block to the south of Simister Lane and one smaller block to the north. The survey area also includes an old farmstead, other hard standings, farm tracks, plus small wooded areas and ponds.

1.3 The survey area varies from gently to steeply sloping and has complex topography in places, particularly in the south-east. It has an average elevation of approximately 95 m AOD.

1.4 At the time of survey the agricultural land was beneath grass, grazed by horses north of Simister Lane.

PUBLISHED INFORMATION

1.5 British Geological Survey 1:50,000 scale information records the basal geology of the survey area as Pennine Coal Measures, sandstone of the Chester Formation and mudstone of the Manchester Marls Formation. Overlying surface deposits are recorded throughout: glacial sand and gravel and locally derived drift (Head).

1.6 The National Soil Map (published at 1:250,000 scale) records the survey area as belonging to the Newport 1 and Brickfield 3 Soil Associations. Newport 1 is mainly an association of sandy and coarse loamy soils formed from glaciofluvial drift. Brickfield 3 is mainly an association of fine loamy, fine loamy over clayey or clayey soils formed from drift derived from sandstones and shale[1].

[1] Jarvis, R.A., et al., 1984. *Soils and their use in Northern England*. Soil Survey of England and Wales Bulletin No. 10, Harpenden.

2.0 Soils

2.1 A soils and agricultural quality survey was carried out in July 2025 in accordance with MAFF (1988) Agricultural Land Classification guidelines[2]. During this survey soils were examined by auger borings and soil pits to a maximum depth of 1.2 m. Observations were made at a density of one per hectare.

2.2 Soil auger records, soil pit descriptions and a map showing the location of each investigation point (Map 1) are attached to this report as appendices.

2.3 The survey area has two broad soil types: undisturbed soils, typically with imperfect or poor drainage, and disturbed soils with very poor drainage. More details are given below.

UNDISTURBED SOILS

2.4 These soils are dominant over much of the survey area. A typical soil profile has a coarse loamy topsoil over a permeable fine loamy upper subsoil and a slowly permeable fine loamy lower subsoil. However, there is a reasonable degree of variation in the parent material of these soils and subsoils often have coarse loamy, sandy and/or clayey bands. The subsoils are brownish or reddish. Stone content is low, with stoneless to very slightly stony topsoil and subsoil. The stones present are small, medium and large hard stones of varying type.

2.5 Almost all of these soils are gleyed[3] at shallow depth and despite the variation outlined above, have a slowly permeable horizon within 80 cm depth. They are judged to belong to Wetness Class III or IV. They are imperfectly or poorly draining and are likely to suffer periodic or prolonged waterlogging between autumn and spring.

2.6 Occasionally these soils have coarse or sandy subsoil to depth and lack a slowly permeable horizon. These soils are judged to belong to Wetness Class I or II. They are freely or moderately freely draining and may suffer slight seasonal waterlogging.

DISTURBED SOILS

2.7 These soils are found in the south west on fields close to the M60. It is assumed that these soils were removed and replaced during / after motorway construction. The soils have a thin coarse loamy topsoil over dense and degraded coarse loamy or fine loamy subsoil. The soils are slowly permeable at shallow depth and under the relatively wet local climate

[2]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

[3]Gleying – greyish and pale soil colours with associated ochreous mottles resulting from reduction and mobilisation of iron compounds under anaerobic conditions (indicates periodic waterlogging).

they are judged to belong to Wetness Class V. They are very poorly draining and likely to be waterlogged at shallow depth for much of the year.

3.0 Agricultural land quality

3.1 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF ALC system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.

3.2 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification[4].

3.3 The relevant site data for an average elevation of 95 m and a central point at grid reference SD 842 058 is given below.

- Average annual rainfall: 1048 mm
- January-June accumulated temperature >0°C 1333 day°
- Field capacity period 242 days
- Summer moisture deficits for: wheat: 64 mm
potatoes: 46 mm

3.4 The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for ALC issued in 1988 by MAFF. Due to the relatively wet climate at this locality, land quality is limited to a maximum of Grade 2.

SURVEY RESULTS

3.5 Agricultural land of Subgrade 3b, Grade 4 and Grade 5 quality has been identified. The principal limitations to agriculture are soil wetness, gradient and microrelief. Other factors have been assessed but do not alter the land grade.

Subgrade 3b

3.6 This land is mapped on undisturbed soils. It is mapped where slopes are less than 7 degrees and soil wetness is the principal limitation due to imperfect or poor drainage (Wetness Class III or IV) and a relatively wet local climate. It is also mapped where there are slopes are between 7 and 11 degrees and gradient is equally limiting with wetness.

[4]Meteorological Office, (1989).*Climatological Data for Agricultural Land Classification*.

3.7 Soil wetness and gradient are moderately severe limitations which limit the potential productivity and flexibility of this land. However, regular arable cropping, alongside improved grassland, is likely to be possible.

3.8 In patches there are better draining soils which could form slightly higher quality agricultural land if they were found contiguously and / or more extensively. However, the use of these soils is judged to be limited by the wetter soils surrounding.

Grade 4

3.9 This land is mapped on disturbed soils, where soil wetness is the principal limitation due to very poor soil drainage (Wetness Class V) and a relatively wet local climate. It is also mapped on undisturbed soils where there are slopes between 11 and 18 degree and/or there is complex topography (microrelief).

3.10 Soil wetness, gradient and topography are severe limitations which are likely to limit agricultural use to improved grassland, with some scope for occasional break fodder crops.

Grade 5

3.11 This land is mapped on undisturbed soils where there is particularly complex topography (microrelief).

3.12 Microrelief is a very severe limitation which is likely to limit agricultural use to rough grazing or environmental / habitat set aside only.

Other land

3.13 This includes buildings, hard standing, farm tracks, large pylons, a small electrical unit, small wooded areas and small ponds.

Grade areas

3.14 The land grades are shown on Map 2 and the areas occupied shown below.

Table 1: Areas occupied by the different land grades (ha)

Grade/subgrade	*Area (ha)*	*% of the land*
Subgrade 3b	36.7	59
Grade 4	20.9	33
Grade 5	2.2	4
Other land	2.8	4
Total	62.6	100

APPENDICES:

1. SOIL AUGER LOG

2. SOIL PIT DESCRIPTIONS

3. MAPS

Land west of Heywood Old Road: Details of Soils and ALC survey

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-23	MSL	<5	23-44	SCL	xxx	44-72 72-80+	SCL HCL	xxx xxx	4	IV	3b	W
2	0-22	MSZL	<5	22-36	SCL	xxx	36-80+	rC	xxx	5	IV	3b	W
3	0-24	MCL	<5	24-58	SCL	xxx	58-80+	rC	xxx	6	IV	3b	W
4	0-20	SCL	<5	20-55	MSL/LMS	xxx	55-80+	SCL	xxx	8	IV	3b	W, G
5	0-25	SCL	<5	25-48	SCL	xxx	48-80+	rC	xxx	4	IV	3b	W
6	0-27	MCL	<5	27-38	SCL	xxx	38-80+	rHCL	xxx	10	IV	3b	G
7	0-31	MCL	<5	31-41	MCL	xxx	41-80+	rHCL	xxx	6	IV	3b	W
8	0-30	MSZL	<5	30-48	MSZL	xxx	48-80+	HCL	xxx	4	IV	3b	W
9	0-30	MSZL	<5	30-58	MSL/SCL	xxx	58-80+	rHCL	xxx	6	IV	3b	W
10	0-25	MSL	<5	25-35	SCL	xxx	35-80+	HCL	xxx	3	IV	3b	W
11	0-30	MSL	<5	30-46	MSL	xxx	46-80+	rMSL	xxx	4	II	3a	W
12	0-30	MSZL	<5	30-45	MSL	xxx	45-65 65-80+	MS MSL	o o	4	II	3a	W
13	0-35	MCL	<5	35-60	SCL	xxx	60-80+	HCL	xxx	8	IV	3b	W, G
14	0-28	SCL	<5	28-43	SCL	xxx	43-80+	HCL	xxx	5	IV	3b	W
15	0-26	SCL	<5	26-55	SCL	xxx	55-80+	rSCL	xxx	4	IV	3b	W
16	0-22	SCL	<5	22-68	MSL	xxx	68-90+	rHCL	xxx	10	IV	3b	W, G
17	0-30	MCL	<5	30-45	SCL	xxx	65-80+	HCL/C	xxx	2	IV	3b	W
18	0-28	SCL	<5	28-48	SCL	xxx	48-65 65-90+	MSL rSCL	xxx xxx	5	III/IV	3b	W
19	0-30	MSL	<5	30-57	MSL	o	57-75 75+	Pty MS Stopped on stones	o	8	?	3b	G
20	0-30	SCL	<5	30-40	SCL	xxx	40-80+	rMSL	xxx	5	I/II	3b	G
21	0-20	MCL	<5	20-65	MCL	x	65-80+	MCL	xxx	12	III	4	G
22	0-23	MSZL	<5	23-41	SCL	xxx	41-80+	HCL/C	xxx	5	IV	3b	W
23	0-30	MCL	<5	30-45	MCL	xxx	45-68 68-80+	MZCL HZCL	xxx xxx	4	IV	3b	W
24	0-20	MSL	<5	20-35	MSL	o	35+	Stopped, too firm, made ground		3	V	4	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
25	0-25	MSL	<5	25-65	MSL	xxx	65-80+	rC	xxx	5	IV	3b	W
26	0-23	MSL	<5	23-55	rSCL	xxx	55+	Stopped, too firm		10	III/IV	3b	W, G
27	0-25	MSL	<5	25-50	rSCL	xxx	50-80+	rSCL	xxx	5	IV	3b	W
28	0-22	MSL	<5	22-53	rSCL	xxx	53-80+	rHCL	xxx	4	IV	3b	W
29	0-20	SCL	<5	20-45	SCL	xxx	45-80+	rHCL	xxx	3	IV	3b	W
30	0-20	MCL	<5	20-50	SCL	xx(x)	50-80 80+	MCL (ex. firm) Stopped, too firm, made ground	xx(x)	3	V	4	W
31	0-23	MSZL	<5	23-80+	MSZL	xxx				8	II	3b	G
32	0-24	MSL	<5	24-39	SCL	xxx	39-80+	rHCL/C	xxx	4	IV	3b	W
33	0-40	MSL	<5	40+	Stopped, disturbed					12	-	4	G, T
34	0-22	MSZL	<5	22-55	MSZL	o	55-80+	MSZL	xxx	12	I	4	G
35	0-25	MSZL	<5	25-40	MSZLslst	xxx	40+	Stopped, stones		4	III/IV	3b	W
36	0-20	SCL	<5	20-48	SCL	o	48+	Stopped, too firm, made ground		3	V	4	W
37	0-20	SCL	<5	20-45	MSL/SCL	o				3	V	4	W
38	0-20	MSL	<5	20-40	MSL	o	40+	Stopped, too firm, made ground		2	V	4	W
39	Not recorded												
40	0-25	MSZL	<5	25-45	HCL	xxx	45+	Stopped, disturbed		5	V	4	W
41	0-25	MSZL	<5	23-38	MCL	xxx	38-55 55-75 75-100+	rSCL rFSZL rHCL	xxx xxx xxx	4	IV	3b	W
42	0-22	MSZL	<5	22-55	MCL	o	55-80+	M/HCL	xxx	6	IIII	3b	W
43	0-20	SCL	<5	20-40	SCL	o	40+	Stopped, too firm, made ground		6	V	4	W
44	0-20	MSL/SCL	<5	20-45	SCL	o	45+	Stopped, too firm, made ground		3	V	4	W
45	0-35	LMS	<5	35-67	MS	o	67+	Stopped, too firm, made ground?		2	-	-	-
46	0-33	MSZL	<5	33-38	MS	xxx	85-100+	rC	xxx	2	II	3a	W
47	0-25	MSL	<5	25-46	SCL	xxx	46-80+	rSCL	xxx	12	IV	4	G, T
48	0-25	MSL	<5	25-48	MCL	xxx	48-80+	rHCL	xxx	12	IV	4	G
49	0-23	MCL	<5	23-80+	MSL	o				8	I	3b	T
50	0-25	MSZL	<5	25-70	SCL	o	70-100+	MSZL	o	12	I	4	G
51	0-20	MSL/SCL	<5	20-60	SCL	o	60+	Stopped, too firm, made ground		5	V	4	W

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
52	0-20	MSL	<5	20-40	MSL	xxx	40-58 58-80+	SCL MS	xxx xxx	6	V	4	W
53	0-20	MSL	<5	20-45	SCL	xxx	45+	Stopped, too firm, made ground		3	V	4	W
54	0-20	MSZL	<5	20-37	MSZL	o	37+	Stopped, too firm, made ground		3	V	4	W
55	0-20	MCL	<5	20-45	MCL	xxx	45-70 70-90+	MCL rC	xxx xxx	12	IV	4	G, T
56	0-20	MCL	<5	20-50	MCL	xxx	50-80+	HCL	xxx	13	IV	4	G, T
57	0-30	MCL	<5	30-42	HCL	xxx	42-80+	rHZCL	xxx	6	IV	3b	W
58	0-20	MSL	<5	20-40	MSL	o	40+	Stopped, too firm, made ground		5	V	3b	W
59	0-30	MSZL	<5	30-42	SCL	x	42-65 65-80+	SCL HCL	xxx xxx	8	III	3b	W, G, T
60	0-28	MCL	<5	28-62	MCL	x	62-90+	SCL	xxx	8	III	3b	W, G
61	0-22	MCL	<5	22-70	MCL	xxx	70-90+	HCL	xxx	9	III	3b	W, G
62	0-32	SCL	<5	32-65	MSL	xx	65-90+	MSL	xxx	13	I	4	G, T

Soil log key

Gley indicators[1]

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils))[3]
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles or f-m concentrations and pale ped faces (gleyed horizon)
xxxx	dominantly blueish/greenish matrix, often with some reddish mottles (gleyed horizon)
xx(x)	Subsoils where gleying evidence is unclear in auger boring (especially reddish soils)

Texture[2]

C – clay

ZC - silty clay
SC - sandy clay
CL - clay loam (H-heavy, M-medium)
ZCL - silty clay loam (H-heavy, M-medium)
SZL - sandy silt loam (F-fine, M-medium,C-coarse)
LS - loamy sand (F-fine, M-medium, C-coarse)
SL - sandy loam (F-fine, M-medium, C-coarse)
S - sand (F-fine, M-medium, C-coarse)
SCL - sandy clay loam

P - peat (H-humified, SF-semi-fibrous, F-fibrous)

LP - loamy peat; PL - peaty loam

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
G - gradient
T – topography/microrelief
Tx – texture
C - Climate

Suffixes & prefixes:

o - organic

(vsl, sl, m, v, x)**st** – (very slightly, slightly, moderately, very, extremely) **stony**[6]

(vsl, sl, m, v, x)**ca**
(very slightly, slightly, moderately, very, extremely) **calcareous**[7]

Slowly permeable layers[4]

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer

A wavy underline (e.g. 50 indicates the top of a layer borderline to slowly permeable

Wetness Class[5]

I (freely drained) to VI (very poorly drained)

Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer; chky - chalky
R – bedrock (CH – chalk, SST – sandstone LST – limestone, MST – Mudstone)
gn – greenish

[1]Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5
[2]Texture in accordance with particle size classes in Hodgson (1997)
[3] Occasionally recorded in the texture box
[4]Permeability is estimated for auger borings and must be confirmed by full pit observations in accordance with the definitions in: Revised Guidelines for grading the quality of Agricultural Land (Maff 1988)
[5]Soil Wetness Classes are defined in Hodgson (1997)
[6]stoniness classes as defined in Hodgson (1997)
[7]calcareous classes as defined in Hodgson (1997)

Grades shown as intergrade e.g. **3a**/3b are close to the grade boundary. The estimate of which side of the boundary the grading falls is the shown first (in bold here)
grades in brackets eg. (3a) raised by one grade due to calcareous topsoil

Soil pit descriptions

Pit 32

0-24 cm Very dark grey (10YR 3/1) medium sandy loam with common dark brown (7.5YR 3/4) mottles; stoneless; moderately developed medium subangular blocky structure; moderately weak; abundant fine fibrous roots; smooth gradual boundary to:

24-39 cm Light brownish grey to light yellowish brown (10YR 6/2 to 6/4) sandy clay loam with many yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) mottles; stoneless; weakly developed medium to coarse subangular blocky structure; moderately weak to moderately firm; common fine fibrous roots; *c*. 0.5% macropores; smooth gradual boundary to:

39-80+ cm Reddish brown (5YR 5/3) heavy clay loam to clay with many medium and coarse strong brown (7.5YR 5/8) and many coarse light bluish grey (10B 7/1) mottles; stoneless; weakly developed very coarse prismatic structure; moderately firm; a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: IV

Grade: 3b. Limitation: soil wetness.

Pit 37

0-20 cm Very dark grey (10YR 3/1), becoming dark grey (10YR 4/1) towards base, sandy clay loam; 1-5% variable hard stones; weakly developed medium to coarse subangular blocky structure; moderately firm; common fine fibrous roots; wavy gradual boundary to:

20-45 cm Dark greyish brown (10YR 4/2) medium sandy loam to sandy clay loam; 1-5% variable hard stones; weakly developed diagonally aligned medium to coarse platy structure; very strong in situ, very firm ex situ; a few becoming no roots.

45+ cm Stopped, too firm.

Slope: 3°. Wetness Class: V

Grade: 4. Limitation: soil wetness.

Pit 41

0-25 cm Very dark grey (10YR 3/1) medium sandy silt loam; stoneless; moderately developed fine subangular blocky structure; moderately weak; abundant roots; smooth gradual boundary to:

25-38 cm Light brownish grey (10YR 6/2) medium clay loam with common fine and medium yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6); stoneless; weakly developed medium subangular blocky structure; moderately weak; many fine fibrous roots; >0.5% macropores; smooth gradual boundary to:

38-55 cm Pale brown to yellowish brown (10YR 6/3 to 6/4) sandy clay loam; stoneless; weakly developed coarse angular blocky structure; moderately firm; common fine fibrous roots; <0.5% macropores; wavy gradual boundary to:

55-75 cm Pinkish grey and white (5YR 7/2 + 8/1) fine sandy silt loam with common medium strong brown (7.5YR 5/6) mottles; stoneless; weakly developed coarse platy to massive structure; moderately firm (dry); a few fine fibrous roots; >0.5 macropores; clear irregular boundary to:

75-100 cm Pink (5YR 6/2) heavy clay loam with many medium strong brown (7.5YR 5/8) mottles; stoneless; weakly developed very coarse prismatic structure; moderately firm; a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: IV

Grade: 3b. Limitation: soil wetness.

Pit at 384850, 405450[5]

0-42 cm Very dark grey (10YR 3/1) medium sandy silt loam; 1-5% variable hard stones; moderately developed fine subangular blocky structure; very weak; many fine fibrous roots; wavy diffuse boundary to:

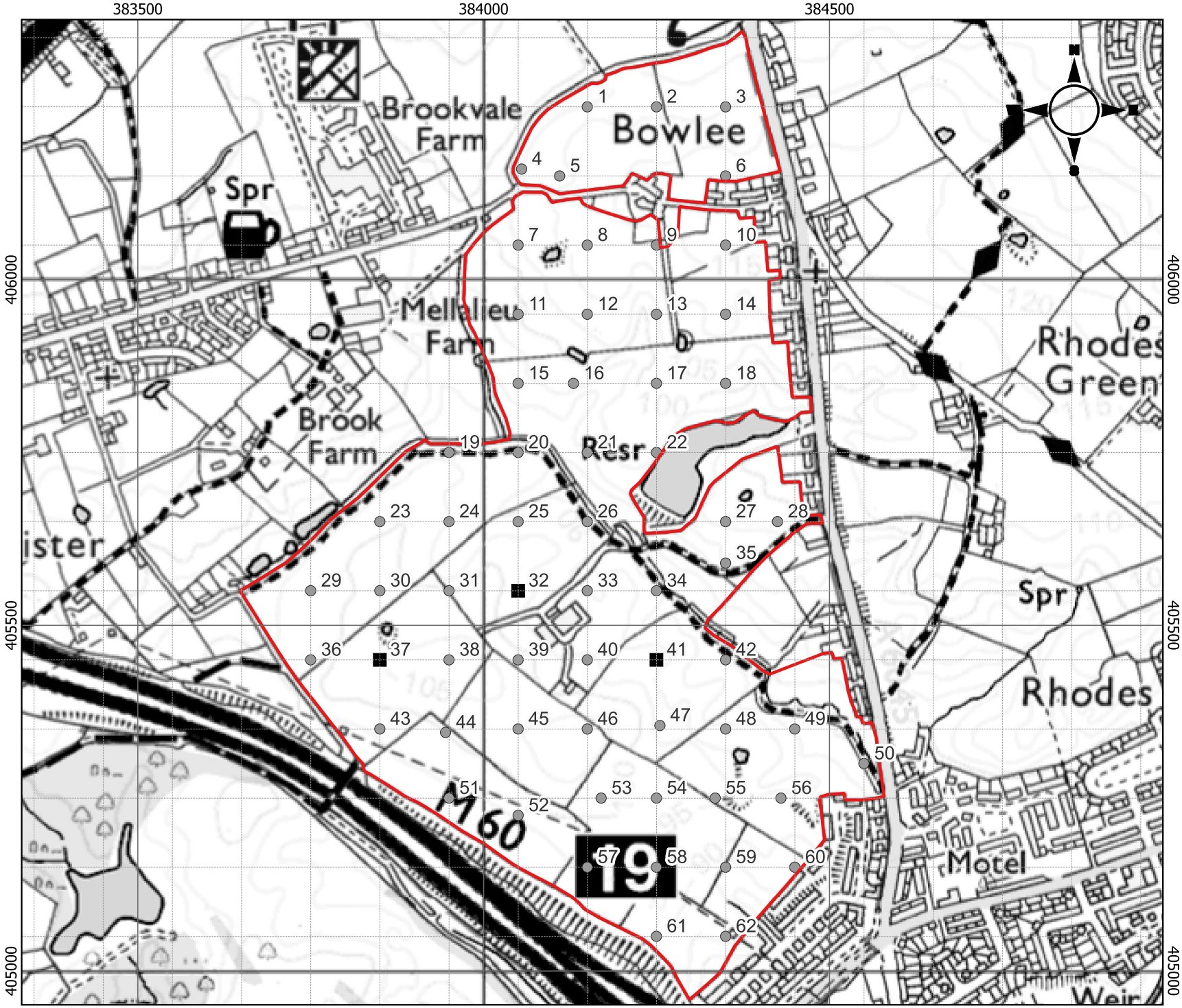
42-75 cm Pale brown to light yellowish brown (10YR 6/3 to 6/4) medium sandy silt loam; 1-5% variable hard stones; weakly developed medium subangular blocky structure; moderately weak; common fine fibrous roots; >0.5% macropores; smooth gradual boundary to:

75-100+ cm Reddish brown and reddish grey (5YR 5/3 + 5/2) sandy clay loam with common fine and medium strong brown and yellowish brown (7.5YR 5/6 + 10YR 5/6) mottles and pinkish grey (5YR 6/1) ped faces, with subordinate bands of sandy loam and loamy sand of similar colouring; stoneless; moderately developed very coarse prismatic structure; moderately firm (sandy clay loam) to very weak (loamy sand); a few fine fibrous roots; <0.5% macropores.

Slope: 4°. Wetness Class: III

Grade: 3b. Limitation: soil wetness.

[5] Soil pit dug during related survey on adjacent land with comparable geology.



Key

- Survey area
- Soil pit
- Soil auger

Site:

Heywood Old Road West

Map:

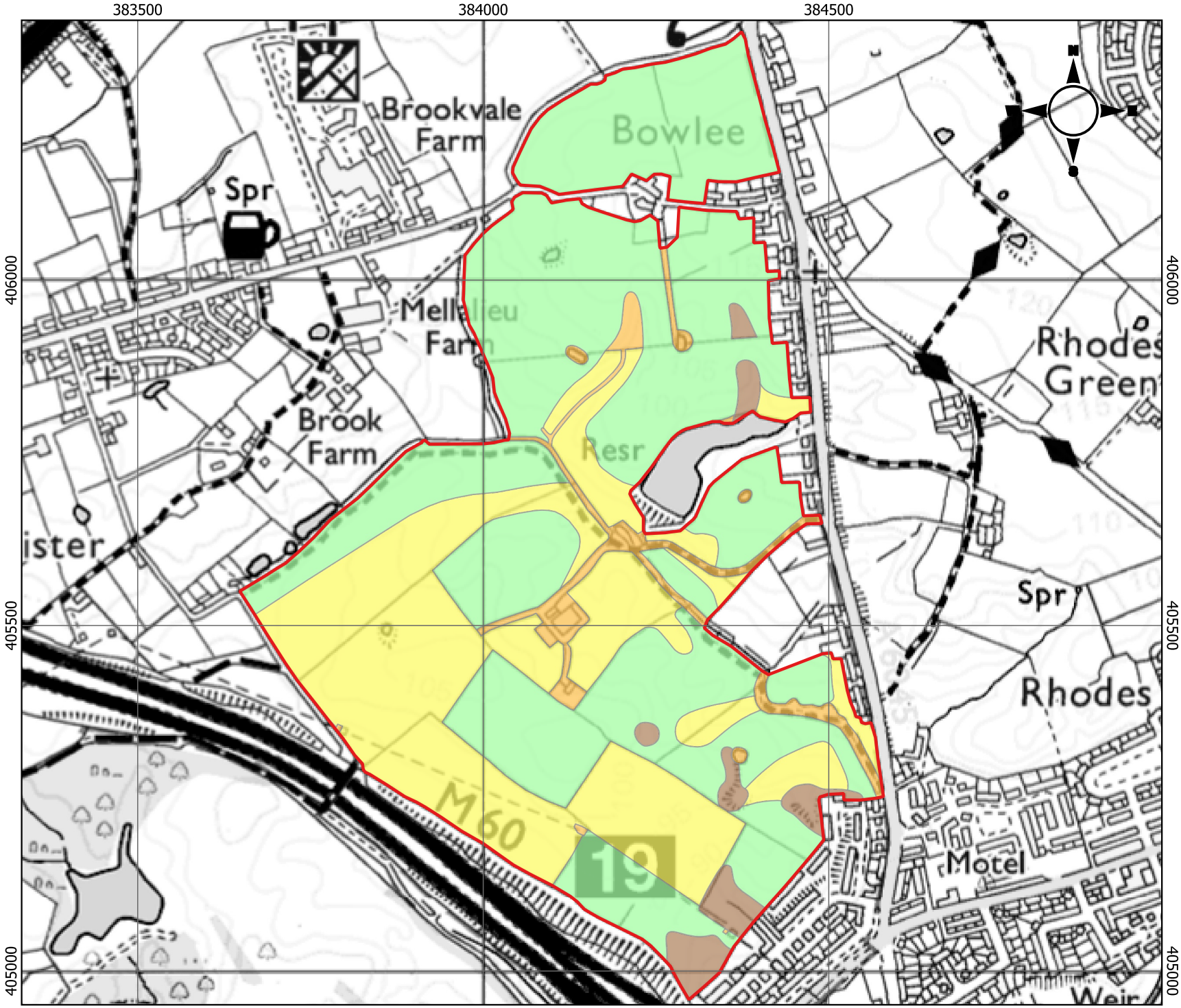
Map 1 - Observations

Date: 28 / 08 / 2025

Scale: 1 :7,500 at A4

Land Research Associates

Tapton Park Innovation Centre
Brimington Road
Chesterfield
S41 0TZ
www.lra.co.uk



Key

- Survey area
- Subgrade 3b
- Grade 4
- Grade 5
- Other land

Site:

Heywood Old Road West

Map:

Map 2 - Agricultural Land Classification

Date: 28 / 08 / 2025

Scale: 1 :7,500 at A4

Land Research Associates

Tapton Park Innovation Centre
Brimington Road
Chesterfield
S41 0TZ
www.lra.co.uk

APPENDIX 7.2 – Heritage Asset Plan

Ref	Asset No.	Listed Building	Grade
1	1200809	Heaton Hall	I
2	1200813	Temple to North East of Heaton Hall	II*
3	1282994	Smithy Lodge to East of Heaton Hall	II*
4	1200810	Dower House Cottage to North of Heaton Hall	II
5	1282995	Sundial in front of orangery of Heaton Hall	II
6	1068501	Rhodes Schools	II
7	1350346	Church of St George	II
8	1392256	31-37, Broad Street	II
9	1441215	Church of All Saints War Memorial, All Saint's Church, Manchester Old Road, Middleton	II

Ref	Locally Listed Building (Bury)
10	Coopers Farm, Simister, Prestwich, M25 2SP
11	Egypt Farm, Egypt Lane, Simister, Whitefield, M25 2RU
12	Lady Wilton School, Nut Lane, Simister, Prestwich
13	Sand Field Farm, Simon Lane, Whitefield, M24 4SF

Ref	Locally Listed Buildings (Rochdale)
14	St Thomas Church
15	New Jerusalem Sunday School (demolished)
16	Little Nook
17	Former Wesleyan Sunday School and Site of Chapel

Ref	HER Entry (Buildings and Monuments)
18	Heaton Park: line of former Manchester to Rochdale road
19	Trackway
20	Unsworth Moss Farm
21	Droughts Farm
22	Bowlee Mill
23	Heaton Park Orangery
24	Melodieu's (now Mellowdew Farm)
25	Heaton Park: ha ha to Heaton Hall and temple
26	Heaton Park: ha ha to the Dower House
27	Heaton Park: park boundary wall

0 100 200 m

1:13,250

Client
Northern Gateway Development Vehicle LLP

Project
Northern Gateway JPA 1.2

Drawing
Heritage Asset Plan

Project Number
RUSH3008

Drawing Number
GIS_000

Date
June 2026

Revision
1.0

Checked By
KM

Scale
1:13,250 @ A3

Status
Final

- Assessment Boundary
- Study Area
- Conservation Area
- Registered Park and Garden

Listed Buildings

- I
- II*
- II
- Locally Listed Buildings (Bury)
- Locally Listed Buildings (Rochdale)
- Greater Manchester HER Entry

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APPENDIX 7.3 – Geo-environmental and Geotechnical Desk Study

Northern Gateway JPA1.2

Geo-environmental and Geotechnical Desk Study



TETRA TECH

Date of First Issue: November 2025



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Geo-environmental and Geotechnical Desk Study Report

Document Control

Document:	JPA1.2 Geo-environmental and Geotechnical Desk Study
Project:	Northern Gateway JPA1.2
Client:	Northern Gateway Development Joint Venture
Job Number:	784-B048805-JPA1.2
Document Number	TTE-B048805-XX-XX-RP-G-0002

Revision:	P01	**Status:**	For information
Date:	November 2025		

Prepared by:	**Checked by:**	**Approved by:**
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Description of revision: First Issue

Revision:	P02	**Status:**	For information
Date:	July 2026		

Prepared by:	**Checked by:**	**Approved by:**
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Description of revision: Update to Limitations wording.

EXECUTIVE SUMMARIES

Western Parcel Executive Summary

WESTERN PARCEL	
Brief	Tetra Tech Ltd was commissioned by Northern Gateway Development Joint Venture (NGDJV) to undertake a Geo-Environmental and Geotechnical Desk Study for the Northern Gateway Development Area JPA1.2 site to provide a preliminary assessment of potential ground condition related constraints associated with proposed future development. The site comprises two areas, the Western Parcel and the Eastern Parcel either side of Heywood Old Road. Geo-environmental and geotechnical appraisal of both parcels has been undertaken. Initial assessment was undertaken in 2024 followed by expansion of the scope of work in 2025.
Proposed Development	The anticipated development will be low rise residential housing.
The Site	The Western Parcel is approximately 62.5 hectares (Ha) centred around 384190E, 405610N. The parcel is approximately bounded by Heywood Old Road to the east, the M60 to the south and Simister Lane to the north. The parcel is approximately 9km north of Manchester city centre and currently comprises agricultural fields and farm buildings.
Surrounding Site Information	The area to the north comprises agricultural land. To the east comprises agricultural land (associated with the Eastern Parcel) and residential properties with Middleton beyond that. To the south comprises M60 with Heaton Park beyond that to the southwest and residential properties to the southeast. To the west comprises agricultural land and residential properties with the town of Simister beyond that. A reservoir (used as a fishing pond) is present near the centre of this parcel and is retained by an approximately 10m high embankment of unknown construction.
Site Walkover	At the time of the site walkover (May 2024) the agricultural fields were wet in places but generally were firm underfoot, with vehicle access possibly along all existing tracks. Suspected Japanese Knotweed was noted along the southeast boundary with the residential properties and near the foot of the reservoir. Suspected Himalayan Balsam was also observed. Some small areas of made ground were noted, usually for localised leveling. Potential asbestos containing materials (ACM) were noted within made ground in the centre of the Western Parcel. Several small-scale slope failures were noted.
Site History	The site comprised predominantly agricultural fields with associated field boundaries from 1849 mapping. Several small ponds were present across the site from 1849 mapping. Small Sand and Gravel pits were present witin the site from 1849 mapping. Reservoir present in the centre of the site from 1894 with associated earthworks.

	Reprofiling of the southwest boundary by 1974 mapping associated with the development of the M60 motorway. Farm buildings in the centre of the site present from 1999 mapping.
Geology	The geology is recorded as comprising: • Potential Made Ground associated with infilled ponds, sand pits, farm buildings and motorway cuttings. • Superficial deposits are indicated to be Morainic Deposits (poorly sorted sand, gravel and silty clay with a moundy topography) across the majority of the parcel. A small area of Glaciofluvial Sheet Deposits (sand and gravel) are mapped in the south of the Western Parcel. Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southeast through the Western Parcel. Till (clay to sandy clay, unsorted, with gravel, cobbles and boulders) is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition. • Bedrock strata of both the Pennine Lower and Middle Coal Measures Formation comprising mudstone, siltstone and sandstone. In the southwest the Chester Formation (Sandstone) is present with a small area in the southeast where the Manchester Marls Formation (mudstone) outcrops. Bedrock is anticipated to be at approximately 60m to 70m above Ordnance Datum, with potential for it to be lower in the vicinity of the southern boundary due to proximity of a buried valley.
Hydrogeology & Hydrology	The parcel is not located within a groundwater Source Protection Zone. The superficial aquifer designations comprise: • Secondary A (Glaciofluvial Sheet Deposits). • Secondary Undifferentiated (Morainic Deposits, Till and Head). The bedrock aquifer designations comprise: • Secondary A (Pennine Lower Coal Measures and Pennine Middle Coal Measures). • Principal (Chester Formation Sandstone – southern part of the site). • Secondary B (Manchester Marls Formation – southeast). A stream runs along the western boundary and through the site from northwest to southeast. A reservoir is present near the eastern central portion of the parcel (outside study boundary).
UXO Risk	An unexploded ordnance (UXO) desk study has been completed and describes the site as being low risk with the recommended mitigation measures comprising a UXO awareness briefing for excavations.
Preliminary Coal Mining Risk Assessment	The site falls within a Coal Mining Reporting Area however is not within a Development High Risk Area defined by the Mining Remediation Authority. The risk to the site from historic coal mining has been assessed as low.
Preliminary Ground Contamination Assessment	The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel. Without further assessment radon protection measures are likely to be required for properties constructed over Head Deposits, of if Head Deposits are excavated and placed as fill in construction areas. Ground gas has not been identified as a risk for this parcel and is not considered further.

	The presence of areas of contamination at the site cannot be ruled out however given the historical use and general agricultural setting of the site it is reasonable to assume that such areas of contamination will be relatively localised. The risk from ground contamination at the site is considered to be as follows: • **Moderate/Low** risk to future site users / residents and construction workers from made ground on site. • **Low risk** to controlled waters (surface waters and underlying aquifers) from made ground on site. • **Low** risk to future site users / residents, construction workers and a **Moderate/Low** risk to controlled waters (surface waters and underlying aquifers) from potential hydrocarbons on site. • **Low risk** to future site users / residents and construction workers and controlled waters from pesticides / herbicides on site. • **Low risk** to potable pipework from made ground on site.
Preliminary Geotechnical Assessment	The geotechnical risk register details the potential geotechnical risks associated with the Western Parcel. Exact loadings and the extent of cut and fill operations are not currently known, however it is anticipated that a significant proportion of the site will need to be re-engineered and levelled to create platforms for development. Where competent natural strata is present following cut/fill works traditional strip foundations are likely to be suitable and, dependant on the earthworks specifications, the re-engineered material may be suitable for raft foundations or reinforced strip foundations. Un-engineered made ground may be present in former sand pits and presents a risk of differential settlement. Although outside the site boundary, the pond retained by an embankment presents a potential significant risk due to its age and unknown construction methods.
Recommendations	Suspected Japanese Knotweed and Himalayan Balsam were identified in two areas of the parcel, one along the boundary with the flats in the southeast and the other along the reservoir (fishing pond) overflow. It is recommended that an ecologist is consulted in advance of construction phase works near these areas. Note treatment of invasive species sometimes requires excavation and disposal of root networks or other mitigation measures to prevent re-growth from roots. Ground investigation to characterise ground conditions will be required across the site. It may the case that more than one phase of ground investigation will be required as design progresses. Geotechnical ground investigation will be required to address uncertainties, obtain information relating to geotechnical risks and determine the parameters of the underlying soils and to obtain data for geotechnical design including foundations, earthworks, retaining structures, settlement assessment and pavement design and to provide information about groundwater levels. Geochemical testing of the soils will be required to confirm the concrete classification. Geo-environmental investigation and testing of the underlying soils will be required for the following: • targeting the identified potential sources of contamination;

	• characterising the contamination status of soils proposed for reuse as part of cut/fill earthworks (e.g. as part of demonstrating suitability for use). • characterising the contamination status of groundwater (e.g. to allow assessment of potential impacts to groundwater associated with reuse of materials as part of cut/fill earthworks). • geochemical testing of soils to assess the concrete classification. Areas of tarmacadam (e.g. existing tracks) will require testing to determine the composition and concentration of coal tar present in the material. The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel, where 10%-30% of homes could be recorded above the action level. A site-specific radon assessment should be undertaken to confirm the presence and classification of radon risk at the site. Investigation and monitoring of the embankment for the reservoir is recommended to assess its construction and long-term stability. Further advice from a specialist dam consultant is recommended. Slope stability assessment may be required in the future depending on cut/fill proposals. The geotechnical properties of the material that a slope will be created from and the proposed angle of a slope are required in order to undertake slope stability assessment.
THIS EXECUTIVE SUMMARY IS TO BE READ IN CONJUNTION WITH THE REPORT TO WHICH IT RELATES.	

Eastern Parcel Executive Summary

EASTERN PARCEL	
Brief	Tetra Tech Ltd was commissioned by Northern Gateway Development Joint Venture (NGDJV) to undertake a Geo-Environmental and Geotechnical Desk Study for the Northern Gateway Development Area JPA1.2 site to provide a preliminary assessment of potential ground condition related constraints associated with proposed future development. The site comprises two areas, the Western Parcel and the Eastern Parcel either side of Heywood Old Road. Geo-environmental and geotechnical appraisal of both parcels has been undertaken. Initial assessment was undertaken in 2024 followed by expansion of the scope of work in 2025.
Proposed Development	The anticipated development will be low rise residential housing.
The Site	The Eastern Parcel is approximately 22Ha centred around 384730E, 405550N. The parcel is bounded by Heywood Old Road to the west, Boardman Lane to the northeast and residential properties of Rhodes to the south. The parcel is approximately 9km north of Manchester City Centre and currently comprises agricultural fields and sporadic farm buildings.

Surrounding Site Information	The area to the north comprises agricultural land. To the east the parcel is bound by Boardman Lane with residential properties, North Manchester Golf Course and Middleton beyond that. To the south comprises residential properties along Manchester Old Road (A576). To the west is agricultural land (associated with the western parcel).
Site Walkover	At the time of the site walkover (May 2024) the agricultural fields were wet in places but generally were underfoot, with very soft ground present in the far southwest. Some small areas of made ground were noted with the remains of concrete pads and several below ground utility covers, likely associated with a drain, noted around the site. A minor slope failure was observed at western area and appears to be associated with the historical sandpits. Following the subsequent October 2025 site walkover, an area of potential slope instability of observed in the western area of the site (east of Heywood Old Road). An overland flow path and ponded area were also noted in the same location.
Site History	The site comprised predominantly agricultural fields with associated field boundaries from 1848 mapping. Bagley Brown Road ran from the north to the southwest through the site but was no longer present by 2001 mapping. Sand and Gravel pits were present across the site from 1848 mapping, potentially infilled. Wells and a pump were present onsite from 1891 to 1893 mapping. Bleach Works present immediately south of site in early 1900s.
Geology	The geology is recorded as comprising: • Potential Made Ground associated with infilled ponds, sand pits, farm buildings. • Superficial deposits are indicated to be Morainic Deposits (poorly sorted sand, gravel and silty clay with a moundy topography) across the majority of the parcel. Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southwest through the Eastern Parcel. Peat may be present associated with the central portion of the Eastern Parcel where there is no agricultural activity. Till (clay to sandy clay, unsorted, with gravel, cobbles and boulders) is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition. • Bedrock strata of the Pennine Lower Coal Measures Formation comprising mudstone, siltstone and sandstone. Bedrock is anticipated to be at approximately 60m to 70m above Ordnance Datum, with potential for it to be lower in the vicinity of the southern boundary due to proximity of a buried valley.
Hydrogeology & Hydrology	The parcel is not located within a groundwater Source Protection Zone. The superficial aquifer designations comprise: • Secondary Undifferentiated (Morainic Deposits and Head). The bedrock aquifer designations comprise: • Secondary A (Pennine Lower Coal Measures). Three small streams run through the site, all heading southwest.

Unexploded Ordnance Risk	An unexploded ordnance (UXO) desk study has been completed and describes the site as being low risk with the recommended mitigation measures comprising a UXO awareness briefing for excavations.
Preliminary Coal Mining Risk Assessment	The site falls within a Coal Mining Reporting Area however is not within a Development High Risk Area defined by the Mining Remediation Authority. The risk to the site from historic coal mining has been assessed as low.
Preliminary Ground Contamination Assessment	The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel. Without further assessment radon protection measures are likely to be required for properties constructed over Head Deposits, of if Head Deposits are excavated and placed as fill in construction areas. Ground gas has not been identified as a risk for this parcel and is not considered further. The presence of areas of contamination at the site cannot be ruled out however given the historical use and general agricultural setting of the site it is reasonable to assume that such areas of contamination will be relatively localised. The risk from ground contamination at the site is generally considered to be as follows: • **Moderate/Low** risk to future site users / residents and construction workers from made ground on site. • **Low risk** to controlled waters (surface waters and underlying aquifers) from made ground on site. • **Low** risk to future site users / residents, construction workers and a **Moderate/Low** risk to controlled waters (surface waters and underlying aquifers) from potential hydrocarbons on site. • **Low risk** to future site users / residents and construction workers and controlled waters from pesticides / herbicides on site. • **Low risk** to potable pipework from made ground on site.
Preliminary Geotechnical Assessment	The geotechnical risk register details the potential geotechnical risks associated with the Eastern Parcel. Exact loadings and the extent of cut and fill operations are not currently known, however it is anticipated that a significant proportion of the site will need to be re-engineered and levelled to create platforms for development. Where competent natural strata is present following cut/fill works traditional strip foundations are likely to be suitable and, dependant on the earthworks specifications, the re-engineered material may be suitable for raft foundations or reinforced strip foundations. Un-engineered made ground may be present in former and inferred sand pits and presents a risk of differential settlement. There may be a risk of slope instability on site. This risk is greatest in the vicinity of existing streams or a spur line (e.g., western portion of the Eastern Parcel).

Recommendations	Ground investigation to characterise ground conditions will be required across the site. It may the case that more than one phase of ground investigation will be required as design progresses. Geotechnical ground investigation will be required to address uncertainties, obtain information relating to geotechnical risks and determine the parameters of the underlying soils and to obtain data for geotechnical design including foundations, earthworks, retaining structures, settlement assessment and pavement design and to provide information about groundwater levels. Geo-environmental investigation and testing of the underlying soils will be required for the following: • targeting the identified potential sources of contamination; • characterising the contamination status of soils proposed for reuse as part of cut/fill earthworks (e.g. as part of demonstrating suitability for use). • characterising the contamination status of groundwater (e.g. to allow assessment of potential impacts to groundwater associated with reuse of materials as part of cut/fill earthworks). • geochemical testing of the soils to assess the concrete classification. Areas of tarmacadam (e.g. existing tracks) will require testing to determine the composition and concentration of coal tar present in the material. The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel, where 10%-30% of homes could be recorded above the action level. A site-specific radon assessment should be undertaken to confirm the presence and classification of radon risk at the site. Slope stability assessment may be required in the future, depending on cut/fill proposals. The geotechnical properties of the material that a slope will be created from and the proposed angle of a slope are required in order to undertake slope stability assessment.

THIS EXECUTIVE SUMMARY IS TO BE READ IN CONJUNTION WITH THE REPORT TO WHICH IT RELATES.

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Instruction 1
1.2 Brief 1
1.3 Proposed Development 1
1.4 Related Assessments 2
1.5 Report Scope 2
1.6 Limitations 2
2.0 SITE INFORMATION 3
2.1 Location 3
2.2 General Area Context 3
2.3 Site Description 3
2.4 Western Parcel 3
2.5 Eastern Parcel 5
3.0 SITE HISTORY 7
3.1 Introduction 7
3.2 Site History 7
4.0 GEOLOGY, HYDROGEOLOGY, HYDROLOGY AND RADON 12
4.1 Introduction 12
4.2 Geology 12
4.3 Coal Mining 13
4.4 Mineral Mining and Ground Workings 13
4.5 Historical Borehole Logs 14
4.6 Hydrogeology 14
4.7 Hydrology 15
4.8 Radon 17
4.9 Unexploded Ordnance (UXO) 17
5.0 ENVIRONMENTAL DATABASE SEARCH 18
5.1 Introduction 18
5.2 Infilled features 18
5.3 Waste 18
5.4 Hazardous Substances and Health & Safety 19
5.5 Environmental designations 19
5.6 Flooding 19
5.7 Historical Land Uses 20
5.8 Current industrial land uses 20

6.0 CONCEPTUAL SITE MODEL AND PRELIMINARY GROUND CONTAMINATION RISK ASSESSMENT 21
6.1 Overview 21
6.2 Current Site Usage and Proposed Development 21
6.3 Ground gas Conceptual Site Model 21
6.4 Conceptual Site Model 22
6.5 Ground Contamination Risk Assessment 23
7.0 PRELIMINARY GEOTECHNICAL ASSESSMENT – WESTERN PARCEL 28
7.1 Anticipated Ground Conditions 28
7.2 Potential Geotechnical Constraints to Development 28
7.3 Reservoir 29
7.4 Geochemistry 29
7.5 Enabling Works 29
7.6 Foundations 30
7.7 Piled Foundation Risk Assessment 30
7.8 Floor slabs, highways and Hardstanding 30
7.9 Infiltration Drainage 31
8.0 PRELIMINARY GEOTECHNICAL ASSESSMENT – EASTERN PARCEL 32
8.1 Anticipated Ground Conditions 32
8.2 Potential Geotechnical Constraints to Development 32
8.3 Geochemistry 33
8.4 Enabling Works 33
8.5 Foundations 33
8.6 Piled Foundation Risk Assessment 33
8.7 Floor slabs, highways and Hardstanding 33
8.8 Infiltration Drainage 33
9.0 GEOTECHNICAL RISK REGISTER 34
9.1 OVERVIEW 34
10.0 CONCLUSIONS AND RECOMMENDATIONS 45
10.1 Conclusions – Western Parcel 45
10.2 Conclusions – Eastern Parcel 46
10.3 Part 2A and Planning 47
10.4 Limitations 47
10.5 Uncertainties 48
10.6 Recommendations 48
11.0 REFERENCES 50
DRAWINGS 51

APPENDIX A – REPORT CONDITIONS **52**

APPENDIX B – ENVIROCHECK AND GROUNDSURE REPORT **54**

APPENDIX C – HISTORICAL MAPS **55**

APPENDIX D – UNEXPLODED ORDNANCE **56**

APPENDIX E – CIRIA C552 RISK METHODOLOGY **57**

TABLES

Table 2.2-1 – Surrounding land uses 3
Table 3.2-1 – History of Western Parcel 7
Table 3.2-2 – History of Eastern Parcel 8
Table 3.2-3 – Summary of History of Surrounding Land within 250m 9
Table 4.4-1 – Mineral Mining and Ground Workings Western Parcel 13
Table 4.4-2 – Mineral Mining and Ground Workings Eastern Parcel 13
Table 4.5-1 – Historical borehole records 14
Table 4.6-1 – Aquifer Classification Western Parcel 14
Table 4.6-2 – Aquifer Classification Eastern Parcel 15
Table 4.7-1 – Hydrological Features Western Parcel 16
Table 4.7-2 – Hydrological Features Eastern Parcel 16
Table 5.3-1– Summary of Waste Facilities Western Parcel 18
Table 5.3-2– Summary of Waste Facilities Eastern Parcel 19
Table 5.6-1 – Summary of Flooding Potential 19
Table 6-1 – Preliminary Contamination Qualitative Risk Assessment for Western Parcel 24
Table 6-2 – Preliminary Contamination Qualitative Risk Assessment for Eastern Parcel 26
Table 9-1 – Risk Evaluation Matrix 34
Table 9-2 – Preliminary Geotechnical Risk Register for Western Parcel 35
Table 9-3 – Preliminary Geotechnical Risk Register for Eastern Parcel 40

DRAWINGS

B048805-TTE-00-XX-DR-U-0020/01 Site Location Plan

B048805-TTE-00-XX-DR-U-0021/03 Site Boundary

B048805-TTE-00-XX-DR-U-0022/04 Contamination Constraints Plan Western Parcel

B048805-TTE-00-XX-DR-U-0023/03 Contamination Constraints Plan Eastern Parcel

B048805-TTE-00-XX-DR-U-0024/03 Geotechnical Constraints Plan Western Parel

B048805-TTE-00-XX-DR-U-0025/04 Geology Plan

B048805-TTE-00-XX-DR-U-0029/03 Geotechnical Constraints Plan Western Parel

APPENDICES

APPENDIX A – REPORT CONDITIONS

APPENDIX B – ENVIROCHECK AND GROUNDSURE REPORT

APPENDIX C – HISTORICAL MAPS

APPENDIX D – UNEXPLODED ORDNANCE

APPENDIX E – CIRIA C552 RISK METHODOLOGY

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
aOD	above Ordnance Datum
bgl	below ground level
BGS	British Geological Survey
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
C4SL	Category 4 Screening Levels
CIEH	Chartered Institute of Environmental Health
CLEA	Contaminated Land Exposure Assessment
CoC	Constituent of Concern
CSM	Conceptual Site Model
DEFRA	Department of Environment, Food and Rural Affairs
DQRA	Detailed Quantitative Risk Assessment
DTS	Desk Top Study
DRO	Diesel Range Organics
DWS	Drinking Water Standard
EA	Environment Agency (England)
EPH	Extractable Petroleum Hydrocarbons
EQS	Environmental Quality Standards
FOC	Fraction Organic Carbon
GPR	Ground Penetrating Radar
LOD	Limit Of Detection
LQM	Land Quality Management
NRW	Natural Resources Wales
OS	Ordnance Survey
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Poly Chlorinated Biphenyl
PPE	Personal Protective Equipment
ppm	parts per million
PRO	Petroleum Range Organics
SGV	Soil Guideline Values
SOM	Soil Organic Matter
SSV	Soil screening value
SVOC	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
TSV	Tier 1 Screening Values
VOC	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons

1.0 INTRODUCTION

1.1 INSTRUCTION

Tetra Tech Ltd (Tetra Tech) was commissioned by Northern Gateway Development Joint Venture (the Client) to undertake a Geo-environmental and Geotechnical Desk Study for the southern section of the wider proposed Northern Gateway development, an area referred to by the design team as JPA1.2.

JPA1.2 is split into two parcels of land, one to the west and the other to the east of Heywood Old Road (A6045). Due to the size of the dataset required for the development area, for the purpose of description and database information review, this report assesses JPA1.2 as a Western Parcel and an Eastern Parcel, and as detailed by drawing B048805-TTE-00-XX-DR-U-0020 Site Location Plan and B048805-TTE-00-XX-DR-U-0021 Site Boundary Plan.

1.2 BRIEF

The initial brief[1] (in 2024) was to provide a Geo-environmental assessment for the Eastern and Western Parcels and Geotechnical assessment for the Western Parcel only, presented in a desk study report to:

- assess whether there was potential for ground contamination to be present which could significantly constrain the use of the site or give rise to the risk of significant environmental liability, and to undertake a desk study to assess contaminant linkages for both Eastern and Western Parcels.
- assess geotechnical risks which could significantly constrain the use of the site, or give rise to risk, and to undertake a desk study to assess these constraints for the Western parcel only.

The 2024 assessment was undertaken however the report was not issued.

The updated brief[2] (2025) was to update the drafted version of the desk study. The updates were as follows:

- Update drawings to reflect the variations to the client's amended assessment area boundary. This was an adaptation of the 2024 assessment area boundary.
- Review the areas not previously within the assessment area boundary for potential sources of contamination and, if any are identified, updating the desk study accordingly.
- Review the areas not previously within the assessment area boundary for potential geotechnical constraints/ opportunities and, if any are identified, update the desk study accordingly.
- Undertake a preliminary geotechnical constraints assessment for the Eastern Parcel.

The report has been prepared in general accordance and with reference to Environment Agency Land Contamination Risk Management (Environment Agency, 2025).

1.3 PROPOSED DEVELOPMENT

This assessment is for a proposed development to a low-rise residential end use.

[1] Northern Gateway – Consultancy Services for EIA and Outline Planning Applications: JPA 1.1 And 1.2 – Rev2. Dated 01 March 2024.
[2] Northern Gateway – JPA 1.2, Geo-environmental and Geotechnical Services. Issue 02. Dated 14 May 2025.

1.4 RELATED ASSESSMENTS

Tetra Tech (formerly WYG) undertook a Geo-environmental High-Level Constraints Review for the assessment of the site in 2019 on behalf of Northern Gateway Development Vehicle LLP for an area encompassing the Western Parcel and land further to the north and west. The historic report comprised:

- WYG 2019, Area GMA 1.2 Geo-environmental High-Level Constraints Review A104444-5-GHLCR1.2-V2.

It is recommended that this report is read in conjunction with the current document.

1.5 REPORT SCOPE

The area of interest has been separated into the Western Parcel, incorporating land to the west of Heywood Old Road (A6045), and the Eastern Parcel, incorporating land to the east of Heywood Old Road. This report includes the following elements:

- A record of the site visit and visual inspection walkover.
- A historical site and area review, primarily referring to past editions of Ordnance Survey Maps.
- A discussion of the general expected ground and groundwater conditions within the topographical and area context referring to our own geological and hydrogeological maps library.
- Details of an environmental database search of key relevant agencies, including Local and Statutory Authorities such as the Environment Agency.
- A ground contamination assessment discussing the results of the research above not only concerning potential on-site conditions/constraints and contamination but also an overview of the potential for migration onto or off-site with respect to the surrounding neighbouring sites.
- A baseline unexploded ordnance (UXO) risk assessment using freely available databases to classify the site with regards to UXO risk.
- Development of a preliminary conceptual site model.
- Preliminary qualitative ground contamination risk assessment (compliant with CIRIA 552 (CIRIA, 2001) methodology).
- Initial consideration of ground engineering requirements and the development of a geotechnical risk register.

1.6 LIMITATIONS

This report has been prepared by Tetra Tech Ltd on behalf of Northern Gateway Development Vehicle LLP in connection with the scope of the report as described in Section 1.5 above and taking into account the particular instructions and requirements set out in Tetra Tech Ltd fee proposal and Northern Gateway Development Vehicle LLP acceptance of same. It is not intended for and should not be relied on by any third party and no responsibility is undertaken to any third party save as provided for in (and in accordance with the terms of) any collateral warranty executed by Tetra Tech or any third party rights notice in favour of a named beneficiary (a "Collateral Warranty" or “Third Party Rights Notice”).

Without prejudice to the provisions of any Collateral Warranty or Third Party Rights Notice, Tetra Tech Ltd accepts no duty or responsibility (including in negligence) to any party other than Northern Gateway Development Vehicle LLP, and disclaims all liability of any nature whatsoever to any such party in respect of this report.

This report is subject to the report conditions presented in Appendix A.

2.0 SITE INFORMATION

2.1 LOCATION

The site is centered around Heywood Old Road, Middleton, M24 4QR approximately 9km north of Manchester City Centre. The western parcel is immediately north of Junction 19 of the M60. The eastern parcel is immediately north of Rhodes. Both parcels currently comprise agricultural fields and farms. There are multiple small access roads with areas of juvenile to mature vegetation across site.

The site is approximately 62.5 hectares (Ha) in the Western Parcel, centered around 384190E, 405610N and 22Ha in the Eastern Parcel, centered around 384730E, 405550N.

Site location plans are presented as drawings B048805-TTE-00-XX-DR-U-0020 and Site Boundary Plans are shown in B048805-TTE-00-XX-DR-U-0021.

2.2 GENERAL AREA CONTEXT

Table 2.2-1 describes the surrounding land uses for the whole site area.

Table 2.2-1 – Surrounding land uses

Direction	Description
North	Agricultural land
East	Agricultural land and residential properties with Middleton beyond that.
South	M60 with Heaton Park beyond that to the southwest and residential properties to the southeast.
West	Agricultural land and residential properties with the town of Simister beyond that.

2.3 SITE DESCRIPTION

During the first phase of work A site walkover inspection was undertaken by Tetra Tech on 21st May 2024. A follow-up site walkover was conducted by Tetra Tech on 28th November 2025. The site description has been split into a Western Parcel and Eastern Parcel as per the Site Boundary Plan B048805-TTE-00-XX-DR-U-0021.

The site predominantly comprises open agricultural fields with small access roads and farm buildings. The Western Parcel is separated from the Eastern parcel by Heywood Old Road (A6045).

2.4 WESTERN PARCEL

2.4.1 Current Parcel Usage

The Western Parcel, shown as the blue line boundary on drawing B048805-TTE-00-XX-DR-U-0021 Site Boundary Plan, currently consists of undeveloped agricultural land with a number of access tracks. A collection of concrete farm buildings, potentially incorporating asbestos containing material (ACM) are present in the centre of the parcel and there are a few small areas along the track where construction material and spoil has been stockpiled. In the southwest of the parcel overhead electrical cables cross the parcel with associated pylons and cabin in the south and west.

Immediately adjacent to the assessment area boundary a reservoir/ large pond is present immediately east of central portion of the Western parcel, currently used as a fishing pond. The pond has been created by damming of a watercourse via an approximately 10m high embankment constructed at the southwestern end of the pond.

2.4.2 Access and Boundaries

The parcel was accessed off Heywood Old Road (A6045). A locked gate lead onto a track of tarmacadam and crushed limestone that lead to the farm buildings in the center and then on to the southern most pylon and its associated cabin. Another access point was noted further south off Heywood Old Road where a small barbed wire fence had been erected behind a gate.

The parcel is bound to the east by Heywood Old Road, with residential properties along this boundary. It is bound to the south by the M60 with Heaton Park beyond this and there is no suitable access to the parcel from this boundary. The parcel is bound to the west and north by agricultural fields and residential properties of Simister.

The parcel could be accessed off Simister Lane, which runs through the far north of the parcel, or off Blueball Lane which bounds the north of the parcel, however it is not recommended to use these roads for access as they are narrow and in poor repair.

2.4.3 Topography

The topography of the parcel is complex with several hills and a valley that runs northwest to southeast through the parcel. Ground level ranges from 120m above Ordnance Datum (aOD) in the far north to 75m aOD in the southeast.

A few smaller depressions were noted, interpreted as likely relating to historical sand pits.

2.4.4 Ground Cover and Vegetation

The parcel is predominantly covered by agricultural grassed fields, with hardstanding present around the collection of farm buildings in the center of the parcel. Tracks across the parcel appear to be a mixture of tarmac and limestone gravel.

At a couple of locations, it was noted that the land had been levelled with made ground, in some cases fairly recently as limited vegetation was present.

Vegetation across the parcel was predominantly grassland with possible spring lines and damp areas showing swamp grass and nettles.

The hedges around each field boundary generally comprised of blackthorn and hawthorn, with occasional large mature trees including several oaks.

Japanese Knotweed and Himalayan Balsam were identified in the parcel in two areas, one along the boundary with the flats in the southeast and the other along the fishing pond overflow.

2.4.5 Tanks

A below ground storage tank was noted close to the farm buildings, most likely a slurry tank.

No other above or below ground tanks were noted.

2.4.6 Utilities

High voltage overhead cables run from northwest to southeast through the southwest of the parcel, with three associated pylons. The cables are quite low in one location due to the topography and need to be considered with regards to plant movement.

Other lower voltage overhead cables were also noted in the west of the parcel.

A fire hydrant was noted in the pavement next to the entrance onto the parcel from Heywood Old Road.

2.4.7 Asbestos Containing Material

Potential asbestos containing materials (ACM) were noted as present within an area of made ground used for levelling along the track, and on the roofs of the farm buildings. Given the age of some of the farm structures, it is possible that there is ACM within some of the farm buildings. Assessment of asbestos associated with buildings and structures was not part of the scope of work.

2.4.8 Evidence of Contamination

No areas of gross contamination were observed during the walkover.

There is evidence of fill / made ground associated with the track and some areas of localized levelling in the fields.

There was a strong blue/green colour to the fish pond which may be the result of an algal bloom, potentially resulting from fertilizer run-off.

2.5 EASTERN PARCEL

2.5.1 Current Parcel Usage

The Eastern Parcel, shown as the red line boundary on drawing B048805-TTE-00-XX-DR-U-0021 Site Boundary Plan, comprises mainly agricultural fields, some of which at the time of writing this report had been recently ploughed (e.g., the western and southwestern fields). A section of Broadman Lane passes through the north of the parcel.

2.5.2 Access and Boundaries

The parcel can be accessed off Broadman Lane.

The north of the parcel is bound by Ellis Lane, which becomes Broadman Lane further to the east. The east of the parcel is bound by Broadman Lane with residential properties of Middleton beyond that. To the south are residential properties and to the west the parcel is bound by Heywood Old Road.

2.5.3 Topography

The topography of the parcel is complex with a number of valleys but the parcel predominantly falls towards Heywood Old Road. The highest point is around 112m aOD in the northeast and the lowest around 72m aOD in the southwest.

2.5.4 Ground Cover and Vegetation

The parcel is predominantly covered by agricultural grassed fields. Mature vegetation comprising trees and bushes/hedgerows are recorded on field boundaries.

2.5.5 Tanks

No above or below ground tanks were observed, however, there was a tank possibly associated with feeding troughs located at the southeastern corner of the site based on historical mapping (refer to Table 3.2-2 Section 3.2.2).

2.5.6 Utilities

A row of manhole covers was noted running along the base of a shallow valley in the northern part of the parcel, anticipated to relate to a stormwater. The underground stormwater channel is approximately 2m deep and 2m wide. No other utilities were noted on the parcel.

2.5.7 Asbestos Containing Material

No potential ACM were observed during the walkover.

2.5.8 Evidence of Contamination

A localised area of made ground was identified during the walkover, containing broken pieces of glazed pottery. Domestic waste from fly tipping was observed near the Heywood Old Road public footpath entrance.

3.0 SITE HISTORY

3.1 INTRODUCTION

The historical development of the site and surrounding area has been assessed using information available from extracts of historical Ordnance Survey (OS) maps from the previously undertaken WYG report presented in Appendix B, and from the Groundsure report commissioned for the Eastern parcel, also present in Appendix B.

In the context of the summary of historical development of the surrounding area, the descriptions are split based on the Western Parcel and the Eastern Parcel on drawing B048805-TTE-00-XX-DR-U-0021 Site Boundary Plan and limited to within approximately 250m of the site as a whole unless specified in the following section.

3.2 SITE HISTORY

3.2.1 Site Summary

The site's history describes primarily agricultural land use from at least 1849 with farmsteads and multiple small scale sand/gravel quarries recorded across site. Numerous relatively small former quarries were identified from historical maps.

Farm buildings are currently present along the main access track off Heywood Old Road and through the Western parcel of the site.

The development of residential properties along the southeast boundary of the site by 1955 and the M60 motorway adjacent to the southwest of the Western Parcel by 1974 mapping may have caused overspill of made ground onto site.

The potential contamination sources identified as part of the site history and site walkover are shown on the contamination constraints drawings B048805-TTE-00-XX-DR-U-0022 Contamination Constraints Plan for the Western Parcel and B048805-TTE-00-XX-DR-U-0023 Contamination Constraints Plan for the Eastern parcel.

3.2.2 Site History

The following tables, Table 3.2-1 and Table 3.2-2, below provide a summary of each section's history following a review of available OS mapping coverage dating back to 1849 and historical aerial imagery for the site.

Table 3.2-1 – History of Western Parcel

Feature	Map Years	Location onsite	Notes (May impact other sections)
Agricultural fields with several field boundaries	1849-Present	The number of fields within the site boundary remain relatively consistent across the map editions.	Higher Fields labelled as a small holding/farm throughout mapping
Farm building	1849-Present	East boundary	Annotated 'Baguley Brow Farm'.
Stream	1849-Present	Running northwest to southeast and culverted under the road in the far southeast.	-
Stream	1894-Present	Running from the south offsite to the southeast.	Reduces in length by 1894 mapping. Mapped as Rises on 1923 mapping. Mapped as Issues and Sinks on 1999 mapping.

Feature	Map Years	Location onsite	Notes (May impact other sections)
Several Ponds	1849-Present	Number of small ponds across the site.	The majority of these do not appear to have been infilled. One near the southwest boundary potentially infilled by 1974 mapping.
Gravel Pit	1849 only	Present in the centre of the site	Potentially infilled as not present by 1894 mapping.
Sand Pit	1849 only	Present in the northwest of the site.	Potentially infilled as not present by 1894 mapping.
Old Sand Pit	1894-Present	Two excavations present in the southeast.	Depressions still present on recent mapping and present during walkover.
Reservoir	1894-Present	Outside boundary near the centre east of the site.	Earthen dam constructed to the southwest and a small overflow running southwest to join with the stream. Currently a fish pond.
Excavation	1894-1955	Northeast boundary	Potentially infilled as not present by 1965 mapping.
Excavation	1894-1983	North boundary	Potentially infilled as not present by 1999 mapping.
Electrical Pylon	1932-Present	Three pylons mapped along the southwest.	By 1974 mapping the three onsite pylons have moved locations but remain within the site running parallel to the southwest boundary.
Earthworks	1974-Present	Southwest boundary	Reprofiling of the slope of the site associated with the development of the M60 motorway.
Farm Buildings	1999-Present	Centre	Annotated 'Heaton Farm' consisting of farm buildings, residential property and associated track.

Table 3.2-2 – History of Eastern Parcel

Feature	Map Years	Location onsite	Notes (May impact other sections)
Open fields with numerous small holdings and farms	1848-Present	The number of fields within the site boundary remain relatively consistent across the map editions.	'Little Nook' farm house in the southwest of the site. Several farm buildings along Bagley Brow road.
Bagley Brow road	1848-1980	Running from north to southwest.	Annotated 'Foot Path' by 1909 mapping. No longer present by 2001 mapping.
Un-named Road	1848-Present	In the north of the site, running east to west joining Bagley Brow and Heywood Old Road.	Annotated 'Boardman Lane' on modern mapping.
Sand Pit	1848 only	South	Potentially infilled as not present by 1891 mapping.
Sand Pit	1848-1965	West	Annotated 'Old Sand Pit' by 1891 mapping. Marked as swamp by 1965 mapping. No longer present by 1974 mapping.

Stream	1848-Present	Running from the centre of the site to the southwest.	Spring noted on 1965 mapping. Terminating in the pond by 'Little Nook'
Pond	1848-1938	Southwest near 'Little Nook'	No longer present by 1954 mapping, replaced by tank.
Well	1891-1893	Northwest	No longer present by 1909 mapping.
Well	1891-1893	West	No longer present by 1909 mapping.
Pump	1891-1893	Southwest	No longer present by 1909 mapping.
Stream	1909-Present	Running adjacent to the footpath from centre to southwest.	-
Cuttings	1932-Present	Land bounding Heywood Old Road appears to have been reprofiled.	On visual inspection these areas appear to have been given a stone wall facing.
Stream	1954-Present	Appearing in the west near Bardley Hall Cottages and running west.	-
Tank	1954-1955	In the far southeast corner.	No longer present by 1965 mapping. Possibly associated with feeding troughs.

3.2.3 Surrounding History

Potentially contaminative land uses within 250m of the site boundary are summarised in Table 3.2-3 below.

Table 3.2-3 – Summary of History of Surrounding Land within 250m

Feature	Map Years	Location Relative to which Section Boundary	Notes (May impact other sections)
Farm Buildings	1849-1955	10m southwest of the Western Parcel	Along Simister Lane. Annotated 'Old Hall'. No longer present by 1965 mapping.
Farm Buildings	1849-1955	Encompassed in the north of the Western Parcel	Annotated 'Cambashaw'. No longer present by 1983 mapping.
Sand Pit	1849 only	150m north of the Western Parcel	Annotated 'Old Sand Pit'. No longer present by 1894 mapping.
Sand Pit	1849-1894	200m north of the Western Parcel	Annotated 'Old Sand Pit'. No longer present by 1910 mapping.

Feature	Map Years	Location Relative to which Section Boundary	Notes (May impact other sections)
Bleach Works	1849-1923	200m south of the Western Parcel	Annotated 'Lands End Bleach Works'. Annotated 'disused' by 1923 mapping. No longer present by 1932 mapping.
Bleach Works	1891-1980	10m south of the Eastern Parcel	Annotated 'Bleach and Dye Works' on 1891 mapping. Associated Tanks adjacent the Eastern parcel southern boundary by 1907 mapping. Annotated 'Chemical Works' by 1954 mapping. No longer present by 2001 mapping.
Reservoir	1891-1955	10m south of the Eastern Parcel	Appears to be disused by 1969 mapping with trees mapped within it.
Old Sand Pit	1891-Present	200m northeast of the Eastern Parcel	With associated pond.
Grave Yard	1893-Present	100m southeast of the Eastern Parcel	Expanded by 1932 mapping and now 70m from the boundary.
Sand Pits	1894-1965	10m southeast of the Western Parcel	Appears as a pond from 1910 mapping. Replaced by residential properties by 1983 mapping.
Reservoir	1894-Present	Near the centre east of the Western Parcel.	Earthen dam constructed to the southwest and a small overflow running southwest to join with the stream. Currently a fish pond.
Sewage Works with associated filter beds	1909-1952	150m south of the Western Parcel	Most of the works appear to be landfilled by 1952 mapping, with the remainder no longer present by 1958 mapping.
Allotment Gardens	1932-1967	Adjacent southeast of the Eastern Parcel	No longer mapped by 1974 mapping.
Sand Pits	1952-1959	Adjacent southeast of the Western Parcel	Replaced by residential properties by 1969 mapping.
Residential development	1952-Present	60m southeast of the Western Parcel	Adjacent southeast by 1977 mapping.
Heywood Old Road straightened and residential development present along it	1955-Present	Adjacent along Heywood Old Road	-

Feature	Map Years	Location Relative to which Section Boundary	Notes (May impact other sections)
M60 Motorway with associated earthworks	1965-Present	Adjacent southwest of the Western Parcel	-
Residential properties	1965-Present	Northeast of the Western Parcel	Along Simister Lane.

4.0 GEOLOGY, HYDROGEOLOGY, HYDROLOGY AND RADON

4.1 INTRODUCTION

Details of the geology underlying the site have been obtained from the following sources and are shown on drawing B048805-TTE-00-XX-DR-U-0025.

Geology Plan:

- BGS 1:50,000 Map, Sheet No. 85 Manchester Bedrock and Superficial Deposits
- BGS 1:10,000 Map, Sheet No. SD80NW Manchester Bedrock and Superficial Deposits
- Coal Authority Interactive Viewer, accessed May 2024
- BGS website and Geoindex (British Geological Survey, 2021), accessed May 2024.
- Environmental database (Envirocheck Report 202263147_1_1) presented in Appendix B
- Environmental database (Groundsure Report GS-UJV-EOF-ETA-HZ1) presented in Appendix B.
- BR211 Indicative Radon Mapping (Scivyer, 2015).
- MAGIC MAP online interactive mapper.
- BGS Borehole Data

4.2 GEOLOGY

Below is a summary of the recorded geology, based on the sources listed in Section 4.2, which is also shown on drawing B048805-TTE-00-XX-DR-U-0025 Geology Plan.

4.2.1 Made Ground

Made ground and Infilled ground is not mapped onsite. A small area of landfilling is noted as present in the far north of the site.

4.2.2 Superficial Geology

The geological map (Sheet 85) indicates that superficial strata are anticipated to be present across the site. In the main these comprise Morainic Deposits described as poorly sorted sand, gravel and silty clay with a moundy topography. They have been referred to in this report as ‘Hummocky (moundy) Glacial Deposits.

Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southeast through the Western Parcel and in the southwest of the Eastern Parcel.

The geological map indicates that Till, comprising clay to sandy clay, unsorted, with gravel, cobbles and boulders is anticipated to be present beneath the other superficial deposits.

There are several small depressions with ponds at their base that appear to be historic sand pits.

Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition.

4.2.3 Bedrock Geology

The bedrock geology comprises primarily the Pennine Lower Coal Measures Formation across the whole of the Eastern Parcel and across the northeast of the Western Parcel. The Pennine Middle Coal Measures Formation (mudstone, siltstone and sandstone) is present across the centre of the Western Parcel. These Formations comprise mudstone and siltstone with sandstone and subordinate seatearth beds and thin coal seams.

In the southwest of the western parcel, the Chester Formation (sandstone) is present with a small area in the southeast where the Manchester Marls Formation (mudstone) outcrops.

The geological map (Sheet 85) indicates rockhead is at approximately 60m OD in the south of the parcels, rising up to approximately 70m OD in the north. The southern boundary of the parcels is located in the vicinity of a buried valley in the rockhead, and consequently there is potential for rockhead to be at <60m OD in those areas.

4.2.4 Geological Features

The Bradley Fold Fault runs across the site with downthrow to the south, separating the Pennine Middle Coal measures from the stratigraphically younger Chester Formation.

A glacial channel is mapped as being present in the vicinity of the southern boundary of the parcels. Consequently, superficial deposits may be thicker in the south of each parcel of land relative to other parts of the parcels.

4.3 COAL MINING

The site is within a Coal Mining Reporting Area but it is not within a Development High Risk Area defined by the Mining Remediation Authority. No mine entries or outcrops are present on or close to the site in data sets available from the Mining Remediation Authority and therefore the risk to the site from historical coal mining is considered low.

4.4 MINERAL MINING AND GROUND WORKINGS

Table 4.4-1 and Table 4.4-2 summarise the likely Mineral Mining and Ground Workings relevant to the Site with regards to the Western and Eastern Parcels of land respectively, and limited to within approximately 250m of their boundaries.

Table 4.4-1 – Mineral Mining and Ground Workings Western Parcel

Feature	Location	Notes
Old Hall Sand Pit	Onsite southeast	Opencast Ceased
Old Hall Gravel Pit	Onsite south	Opencast Ceased
Hazel Hillocks Sand Pit	Onsite southwest	Opencast Ceased
Bow Lee Sand Pit	170m north	Opencast Ceased
Bow Lee Sand Pit	240m north	Opencast Ceased

Table 4.4-2 – Mineral Mining and Ground Workings Eastern Parcel

Feature	Section	Notes
Hanging Birch Sand Pit	Onsite southwest	Opencast Ceased

4.5 HISTORICAL BOREHOLE LOGS

BGS logs have been referred to for information and are displayed in Table 4.5-1 below. BGS borehole records are publicly available and have been used for information only. None of the borehole records were located on site, however there are borehole records within 250m of the site boundary.

Table 4.5-1 – Historical borehole records

Borehole Reference (Year drilled)	Location	Summary
SD80NW359 (1989)	20m southwest	Topsoil to 0.20mbgl. Firm grey sandy very clayey with occasional pebbles, sandstone fragments, cinders and traces of brick – FILL to 2.40mbgl. Medium dense grey clayey silty sand with clay inclusions, traces of cinder and vegetation – FILL to 3.70mbgl. Stiff/hard grey sandy silty CLAY with occasional sand and silty inclusions and partings, pebbles, sandstone, siltstone and mudstone fragments to 10.00mbgl. Water strike 6.9mbgl rising to 5.0mbgl after 15 minutes.
SD80SW86 (1980)	70m south	Topsoil and rootlets to 0.50mbgl. Firm slightly friable yellow brown sandy silty CLAY with traces of topsoil to 1.00mbgl. Stiff yellow brown slightly mottled grey silty slightly sandy CLAY with a little gravel and partings of sand to 4.00mbgl. Medium dense red brown silty fine to medium SAND with a little fines to 6.00mbgl. Medium dense red brown fine to medium SAND with some fines and a little gravel and occasional coal fragments to 8.00mbgl. Medium dense red brown uniformly graded medium SAND with trace fines to 10.50mbgl. Medium dense well graded subrounded GRAVEL and COBBLES with a little red brown fine sand and a boulder at 10.50mbgl. No groundwater strikes.
SD80NE209 (1990)	160m east	Made ground (thin layer of tarmac over cemented ashes/concrete-type material) to 0.30mbgl. Brown silty fine to medium grained SAND to 1.00mbgl. No groundwater strikes.

4.6 HYDROGEOLOGY

Table 4.6-1 and Table 4.6-2 describe the Aquifer classification for the strata found in the Western Parcel and the Eastern Parcel of the site and should be read in conjunction with drawing B048805-TTE-00-XX-DR-U-0025 Geology Plan.

Table 4.6-1 – Aquifer Classification Western Parcel

Feature	Superficial	Bedrock

Aquifer Classification	Secondary A (Glaciofluvial Sheet Deposits). Secondary Undifferentiated (Hummocky Glacial Deposits and Head).	Secondary A (Pennine Middle Coal Measures – Majority of the site). Principal (Chester Formation Sandstone – south of the site). Secondary B (Manchester Marls Formation – southeast).
Groundwater Vulnerability	Medium vulnerability Secondary Aquifer in the east. High vulnerability Secondary Aquifer in the west.	Low vulnerability Principal Aquifer. Low vulnerability Secondary Aquifer.
Groundwater Source Protection Zone	None within 1km.	None within 1km.
Licensed Groundwater Abstractions	None	None
Groundwater Hydraulic Gradient	Anticipated to be towards the south.	

Table 4.6-2 – Aquifer Classification Eastern Parcel

Feature	Superficial	Bedrock
Aquifer Classification	Secondary Undifferentiated (Hummocky Glacial Deposits and Head).	Secondary A (Pennine Lower Coal Measures).
Groundwater Vulnerability	Medium vulnerability Secondary Aquifer across the majority of the site. Medium vulnerability Secondary Aquifer in the far south.	Low vulnerability Secondary Aquifer.
Groundwater Source Protection Zone	None within 1km.	None within 1km.
Licensed Groundwater Abstractions	None	None
Groundwater Hydraulic Gradient	Anticipated to be towards the south.	

4.7 HYDROLOGY

Details of the hydrology of the Western Parcel have been obtained from the Environmental Database Envirocheck Report 202263147_1_1 presented within Appendix B and summarised in Table 4.7-1 below.

Table 4.7-1 – Hydrological Features Western Parcel

Feature	On Site	Off Site (<250m)
Watercourse	A stream runs from the northwest to the southeast.	A pond formed by damming the watercourse is present near the centre east of the site with an overflow draining to the southwest and joining with the stream.
Surface Water Abstractions	None	None
Discharge to Surface Water	One in the southeast. Mr Broxton Domestic Property Reference: 016992302 Issued: 1st October 1996 Revocation date: Not Supplied Discharge Type: Sewage Discharges – Final/Treated Effluent – Not Water Company Receiving Water: Surface water drain to River Irk.	Eight within 250m. Nearest 30m east. Mr Roy Lowe Domestic Property Reference: 0172/1714 Issued: 5th May 1972 Revocation date: Not Supplied Discharge Type: Sewage Discharges – Final/Treated Effluent – Not Water Company Receiving Water: Langley Brook
Flood Risk	Flood Zone 1	

Details of the hydrology of the area have been obtained from the Environmental Database Groundsure Report GS-UJV-EOF-ETA-HZ1 presented within Appendix B and summarised in Table 4.7-2 below.

Table 4.7-2 – Hydrological Features Eastern Parcel

Feature	On Site	Off Site (<250m)
Watercourse	Three streams onsite, all classified as 'Inland river not influenced by normal tidal action' and all flow from northeast to southwest. Area of Marsh, classified as 'An area that is predominantly waterlogged by freshwater' in the southwest of the parcel. A 'spring' is noted on Ordnance Survey mapping located towards the centre of the parcel.	Waters onsite drain to the River Irk (340m southeast).
Surface Water Abstractions	None	None
Discharge to Surface Water	None	Three within 250m. Nearest 67m southwest 241 Heywood old Road Effluent Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Permit Number: 016992302 Permit Version: 1 Receiving Water: Surface Water drain to River Irk

		Issue date: 01/10/1996
Flood Risk	Flood Zone 1	

4.8 RADON

Radon data at a scale of 1km grid squares indicates the following:

- The Western Parcel is primarily in an area of elevated radon potential with 10% to 30% of properties at or above the Action Level.
- The Eastern Parcel is primarily in an area of elevated radon potential with 10% to 30% of properties at or above the Action Level.

Groundsure report GS-UJV-EOF-ETA-HZ1 presented within Appendix B provides further detail and indicates that the area of 10% - 30% affected is associated with the southwest of the Eastern Parcel and a southeast – northwest orientated strip running through the centre of the Western Parcel. The alignment of the area of highest radon potential in both parcels aligns with the distribution of the Head Deposits on the geological map suggesting these are the likely source of the radon. The radon derives from the natural radioactive decay of minerals in the deposit. Radon is quickly diluted in the atmosphere however, if it accumulates in enclosed spaces such as in basements, buildings, caves, mines and tunnels it may reach high concentrations, and may pose a health hazard from the inhalation of radioactive particles.

This will need to be taken into consideration if the Head Deposits are cut and used elsewhere on the site as engineered fill. The remaining parts of both parcels are indicated to have a radon potential of <1% of properties affected.

Radon protection measures may be required in new buildings depending on the material they are underlain by.

Should radon protection measures be required they will likely comprise a radon barrier positioned over the floor of the structure and linked to cavity trays at the edges. Supplementary protection is also provided by locating underfloor vents on two or more sides of the underfloor space. Although underfloor ventilation reduces the amount of radon, which the radon barrier provided in the floor construction has to exclude, it should not be looked upon as a primary defence, in line with BR211 guidance.

4.9 UNEXPLODED ORDNANCE (UXO)

Based on freely available mapping data from Zetica UXO (Zetica UXO, 2024), the site is located within a low-risk area with regards to unexploded ordnance (UXO). A ‘Low Risk’ area is defined by Zetica as:

‘Low risk regions are those with a bomb density of up to 10 bombs per 1000 acres. These areas are considered to have a significant but low unexploded bomb risk. In general, further action to mitigate the risk is considered prudent, although not essential. Care is required when assessing the risk for specific sites where the risk may be higher because of local wartime activity’.

5.0 ENVIRONMENTAL DATABASE SEARCH

5.1 INTRODUCTION

Regulatory authority information relevant to the site and its surroundings has been obtained from review of information presented in the previously acquired Envirocheck report for the Western Parcel (Appendix B) and a Groundsure Report for the Eastern Parcel (Appendix B). Distances stated are approximate and are taken from the boundary of the site to the database recorded entries.

The following summary is generally limited to locations within 250m of the site boundaries unless it is considered that installations or activities beyond that range could potentially have an impact on the site or be affected by the redevelopment of the site.

5.2 INFILLED FEATURES

The absence or presence of infilled features at or within 250m of the wider site has been summarised in Section 4.2.1 for Made Ground and Section 4.4 for ground workings. The locations of the Made Ground/infilled deposits with respect to the sections are described there.

5.3 WASTE

The presence of waste facilities at or within 250m of the site boundary have been summarised in Table 5.3-1 for the Western Parcel and in Table 5.3-2 for the Eastern Parcel.

Table 5.3-1– Summary of Waste Facilities Western Parcel

Facility Type	On Site	Off Site (250m)
Historical Landfill (EA/NRW records)	No	Bowlee Sand Quarry, Bluebell Lane Waste Type: Inert and Industrial Waste Site Reference: EAHLD30185 10m north
		Heaton Mills Printing Company Limited, land at Kelvin Avenue Waste Type: Household Waste Site Reference: EAHLD18072 130m south
Licensed Waste Management facilities	No	M&M oils Ltd, 124 Simister Lane, Prestwich Site category: Physical Treatment Facilities License Number: 53602 160m northwest

Table 5.3-2– Summary of Waste Facilities Eastern Parcel

Facility Type	On Site	Off Site (250m)
Historical Landfill (EA/NRW records)	No	Land at Kelvin Avenue, Rochdale Waste Type: Household Site Reference: RD/LIC/133/77/P2,D065 231m south
Historical Waste Sites	No	Scrap Metal Yard 244m southeast
Licensed Waste Management facilities	No	No

5.4 HAZARDOUS SUBSTANCES AND HEALTH & SAFETY

No Control of Major Accident Hazard or Hazardous Substance Storage has been identified for the site as a whole or within 250m of the boundary.

5.5 ENVIRONMENTAL DESIGNATIONS

The site is part of an area of greenbelt known as Merseyside and Greater Manchester under both Rochdale and Bury local Authorities.

The site falls within a Site of Special Scientific Interest Impact zone, therefore any aviation development will require further consultation.

5.6 FLOODING

The absence or presence of flooding potential at the site is summarised in Table 5.3-1 for the Western Parcel and the Eastern Parcel.

Table 5.6-1 – Summary of Flooding Potential

Designation	Presence	Detail
Risk of Flooding from Rivers and Sea	No	-
Historical Flood Events	No	-
Flood Defences	No	-
Area Benefiting from Flood Defences	No	-
Flood Storage Areas	No	-
Flood Zone 2	No	-
Flood Zone 3	No	-
Groundwater Flooding	Yes	Limited potential for groundwater flooding to occur in both Western and Eastern Parcels. Potential for groundwater flooding of property situated below ground level in both Western and Eastern Parcels.
Surface Water Flooding	No	-

5.7 HISTORICAL LAND USES

The potentially contaminative historical land uses at or within 250m of the wider site boundary have been summarised on drawings B048805-TTE-00-XX-DR-U-0022 Contaminant Constraints Plan Western Parcel and B048805-TTE-00-XX-DR-U-0023 Contaminant Constraints Plan Eastern Parcel with a full list detailed in the environmental reports in Appendix B.

The key contaminative historical land uses indicated on the historical maps can be summarised by:

- Agricultural use (predominantly pastural) present across the whole site.
- Sewage Works and Bleach Works with associated landfilling present around 200m south of the whole site.
- Various ground workings, sand and gravel pits on and offsite of the whole site.
- Farm buildings with associated tanks within the Western Parcel.
- Overspill and earthworks from Motorway construction within the southwest of the Western Parcel.

5.8 CURRENT INDUSTRIAL LAND USES

The potentially contaminative current land uses shown on historical maps at or within 250m of the wider site boundary have been summarised below:

- Lancashire Vehicle Sales adjacent to the northeast boundary of the Western Parcel.
- Metal Stitching Services Ltd adjacent to the western boundary of the Western Parcel.
- Car Shop Megastore present 200m south of the Eastern parcel.

6.0 CONCEPTUAL SITE MODEL AND PRELIMINARY GROUND CONTAMINATION RISK ASSESSMENT

6.1 OVERVIEW

The information presented in the previous sections of this report have been collated and evaluated to establish an initial qualitative risk assessment for the Northern Gateway JPA1.2 site. A preliminary conceptual model of the site has been generated based on information derived from this assessment, supplemented by information attained during the Tetra Tech site walkover.

Both the Western and Eastern Parcels have been considered with regard to current UK legislation and guidance, namely Part 2A of the Environmental Protection Act 1990 and the Contaminated Land (England) Regulations 2006, as amended, and in accordance with current UK good practice guidelines (for example BS10175:2011).

In general, ground contamination can occur through several causes, particularly from historical operations and activities. Contamination can result from either on-site sources or from on-site migration from off-site sources, leading to long term liabilities under recent legislation for any site owner.

For a risk of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

- Source, i.e., a substance that is capable of causing pollution or harm;
- Pathway, i.e., a route by which the contaminant can reach a target; and
- Receptor (target), i.e., something which could be adversely affected by the contaminant.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

6.2 CURRENT SITE USAGE AND PROPOSED DEVELOPMENT

This assessment is undertaken on the basis of future low rise residential end use.

6.3 GROUND GAS CONCEPTUAL SITE MODEL

A site can be potentially be significantly affected by ground gas, principally methane and carbon dioxide, if it:

- Is located within 250m of a historical landfill.
- Is underlain by made ground containing a significant proportion of potentially degradable material.
- Is underlain by deep made ground (e.g. from backfilling of former workings).
- Is underlain by shallow coal workings.

An historical landfill is mapped as being present extending into the northernmost tip of the Western parcel and extending off site towards the northwest. The shape of the landfill area suggests the portion adjacent to the Western parcel was an access route from Heywood Old Road to the landfill area located approximately 140m northwest of the northern boundary of the Western Parcel at its closest point. Till is mapped as being present beneath the historical landfill and the site boundary, the cohesive nature of which will limit lateral migration of ground gas. The distance and the cohesive nature of the superficial deposits means there is unlikely to be a viable migration pathway such that ground gas from the landfill would pose a significant contaminant linkage to proposed end users. Therefore, ground gas from the historical landfill has not been considered further.

Within both the Western Parcel and Eastern Parcel, areas that appear to be associated with localised extraction of sand/gravel deposits are present. These are all relatively small areas with a long axis <50m and predominantly <30m. Where they have been infilled they are unlikely to be a significant source of ground gas based on the following:

- Their relatively small surface area and relatively shallow depth (<5m deep).
- They are unlikely to have been filled with material containing a significant proportion of potentially degradable material.
- Natural deposits e.g. from accumulation of organic matter are unlikely to degrade at a sufficient rate to generate significant volumes of ground gas.

Therefore, infilled ponds and former workings are not considered to form a significant contaminant linkage and the ground gas from these features has not been considered further.

6.4 CONCEPTUAL SITE MODEL

The key source, pathway and receptor model is outlined below within the context of the residential use of the site.

6.4.1 Potential Sources of Contamination

As a predominantly greenfield site there are limited potential sources of contamination associated with the site.

The main potential sources of contamination have been identified as potential infilling following localised, historical extraction of sand/gravel and localised deposits of made ground associated with farming activities e.g. to create level areas.

The source of the material associated with construction of the embankment to form the reservoir, now fish pond, immediately east of the Western parcel is not known. However, given that it was constructed in the late 1800s it is unlikely that would be a significant source of contamination.

Potential sources associated with each Parcel have been described below and locations are indicated on the contamination constraint plans B048805-TTE-00-XX-DR-U-0022 (Contamination Constraints Plan Western Parcel) and B048805-TTE-00-XX-DR-U-0023 (Contamination Constraints Plan Eastern Parcel):

On-site Sources

- Localised areas of Made Ground – potential for heavy metals (associated with ash and clinker), poly aromatic hydrocarbons (PAH) and asbestos containing material (ACM) in areas of infilling, levelling, and overspill from earthworks along the southern boundary of the Western parcel.
- Hydrocarbon/contaminants storage, use and potential spills/leaks associated with farming land use.
- Use of pesticides/herbicides across farmland.

Off-site Sources

- Historical Sewage and Bleach Works (migration of volatile contaminants via groundwater).

6.4.2 Potential Contaminant Pathways

The following contaminant pathways are considered to be potentially active based on the current site use and proposed development and are shown on the contamination constraints plans.

<u>Human Exposure Pathways</u>

- Direct dermal contact or ingestion of soils, or inhalation of dust and/or vapours (i.e. human interaction with surface and sub-surface materials).

<u>Environmental Pathways</u>

- Leaching and horizontal or vertical migration through the unsaturated ground, either through permeable sub-surface materials and/or preferential pathways;
- Lateral and vertical migration of groundwater through permeable sub-surface materials and/ or preferential pathways;

- Leaching to surface water run-off/drainage.
- Plant root uptake

6.4.3 Potential Receptors at Risk

The following potential receptors have been identified, numbered and are shown on the contamination constraints plans.

Human Health

- Future site users (residential);
- Construction / Maintenance Workers (during and post construction); and
- Adjacent site users (residential/commercial/industrial).

Wider Environment

- Underlying Superficial Secondary A Aquifer (Glaciofluvial Sheet Deposits). Secondary Undifferentiated Aquifer (Head deposits).
- Underlying Bedrock Aquifers, Secondary A (Pennine Middle Coal Measures) across the majority of the site, Principal Aquifer (Chester Formation Sandstone) in the southwest. Secondary B Aquifer (Manchester Marls Formation) in the southeast.
- Building Infrastructure and supply pipes
- Adjacent Properties; and
- Surface Waters
- Plants in areas of landscaping e.g. gardens

6.5 GROUND CONTAMINATION RISK ASSESSMENT

The source, pathway, and receptor linkages are presented with a qualitative risk assessment in the following tables.

The risk assessment assesses potential risks to identified receptors in relation to the existing site setting and the proposed development. CIRIA C552 methodology has been used for the risk assessment and is presented in Appendix G.

Table 6-1 – Preliminary Contamination Qualitative Risk Assessment for Western Parcel

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix F						
Source	**Pathway**	**Receptor**	**Consequence of risk being realised**	**Probability of risk being realised**	**Risk Classification**	**Justification & Potential Risk Management (if required)**
Ground Conditions – Made Ground on site, areas of potential infilling and development overspill (Heavy metals, PAH, ACM)	Dermal contact, ingestion and/or inhalation of or dusts	Human Health – Future site users / residents and construction workers	Medium	Low	**Moderate / Low**	Localised areas of made ground associated with infilling and levelling are likely to present. Significant contamination, if present, is unlikely to be laterally or vertically widespread. The embankment of the fish pond has been present for >100 years. Significant contamination representing a risk to human health is unlikely to be present. The embankment is proposed to remain in-situ as part of proposed development limiting the potential for future exposure. Limited evidence of contaminants encountered during site walkover. Potential risks to construction workers can be mitigated through working practices.
	Leaching to groundwater, drainage and lateral / vertical migration.	Surface Water (Onsite Stream and fish pond)	Medium	Unlikely	**Low**	Localised areas of made ground associated with infilling and levelling are likely to present. Significant contamination, if present, is unlikely to be laterally or vertically widespread. Material will have been subject to leaching since it was placed therefore is unlikely to remain a significant source of contamination. No surface or groundwater water abstractions within 1km. No further assessment required unless significant mobile contamination identified during design phase or construction phase.
		Secondary A (Superficial) Principal (Bedrock)	Medium	Unlikely	**Low**	
Hydrocarbons on site from agricultural storage and use. (hydrocarbons)	Dermal contact, ingestion and/or inhalation of or dusts	Human Health – Future site users / residents and construction workers	Medium	Unlikely	**Low**	No significant historical or existing sources of hydrocarbons identified. While spills may have occurred they are likely to have been localised and involved relatively small volumes and therefore contamination is unlikely to be laterally or vertically widespread. Natural attenuation will have occurred. Potential risks to construction workers can be mitigated through working practices. No further assessment required unless significant mobile contamination identified during design phase or construction phase.
	Leaching to groundwater,	Surface Water	Medium	Low	**Moderate / Low**	No significant historical or existing sources of hydrocarbons identified. While spills may have occurred they are likely to have been localised

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix F						
Source	**Pathway**	**Receptor**	**Consequence of risk being realised**	**Probability of risk being realised**	**Risk Classification**	**Justification & Potential Risk Management (if required)**
	drainage and lateral / vertical migration.	(Onsite Stream and fish pond)				and involved relatively small volumes and therefore contamination is unlikely to be laterally or vertically widespread. Natural attenuation will have occurred. Geological map indicates cohesive Till is likely to present which will act to constrain downward migration. No surface or groundwater water abstractions within 1km. Stream onsite and Principal Aquifer beneath site, with potential for mobile contamination to be present on site, however most likely source areas are near the farm buildings which are located away from these sensitive receptors. No further assessment required unless evidence of visual evidence of hydrocarbon contamination is identified onsite during the design phase or construction phase.
		Secondary A (Superficial) Principal (Bedrock)	Medium	Unlikely	**Low**	
Pesticides / herbicides form agricultural land use	Dermal contact, ingestion and/or inhalation.	Human Health – Future site users / residents and construction workers	Medium	Unlikely	**Low**	Predominantly pastural farming and grazing land, not arable farming due to the steep topography. Pesticides / Herbicides generally short lived and non-persistent since the 1970s. No further assessment required.
	Leaching to groundwater, drainage and lateral / vertical migration.	Surface Water (Onsite Stream and Reservoir)	Medium	Unlikely	**Low**	
Made ground – Heavy metals PAH and Hydrocarbons	Direct Contact	Potable water pipework	Medium	Unlikely	**Low**	Localised areas of made ground associated with infilling and levelling are likely to present. Significant contamination, if present, is unlikely to be laterally or vertically widespread. While the risk has been assessed as low it is recommended that a United Utilities Risk Assessment be undertaken to confirm that barrier pipe is not required.

Table 6-2 – Preliminary Contamination Qualitative Risk Assessment for Eastern Parcel

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix F						
Source	**Pathway**	**Receptor**	**Consequence of risk being realised**	**Probability of risk being realised**	**Risk Classification**	**Justification & Potential Risk Management (if required)**
Ground Conditions – Made Ground on site, areas of potential infilling and development overspill (Heavy metals, PAH, ACM)	Dermal contact, ingestion and/or inhalation of or dusts	Human Health – Future site users / residents and construction workers	Medium	Low	**Moderate / Low**	Localised areas of made ground associated with infilling and levelling are likely to present. The lateral and vertical extent and composition is unknown but likely to be thickest around farm buildings, adjacent and along roads, infilled pits and ponds and along the southern boundary. Significant contamination, if present, is unlikely to be laterally or vertically widespread. Off site historical bleach works is unlikely to be an ongoing source of contaminants that could migrate onto site via groundwater given its age and that the land has been redeveloped with residential housing. Limited evidence of contaminants encountered during site walkover. Potential risks to construction workers can be mitigated through working practices.
	Leaching to groundwater, drainage and lateral / vertical migration.	Surface Water (Onsite Streams)	Medium	Unlikely	**Low**	Localised areas of made ground associated with infilling and levelling are likely to present. Significant contamination, if present, is unlikely to be laterally or vertically widespread. Material will have been subject to leaching since it was placed therefore is unlikely to remain a significant source of contamination. No surface or groundwater water abstractions within 1km. No further assessment required unless significant mobile contamination identified during design phase or construction phase.
		Secondary A (Superficial) Principal (Bedrock)	Medium	Unlikely	**Low**	
Hydrocarbons on site from agricultural storage and use and potential migration from adjacent historic Bleach Works. (hydrocarbons)	Dermal contact, ingestion and/or inhalation of or dusts	Human Health – Future site users / residents and construction workers	Medium	Unlikely	**Low**	No significant historical or existing sources of hydrocarbons identified. While spills may have occurred they are likely to have been localised and involved relatively small volumes and therefore contamination is unlikely to be laterally or vertically widespread. Natural attenuation will have occurred. Off site historical bleach works is unlikely to be an ongoing source of contaminants that could migrate onto site via groundwater given its age and that the land has been redeveloped with residential housing. Potential risks to construction workers can be mitigated through working practices. No further assessment required unless significant mobile contamination identified during design phase or construction phase.

This matrix is based on CIRIA C552 risk evaluation methodology, definitions for risk ratings is presented in Appendix F						
Source	**Pathway**	**Receptor**	**Consequence of risk being realised**	**Probability of risk being realised**	**Risk Classification**	**Justification & Potential Risk Management (if required)**
	Leaching to groundwater, drainage and lateral / vertical migration.	Surface Water (Onsite Stream and Reservoir)	Medium	Unlikely	**Low**	No significant historical or existing sources of hydrocarbons identified. While spills may have occurred they are likely to have been localised and involved relatively small volumes and therefore contamination is unlikely to be laterally or vertically widespread. Natural attenuation will have occurred. Geological map indicates cohesive Till is likely to present which will act to constrain downward migration. No surface or groundwater water abstractions within 1km. Stream onsite and Principal Aquifer beneath site, with potential for mobile contamination to be present on site, however most likely source areas are near the farm buildings which are located away from these sensitive receptors. No further assessment required unless evidence of visual evidence of hydrocarbon contamination is identified onsite during the design phase or construction phase.
		Secondary A (Superficial) Principal (Bedrock)	Medium	Low	**Moderate / Low**	
Pesticides / herbicides form agricultural land use	Dermal contact, ingestion and/or inhalation.	Human Health – Future site users / residents and construction workers	Medium	Unlikely	**Low**	Predominantly pastural farming and grazing land, not arable farming due to the steep topography. Pesticides / Herbicides generally short lived and non-persistent since the 1970s. No further assessment required.
	Leaching to groundwater, drainage and lateral / vertical migration.	Surface Water (Onsite Streams)	Medium	Unlikely	**Low**	
Made ground – Heavy metals PAH and Hydrocarbons	Direct Contact	Potable water pipework	Medium	Unlikely	**Low**	Localised areas of made ground associated with infilling and levelling are likely to present. Significant contamination, if present, is unlikely to be laterally or vertically widespread. While the risk has been assessed as low it is recommended that a United Utilities Risk Assessment be undertaken to confirm that barrier pipe is not required.

7.0 PRELIMINARY GEOTECHNICAL ASSESSMENT – WESTERN PARCEL

This section summarises the anticipated ground conditions and preliminary geotechnical assessment for the Western Parcel, including highlighting the potential constraints for the propsed future development, based on the information identified in the preceding sections for the Western Parcel.

Actual ground conditions will need to be confirmed through ground investigation. It is anticipated this will need to be carried out in several phases.

7.1 ANTICIPATED GROUND CONDITIONS

The anticipated ground conditions are summarised in Section 4.2 and indicated by drawing B048805-TTE-00-XX-DR-U-0025 Geology Plan.

- Made Ground while not mapped onsite is likely associated with infilled ponds, pits, farm buildings, motorway cuttings and areas where ground has been levelled.
- Superficial strata across site primarily comprise Hummocky (moundy) Glacial Deposits (poorly sorted sand, gravel and silty clay with a moundy topography). A small area of Glaciofluvial Sheet Deposits (sand and gravel) is mapped in the south of the Western Parcel. Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southeast through the Western Parcel and in the southwest of the Eastern Parcel. The geological map indicates that Till, comprising clay to sandy clay, unsorted, with gravel, cobbles and boulders is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition.
- The bedrock geology comprises primarily the Pennine Lower Coal Measures Formation across the northeast of the Western Parcel. The Pennine Middle Coal Measures Formation (mudstone, siltstone and sandstone) is present across the centre of the Western Parcel. These Formations comprise mudstone and siltstone with sandstone and subordinate seatearth beds and thin coal seams. In the southwest of the Western Parcel the Chester Formation (Sandstone) is present with a small area in the southeast of the Western Parcel where the Manchester Marls (mudstone) outcrops. The geological map (Sheet 85) indicates rockhead is at approximately 60m OD in the south of the parcels, rising up to approximately 70m OD in the north. The southern boundary of the parcels is located in the vicinity of a buried valley in the rockhead, and consequently there is potential for rockhead to be at <60m OD in those areas.
- Information about groundwater is limited. The depth to groundwater is likely shallower near the stream and at the base of the slope however this has not been proved.

7.2 POTENTIAL GEOTECHNICAL CONSTRAINTS TO DEVELOPMENT

Potential ground constraints are shown on drawing B048805-TTE-00-XX-DR-U-0024 Geotechnical Constraints Plan Western Parcel and listed below:

- Stability of slopes around the parcel during development and loading near stream. Risk of landslide predominantly located along the stream on site, but movement noted in other locations during walkover.
- Potential un-engineered made ground or other ‘soft spots’, especially in historic quarries and ponds. Differential settlement, especially where foundations bridge differing strata. The extraction and any backfilling are likely to have been uncontrolled and therefore potential for non-engineered Made Ground.
- Collapse compression of deep, dry un-compacted made ground.
- In ground structures and relic foundations from historical structures. Potential for ‘hard spots’ where below ground elements (e.g. foundations, basements) of historical buildings have not been grubbed out.

- Shrink/swell of clays due to the water demand of historical or current trees.
- Unknown depth of groundwater.
- Granular superficial deposits will require excavation support.
- Sulphate attack on infrastructure.
- Compression of natural strata.
- Existing below ground utilities present on site may need diversion.
- Soft compressive ground may be encountered e.g. where marshy areas are present and/or in the vicinity of watercourses.

7.3 RESERVOIR

Although the reservoir is outside the assessment area boundary, collapse of the reservoir's embankment can result in fatality and significant damage to the proposed residential development. Given the age of the embankment, and the lack of maintenance records, there is considered a risk of embankment collapse. Monitoring equipment (e.g., piezometer, extensometer, and inclinometer) is recommended to be installed to monitor the embankment movement (if any). Further advice from a specialist dam consultant is recommended.

7.4 GEOCHEMISTRY

A suite of sulphate testing to allow the characterisation of ground aggressivity for concrete classification across the site will be required at ground investigation survey.

7.5 ENABLING WORKS

7.5.1 Cut and Fill and Earthworks

Significant cut and fill works are expected to be required to achieve development platforms for proposed development. There is potential that significant cut depths could result in cutting into bedrock.

The Hummocky (moundy) Glacial Deposits are indicated to comprise poorly sorted sand, gravel and silty clay which may vary laterally and vertically and consequently the material is likely to comprise more than one engineering class under the Specification for Highways Works classification. The suitability of the material for reuse will be dependent on its composition. Diligent excavation and separation of material will be required in order to maximise reuse.

The Hummocky (moundy) Glacial Deposits are anticipated to be underlain by superficial Glacial Till deposits which are generally cohesive. In dry conditions such material is usually suitable for re-engineering in areas of filling. However, during winter and periods of wet weather, the material will be less suited to re-engineering and can be expected to require lime modification. It will also present poor tracking conditions for site plant during wet weather.

7.5.2 Materials Management

It is expected that a Materials Management Plan (MMP) will need to be produced in accordance with the CL:AIRE Definition of Waste Code of Practice (DoWCoP) for earthworks. The MMP will need to demonstrate material geotechnical and chemical suitability for use, certainty of use and that the volumes of material being proposed for re-use are required. This requires supporting documentation including interpretative ground investigation reports, remediation strategy, cut and fill plans and evidence of liaison with regulators. The MMP must be registered by an accredited Qualified Person (QP) before material movement starts onsite.

The aim should be to achieve a site cut/fill balance where possible to minimise lorry movements on and off site and to minimise waste disposal costs.

If off site disposal of soils is required the material to be disposed will require waste characterisation to determine if they are classified as hazardous or non-hazardous. Under certain scenarios waste acceptance criteria (WAC) testing of the material will also be required as part of the information required by a landfill. Disposal of soils to a soil treatment centre may also be a viable option for made ground that is unsuitable for use on site.

7.5.3 Temporary Works

Groundwater depths are currently unknown so the need for dewatering or excavation support is unknown.

All excavations requiring entry of personnel should be fully supported. Gas risks to construction personnel should also be considered.

Implications for temporary works can be initially assessed after the first phase of ground investigation.

7.6 FOUNDATIONS

At present, no geotechnical ground investigation data is available and consequently it is only possible to estimate the ground conditions. Before firm foundation recommendations can be given, it will be necessary to undertake an appropriate ground investigation. The foundations required will also be dependent upon the structure types and loadings.

Made ground is not generally considered a suitable founding material and foundations should be taken through it, into underlying natural in-situ strata of adequate bearing capacity.

Any concrete slabs, buried foundations etc will require breaking out during the demolition of existing buildings. Foundations of plots that conflict with relict foundations should be taken to greater depth than the relict foundations and into natural ground of adequate bearing capacity.

Areas of Hummocky (moundy) Glacial Deposits that have not been re-engineered may be of variable strength and may not provide a sufficient bearing capacity to support the proposed build (subject to anticipated loadings & ground conditions).

In areas where Glacial Till or bedrock is at or near surface, traditional shallow strip foundations are likely to be suitable for lightly loaded structures. More heavily loaded structures may required ground improvement or piled foundations.

In areas of fill, where soils have been re-engineered to a suitable earthworks specification, demonstrated by post-earthworks conformance testing, raft foundations or reinforced strip foundations may be suitable for lightly loaded structures.

In locations where bedrock and superficial deposits are encountered, it is important to make sure the whole foundation is on bedrock rather than bridging the two strata in order to prevent differential settlement.

7.7 PILED FOUNDATION RISK ASSESSMENT

The assessment has identified that there is unlikely to be significant contamination associated with soils or groundwater at the site. Similarly, the assessment has not identified a significant risk from ground gas for the site. Consequently, piled foundations, should they be required, are unlikely to create a preferential pathway for migration of contaminants or ground gas.

7.8 FLOOR SLABS, HIGHWAYS AND HARDSTANDING

Soils in areas of filling should be re-engineered to a suitable earthworks specification (and potentially in areas of cut depending upon the ground conditions) to facilitate the required floor slabs, hardstanding and highways. Retaining walls may be required in areas of significant cut or fill.

The risk of differential settlements should be considered in areas of variable ground conditions or where structures span cut and fill areas.

Localised areas of infilled quarries present a risk of differential settlement and should be identified and delineated and re-engineered near surface as required for tolerable settlements. This may require the incorporation of reinforcement into the design.

If highways are to be adopted consultation with the local authority regarding the specification of the highway is recommended.

7.9 INFILTRATION DRAINAGE

Given anticipated ground conditions, most notably the Glacial Till likely to underlie the site, soakaways are unlikely to be a viable solution for the disposal of surface water. Alternative approaches for water attenuation are detailed in the SuDS manual (CIRIA 753).

With respect to detention basins, which should normally be dry, water table levels should be taken from borehole monitoring wells over 4 consecutive seasons, for at least 3 points in the basin area. The detention basin should be designed to ensure that there is a minimum of 1m of unsaturated soil between the maximum groundwater level and the lowest part of the structure.

Surface water runoff is recommended to be collected and disposed of appropriately. Discharging surface runoff onto a slope can results in scour erosion that may destabilise slopes.

8.0 PRELIMINARY GEOTECHNICAL ASSESSMENT – EASTERN PARCEL

This section summarises the anticipated ground conditions and preliminary geotechnical assessment for the Eastern Parcel, including highlighting the potential constraints for the proposed future development, based on the information identified in the preceding sections for the Eastern Parcel.

Actual ground conditions will need to be confirmed through ground investigation. It is anticipated this will need to be carried out in several phases.

8.1 ANTICIPATED GROUND CONDITIONS

The anticipated ground conditions are summarised in Section 4.2 and indicated by drawing B048805-TTE-00-XX-DR-U-0025 Geology Plan.

- Made Ground while not mapped onsite is likely associated with infilled ponds, pits, and motorway cuttings and areas where ground has been levelled.
- Superficial strata across site generally comprise Hummocky (moundy) Glacial Deposits (poorly sorted sand, gravel and silty clay with a moundy topography). The southwestern area is mapped as Head Deposits (clay, silt, sand and gravel) and generally follow the southernmost stream. Peat may also be present associated with the central portion of the Eastern Parcel where there is no agricultural activity. The geological map indicates that Till, comprising clay to sandy clay, unsorted, with gravel, cobbles and boulders is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition.
- Bedrock strata of the Pennine Lower Coal Measures Formation comprising mudstone, siltstone and sandstone. Bedrock is anticipated to be at approximately 60m to 70m above Ordnance Datum, with potential for it to be lower in the vicinity of the southern boundary due to proximity of a buried valley.
- Information about groundwater is limited. The depth to groundwater is likely shallower near the stream and at the base of the slope however this has not been proved.

8.2 POTENTIAL GEOTECHNICAL CONSTRAINTS TO DEVELOPMENT

Potential ground constraints are shown on drawing B048805-TTE-00-XX-DR-U-0024 Geotechnical Constraints Plan Western Parcel and listed below:

- Based on review of the existing site geomorphology, there is considered a risk of areas of slope instability within the Eastern Parcel. This risk is likely greatest in the vicinity of a stream or a spur line (e.g., within the western part of the Eastern Parcel). Due to heavy vegetation, no observable slope instability features were identified during the walkover. A building restriction line and/ or engineered slope stabilisation may be required depending on the earthwork extent and the building/ structure load.
- Potential un-engineered made ground or other ‘soft spots’, in particular associated with the footprint of historical quarries and infilled ponds. The extraction and any backfilling are likely to have been uncontrolled and therefore potential for non-engineered Made Ground. Differential settlement is a risk, especially where foundations bridge differing strata.
- Collapse compression of deep, dry un-compacted made ground.
- In ground structures and relic foundations from historical structures. Potential for ‘hard spots’ where below ground elements (e.g. foundations, basements) of historical buildings have not been grubbed out.
- Shrink/swell of clays due to the water demand of historical or current trees.
- Unknown depth of groundwater.
- Granular superficial deposits will require excavation support.

- Sulphate attack on infrastructure.
- Compression of natural strata.
- Existing below ground utilities present on site may need diversion.
- Soft compressive ground may be encountered e.g. where marshy areas are present and/or in the vicinity of watercourses.
- Potential for localised deposits of peat in the central portion of the parcel associated with the marshy area.

8.3 GEOCHEMISTRY

A suite of sulphate testing to allow the characterisation of ground aggressivity for concrete classification across the site will be required at ground investigation survey.

8.4 ENABLING WORKS

Refer to Section 7.5 above for recommendation/ assessment.

8.5 FOUNDATIONS

Refer to Section 7.6 above for recommendation/ assessment.

8.6 PILED FOUNDATION RISK ASSESSMENT

Refer to Section 7.7 above for recommendation/ assessment.

8.7 FLOOR SLABS, HIGHWAYS AND HARDSTANDING

Refer to Section 7.8 above for recommendation/ assessment.

8.8 INFILTRATION DRAINAGE

Refer to Section 7.9 above for recommendation/ assessment.

9.0 GEOTECHNICAL RISK REGISTER

9.1 OVERVIEW

This section presents a Geotechnical Risk Register (GRR) for the scheme based on the information identified in the preceding sections for the Western Parcel. The scope of work excluded the Eastern parcel from this element of the assessment. The risks have been evaluated using the risk evaluation matrix suggested in CD 622 'Managing Geotechnical Risk, which is reproduced as Table 8-1, and are presented in Table 8-2.

For the purposes of this report, risk has been assessed with reference to 'likelihood', 'severity' and 'risk'.

Table 9-1 – Risk Evaluation Matrix

Risk Matrix						
Likelihood		Severity				
		1	2	3	4	5
		Minor	Moderate	Serious	Major	Catastrophic
1	Extremely unlikely	1	2	3	4	5
2	Unlikely	2	4	6	8	10
3	Likely	3	6	9	12	15
4	Extremely likely	4	8	12	16	20
5	Almost certain	5	10	15	20	25
Potential severity of harm occurring						
1	Minor	Minor damage or loss - (no human injury)				
2	Moderate	Moderate damage or loss - (slight injury or illness)				
3	Serious	Substantial damage or loss - (serious injury or illness)				
4	Major	Major damage or loss - (fatal injury)				
5	Catastrophic	Catastrophic damage or loss - (multiple fatalities)				
Risk Classification						
Low (1-8)	Ensure assumed control measures are maintained and reviewed as necessary.					
Medium (9-19)	Additional control measures needed to reduce risk rating to a level that is equivalent to a test of "reasonably required" for.					
High (20-25)	Activity not permitted. Hazard to be avoided or risk to be reduced to tolerable level.					

Table 9-2 – Preliminary Geotechnical Risk Register for Western Parcel

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
1	Reservoir (fish pond) bank collapse.	Earthen embankment forming the onsite reservoir is old and of unknown composition. Its failure could lead to flooding and significant damage. The high likelihood is based on the embankment age and the unknown maintenance schedule.	During Design, Construction, Operation.	4	5	20	It is recommended that investigation and monitoring is put in place on order to assess the stability of the embankment now and in the future in line with the proposed development. Slope will need re-assessing should monitoring highlight any changes.	2	5	10	Yes	Active
2	Compression of the natural ground.	Compressible, and potentially organic rich ground, in the area surrounding the stream and any ponds.	During Design, During Construction, During operation	4	4	16	Ground investigation to assess lateral and vertical extents of organic or alluvium deposits and their compressibility potential. Ground improvement method or remedial measures to be designed and constructed to appropriately mitigate risk to development.	2	2	4	Risk no longer present once constructed.	Active
3	Un-engineered made ground – possible infilled and levelled areas and backfilled ponds / sand pits.	Building Settlement / Failure of Foundations. Differential settlement of services leading to issues with drainage and damage to joints.	During Design, Construction, Operation.	3	4	12	Ground investigation to assess ground conditions, depth of fill etc. Foundation and ground improvement to be designed and constructed to appropriately mitigate the risk.	2	2	4	Risk to be addressed at design / construction stage otherwise risk remains	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
		Risk of collapse compression in deep un-engineered made ground if groundwater not present					Possible use of flexible service joints.				during operation.	
4	In ground obstructions and relict foundations.	Potential shallow refusal of ground investigation techniques. Increase in time and equipment to remove obstructions and associated disposal costs. 'Hard spots' that could lead to differential settlement.	During Design, Construction, Operation.	4	3	12	Undertake a suitable ground investigation. Make preparations to deal with obstructions in ground. Have strategy for dealing with unidentified obstructions encountered during earthworks.	2	3	6	Risk to be addressed at design / construction stage otherwise risk remains during operation..	Active
5	Shrink / swell of clay	Shrink/swell of clay due to the water demand of historical or current trees leading to damage to foundations	During Construction, Operation.	3	4	12	Suitable ground investigation required. Arboricultural survey recommended. Deepening of foundations in expansive clays.	2	4	8	Yes	Active
6	Unknown depth of groundwater	Hazard to ground workers. Potential to contribute to instability of excavations.	During Design, Construction.	3	4	12	Site investigation to record groundwater levels onsite. Dewatering may be required for deep excavations.	2	3	6	Risk no longer present once constructed.	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
		Buoyancy of structures (e.g. attenuation tank) due to shallow groundwater. May require revised methods of construction for foundations.										
7	Superficial Deposits comprising sands and gravel	Difficulty excavating due to increased side wall instability.	During Construction	3	4	12	Suitable ground investigation required. Excavation support and dewatering may be required.	2	4	8	Risk no longer present once constructed.	Active
8	Presence of below ground utilities already onsite.	Unknown below ground utilities onsite may cause a risk to site workers. Works to be undertaken onsite may cause damage to existing below ground utilities. May not be able to develop close to existing below ground utilities.	During Design, Construction.	3	4	12	Contacting all potential asset owners for plans. Undertake PAS 128 compliant survey. Engage stakeholders early on should below ground utilities need to be re-routed.	2	4	8	Risk no longer present once constructed.	Active
9	Stope stability onsite	Slopes onsite show small failures. Increased load due to development may effect the stability, especially along the stream banks.	During Design, During Construction, During operation	3	4	12	Avoid construction close to watercourses. Care to be taken during earthworks and suitable level of reprofiling to reduce the risk of future failures.	2	4	8	Yes	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
		Hummocky (Moundy) Glacial Deposits prone to slope instability.					If construction required close to water courses, ground investigation and slope stability analysis to assess the potential for slope failures / landslide. Remedial measures to mitigate risk if required. Slope instability likely shallow and localised.					
10	Differential settlement	Foundations should not bridge differing strata (e.g. Bedrock and Superficial) as differential settlement may cause damage to structures.	During Design, Construction, Operation.	3	3	9	Ground investigation to assess ground conditions, depth of strata etc. Deepening foundations where required to make sure the same founding strata across the foundation. Strengthening of foundations.	2	2	4	Risk no longer present once constructed.	Active
11	Differential settlement between buildings and infrastructure e.g. hardstanding, utilities and roads	Foundation solution for buildings is robust but un-engineered made ground supporting utilities and pavement	During Design, During Construction, During operation	3	3	9	Ground investigation to assess ground conditions, depth of fill etc. Foundation solution to be considered together with ground solutions for pavement and infrastructure. Ground improvement or re-engineering to	2	3	6	No	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
							be implemented if required to mitigate risk					
12	Aggressive ground.	Unknown pH and sulphate levels of natural and made ground which could attack concrete infrastructure leading to damage over time.	During Operation.	3	3	9	Suitable ground investigation required involving testing of soils likely to come into contact with infrastructure. Dependant on the results of testing, sulphate resistant concrete may be required.	2	2	4	Yes	Active
13	Unexpected contamination - outside of areas where it is anticipated based on historical information (see contamination risk assessment sections of this desk study report for further details)	Unexpected contamination - H&S and cost	During Ground Investigation, Design, Construction.	4	2	8	Ground investigation to assess the anticipated areas. Other unexpected contamination on site is likely to be localised. Earthworks specification to include for measures should contamination be encountered. Cost plan to include allowance.	2	2	4	Risk no longer present once constructed.	Active

Table 9-3 – Preliminary Geotechnical Risk Register for Eastern Parcel

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
1	Compression of the natural ground.	Compressible, and potentially organic rich ground, in the area surrounding the marshy areas and/or streams/ ponds. Peat may be encountered at the centre of the site. Presence and extent is currently not known.	During Design, During Construction, During operation	4	4	16	Ground investigation to assess lateral and vertical extents of organic or alluvium deposits and their compressibility potential. Ground improvement method or remedial measures to be designed and constructed to appropriately mitigate risk to development.	2	2	4	Risk no longer present once constructed.	Active
2	Stope stability onsite	Increased load due to development may effect the stability, especially along the stream banks and spur line. Hummocky (Moundy) Glacial Deposits prone to slope instability.	During Design, During Construction, During operation	4	4	16	Avoid construction close to watercourses. Care to be taken during earthworks and suitable level of reprofiling to reduce the risk of future failures. If construction required close to water courses, ground investigation and slope stability analysis to assess the potential for slope failures / landslide. Remedial measures to mitigate risk if required. Slope instability likely shallow and localised.	2	4	8	Yes	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
3	Un-engineered made ground – possible infilled and levelled areas and backfilled ponds / sand pits.	Building Settlement / Failure of Foundations. Differential settlement of services leading to issues with drainage and damage to joints. Risk of collapse compression in deep un-engineered made ground if groundwater not present	During Design, Construction, Operation.	3	4	12	Ground investigation to assess ground conditions, depth of fill etc. Foundation and ground improvement to be designed and constructed to appropriately mitigate the risk. Possible use of flexible service joints.	2	2	4	Risk to be addressed at design / construction stage otherwise risk remains during operation.	Active
4	Shrink / swell of clay	Shrink/swell of clay due to the water demand of historical or current trees leading to damage to foundations	During Construction, Operation.	3	4	12	Suitable ground investigation required. Arboricultural survey recommended. Deepening of foundations in expansive clays.	2	4	8	Yes	Active
5	Unknown depth of groundwater	Hazard to ground workers. Potential to contribute to instability of excavations. Buoyancy of structures (e.g. attenuation tank) due to shallow groundwater.	During Design, Construction.	3	4	12	Site investigation to record groundwater levels onsite. Dewatering may be required for deep excavations.	2	3	6	Risk no longer present once constructed.	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
		May require revised methods of construction for foundations.										
6	Superficial Deposits comprising sands and gravel.	Difficulty excavating due to increased side wall instability.	During Construction	3	4	12	Suitable ground investigation required. Excavation support and dewatering may be required.	2	4	8	Risk no longer present once constructed.	Active
7	Presence of below ground utilities already onsite.	Unknown below ground utilities onsite may cause a risk to site workers. Works to be undertaken onsite may cause damage to existing below ground utilities. May not be able to develop close to existing below ground utilities.	During Design, Construction.	3	4	12	Contacting all potential asset owners for plans. Undertake PAS 128 compliant survey. Engage stakeholders early on should below ground utilities need to be re-routed.	2	4	8	Risk no longer present once constructed.	Active
8	Differential settlement	Foundations should not bridge differing strata (e.g. Bedrock and Superficial) as differential settlement may cause damage to structures.	During Design, Construction, Operation.	3	3	9	Ground investigation to assess ground conditions, depth of strata etc. Deepening foundations where required to make sure the same founding strata across the foundation. Strengthening of foundations.	2	2	4	Risk no longer present once constructed.	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
9	Differential settlement between buildings and infrastructure e.g. hardstanding, utilities and roads.	Foundation solution for buildings is robust but un-engineered made ground supporting utilities and pavement	During Design, During Construction, During operation	3	3	9	Ground investigation to assess ground conditions, depth of fill etc. Foundation solution to be considered together with ground solutions for pavement and infrastructure. Ground improvement or re-engineering to be implemented if required to mitigate risk	2	3	6	No	Active
10	Aggressive ground.	Unknown pH and sulphate levels of natural and made ground which could attack concrete infrastructure leading to damage over time.	During Operation.	3	3	9	Suitable ground investigation required involving testing of soils likely to come into contact with infrastructure. Dependant on the results of testing, sulphate resistant concrete may be required.	2	2	4	Yes	Active
11	Unexpected contamination - outside of areas where it is anticipated based on historical information (see contamination risk assessment sections of this	Unexpected contamination - H&S and cost	During Ground Investigation, Design, Construction.	4	2	8	Ground investigation to assess the anticipated areas. Other unexpected contamination on site is likely to be localised. Earthworks specification to include for measures should contamination be encountered. Cost plan to include allowance.	2	2	4	Risk no longer present once constructed.	Active

Hazard Reference	Activity/Process/ Material/Element	Hazard (also indicate who/what is at risk and how)	Stage of Work	Initial Risk Level			Risk Control Measures: Design action taken, record of decision process including option considered, design constraints and justification for options/actions not having been taken	Residual Risk Level			Is there a 'significant' residual risk to be passed on? (Y/N)	Status (Active / Closed)
				Likelihood	Severity	Risk Level		Likelihood	Severity	Risk Level		
	desk study report for further details)											

10.0 CONCLUSIONS AND RECOMMENDATIONS

10.1 CONCLUSIONS – WESTERN PARCEL

10.1.1 Anticipated Ground Conditions

Made Ground while not mapped onsite is likely associated with infilled ponds, pits, farm buildings, motorway cuttings and areas where ground has been levelled.

Superficial deposits are indicated to be Morainic Deposits (poorly sorted sand, gravel and silty clay with a moundy topography) across the majority of the parcel. A small area of Glaciofluvial Sheet Deposits (sand and gravel) are mapped in the south of the Western Parcel. Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southeast through the Western Parcel. Till (clay to sandy clay, unsorted, with gravel, cobbles and boulders) is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition.

There are several small depressions with ponds at their base that appear to be historic sand pits.

Bedrock is indicated to be Pennine Lower Coal Measures Formation in the northeast and Pennine Middle Coal Measures Formation (mudstone, siltstone and sandstone) in the centre of the Western Parcel. In the southwest of the western parcel, the Chester Formation (sandstone) is present with a small area in the southeast where the Manchester Marls Formation (mudstone) outcrops.

The geological map (Sheet 85) indicates rockhead is at approximately 60m OD in the south of the parcels, rising up to approximately 70m OD in the north. The southern boundary of the parcels is located in the vicinity of a buried valley in the rockhead, and consequently there is potential for rockhead to be at <60m OD in those areas. Superficial deposits may also be thicker in the south of the parcels.

There is limited information regarding groundwater level.

10.1.2 Coal Mining

The site is within a Coal Mining Reporting Area but it is not within a Development High Risk Area defined by the Mining Remediation Authority. No mine entries or outcrops are present on or close to the site in data sets available from the Mining Remediation Authority and therefore the risk to the site from historical coal mining is considered low.

10.1.3 Preliminary Geotechnical Assessment

The geotechnical risk register details the potential geotechnical risks associated with the Western Parcel.

Exact loadings and the extent of cut and fill operations are not currently known, however it is anticipated that a significant proportion of the site will need to be re-engineered and levelled to create platforms for development. As such, where competent natural strata are present following cut/fill works traditional strip foundations are likely to be suitable and, dependant on the earthworks specifications, the re-engineered material may be suitable for raft foundations or reinforced strip foundations.

Un-engineered made ground may be present in former sand pits and presents a risk of differential settlement.

The reservoir/ large pond present immediately east of the centre of this parcel is retained by an embankment of unknown construction.

10.1.4 Preliminary Contamination Assessment

The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel. Without further assessment radon protection measures are likely to be required for properties constructed over Head Deposits, of if Head Deposits are excavated and placed as fill in construction areas.

Ground gas has not been identified as a risk for this parcel and is not considered further.

The presence of areas of contamination at the site cannot be ruled out however given the historical use and general agricultural setting of the site it is reasonable to assume that such areas of contamination will be relatively localised. The risk from ground contamination at the site is considered to be as follows:

- **Moderate/Low** risk to future site users / residents and construction workers from made ground on site.
- **Low risk** to controlled waters (surface waters and underlying aquifers) from made ground on site.
- **Low** risk to future site users / residents, construction workers and a **Moderate/Low risk to** controlled waters (surface waters and underlying aquifers) from potential hydrocarbons on site.
- **Low risk** to future site users / residents and construction workers and controlled waters from residual pesticides / herbicides on site.
- **Low risk** to potable pipework from made ground on site.

10.2 CONCLUSIONS – EASTERN PARCEL

10.2.1 Anticipated Ground Conditions

Made Ground while not mapped onsite is likely associated with infilled ponds, pits, farm buildings, motorway cuttings and areas where ground has been levelled.

Superficial deposits are indicated to be Morainic Deposits (poorly sorted sand, gravel and silty clay with a moundy topography) across the majority of the parcel. Head Deposits (clay, silt, sand and gravel) are mapped as present along the stream that runs northwest to southwest through the Eastern Parcel. Peat may be present associated with the central portion of the Eastern Parcel where marshy ground is present and there is no agricultural activity. Till (clay to sandy clay, unsorted, with gravel, cobbles and boulders) is anticipated to be present beneath the other superficial deposits. Given the variable topography at the site there is potential for variation in both the lateral and horizontal distribution of superficial deposits and for variation in their composition.

There are several small depressions with ponds at their base that appear to be historic sand pits.

Bedrock is indicated to be Pennine Lower Coal Measures Formation.

The geological map (Sheet 85) indicates rockhead is at approximately 60m OD in the south of the parcels, rising up to approximately 70m OD in the north. The southern boundary of the parcels is located in the vicinity of a buried valley in the rockhead, and consequently there is potential for rockhead to be at <60m OD in those areas. Superficial deposits may also be thicker in the south of the parcels.

There is limited information regarding groundwater level. A historical borehole, 20m to the southwest of the parcels, recorded a water strike in the superficial deposits at 6.9mbgl rising to 5.0mbgl after 15 minutes.

10.2.2 Coal Mining

The site is within a Coal Mining Reporting Area but it is not within a Development High Risk Area defined by the Mining Remediation Authority. No mine entries or outcrops are present on or close to the site in data sets available from the Mining Remediation Authority and therefore the risk to the site from historical coal mining is considered low.

10.2.3 Preliminary Geotechnical Assessment

The geotechnical risk register details the potential geotechnical risks associated with the Eastern Parcel.

Exact loadings and the extent of cut and fill operations are not currently known, however it is anticipated that a significant proportion of the site will need to be re-engineered and levelled to create platforms for development. As such, where competent natural strata are present following cut/fill works traditional strip foundations are likely to be suitable and, dependant on the earthworks specifications, the re-engineered material may be suitable for raft foundations or reinforced strip foundations.

Un-engineered made ground may be present in former sand pits and presents a risk of differential settlement.

There may be a risk of slope instability on site. This risk is greatest in the vicinity of existing streams or a spur line (e.g., western portion of the Eastern Parcel).

10.2.4 Preliminary Contamination Assessment

The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel. Without further assessment radon protection measures are likely to be required for properties constructed over Head Deposits, of if Head Deposits are excavated and placed as fill in construction areas.

Ground gas has not been identified as a risk for this parcel and is not considered further.

The presence of areas of contamination at the site cannot be ruled out however given the historical use and general agricultural setting of the site it is reasonable to assume that such areas of contamination will be relatively localised. The risk from ground contamination at the site is generally considered to be as follows:

- **Moderate/Low** risk to future site users / residents and construction workers from made ground on site.
- **Low risk** to controlled waters (surface waters and underlying aquifers) from made ground on site.
- **Low** risk to future site users / residents, construction workers and a **Moderate/Low** risk to controlled waters (surface waters and underlying aquifers) from potential hydrocarbons on site.
- **Low risk** to future site users / residents and construction workers and controlled waters from Pesticides / Herbicides on site.
- **Low risk** to potable pipework from made ground on site.

10.3 PART 2A AND PLANNING

The site is unlikely to be classified as ‘Contaminated Land’ under Part 2A of the Environmental Protection Act. Note Part 2A is assessed on the basis of current use. It is not directed at assessing risks in relation to future use.

The National Planning Policy Framework (NPPF) last updated in December 2024 states the following with respect to contamination:

“*Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner*”.

Annex 2 of NPPF states that site investigation information “includes a risk assessment of land potentially affected by contamination, or ground stability and slope stability reports, as appropriate. All investigations of land potentially affected by contamination should be carried out in accordance with established procedures (such as BS10175 Investigation of Potentially Contaminated Sites – Code of Practice)”.

10.4 LIMITATIONS

The scope of work presented in this report is limited to that detailed in the instructed fee proposal for the work.

The conclusions and recommendations in this report must not be used in respect of any development differing in any way from the proposals described in this report, without reference back to Tetra Tech or to another geo-environmental specialist.

Changes to the boundary of the assessment area or to the proposed end use will require reassessment of the information presented in this report.

10.5 UNCERTAINTIES

The construction methodology and material of the reservoir embankment (immediately adjacent to the Western Parcel).

The distribution and thickness of made ground.

The thickness and composition of superficial deposits.

The presence/absence of peat in the Eastern Parcel.

The depth, level and competency of bedrock.

The location of boundaries between geological units.

The groundwater profile within the different geological deposits.

Suitability of near surface deposits for infiltration drainage.

The suitability of materials for reuse (from both a geotechnical and contamination perspective).

Whether infrastructure associated with the historical Bleach Works extended into the south of the Eastern Parcel.

Acceptable slope angles for the different types of soils and superficial deposits (note outline design of slopes are required before this can be assessed).

10.6 RECOMMENDATIONS

10.6.1 Western Parcel

Suspected Japanese Knotweed and Himalayan Balsam was identified in two areas of the parcel, one along the boundary with the flats in the southeast and the other along the reservoir (fishing pond) overflow. It is recommended that an ecologist is consulted in advance of construction phase works near these areas. Note treatment of invasive species sometimes requires excavation and disposal of root networks or other mitigation measures to prevent re-growth from roots.

Ground investigation to characterise ground conditions will be required across the site. It may the case that more than one phase of ground investigation will be required in each part of the site as design progresses.

Geotechnical ground investigation will be required to address uncertainties, obtain information relating to geotechnical risks and determine the parameters of the underlying soils and to obtain data for geotechnical design including foundations, earthworks, retaining structures, settlement assessment and pavement design and to provide information about groundwater levels.

Geochemical testing of the soils will be required to confirm the concrete classification.

Geo-environmental investigation and testing of the underlying soils will be required for the following:

- targeting the identified potential sources of contamination;
- characterising the contamination status of soils proposed for reuse as part of cut/fill earthworks (e.g. as part of demonstrating suitability for use).
- characterising the contamination status of groundwater (e.g. to allow assessment of potential impacts to groundwater associated with reuse of materials as part of cut/fill earthworks).
- geochemical testing of soils to assess the concrete classification.

Areas of tarmacadam (e.g. existing tracks) will require testing to determine the composition and concentration of coal tar present in the material.

Although the reservoir is outside the assessment area boundary, collapse of the reservoir's embankment can result in fatality and potentially significant damage to the proposed residential development. Given the age of the embankment there is considered a risk of embankment collapse. Monitoring equipment (e.g., piezometer, extensometer, and inclinometer) is recommended to be installed to monitor the embankment movement (if any). Further advice from a specialist dam consultant is recommended.

The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel, where 10%-30% of homes are recorded above the action level. A site-specific radon assessment should be undertaken to confirm the presence and classification of radon risk at the site.

Investigation and monitoring of the embankment for the large pond in the central portion of the Western Parcel is recommended to assess its construction and long term stability.

Slope stability assessment may be required in the future, depending on cut/fill proposals. The geotechnical properties of the material that a slope will be created from and the proposed angle of a slope are required in order to undertake slope stability assessment.

10.6.2 Eastern Parcel

Ground investigation to characterise ground conditions will be required across the site. It may the case that more than one phase of ground investigation will be required in each part of the site as design progresses.

Geotechnical ground investigation will be required to address uncertainties, obtain information relating to geotechnical risks and determine the parameters of the underlying soils and to obtain data for geotechnical design including foundations, earthworks, retaining structures, settlement assessment and pavement design and to provide information about groundwater levels.

Geo-environmental investigation and testing of the underlying soils will be required for the following:

- targeting the identified potential sources of contamination;
- characterising the contamination status of soils proposed for reuse as part of cut/fill earthworks (e.g. as part of demonstrating suitability for use).
- characterising the contamination status of groundwater (e.g. to allow assessment of potential impacts to groundwater associated with reuse of materials as part of cut/fill earthworks).
- geochemical testing of the soils will be required to confirm the concrete classification.
- areas of tarmacadam (e.g. existing tracks) will require testing to determine the composition and concentration of coal tar present in the material.

The potential for radon above the Action Level is associated with the distribution of the Head Deposits within the parcel, where 10%-30% of homes are recorded above the action level. A site-specific radon assessment should be undertaken to confirm the presence and classification of radon risk at the site.

Slope stability assessment may be required in the future, depending on cut/fill proposals. The geotechnical properties of the material that a slope will be created from and the proposed angle of a slope are required in order to undertake slope stability assessment.

11.0 REFERENCES

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DRAWINGS

APPENDIX A – REPORT CONDITIONS

APPENDIX A - REPORT CONDITIONS

GEO-ENVIRONMENTAL DESK-STUDY

This report is produced solely for the benefit of by Northern Gateway Development Vehicle LLP and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report is based on a study of readily accessible referenced historical records. Some of the opinions are based on unconfirmed data and information and are presented in good faith without exhaustive clarification. Where ground conditions are discussed but no physical site test results are available to confirm this, the report must be regarded as initial advice only, and further assessment should be undertaken prior to detailed activities related to the site. Where test results undertaken by others have been made available these can only be regarded as a limited sample.

Whilst confident in the findings detailed within this report because there are no exact UK definitions of these matters, we are unable to give categorical assurances that they will be accepted by Authorities or Funds etc. without question, as such bodies may have unpublished, often more stringent objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Tetra Tech. In time improved practices or amended guidance may necessitate a re-assessment. The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous use and abuse of the site and adjacent sites. The report concentrates on the site as defined in the report and provides an opinion on surrounding sites.

APPENDIX B – ENVIROCHECK AND GROUNDSURE REPORT

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
202263147_1_1

Customer Reference:
A104444-1

National Grid Reference:
383690, 405420

Slice:
A

Site Area (Ha):
105.63

Search Buffer (m):
1000

Site Details:

82, Baguley Crescent
Middleton
MANCHESTER
M24 4GU

Client Details:

Ms C Martin
WYG Environment Planning Transport Ltd
Quay West
Trafford Park Road
Salford Quays
Manchester
M17 1HH

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	46
Hazardous Substances	-
Geological	50
Industrial Land Use	54
Sensitive Land Use	56
Data Currency	57
Data Suppliers	61
Useful Contacts	62

Introduction

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

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Report Version v53.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 11	1	19	7	14
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 21			2	1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature		Yes			
Pollution Incidents to Controlled Waters	pg 22	1	3	13	2
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 25			1	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 25			2	(*9)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 28	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 33	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 34	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 34		Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 34		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 34	29	20	28	24

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 46	2	3	2	
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 47		1		
Local Authority Landfill Coverage	pg 47	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 48		1	3	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 49		1		
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 50	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 50	5	1		3
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 51	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 51	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 52	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 52	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 52	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 53	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 54		4	1	12
Fuel Station Entries	pg 55			1	1
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 56	2	1		
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 56				1
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 56	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	1	384000 406200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	384050 406200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	0	1	384100 406600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	384200 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (E)	0	1	384250 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	0	1	383750 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NE)	0	1	383800 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384150 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384200 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	383500 406000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	384050 405850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (N)	0	1	383688 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	0	1	383700 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	384050 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384200 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384250 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (N)	0	1	383750 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (E)	0	1	384400 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	384450 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	384500 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (SE)	0	1	383850 405350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	384350 405350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	384400 405350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SW (E)	0	1	384350 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (NE)	0	1	384000 405950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	383900 406450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	383950 406450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	383850 406350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	383900 406350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (NE)	0	1	384200 406350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	1	383688 406150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	383650 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	1	383800 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (NE)	0	1	384000 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	383600 406050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	383550 406000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	0	1	383950 406400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (NE)	0	1	384250 406400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	1	384050 406250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	384100 406250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SW (N)	0	1	383450 406050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (NE)	0	1	384100 406300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	384150 406300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384300 405050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384250 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	0	1	383850 405900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	0	1	384000 405900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	0	1	383600 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	0	1	384050 405150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	0	1	384100 405150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	0	1	384300 405150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	0	1	383800 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (E)	0	1	384450 405150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (E)	0	1	384500 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (S)	0	1	383700 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	0	1	383750 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	0	1	383800 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	0	1	383900 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	0	1	384000 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	384050 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (E)	0	1	384250 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (E)	0	1	384300 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (W)	0	1	383688 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	0	1	383850 405800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	384050 405800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	0	1	383650 405750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	0	1	383750 405750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	384150 405750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (E)	0	1	383750 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	384200 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384250 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384300 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	384100 405900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (N)	0	1	383688 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	384400 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (SE)	0	1	383800 405250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	0	1	384150 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384150 405150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	0	1	384250 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384300 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	0	1	383900 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NE)	0	1	383950 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384050 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384150 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384300 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	384350 405550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	0	1	384400 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	0	1	384150 405700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	384200 405700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384300 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	384350 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (E)	0	1	384500 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	384250 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NE (SE)	0	1	383850 405200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NE (SE)	0	1	383950 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	0	1	384000 405200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384050 405200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (SE)	0	1	383950 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	384450 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (SE)	0	1	383900 405250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (SE)	0	1	383950 405250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	0	1	384400 405250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	384200 405050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	1	1	384350 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	2	1	384000 406850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	2	1	384150 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	12	1	383600 406000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	12	1	383800 405750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	13	1	383850 406900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	13	1	384450 405100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	19	1	383700 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	26	1	383750 405700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (S)	29	1	383750 405250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	33	1	384000 406900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	33	1	384400 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	39	1	384550 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	41	1	384450 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	41	1	384500 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	41	1	384050 406850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	48	1	384450 405050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (NW)	48	1	383450 405950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NW (N)	48	1	383350 406300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	49	1	384400 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	51	1	383688 405650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (E)	51	1	384500 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	58	1	383700 405700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	67	1	384600 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	72	1	384050 406900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NW (NW)	76	1	383600 405600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (E)	80	1	384650 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	81	1	384100 406850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	84	1	384450 405000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SE (E)	86	1	384600 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	93	1	383850 406950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	96	1	383900 405050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7SE (SE)	102	1	384000 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7SE (SE)	104	1	384000 404800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	110	1	383688 406800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	113	1	383950 407000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	114	1	383900 407000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	114	1	383800 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	115	1	384050 404950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	119	1	384500 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	120	1	384550 405050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SW (N)	125	1	383350 406250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	125	1	383850 405050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	126	1	384050 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	128	1	384200 406800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	136	1	384700 405350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	137	1	383900 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	142	1	383700 406850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	144	1	384700 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (SE)	155	1	384500 404950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	164	1	383800 407000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	166	1	383850 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	169	1	383750 406950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	169	1	383688 406850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SE (NW)	175	1	383250 406200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	176	1	383550 405800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	178	1	384700 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	180	1	384750 405300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SE (NW)	182	1	383300 406200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	182	1	384150 406950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	186	1	384750 405350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NE (SE)	190	1	384600 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	193	1	384750 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	195	1	383688 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	202	1	383800 407050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	203	1	384750 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SW)	208	1	383500 405200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	225	1	384550 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (NW)	229	1	383300 405850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	235	1	384800 405350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NE (NE)	240	1	384600 406400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	243	1	384800 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SE (SE)	260	1	384600 404900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	276	1	383800 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	276	1	384800 405100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (NW)	281	1	383150 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SE (SE)	296	1	384600 404850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	304	1	384200 404650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7SE (S)	306	1	383750 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	310	1	384750 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	315	1	384000 407200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	340	1	384700 406400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	342	1	384900 405400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10NE (NW)	349	1	383150 405900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	349	1	384900 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	360	1	383900 404750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7SE (S)	360	1	383750 404800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	362	1	384150 404600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (S)	373	1	383550 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	375	1	383700 404850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SE (NW)	388	1	383100 406150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	389	1	384200 407200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	390	1	384750 406400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	390	1	384750 406350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SE (NW)	391	1	383100 406050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (NW)	394	1	383100 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SW)	395	1	383500 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	396	1	384050 404600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	399	1	384950 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	409	1	384950 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A4NW (S)	410	1	384050 404550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	412	1	384850 404950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	413	1	383950 404650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	416	1	383700 404800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	422	1	383950 404600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	430	1	385000 405423
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	437	1	384700 404750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	440	1	384800 404850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (NW)	441	1	383050 406050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (S)	441	1	383500 404950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SE (NW)	443	1	383050 406100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	445	1	383688 404800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7SE (S)	446	1	383900 404650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	450	1	384850 404900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	456	1	384950 405000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	458	1	385000 405450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	461	1	383250 406850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(E)	472	1	385000 405500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	484	1	383600 407200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	485	1	384950 404950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (NW)	491	1	383000 406000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10NE (NW)	495	1	383050 405750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	498	1	385000 405000
1	**Discharge Consents** Operator: Mr Broxton Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 241 Heywood Old Road, Middleton, Manchester, M24 4qr Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016992302 Permit Version: 1 Effective Date: 1st October 1996 Issued Date: 1st October 1996 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Surface Water Drain To R Irk **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A12SE (E)	0	2	384500 405400
2	**Discharge Consents** Operator: Mr & Mrs A G Hamer Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 302 - 308 Heywood Old Rd, Middleton, Bowlee, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0170/1235 Permit Version: 1 Effective Date: 1st May 1970 Issued Date: 1st May 1970 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	58	2	384403 406430
2	**Discharge Consents** Operator: Miss Ann Ingram Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 302 - 308 Heywood Old Rd, Middleton, Bowlee, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0170/1235 Permit Version: 1 Effective Date: 1st May 1970 Issued Date: 1st May 1970 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	58	2	384403 406430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Ma & P M Caveney Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 302 - 308 Heywood Old Rd, Middleton, Bowlee, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0170/1235 Permit Version: 1 Effective Date: 1st May 1970 Issued Date: 1st May 1970 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	58	2	384403 406430
2	**Discharge Consents** Operator: Census Turner Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 302 - 308 Heywood Old Rd, Middleton, Bowlee, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0170/1235 Permit Version: 1 Effective Date: 1st May 1970 Issued Date: 1st May 1970 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	58	2	384403 406430
3	**Discharge Consents** Operator: Mr. Roy Lowe Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 276 Heywood Old Rd, Middleton, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0172/1714 Permit Version: 1 Effective Date: 5th May 1972 Issued Date: 5th May 1972 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A16NE (NE)	86	2	384420 406330
4	**Discharge Consents** Operator: Susan Taylor Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 395, 397 & 399 Heywood Old Rd, Middleton, Manchester, M24 4gp Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0172/1854 Permit Version: 1 Effective Date: 17th October 1972 Issued Date: 17th October 1972 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A16NE (NE)	88	2	384370 406520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Miles Alexander Ridley & Sally Faye Byrne Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 395, 397 & 399 Heywood Old Rd, Middleton, Manchester, M24 4gp Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0172/1854 Permit Version: 1 Effective Date: 17th October 1972 Issued Date: 17th October 1972 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Langley Brook **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	88	2	384370 406520
4	**Discharge Consents** Operator: Mr. P. Moss Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 296, 298 & 300 Heywood Old Rd, Middleton, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0173/1881 Permit Version: 1 Effective Date: 31st January 1973 Issued Date: 31st January 1973 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Unknown Receiving Water: Unknown **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A16NE (NE)	93	2	384400 406490
4	**Discharge Consents** Operator: V.C. Parr Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 296, 298 & 300 Heywood Old Rd, Middleton, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0173/1881 Permit Version: 1 Effective Date: 31st January 1973 Issued Date: 31st January 1973 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Unknown Receiving Water: Unknown **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	93	2	384400 406490
4	**Discharge Consents** Operator: Gladys Scott Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: 296, 298 & 300 Heywood Old Rd, Middleton, Manchester, M24 4qg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0173/1881 Permit Version: 1 Effective Date: 31st January 1973 Issued Date: 31st January 1973 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Unknown Receiving Water: Unknown **Status:** **Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	A16NE (NE)	93	2	384400 406490

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Mr Paluch Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Heywood Farm Stp Nutt Lane, Simister, Prestwich, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016990378 Permit Version: 1 Effective Date: 10th August 1982 Issued Date: Not Supplied Revocation Date: 25th January 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib River Irk **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A11SW (W)	99	2	383450 405500
6	**Discharge Consents** Operator: Mr Adam J. Heywood Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 238 Heywood Old Road, Middleton, Manchester, M24 4gq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0173/2092 Permit Version: 1 Effective Date: 7th November 1973 Issued Date: 7th November 1973 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of Langley Brook **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A16SE (NE)	107	2	384520 406100
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Simister Lane Ww Ntwk Ps (09013) Rear Of Lower Droughts Farm, Egypt Lane, Prestwich, Bury, M25 2ru Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01bry0062 Permit Version: 3 Effective Date: 10th June 2016 Issued Date: 10th June 2016 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of Whittle Brook **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	120	2	383370 406210
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Simister Lane Ww Ntwk Ps (09013) Rear Of Lower Droughts Farm, Egypt Lane, Prestwich, Bury, M25 2ru Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01BRY0062 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 9th June 2016 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Watercourse **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A15SW (N)	120	2	383370 406210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Simister, Bury Mdc, Prestwich, Lancashire Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01bry0062 Permit Version: 3 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of Castle Brook **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	120	2	383370 406210
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Simister Sps, Prestwich, Bury, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982166 Permit Version: 1 Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge Environment: Ditch Receiving Water: To Ditch **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	120	2	383370 406210
7	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Simister Lane Ww Ntwk Ps (09013) Rear Of Lower Droughts Farm, Egypt Lane, Prestwich, Bury, M25 2ru Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01bry0062 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Sewage Discharges - Unspecified - Water Company Discharge Environment: Into And/Or Watercourse Receiving Water: Unnamed Watercourse **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A15SW (N)	120	2	383370 406210
8	**Discharge Consents** Operator: Bass Lease Co Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Jolly Butcher Inn Bowlee, Middleton, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01m/211 Permit Version: 1 Effective Date: 12th December 1960 Issued Date: Not Supplied Revocation Date: 1st April 1998 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Unknown Receiving Water: Unknown **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A16NE (NE)	167	2	384500 406300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: Mr R.S. Davenport Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Egypt Farm, Prestwich, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991074 Permit Version: 1 Effective Date: 23rd December 1985 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Castle Brook **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A14NE (N)	193	2	383300 406400
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Manchester Old Road Cso, Middleton, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982916 Permit Version: 2 Effective Date: 8th November 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	264	2	384440 404740
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Manchester Old Road Cso, Middleton, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982916 Permit Version: 1 Effective Date: 10th May 1995 Issued Date: Not Supplied Revocation Date: 7th November 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	264	2	384440 404740
11	**Discharge Consents** Operator: Mr R S Davenport Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Egypt Farm Swo, Bowlee, Whitefield, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991073 Permit Version: 1 Effective Date: 1st July 1991 Issued Date: Not Supplied Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: Trib Castle Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NE (NW)	275	2	383200 406300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Kelvin Ave/Lister Rd, Rochdale, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01roc0010 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	303	2	384620 404860
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Dexter Rd Heaton Park Rd Cso 133 Heaton Park Road, ., ., Manchester, M9 0pe Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993739 Permit Version: 2 Effective Date: 1st April 2018 Issued Date: 12th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	500	2	384150 404470
13	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Dexter Rd Heaton Park Rd Cso 133 Heaton Park Road, ., ., Manchester, M9 0pe Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993739 Permit Version: 1 Effective Date: 1st June 2005 Issued Date: 1st June 2005 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	500	2	384150 404470
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Dexter Rd Heaton Park Rd Cso 133 Heaton Park Road, ., ., Manchester, M9 0pe Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 01MAN0126 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: 1st January 1995 Revocation Date: 31st May 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A4NW (SE)	500	2	384150 404470

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Glenbrook Rd Exter Rd Cso 281vu 15 Glenbrook Road, ., ., Manchester, M9 Opp Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0125 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 24th June 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Unnamed Watercourse **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	548	2	384150 404420
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Glenbrook Rd Exter Rd Cso 281vu 15 Glenbrook Road, ., ., Manchester, M9 Opp Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0125 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Into And/Or Watercourse Receiving Water: Unnamed Watercourse **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A4NW (SE)	548	2	384150 404420
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Glenbrook Rd Exter Rd Cso 281vu 15 Glenbrook Road, ., ., Manchester, M9 Opp Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0125 Permit Version: 3 Effective Date: 25th June 2018 Issued Date: 25th June 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	553	2	384149 404415
14	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue/Glenbrook, Higher Blackley, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993670 Permit Version: 1 Effective Date: 24th May 2005 Issued Date: 24th May 2005 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A4SW (S)	924	2	384040 404060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue/Glenbrook, Higher Blackley, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 01MAN0093 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: 1st January 1995 Revocation Date: 23rd May 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A4SW (S)	924	2	384040 404060
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue Bridge Cso Victoria Avenue/Beadham Drive, ., Manchester, Greater Manchester, M9 0gr Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0094 Permit Version: 3 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 4th February 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A4SW (S)	934	2	384040 404050
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue Bridge Cso Victoria Avenue/Beadham Drive, ., Manchester, Greater Manchester, M9 0gr Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0094 Permit Version: 2 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A4SW (S)	934	2	384040 404050
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue Bridge Cso Victoria Avenue/Beadham Drive, ., Manchester, Greater Manchester, M9 0gr Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0094 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 13th April 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A4SW (S)	934	2	384040 404050

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Victoria Avenue Bridge Cso Victoria Avenue/Beadham Drive, ., Manchester, Greater Manchester, M9 0gr Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0094 Permit Version: 4 Effective Date: 5th February 2016 Issued Date: 5th February 2016 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A4SW (S)	935	2	384034 404051
15	**Discharge Consents** Operator: M.D. Homes (North West Ltd) Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Plots 1-3 Parrenthorn Farm Corday Lane, Prestwich, Manchester, Lancashire, M25 2rp Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: Npswqd006831 Permit Version: 1 Effective Date: 26th February 2009 Issued Date: 26th February 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of Parr Brook **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A9NE (W)	934	2	382598 405636
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Middleton Road/Victoria Avenue Cso Middleton Road, ., Manchester, Greater Manchester, M8 4lz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0096 Permit Version: 3 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 21st March 2016 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A3SE (S)	987	2	383860 404060
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Middleton Road/Victoria Avenue Cso Middleton Road, ., Manchester, Greater Manchester, M8 4lz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0096 Permit Version: 2 Effective Date: 14th April 2009 Issued Date: 14th April 2009 Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A3SE (S)	987	2	383860 404060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Middleton Road/Victoria Avenue Cso Middleton Road, ., Manchester, Greater Manchester, M8 4lz Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0096 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 13th April 2009 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irk **Status:** **Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A3SE (S)	987	2	383860 404060
17	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: WTW/WATER COLLECTION/TREATMENT/SUPPLY Location: Heaton Park Open Reservoir, Off St Margaret'S Road, Prestwich, Manchester, M25 5sw Authority: Environment Agency, North West Region Catchment Area: Irk Reference: 016993810 Permit Version: 1 Effective Date: 9th December 2005 Issued Date: 9th December 2005 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Process Effluent - Water Company (Wtw) Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Irk **Status:** **New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	990	2	382860 404670
18	**Local Authority Pollution Prevention and Controls** Name: Persil Service Ltd - C/O Sainsbury'S Ltd Location: 170 Heaton Park Road, Middleton, Manchester Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/DC/RM/14/07 Dated: 1st February 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status:** **Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A4NW (SE)	424	3	384226 404532
18	**Local Authority Pollution Prevention and Controls** Name: Sainsbury'S Supermarkets Ltd Location: 170 Heaton Park Road, Blackley, MANCHESTER, Lancashire, M9 0GH Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/033/05 Dated: 9th December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status:** **Authorised** Positional Accuracy: Manually positioned to the address or location	A4NW (SE)	438	3	384217 404519
19	**Local Authority Pollution Prevention and Controls** Name: Kp Hill Service Station Location: 355 Victoria Avenue, Higher Blackley, MANCHESTER, M9 8WQ Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/PFS/RM/017/05 Dated: 20th December 2001 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status:** **Authorised** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	929	3	384694 404120
	Nearest Surface Water Feature	A12SW (E)	0	-	384288 405532

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Pollution Incidents to Controlled Waters** Property Type: Farm Drainage Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Organic Wastes: Dairy / Parlour Washings Note: Tributary River Irk Incident Date: 18th September 1994 Incident Reference: 94612092 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12NE (E)	0	2	384400 405700
21	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; None Pollution Found Incident Date: 25th November 1995 Incident Reference: 95612850 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (NE)	22	2	384400 405800
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Middleton, MANCHESTER Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: Foam Robert Mcbrides Incident Date: 2nd February 1998 Incident Reference: SO980221 Catchment Area: Irk Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	119	2	384501 405001
23	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: Tributary River Roch Incident Date: 30th March 1994 Incident Reference: 94610582 Catchment Area: Roch Receiving Water: Not Given Cause of Incident: Poor/Inadequate Maintenance Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (NW)	175	2	383300 406300
24	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Not Given Note: River Irk; None Pollution Found Incident Date: 11th August 1993 Incident Reference: 93611584 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	253	2	384300 404700
25	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: River Irk Incident Date: 18th August 1993 Incident Reference: 93612359 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	261	2	384500 404800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: Not Supplied Incident Date: 15th August 1995 Incident Reference: 95612091 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	265	2	384505 404800
25	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Chemicals - Detergents/Surfactant Note: River Irk Incident Date: 28th September 1994 Incident Reference: 94612168 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	265	2	384500 404795
25	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: River Irk Incident Date: 24th February 1995 Incident Reference: 95610379 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	268	2	384505 404795
26	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: River Irk Incident Date: 7th June 1995 Incident Reference: 95611361 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	332	2	384600 404800
27	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: River Irk Incident Date: 29th July 1995 Incident Reference: 95611904 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	333	2	384500 404700
28	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Sewage - Treated Effluent Note: River Irk Incident Date: 28th April 1993 Incident Reference: 93610874 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	352	2	384300 404600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: River Irk Incident Date: 22nd February 1993 Incident Reference: 93610302 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	371	2	384400 404600
29	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Foam On Irk Under Motorway, Heaton Park Authority: Environment Agency, North West Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 11th July 1998 Incident Reference: SO981254 Catchment Area: Irk Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	378	2	384405 404595
30	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: River Irk Incident Date: 21st July 1995 Incident Reference: 95611829 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4NW (SE)	452	2	384300 404500
30	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Not Given Note: None Pollution Found Incident Date: 10th September 1992 Incident Reference: 92611634 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4NW (SE)	457	2	384300 404495
31	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: BLACKLEY Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Foam Note: Irk; Foam Incident Date: 3rd April 1997 Incident Reference: 97610541 Catchment Area: Irk Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4NW (SE)	487	2	384100 404500
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Not Supplied Incident Date: 11th November 1995 Incident Reference: 95612776 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Land Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4NE (SE)	502	2	384500 404500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Natural Foam Incident Date: 18th April 1996 Incident Reference: 96610840 Catchment Area: Irk Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A3NE (S)	533	2	384000 404500
	River Quality Name: Irk GQA Grade: River Quality E Reach: Wince Bk To Moston Bk Estimated Distance (km): 10.3 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	A4NW (SE)	361	2	384221 404459
34	**Water Abstractions** Operator: Oakbest Limited Licence Number: 2569005041 Permit Version: Not Supplied Location: Two Boreholes, Higher Blackley, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 1818 Yearly Rate (m3): 181840 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	376	2	384400 404595
35	**Water Abstractions** Operator: Oakbest Ltd Licence Number: 2569005042 Permit Version: Not Supplied Location: Reservoir Fed By Un-Named Tributary, River Irk; Heaton Park, HIGHER BLACKLEY Authority: Environment Agency, North West Region Abstraction: Manufacturing Abstraction Type: Not Supplied Source: River Daily Rate (m3): 623 Yearly Rate (m3): 109104 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7SE (S)	472	2	383800 404700
	Water Abstractions Operator: Rexmore Textiles Limited Licence Number: 2569005047 Permit Version: Not Supplied Location: Un-Named Tributary Of River Irk, Heaton Park, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Boiler Feed & Drinking; Cooking; Sanitary; Washing For Industrial Premises & Manufacturing Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 546 Yearly Rate (m3): 122742 Details: Additional Purposes: Boiler feed; Domestic - industrial; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A3SW (S)	1278	2	383400 404000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Onsite Central Limited Licence Number: Nw/069/0004/002 Permit Version: 1 Location: Point A Whitefield Brook At Whitefield, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 27 November Permit Start Date: 1st November 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (W)	1463	2	382063 405654
	Water Abstractions Operator: Onsite Central Limited Licence Number: Nw/069/0004/002 Permit Version: 1 Location: Point B On Whitefield Brooke Whitefield, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 27 November Permit Start Date: 1st November 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1676	2	381829 405811
	Water Abstractions Operator: Onsite Central Limited Licence Number: Nw/069/0004/002 Permit Version: 1 Location: Point C On Whitfield Brook Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 November Authorised End: 27 November Permit Start Date: 1st November 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1874	2	381610 406123
	Water Abstractions Operator: British Cables Company Limited Licence Number: 2569005044 Permit Version: 106 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1989	2	384610 402990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Bt Cables Limited Licence Number: 2569005044 Permit Version: 105 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th October 2012 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1989	2	384610 402990
	Water Abstractions Operator: Manchester Cables Ltd Licence Number: 2569005044 Permit Version: 104 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th May 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1989	2	384610 402990
	Water Abstractions Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 103 Location: Boreholes X 2 At Blackley Manchester Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th November 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1989	2	384610 402990
	Water Abstractions Operator: Belden (Uk) Ltd Licence Number: 2569005044 Permit Version: 102 Location: 2 Boreholes At Blackley, Manchester $121 Authority: Environment Agency, North West Region Abstraction: Metal: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Land & Premises At Blackley Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 3rd April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1989	2	384610 402990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (W)	0	4	383688 405423
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (E)	0	4	383983 405316
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (NE)	0	4	383699 405447
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11SE (E)	0	4	383985 405320

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A8NE (E)	0	4	384362 405155
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A7NE (SE)	0	4	384000 405239
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A11SE (E)	0	4	384000 405314
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A11SE (E)	0	4	384000 405423

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A11SE (E)	0	4	384000 405352
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15SE (N)	0	4	383766 406000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15SW (N)	0	4	383468 406158
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15NE (N)	0	4	383924 406312

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(N)	0	4	383896 406779
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15SE (NE)	0	4	384000 406000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15NE (N)	0	4	384000 406319
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A16NW (N)	0	4	384155 406557

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(N)	0	4	384000 406793
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A8NW (SE)	0	4	384108 405000
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A11NW (N)	0	4	383669 405883
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A8NW (SE)	0	4	384312 405077

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A12SE (E)	0	4	384474 405336
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: High	A8NW (SE)	0	4	384067 404986
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A15SE (N)	0	4	383688 406000
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A14SE (NW)	0	4	383341 406084
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SE (NE)	0	4	383699 405447
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A7NE (S)	0	4	383688 405000
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A11SE (W)	0	4	383688 405423

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A8NE (E)	0	4	384362 405155
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A8NW (SE)	0	4	384108 405000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SE (W)	0	4	383688 405423
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A7NW (S)	0	4	383613 405000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SW (SW)	0	4	383504 405296
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A8NW (SE)	0	4	384312 405077
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SE (E)	0	4	383983 405316
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A15SW (N)	0	4	383468 406158
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A15NE (N)	0	4	383924 406312
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A16NW (N)	0	4	384155 406557
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(N)	0	4	383896 406779
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A14SE (NW)	0	4	383341 406084
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A8SW (SE)	243	2	384280 404675
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A8SW (SE)	243	2	384272 404663
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
36	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 346.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (E)	0	5	384208 405634
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 139.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (E)	0	5	384211 405626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384288 405532
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384291 405528
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384311 405509
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384313 405508
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384319 405503
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 92.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SW (E)	0	5	384333 405492
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 282.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NE (SE)	0	5	384384 405076
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384400 405413
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384406 405439

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384538 405343
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384550 405315
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384557 405300
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	0	5	384557 405300
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 288.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384024 405776
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A15SW (N)	0	5	383552 406119
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A15SW (N)	0	5	383553 406120
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A15SW (N)	0	5	383588 406150
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 193.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NE (NE)	0	5	383848 405727

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384025 405771
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384025 405771
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384115 405713
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384119 405711
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384131 405695
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 106.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NW (NE)	0	5	384145 405671
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 352.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NE (SE)	0	5	384384 405076
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NW (SE)	0	5	384344 405105
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8NW (SE)	0	5	384342 405107

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 90.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11SW (N)	4	5	383647 405557
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NE (N)	4	5	383722 405608
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 174.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NE (N)	4	5	383722 405608
68	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 14.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NE (N)	5	5	383706 405608
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NE (NE)	11	5	383848 405727
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (NE)	16	5	384451 405795
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (NE)	16	5	384441 405800
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12NE (NE)	16	5	384443 405799
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 218.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A15SW (N)	32	5	383368 406212

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 101.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	64	5	384592 405416
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	79	5	384483 405536
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 335.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NE (SE)	81	5	383902 405100
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 318.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	83	5	384639 405350
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	113	5	384528 405582
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	137	5	384638 405497
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A12SE (E)	137	5	384638 405497
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 257.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8SW (SE)	139	5	384146 404886
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 86.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14SE (NW)	211	5	383275 406226

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 250.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	243	5	383380 405199
84	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 31.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A11NW (NW)	243	5	383411 405646
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 475.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (NW)	253	5	383222 406294
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 138.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A8SW (SE)	255	5	384289 404673
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 262.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A8SE (SE)	263	5	384415 404725
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 512.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A8SW (SE)	279	5	384289 404673
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 219.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	284	5	383390 405161
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	284	5	383390 405161
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	292	5	383394 405151

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 139.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	295	5	383476 405110
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	332	5	383474 405077
94	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 19.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	337	5	383474 405072
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	354	5	383477 405053
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	382	5	383490 405017
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (SW)	404	5	383501 404990
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	412	5	383798 404771
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (S)	413	5	383510 404977
100	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 70.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	418	5	383801 404762

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (S)	431	5	383515 404953
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 210.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7NW (S)	445	5	383506 404942
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A8SE (SE)	454	5	384674 404701
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A8SE (SE)	454	5	384674 404701
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	461	5	383841 404691
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	461	5	383840 404692
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	462	5	383831 404694
108	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 31.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	463	5	383800 404697
109	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 116.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	474	5	383755 404697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	475	5	383871 404660
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	488	5	383858 404653
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	489	5	383856 404652
113	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 19.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6NE (W)	519	5	383034 405206
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 277.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SE (S)	523	5	383843 404622
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6NE (W)	530	5	383031 405187
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6NE (W)	533	5	383030 405181
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6NE (W)	536	5	383029 405177
118	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6NE (W)	545	5	383028 405159

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SW (S)	549	5	383685 404683
120	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 10.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SW (S)	554	5	383679 404680
121	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 179.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Blackfish Pond Catchment Name: Mersey Primacy: 1	A7SW (S)	562	5	383518 404741
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SW (S)	602	5	383489 404758
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A7SW (S)	607	5	383443 404787
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 342.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NW (NW)	647	5	382848 406501
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3NE (S)	674	5	383936 404374
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3NE (S)	674	5	383936 404374
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3NE (S)	722	5	383903 404338

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3NE (S)	723	5	383908 404333
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 307.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A3NE (S)	724	5	384009 404281
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A3NE (S)	748	5	383918 404293
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3NE (S)	753	5	383891 404301
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 205.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A9SE (W)	922	5	382586 405457
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3SE (S)	985	5	383936 404017
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 184.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A6SW (SW)	988	5	382871 404665
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A3SE (S)	990	5	383987 404006
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 197.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irk Catchment Name: Mersey Primacy: 1	A4SW (S)	997	5	384038 403985

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
137	**Historical Landfill Sites** Licence Holder: Terry Adams Limited Location: Bluebell Lane, Bowlee, Bury Name: Bowlee Sand QuarryBluebell Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD30185 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: RD/LIC/338/84	A15NE (N)	0	2	383846 406339
138	**Historical Landfill Sites** Licence Holder: T J Murphy Location: Simister, Bury, Greater Manchester Name: Land at Egypt Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16055 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: C122, 01140	A15SW (N)	0	2	383534 406010
139	**Historical Landfill Sites** Licence Holder: Heaton Mills Printing Company Limited Location: Rochdale, Greater Manchester Name: Land at Kelvin Avenue Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD18072 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: RD/LIC/133/77/P2,D065	A8NE (SE)	135	2	384485 404958
140	**Historical Landfill Sites** Licence Holder: Costain Engineering and Construction Limited Location: Bridle Road, Simister, Bury, Greater Manchester Name: Land to the west of the M66 motorway Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16120 First Input Date: 1st November 1994 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9155 BGS Ref: Not Supplied Other Ref: RD/LIC/1064/94, C099	A11SW (W)	141	2	383376 405367
141	**Historical Landfill Sites** Licence Holder: Costain Engineering and Construction Limited Location: Farm Lane, Simister, Bury, Greater Manchester Name: Land to the South of Whitehouse Farm Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16086 First Input Date: 31st October 1993 Last Input Date: 25th May 1994 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9307 BGS Ref: Not Supplied Other Ref: C096, RD/LIC/1046/93	A11NW (NW)	239	2	383370 405615

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
142	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Heywood Road, Simister, Bury, Greater Manchester Name: Land at Heaton Park Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD18071 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: F055	A7NW (S)	308	2	383598 405048
143	**Historical Landfill Sites** Licence Holder: Wills Fabrics Limited Location: Higher Blackley, Manchester, Greater Manchester Name: Land Off Heaton Park Road Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16216 First Input Date: 31st December 1947 Last Input Date: 31st December 1986 Specified Waste Type: Deposited Waste included Inert and Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9032 BGS Ref: Not Supplied Other Ref: F034, RD/LIC/133/77	A8SE (SE)	353	2	384486 404664
144	**Licensed Waste Management Facilities (Locations)** Licence Number: 53602 Location: 124 Simister Lane, Prestwich, Manchester, M25 2SB Operator Name: M & M Oils Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Physical Treatment Facilities **Licence Status: Issued** Issued: 30th May 1996 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NE (N)	22	2	383769 405872
	Local Authority Landfill Coverage Name: Bury Metropolitan Borough Council - Has not been able to supply Landfill data		0	6	383688 405423
	Local Authority Landfill Coverage Name: Rochdale Metropolitan Borough Council - Has no landfill data to supply		0	7	384491 405630
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		50	8	383658 405308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	**Registered Landfill Sites** Licence Holder: T J Murphy Ltd Licence Reference: 01140 Site Location: Egypt Street, Simister, Bury, Lancashire Licence Easting: 383530 Licence Northing: 406040 Operator Location: Lancaster House, 70-76 Blackburn Street, Radcliffe, MANCHESTER, Greater Manchester, M26 9TS Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence has completion certificateSurrendered Dated: 1st August 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Max.Waste Permitted By Licence Rubble,Hardcore,Stone,Brick,Concrete Soil, Clay, Sand Prohibited Waste: Contaminated Soil Foundry Sand, Filter Sand Waste N.O.S.	A15SW (N)	9	2	383530 406040
146	**Registered Landfill Sites** Licence Holder: Costain Engineering & Construction Ltd Licence Reference: 01064 Site Location: Land North West Of M66, Simister, Bury, Lancashire Licence Easting: 383200 Licence Northing: 406400 Operator Location: Costain House, Nicholsons Walk, Maidenhead, Berkshire Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence has completion certificateSurrendered Dated: 1st August 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Soil, Clay, Sand Prohibited Waste: Liquid Wastes Sludge Wastes Special Wastes Waste In Drums Waste In Skips Waste N.O.S Whether/Not Pack./Pre-Trt	A14NE (NW)	289	2	383200 406400
147	**Registered Landfill Sites** Licence Holder: Wills Fabrics Ltd Licence Reference: 00133/77/M3 Site Location: Heaton Park Road, Higher Blackley, Manchester, Greater Manchester Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: 44 George Street, Manchester, Greater Manchester Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 22nd September 1983 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Positioned by the supplier Boundary Accuracy: Good Authorised Waste: Construction And Demolition Wastes Prohibited Waste: Liquid/Slurry/Sludge Wastes	A8SE (SE)	340	2	384495 404688

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	**Registered Landfill Sites** Licence Holder: Costain Engineering & Construction Ltd Licence Reference: 01046 Site Location: South Of Whitehouse Farm, Simister Lane, Bury, Lancashire Licence Easting: 383300 Licence Northing: 405700 Operator Location: Costain House, Nicholsons Walk, Maidenhead, Berkshire Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence has completion certificateSurrendered Dated: 1st February 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Uncontam.Soil, Clay, Sand Prohibited Waste: Asbestos Liquid Wastes Skip Waste Sludge Wastes Special Wastes Waste In Drums Waste N.O.S.	A10NE (NW)	349	2	383300 405700
149	**Registered Waste Treatment or Disposal Sites** Licence Holder: M & M Oils Ltd Licence Reference: 01005 Site Location: Brook Farm, 124 Simister Lane, Prestwich, Manchester, Greater Manchester, M25 2sb Operator Location: Lane End Farm, Hopwood, HEYWOOD, Lancashire, OL10 2JE Authority: Environment Agency - North West Region, South Area Site Category: Treatment Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st May 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Waste Permitted By Licence Waste Vegetable Oils Prohibited Waste: Waste N.O.S.	A11NE (N)	51	2	383750 405850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Middle Coal Measures Formation And South Wales Middle Coal Measures Formation (Undifferentiated)	A11SE (NE)	0	1	383714 405478
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A11SE (W)	0	1	383688 405423
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A12NW (NE)	0	1	384127 405675
150	**BGS Recorded Mineral Sites** Site Name: Bow Lee Sand Pit Location: Bowlee, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96882 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A15NE (N)	0	1	383994 406496
151	**BGS Recorded Mineral Sites** Site Name: Bow Lee Sand Pit Location: Bowlee, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96883 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A15NE (N)	0	1	383963 406385
152	**BGS Recorded Mineral Sites** Site Name: Hazel Hillocks Sand Pit Location: Simister, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96891 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A11SE (N)	0	1	383730 405576
153	**BGS Recorded Mineral Sites** Site Name: Old Hall Gravel Pit Location: Rhodes, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96894 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	A12SW (E)	0	1	384130 405383
154	**BGS Recorded Mineral Sites** Site Name: Old Hall Sand Pit Location: Simister, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96924 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A12SE (E)	0	1	384372 405281

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
155	**BGS Recorded Mineral Sites** Site Name: Hanging Birch Sand Pit Location: Simister, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96895 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A12SE (E)	107	1	384667 405320
156	**BGS Recorded Mineral Sites** Site Name: Heaton Mill Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96898 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A4NE (SE)	645	1	384654 404425
157	**BGS Recorded Mineral Sites** Site Name: Heaton Park Sand Pit Location: Higher Blackley, Manchester, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96897 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Till, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A3NE (S)	773	1	383871 404298
158	**BGS Recorded Mineral Sites** Site Name: Cold Gate Sand Pit Location: Simister, Middleton, Lancashire Source: British Geological Survey, National Geoscience Information Service Reference: 96890 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Quaternary Geology: Glaciofluvial Deposits, Devensian Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A14SW (NW)	778	1	382713 406056
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A11SE (W)	0	9	383688 405423
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14SE (NW)	0	1	383342 405976
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14NE (NW)	61	1	383024 406286
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	145	1	384362 404827

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Compressible Ground Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A14SE (NW)	0	1	383342 405976
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000
	Potential for Compressible Ground Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A14NE (NW)	61	1	383024 406286
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	145	1	384362 404827
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12SE (E)	0	1	384455 405435
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	383766 405632
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	0	1	384211 405655
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12SE (E)	8	1	384417 405465
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12SE (E)	152	1	384688 405415
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	180	1	384451 404865
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A14SE (NW)	185	1	383121 406083
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A8SW (SE)	197	1	384359 404770
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	207	1	383499 405201
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	218	1	384361 404749
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	247	1	383468 405168
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A8SE (SE)	145	1	384362 404827
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A14SE (NW)	0	1	383335 405974
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	0	1	383926 406308
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	1	383661 405489
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A16NW (N)	0	1	384156 406558
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A14NE (NW)	61	1	383024 406286
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	102	1	383511 405307
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (S)	145	1	383603 405000
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	383688 405001
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SE (W)	0	1	383688 405423

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
159	**Contemporary Trade Directory Entries** Name: Metal Stitching Services Ltd Location: Parkwood Bungalow, Old Hall Lane, Prestwich, Manchester, M25 2SL Classification: Plant & Machinery Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (N)	18	-	383644 405563
160	**Contemporary Trade Directory Entries** Name: Lancashire Vehicle Sales Location: 282, Heywood Old Road, Middleton, Manchester, Lancashire, M24 4QG Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A16NE (NE)	55	-	384396 406350
161	**Contemporary Trade Directory Entries** Name: M M Oils Ltd Location: Simister La, Prestwich, Manchester, Lancashire, M25 2SB Classification: Oils - Edible **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A15SW (N)	71	-	383517 405960
162	**Contemporary Trade Directory Entries** Name: Car Shop Megastore Location: Manchester Old Rd, Middleton, Manchester, Lancashire, M24 4RF Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NE (E)	189	-	384669 405091
163	**Contemporary Trade Directory Entries** Name: Currys Location: Heaton Park Road, Manchester, M9 0QS Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (SE)	384	-	384398 404586
164	**Contemporary Trade Directory Entries** Name: Persil Service Ltd Location: 170 Heaton Pk Rd West, Manchester, Lancashire, M9 0TZ Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A4NW (SE)	511	-	384124 404466
165	**Contemporary Trade Directory Entries** Name: Mojo Rooster Guitars Ltd Location: Flat 17, Arundel Court, Beadham Drive, Manchester, M9 0GY Classification: Musical Instrument - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4NW (S)	714	-	384064 404273
166	**Contemporary Trade Directory Entries** Name: Cleaning Service Location: 1, Melverley Road, Manchester, M9 0PR Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SW (SE)	749	-	384209 404206
167	**Contemporary Trade Directory Entries** Name: Claims Solutions Location: 454, Victoria Avenue, Manchester, M9 0PL Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	765	-	384365 404192
168	**Contemporary Trade Directory Entries** Name: D T R Supplies Location: 373, Victoria Avenue, Manchester, M9 8WQ Classification: Painting & Decorating Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	875	-	384624 404147
169	**Contemporary Trade Directory Entries** Name: Esso Location: 355, Victoria Avenue, Manchester, M9 8WQ Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	918	-	384693 404131
169	**Contemporary Trade Directory Entries** Name: Tex'S Tyres Location: 355, Victoria Avenue, Manchester, M9 8WQ Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	928	-	384694 404120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
169	**Contemporary Trade Directory Entries** Name: K P Hill Service Station Location: 355, Victoria Avenue, Manchester, M9 8WQ Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	928	-	384694 404120
169	**Contemporary Trade Directory Entries** Name: K P Hill Service Station Location: 355, Victoria Avenue, Manchester, M9 8WQ Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	929	-	384694 404120
169	**Contemporary Trade Directory Entries** Name: Blakeley Tyres Location: 355, Victoria Avenue, Manchester, M9 8WQ Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	929	-	384694 404120
170	**Contemporary Trade Directory Entries** Name: Karate Cards Location: 100, Broomhall Road, Manchester, M9 8PA Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	927	-	384624 404090
171	**Contemporary Trade Directory Entries** Name: Atkinsons Location: 19, Stanwick Avenue, Manchester, M9 8PD Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	975	-	384444 403991
172	**Fuel Station Entries** Name: Sainsburys Heaton Park Location: Heaton Park Heaaton Park Road West, , Manchester, Greater Manchester, M9 0QS Brand: Sainsburys Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A4NW (SE)	436	-	384222 404520
173	**Fuel Station Entries** Name: K P Hill Service Location: 365, Victoria Avenue Broomhall Road, , Manchester, Greater Manchester, M9 8WQ Brand: Esso Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A4SE (SE)	929	-	384694 404120

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
174	**Areas of Adopted Green Belt** Authority: Rochdale Metropolitan Borough Council Plan Name: Rochdale Unitary Development Plan **Status:** **Adopted** Plan Date: 30th June 2006	A16NE (NE)	0	11	384373 406358
175	**Areas of Adopted Green Belt** Authority: Bury Metropolitan Borough Council Plan Name: Bury Unitary Development Plan **Status:** **Adopted** Plan Date: 29th August 1997	A11SE (W)	0	6	383688 405423
176	**Areas of Adopted Green Belt** Authority: Manchester City Council Plan Name: Proposals Map **Status:** **Adopted** Plan Date: 11th July 2012	A11SW (SW)	103	12	383607 405271
177	**Local Nature Reserves** Name: Blackley Forest Multiple Area: Y Area (m2): 342102.94 Source: Natural England Designation Date: 20th June 2005	A4NW (S)	505	10	384071 404478
178	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	A11SE (W)	0	4	383688 405423

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Salford City Council - Environmental Health Department	November 2013	Annual Rolling Update
Bury Metropolitan Borough Council - Environmental Health Department	October 2013	Annual Rolling Update
Rochdale Metropolitan Borough Council - Environmental Health Department	October 2017	Annually
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - North West Region	January 2019	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - North West Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	January 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Annual Rolling Update
Salford City Council - Environmental Health Department	March 2015	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	January 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - North West Region - South Area	January 2019	Quarterly
Water Abstractions		
Environment Agency - North West Region	January 2019	Quarterly
Water Industry Act Referrals		
Environment Agency - North West Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Environment Agency - Head Office	June 2018	Annually

Agency & Hydrological	Version	Update Cycle
Bedrock Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations		
Environment Agency - Head Office	January 2018	Annually
Source Protection Zones		
Environment Agency - Head Office	January 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	February 2019	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	February 2019	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	February 2019	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	February 2019	Quarterly
Flood Defences		
Environment Agency - Head Office	February 2019	Quarterly
OS Water Network Lines		
Ordnance Survey	January 2019	Quarterly
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	July 2018	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	July 2018	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North West Region - South Area	January 2019	Quarterly
Local Authority Landfill Coverage		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Salford City Council	June 2016	Variable
Planning Hazardous Substance Consents		
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Rochdale Metropolitan Borough Council	February 2016	Variable
Salford City Council	June 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2019	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability		
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	January 2019	Quarterly
Fuel Station Entries		
Catalist Ltd - Experian	March 2019	Quarterly
Gas Pipelines		
National Grid	July 2014	
Underground Electrical Cables		
National Grid	December 2015	
Sensitive Land Use	**Version**	**Update Cycle**
Ancient Woodland		
Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt		
Bury Metropolitan Borough Council	March 2019	As notified
Manchester City Council	March 2019	As notified
Rochdale Metropolitan Borough Council	March 2019	As notified
Salford City Council	March 2019	As notified
Areas of Unadopted Green Belt		
Bury Metropolitan Borough Council	March 2019	As notified
Manchester City Council	March 2019	As notified
Rochdale Metropolitan Borough Council	March 2019	As notified
Salford City Council	March 2019	As notified
Areas of Outstanding Natural Beauty		
Natural England	August 2018	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	March 2019	Bi-Annually
Marine Nature Reserves		
Natural England	January 2018	Bi-Annually
National Nature Reserves		
Natural England	August 2018	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones		
Environment Agency - Head Office	December 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites		
Natural England	April 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural England	March 2019	Bi-Annually
Special Areas of Conservation		
Natural England	August 2018	Bi-Annually
Special Protection Areas		
Natural England	April 2019	Bi-Annually

Data Suppliers

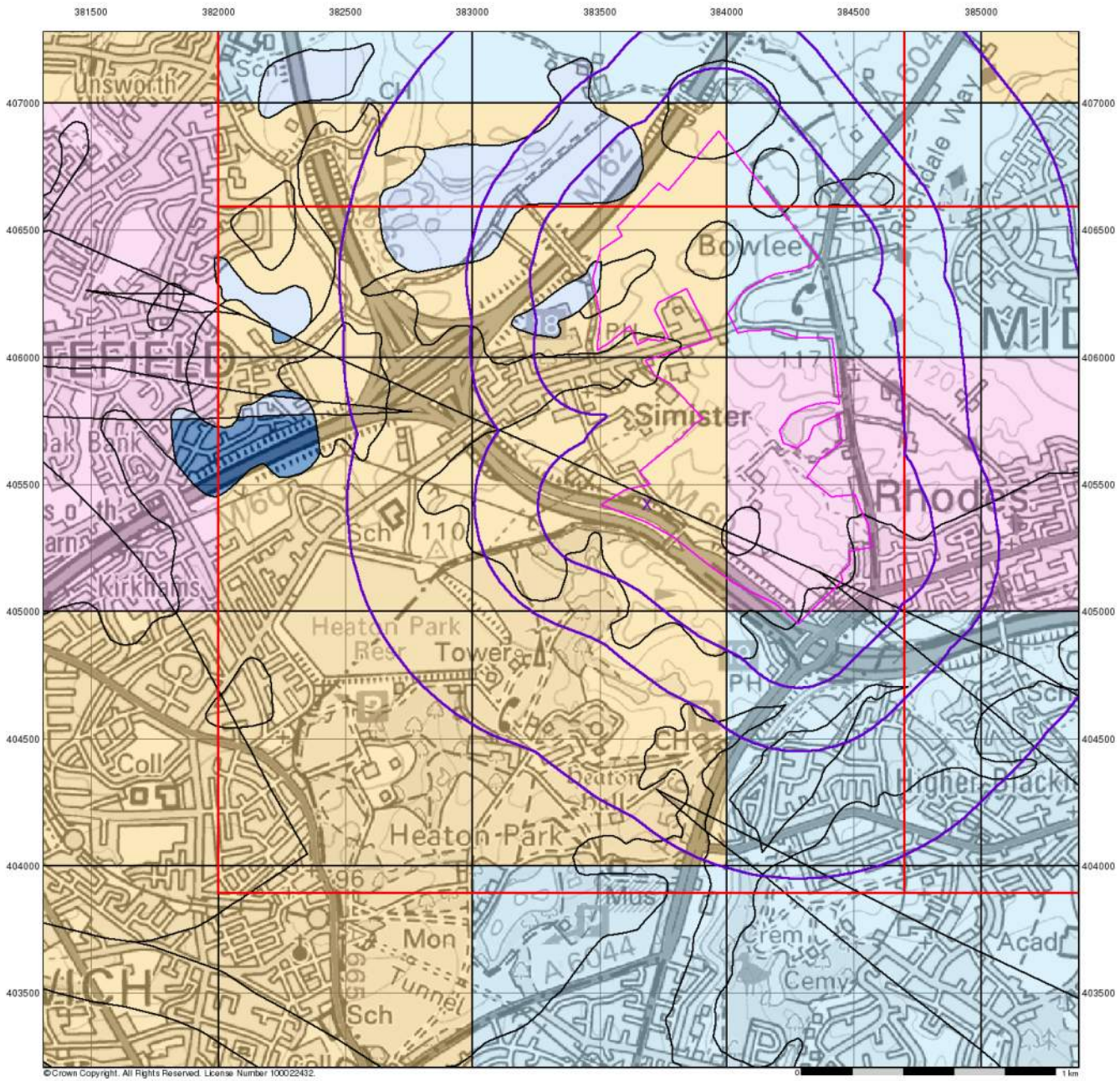
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
4	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Bury Metropolitan Borough Council** Craig House, Bank Street, Bury, Lancashire, BL9 0DN	Telephone: 0161 253 5000 Fax: 0161 705 5290 Website: www.bury.gov.uk
7	**Rochdale Metropolitan Borough Council - Environmental Health Department** P O Box 32, Telegraph House, Ballie Street, Rochdale, Greater Manchester, OL16 1JH	Telephone: 01706 864139 Fax: 01706 864185 Website: www.rochdale.gov.uk
8	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
9	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
11	**Rochdale Metropolitan Borough Council** PO Box 15, Town Hall, Rochdale, Greater Manchester, OL16 1AB	Telephone: 01706 647474 Fax: 01706 59475 Website: www.rochdale.gov.uk
12	**Manchester City Council** Town Hall, Albert Square, Manchester, Greater Manchester, M60 2JT	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

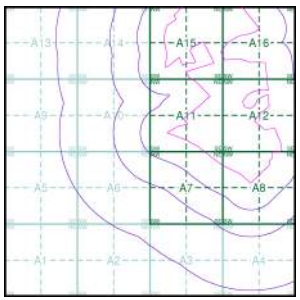
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



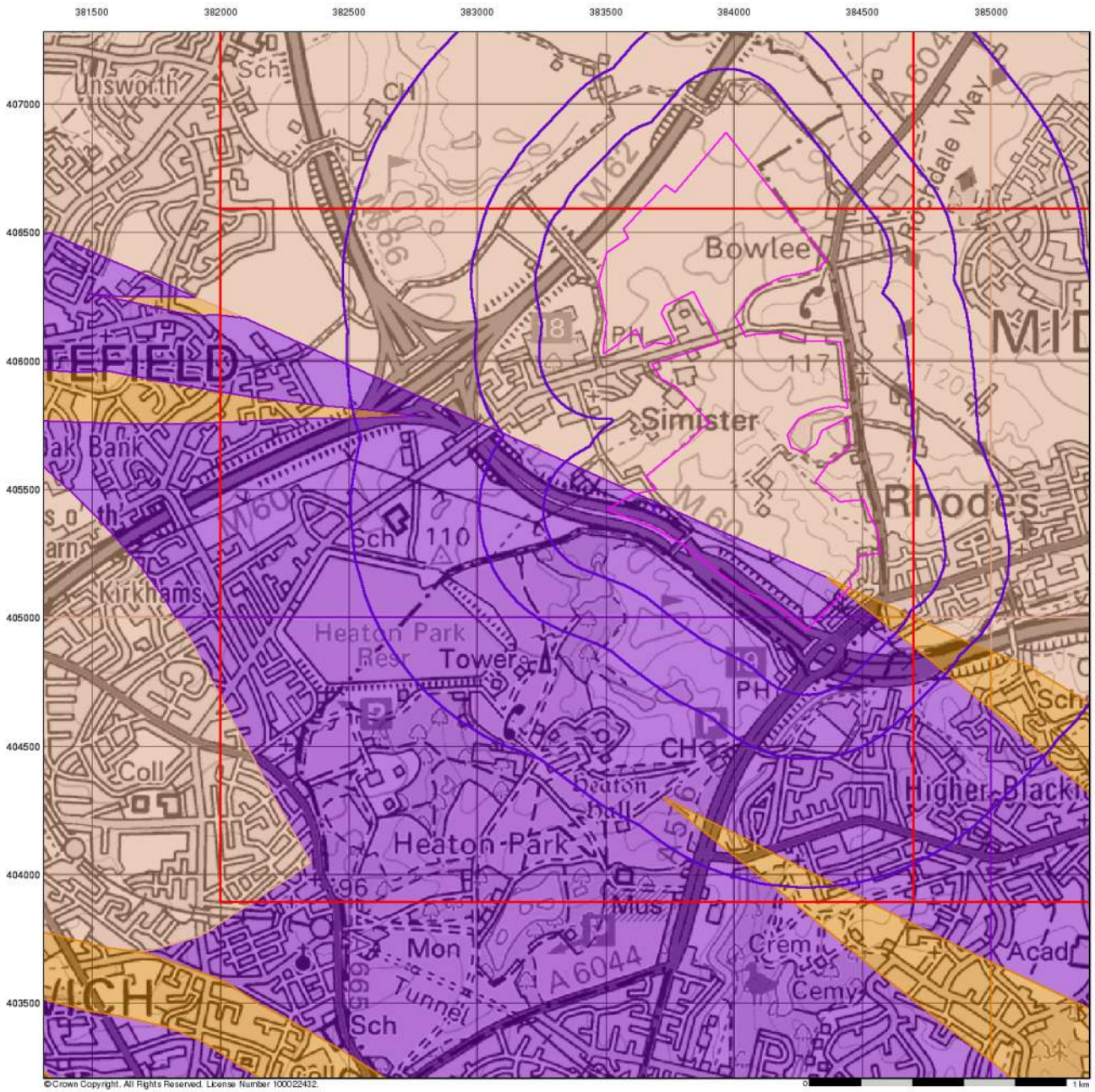
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Bedrock Aquifer Designation

General

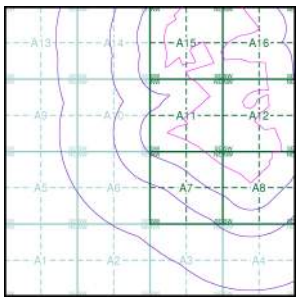
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



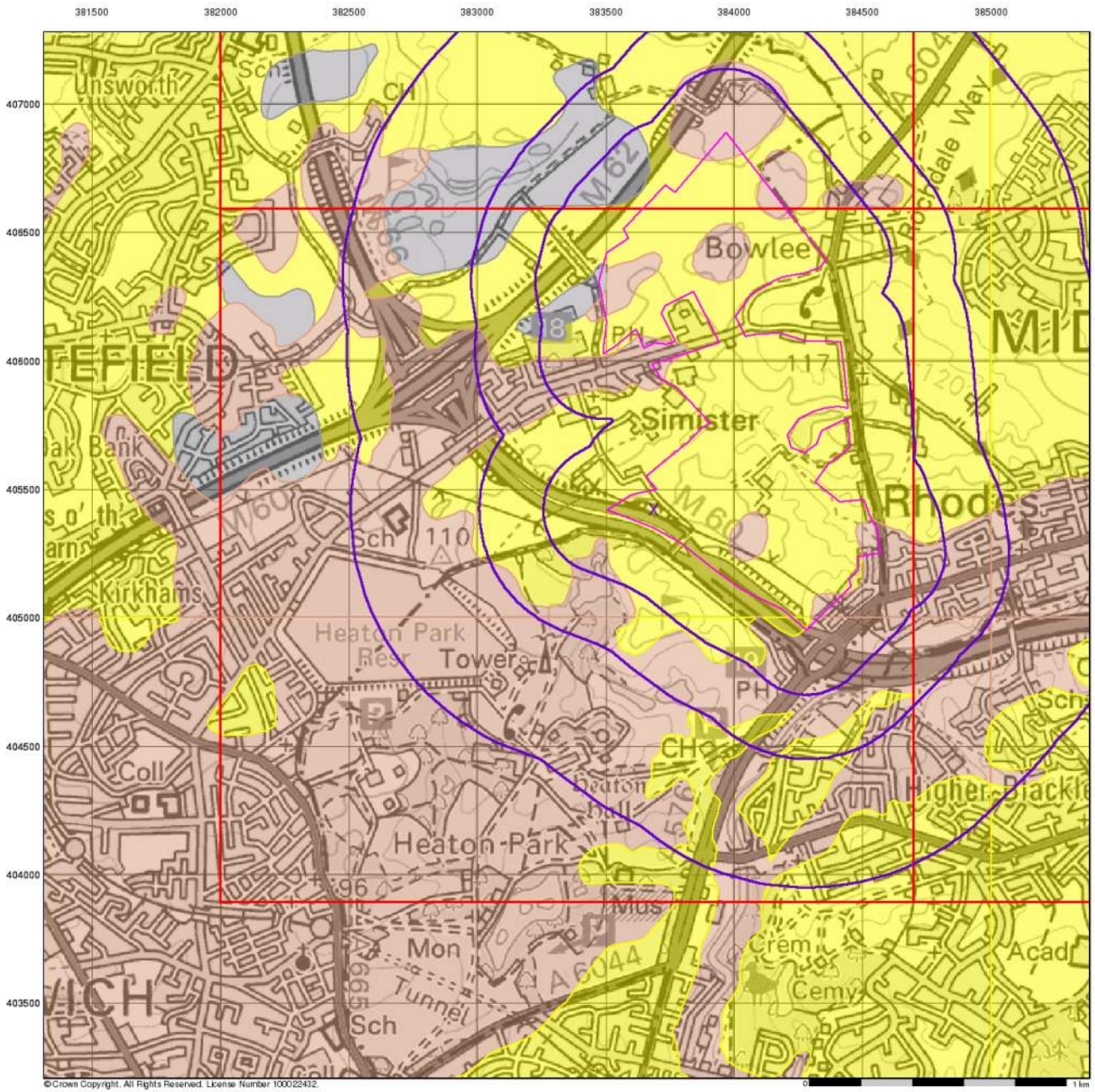
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

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Superficial Aquifer Designation

General

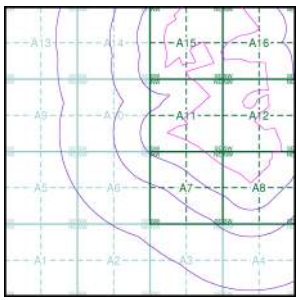
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

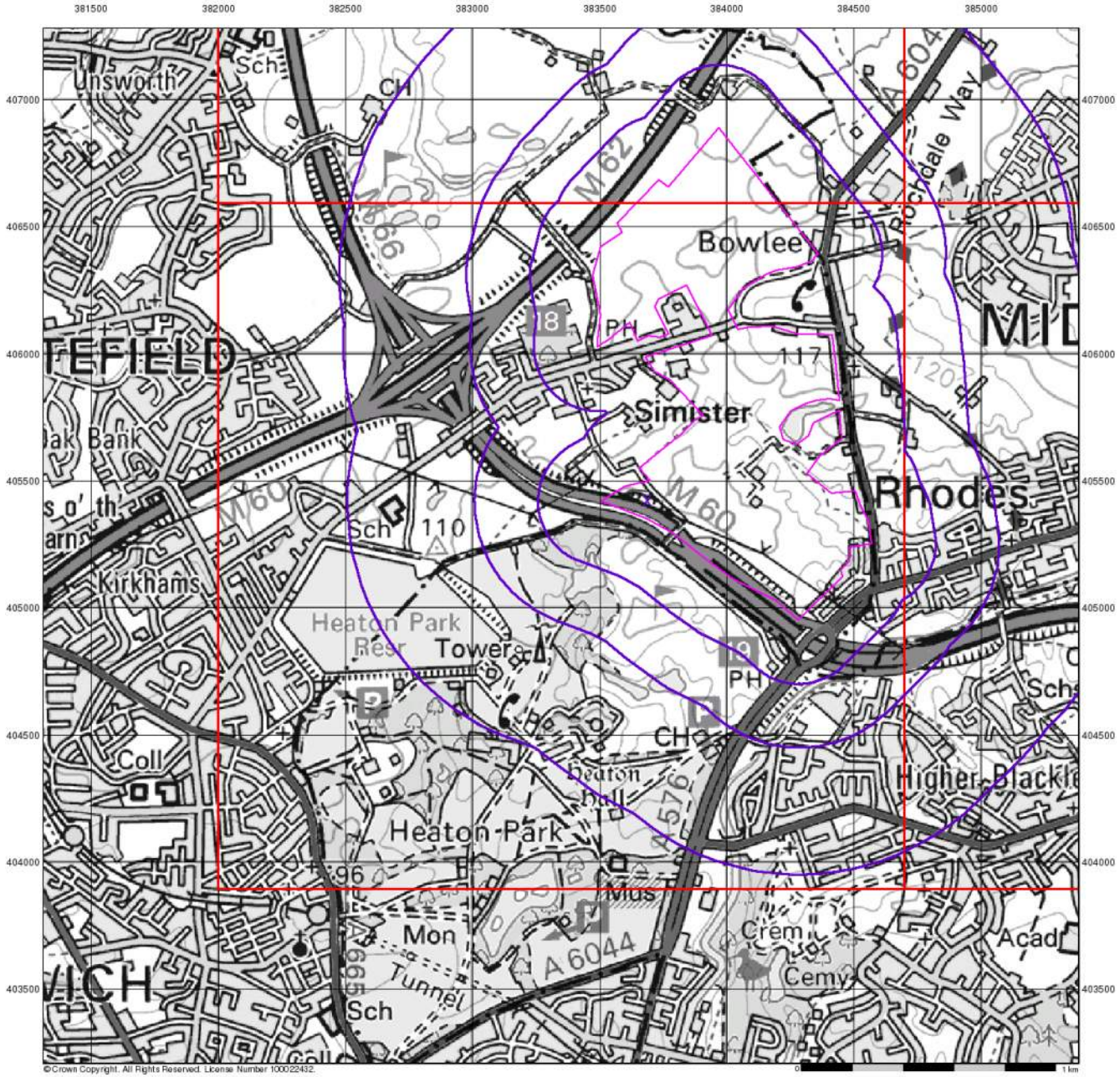


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Search Buffer (m):	1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU



Source Protection Zones

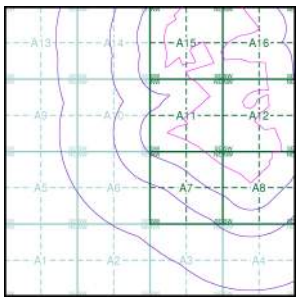
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



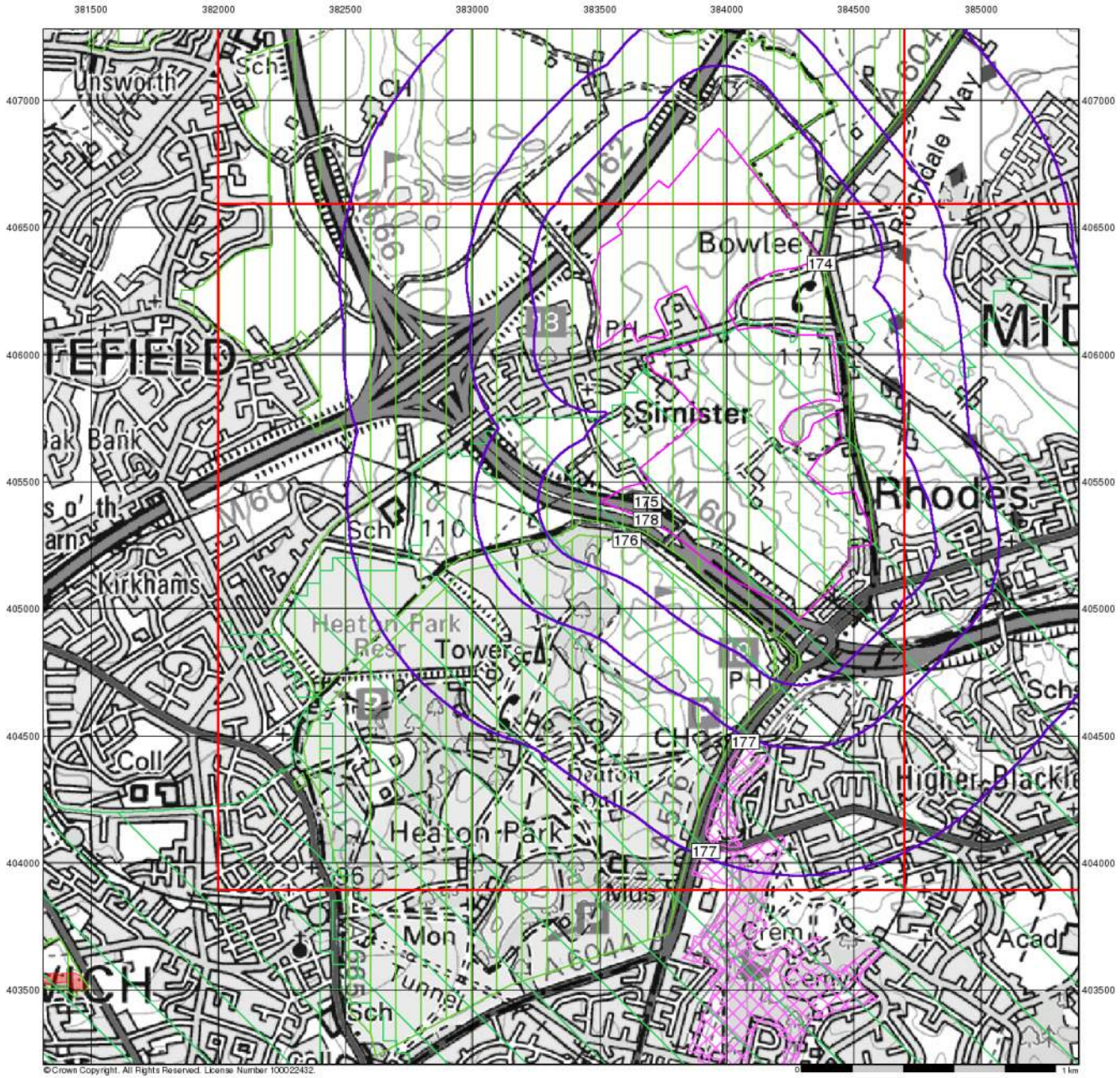
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Sensitive Land Uses

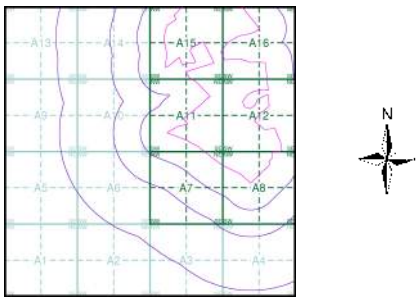
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



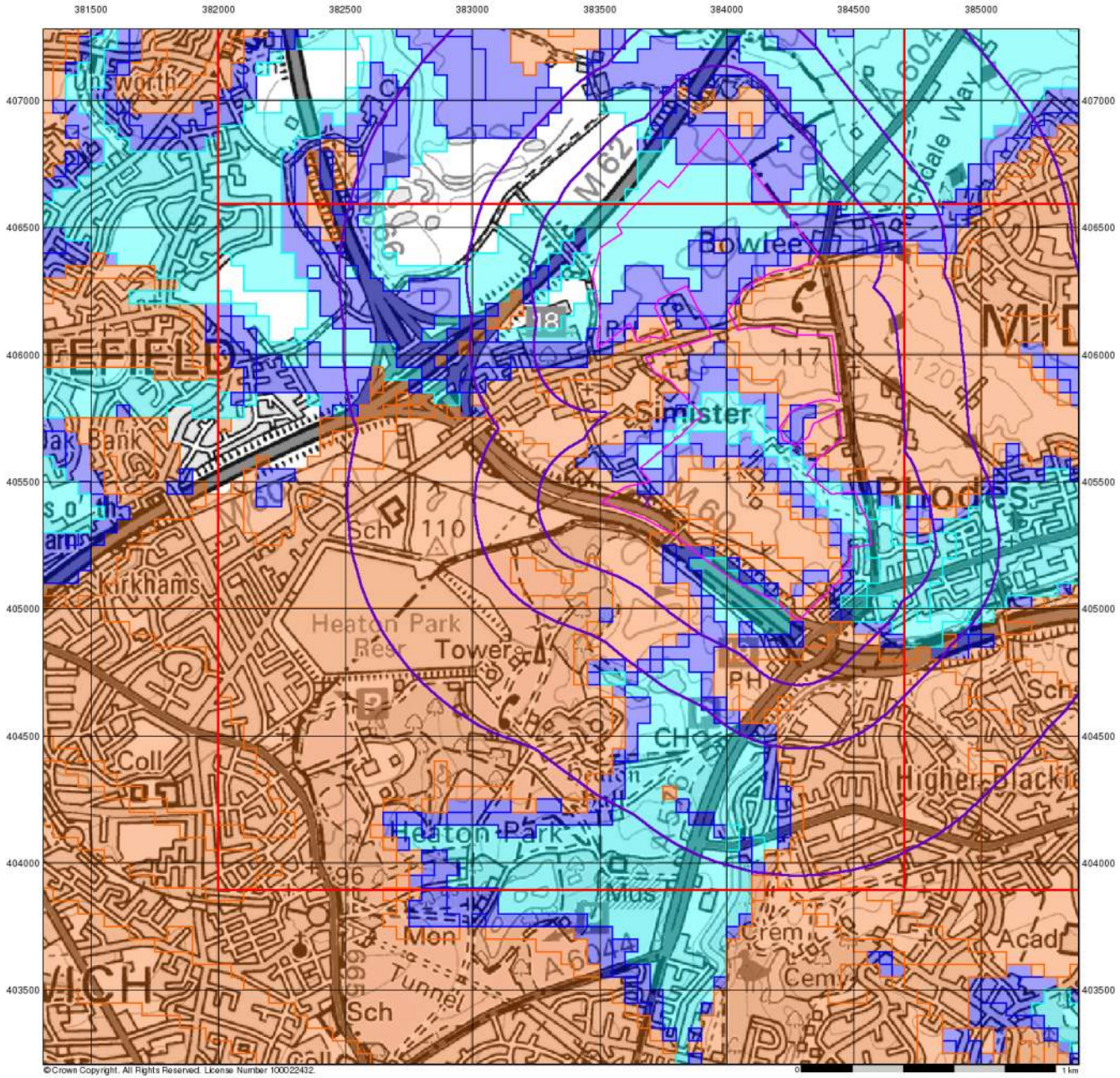
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BGS Flood GFS Data

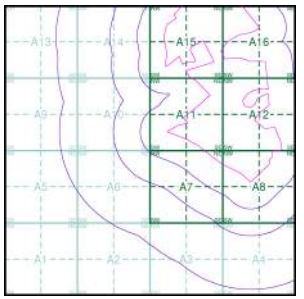
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A

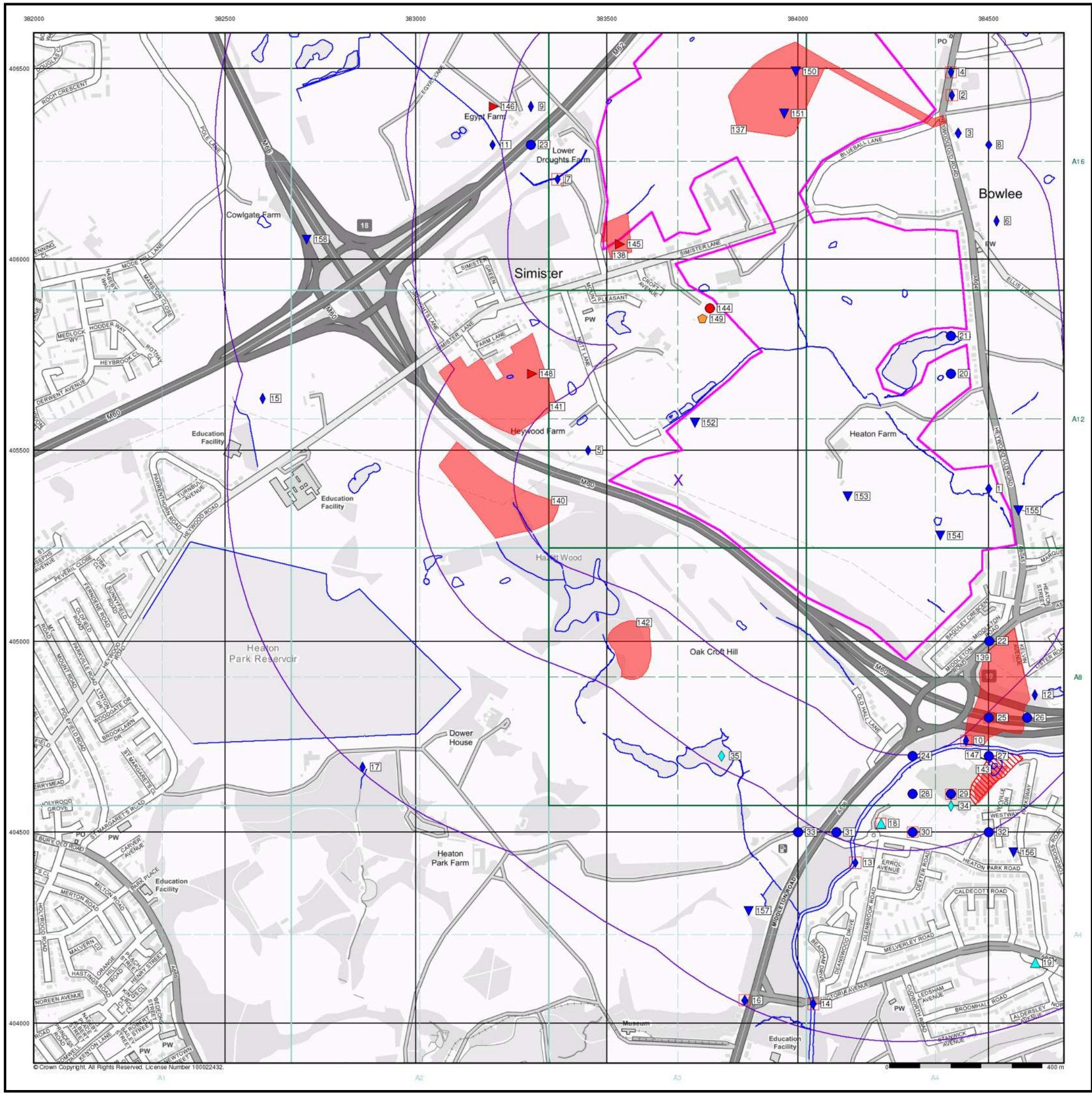


Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Geological

- BGS Recorded Mineral Site

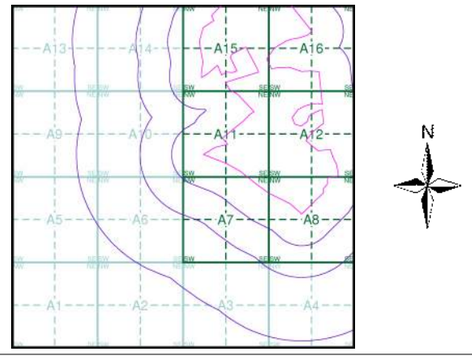
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice A



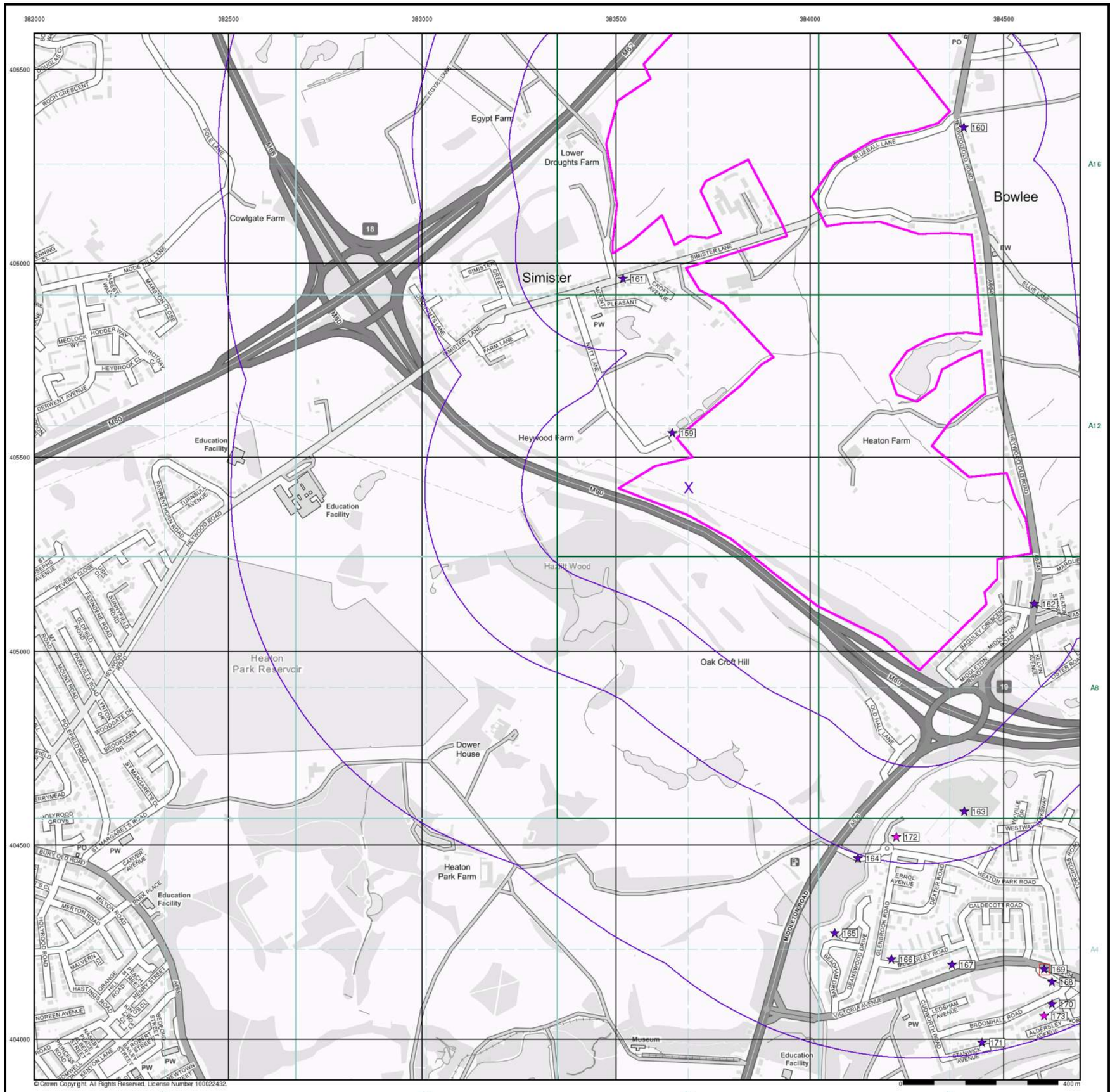
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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0 400 m

Industrial Land Use Map

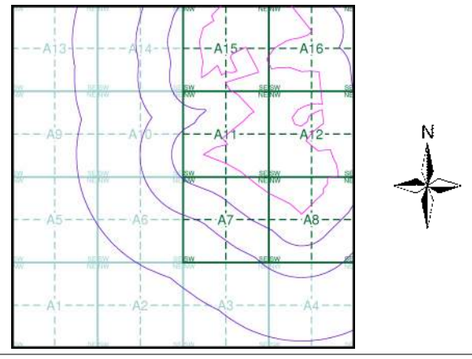
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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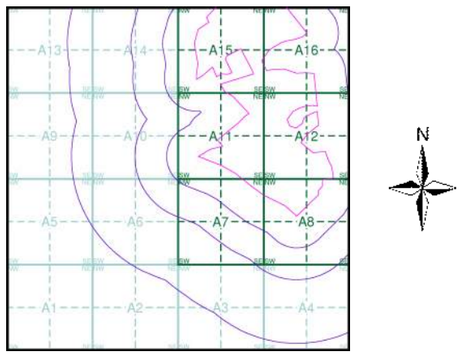
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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



General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Map ID
- Several of Type at Location

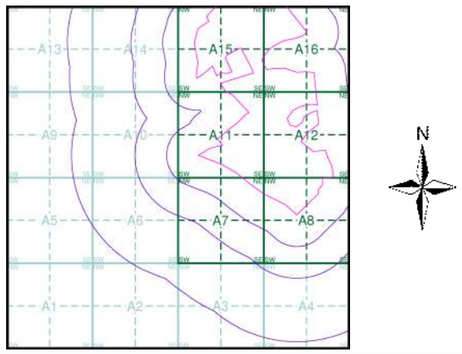
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



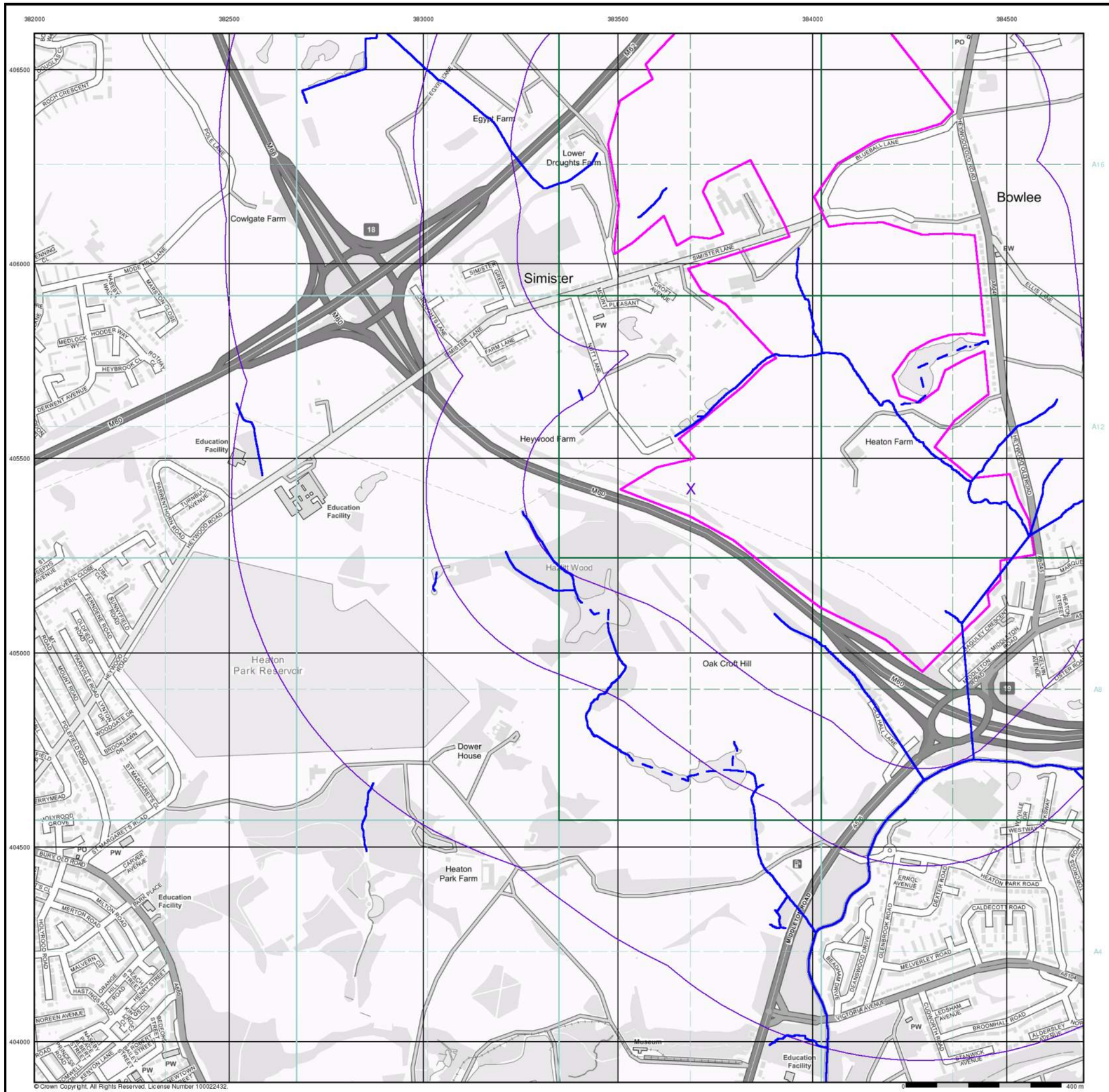
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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



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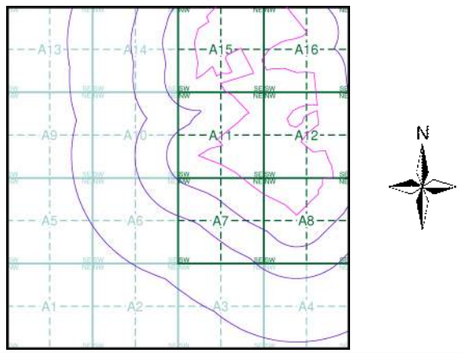
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

OS Water Network Map - Slice A



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Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

Northern Gateway Eastern Parcel

Order Details

Date: 01/07/2024

Your ref: 784-B048805

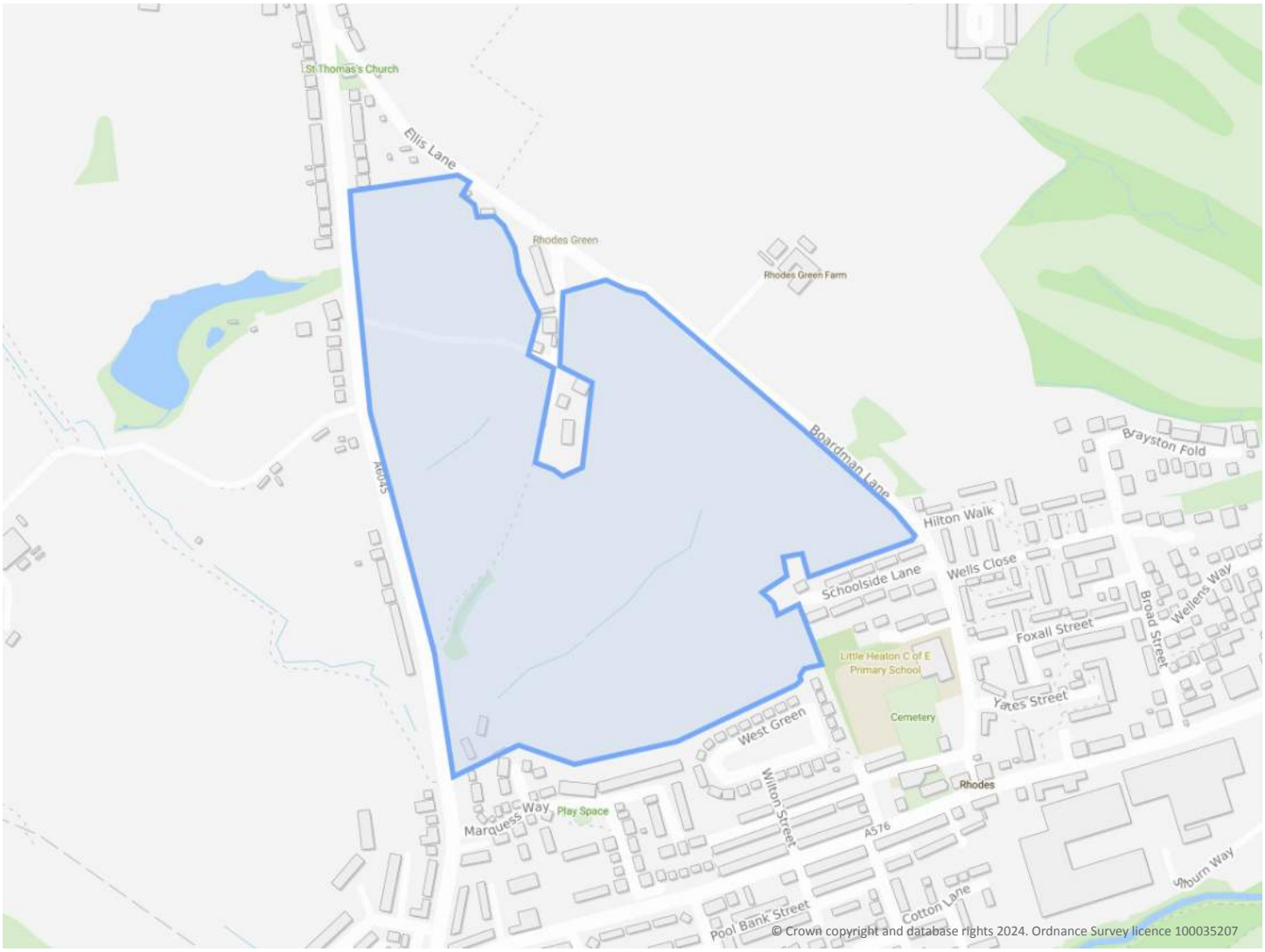
Our Ref: GS-UJV-EOF-ETA-HZ1

Site Details

Location: 384731 405565

Area: 21.73 ha

Authority: Rochdale Metropolitan Borough Council ↗



Summary of findings p. 2 >

OS MasterMap site plan N/A: >10ha

Aerial image p. 9 >

Insight User Guide ↗

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

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
13 >	1.1 >	Historical industrial land uses >	12	11	26	103	-
19 >	1.2 >	Historical tanks >	9	4	4	31	-
21 >	1.3 >	Historical energy features >	0	1	14	1	-
22	1.4	Historical petrol stations	0	0	0	0	-
22 >	1.5 >	Historical garages >	0	0	4	0	-
23	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
24 >	2.1 >	Historical industrial land uses >	16	15	42	160	-
33 >	2.2 >	Historical tanks >	9	8	6	61	-
36 >	2.3 >	Historical energy features >	0	3	28	4	-
38	2.4	Historical petrol stations	0	0	0	0	-
38 >	2.5 >	Historical garages >	0	0	4	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
39	3.1	Active or recent landfill	0	0	0	0	-
39	3.2	Historical landfill (BGS records)	0	0	0	0	-
40	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
40 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	1	2	-
41 >	3.5 >	Historical waste sites >	0	0	4	0	-
41	3.6	Licensed waste sites	0	0	0	0	-
41 >	3.7 >	Waste exemptions >	9	0	0	13	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
44 >	4.1 >	Recent industrial land uses >	0	0	11	-	-
45 >	4.2 >	Current or recent petrol stations >	0	0	1	0	-
46	4.3	Electricity cables	0	0	0	0	-
46	4.4	Gas pipelines	0	0	0	0	-
46 >	4.5 >	Sites determined as Contaminated Land >	0	0	1	0	-

46	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
47	4.7	Regulated explosive sites	0	0	0	0	-
47	4.8	Hazardous substance storage/usage	0	0	0	0	-
47	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
47	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
47 >	**4.11 >**	**Licensed pollutant release (Part A(2)/B) >**	0	0	1	1	-
48	4.12	Radioactive Substance Authorisations	0	0	0	0	-
48 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	0	3	8	-
50	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
50	4.15	Pollutant release to public sewer	0	0	0	0	-
50	4.16	List 1 Dangerous Substances	0	0	0	0	-
51	4.17	List 2 Dangerous Substances	0	0	0	0	-
51 >	**4.18 >**	**Pollution Incidents (EA/NRW) >**	0	0	0	4	-
51	4.19	Pollution inventory substances	0	0	0	0	-
52	4.20	Pollution inventory waste transfers	0	0	0	0	-
52	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
53 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
55 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
57 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
58	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
58	5.5	Groundwater vulnerability- local information	None (within 0m)				
60	5.6	Groundwater abstractions	0	0	0	0	0
61 >	**5.7 >**	**Surface water abstractions >**	0	0	0	0	5
62	5.8	Potable abstractions	0	0	0	0	0
62	5.9	Source Protection Zones	0	0	0	0	-
63	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
64 >	**6.1 >**	**Water Network (OS MasterMap) >**	9	9	11	-	-

67 >	6.2 >	Surface water features >	1	2	6	-	-
67 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
68 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
68 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
69	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
70	7.2	Historical Flood Events	0	0	0	-	-
70	7.3	Flood Defences	0	0	0	-	-
70 >	7.4 >	Areas Benefiting from Flood Defences >	0	0	1	-	-
70	7.5	Flood Storage Areas	0	0	0	-	-
71	7.6	Flood Zone 2	None (within 50m)				
71	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
72 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
74 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
75	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
76	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
76	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
76	10.4	Special Protection Areas (SPA)	0	0	0	0	0
76	10.5	National Nature Reserves (NNR)	0	0	0	0	0
77 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	1	2
77	10.7	Designated Ancient Woodland	0	0	0	0	0
77	10.8	Biosphere Reserves	0	0	0	0	0
78	10.9	Forest Parks	0	0	0	0	0
78	10.10	Marine Conservation Zones	0	0	0	0	0
78 >	10.11 >	Green Belt >	0	1	0	1	1
78	10.12	Proposed Ramsar sites	0	0	0	0	0

79	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
79	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
79	10.15	Nitrate Sensitive Areas	0	0	0	0	0
79 >	10.16 >	Nitrate Vulnerable Zones >	1	0	1	2	0
81 >	10.17 >	SSSI Impact Risk Zones >	1	-	-	-	-
82	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
83	11.1	World Heritage Sites	0	0	0	-	-
84	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
84	11.3	National Parks	0	0	0	-	-
84 >	11.4 >	Listed Buildings >	0	0	2	-	-
85	11.5	Conservation Areas	0	0	0	-	-
85	11.6	Scheduled Ancient Monuments	0	0	0	-	-
85	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
86 >	12.1 >	Agricultural Land Classification >	Grade 3 (within 250m)				
87	12.2	Open Access Land	0	0	0	-	-
87	12.3	Tree Felling Licences	0	0	0	-	-
87 >	12.4 >	Environmental Stewardship Schemes >	1	2	0	-	-
88 >	12.5 >	Countryside Stewardship Schemes >	0	3	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
89 >	13.1 >	Priority Habitat Inventory >	0	2	1	-	-
90	13.2	Habitat Networks	0	0	0	-	-
90	13.3	Open Mosaic Habitat	0	0	0	-	-
90	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
91 >	14.1 >	10k Availability >	Identified (within 500m)				
93 >	14.2 >	Artificial and made ground (10k) >	4	1	3	10	-
95 >	14.3 >	Superficial geology (10k) >	4	2	2	10	-

96 >	14.4 >	Landslip (10k) >	0	0	2	2	-
98 >	14.5 >	Bedrock geology (10k) >	2	0	3	6	-
99 >	14.6 >	Bedrock faults and other linear features (10k) >	1	2	3	9	-
Page	Section	**Geology 1:50,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
101 >	15.1 >	50k Availability >	Identified (within 500m)				
102	15.2	Artificial and made ground (50k)	0	0	0	0	-
102	15.3	Artificial ground permeability (50k)	0	0	-	-	-
103 >	15.4 >	Superficial geology (50k) >	3	0	0	4	-
104 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
104 >	15.6 >	Landslip (50k) >	0	0	0	1	-
105	15.7	Landslip permeability (50k)	None (within 50m)				
106 >	15.8 >	Bedrock geology (50k) >	1	0	3	1	-
107 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
107 >	15.10 >	Bedrock faults and other linear features (50k) >	0	1	1	2	-
Page	Section	**Boreholes >**	On site	0-50m	50-250m	250-500m	500-2000m
108 >	16.1 >	BGS Boreholes >	0	0	13	-	-
Page	Section	**Natural ground subsidence >**					
110 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
111 >	17.2 >	Running sands >	Very low (within 50m)				
112 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
113 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
114 >	17.5 >	Landslides >	Low (within 50m)				
116 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	**Mining and ground workings >**	On site	0-50m	50-250m	250-500m	500-2000m
118 >	18.1 >	BritPits >	1	0	2	2	-
119 >	18.2 >	Surface ground workings >	10	29	58	-	-
123	18.3	Underground workings	0	0	0	0	0
123	18.4	Underground mining extents	0	0	0	0	-
124 >	18.5 >	Historical Mineral Planning Areas >	0	0	1	0	-

124	18.6	Non-coal mining	0	0	0	0	0
124	18.7	JPB mining areas	None (within 0m)				
124	18.8	The Coal Authority non-coal mining	0	0	0	0	-
125 >	**18.9 >**	**Researched mining >**	0	0	0	1	-
125	18.10	Mining record office plans	0	0	0	0	-
125	18.11	BGS mine plans	0	0	0	0	-
125 >	**18.12 >**	**Coal mining >**	Identified (within 0m)				
126	18.13	Brine areas	None (within 0m)				
126	18.14	Gypsum areas	None (within 0m)				
126	18.15	Tin mining	None (within 0m)				
126	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
127	19.1	Natural cavities	0	0	0	0	-
127	19.2	Mining cavities	0	0	0	0	0
127	19.3	Reported recent incidents	0	0	0	0	-
127	19.4	Historical incidents	0	0	0	0	-
128	19.5	National karst database	0	0	0	0	-
Page	Section	**Radon >**					
129 >	**20.1 >**	**Radon >**	Between 10% and 30% (within 0m)				
Page	Section	**Soil chemistry >**	On site	0-50m	50-250m	250-500m	500-2000m
131 >	**21.1 >**	**BGS Estimated Background Soil Chemistry >**	8	3	-	-	-
132	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
132	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	**Railway infrastructure and projects >**	On site	0-50m	50-250m	250-500m	500-2000m
133	22.1	Underground railways (London)	0	0	0	-	-
133	22.2	Underground railways (Non-London)	0	0	0	-	-
134	22.3	Railway tunnels	0	0	0	-	-
134 >	**22.4 >**	**Historical railway and tunnel features >**	0	1	0	-	-
134	22.5	Royal Mail tunnels	0	0	0	-	-

134	22.6	Historical railways	0	0	0	-	-
135	22.7	Railways	0	0	0	-	-
135	22.8	Crossrail 1	0	0	0	0	-
135	22.9	Crossrail 2	0	0	0	0	-
135	22.10	HS2	0	0	0	0	-

Recent aerial photograph



Capture Date: 22/04/2019

Site Area: 21.73ha

Recent site history - 2015 aerial photograph



Capture Date: 11/06/2015

Site Area: 21.73ha

Recent site history - 2011 aerial photograph



Capture Date: 01/05/2011

Site Area: 21.73ha

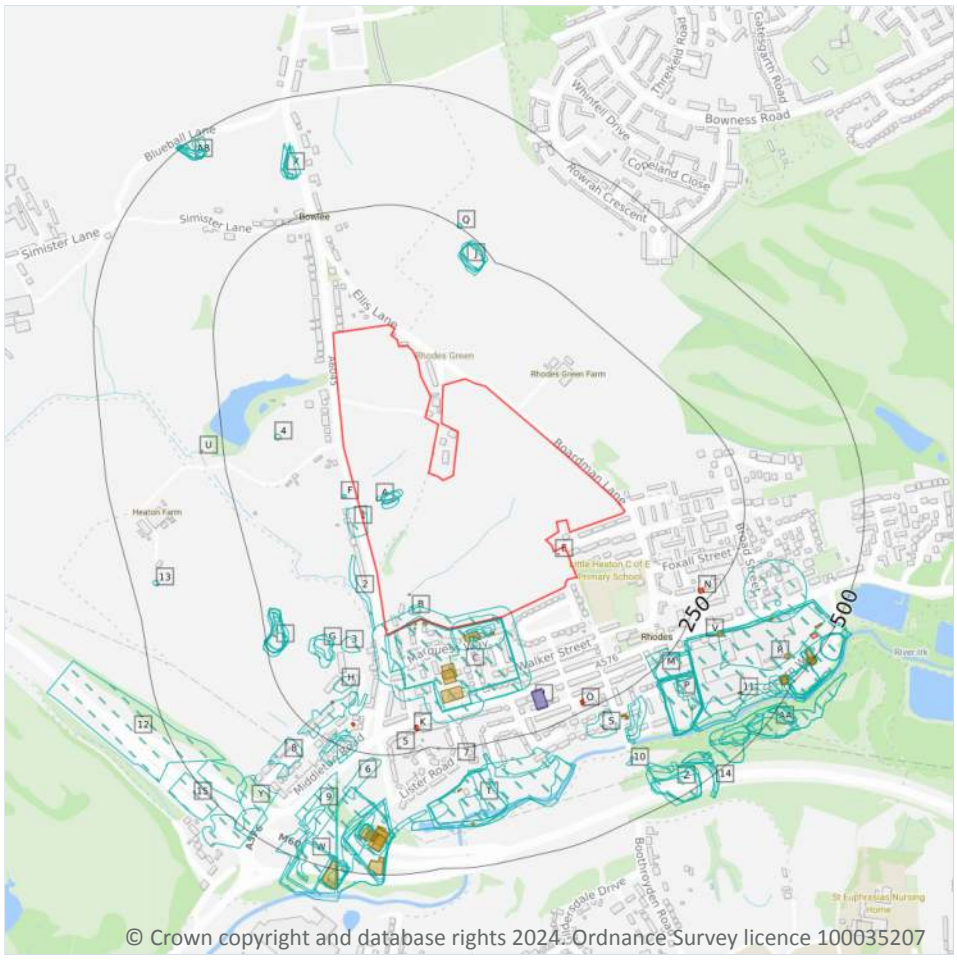
Recent site history - 2000 aerial photograph



Capture Date: 27/06/2000

Site Area: 21.73ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	152

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

Features are displayed on the Past land use map on **page 13 >**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Cuttings**	**1932**	**653359**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Sand Pit**	**1848**	**674329**
A	**On site**	**Old Sand Pit**	**1891**	**687345**
A	**On site**	**Unspecified Pit**	**1932**	**722192**
A	**On site**	**Unspecified Pit**	**1907 - 1923**	**726915**
A	**On site**	**Unspecified Pit**	**1938 - 1955**	**750195**
B	**On site**	**Sand Pit**	**1848**	**674330**
C	**On site**	**Unspecified Works**	**1974 - 1981**	**713431**
C	**On site**	**Bleach and Dye works**	**1891**	**781406**
C	**On site**	**Unspecified Works**	**1938**	**803963**
D	**On site**	**Unspecified Works**	**1965**	**770532**
D	**On site**	**Unspecified Tanks**	**1938**	**795253**
C	2m S	Bleach and Dye works	1907 - 1932	771548
D	8m S	Unspecified Tanks	1955	792301
D	13m S	Unspecified Tanks	1932	795711
F	21m W	Unspecified Tank	1932	781767
F	21m W	Unspecified Tank	1907 - 1915	805087
2	23m SW	Unspecified Ground Workings	1932	660971
D	25m S	Unspecified Tank	1923	698424
D	28m S	Unspecified Tanks	1932	730346
D	28m S	Unspecified Tank	1907	733341
D	28m S	Unspecified Tanks	1915	794412
D	28m S	Unspecified Tank	1923	799989
3	63m SW	Unspecified Pit	1965 - 1974	749663
G	111m SW	Unspecified Pit	1955	796791
G	112m SW	Unspecified Pit	1965 - 1981	766409
H	114m SW	Unspecified Pit	1955	675618
G	118m SW	Unspecified Pit	1891 - 1938	804740
4	128m W	Unspecified Tank	1891	698423

ID	Location	Land use	Dates present	Group ID
H	131m SW	Refuse Heap	1965	656880
J	193m N	Old Sand Pit	1891	687320
J	198m N	Unspecified Pit	1907	767543
J	198m N	Unspecified Pit	1923	787277
L	201m SW	Unspecified Pit	1955	740560
J	202m N	Unspecified Pit	1974 - 1981	715391
J	206m N	Unspecified Pit	1955 - 1965	803537
L	206m SW	Unspecified Pit	1965 - 1981	764108
L	211m SW	Unspecified Pit	1907 - 1923	718881
L	211m SW	Unspecified Pit	1932	740127
L	211m SW	Unspecified Pit	1938	774420
H	213m SW	Refuse Heap	1955	805802
L	215m SW	Old Sand Pit	1891	687316
M	220m SE	Unspecified Mill	1891	773440
H	224m SW	Refuse Heap	1932	787794
H	229m SW	Refuse Heap	1932 - 1938	734407
P	240m SE	Unspecified Mills	1915	755130
M	241m SE	Unspecified Mill	1932 - 1938	741699
Q	248m N	Unspecified Tank	1932	736583
Q	248m N	Unspecified Tank	1915	757903
6	257m S	Cuttings	1907 - 1923	728320
R	260m SE	Print Works	1891 - 1932	760934
R	260m SE	Print Works	1938	785697
R	263m SE	Unspecified Mills	1975 - 1982	804961
R	265m SE	Print Works	1955 - 1965	716912
S	270m SE	Refuse Heap	1932 - 1938	732862
T	271m S	Disused Bleach Works	1915 - 1923	736013
T	271m S	Bleach Works	1891 - 1907	738626

ID	Location	Land use	Dates present	Group ID
7	271m S	Pump	1848	682701
P	272m SE	Unspecified Mills	1932 - 1938	803357
P	273m SE	Unspecified Mills	1907	720174
S	277m SE	Refuse Heap	1915 - 1923	748566
P	277m SE	Unspecified Mills	1923	754683
P	277m SE	Unspecified Mills	1965 - 1982	714947
P	278m SE	Unspecified Mill	1891	708990
S	279m SE	Unspecified Ground Workings	1907	661641
T	281m S	Bleach Works	1848	764467
R	291m E	Chimney	1982	702029
8	292m SW	Refuse Heap	1956 - 1965	779622
V	297m SE	Pump	1848	682561
T	301m S	Unspecified Commercial/Industrial	1977	670557
T	301m S	Unspecified Works	1985	707978
T	301m S	Unspecified Works	1968	755739
T	304m S	Rubber Works	1932 - 1938	735668
W	304m SW	Unspecified Commercial/Industrial	1938	670258
R	314m SE	Print Works	1848	770004
W	325m S	Sewage Works	1907 - 1915	756067
W	325m S	Sewage Works	1923	789843
X	332m NW	Unspecified Pit	1923 - 1932	767138
X	332m NW	Unspecified Ground Workings	1891	743045
X	334m NW	Unspecified Pit	1938 - 1955	797118
X	334m NW	Unspecified Ground Workings	1907 - 1915	799588
W	340m S	Sewage Works	1956	764323
9	344m SW	Unspecified Pit	1932 - 1938	764430
W	346m S	Sewage Work	1938	668930
W	349m S	Refuse Heap	1956 - 1968	716157

ID	Location	Land use	Dates present	Group ID
T	350m S	Cabinet Works	1956	663573
W	351m S	Sewage Works	1932	723012
P	360m SE	Unspecified Tank	1907 - 1923	769130
R	367m E	Unspecified Tank	1907 - 1932	748320
W	372m S	Unspecified Pit	1977 - 1985	759814
W	373m S	Unspecified Ground Workings	1932	661500
W	375m S	Shed	1848	658371
W	379m S	Unspecified Ground Workings	1956 - 1968	719308
10	380m SE	Gravel Pit	1848	699647
T	392m S	Unspecified Tank	1907 - 1923	737244
W	395m S	Unspecified Tanks	1938	724146
W	398m S	Sewage Tanks	1923	704522
W	398m S	Unspecified Tanks	1932	766386
W	398m S	Unspecified Tanks	1907 - 1915	788712
Y	401m SW	Refuse Heap	1956	656420
Z	407m SE	Unspecified Ground Workings	1966	766071
Z	410m SE	Unspecified Ground Workings	1932	784059
Z	416m SE	Unspecified Disused Pit	1975	704318
12	418m SW	Cuttings	1974 - 1985	765868
AA	430m SE	Unspecified Ground Workings	1965 - 1982	751895
AA	430m SE	Unspecified Ground Workings	1955	760108
Z	437m SE	Sand Pit	1932 - 1938	773485
Z	438m SE	Unspecified Ground Workings	1975	732543
Z	438m SE	Unspecified Ground Workings	1965	753038
Z	438m SE	Unspecified Heap	1955	796584
AA	443m SE	Unspecified Ground Workings	1915	772950
Y	445m SW	Cuttings	1977 - 1985	768007
13	445m W	Gravel Pit	1848	699585

ID	Location	Land use	Dates present	Group ID
Z	446m SE	Unspecified Pit	1956	676281
AA	447m SE	Sand Pit	1932	778383
AA	451m SE	Sand Pit	1938	773244
R	453m SE	Refuse Heap	1891	656502
Z	454m SE	Unspecified Heap	1907 - 1923	707969
AB	456m NW	Unspecified Ground Workings	1955	727993
AB	456m NW	Unspecified Ground Workings	1965 - 1981	772984
AB	457m NW	Unspecified Ground Workings	1932	742033
AB	457m NW	Unspecified Ground Workings	1938	760612
AB	458m NW	Unspecified Ground Workings	1915 - 1923	770765
W	458m SW	Filter Beds	1907 - 1915	765304
W	463m SW	Filter Beds	1923	801307
W	464m S	Unspecified Tanks	1932	666726
AA	469m SE	Sand Pit	1923	738197
AA	469m SE	Sand Pit	1907 - 1915	802257
AA	469m SE	Unspecified Heap	1938	688850
R	471m SE	Unspecified Tanks	1938	756963
AA	472m SE	Unspecified Ground Workings	1932	747550
R	473m SE	Unspecified Tanks	1907	708195
R	473m SE	Unspecified Tanks	1915	756897
W	473m S	Unspecified Tanks	1932 - 1938	723024
W	473m S	Unspecified Tanks	1915	719905
R	476m SE	Unspecified Tanks	1915	720840
W	477m S	Unspecified Tank	1923	697942
R	477m SE	Unspecified Tanks	1923	709699
14	477m SE	Unspecified Ground Workings	1966	800988
R	477m SE	Unspecified Tanks	1923 - 1932	742843
W	478m S	Unspecified Tanks	1938	803390

ID	Location	Land use	Dates present	Group ID
AB	481m NW	Unspecified Tank	1907 - 1923	794077
R	483m SE	Sand Pit	1907	674130
R	483m SE	Refuse Heap	1915 - 1923	758039
W	484m S	Unspecified Tanks	1932	758905
AA	485m SE	Unspecified Ground Workings	1907 - 1915	748848
AA	487m SE	Old Sand Pit	1891	687337
R	489m SE	Refuse Heap	1932	749277
R	491m E	Refuse Heap	1938	791494
R	494m E	Sand Pit	1907	674229
R	494m E	Refuse Heap	1915 - 1932	763838
15	496m SW	Cuttings	1977 - 1985	785802

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**48**

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

Features are displayed on the Past land use map on **page 13 >**

ID	Location	Land use	Dates present	Group ID
B	**On site**	**Unspecified Tank**	**1969**	**92276**
B	**On site**	**Unspecified Tank**	**1992**	**94490**
B	**On site**	**Unspecified Tank**	**1955**	**98967**
B	**On site**	**Unspecified Tank**	**1970**	**99886**
B	**On site**	**Unspecified Tank**	**1985**	**102322**
B	**On site**	**Unspecified Tank**	**1954**	**104326**
E	**On site**	**Unspecified Tank**	**1954**	**95574**

ID	Location	Land use	Dates present	Group ID
E	**On site**	**Unspecified Tank**	**1955**	**99857**
E	**On site**	**Unspecified Tank**	**1969**	**103130**
B	4m S	Unspecified Tank	1954 - 1955	92369
B	5m S	Disused Tank	1954 - 1955	97155
B	12m S	Unspecified Tank	1922 - 1932	97174
D	19m S	Tanks	1922 - 1932	103692
C	72m S	Disused Tanks	1954 - 1955	99777
C	84m S	Tanks	1922	82606
C	122m S	Tanks	1922 - 1932	106885
5	233m S	Unspecified Tank	1922	90317
S	293m SE	Tanks	1977	94208
S	293m SE	Tanks	1985	98377
U	294m W	Unspecified Tank	1954	105094
U	294m W	Unspecified Tank	1955	98580
U	294m W	Unspecified Tank	1969	101283
S	298m SE	Tanks	1968 - 1977	101153
V	315m SE	Unspecified Tank	1985 - 1996	93343
T	334m S	Unspecified Tank	1922 - 1932	99380
P	363m SE	Unspecified Tank	1893	85115
R	377m E	Unspecified Tank	1977	85114
W	398m S	Unspecified Tank	1951	107481
W	401m S	Tanks	1951	96513
W	402m S	Tanks	1951	107594
W	404m S	Tanks	1909 - 1932	99126
T	407m S	Unspecified Tank	1922	90311
W	408m S	Tanks	1909 - 1932	98997
W	410m S	Tanks	1932	99786
W	413m S	Tanks	1909 - 1922	95501

ID	Location	Land use	Dates present	Group ID
11	413m SE	Unspecified Tank	1985 - 1996	101466
W	416m S	Tanks	1909 - 1922	104505
R	449m SE	Unspecified Tank	1985 - 1996	94406
W	463m S	Tanks	1932	82602
R	464m E	Unspecified Tank	1977 - 1985	101392
R	465m E	Unspecified Tank	1909 - 1932	107063
R	470m E	Unspecified Tank	1977 - 1985	92108
R	473m SE	Tanks	1909 - 1922	100922
R	476m SE	Unspecified Tank	1932 - 1955	95390
R	476m SE	Tanks	1922	91762
W	482m S	Tanks	1922 - 1932	105324
R	490m SE	Tanks	1909	103096
R	491m SE	Tanks	1932	93648

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**16**

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

Features are displayed on the Past land use map on **page 13 >**

ID	Location	Land use	Dates present	Group ID
D	26m S	Electricity Substation	1970 - 1992	53311
H	178m SW	Electricity Substation	1978 - 1996	50161
H	195m SW	Electricity Substation	1985 - 1999	56136
H	195m SW	Electricity Substation	1970	50987
K	198m S	Electricity Substation	1970 - 1999	58327

ID	Location	Land use	Dates present	Group ID
K	198m S	Electricity Substation	1954 - 1955	56658
N	223m E	Electricity Substation	1985 - 1996	53089
N	223m E	Electricity Substation	1954 - 1955	53873
N	223m E	Electricity Substation	1977	61662
O	228m SE	Electricity Substation	1985	58360
O	228m SE	Electricity Substation	1992 - 1994	58564
O	228m SE	Electricity Substation	1996	59846
O	228m SE	Electricity Substation	1985	56674
O	228m SE	Electricity Substation	1970 - 1977	58026
O	228m SE	Electricity Substation	1999	53084
R	466m E	Electricity Substation	1954 - 1969	50626

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	4

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

Features are displayed on the Past land use map on **page 13 >**

ID	Location	Land use	Dates present	Group ID
I	167m S	Garage	1970	16787
I	169m S	Garage	1985	21279
I	170m S	Garage	1999	20032
I	170m S	Garage	1992	17450

This data is sourced from Ordnance Survey / Groundsure.

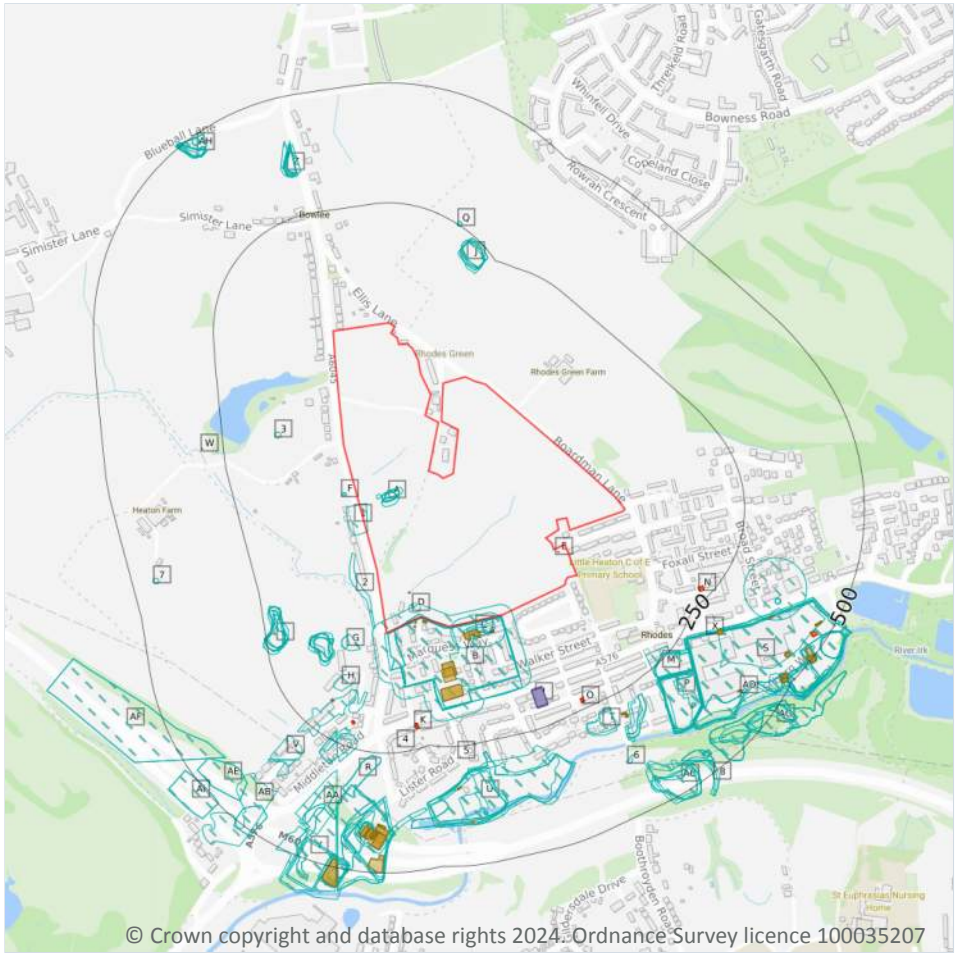
1.6 Historical military land

Records within 500m	**0**

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

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

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	233

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

Features are displayed on the Past land use - un-grouped map on **page 24 >**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Cuttings**	**1932**	**653359**
A	**On site**	**Unspecified Pit**	**1932**	**722192**
A	**On site**	**Unspecified Pit**	**1915**	**726915**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Pit**	**1907**	**726915**
A	**On site**	**Old Sand Pit**	**1891**	**687345**
A	**On site**	**Sand Pit**	**1848**	**674329**
A	**On site**	**Unspecified Pit**	**1955**	**750195**
A	**On site**	**Unspecified Pit**	**1938**	**750195**
A	**On site**	**Unspecified Pit**	**1923**	**726915**
B	**On site**	**Unspecified Works**	**1981**	**713431**
B	**On site**	**Unspecified Works**	**1974**	**713431**
B	**On site**	**Unspecified Works**	**1938**	**803963**
B	**On site**	**Bleach and Dye works**	**1891**	**781406**
C	**On site**	**Unspecified Tanks**	**1938**	**795253**
C	**On site**	**Unspecified Works**	**1965**	**770532**
D	**On site**	**Sand Pit**	**1848**	**674330**
B	2m S	Bleach and Dye works	1932	771548
B	2m S	Bleach and Dye works	1915	771548
B	2m S	Bleach and Dye works	1907	771548
B	2m S	Bleach and Dye works	1923	771548
C	8m S	Unspecified Tanks	1955	792301
C	13m S	Unspecified Tanks	1932	795711
F	21m W	Unspecified Tank	1932	781767
F	21m W	Unspecified Tank	1915	805087
F	21m W	Unspecified Tank	1907	805087
2	23m SW	Unspecified Ground Workings	1932	660971
C	25m S	Unspecified Tank	1923	698424
C	28m S	Unspecified Tanks	1932	730346
C	28m S	Unspecified Tanks	1915	794412
C	28m S	Unspecified Tank	1907	733341
C	28m S	Unspecified Tank	1923	799989

ID	Location	Land Use	Date	Group ID
G	63m SW	Unspecified Pit	1965	749663
G	81m SW	Unspecified Pit	1974	749663
G	111m SW	Unspecified Pit	1955	796791
G	112m SW	Unspecified Pit	1981	766409
G	112m SW	Unspecified Pit	1974	766409
G	112m SW	Unspecified Pit	1965	766409
H	114m SW	Unspecified Pit	1955	675618
G	118m SW	Unspecified Pit	1915	804740
G	118m SW	Unspecified Pit	1907	804740
G	118m SW	Unspecified Pit	1923	804740
G	119m SW	Unspecified Pit	1932	804740
G	119m SW	Unspecified Pit	1938	804740
G	122m SW	Unspecified Pit	1891	804740
3	128m W	Unspecified Tank	1891	698423
H	131m SW	Refuse Heap	1965	656880
J	193m N	Old Sand Pit	1891	687320
J	198m N	Unspecified Pit	1907	767543
J	198m N	Unspecified Pit	1923	787277
L	201m SW	Unspecified Pit	1955	740560
J	202m N	Unspecified Pit	1981	715391
J	202m N	Unspecified Pit	1974	715391
J	206m N	Unspecified Pit	1965	803537
J	206m N	Unspecified Pit	1955	803537
L	206m SW	Unspecified Pit	1981	764108
L	206m SW	Unspecified Pit	1974	764108
L	206m SW	Unspecified Pit	1965	764108
L	211m SW	Unspecified Pit	1915	718881
L	211m SW	Unspecified Pit	1907	718881

ID	Location	Land Use	Date	Group ID
L	211m SW	Unspecified Pit	1923	718881
L	211m SW	Unspecified Pit	1932	740127
L	211m SW	Unspecified Pit	1938	774420
H	213m SW	Refuse Heap	1955	805802
L	215m SW	Old Sand Pit	1891	687316
M	220m SE	Unspecified Mill	1891	773440
H	224m SW	Refuse Heap	1932	787794
H	229m SW	Refuse Heap	1932	734407
H	229m SW	Refuse Heap	1938	734407
P	240m SE	Unspecified Mills	1915	755130
M	241m SE	Unspecified Mill	1932	741699
M	244m SE	Unspecified Mill	1938	741699
Q	248m N	Unspecified Tank	1932	736583
Q	248m N	Unspecified Tank	1915	757903
R	257m S	Cuttings	1923	728320
R	257m S	Cuttings	1915	728320
R	257m S	Cuttings	1907	728320
S	260m SE	Print Works	1891	760934
S	260m SE	Print Works	1938	785697
S	261m SE	Print Works	1915	760934
S	261m SE	Print Works	1907	760934
S	261m SE	Print Works	1923	760934
S	262m SE	Print Works	1932	760934
S	263m SE	Unspecified Mills	1982	804961
S	265m SE	Unspecified Mills	1975	804961
S	265m SE	Print Works	1965	716912
S	265m SE	Print Works	1955	716912
T	270m SE	Refuse Heap	1938	732862

ID	Location	Land Use	Date	Group ID
U	271m S	Disused Bleach Works	1915	736013
U	271m S	Bleach Works	1907	738626
U	271m S	Disused Bleach Works	1923	736013
5	271m S	Pump	1848	682701
P	272m SE	Unspecified Mills	1938	803357
P	273m SE	Unspecified Mills	1907	720174
T	273m SE	Refuse Heap	1932	732862
P	274m SE	Unspecified Mills	1932	803357
T	277m SE	Refuse Heap	1915	748566
P	277m SE	Unspecified Mills	1923	754683
P	277m SE	Unspecified Mills	1975	714947
P	277m SE	Unspecified Mills	1965	714947
P	277m SE	Unspecified Mills	1982	714947
T	277m SE	Refuse Heap	1923	748566
P	278m SE	Unspecified Mill	1891	708990
T	279m SE	Unspecified Ground Workings	1907	661641
U	281m S	Bleach Works	1848	764467
S	291m E	Chimney	1982	702029
V	292m SW	Refuse Heap	1965	779622
X	297m SE	Pump	1848	682561
U	301m S	Unspecified Works	1985	707978
U	301m S	Unspecified Commercial/Industrial	1977	670557
U	301m S	Unspecified Works	1968	755739
U	301m S	Bleach Works	1891	738626
U	304m S	Rubber Works	1938	735668
Y	304m SW	Unspecified Commercial/Industrial	1938	670258
U	305m S	Rubber Works	1932	735668
S	314m SE	Print Works	1848	770004

ID	Location	Land Use	Date	Group ID
V	324m SW	Refuse Heap	1956	779622
Y	325m S	Sewage Works	1915	756067
Y	325m S	Sewage Works	1907	756067
Y	325m S	Sewage Works	1923	789843
Z	332m NW	Unspecified Pit	1923	767138
Z	332m NW	Unspecified Ground Workings	1891	743045
Z	334m NW	Unspecified Pit	1938	797118
Z	334m NW	Unspecified Ground Workings	1915	799588
Z	334m NW	Unspecified Ground Workings	1907	799588
Z	335m NW	Unspecified Pit	1955	797118
Z	337m NW	Unspecified Pit	1932	767138
Y	340m S	Sewage Works	1956	764323
AA	344m SW	Unspecified Pit	1932	764430
AA	344m SW	Unspecified Pit	1938	764430
Y	346m S	Sewage Work	1938	668930
Y	349m S	Refuse Heap	1968	716157
Y	349m S	Refuse Heap	1956	716157
U	350m S	Cabinet Works	1956	663573
Y	351m S	Sewage Works	1932	723012
P	360m SE	Unspecified Tank	1915	769130
P	360m SE	Unspecified Tank	1907	769130
P	360m SE	Unspecified Tank	1923	769130
S	367m E	Unspecified Tank	1932	748320
S	367m E	Unspecified Tank	1915	748320
S	367m E	Unspecified Tank	1907	748320
S	367m E	Unspecified Tank	1923	748320
Y	372m S	Unspecified Pit	1977	759814
Y	373m S	Unspecified Ground Workings	1932	661500

ID	Location	Land Use	Date	Group ID
Y	375m S	Shed	1848	658371
Y	379m S	Unspecified Ground Workings	1968	719308
Y	379m S	Unspecified Ground Workings	1956	719308
6	380m SE	Gravel Pit	1848	699647
U	392m S	Unspecified Tank	1915	737244
U	392m S	Unspecified Tank	1907	737244
U	392m S	Unspecified Tank	1923	737244
Y	395m S	Unspecified Tanks	1938	724146
Y	398m S	Unspecified Tanks	1932	766386
Y	398m S	Unspecified Tanks	1915	788712
Y	398m S	Unspecified Tanks	1907	788712
Y	398m S	Sewage Tanks	1923	704522
AB	401m SW	Refuse Heap	1956	656420
Y	403m S	Unspecified Pit	1985	759814
AC	407m SE	Unspecified Ground Workings	1966	766071
AC	410m SE	Unspecified Ground Workings	1932	784059
AC	416m SE	Unspecified Disused Pit	1975	704318
AE	418m SW	Cuttings	1985	765868
AE	418m SW	Cuttings	1977	765868
AF	425m SW	Cuttings	1981	765868
AF	425m SW	Cuttings	1974	765868
AG	430m SE	Unspecified Ground Workings	1975	751895
AG	430m SE	Unspecified Ground Workings	1965	751895
AG	430m SE	Unspecified Ground Workings	1955	760108
AG	430m SE	Unspecified Ground Workings	1982	751895
AC	437m SE	Sand Pit	1938	773485
AC	438m SE	Unspecified Ground Workings	1975	732543
AC	438m SE	Unspecified Ground Workings	1965	753038

ID	Location	Land Use	Date	Group ID
AC	438m SE	Unspecified Heap	1955	796584
AC	442m SE	Sand Pit	1932	773485
AG	443m SE	Unspecified Ground Workings	1915	772950
AB	445m SW	Cuttings	1985	768007
AB	445m SW	Cuttings	1977	768007
7	445m W	Gravel Pit	1848	699585
AC	446m SE	Unspecified Pit	1956	676281
AG	447m SE	Sand Pit	1932	778383
AG	451m SE	Sand Pit	1938	773244
S	453m SE	Refuse Heap	1891	656502
AC	454m SE	Unspecified Heap	1915	707969
AC	454m SE	Unspecified Heap	1907	707969
AC	454m SE	Unspecified Heap	1923	707969
AH	456m NW	Unspecified Ground Workings	1981	772984
AH	456m NW	Unspecified Ground Workings	1974	772984
AH	456m NW	Unspecified Ground Workings	1965	772984
AH	456m NW	Unspecified Ground Workings	1955	727993
AH	457m NW	Unspecified Ground Workings	1932	742033
AH	457m NW	Unspecified Ground Workings	1938	760612
AH	458m NW	Unspecified Ground Workings	1915	770765
AH	458m NW	Unspecified Ground Workings	1923	770765
Y	458m SW	Filter Beds	1915	765304
Y	458m SW	Filter Beds	1907	765304
Y	463m SW	Filter Beds	1923	801307
Y	464m S	Unspecified Tanks	1932	666726
AG	469m SE	Sand Pit	1923	738197
AG	469m SE	Sand Pit	1915	802257
AG	469m SE	Sand Pit	1907	802257

ID	Location	Land Use	Date	Group ID
AG	469m SE	Unspecified Heap	1938	688850
S	471m SE	Unspecified Tanks	1938	756963
AG	472m SE	Unspecified Ground Workings	1932	747550
S	473m SE	Unspecified Tanks	1915	756897
S	473m SE	Unspecified Tanks	1907	708195
Y	473m S	Unspecified Tanks	1938	723024
Y	473m S	Unspecified Tanks	1915	719905
S	476m SE	Unspecified Tanks	1915	720840
Y	477m S	Unspecified Tank	1923	697942
S	477m SE	Unspecified Tanks	1923	709699
8	477m SE	Unspecified Ground Workings	1966	800988
S	477m SE	Unspecified Tanks	1932	742843
Y	478m S	Unspecified Tanks	1932	723024
S	478m SE	Unspecified Tanks	1923	742843
Y	478m S	Unspecified Tanks	1938	803390
AH	481m NW	Unspecified Tank	1915	794077
AH	481m NW	Unspecified Tank	1907	794077
AH	481m NW	Unspecified Tank	1923	794077
S	483m SE	Refuse Heap	1915	758039
S	483m SE	Refuse Heap	1923	758039
S	483m SE	Sand Pit	1907	674130
Y	484m S	Unspecified Tanks	1932	758905
Y	484m S	Unspecified Tanks	1915	719905
AG	485m SE	Unspecified Ground Workings	1915	748848
AG	485m SE	Unspecified Ground Workings	1907	748848
AG	487m SE	Old Sand Pit	1891	687337
S	489m SE	Refuse Heap	1932	749277
S	491m E	Refuse Heap	1938	791494

ID	Location	Land Use	Date	Group ID
S	494m E	Refuse Heap	1932	763838
S	494m E	Refuse Heap	1915	763838
S	494m E	Refuse Heap	1923	763838
S	494m E	Sand Pit	1907	674229
AI	496m SW	Cuttings	1985	785802
AI	496m SW	Cuttings	1977	785802

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**84**

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

Features are displayed on the Past land use - un-grouped map on **page 24 >**

ID	Location	Land Use	Date	Group ID
D	**On site**	**Unspecified Tank**	**1970**	**99886**
D	**On site**	**Unspecified Tank**	**1954**	**104326**
D	**On site**	**Unspecified Tank**	**1969**	**92276**
D	**On site**	**Unspecified Tank**	**1955**	**98967**
D	**On site**	**Unspecified Tank**	**1985**	**102322**
D	**On site**	**Unspecified Tank**	**1992**	**94490**
E	**On site**	**Unspecified Tank**	**1954**	**95574**
E	**On site**	**Unspecified Tank**	**1969**	**103130**
E	**On site**	**Unspecified Tank**	**1955**	**99857**
D	4m S	Unspecified Tank	1955	92369
D	4m S	Unspecified Tank	1954	92369
D	5m S	Disused Tank	1954	97155
D	6m S	Disused Tank	1955	97155
D	12m S	Unspecified Tank	1922	97174

ID	Location	Land Use	Date	Group ID
D	12m S	Unspecified Tank	1932	97174
C	19m S	Tanks	1922	103692
C	19m S	Tanks	1932	103692
B	72m S	Disused Tanks	1954	99777
B	72m S	Disused Tanks	1955	99777
B	84m S	Tanks	1922	82606
B	122m S	Tanks	1922	106885
B	122m S	Tanks	1932	106885
4	233m S	Unspecified Tank	1922	90317
T	293m SE	Tanks	1977	94208
T	293m SE	Tanks	1985	98377
T	293m SE	Tanks	1985	98377
W	294m W	Unspecified Tank	1954	105094
W	294m W	Unspecified Tank	1969	101283
W	294m W	Unspecified Tank	1955	98580
T	298m SE	Tanks	1969	101153
T	298m SE	Tanks	1977	101153
T	298m SE	Tanks	1968	101153
X	315m SE	Unspecified Tank	1996	93343
X	315m SE	Unspecified Tank	1994	93343
X	317m SE	Unspecified Tank	1985	93343
X	317m SE	Unspecified Tank	1985	93343
U	334m S	Unspecified Tank	1922	99380
U	334m S	Unspecified Tank	1932	99380
P	363m SE	Unspecified Tank	1893	85115
S	377m E	Unspecified Tank	1977	85114
Y	398m S	Unspecified Tank	1951	107481
Y	398m S	Unspecified Tank	1951	107481

ID	Location	Land Use	Date	Group ID
Y	401m S	Tanks	1951	96513
Y	402m S	Tanks	1951	107594
Y	404m S	Tanks	1909	99126
Y	404m S	Tanks	1922	99126
Y	404m S	Tanks	1932	99126
U	407m S	Unspecified Tank	1922	90311
Y	408m S	Tanks	1909	98997
Y	408m S	Tanks	1922	98997
Y	408m S	Tanks	1932	98997
Y	410m S	Tanks	1932	99786
Y	413m S	Tanks	1909	95501
Y	413m S	Tanks	1922	95501
AD	413m SE	Unspecified Tank	1996	101466
AD	413m SE	Unspecified Tank	1994	101466
AD	414m SE	Unspecified Tank	1985	101466
AD	414m SE	Unspecified Tank	1985	101466
Y	416m S	Tanks	1909	104505
Y	416m S	Tanks	1922	104505
S	449m SE	Unspecified Tank	1996	94406
S	449m SE	Unspecified Tank	1994	94406
S	451m SE	Unspecified Tank	1985	94406
S	451m SE	Unspecified Tank	1985	94406
Y	463m S	Tanks	1932	82602
S	464m E	Unspecified Tank	1985	101392
S	464m E	Unspecified Tank	1985	101392
S	465m E	Unspecified Tank	1909	107063
S	465m E	Unspecified Tank	1922	107063
S	465m E	Unspecified Tank	1932	107063

ID	Location	Land Use	Date	Group ID
S	465m E	Unspecified Tank	1977	101392
S	470m E	Unspecified Tank	1985	92108
S	470m E	Unspecified Tank	1985	92108
S	470m E	Unspecified Tank	1977	92108
S	473m SE	Tanks	1909	100922
S	476m SE	Unspecified Tank	1954	95390
S	476m SE	Tanks	1922	91762
S	476m SE	Unspecified Tank	1955	95390
S	478m SE	Unspecified Tank	1932	95390
S	480m SE	Tanks	1922	100922
Y	482m S	Tanks	1922	105324
Y	482m S	Tanks	1932	105324
S	490m SE	Tanks	1909	103096
S	491m SE	Tanks	1932	93648

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**35**

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

Features are displayed on the Past land use - un-grouped map on **page 24 >**

ID	Location	Land Use	Date	Group ID
C	26m S	Electricity Substation	1970	53311
C	27m S	Electricity Substation	1985	53311
C	27m S	Electricity Substation	1992	53311
H	178m SW	Electricity Substation	1996	50161
H	178m SW	Electricity Substation	1978	50161
H	195m SW	Electricity Substation	1992	56136

ID	Location	Land Use	Date	Group ID
H	195m SW	Electricity Substation	1999	56136
H	195m SW	Electricity Substation	1970	50987
H	196m SW	Electricity Substation	1985	56136
K	198m S	Electricity Substation	1999	58327
K	198m S	Electricity Substation	1992	58327
K	198m S	Electricity Substation	1970	58327
K	198m S	Electricity Substation	1954	56658
K	198m S	Electricity Substation	1985	58327
K	199m S	Electricity Substation	1955	56658
N	223m E	Electricity Substation	1996	53089
N	223m E	Electricity Substation	1994	53089
N	223m E	Electricity Substation	1954	53873
N	223m E	Electricity Substation	1977	61662
N	224m E	Electricity Substation	1985	53089
N	224m E	Electricity Substation	1985	53089
N	225m E	Electricity Substation	1955	53873
O	228m SE	Electricity Substation	1985	58360
O	228m SE	Electricity Substation	1985	58360
O	228m SE	Electricity Substation	1996	59846
O	228m SE	Electricity Substation	1994	58564
O	228m SE	Electricity Substation	1985	56674
O	228m SE	Electricity Substation	1970	58026
O	228m SE	Electricity Substation	1992	58564
O	228m SE	Electricity Substation	1999	53084
O	229m SE	Electricity Substation	1977	58026
S	466m E	Electricity Substation	1954	50626
S	466m E	Electricity Substation	1968	50626
S	467m E	Electricity Substation	1955	50626

ID	Location	Land Use	Date	Group ID
S	467m E	Electricity Substation	1969	50626

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	4

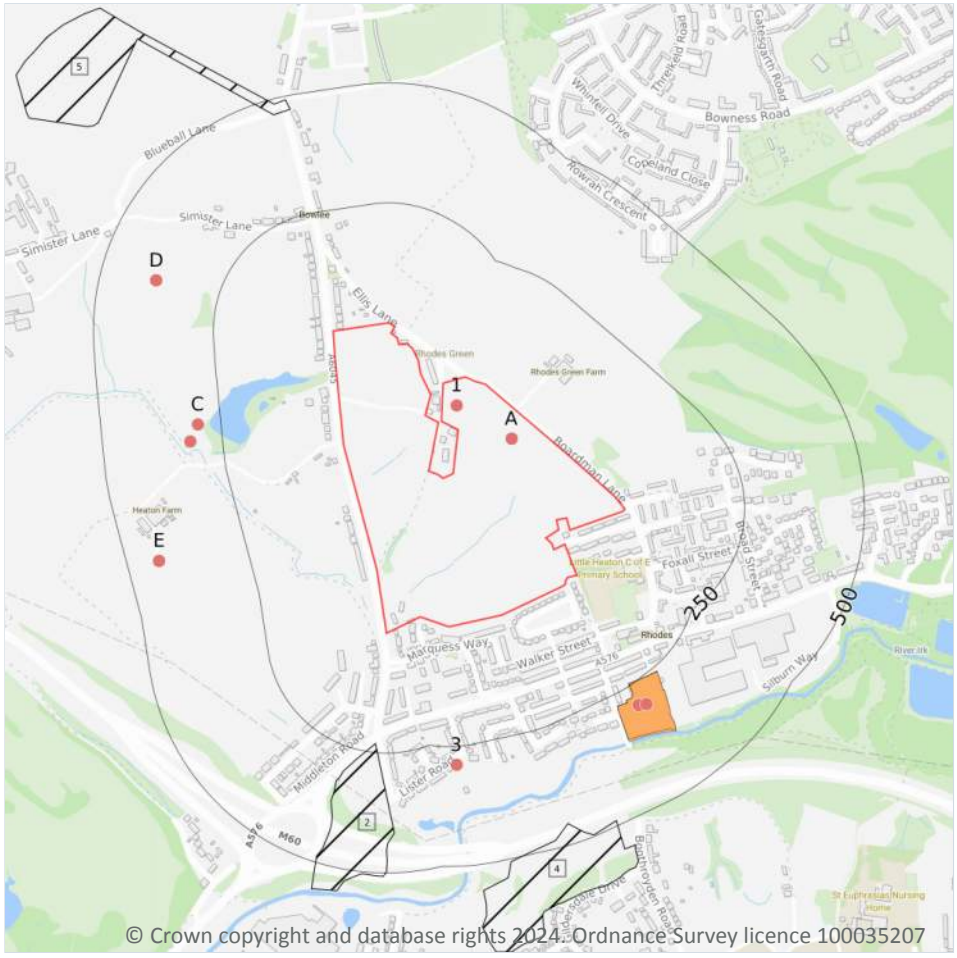
Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 24 >**

ID	Location	Land Use	Date	Group ID
I	167m S	Garage	1970	16787
I	169m S	Garage	1985	21279
I	170m S	Garage	1999	20032
I	170m S	Garage	1992	17450

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



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3.1 Active or recent landfill

Records within 500m	0

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

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

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	3

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on **page 39 >**

ID	Location	Details		
2	231m S	Site Address: Land at Kelvin Avenue, Rochdale, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: RD/LIC/133/77/P2,D065 Waste Type: Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: Heaton Mills Printing Company Limited First Recorded - Last Recorded: -
4	455m S	Site Address: Boothroyd Terrace, Boothroyden Road,Manchester Licence Holder Address: Room D4,Broadway, Broad Street,Birmingham,West Midlands	Waste Licence: Yes Site Reference: - Waste Type: Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 07/04/1995 Licence Surrender: 27/11/2020	Operator: The Director Dept Of Transport North West Construction Programme Division Licence Holder: The Director Dept Of Transport North West Construction Programme Division First Recorded - Last Recorded: -
5	467m NW	Site Address: Bowlee Sand QuarryBluebell Lane, Bluebell Lane, Bowlee, Bury Licence Holder Address: -	Waste Licence: - Site Reference: RD/LIC/338/84 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: Terry Adams Limited First Recorded - Last Recorded: -

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

3.5 Historical waste sites

Records within 500m	4

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

Features are displayed on the Waste and landfill map on **page 39 >**

ID	Location	Address	Further Details	Date
B	244m SE	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1969
B	245m SE	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1968
B	245m SE	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1977
B	245m SE	Site Address: N/A	Type of Site: Scrap Metal Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1985

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

3.6 Licensed waste sites

Records within 500m	0

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

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

3.7 Waste exemptions

Records within 500m	22

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 39 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	**On site**	**Heaton Farm Heywood Old Road Manchester M24 4rp**	**EPR/GE5256RU/A001**	**Storing waste exemption**	**Non-agricultural waste only**	**Storage of sludge**
A	**On site**	**-**	**WEX356542**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX300519**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX364113**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX391716**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX227720**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX151546**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX130071**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
A	**On site**	**-**	**WEX259790**	**Storing waste exemption**	**On a farm**	**Storage of sludge**
3	289m S	1, Lister Road, Middleton, Manchester, M24 4rb	WEX283661	Using waste exemption	Not on a farm	Use of waste in construction
B	295m SE	-	WEX195850	Using waste exemption	Not on a farm	Use of waste in construction
B	295m SE	-	WEX195850	Treating waste exemption	Not on a farm	Screening and blending of waste
C	299m W	Heaton Farm Heywood Old Road Manchester M24 4rp	EPR/GE5856RW/A001	Storing waste exemption	Non-agricultural waste only	Storage of sludge
B	301m SE	21 Boothroyden Road Manchester M24 4ry	EPR/BF0506MW/A001	Using waste exemption	Non-agricultural waste only	Use of waste for a specified purpose
B	301m SE	21 Boothroyden Road Manchester M24 4ry	EPR/BF0506MW/A001	Using waste exemption	Non-agricultural waste only	Use of waste to manufacture finished goods
C	319m W	-	WEX107425	Using waste exemption	On a farm	Use of waste in construction
D	384m NW	-	WEX228806	Storing waste exemption	On a farm	Storage of sludge

ID	Location	Site	Reference	Category	Sub-Category	Description
D	384m NW	-	WEX259810	Storing waste exemption	On a farm	Storage of sludge
E	434m W	Heaton Farm Heywood Old Road Manchester M24 4rp	EPR/TF0003PJ/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit
E	434m W	Heaton Farm Heywood Old Road Manchester M24 4rp	EPR/TF0003PJ/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
E	434m W	Heaton Farm Heywood Old Road Manchester M24 4rp	EPR/NE5747KV/A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste for a specified purpose
E	434m W	Heaton Farm Heywood Old Road Manchester M24 4rp	EPR/NE5747KV/A001	Using waste exemption	Both agricultural and non-agricultural waste	Spreading waste on agricultural land to confer benefit

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

4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m	11

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Company	Address	Activity	Category
2	106m S	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
3	152m E	Revive & Restore F X	11, Mount Pleasant, Middleton, Greater Manchester, M24 4PR	Vehicle Cleaning Services	Personal, Consumer and Other Services
4	183m SW	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
A	190m SE	Stuart House Automotive Centre	717-719 Manchester Old Road, Middleton, Manchester, Greater Manchester, M24 4GF	Vehicle Repair, Testing and Servicing	Repair and Servicing
A	192m S	Tommy's Tyre Repairs	Stuart House Service Station 717, Manchester Old Road, Middleton, Greater Manchester, M24 4GF	Vehicle Repair, Testing and Servicing	Repair and Servicing
5	201m SW	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
B	204m S	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
C	208m NW	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
D	212m SE	N R G Electrical Engineers Ltd	54, Pool Bank Street, Middleton, Greater Manchester, M24 4RN	Electrical and Electronic Engineers	Engineering Services
D	226m SE	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
7	229m E	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m **1**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Company	Address	LPG	Status
A	165m SE	UNBRANDED	717-719, Manchester Old Road, Middleton, Manchester, Greater Manchester, M24 4GF	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	1

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

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Description	Site name	Category	Year identified
6	226m S	Former landfill. Assessment concluded that not meet the legal definition of "contaminated land" as defined by the 1990 Environmental Protection Ac	Kelvin Avenue former landfill site. Middleton	Potentially Contaminated Land - Investigated	Not specified

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

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

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

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

Records within 500m	2

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

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Address	Details	
A	190m S	Pearl Trading Ltd, Stuart House Service Station, 717-719 Manchester Old Road, Middleton, Manchester, M24 4GF	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
9	364m SE	Bernstein Plc, Manchester Old Rd	Process: Timber Manufacture Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m **0**

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m **11**

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

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Address	Details	
1	67m SW	241 HEYWOOD OLD ROAD, MIDDLETON, MANCHESTER, M24 4QR	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 016992302 Permit Version: 1 Receiving Water: SURFACE WATER DRAIN TO R IRK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 01/10/1996 Effective Date: 01/10/1996 Revocation Date: -
B	188m S	MANCHESTER OLD ROAD CSO, 775 MANCHESTER OLD ROAD, MIDDLETON, MANCHESTER, GREATER MANCHESTER, M24 4RE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982916 Permit Version: 3 Receiving Water: RIVER IRK	Status: VARIED UNDER EPR 2010 Issue date: 23/03/2020 Effective Date: 23/03/2020 Revocation Date: -

ID	Location	Address	Details	
C	196m N	238 HEYWOOD OLD ROAD, MIDDLETON, MANCHESTER, M24 4GQ	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0173/2092 Permit Version: 1 Receiving Water: TRIB OF LANGLEY BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 07/11/1973 Effective Date: 07/11/1973 Revocation Date: -
F	365m SE	BOOTHROYDEN ROAD CSO, 120M SW OF 1 BOOTHROYDEN CLOSE, MIDDLETON, MANCHESTER, GREATER MANCHESTER, M24 4RW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01ROC0018 Permit Version: 1 Receiving Water: RIVER IRK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 01/01/1995 Effective Date: 01/01/1995 Revocation Date: 20/07/2005
F	375m S	BOOTHROYDEN ROAD CSO, 120M SW OF 1 BOOTHROYDEN CLOSE, MIDDLETON, MANCHESTER, GREATER MANCHESTER, M24 4RW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993590 Permit Version: 3 Receiving Water: THE RIVER IRK	Status: VARIED UNDER EPR 2010 Issue date: 09/01/2020 Effective Date: 09/01/2020 Revocation Date: -
F	379m S	BOOTHROYDEN ROAD CSO, 120M SW OF 1 BOOTHROYDEN CLOSE, MIDDLETON, MANCHESTER, GREATER MANCHESTER, M24 4RW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993590 Permit Version: 1 Receiving Water: THE RIVER IRK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 20/07/2005 Effective Date: 20/07/2005 Revocation Date: 30/03/2010
F	379m S	BOOTHROYDEN ROAD CSO, 120M SW OF 1 BOOTHROYDEN CLOSE, MIDDLETON, MANCHESTER, GREATER MANCHESTER, M24 4RW	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993590 Permit Version: 2 Receiving Water: THE RIVER IRK	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 31/03/2010 Effective Date: 31/03/2010 Revocation Date: 08/01/2020
10	397m N	JOLLY BUTCHER INN, BOWLEE, MIDDLETON, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 01M/211 Permit Version: 1 Receiving Water: UNKNOWN	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: - Effective Date: 12/12/1960 Revocation Date: 01/04/1998
11	406m S	KELVIN AVE/LISTER RD, ROCHDALE, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 01ROC0010 Permit Version: 1 Receiving Water: RIVER IRK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 15/09/1993 Revocation Date: 15/09/1993

ID	Location	Address	Details	
12	408m S	WHELMAR RES DEVELOPMENT SWO, BOOTHROYDEN ROAD, BLACKLEY, GREATER MANCHESTER	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991312 Permit Version: 1 Receiving Water: RIVER IRK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/11/1994 Revocation Date: 01/11/1994
14	438m N	276 HEYWOOD OLD RD, MIDDLETON, MANCHESTER, M24 4QG	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0172/1714 Permit Version: 1 Receiving Water: LANGLEY BROOK	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 05/05/1972 Effective Date: 05/05/1972 Revocation Date: -

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

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

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

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m	0

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

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

4.17 List 2 Dangerous Substances

Records within 500m	0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m	4

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

Features are displayed on the Current industrial land use map on **page 44 >**

ID	Location	Details	
8	332m S	Incident Date: 15/10/2001 Incident Identification: 36652 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
E	345m SE	Incident Date: 27/11/2001 Incident Identification: 45189 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
E	345m SE	Incident Date: 27/11/2001 Incident Identification: 45189 Pollutant: Inert Materials and Wastes Pollutant Description: Other Inert Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
13	420m E	Incident Date: 09/08/2008 Incident Identification: 612193 Pollutant: Organic Chemicals/Products Pollutant Description: Surfactants and Detergents	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m	0

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

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

4.20 Pollution inventory waste transfers

Records within 500m	0

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

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

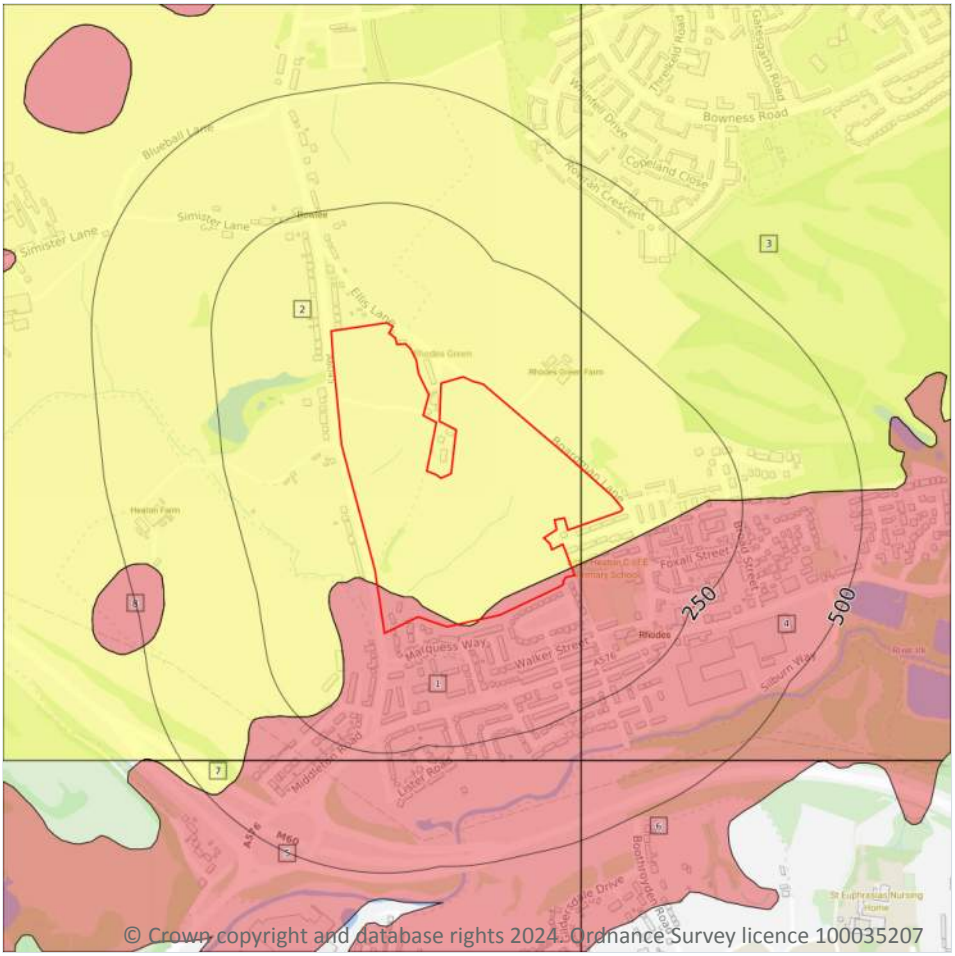
4.21 Pollution inventory radioactive waste

Records within 500m	0

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

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

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	8

Aquifer status of groundwater held within superficial geology.

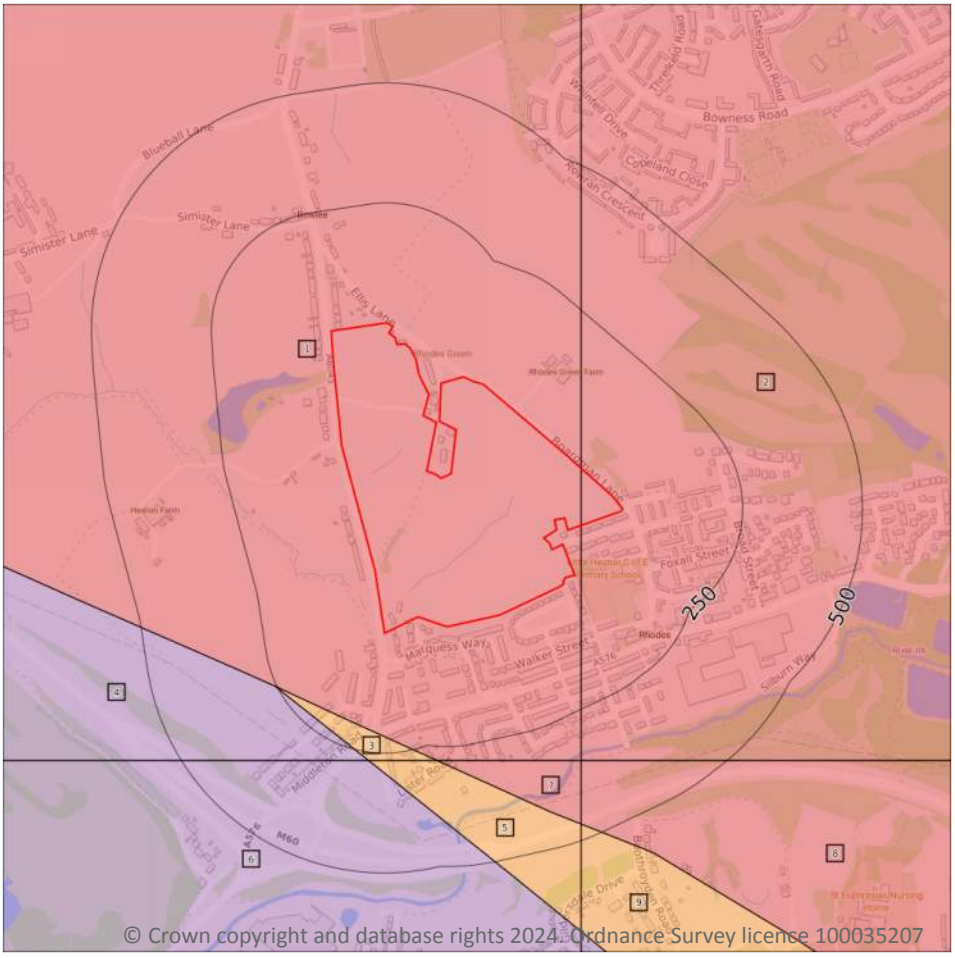
Features are displayed on the Hydrogeology map on **page 53 >**

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

ID	Location	Designation	Description
3	**On site**	**Secondary Undifferentiated**	**Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type**
4	13m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	265m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	346m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	395m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
8	432m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Bedrock aquifer



5.2 Bedrock aquifer

Records within 500m	9

Aquifer status of groundwater held within bedrock geology.

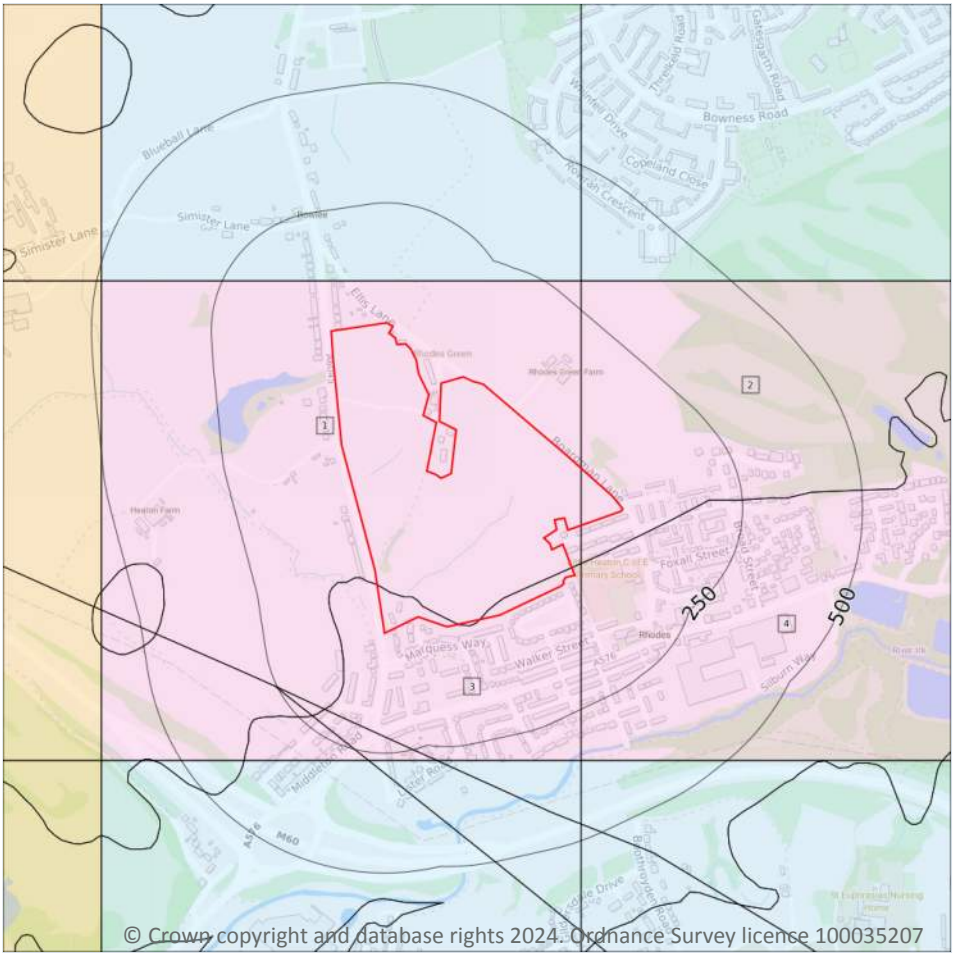
Features are displayed on the Bedrock aquifer map on **page 55 >**

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

ID	Location	Designation	Description
3	196m SW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
4	229m SW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
5	265m S	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers
6	268m S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
7	279m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
8	346m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
9	467m S	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	4

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

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

Features are displayed on the Groundwater vulnerability map on **page 57 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
2	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
3	**On site**	**Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: >550mm/year**	**Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures**
4	13m SE	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

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

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

5.5 Groundwater vulnerability- local information

Records on site	0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by

email on enquiries@environment-agency.gov.uk ↗.

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

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

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

5.6 Groundwater abstractions

Records within 2000m	0

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

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

5.7 Surface water abstractions

Records within 2000m	5

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 60 >**

ID	Location	Details	
-	831m E	Status: Historical Licence No: 2569005055 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT NORTH MANCHESTER GOLF C Data Type: Point Name: THE NEW NORTH MANCHESTER GOLF CLUB LTD Easting: 385900 Northing: 405700	Annual Volume (m^3): 2273 Max Daily Volume (m^3): 45.46 Original Application No: 2477 Original Start Date: 21/02/1977 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -
-	1514m E	Status: Historical Licence No: 2569005035 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T" Data Type: Point Name: ROBERT McBRIDE LTD Easting: 386600 Northing: 405600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/01/1995 Version End Date: -
-	1514m E	Status: Historical Licence No: 2569005035 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T" Data Type: Point Name: ROBERT McBRIDE LTD Easting: 386600 Northing: 405600	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/01/1995 Version End Date: -

ID	Location	Details	
-	1514m E	Status: Historical Licence No: 2569005035 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T Data Type: Point Name: ROBERT McBRIDE LTD Easting: 386600 Northing: 405600	Annual Volume (m^3): 28867 Max Daily Volume (m^3): 2182.08 Original Application No: 1898 Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -
-	1514m E	Status: Historical Licence No: 2569005035 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T Data Type: Point Name: ROBERT McBRIDE LTD Easting: 386600 Northing: 405600	Annual Volume (m^3): 28867 Max Daily Volume (m^3): 2182.08 Original Application No: 1898 Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0

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

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

5.9 Source Protection Zones

Records within 500m	0

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

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

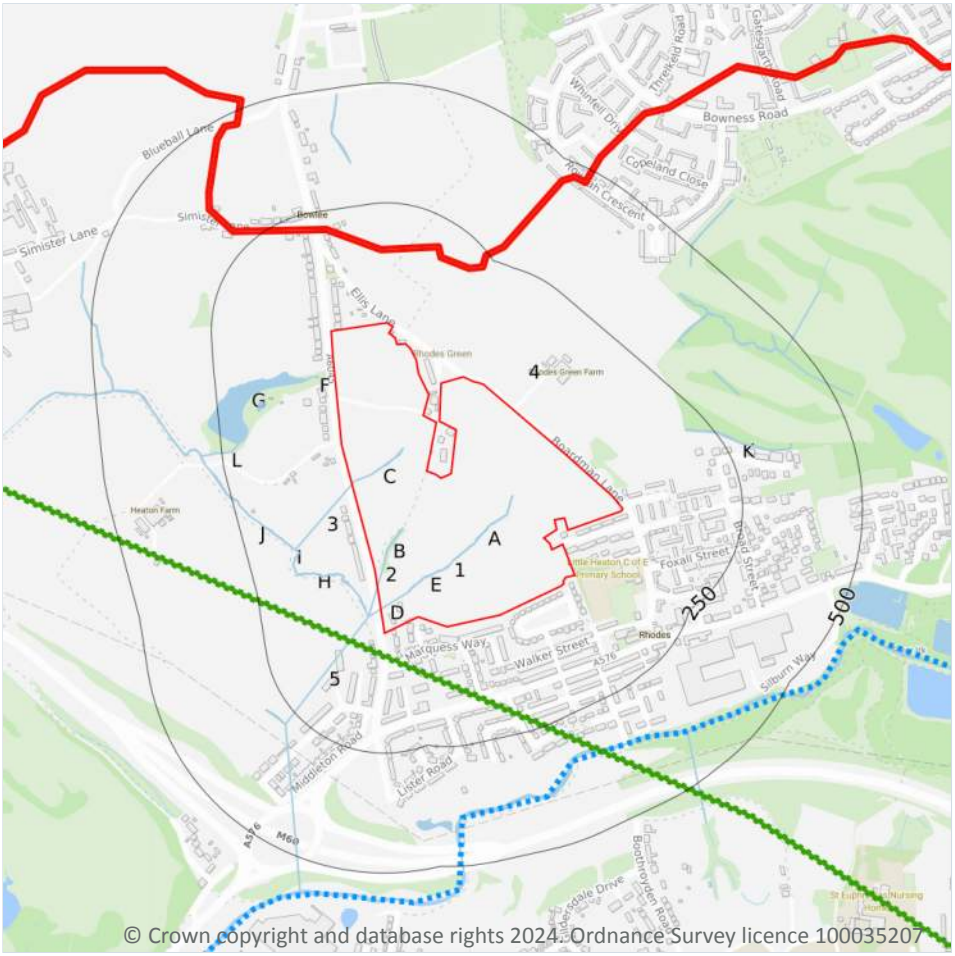
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

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

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

6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	29

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

Features are displayed on the Hydrology map on **page 64 >**

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

ID	Location	Type of water feature	Ground level	Permanence	Name
2	**On site**	**Marsh. An area that is predominantly waterlogged by freshwater.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
3	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
A	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
B	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
C	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
D	**On site**	**Inland river not influenced by normal tidal action.**	**Not provided**	**Watercourse contains water year round (in normal circumstances)**	**-**
D	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
E	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
5	28m SW	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
D	28m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	31m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	35m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	36m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
D	40m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	44m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	45m NW	Reservoir. An area of non-tidal water used for storing water.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	45m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	54m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	149m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
I	151m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	204m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	207m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	213m W	Manmade watercourse for water transfer.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	215m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	220m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	221m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
J	235m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	238m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**9**

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

Features are displayed on the Hydrology map on **page 64 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	**1**

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

Features are displayed on the Hydrology map on **page 64 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River**	**Irk (Wince to Irwell)**	**GB112069061131**	**Roch Irk Medlock**	**Irwell**

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

6.4 WFD Surface water bodies

Records identified	1

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

Features are displayed on the Hydrology map on **page 64 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
12	340m SE	River	Irk (Wince to Irwell)	GB112069061131 ↗	Moderate	Fail	Moderate	2019

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

6.5 WFD Groundwater bodies

Records on site	1

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

Features are displayed on the Hydrology map on **page 64 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
4	**On site**	**Northern Manchester Carboniferous Aquifers**	GB41202G101800 ↗	**Poor**	**Poor**	**Good**	**2019**

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

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

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

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

7.2 Historical Flood Events

Records within 250m	0

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

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

7.3 Flood Defences

Records within 250m	0

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	1

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

Features are displayed on the River and coastal flooding map on **page 69 >**

ID	Location	
5	244m SE	Area benefiting from flood defences

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

7.5 Flood Storage Areas

Records within 250m	0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

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

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

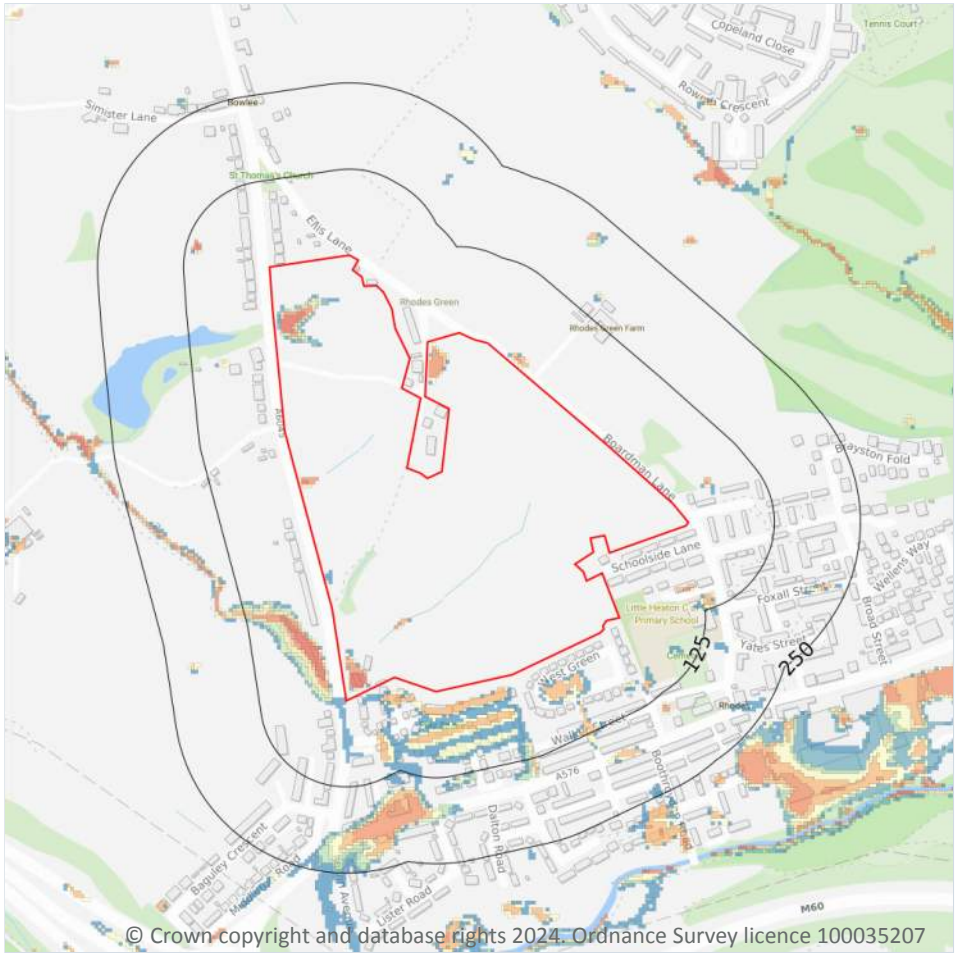
7.7 Flood Zone 3

Records within 50m	0

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

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

8 Surface water flooding



Site Outline

Search buffers in metres (m)

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

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

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

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

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, Greater than 1.0m**
Highest risk within 50m	**1 in 30 year, Greater than 1.0m**

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

Features are displayed on the Surface water flooding map on **page 72 >**

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

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



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9.1 Groundwater flooding

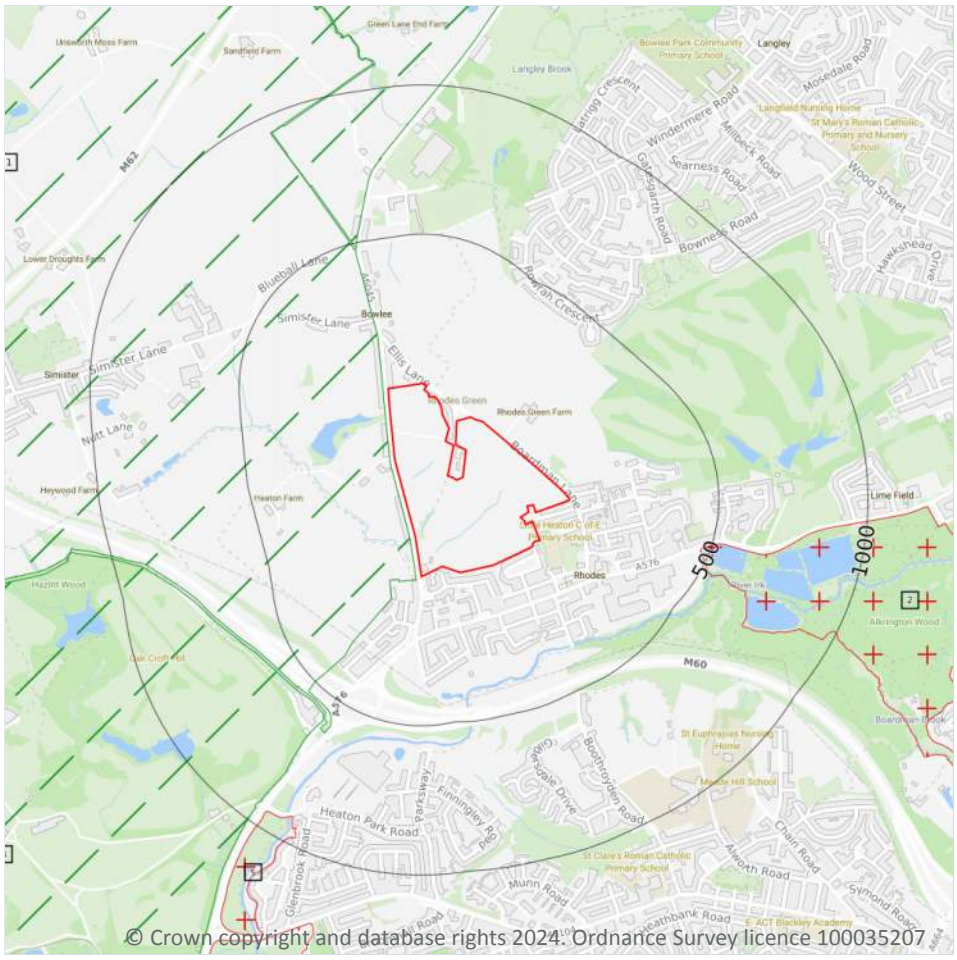
Highest risk on site	**Moderate**
Highest risk within 50m	**Moderate**

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

Features are displayed on the Groundwater flooding map on **page 74 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

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

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	3

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on **page 75 >**

ID	Location	Name	Data source
2	471m E	Alkrington Woods	Natural England
5	913m SW	Blackley Forest	Natural England
6	1221m S	Blackley Forest	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m	0

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

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

10.8 Biosphere Reserves

Records within 2000m	0

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

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

10.9 Forest Parks

Records within 2000m	0

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

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

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

10.11 Green Belt

Records within 2000m	3

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

Features are displayed on the Environmental designations map on **page 75 >**

ID	Location	Name	Local Authority name
1	16m W	Merseyside and Greater Manchester	Bury
3	482m NW	Merseyside and Greater Manchester	Rochdale
4	554m SW	Merseyside and Greater Manchester	Manchester

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

10.12 Proposed Ramsar sites

Records within 2000m	0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	4

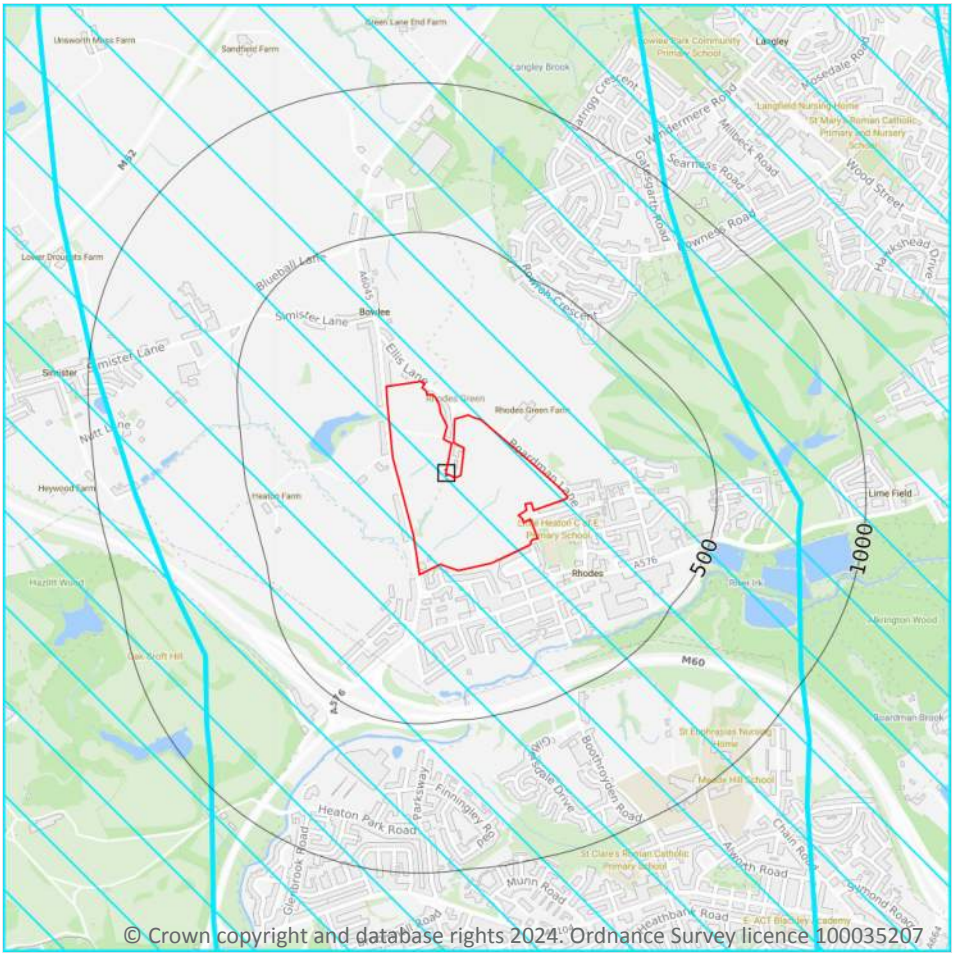
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	**River Irk (Moston Brook to River Irwell) NVZ**	**Surface Water**	**638**	**Existing**

Location	Name	Type	NVZ ID	Status
69m N	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing
387m NW	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing
397m NW	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	638	Existing

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

SSSI Impact Zones and Units



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10.17 SSSI Impact Risk Zones

Records on site	1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 81 >**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t).** **Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**0**

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

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

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

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

11.1 World Heritage Sites

Records within 250m	0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

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

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

11.3 National Parks

Records within 250m	0

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

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

11.4 Listed Buildings

Records within 250m	2

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

Features are displayed on the Visual and cultural designations map on **page 83 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	177m SE	Church Of All Saints War Memorial, All Saint's Church, Manchester Old Road, Middleton	II	1441215	02/02/2017
2	186m E	Rhodes Schools	II	1068501	19/09/1969

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

11.5 Conservation Areas

Records within 250m	0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m	0

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

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

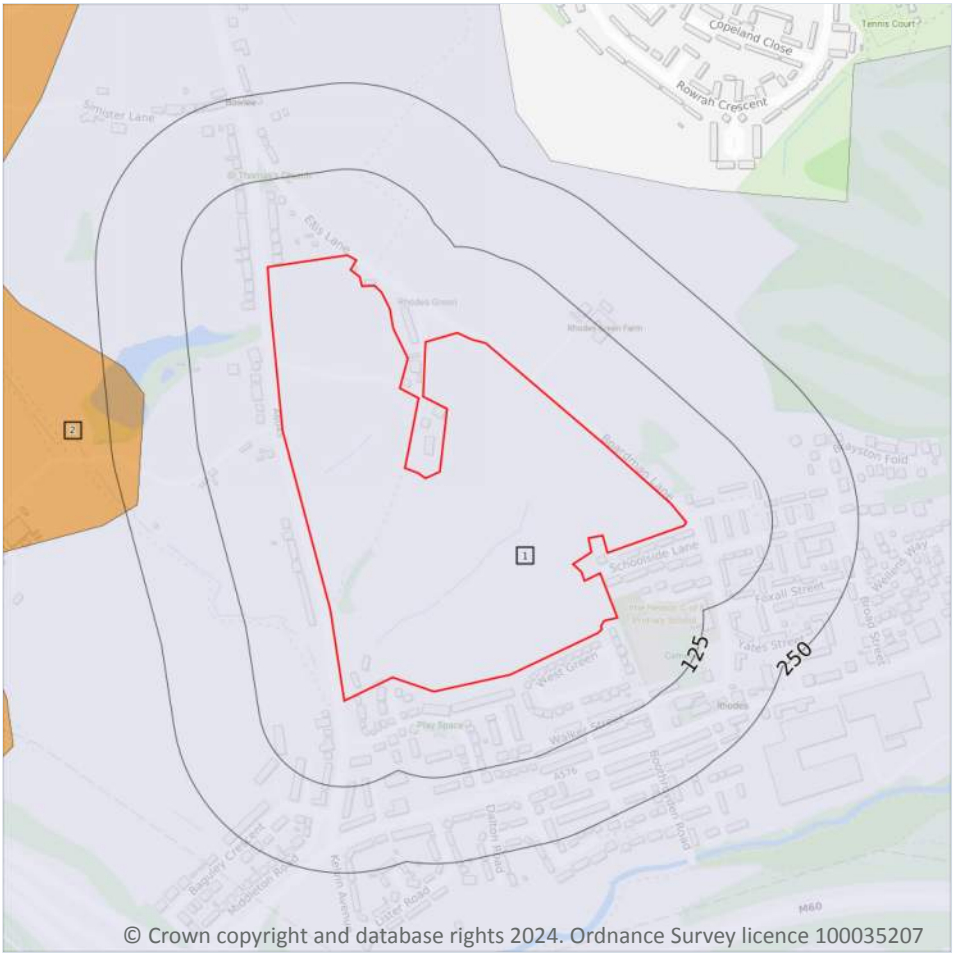
11.7 Registered Parks and Gardens

Records within 250m	0

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

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

12 Agricultural designations



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- Site Outline

Search buffers in metres (m)

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

12.1 Agricultural Land Classification

Records within 250m	2

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

Features are displayed on the Agricultural designations map on **page 86 >**

ID	Location	Classification	Description
1	On site	Grade 4	**Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.**

ID	Location	Classification	Description
2	195m W	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

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

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

12.3 Tree Felling Licences

Records within 250m	0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	3

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

Location	Reference	Scheme	Start Date	End date
On site	**AG00418610**	**Entry Level Stewardship**	**01/11/2013**	**31/10/2018**
20m SW	AG00418610	Entry Level Stewardship	01/11/2013	31/10/2018
44m W	AG00418610	Entry Level Stewardship	01/11/2013	31/10/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	**3**

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

Location	Reference	Scheme	Start Date	End Date
20m SW	1307554	Countryside Stewardship (Higher Tier)	01/09/2022	31/08/2024
44m NW	1307554	Countryside Stewardship (Higher Tier)	01/09/2022	31/08/2024
44m W	1307554	Countryside Stewardship (Higher Tier)	01/09/2022	31/08/2024

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders

Habitat Networks

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

13.1 Priority Habitat Inventory

Records within 250m	3

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

Features are displayed on the Habitat designations map on **page 89 >**

ID	Location	Main Habitat	Other habitats
1	16m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	36m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	203m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

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

This data is sourced from Natural England.

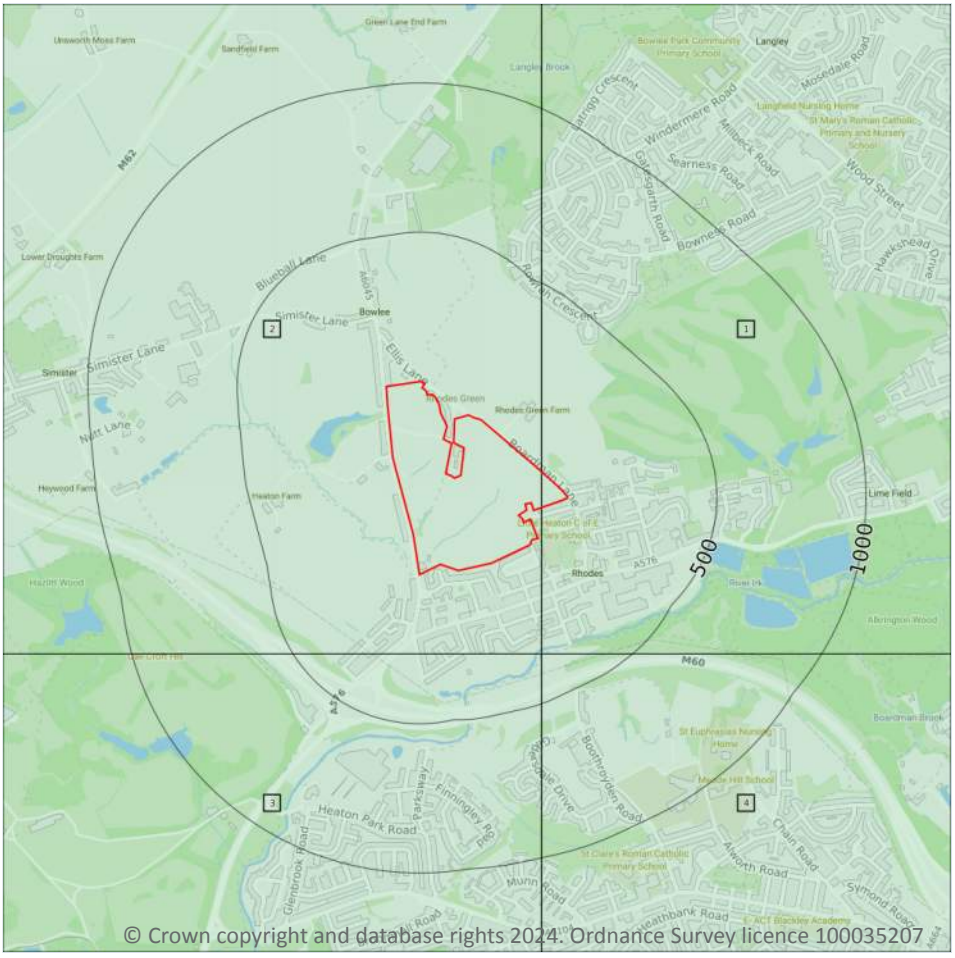
13.4 Limestone Pavement Orders

Records within 250m	0

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m	4

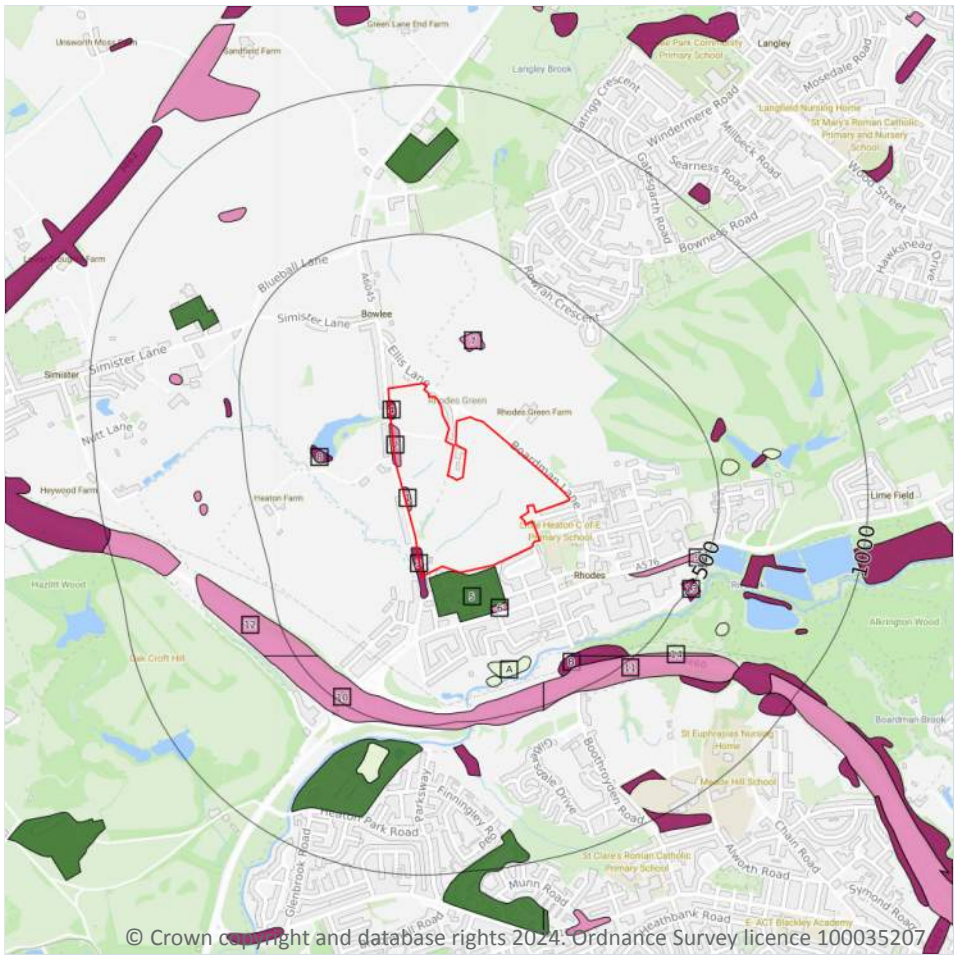
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 91 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**SD80NE**
2	**On site**	**Full**	**Full**	**Full**	**Full**	**SD80NW**
3	265m S	Full	Full	Full	Full	SD80SW
4	346m SE	Full	Full	Full	Full	SD80SE

This data is sourced from the British Geological Survey.

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



14.2 Artificial and made ground (10k)

Records within 500m	18

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

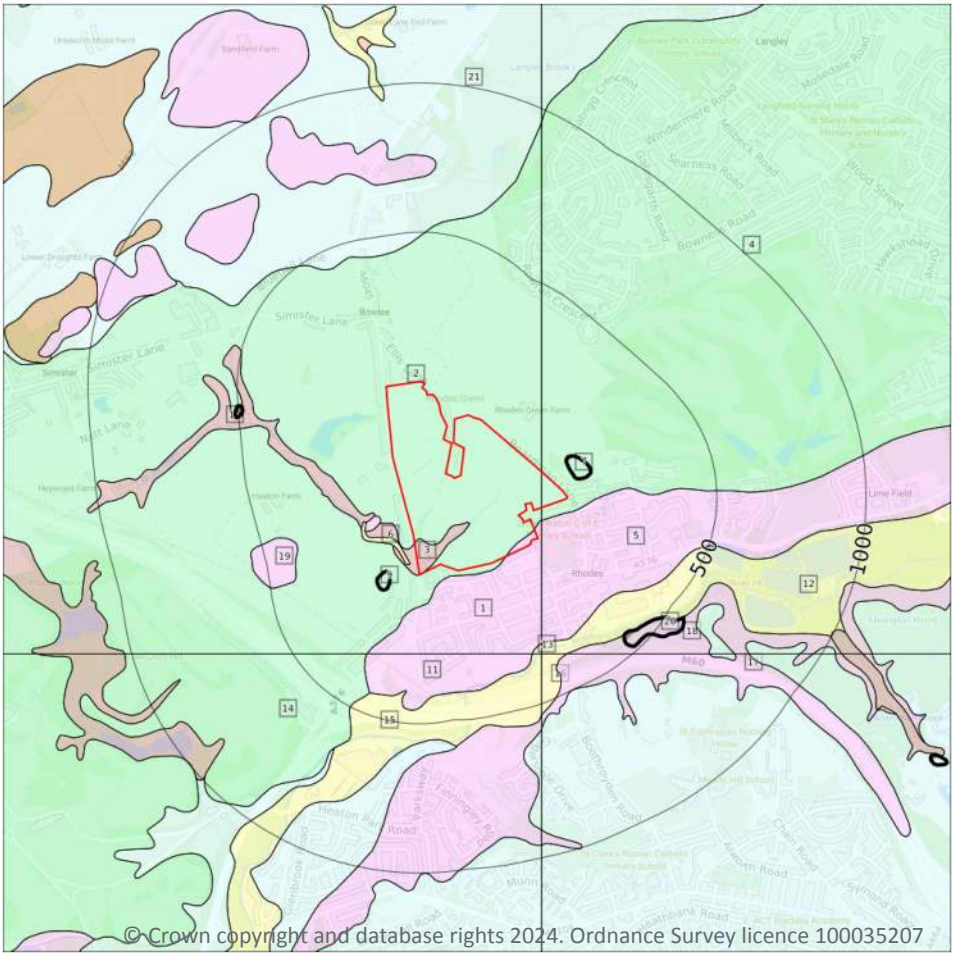
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 93 >**

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

ID	Location	LEX Code	Description	Rock description
5	1m S	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit
6	131m S	WGR-VOID	Worked Ground (Undivided)	Void
7	180m N	WGR-VOID	Worked Ground (Undivided)	Void
8	207m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	316m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
9	320m SE	WGR-VOID	Worked Ground (Undivided)	Void
A	362m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
B	383m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	383m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	422m SW	WGR-VOID	Worked Ground (Undivided)	Void
11	424m SE	WGR-VOID	Worked Ground (Undivided)	Void
12	437m SW	WGR-VOID	Worked Ground (Undivided)	Void
13	469m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
14	490m SE	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m	18

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 95 >**

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	On site	HMGDD-XSV	Hummocky (moundy) Glacial Deposits, Devensian - Sand And Gravel	Sand And Gravel
3	On site	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

ID	Location	LEX Code	Description	Rock description
4	**On site**	**HMGDD-XSV**	**Hummocky (moundy) Glacial Deposits, Devensian - Sand And Gravel**	**Sand And Gravel**
5	13m SE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
6	26m SW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
8	93m SW	GFICD-XSV	Glaciofluvial Ice Contact Deposits, Devensian - Sand And Gravel	Sand And Gravel
10	108m W	HEAD-XCZSV	Head - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
11	265m S	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
12	304m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
13	316m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
14	318m SW	HMGDD-XSV	Hummocky (moundy) Glacial Deposits, Devensian - Sand And Gravel	Sand And Gravel
15	333m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
16	346m SE	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
17	383m SE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
18	383m SE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
19	385m W	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel
21	434m NW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m **4**

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

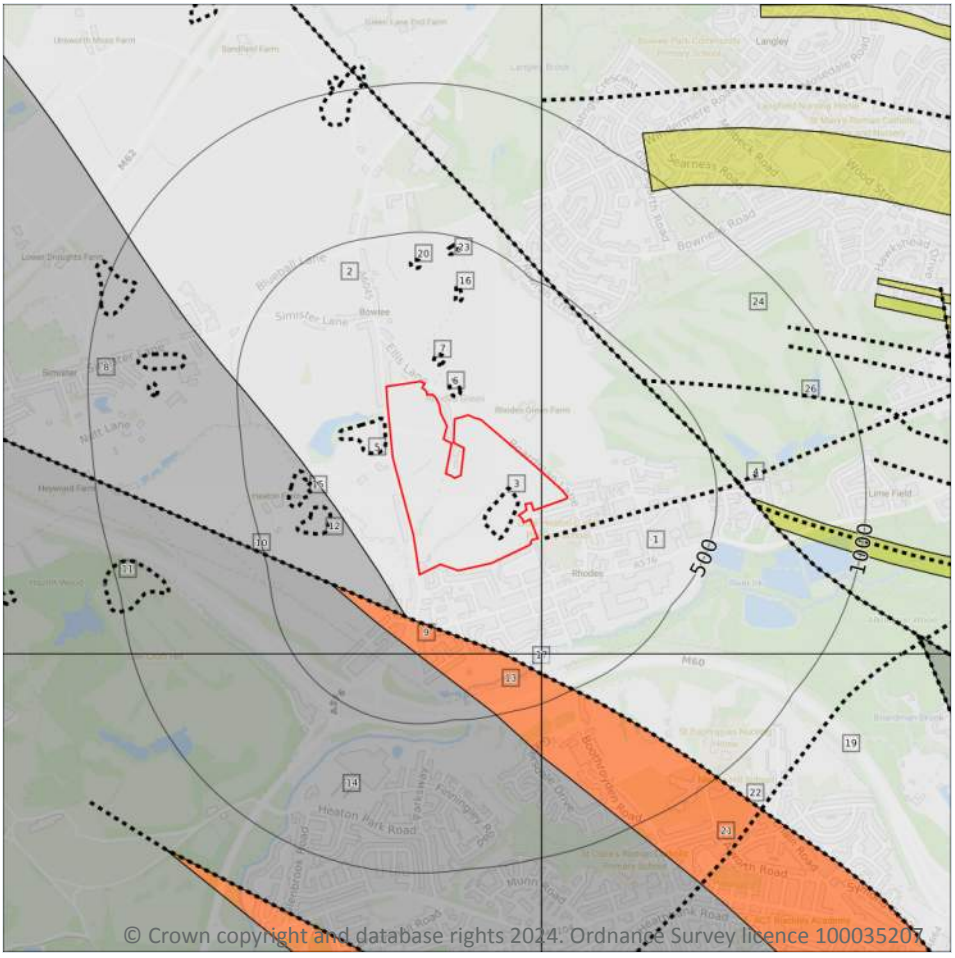
Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 95 >**

ID	Location	LEX Code	Description	Rock description
7	61m E	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry
9	97m SW	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry

ID	Location	LEX Code	Description	Rock description
20	433m SE	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry
22	486m W	SLIP-UKNOWN	Landslide Deposits	Unknown/unclassified Entry

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m	11

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 98 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PLCM-MDSS**	**Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Langsettian Sub-age**
2	**On site**	**PLCM-MDSS**	**Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone**	**Langsettian Sub-age**

ID	Location	LEX Code	Description	Rock age
8	112m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9	148m SW	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
11	216m SW	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
13	265m S	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
14	266m S	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
17	305m S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
19	346m SE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
21	408m SE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
24	449m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **15**

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

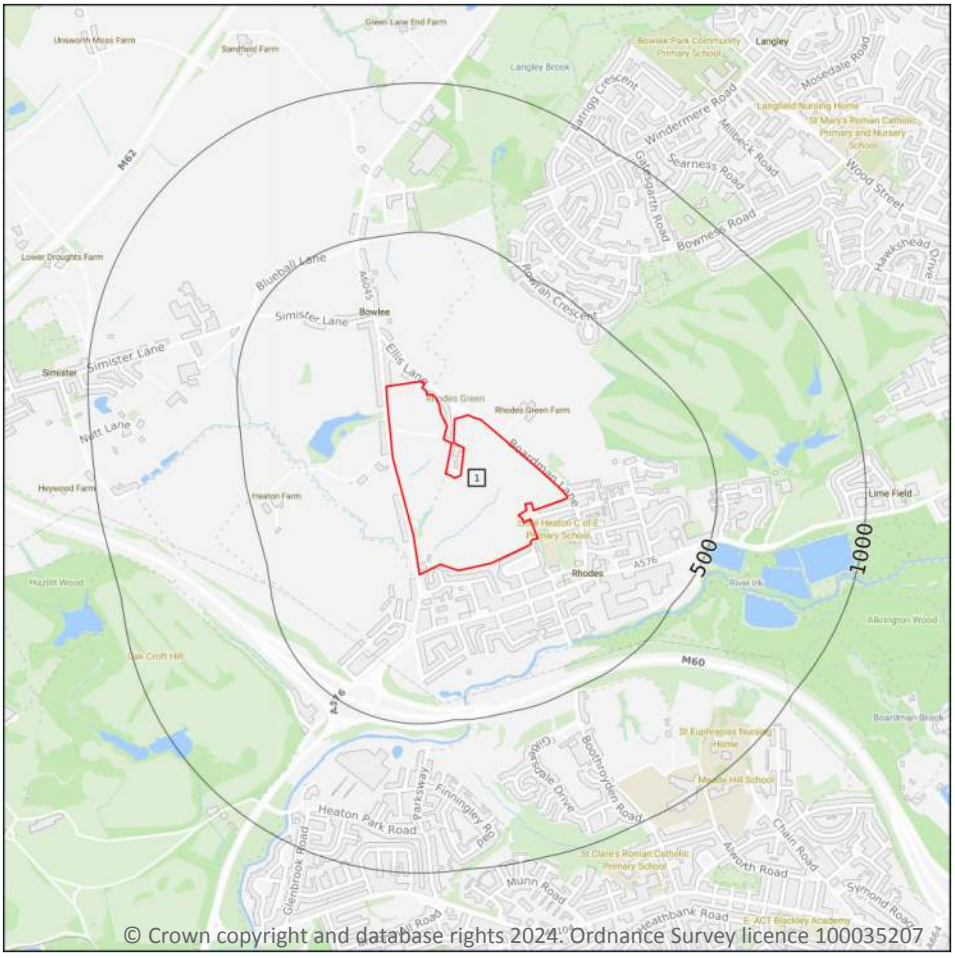
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 98 >**

ID	Location	Category	Description
3	**On site**	**LANDFORM**	**Drumlin, form-line at base of mound**
4	13m SE	LANDFORM	Buried channel or valley margin
5	14m NW	LANDFORM	Drumlin, form-line at base of mound
6	53m N	LANDFORM	Kettle hole; closed hollow
7	77m N	LANDFORM	Kettle hole; closed hollow
10	148m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
12	251m W	LANDFORM	Drumlin, form-line at base of mound

ID	Location	Category	Description
15	286m W	LANDFORM	Drumlin, form-line at base of mound
16	292m N	LANDFORM	Kettle hole; closed hollow
18	305m S	FAULT	Normal fault, inferred; crossmarks on downthrow side
20	379m N	LANDFORM	Kettle hole; closed hollow
22	408m SE	FAULT	Normal fault, inferred; crossmarks on downthrow side
23	438m N	LANDFORM	Kettle hole; closed hollow
25	449m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
26	452m NE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

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

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 101 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**EW085_manchester_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m	0

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

This data is sourced from the British Geological Survey.

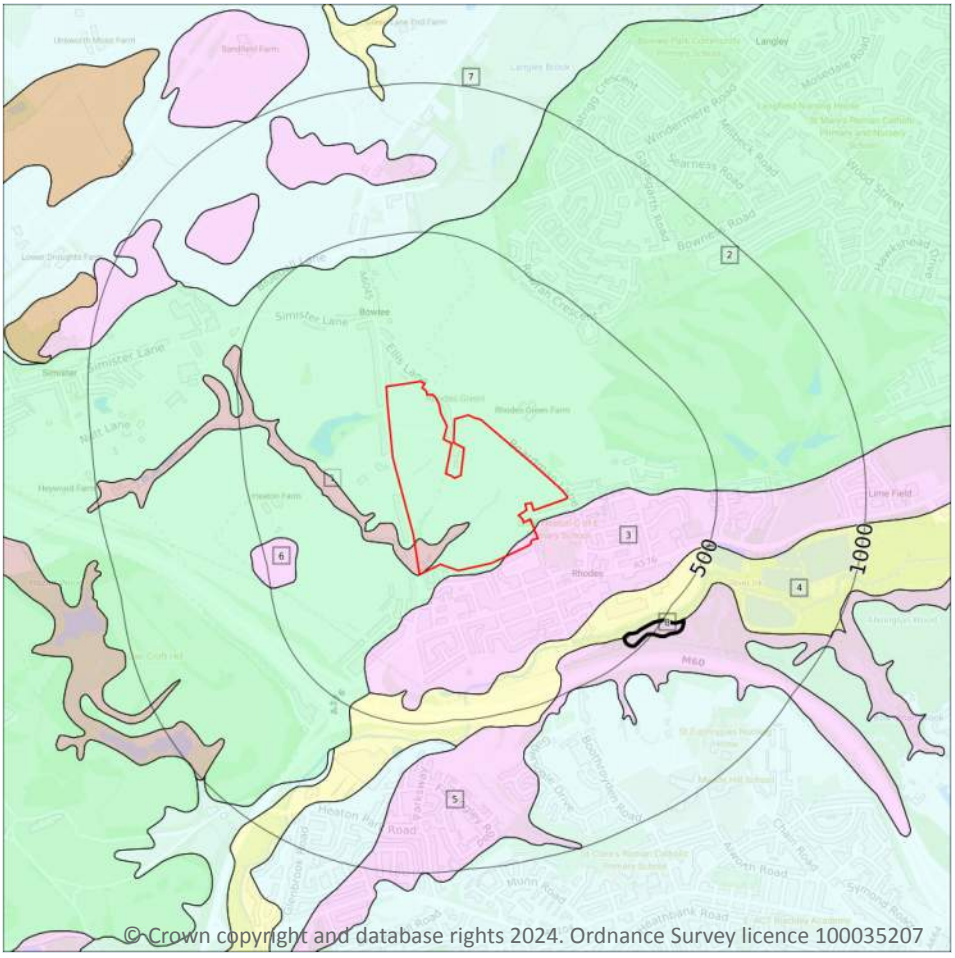
15.3 Artificial ground permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m **7**

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 103 >**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
2	On site	HMGDD-XSV	HUMMOCKY (MOUNDY) GLACIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	On site	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
4	304m SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	383m SE	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
6	385m W	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
7	434m NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m **5**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Very High**	**High**
On site	**Intergranular**	**Very High**	**High**
On site	**Mixed**	**High**	**Very Low**
On site	**Intergranular**	**Very High**	**High**
13m SE	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m **1**

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 103 >**

ID	Location	LEX Code	Description	Rock description
8	440m SE	SLIP-UKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

This data is sourced from the British Geological Survey.

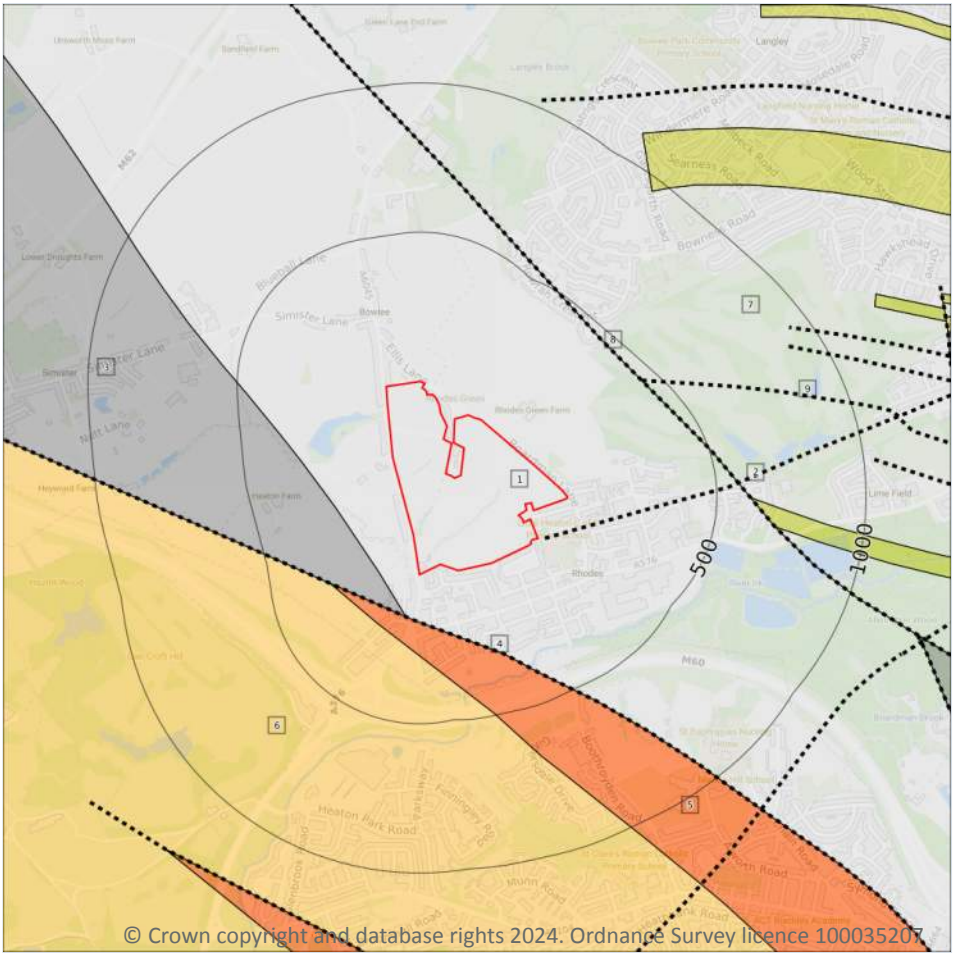
15.7 Landslip permeability (50k)

Records within 50m	0

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

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

15.8 Bedrock geology (50k)

Records within 500m **5**

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 106 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**PLCM-MDSS**	**PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE**	**WESTPHALIAN**
3	112m SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	148m SW	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

ID	Location	LEX Code	Description	Rock age
6	216m SW	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
7	448m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	**2**

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	**4**

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 106 >**

ID	Location	Category	Description
2	13m SE	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
4	148m SW	FAULT	Fault, inferred
8	448m NE	FAULT	Fault, inferred
9	453m NE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m	13

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

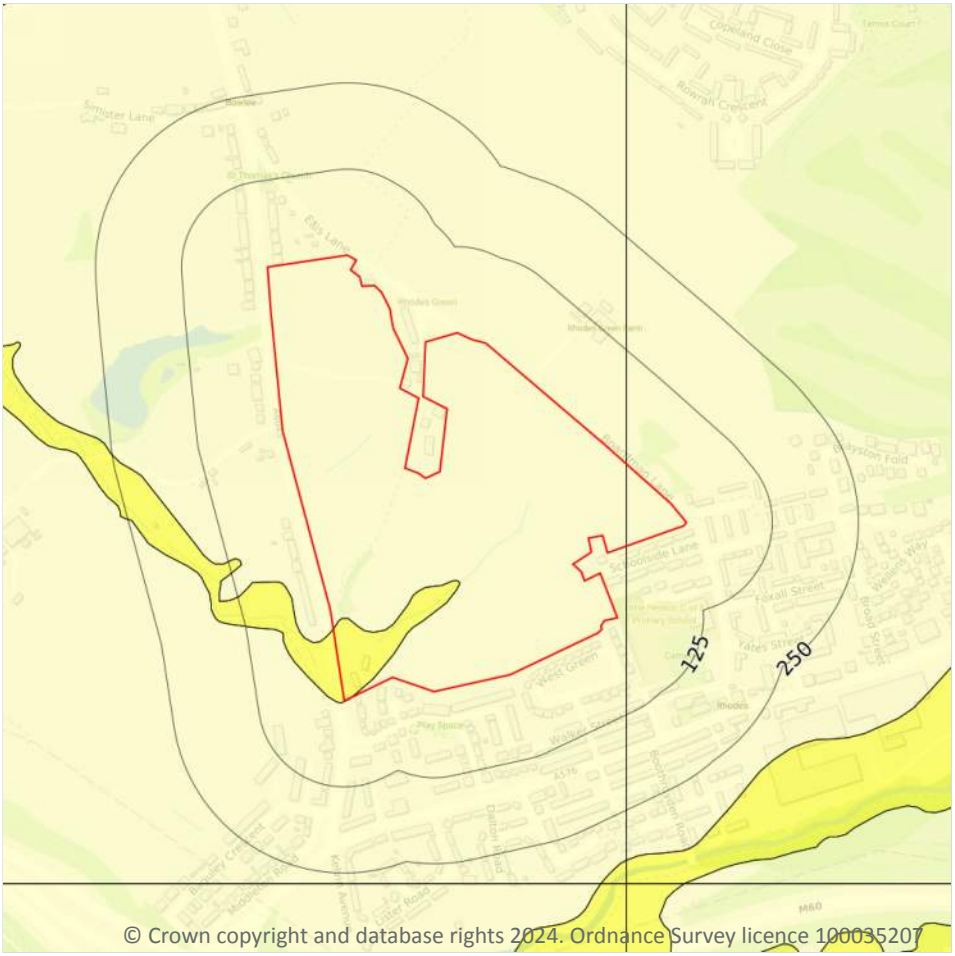
Features are displayed on the Boreholes map on **page 108 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	167m E	385250 405490	LITTLE HEATON SCHOOL MIDDLETON TP8	1.0	N	27164 ↗
A	172m E	385250 405470	LITTLE HEATON SCHOOL MIDDLETON TP4	3.2	N	27160 ↗
A	177m E	385260 405490	LITTLE HEATON SCHOOL MIDDLETON TP7	3.5	N	27163 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	179m E	385260 405480	LITTLE HEATON SCHOOL MIDDLETON 1	12.0	N	27155 ↗
A	185m E	385270 405500	LITTLE HEATON SCHOOL MIDDLETON TP9	1.6	N	27165 ↗
A	194m E	385270 405460	LITTLE HEATON SCHOOL MIDDLETON TP3	3.0	N	27159 ↗
A	198m E	385280 405480	LITTLE HEATON SCHOOL MIDDLETON TP5	3.0	N	27161 ↗
A	201m E	385280 405470	LITTLE HEATON SCHOOL MIDDLETON TP2	3.7	N	27158 ↗
A	204m E	385290 405510	LITTLE HEATON SCHOOL MIDDLETON TP10	1.2	N	27166 ↗
A	205m E	385290 405500	LITTLE HEATON SCHOOL MIDDLETON TP6	3.5	N	27162 ↗
1	207m S	384780 405080	RHODES MIDDLETON	18.29	N	27213 ↗
A	216m E	385300 405490	LITTLE HEATON SCHOOL MIDDLETON 2	12.0	N	27156 ↗
A	218m E	385300 405480	LITTLE HEATON SCHOOL MIDDLETON TP1	3.6	N	27157 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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Site Outline

Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m	2

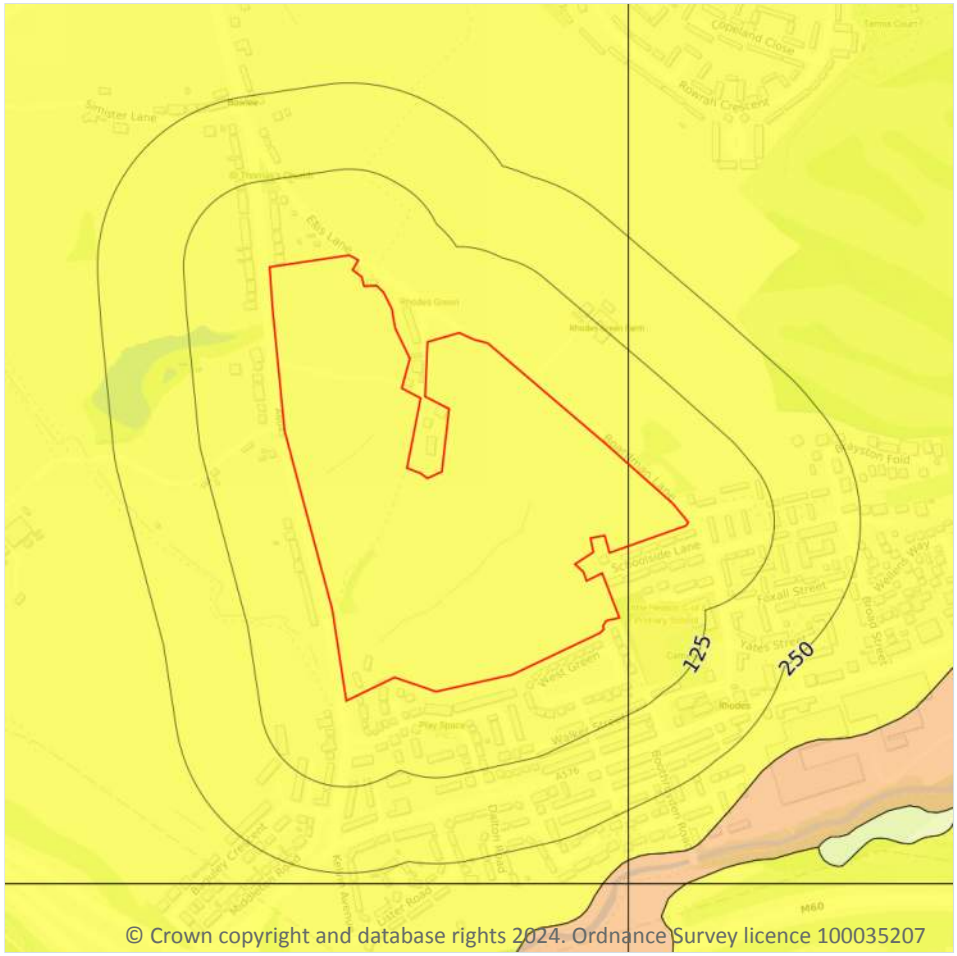
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 110 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

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

17.2 Running sands

Records within 50m	1

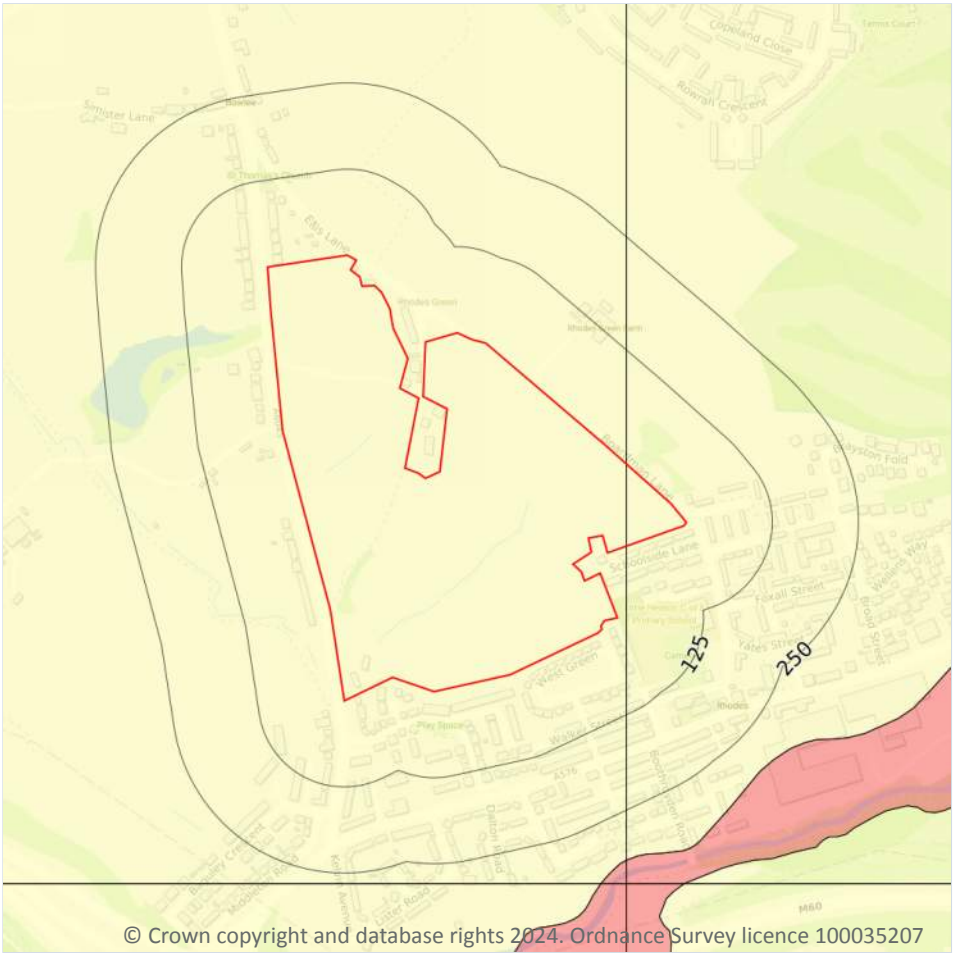
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 111 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	1

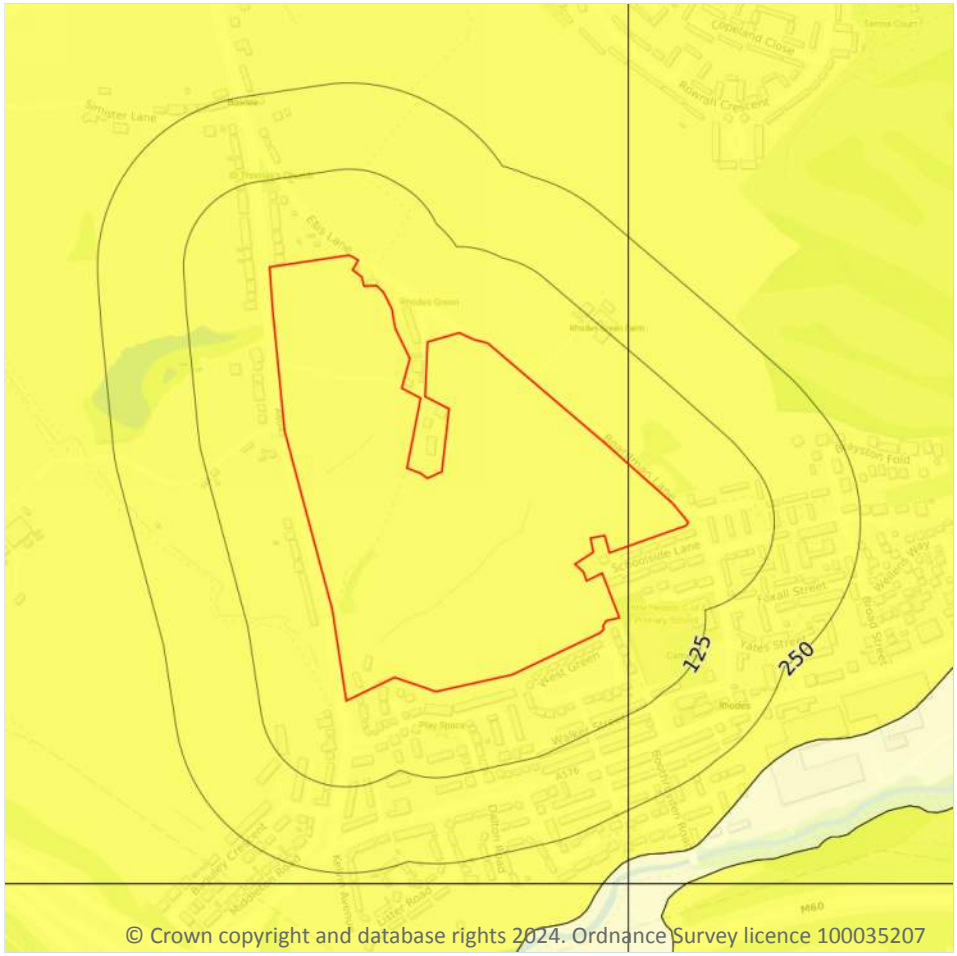
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 112 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

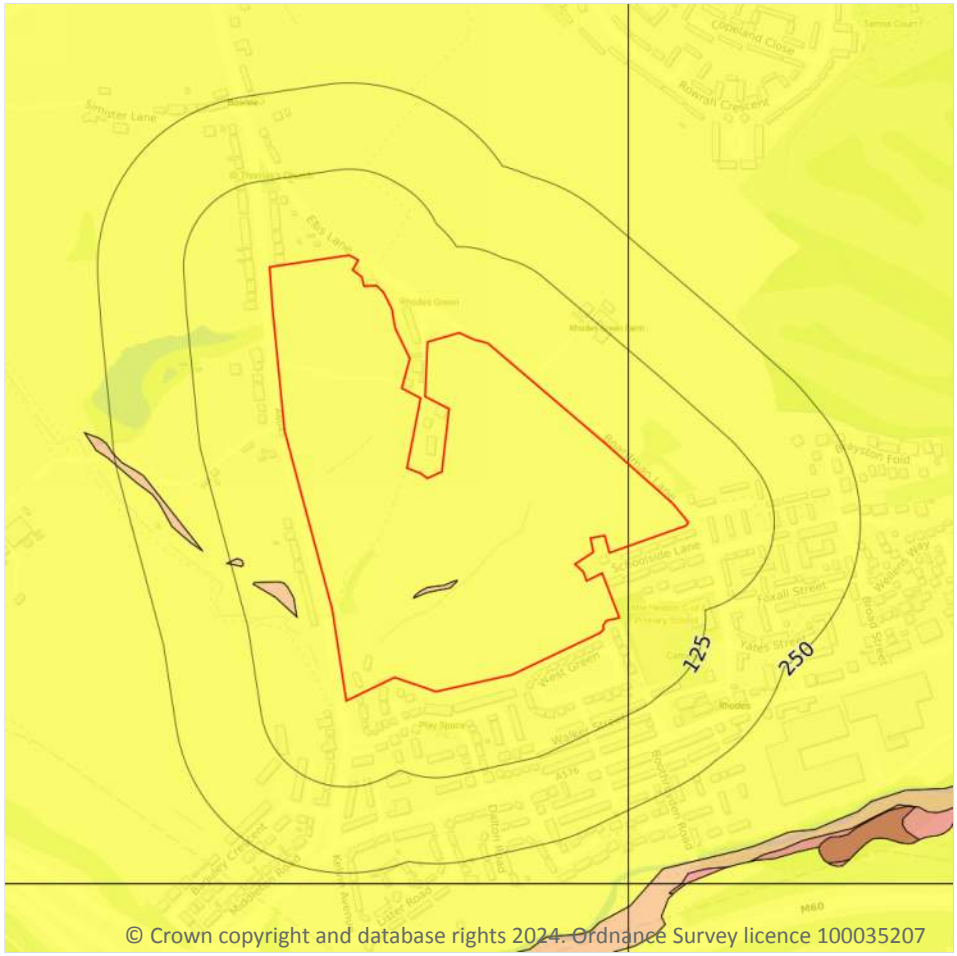
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 113 >**

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

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	3

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

Features are displayed on the Natural ground subsidence - Landslides map on **page 114 >**

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

Location	Hazard rating	Details
On site	**Low**	**Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.**
50m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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Site Outline

Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m	1

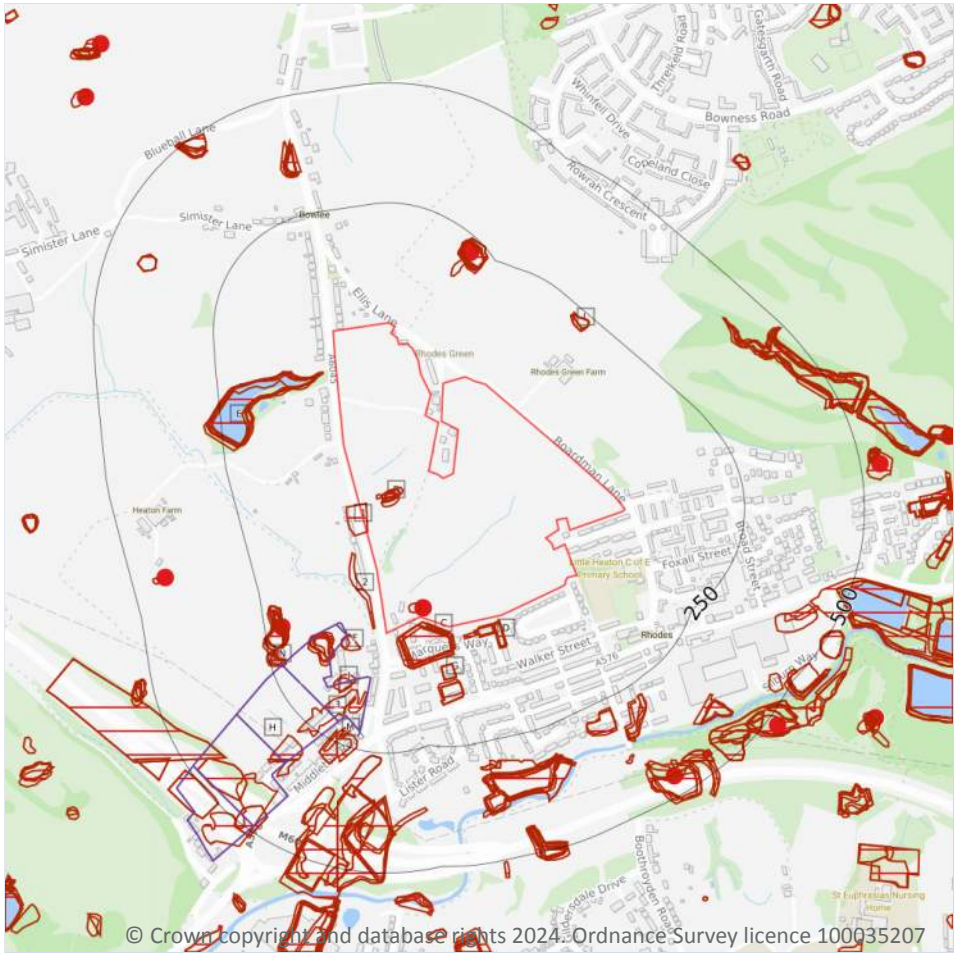
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 116 >**

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

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

BritPits

Surface ground workings

Underground workings

Underground mining extents

Historical mineral planning areas

TCA non-coal mining

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	5

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

Features are displayed on the Mining and ground workings map on **page 118 >**

ID	Location	Details	Description
A	**On site**	**Name: Hanging Birch Sand Pit** **Address: Simister, MIDDLETON, Lancashire** **Commodity: Sand** **Status: Ceased**	**Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site** **Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority**
K	214m SW	Name: Old Hall Sand Pit Address: Simister, MIDDLETON, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
J	221m N	Name: Rhodes Sand Pit Address: Rhodes, MIDDLETON, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AF	429m W	Name: Old Hall Gravel Pit Address: Rhodes, MIDDLETON, Lancashire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AC	458m SE	Name: Rhodes Sand Pit Address: Rhodes, Middleton, MANCHESTER, Lancashire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	**97**

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

Features are displayed on the Mining and ground workings map on **page 118 >**

ID	Location	Land Use	Year of mapping	Mapping scale
1	**On site**	**Cuttings**	**1932**	**1:10560**
A	**On site**	**Sand Pit**	**1848**	**1:10560**
B	**On site**	**Unspecified Pit**	**1938**	**1:10560**
B	**On site**	**Unspecified Pit**	**1923**	**1:10560**
B	**On site**	**Unspecified Pit**	**1932**	**1:10560**
B	**On site**	**Unspecified Pit**	**1915**	**1:10560**
B	**On site**	**Unspecified Pit**	**1907**	**1:10560**
B	**On site**	**Old Sand Pit**	**1891**	**1:10560**
B	**On site**	**Sand Pit**	**1848**	**1:10560**
B	**On site**	**Unspecified Pit**	**1955**	**1:10560**
C	8m S	Pond	1932	1:10560
C	8m S	Pond	1915	1:10560
C	8m S	Pond	1907	1:10560
C	8m S	Pond	1923	1:10560
C	9m S	Pond	1965	1:10560
C	9m S	Reservoir	1955	1:10560
D	10m S	Reservoir	1891	1:10560
D	10m S	Reservoir	1938	1:10560
D	12m S	Pond	1932	1:10560
D	12m S	Pond	1907	1:10560
D	12m S	Pond	1923	1:10560
C	13m S	Reservoir	1938	1:10560
C	13m S	Reservoir	1932	1:10560
C	13m S	Reservoir	1915	1:10560
C	13m S	Reservoir	1907	1:10560
C	13m S	Reservoir	1923	1:10560
D	13m S	Pond	1907	1:10560
D	16m S	Ponds	1915	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	20m S	Reservoir	1891	1:10560
2	23m SW	Unspecified Ground Workings	1932	1:10560
E	28m NW	Reservoir	1955	1:10560
E	36m NW	Reservoir	1932	1:10560
E	36m NW	Reservoir	1938	1:10560
E	37m NW	Reservoir	1915	1:10560
E	37m NW	Reservoir	1907	1:10560
E	37m NW	Reservoir	1923	1:10560
E	48m NW	Reservoir	1974	1:10000
E	48m NW	Pond	1965	1:10560
E	49m NW	Reservoir	1981	1:10000
F	63m SW	Unspecified Pit	1965	1:10560
G	78m S	Ponds	1932	1:10560
G	78m S	Ponds	1915	1:10560
G	78m S	Ponds	1907	1:10560
G	78m S	Ponds	1923	1:10560
F	81m SW	Unspecified Pit	1974	1:10000
E	100m NW	Reservoir	1891	1:10560
G	110m S	Ponds	1938	1:10560
F	111m SW	Unspecified Pit	1955	1:10560
F	112m SW	Unspecified Pit	1981	1:10000
F	112m SW	Unspecified Pit	1974	1:10000
F	112m SW	Unspecified Pit	1965	1:10560
I	114m SW	Unspecified Pit	1955	1:10560
G	116m S	Ponds	1932	1:10560
G	116m S	Ponds	1915	1:10560
G	116m S	Ponds	1907	1:10560
G	116m S	Ponds	1923	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
F	118m SW	Unspecified Pit	1923	1:10560
F	118m SW	Unspecified Pit	1915	1:10560
F	118m SW	Unspecified Pit	1907	1:10560
F	119m SW	Unspecified Pit	1938	1:10560
F	119m SW	Unspecified Pit	1932	1:10560
F	122m SW	Unspecified Pit	1891	1:10560
I	125m SW	Pond	1932	1:10560
3	131m SW	Refuse Heap	1965	1:10560
J	158m N	Ponds	1932	1:10560
J	193m N	Old Sand Pit	1891	1:10560
J	196m N	Pond	1938	1:10560
J	198m N	Unspecified Pit	1923	1:10560
J	198m N	Unspecified Pit	1907	1:10560
J	198m N	Pond	1915	1:10560
K	201m SW	Unspecified Pit	1955	1:10560
J	202m N	Unspecified Pit	1981	1:10000
J	202m N	Unspecified Pit	1974	1:10000
J	206m N	Unspecified Pit	1965	1:10560
J	206m N	Unspecified Pit	1955	1:10560
K	206m SW	Unspecified Pit	1981	1:10000
K	206m SW	Unspecified Pit	1974	1:10000
K	206m SW	Unspecified Pit	1965	1:10560
K	211m SW	Unspecified Pit	1923	1:10560
K	211m SW	Unspecified Pit	1915	1:10560
K	211m SW	Unspecified Pit	1907	1:10560
K	211m SW	Unspecified Pit	1938	1:10560
K	211m SW	Unspecified Pit	1932	1:10560
L	213m NE	Pond	1932	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
M	213m SW	Refuse Heap	1955	1:10560
L	214m NE	Pond	1938	1:10560
K	215m SW	Old Sand Pit	1891	1:10560
N	217m SW	Ponds	1955	1:10560
L	219m NE	Pond	1915	1:10560
L	219m NE	Pond	1907	1:10560
L	219m NE	Pond	1923	1:10560
N	220m SW	Ponds	1974	1:10000
N	220m SW	Ponds	1965	1:10560
M	224m SW	Refuse Heap	1932	1:10560
N	227m SW	Ponds	1938	1:10560
M	229m SW	Refuse Heap	1938	1:10560
M	229m SW	Refuse Heap	1932	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1

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

Features are displayed on the Mining and ground workings map on **page 118 >**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
H	81m SW	Old Hall Pits	Sand and gravel	Surface mineral working	Valid	09/06/1948

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	1

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

Location	Mineral type
320m SE	Unspecified

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

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

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

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

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

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m	0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

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

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

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

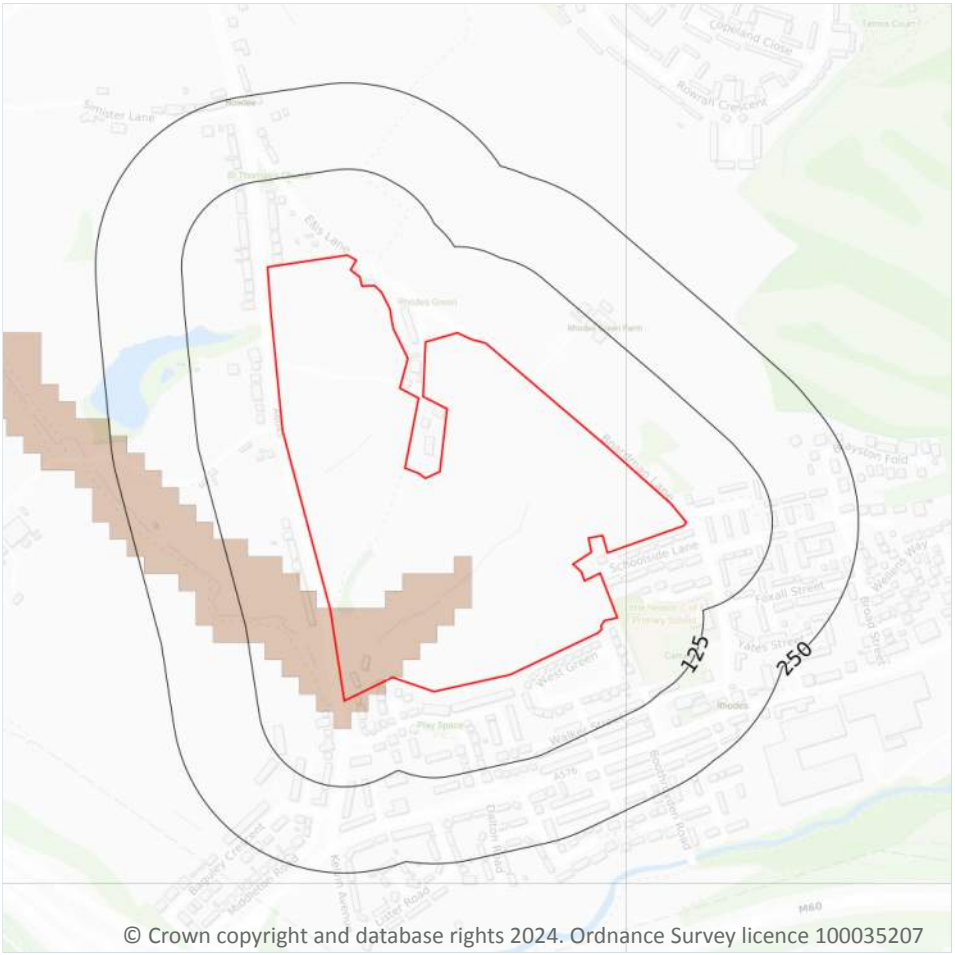
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

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

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

This data is sourced from the British Geological Survey.

20 Radon



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Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site	2

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

Features are displayed on the Radon map on **page 129 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 10% and 30%**	**Full**

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

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

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m	11

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**25 - 35 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
13m SE	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
13m SE	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
41m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

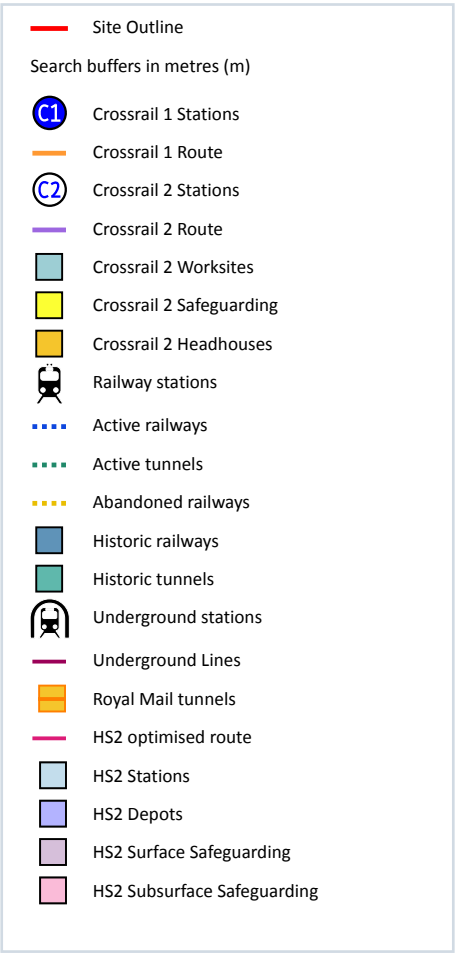
Records within 50m	0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects





22.1 Underground railways (London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

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

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	1

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

Features are displayed on the Railway infrastructure and projects map on **page 133 >**

Location	Land Use	Year of mapping	Mapping scale
42m S	Railway Sidings	1932	2500

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

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

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

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

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

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

This data is sourced from HS2 ltd.

Data providers

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

Terms and conditions

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

APPENDIX C – HISTORICAL MAPS



Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1848**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1891**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

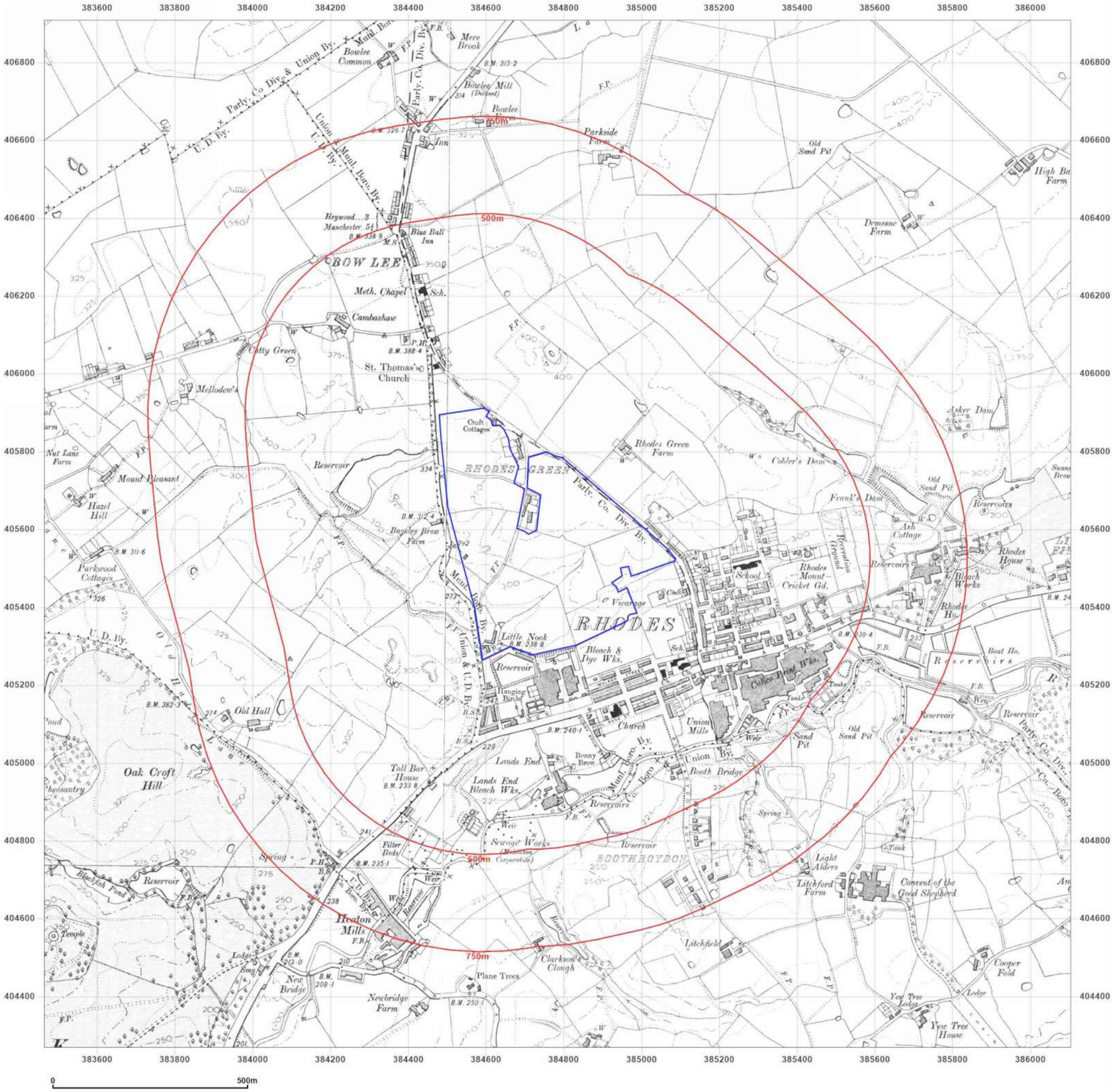
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1906-1907**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

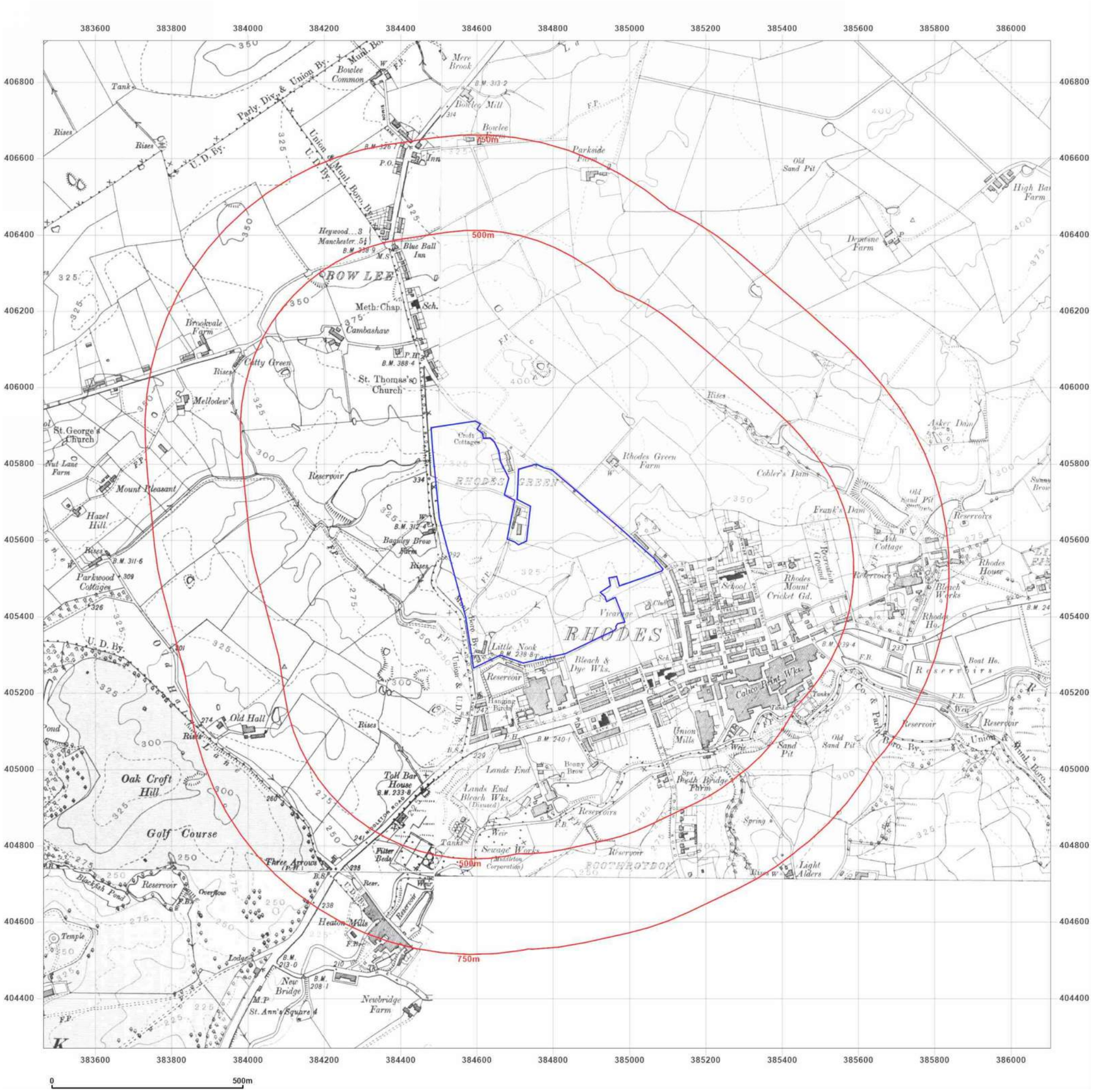
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

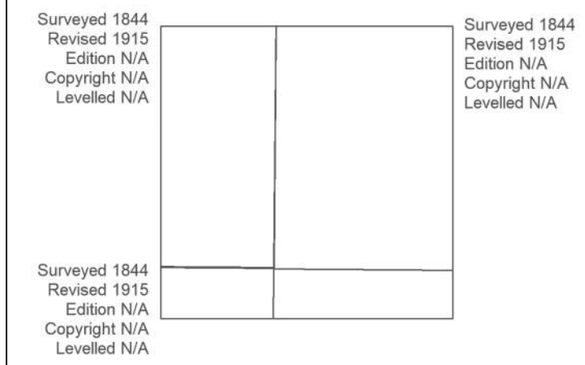
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Scale: 1:10,560

Printed at: 1:10,560

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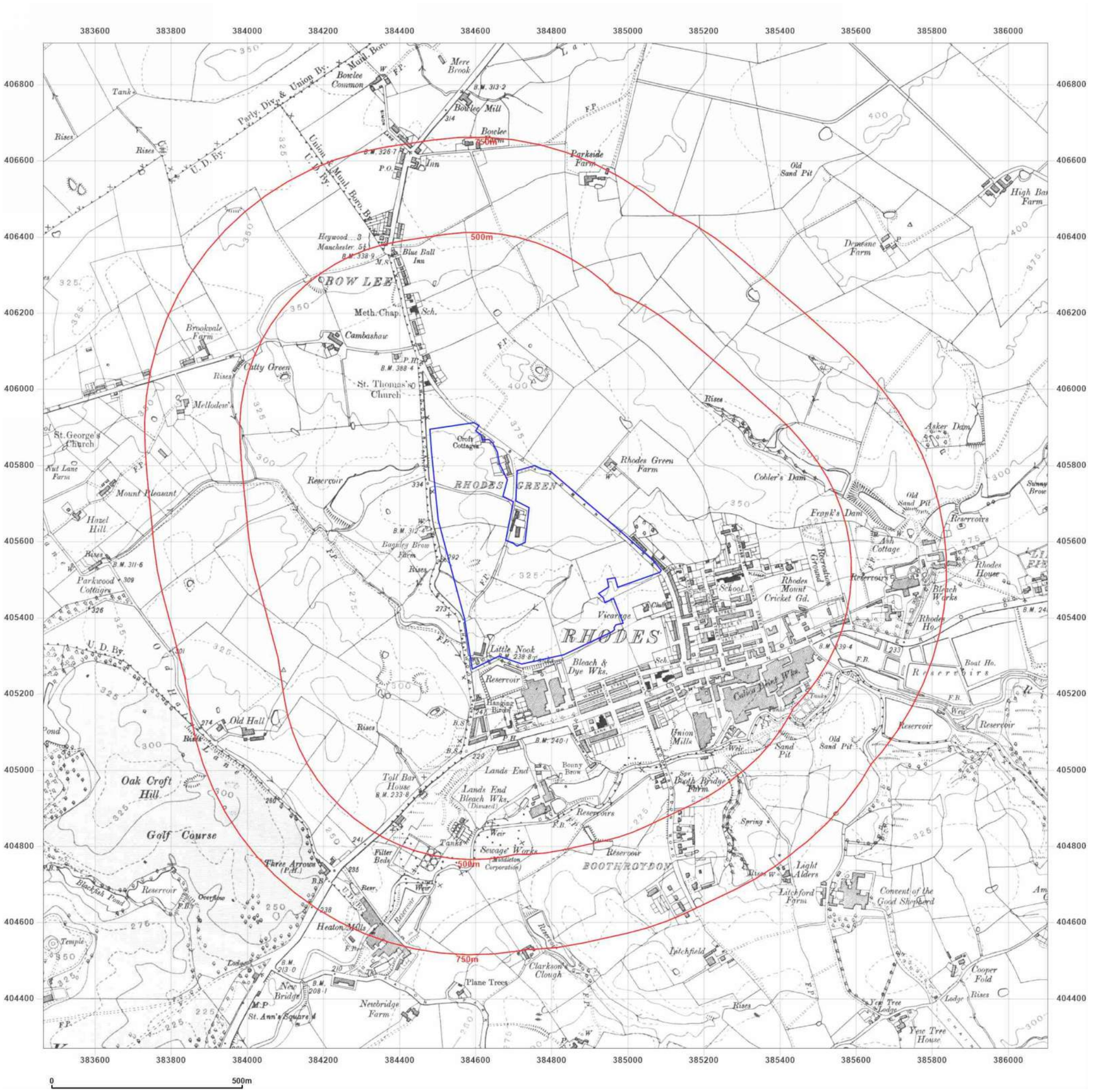
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

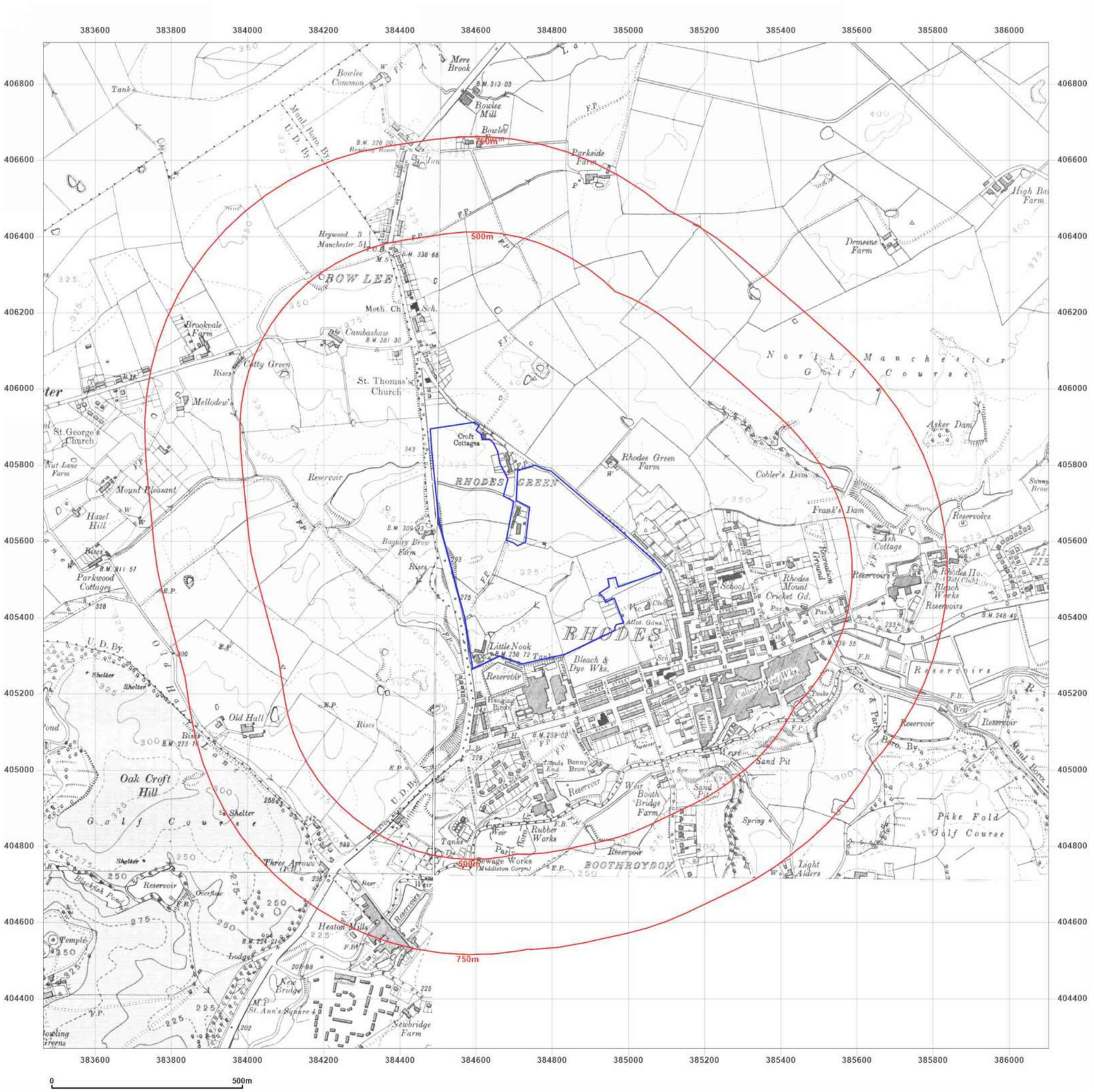
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1932**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

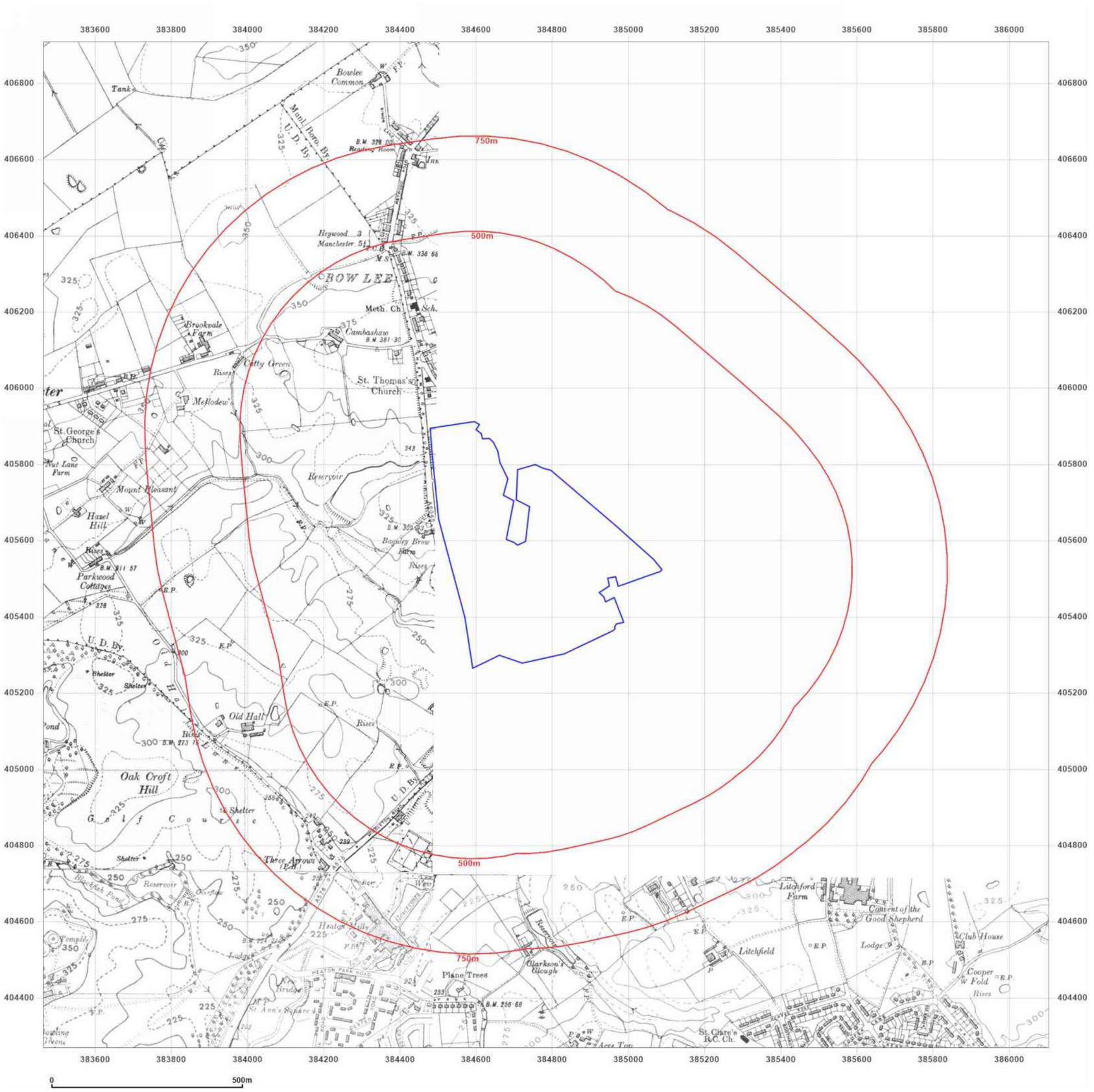
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Site Details:

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Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: County Series

Map date: **1933-1938**

Scale: 1:10,560

Printed at: 1:10,560

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

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

Surveyed 1844
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

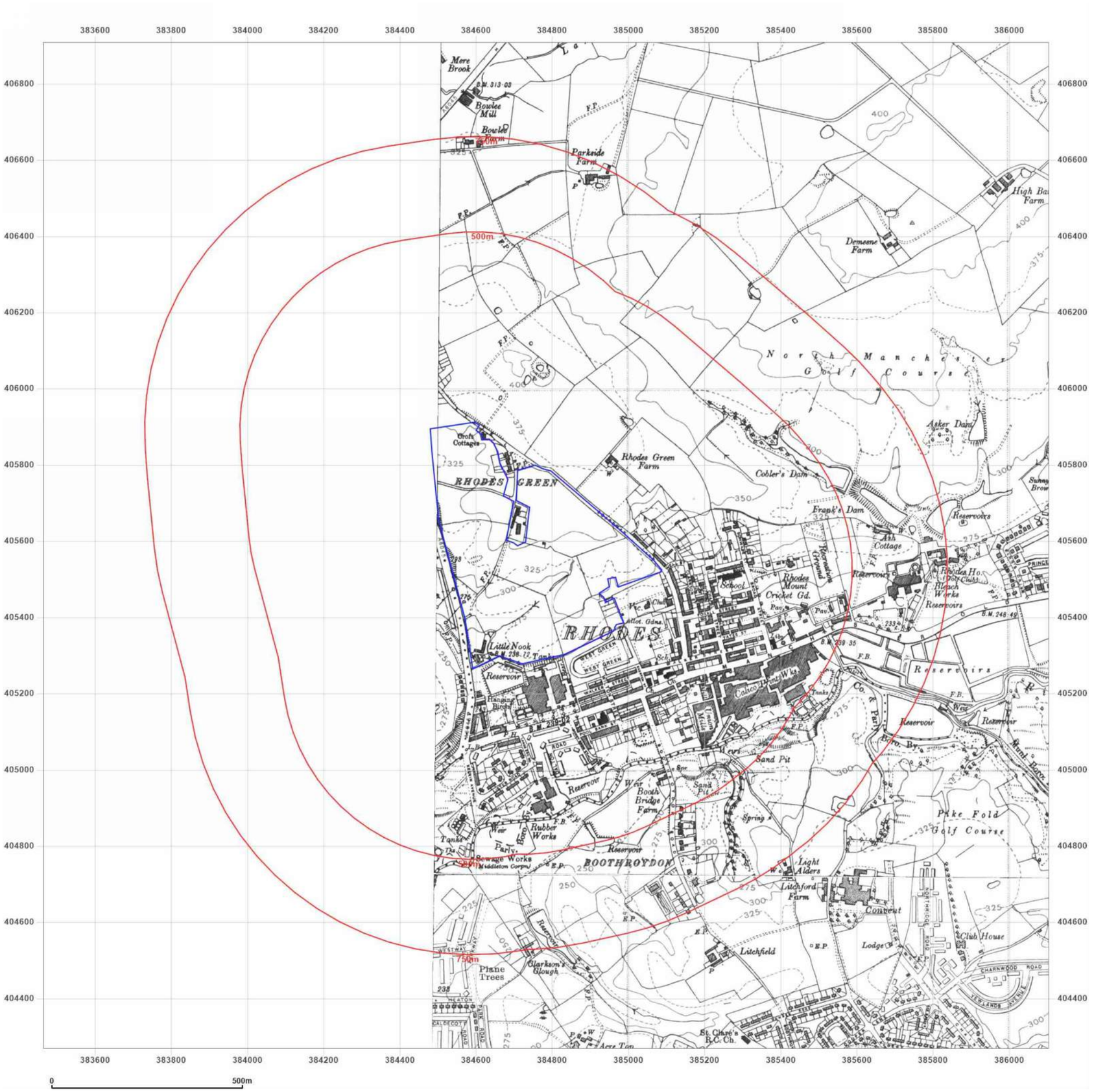
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

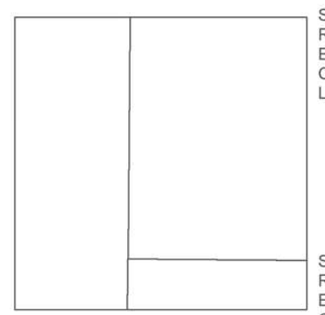
Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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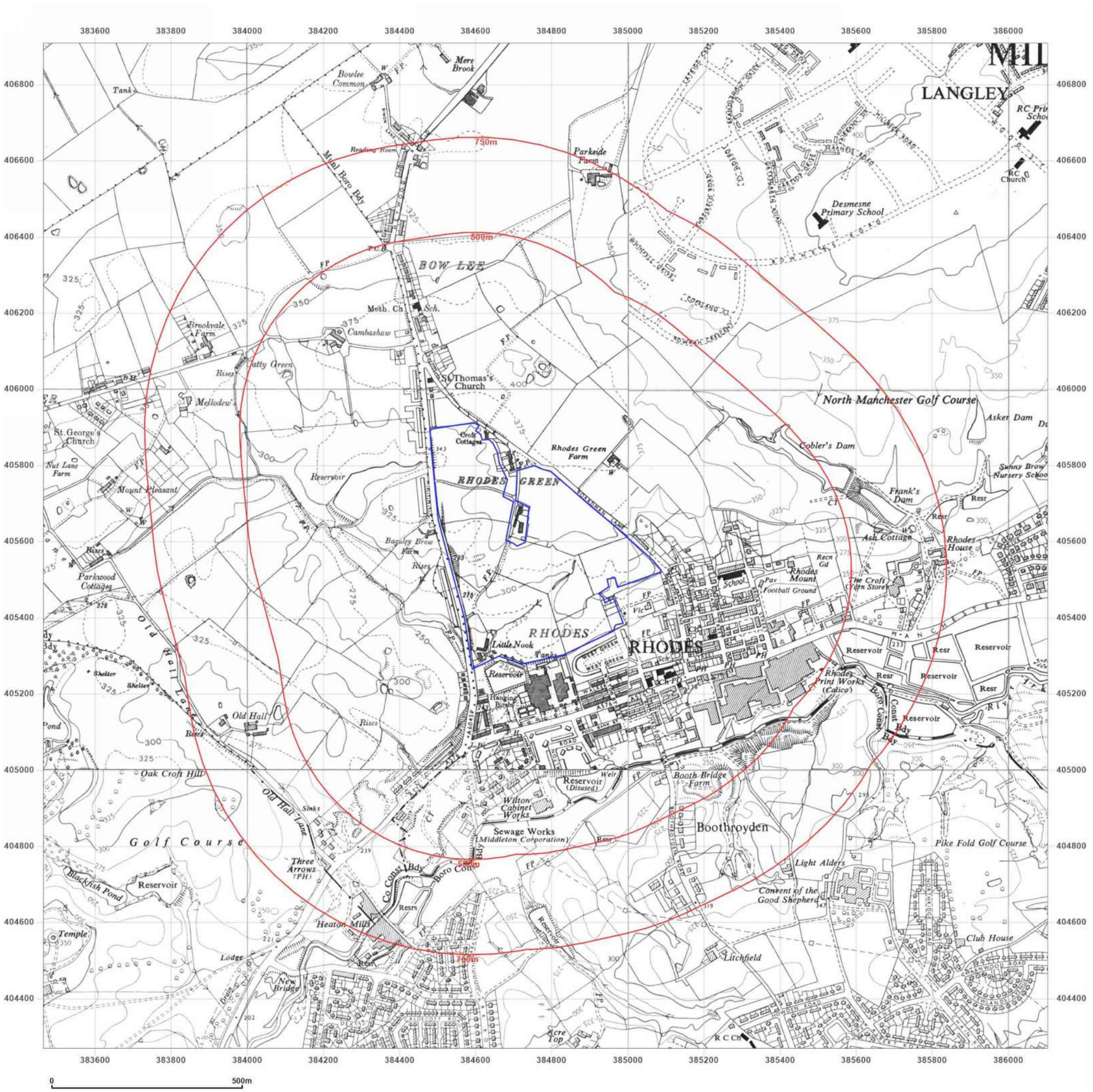
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: Provisional

Map date: **1955-1956**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1949
Revised 1955
Edition 1955
Copyright N/A
Levelled N/A

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

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

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

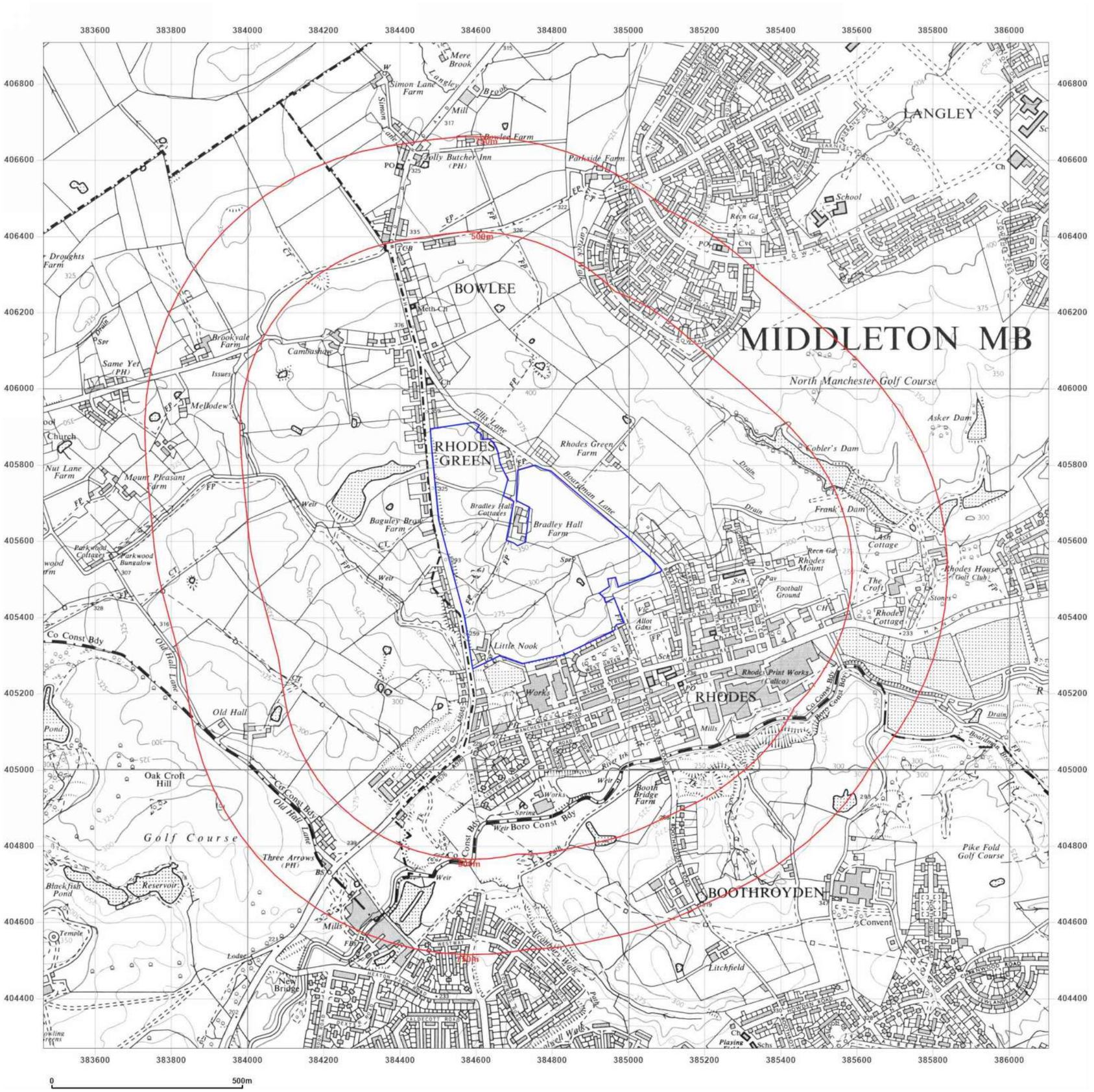
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: Provisional
Map date: **1965-1968**
Scale: 1:10,560
Printed at: 1:10,560

N
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Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

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

Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
Levelled N/A

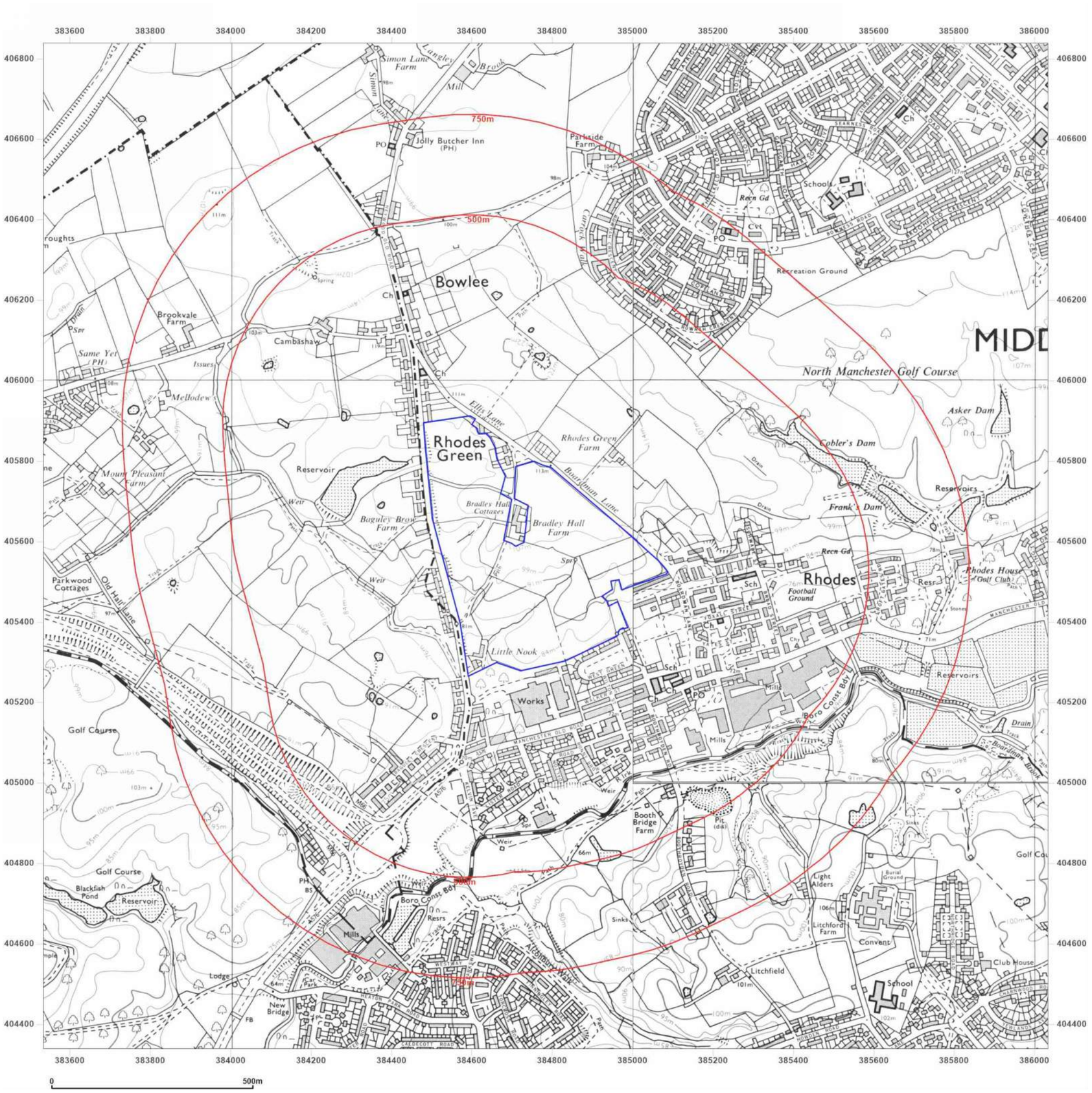
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: National Grid

Map date: **1974-1977**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1974
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

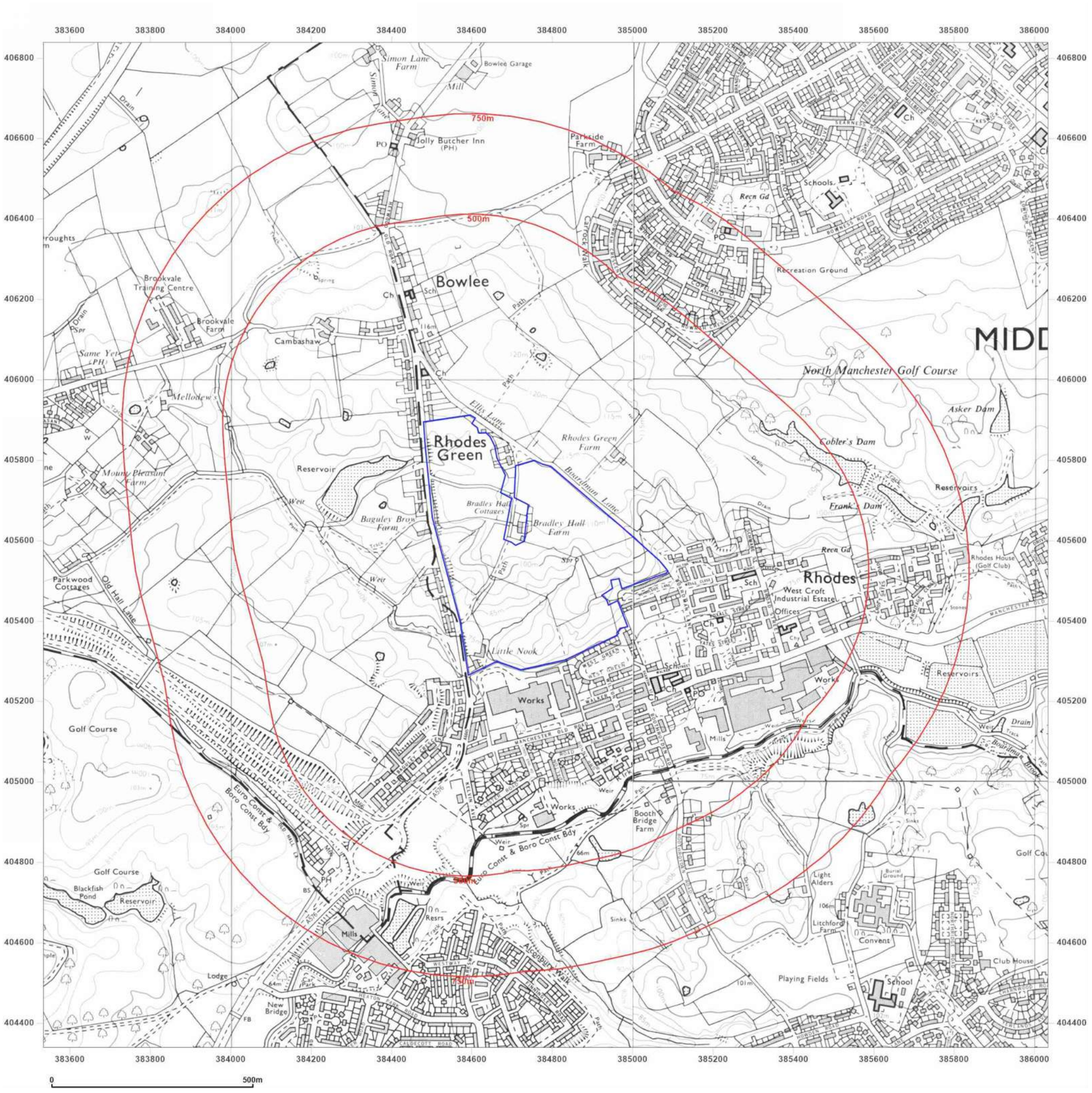
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: National Grid

Map date: **1980-1985**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1980 Revised 1981 Edition N/A Copyright N/A Levelled N/A	Surveyed 1980 Revised 1982 Edition N/A Copyright N/A Levelled N/A
Surveyed 1985 Revised 1985 Edition N/A Copyright N/A Levelled N/A	Surveyed 1980 Revised 1980 Edition N/A Copyright N/A Levelled N/A

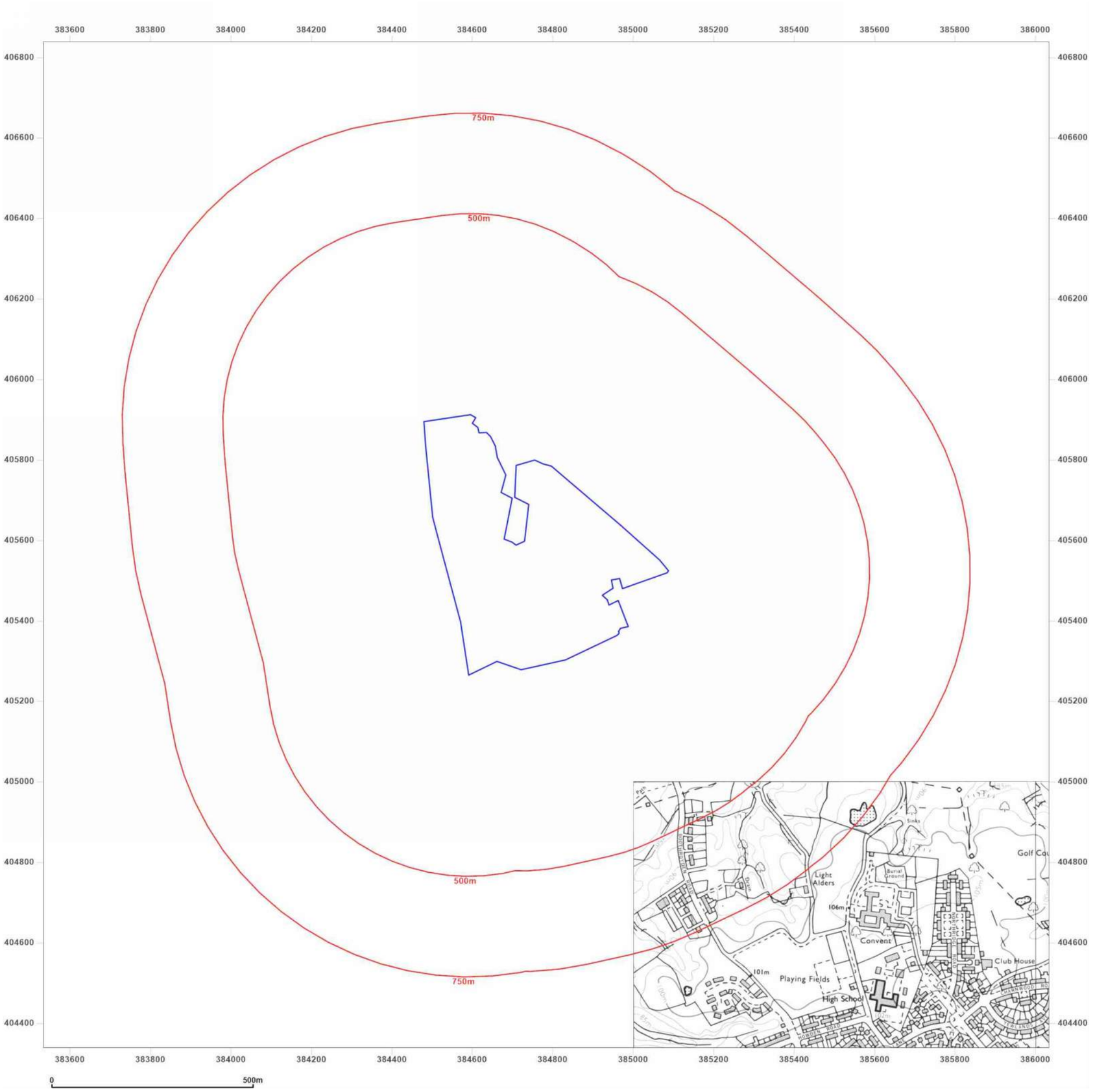
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

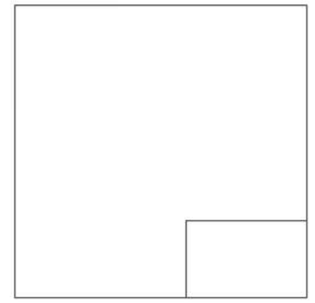
Map Name: National Grid

Map date: **1988**

Scale: 1:10,000

Printed at: 1:10,000

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

N
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2001

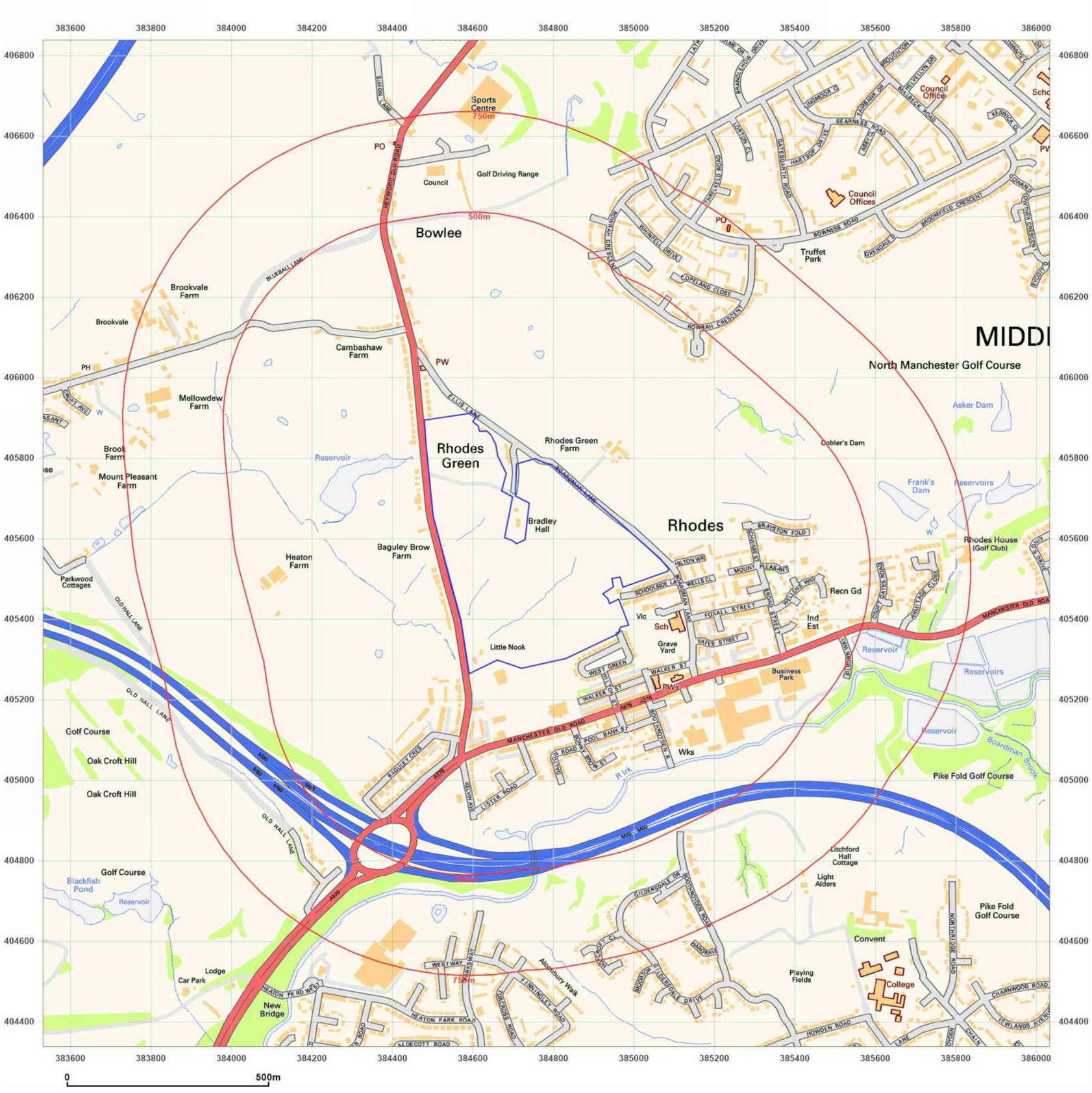
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

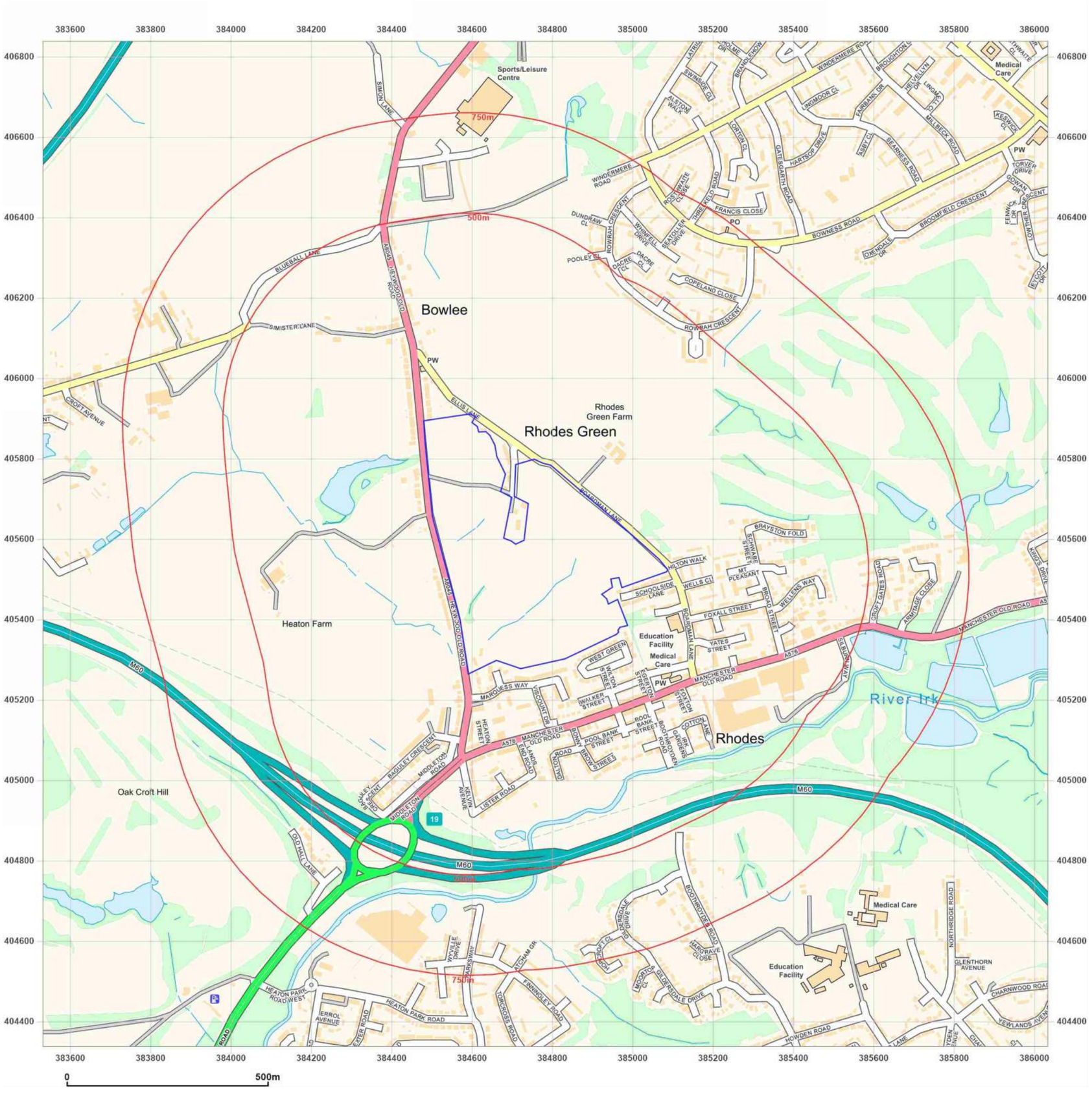
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW
Grid Ref: 384783, 405588

Map Name: National Grid

Map date: **2024**

Scale: 1:10,000

Printed at: 1:10,000

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2024

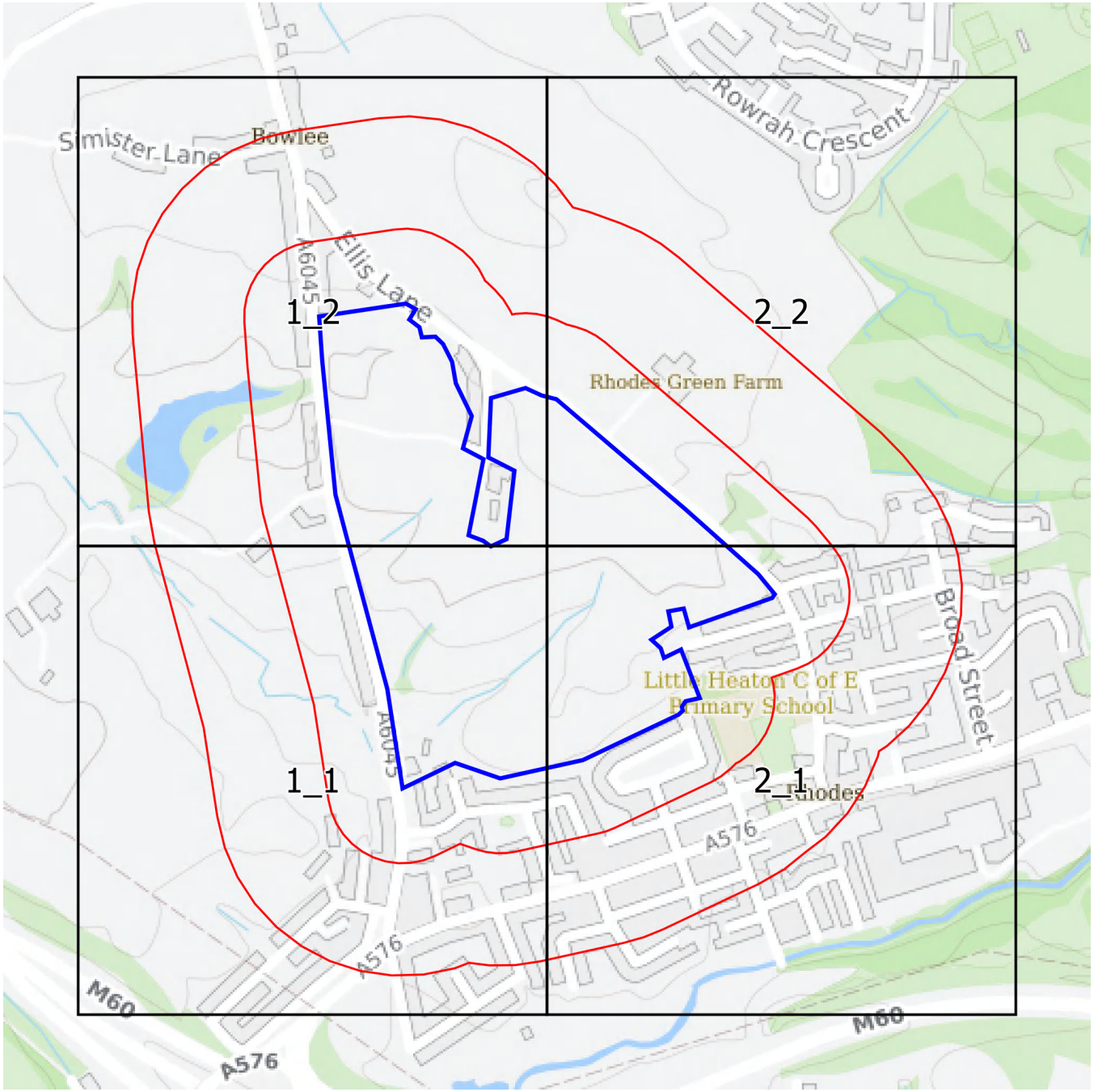
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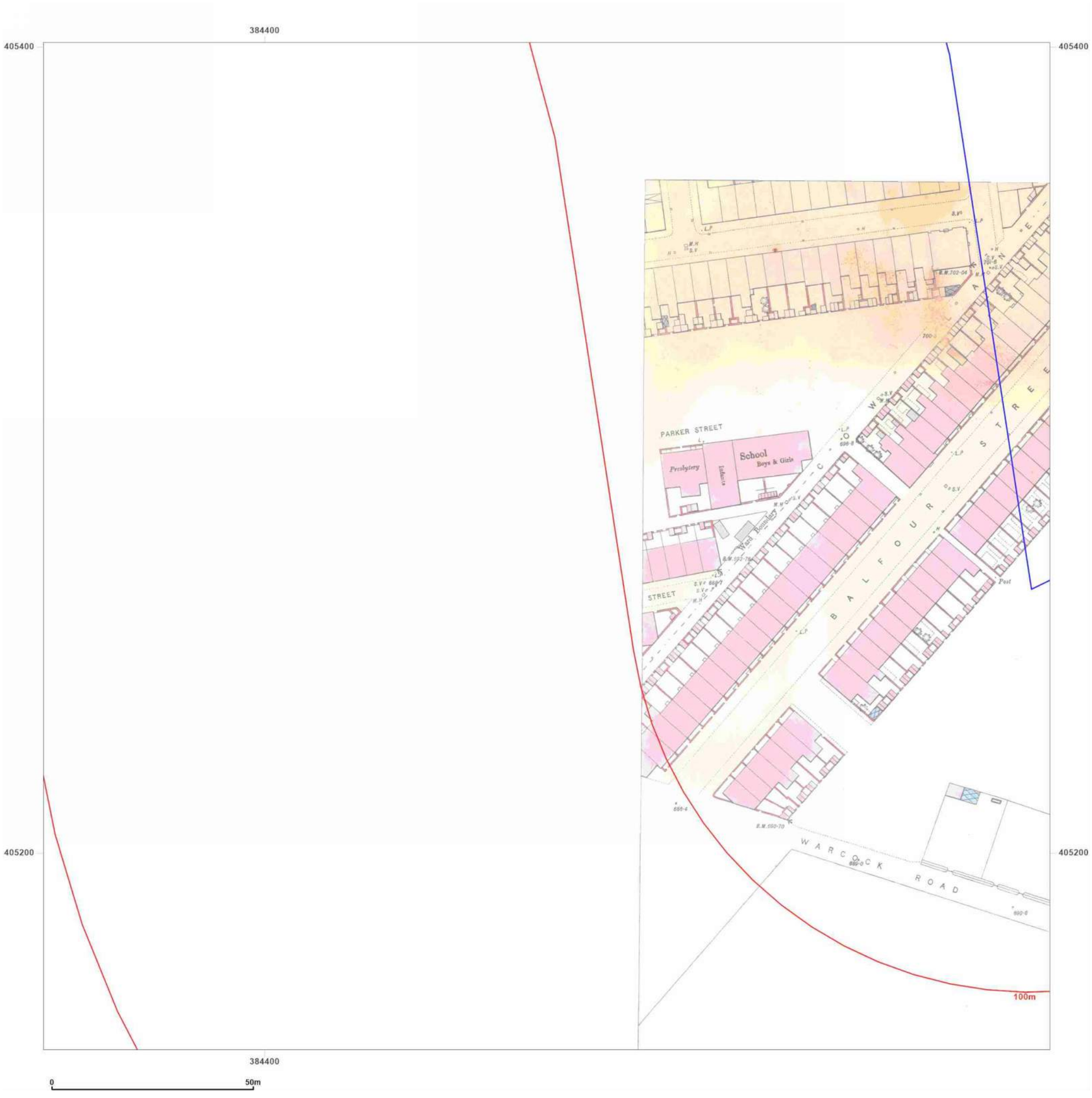
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Groundsure INSIGHTS

1:2,500 Scale Grid Index

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

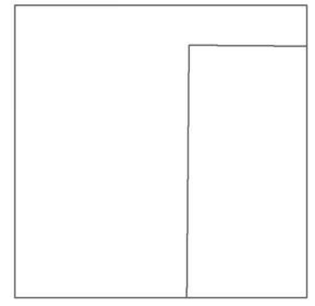
Map Name: County Series Town Plan

Map date: **1892**

Scale: 1:500

Printed at: 1:1,000

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

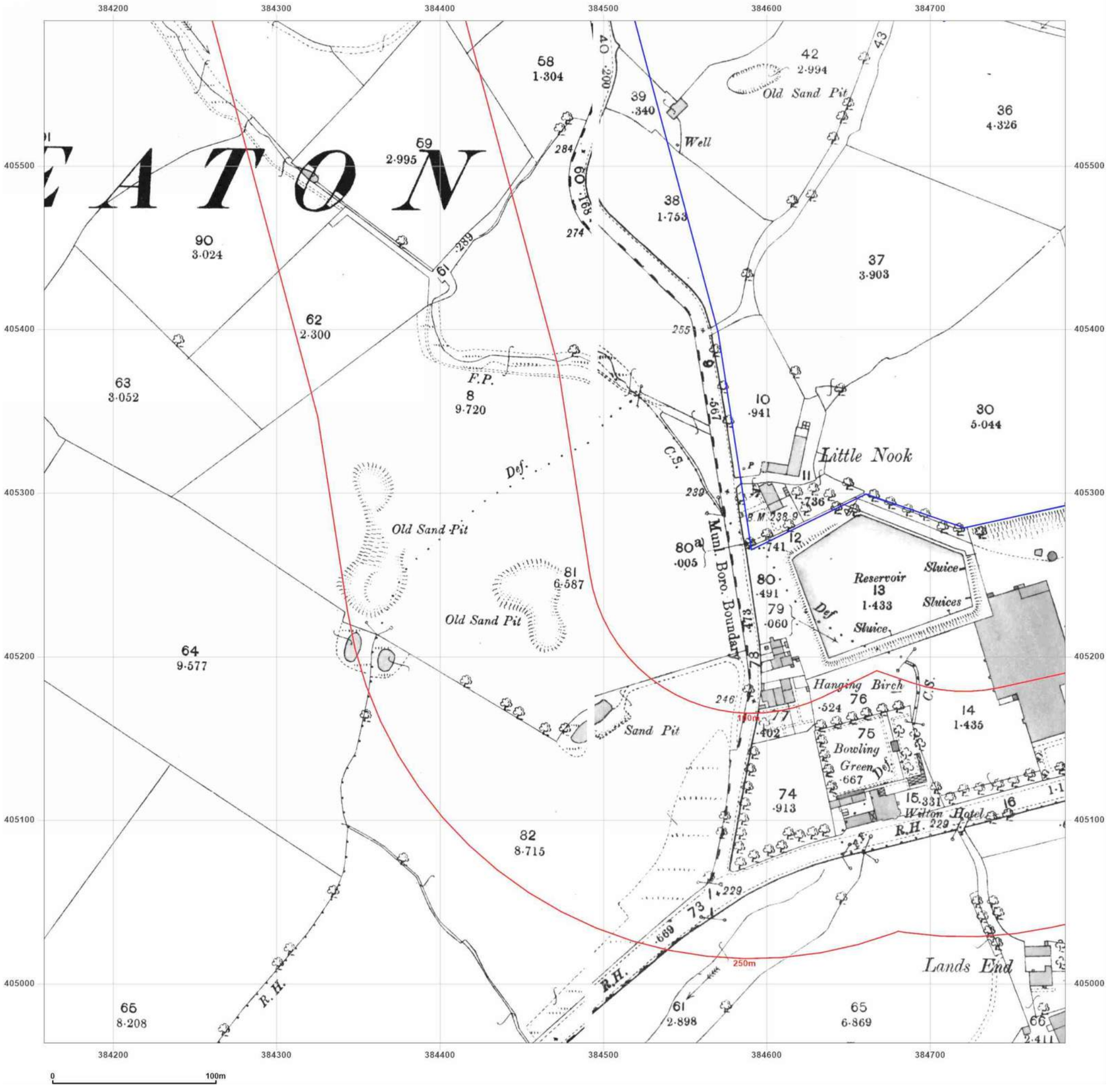
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: County Series

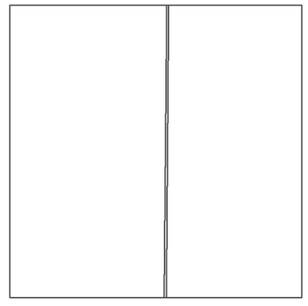
Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: County Series

Map date: **1909**

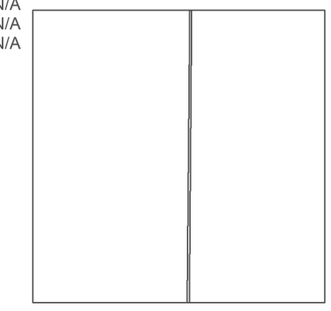
Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

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



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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: County Series

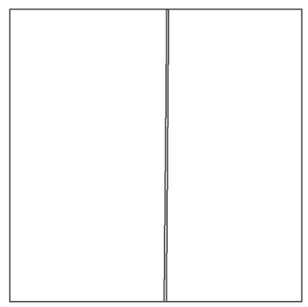
Map date: **1922**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

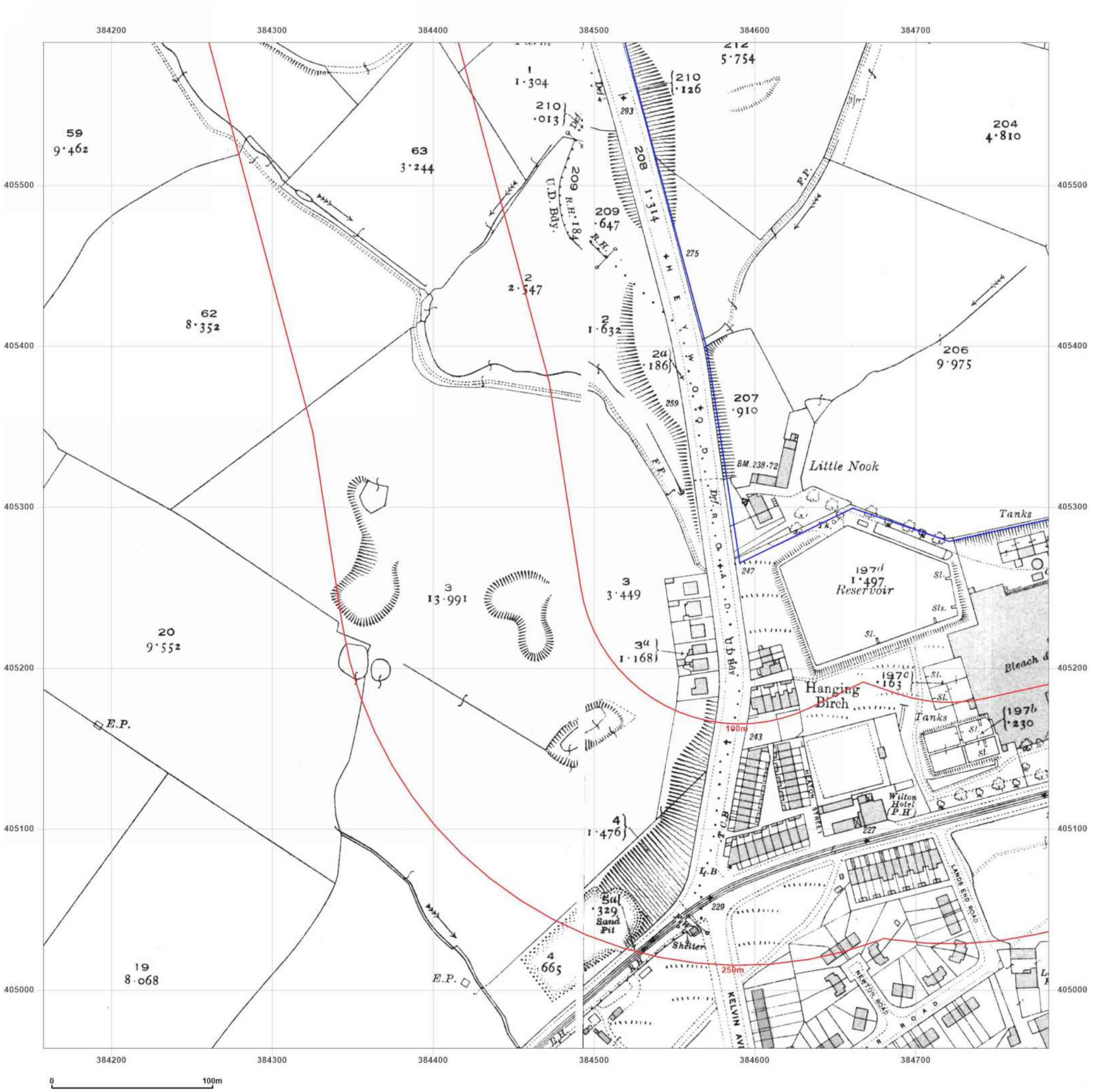
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: County Series

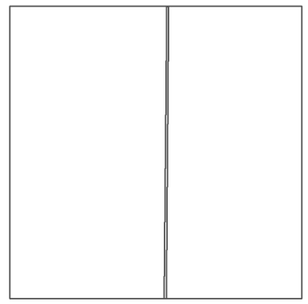
Map date: **1932**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1932
Revised 1932
Edition N/A
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Levelled N/A

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: National Grid

Map date: **1951-1954**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

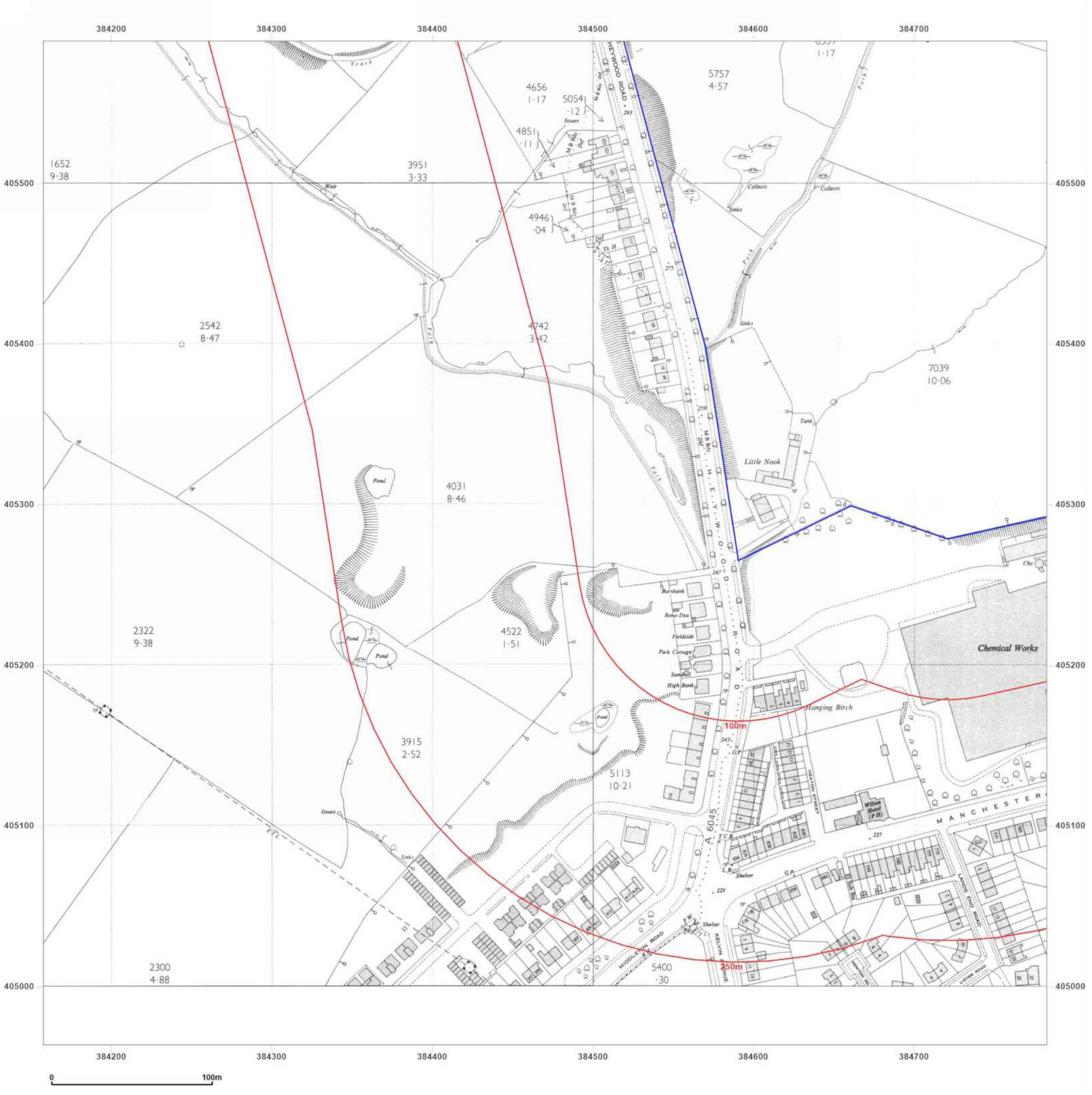
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_1
Grid Ref: 384470, 405276

Map Name: National Grid

Map date: **1967**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
Levelled 1962

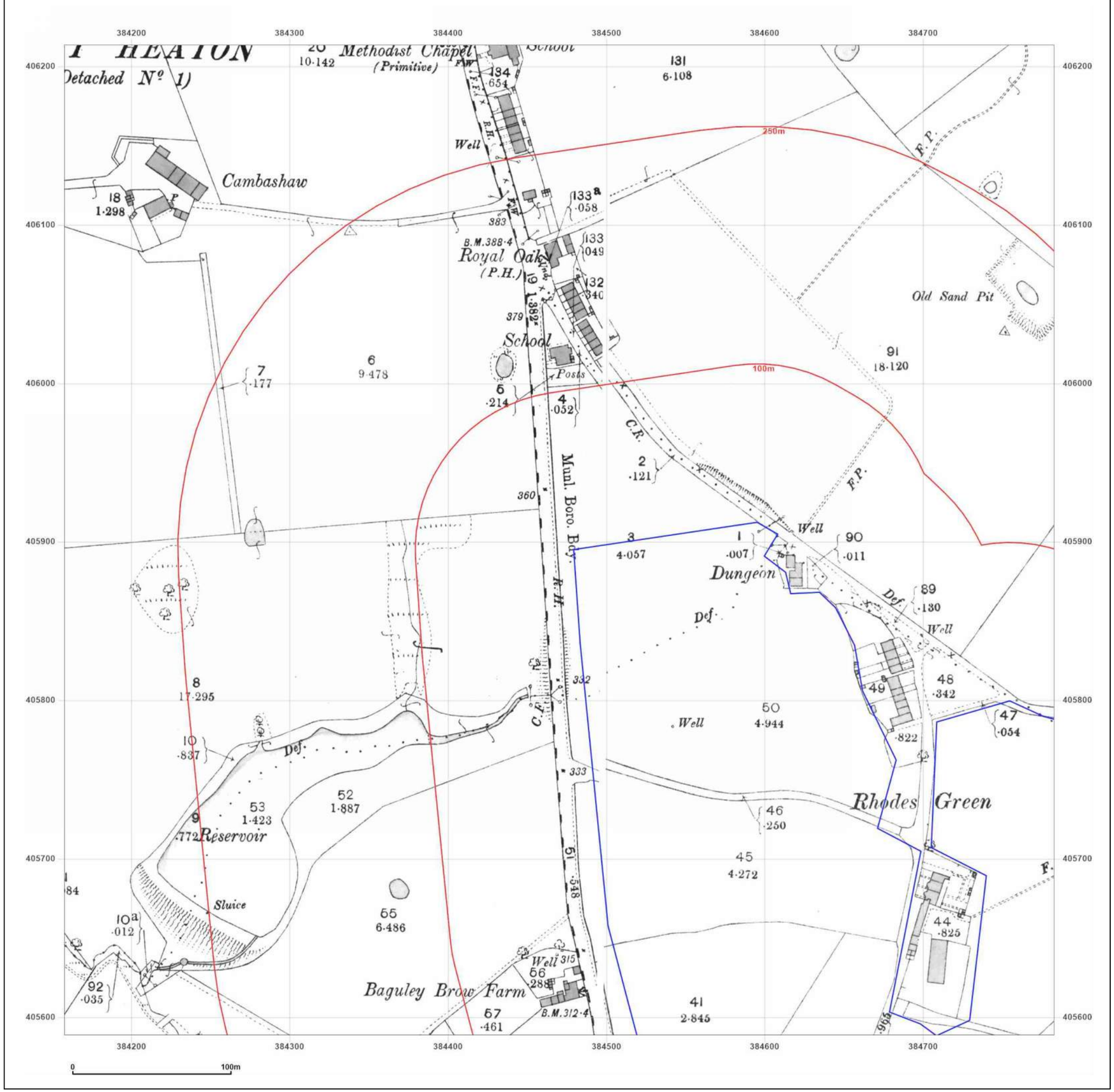
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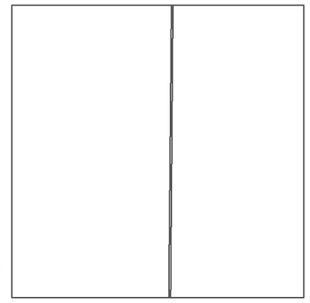
Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

Map Name: County Series
Map date: **1893**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

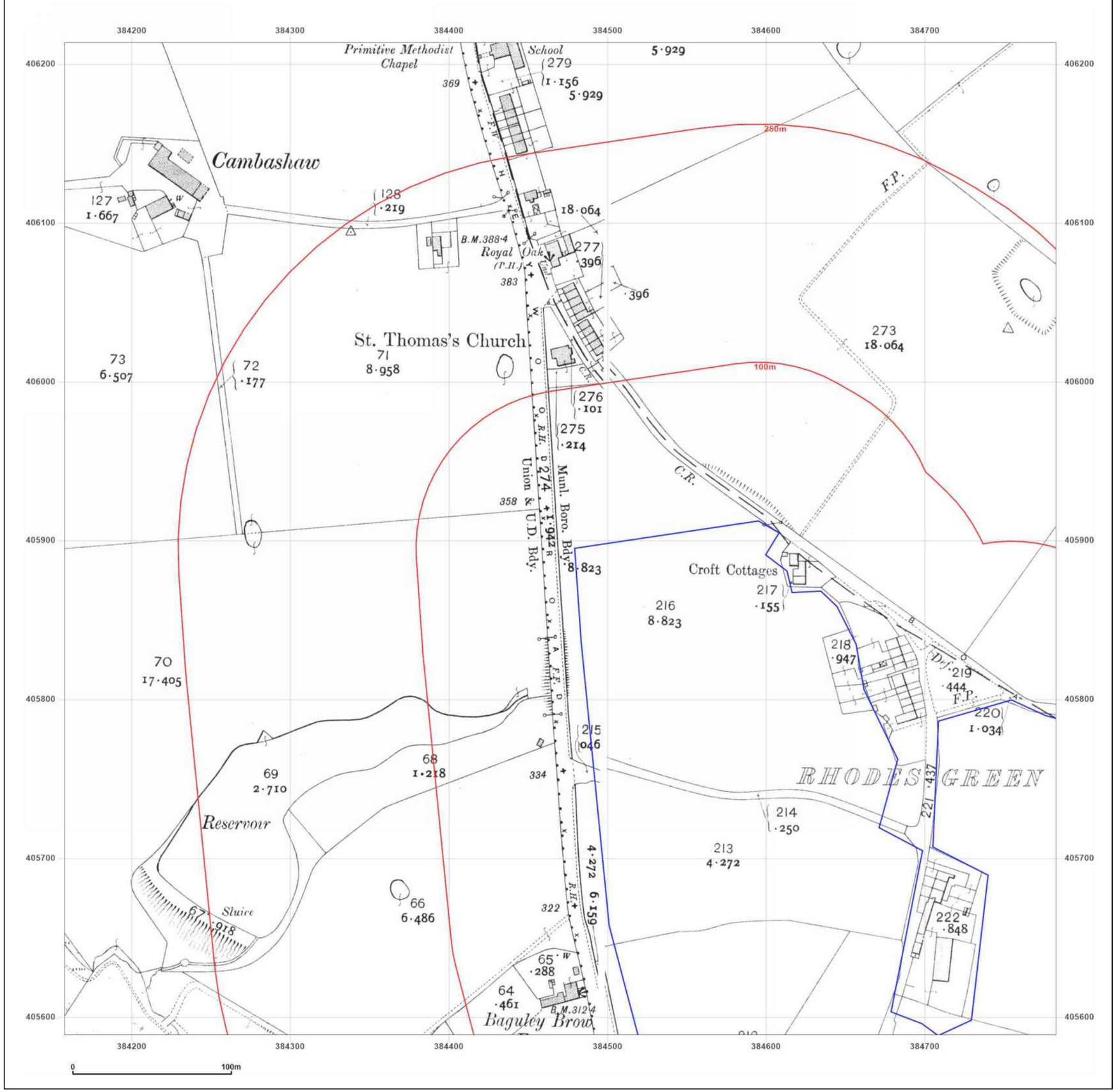
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

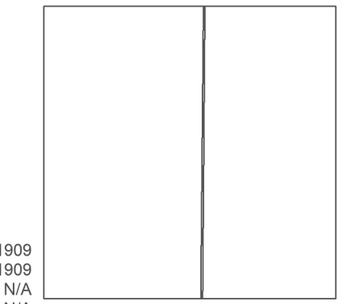
Map Name: County Series

Map date: **1909**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

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

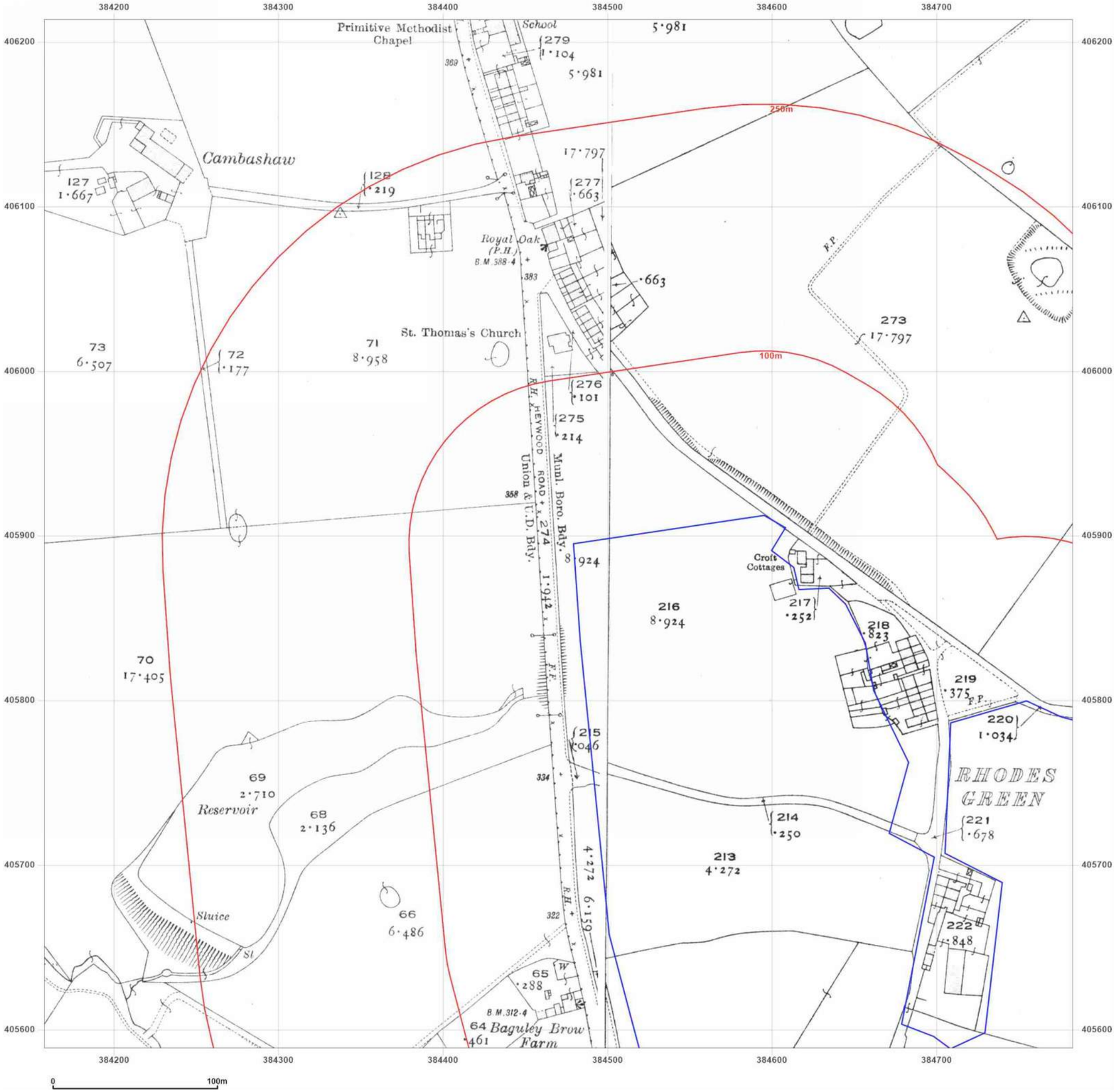
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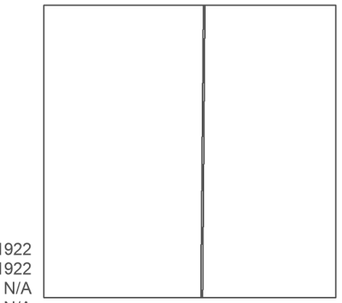
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Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

Map Name: County Series
Map date: **1922**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

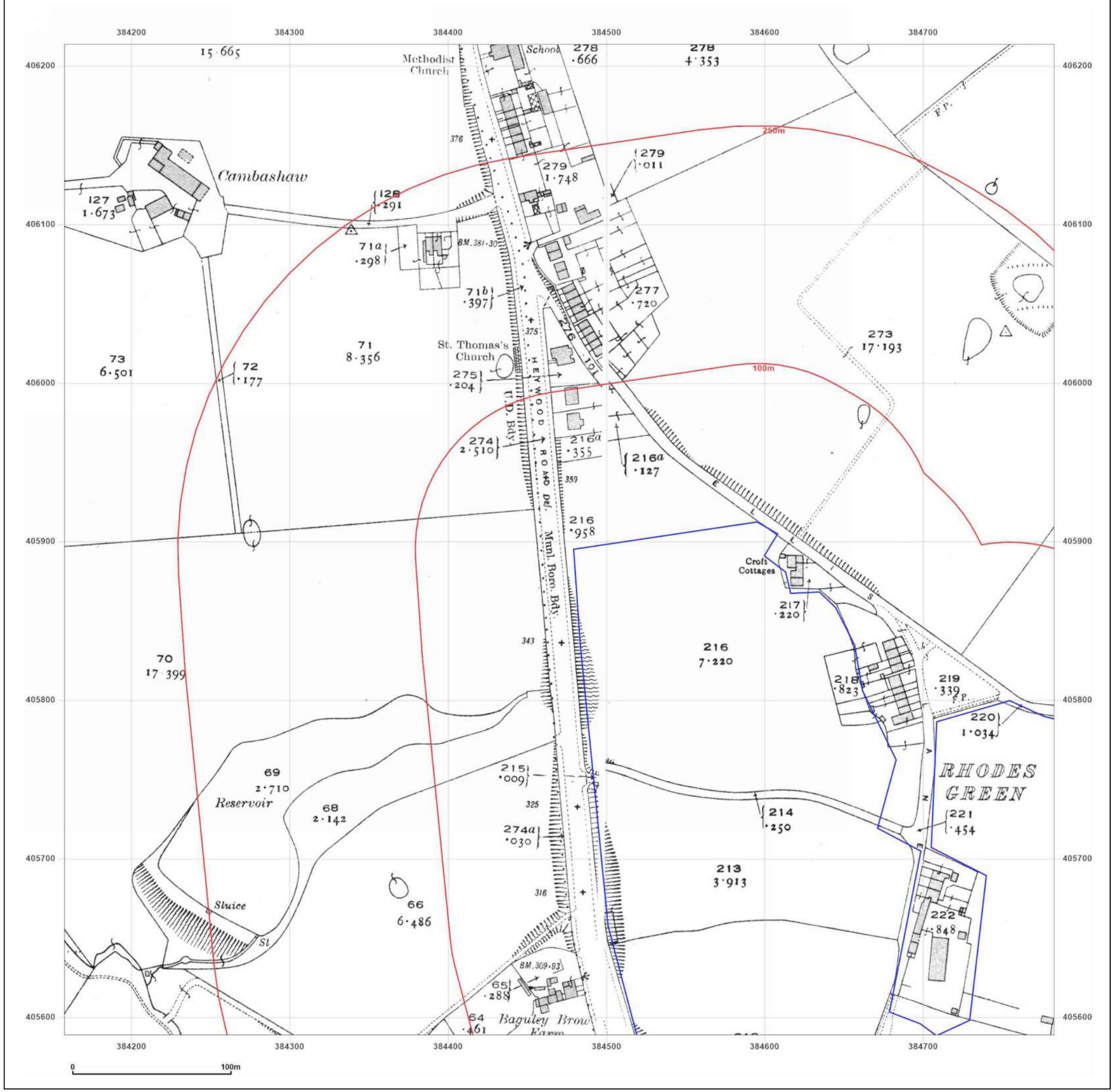
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

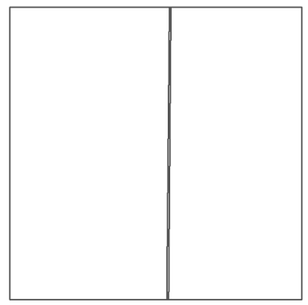
Map Name: County Series

Map date: **1932**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S



Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

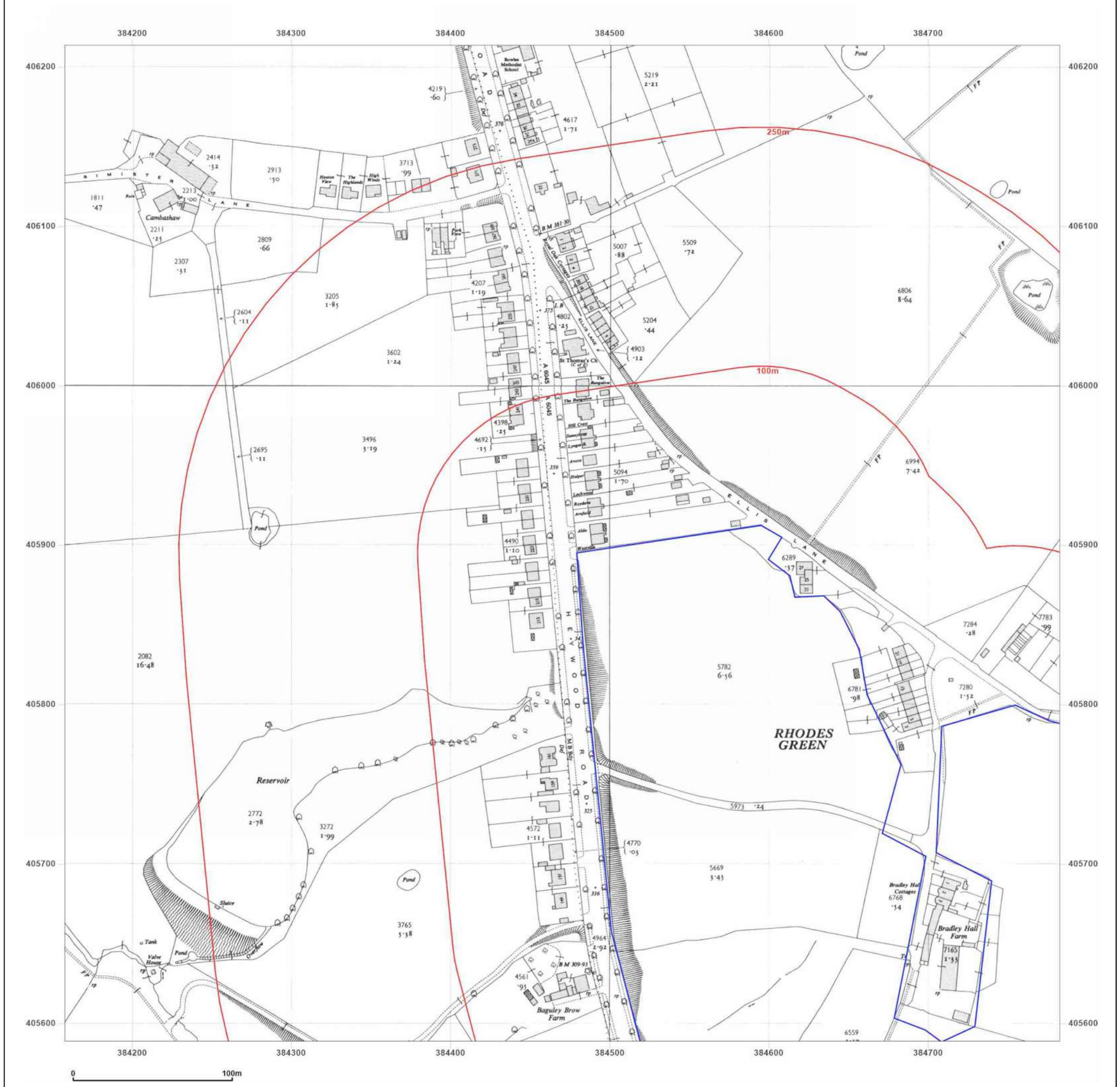
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

Map Name: National Grid

Map date: **1954**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

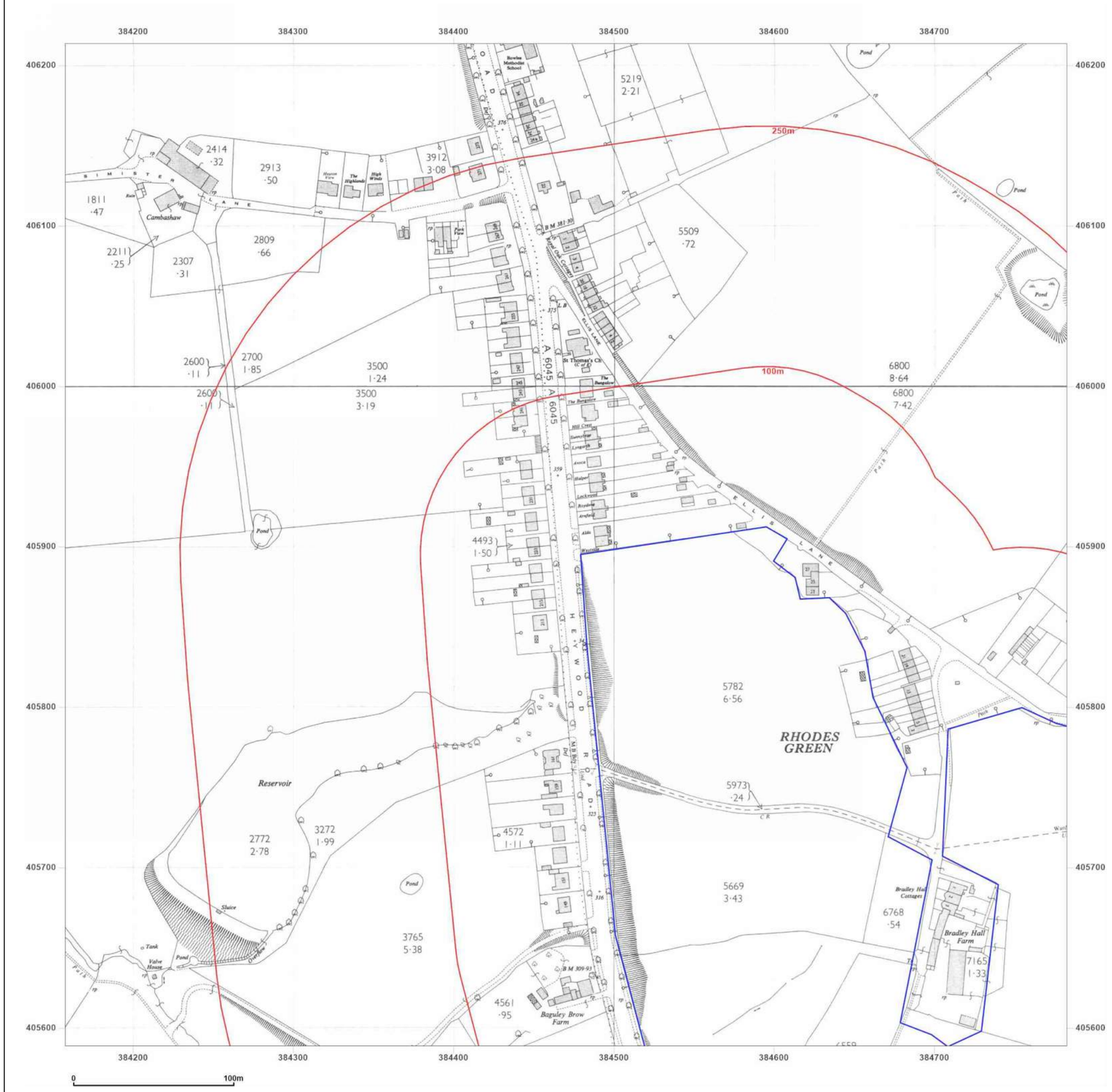
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_1_2
Grid Ref: 384470, 405901

Map Name: National Grid

Map date: **1965-1967**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1965
Revised 1965
Edition N/A
Copyright 1968
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
Levelled 1962

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

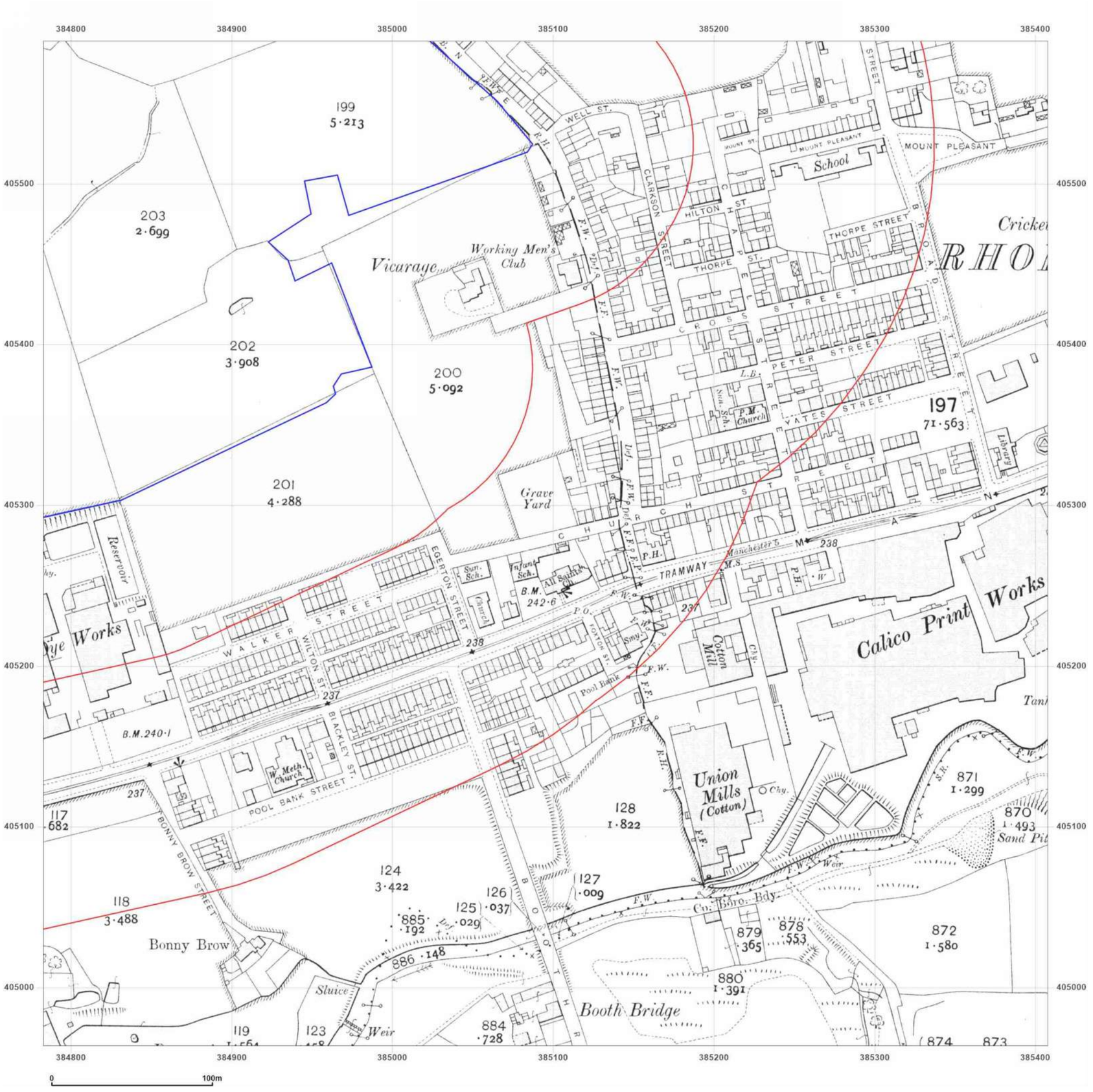
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: County Series
Map date: **1909**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: County Series

Map date: **1922**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: County Series

Map date: **1932**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

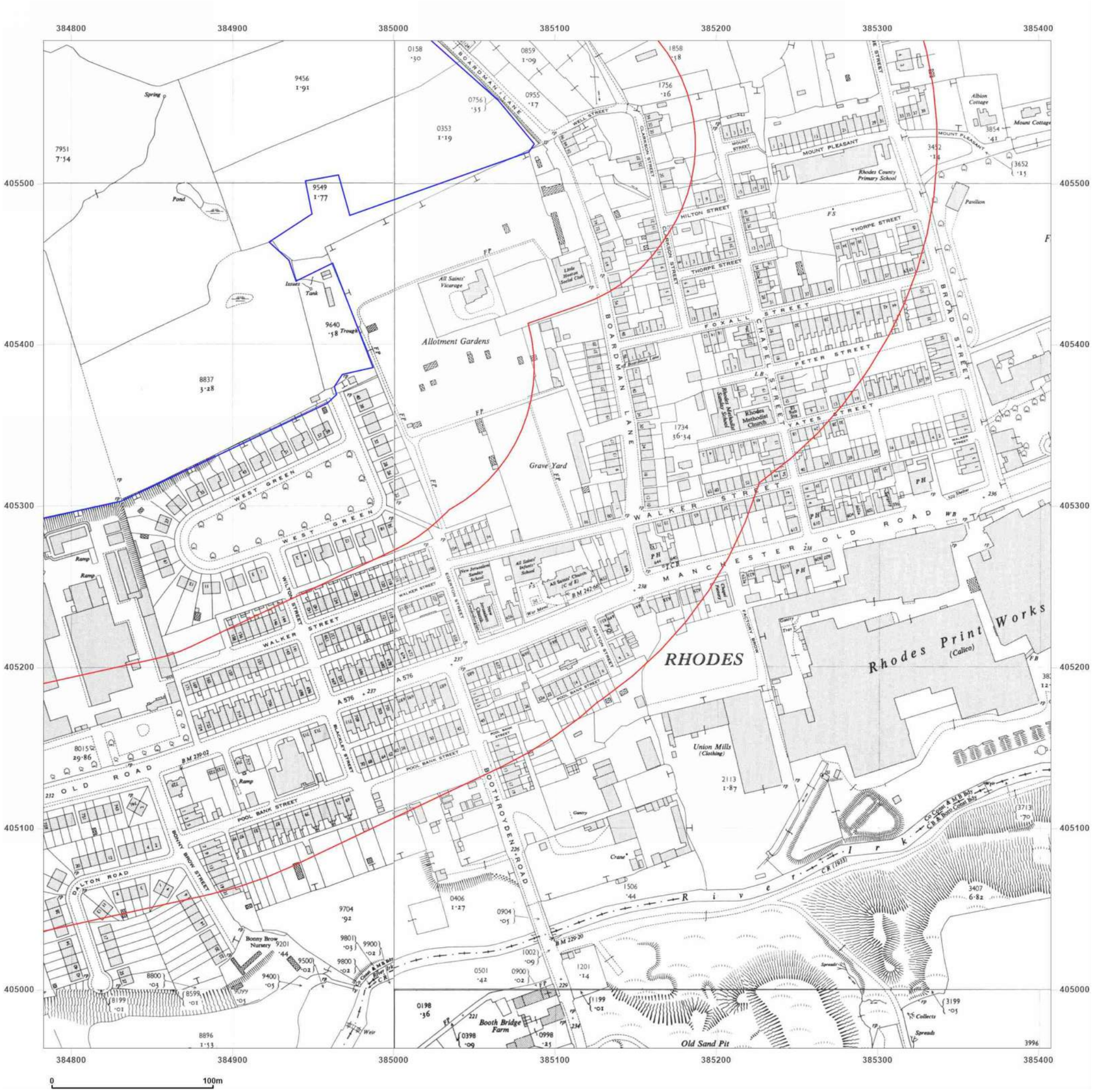
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: National Grid

Map date: **1951-1954**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

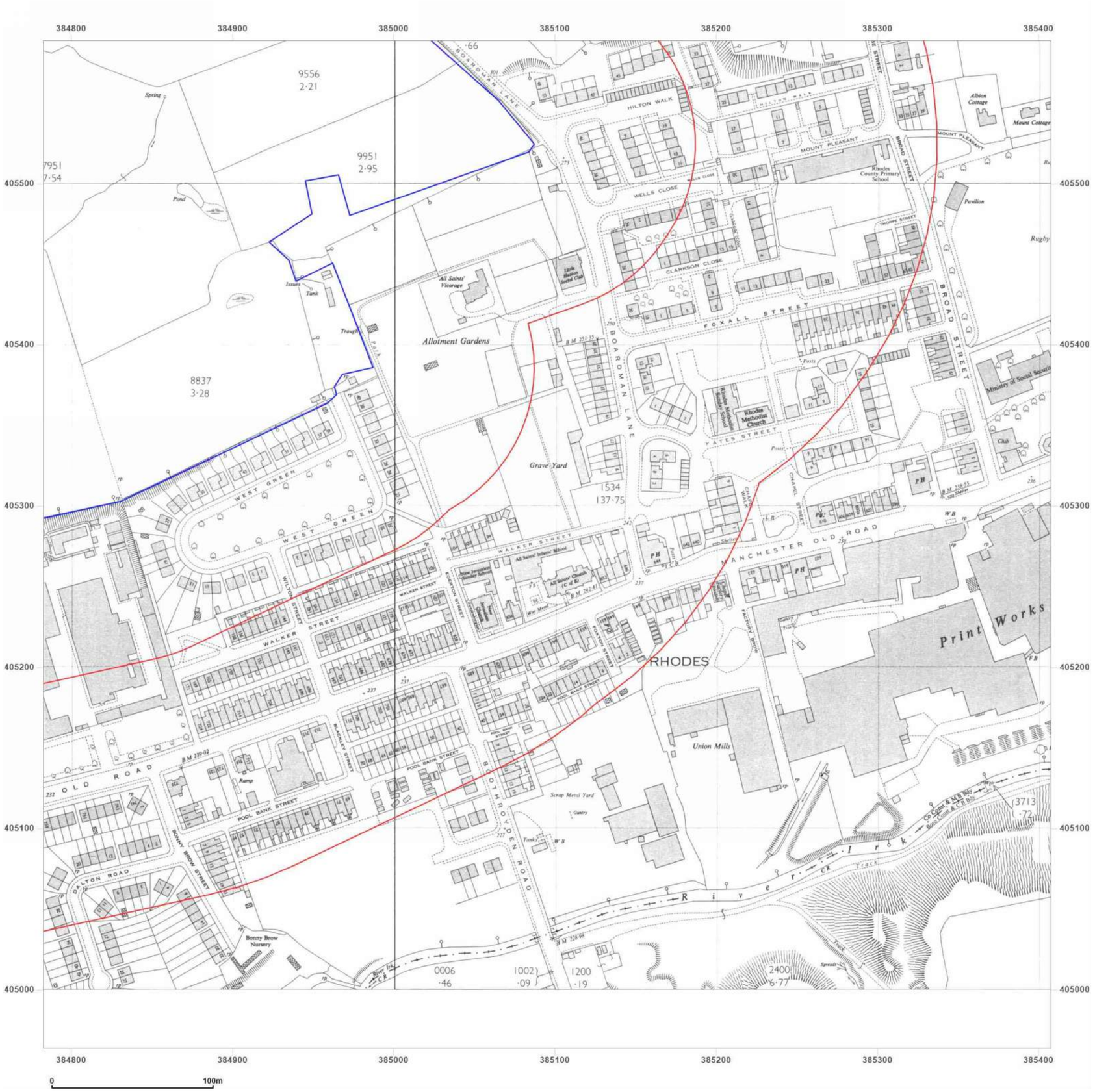
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_1
Grid Ref: 385095, 405276

Map Name: National Grid

Map date: **1967**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
Levelled 1962

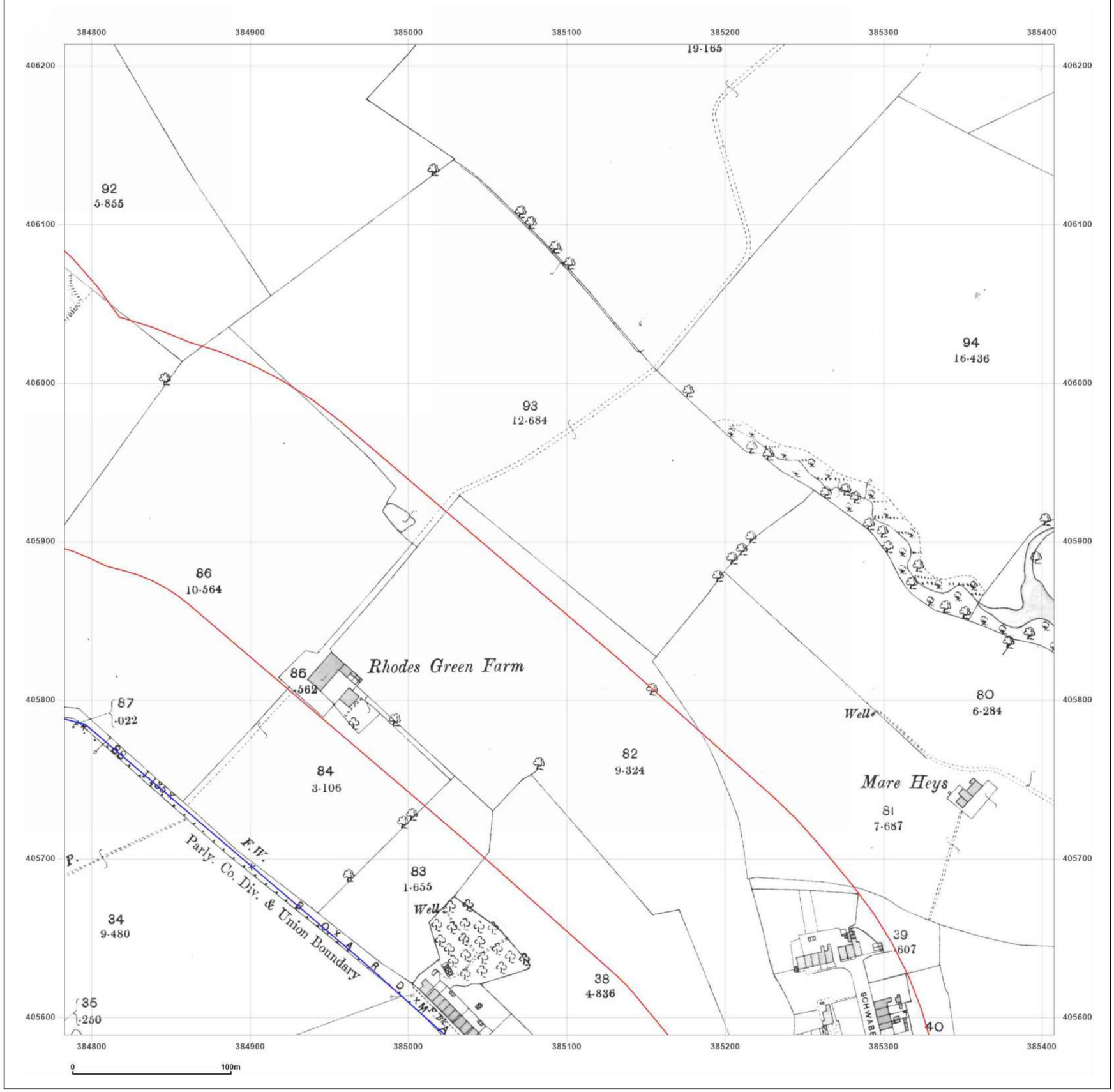
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

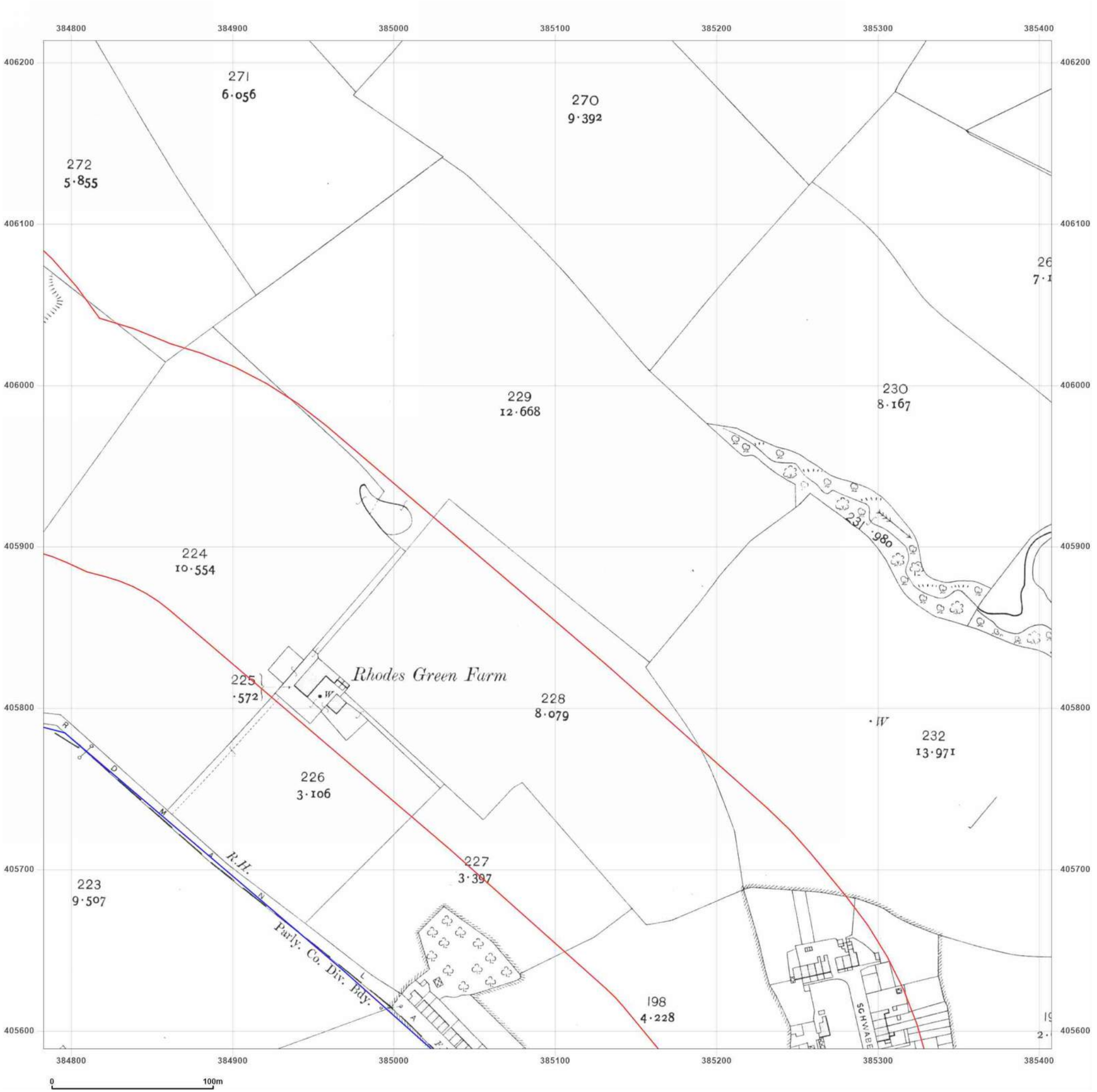
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: County Series
Map date: **1909**
Scale: 1:2,500
Printed at: 1:2,500

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

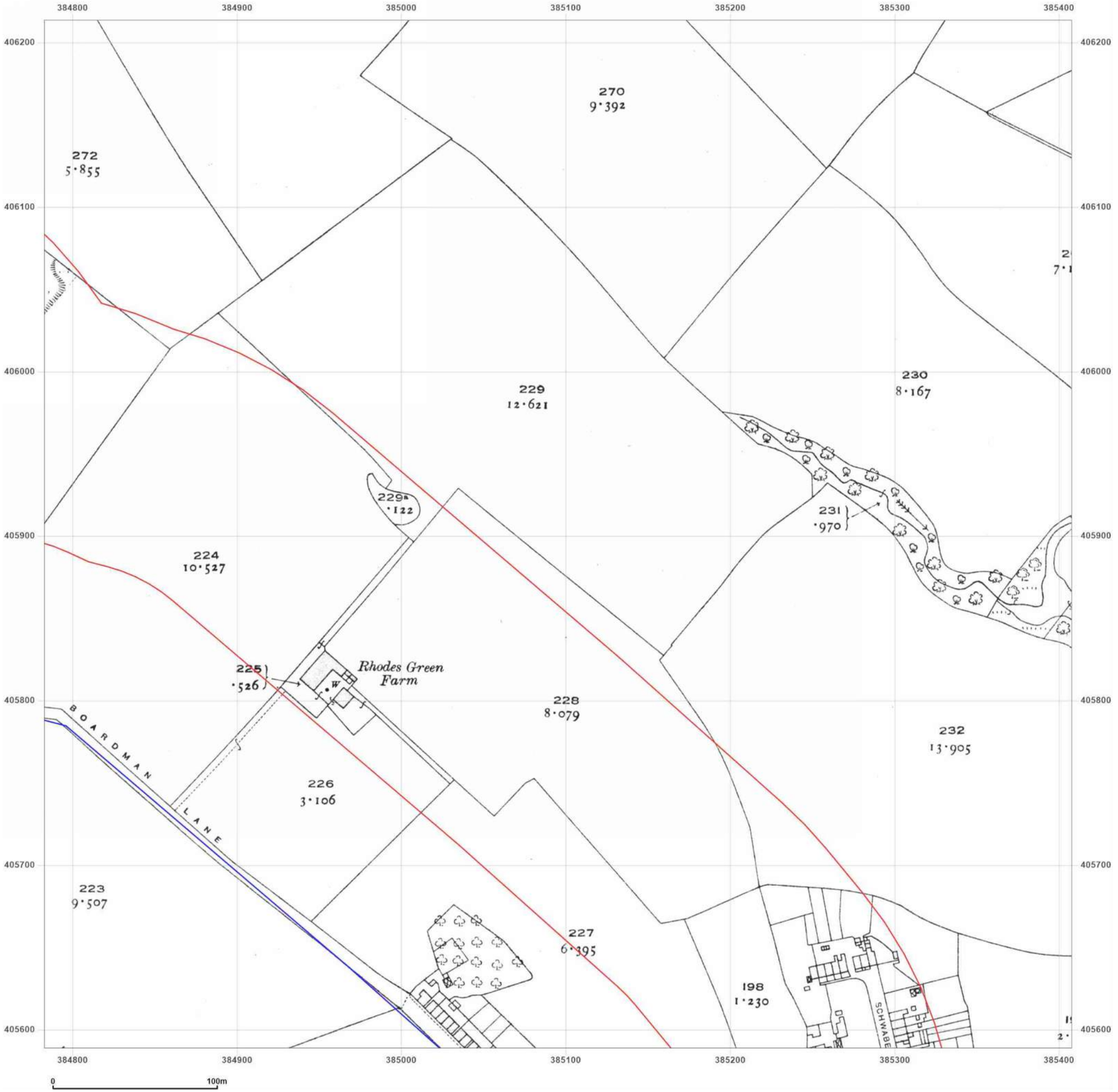
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: County Series
Map date: **1922**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

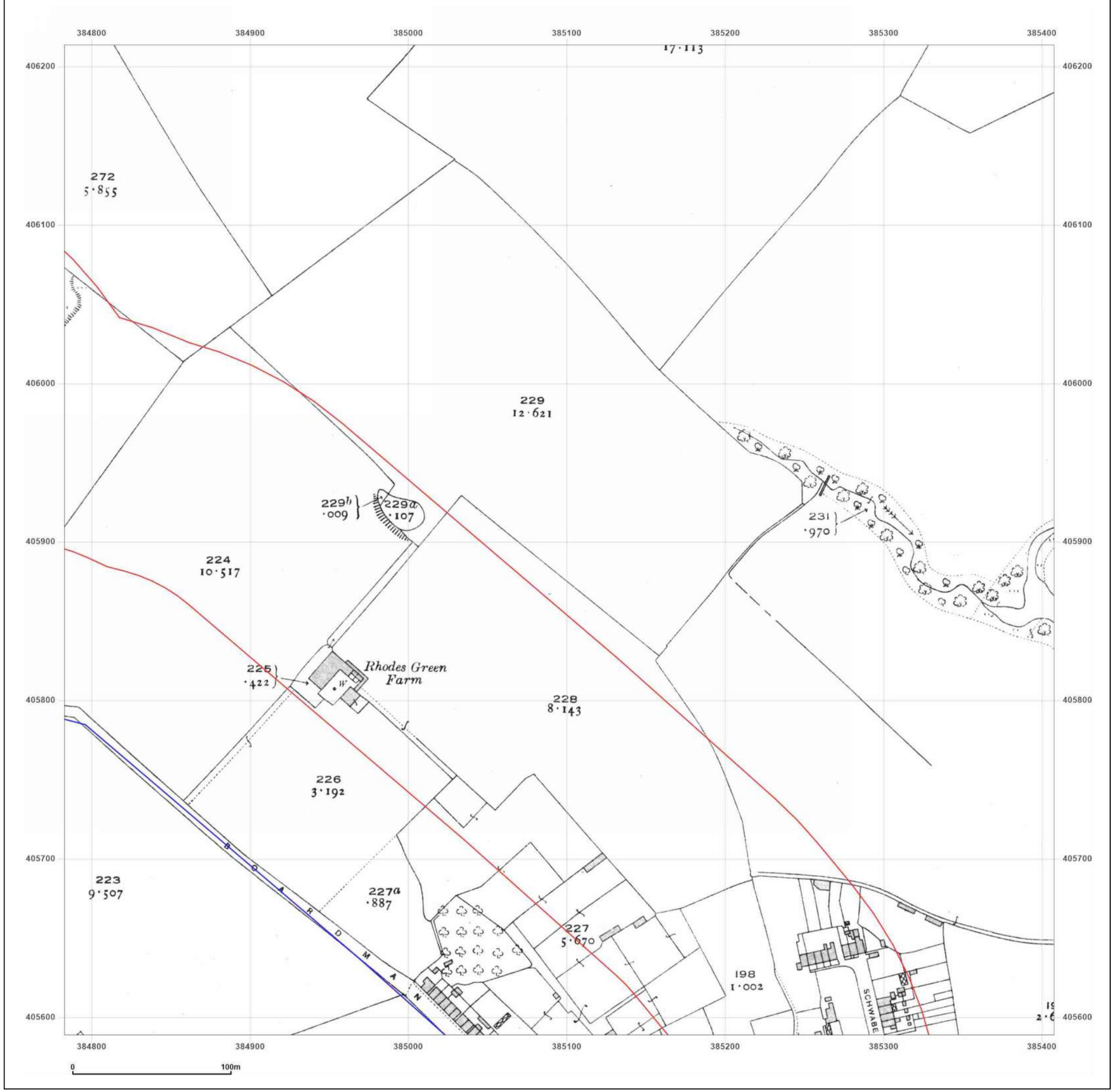
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: County Series
Map date: **1932**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

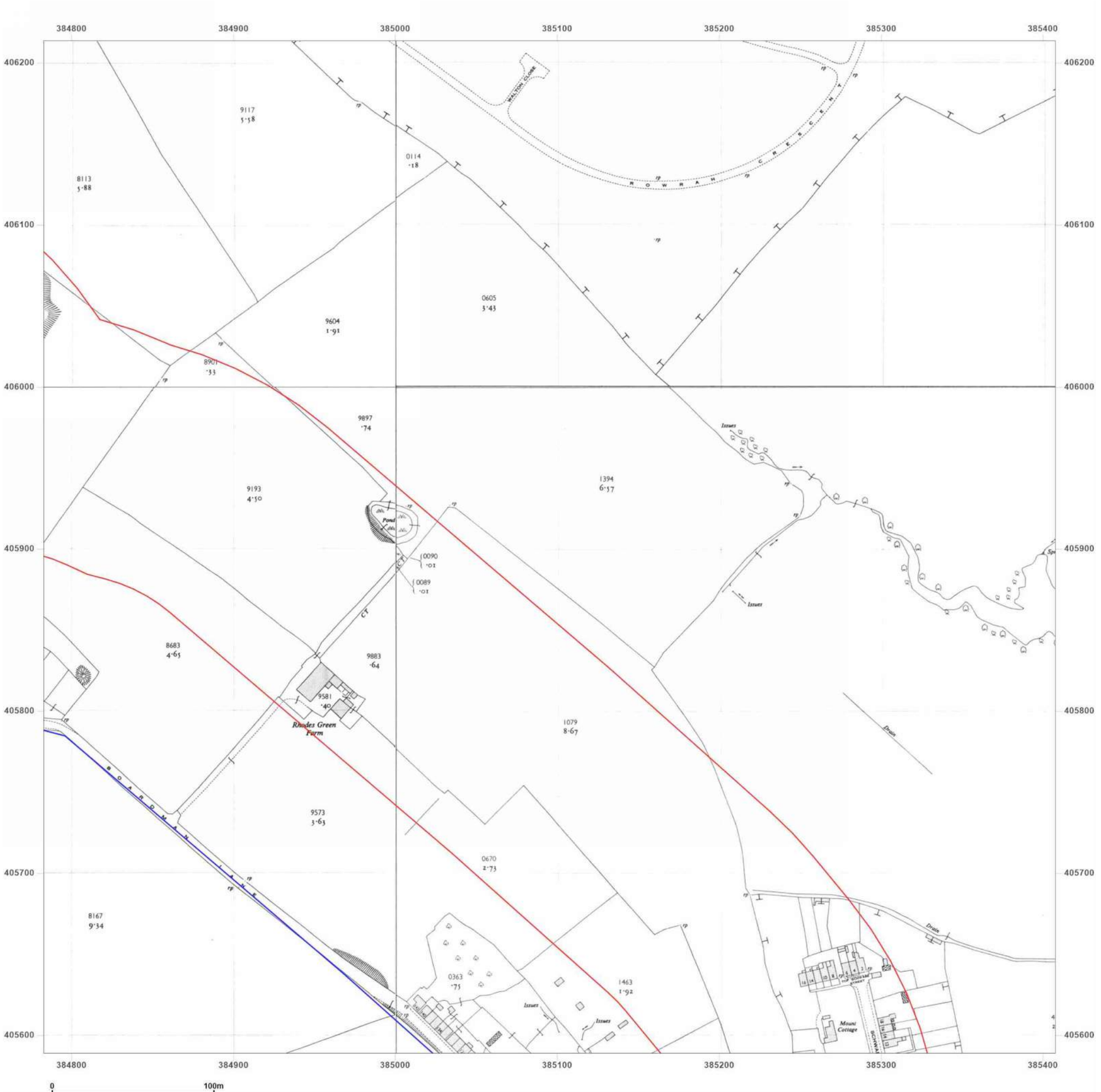
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: National Grid

Map date: **1954**

Scale: 1:2,500

Printed at: 1:2,500

N
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Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition 1955
Copyright N/A
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_LS_2_2
Grid Ref: 385095, 405901

Map Name: National Grid

Map date: **1965-1967**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1965
Revised 1965
Edition N/A
Copyright 1968
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
Levelled 1962

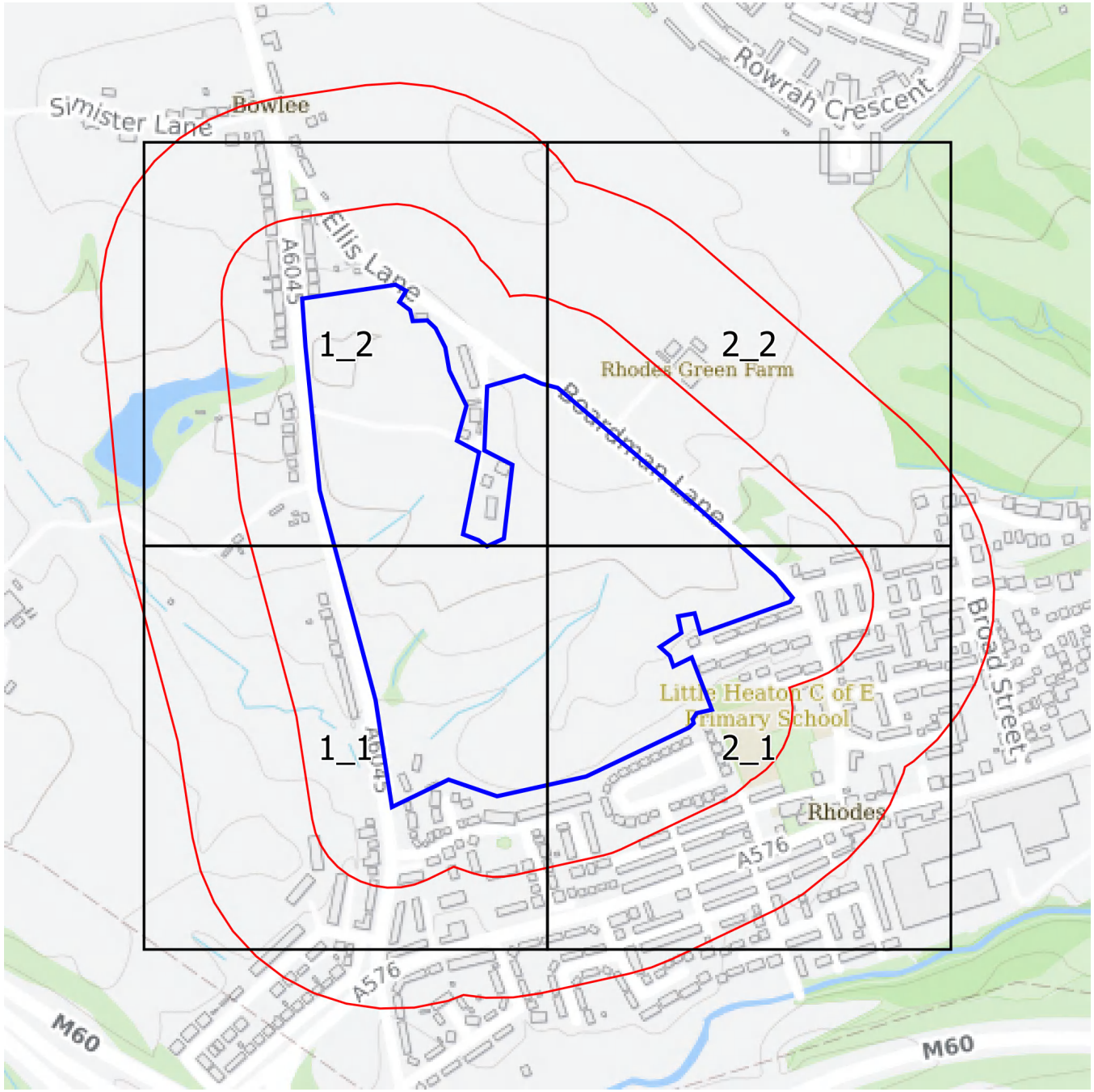
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

Map Name: National Grid

Map date: **1954**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

Map Name: National Grid

Map date: **1955**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
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Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

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

Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

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

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Site Details:

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Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

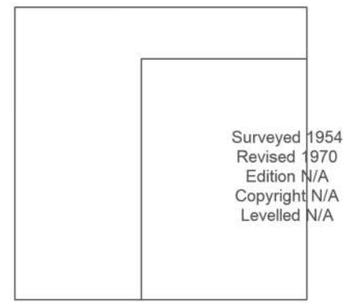
Map Name: National Grid

Map date: **1970**

Scale: 1:1,250

Printed at: 1:2,000

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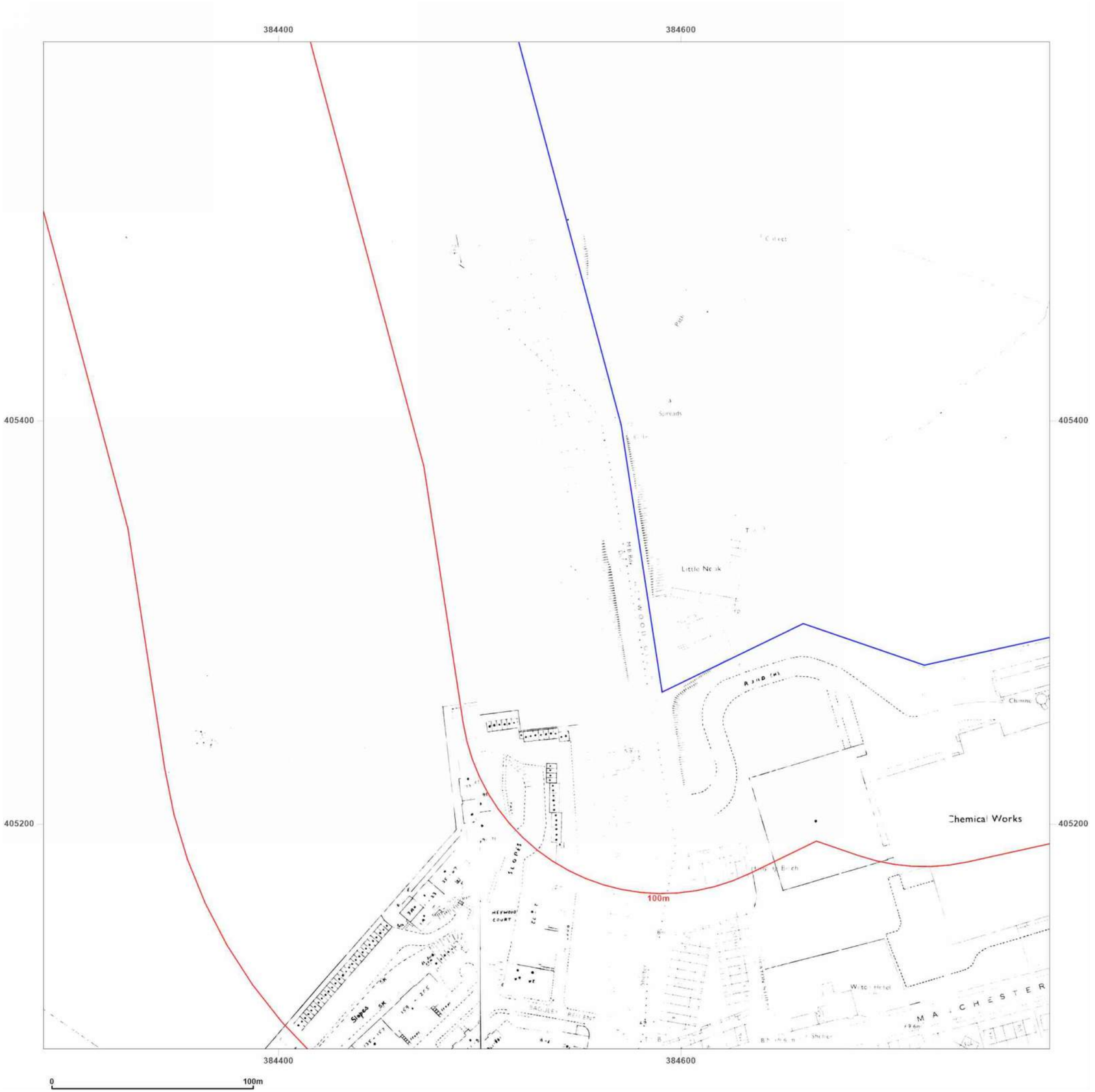
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Site Details:

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Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

Map Name: National Grid

Map date: **1976**

Scale: 1:1,250

Printed at: 1:2,000

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W E
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Copyright N/A
Levelled N/A

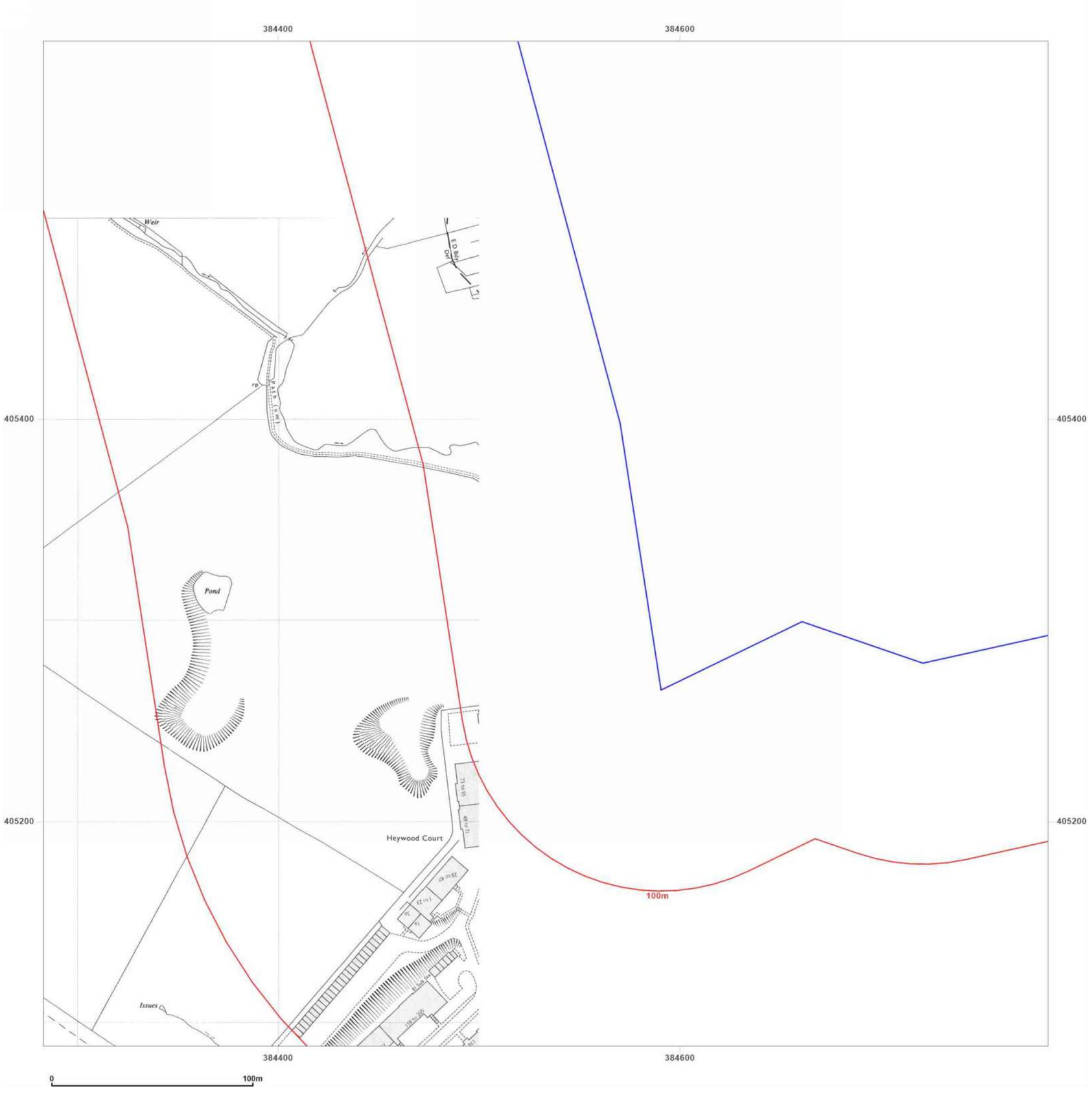
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Site Details:

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Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

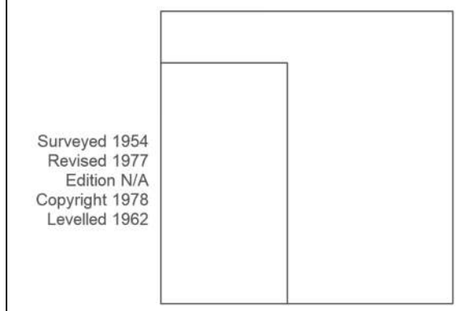
Map Name: National Grid

Map date: **1978**

Scale: 1:1,250

Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

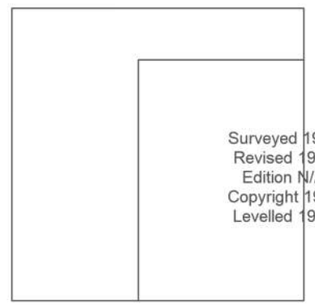
Map Name: National Grid

Map date: **1985**

Scale: 1:1,250

Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_1
Grid Ref: 384533, 405338

Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
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Edition N/A
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_2
Grid Ref: 384533, 405838

Map Name: National Grid

Map date: **1954-1955**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

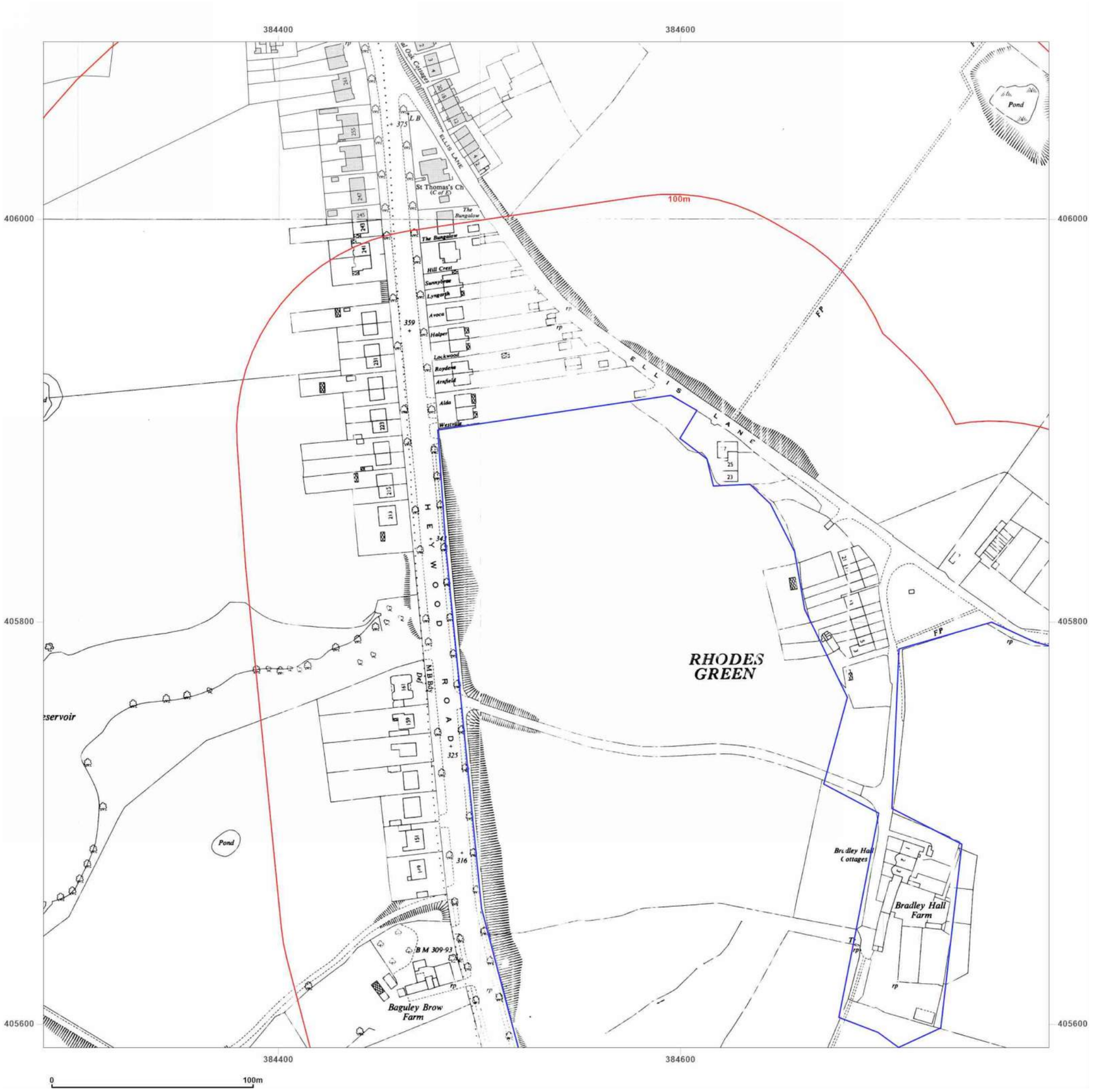
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_2
Grid Ref: 384533, 405838

Map Name: National Grid

Map date: **1954-1955**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
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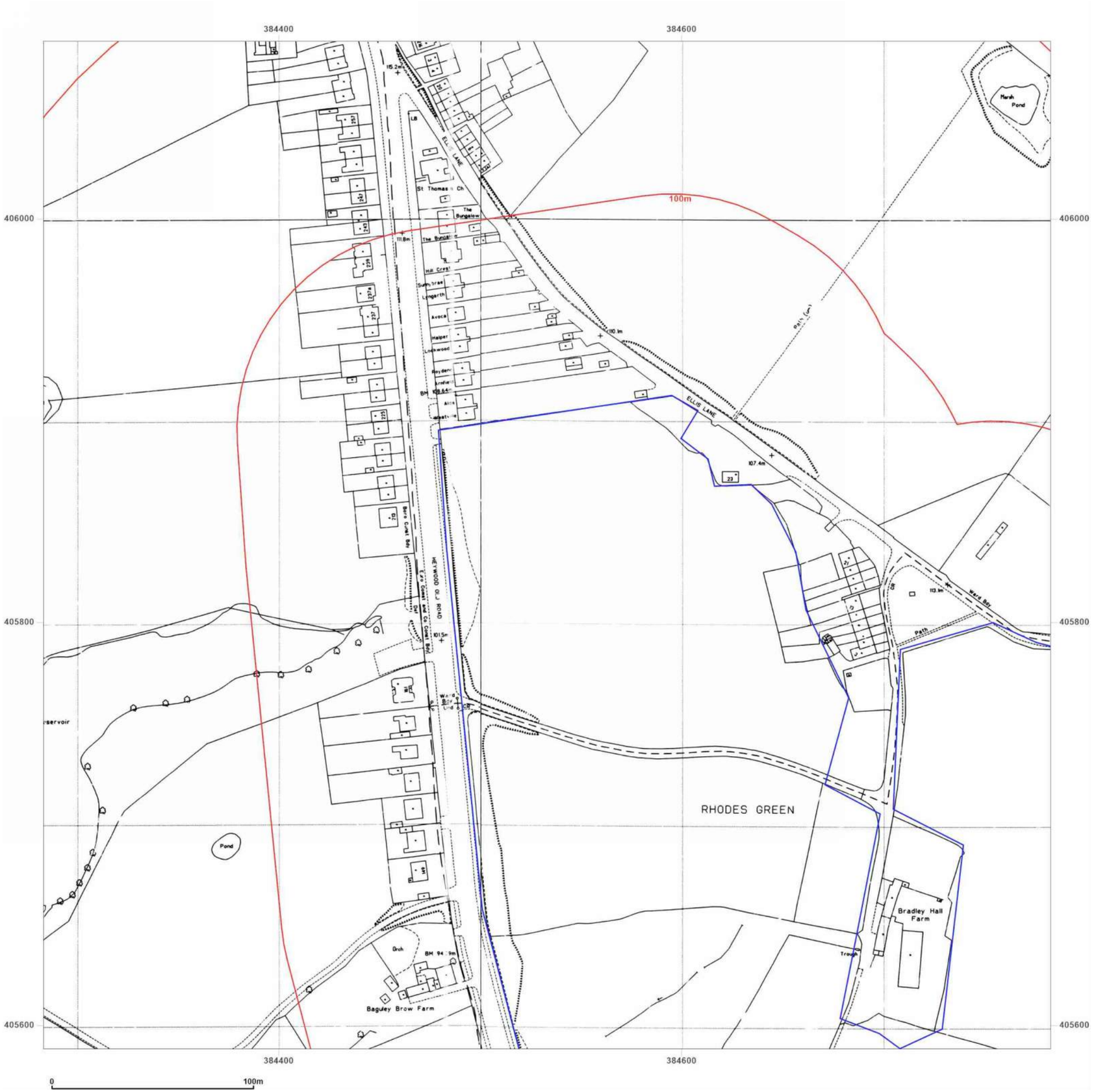
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_1_2
Grid Ref: 384533, 405838

Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1954**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1954
Revised 1954
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1955**

Scale: 1:1,250

Printed at: 1:2,000

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

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

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1968-1970**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1954
Revised 1967
Edition N/A
Copyright 1968
Levelled 1962

Surveyed 1954
Revised 1970
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1954
Revised 1967
Edition N/A
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

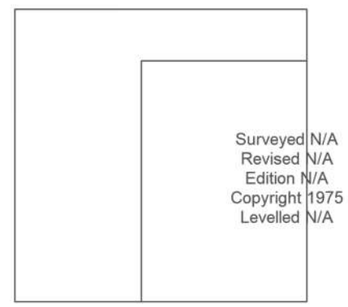
Map Name: National Grid

Map date: **1975**

Scale: 1:1,250

Printed at: 1:2,000

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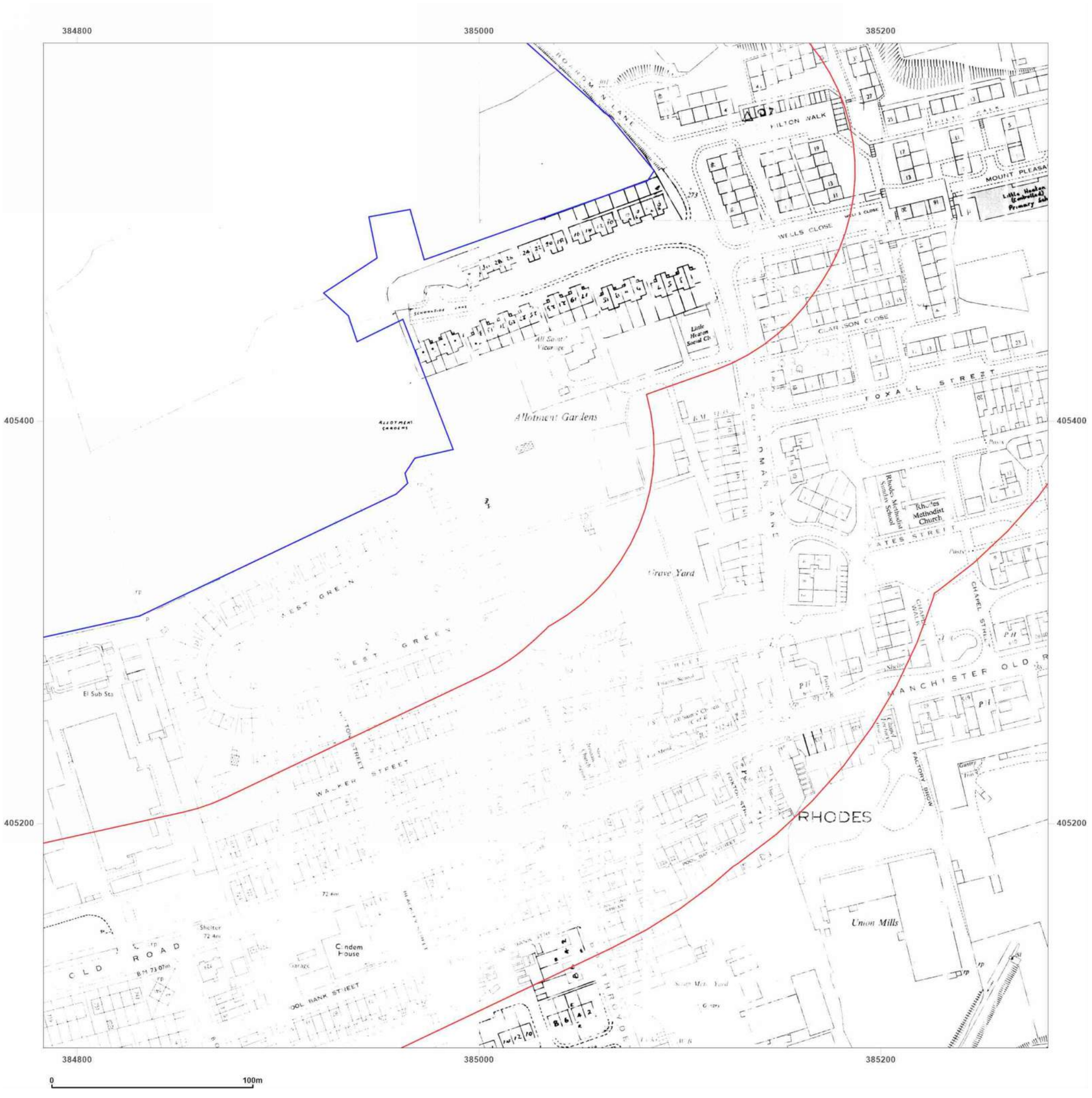
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1974-1976**

Scale: 1:1,250

Printed at: 1:2,000

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

Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1974 Levelled N/A

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

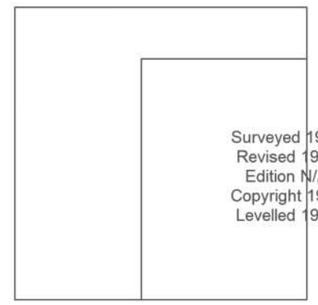
Map Name: National Grid

Map date: **1977**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

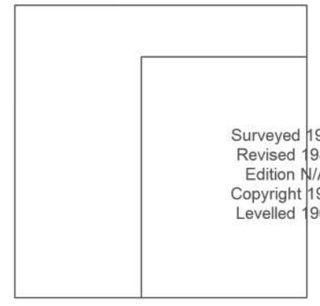
Map Name: National Grid

Map date: **1985**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1985**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1962	Surveyed 1985
Revised 1985	Revised 1985
Edition N/A	Edition N/A
Copyright 1985	Copyright 1985
Levelled 1962	Levelled N/A

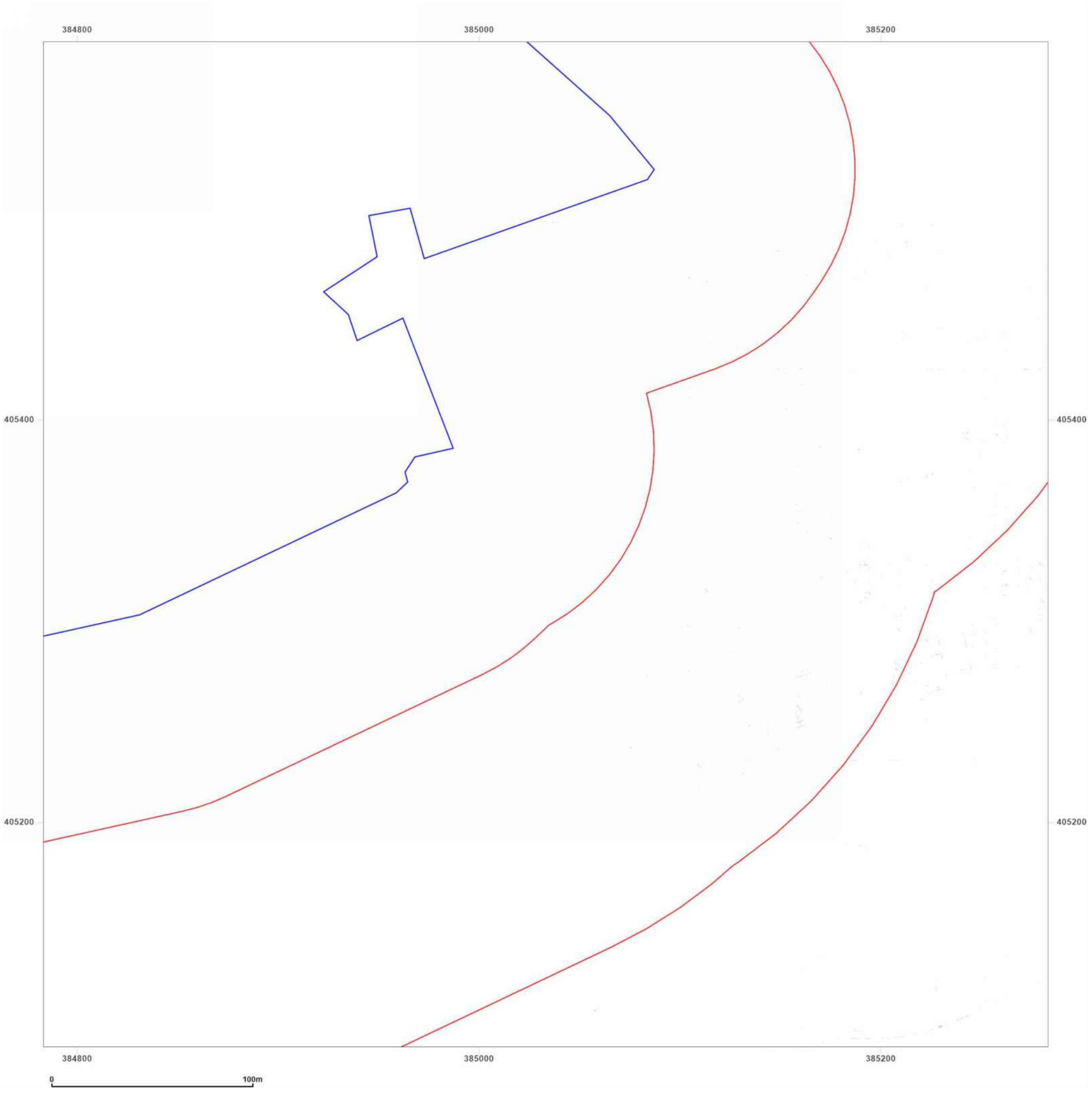
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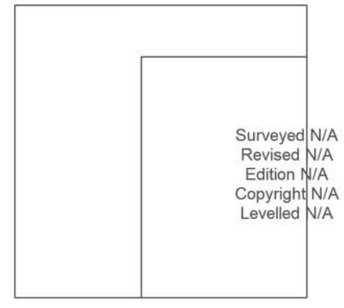
Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid
Map date: **1991**
Scale: 1:1,250
Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

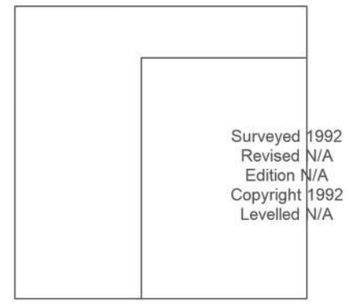
Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

Map Name: National Grid

Map date: **1990-1992**

Scale: 1:1,250

Printed at: 1:2,000

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Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
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Surveyed N/A
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

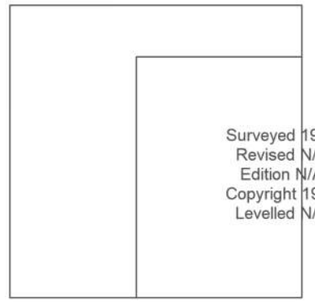
Map Name: National Grid

Map date: **1994**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_1
Grid Ref: 385033, 405338

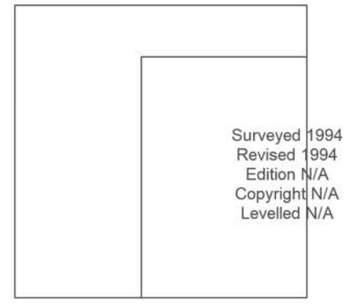
Map Name: National Grid

Map date: **1994**

Scale: 1:1,250

Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_2
Grid Ref: 385033, 405838

Map Name: National Grid
Map date: **1954**
Scale: 1:1,250
Printed at: 1:2,000

N
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Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1948

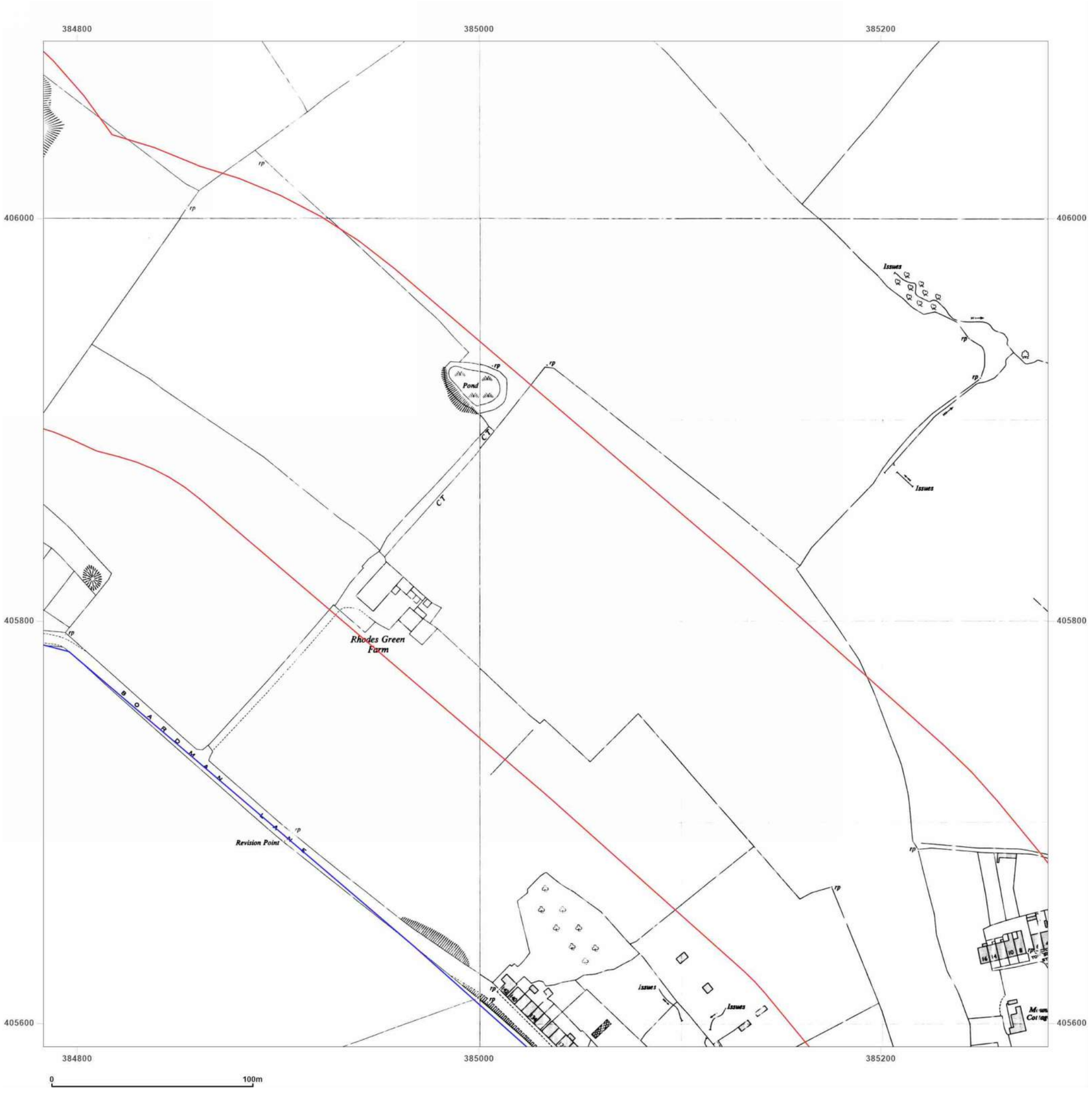
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_2
Grid Ref: 385033, 405838

Map Name: National Grid
Map date: **1955**
Scale: 1:1,250
Printed at: 1:2,000

N
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Surveyed 1954
Revised N/A
Edition N/A
Copyright 1955
Levelled 1927

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

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

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Revised N/A
Edition N/A
Copyright N/A
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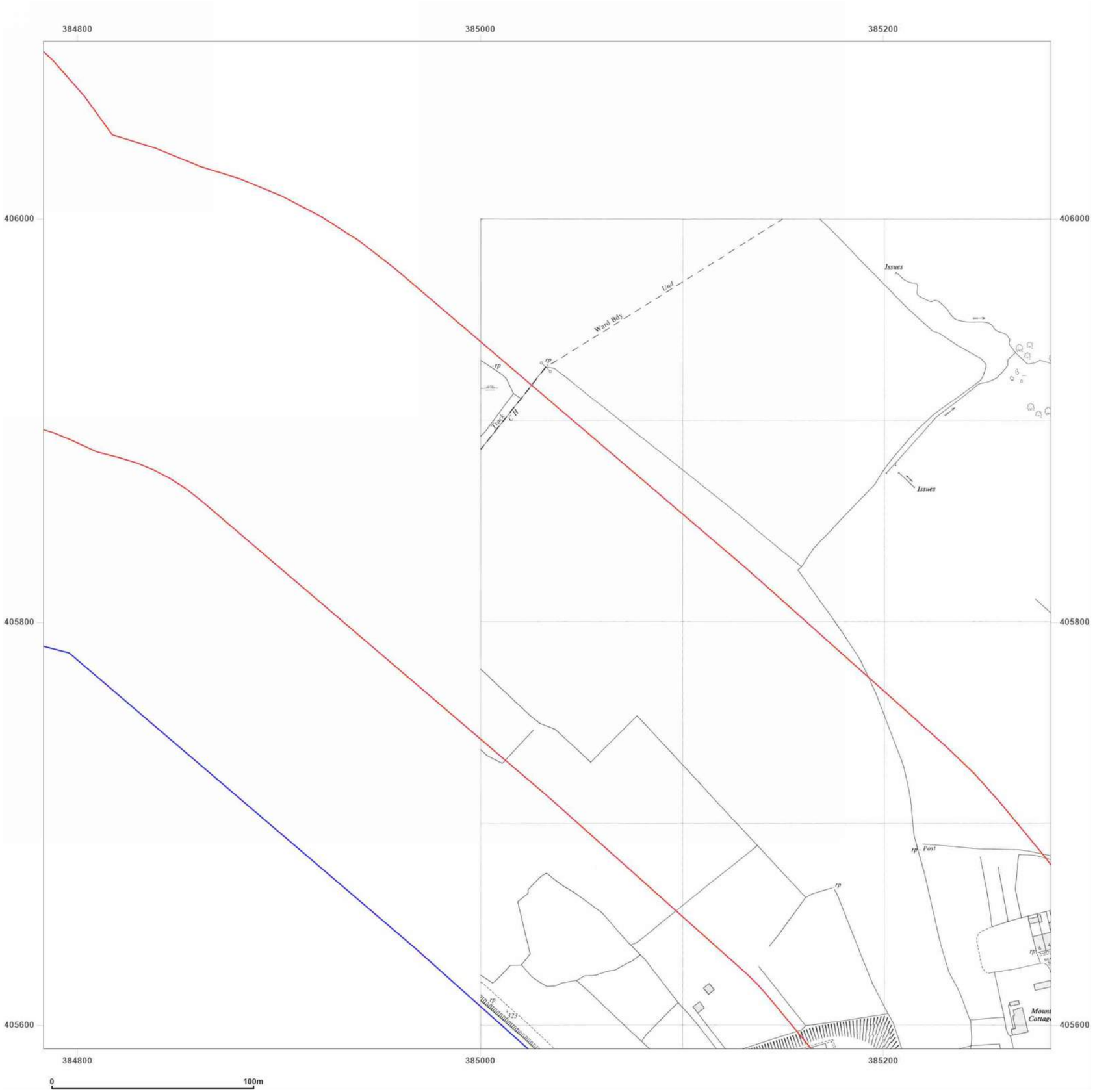
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_2
Grid Ref: 385033, 405838

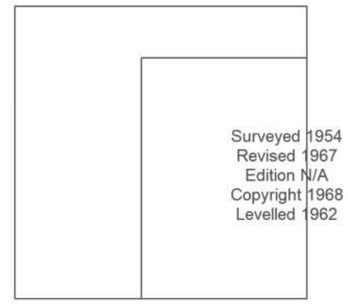
Map Name: National Grid

Map date: **1968**

Scale: 1:1,250

Printed at: 1:2,000

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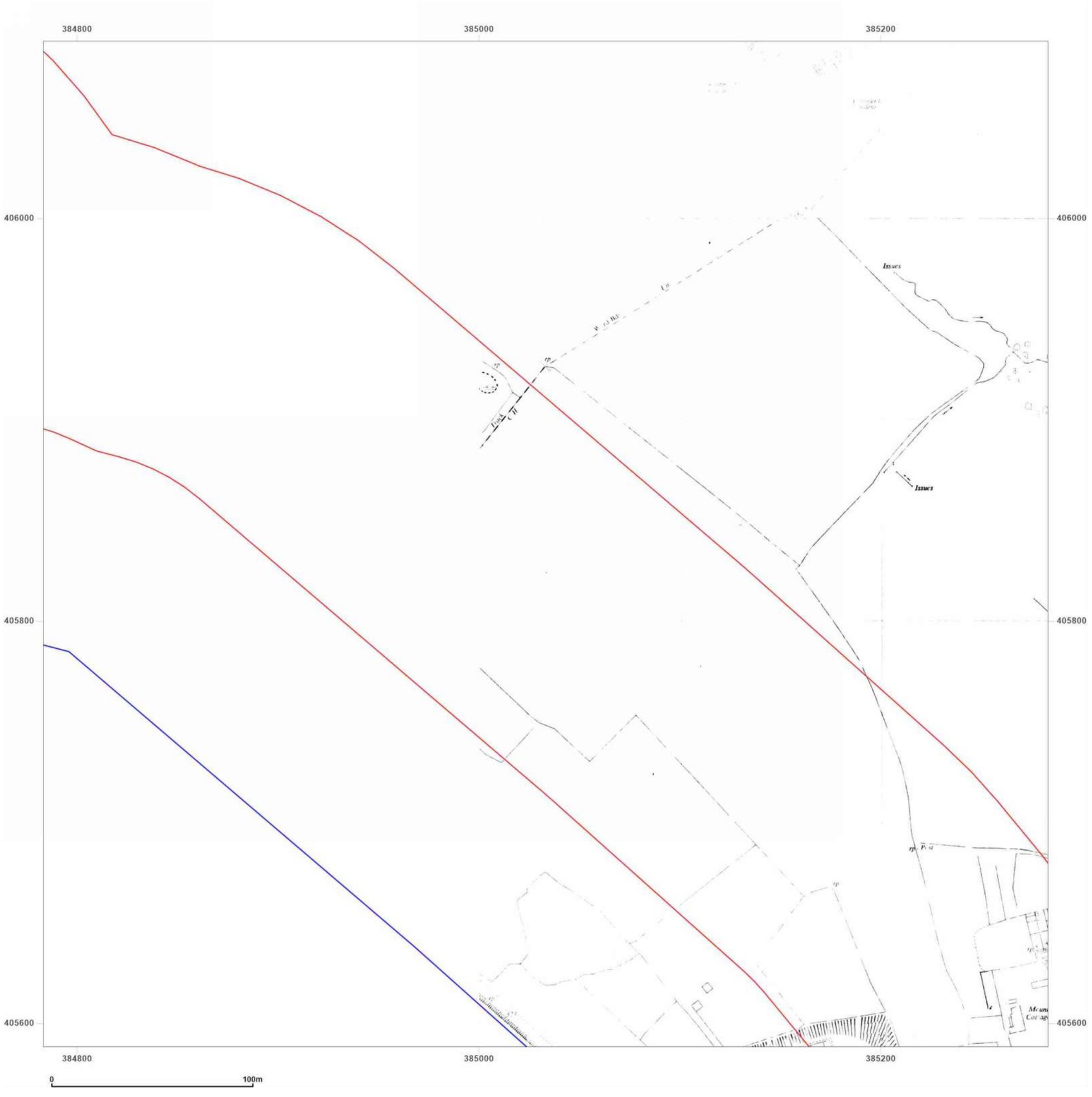
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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_2
Grid Ref: 385033, 405838

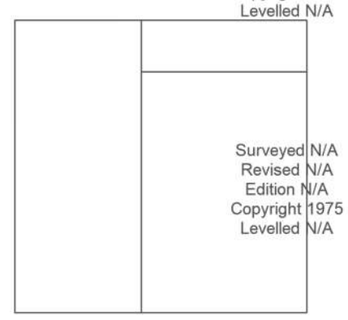
Map Name: National Grid

Map date: **1975**

Scale: 1:1,250

Printed at: 1:2,000

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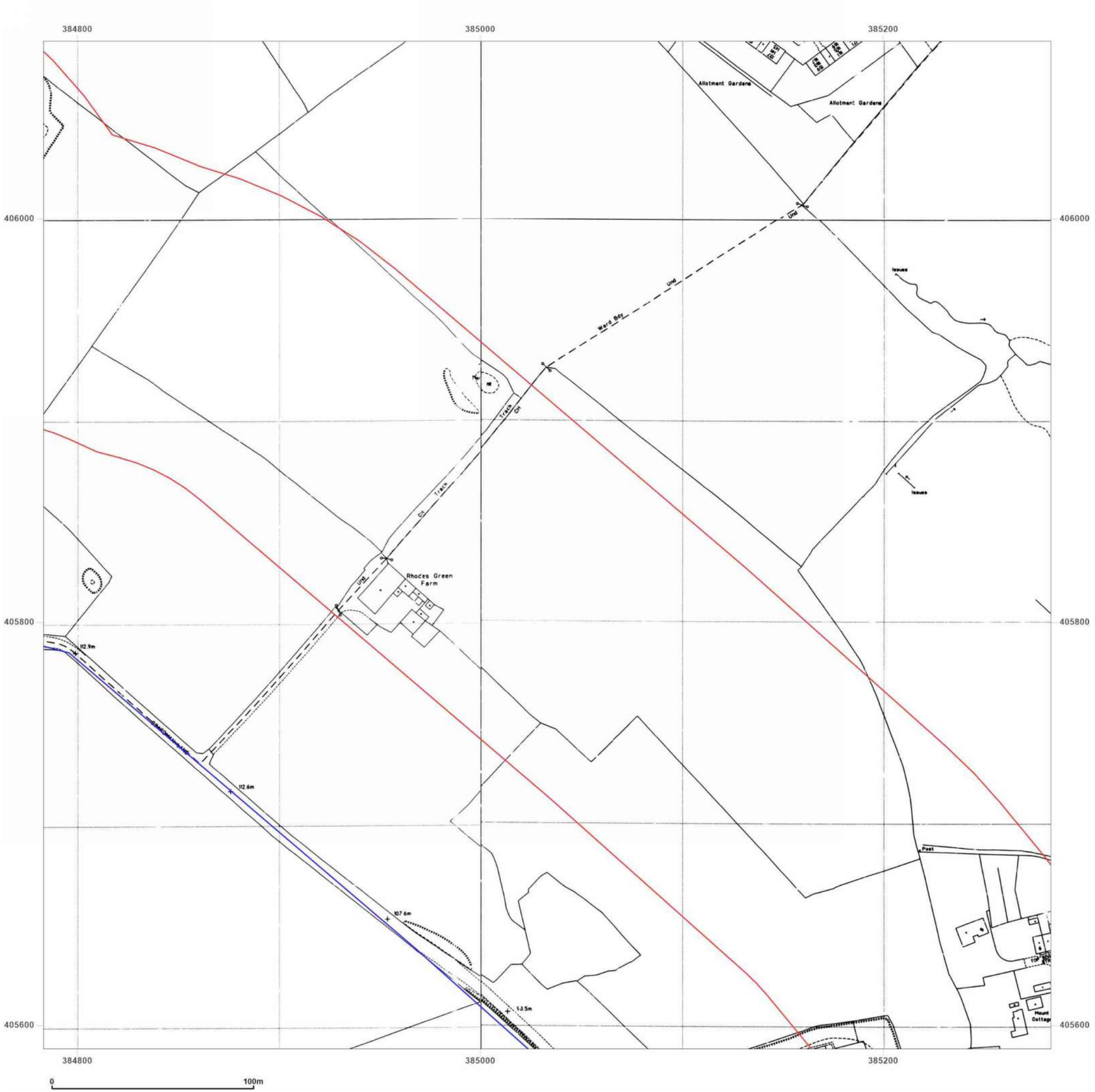
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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_1250_2_2
Grid Ref: 385033, 405838

Map Name: National Grid

Map date: **1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

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Edition N/A
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Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

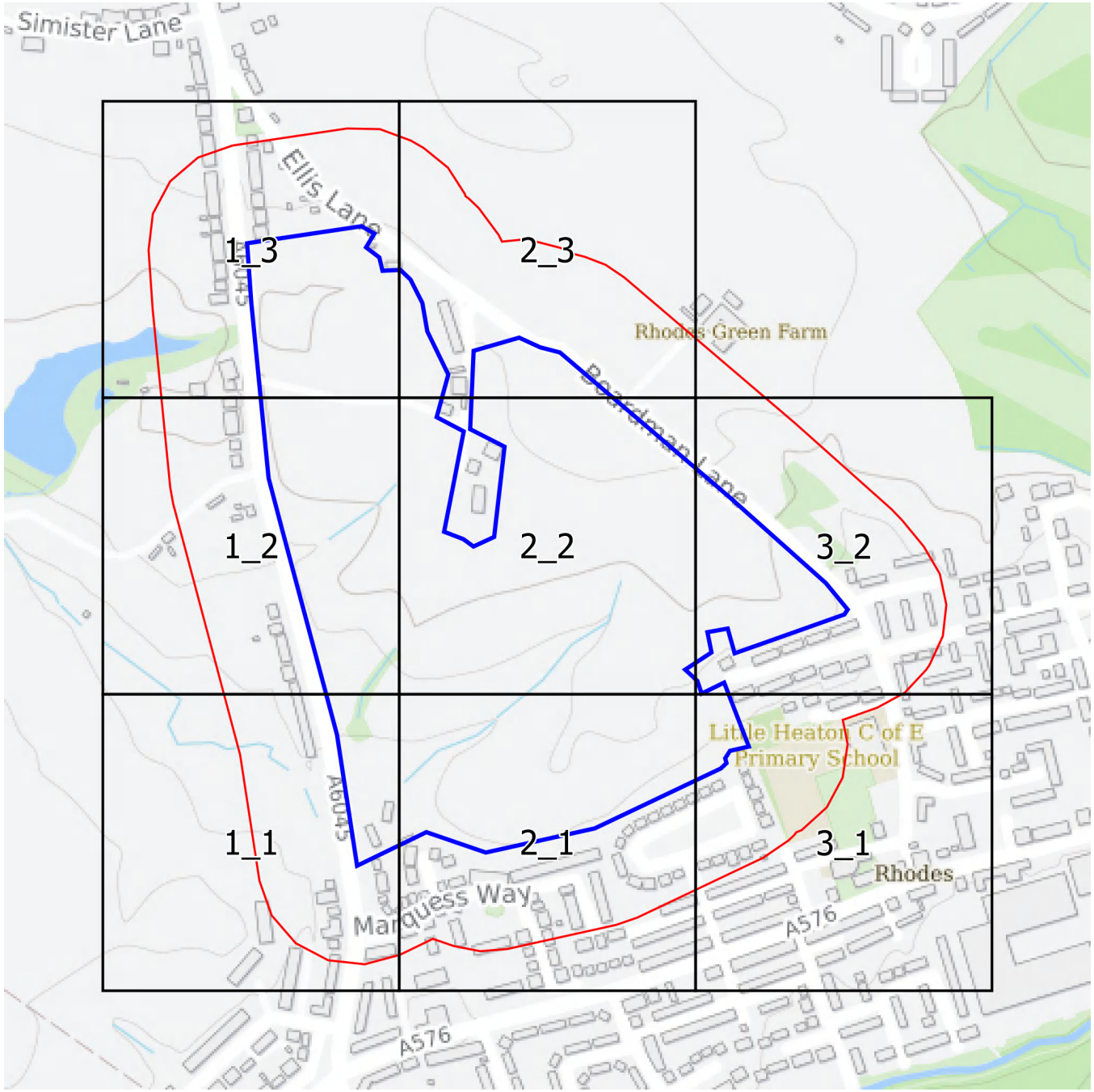
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Landline Scale Grid Index





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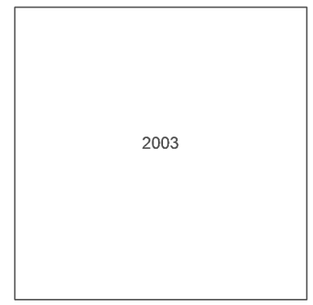
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Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_1_1
Grid Ref: 384483, 405288

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_1_2
Grid Ref: 384483, 405588

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Groundsure INSIGHTS

Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_1_3
Grid Ref: 384483, 405888

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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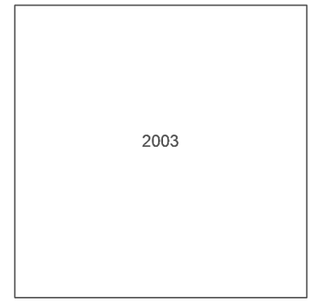
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Report Ref: GS-W9L-47U-6VL-FVW_Landline_2_1
Grid Ref: 384783, 405288

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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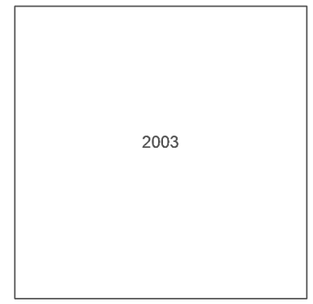
Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_2_2
Grid Ref: 384783, 405588

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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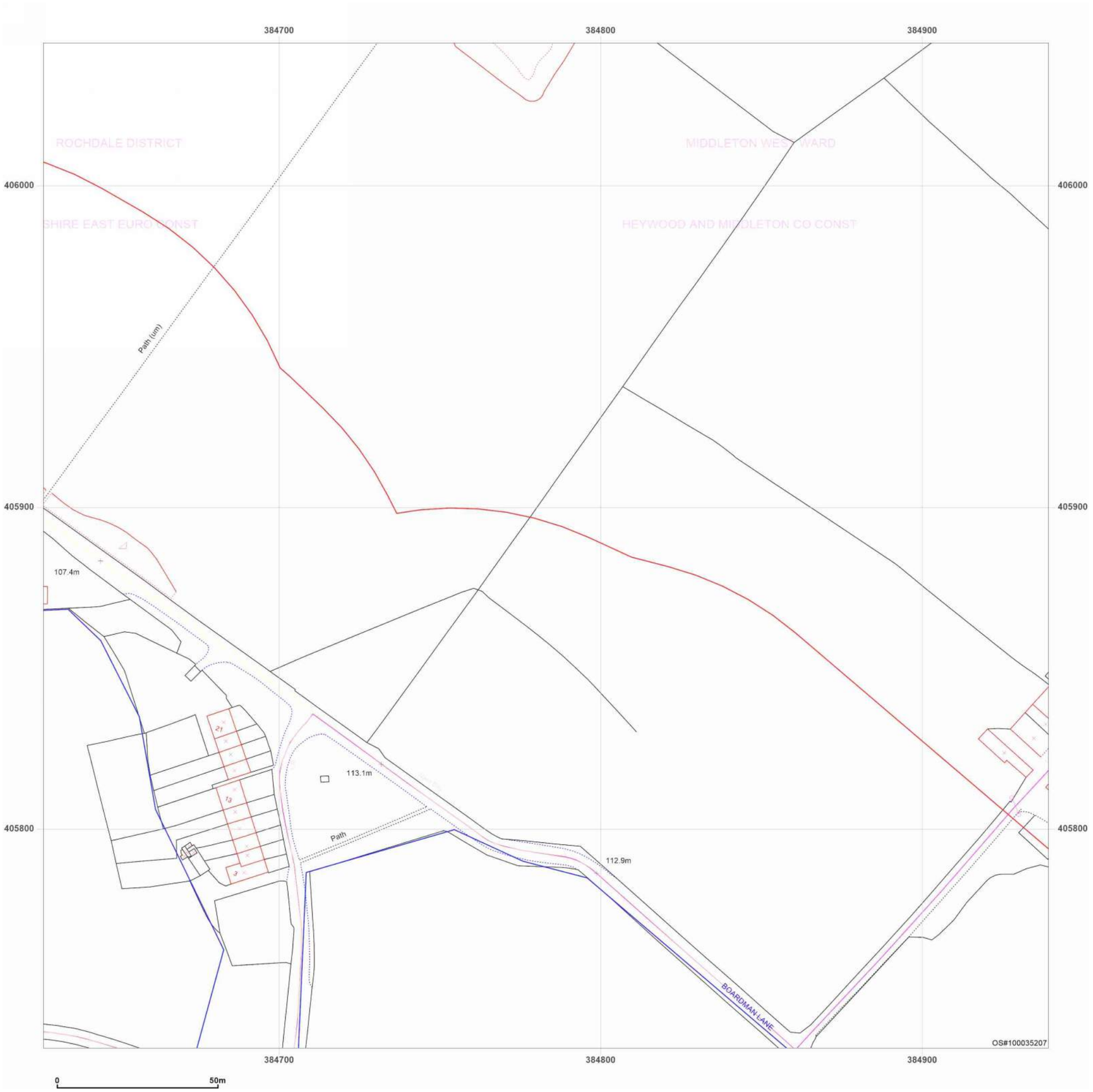
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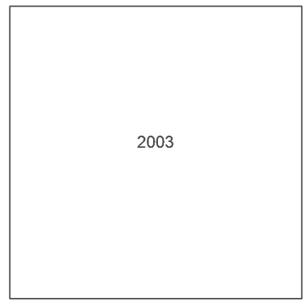
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Report Ref: GS-W9L-47U-6VL-FVW_Landline_2_3
Grid Ref: 384783, 405888

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_3_1
Grid Ref: 385083, 405288

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Site Details:

Northern Gateway Eastern Parcel

Client Ref: 784-B048805
Report Ref: GS-W9L-47U-6VL-FVW_Landline_3_2
Grid Ref: 385083, 405588

Map Name: LandLine
Map date: **2003**
Scale: 1:1,250
Printed at: 1:1,250

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

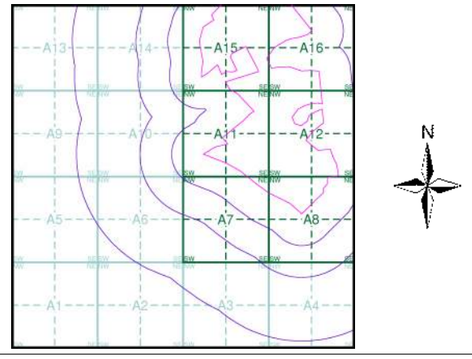
1:10,000 Raster Mapping

Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	2
Lancashire And Furness	1:10,560	1894	3
Lancashire And Furness	1:10,560	1910	4
Lancashire And Furness	1:10,560	1923	5
Lancashire And Furness	1:10,560	1932 - 1933	6
Lancashire And Furness	1:10,560	1938	7
Ordnance Survey Plan	1:10,000	1955 - 1956	8
Ordnance Survey Plan	1:10,000	1965 - 1968	9
Ordnance Survey Plan	1:10,000	1974 - 1979	10
Ordnance Survey Plan	1:10,000	1983 - 1986	11
10K Raster Mapping	1:10,000	1999	12
Street View	Variable		13

Historical Map - Slice A



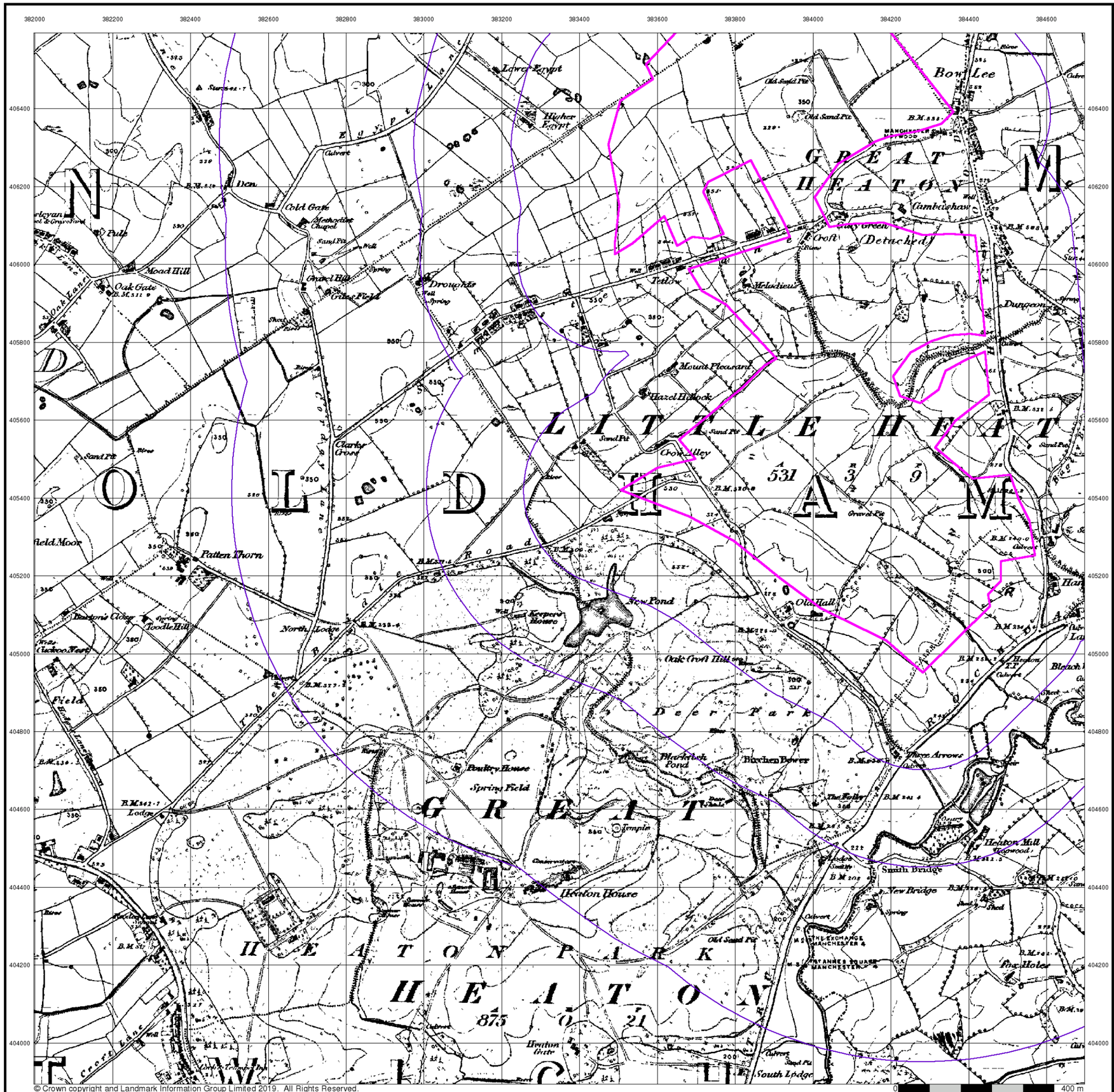
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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Lancashire And Furness

Published 1848

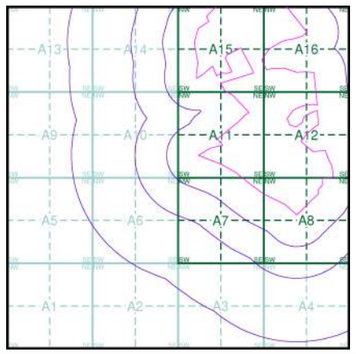
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

09600
1848
1:10,560

Historical Map - Slice A



Order Details

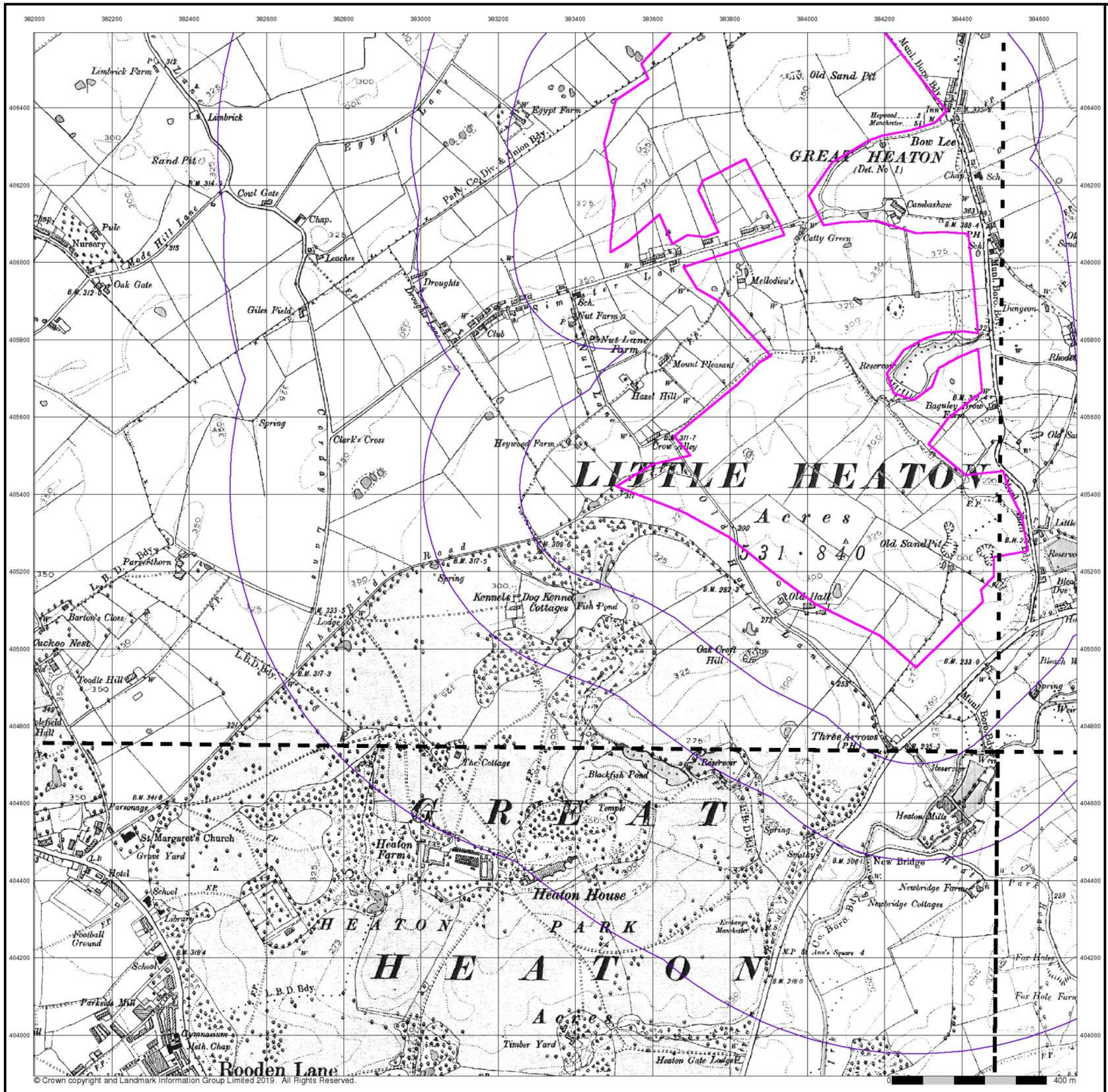
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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Lancashire And Furness

Published 1894

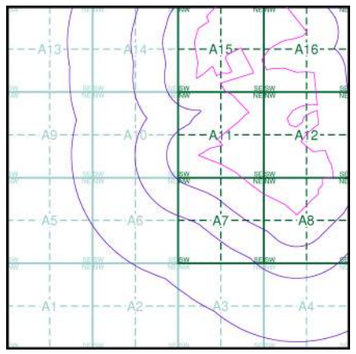
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

096NW 1894 1:10,560	096NE 1894 1:10,560
096SW 1894 1:10,560	096SE 1894 1:10,560

Historical Map - Slice A



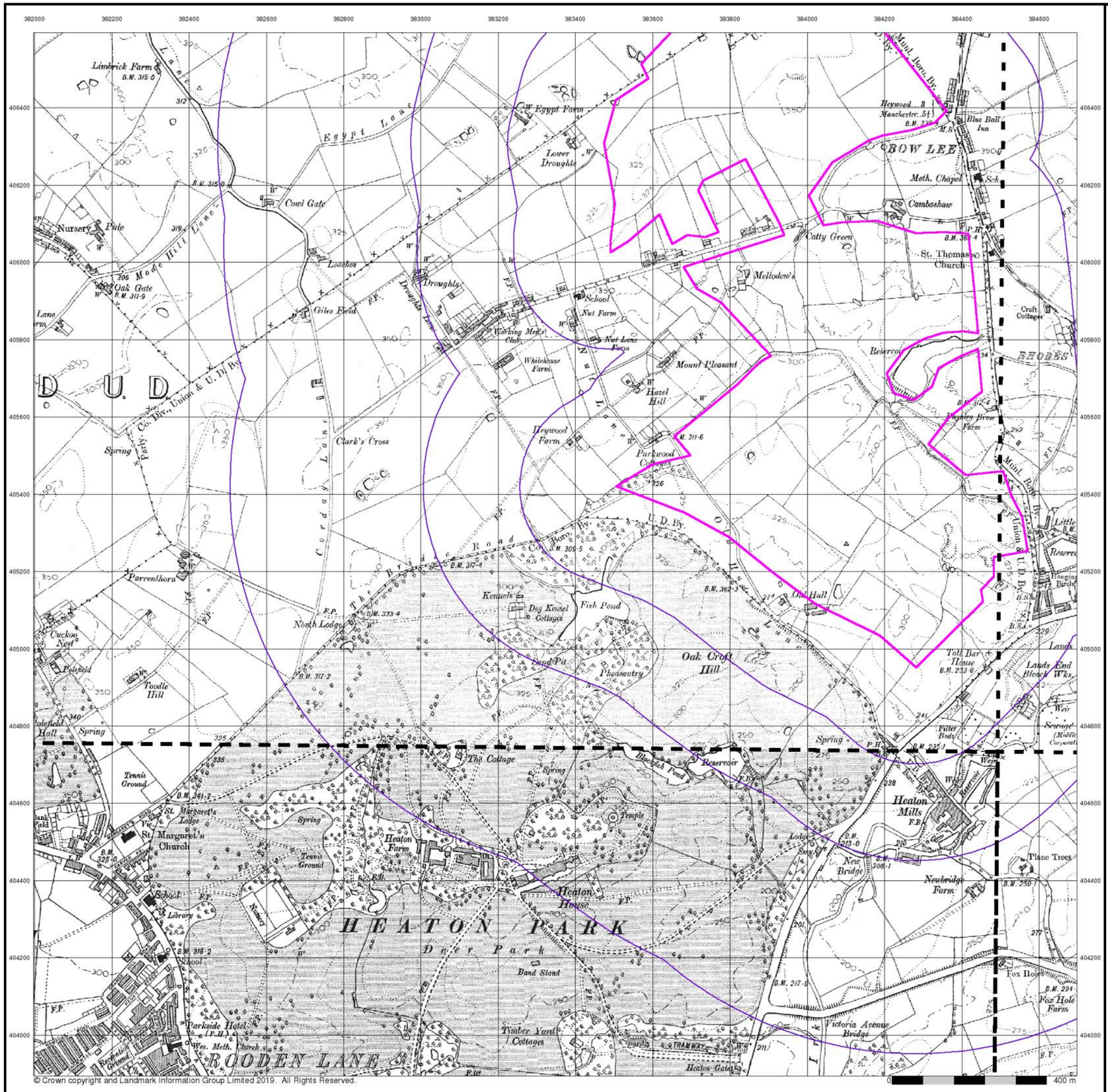
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National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Lancashire And Furness

Published 1910

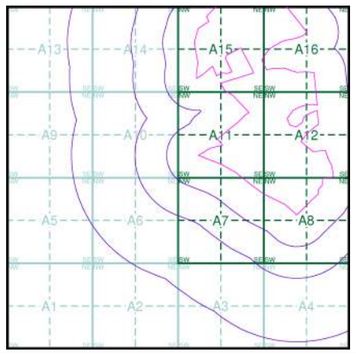
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

096NW 1910 1:10,560	096NE 1910 1:10,560
096SW 1910 1:10,560	096SE 1910 1:10,560

Historical Map - Slice A



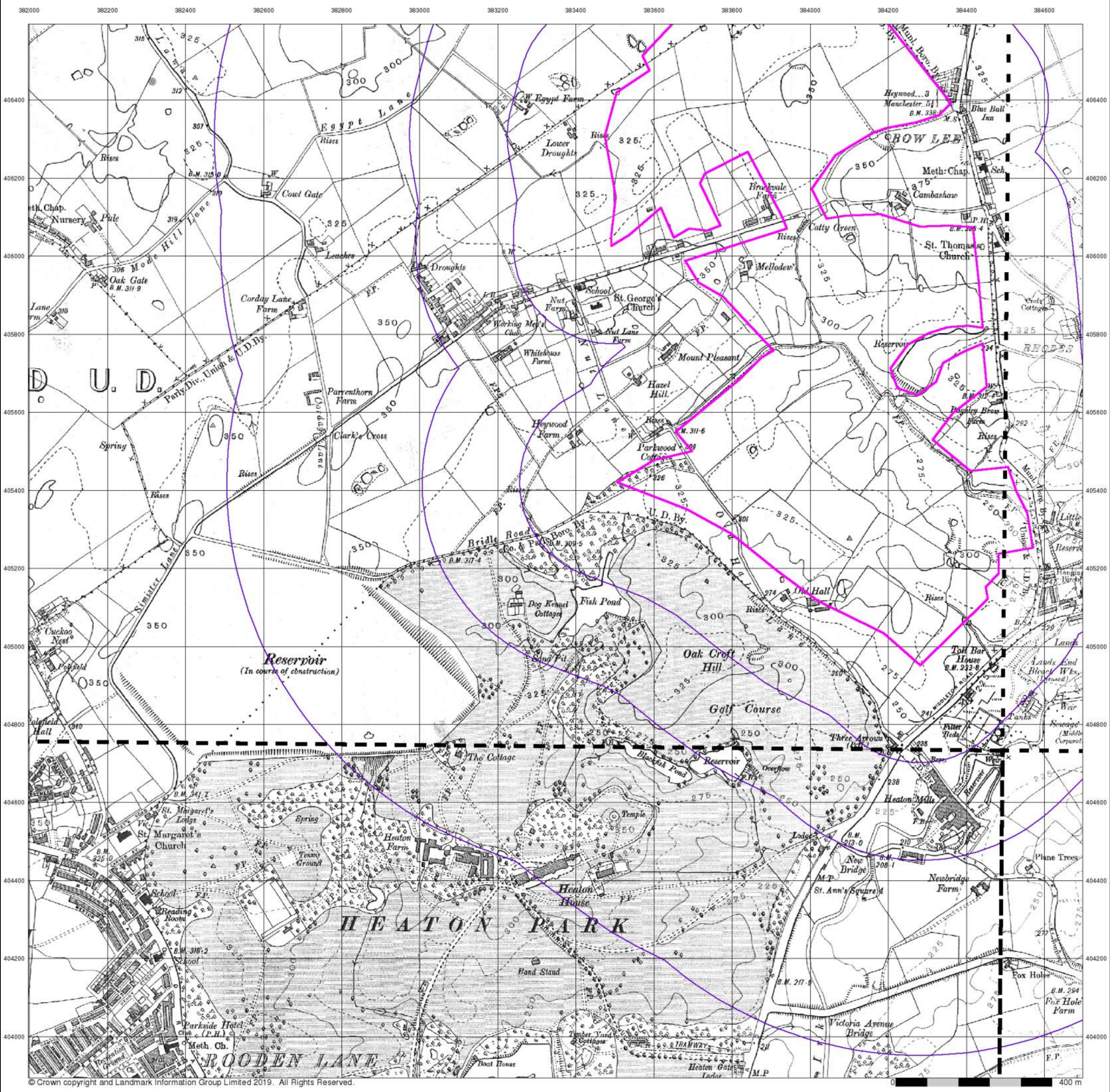
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National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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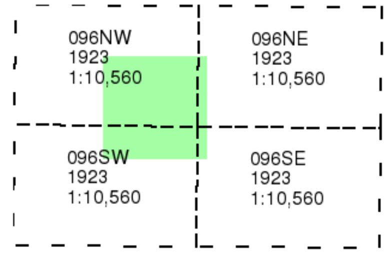
Lancashire And Furness

Published 1923

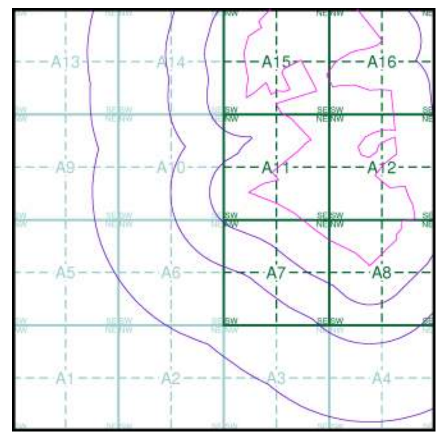
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



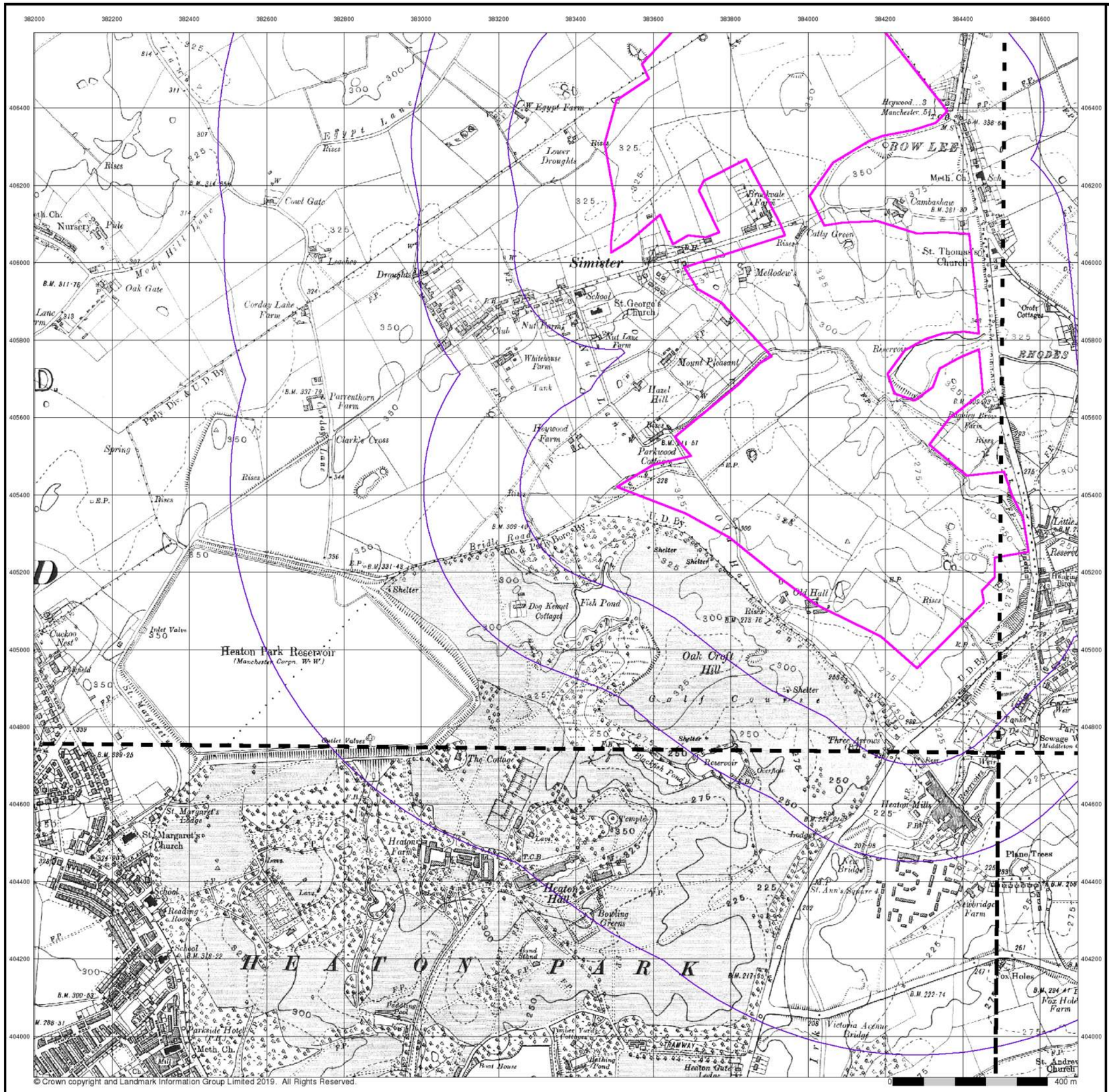
Order Details

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Customer Ref: A104444-1
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Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 1000

Site Details

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Lancashire And Furness

Published 1932 - 1933

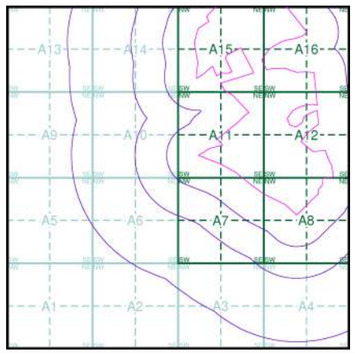
Source map scale - 1:10,560

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

Map Name(s) and Date(s)

096NW 1932 1:10,560	096NE 1932 1:10,560
096SW 1932 1:10,560	096SE 1933 1:10,560

Historical Map - Slice A



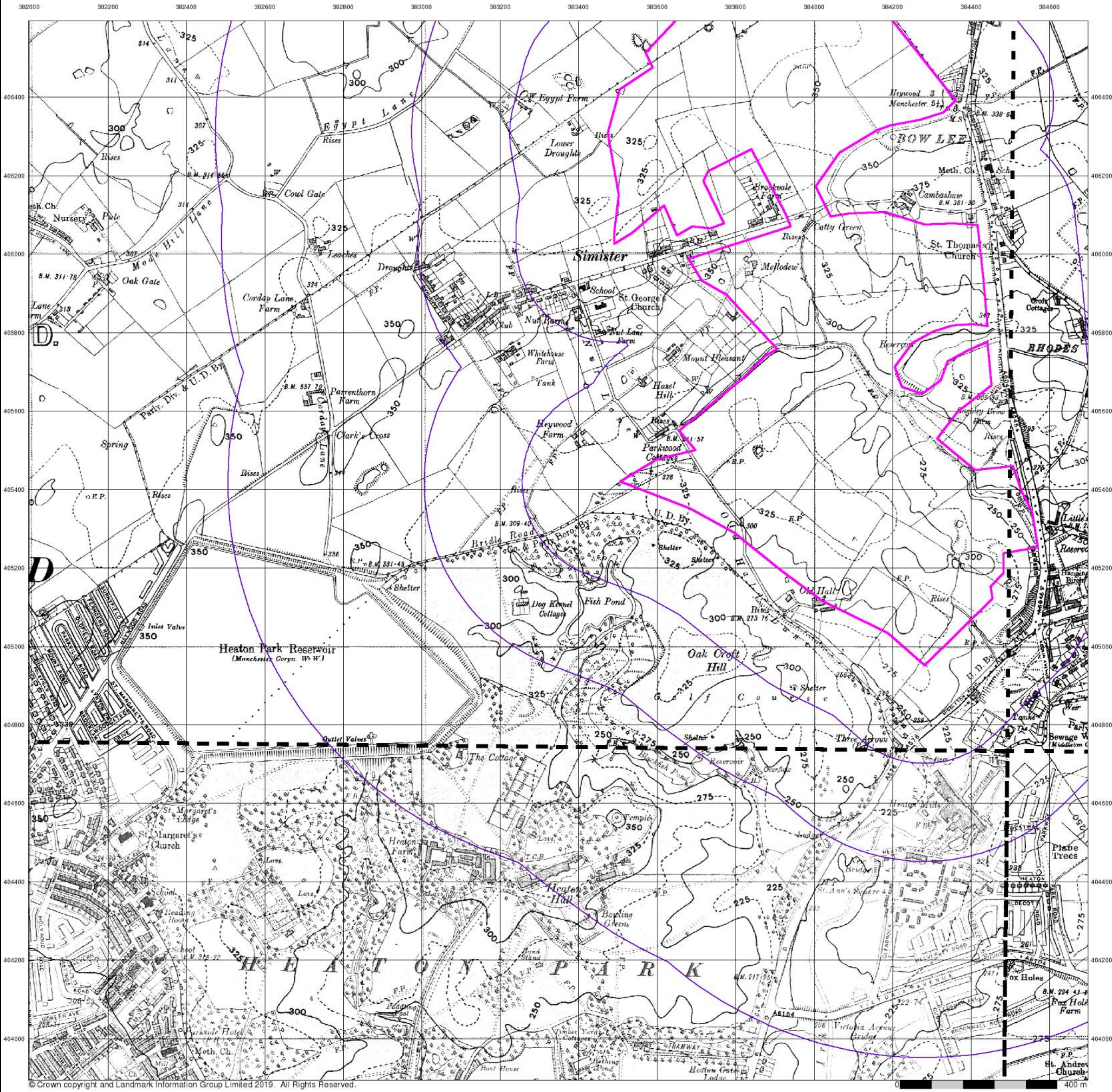
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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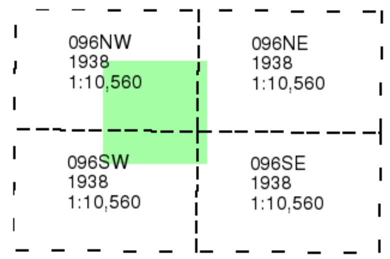
Lancashire And Furness

Published 1938

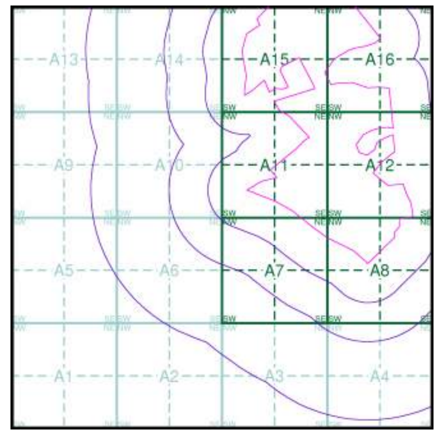
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



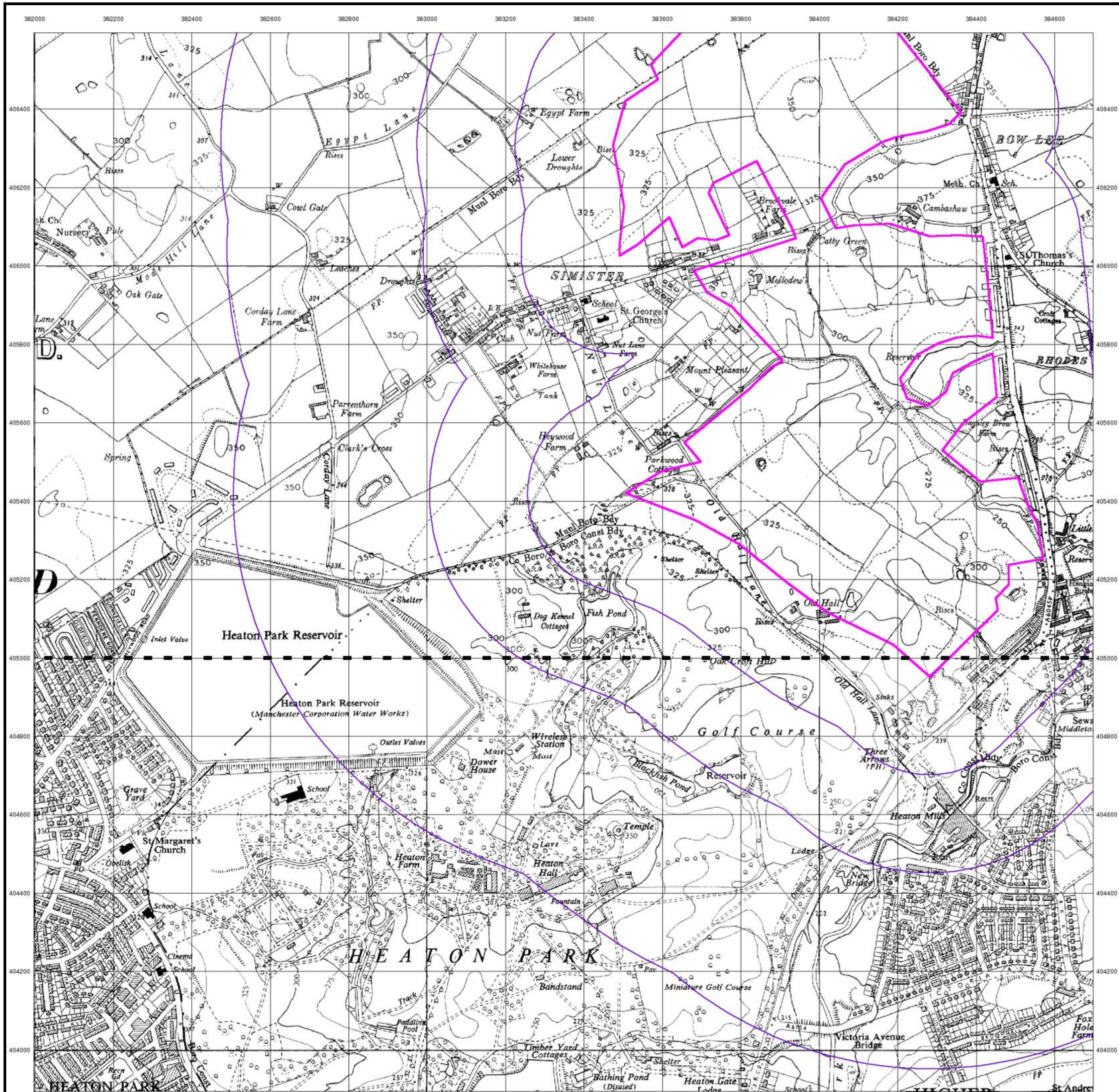
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 1000

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Ordnance Survey Plan

Published 1955 - 1956

Source map scale - 1:10,000

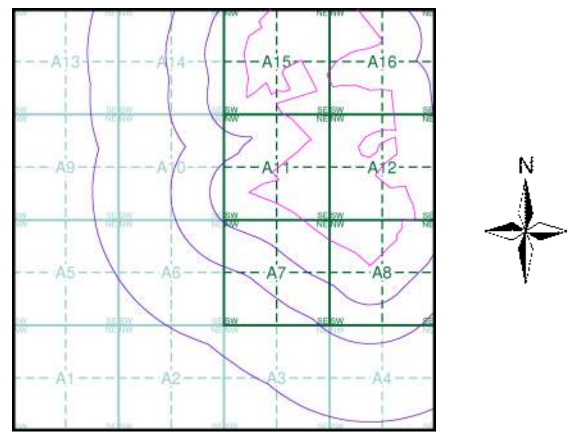
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)

SD80NW
1955
1:10,560

SD80SW
1956
1:10,560

Historical Map - Slice A



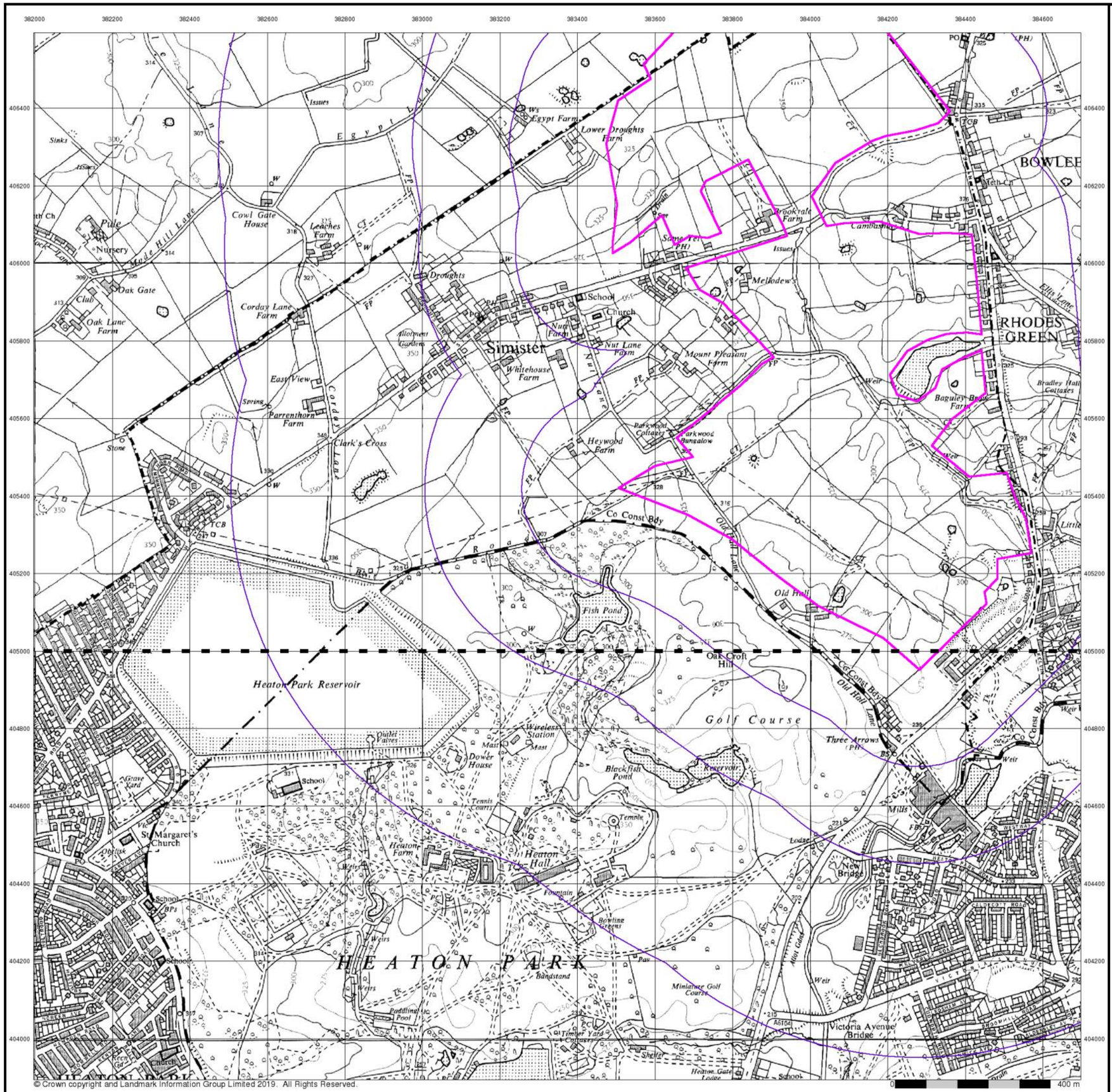
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan

Published 1965 - 1968

Source map scale - 1:10,000

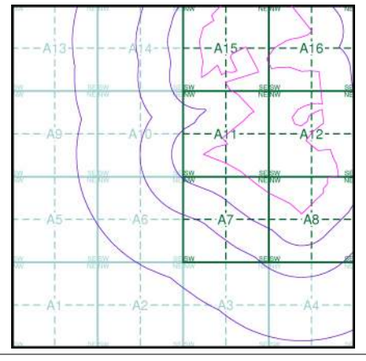
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)

SD80NW
1965
1:10,560

SD80SW
1968
1:10,560

Historical Map - Slice A



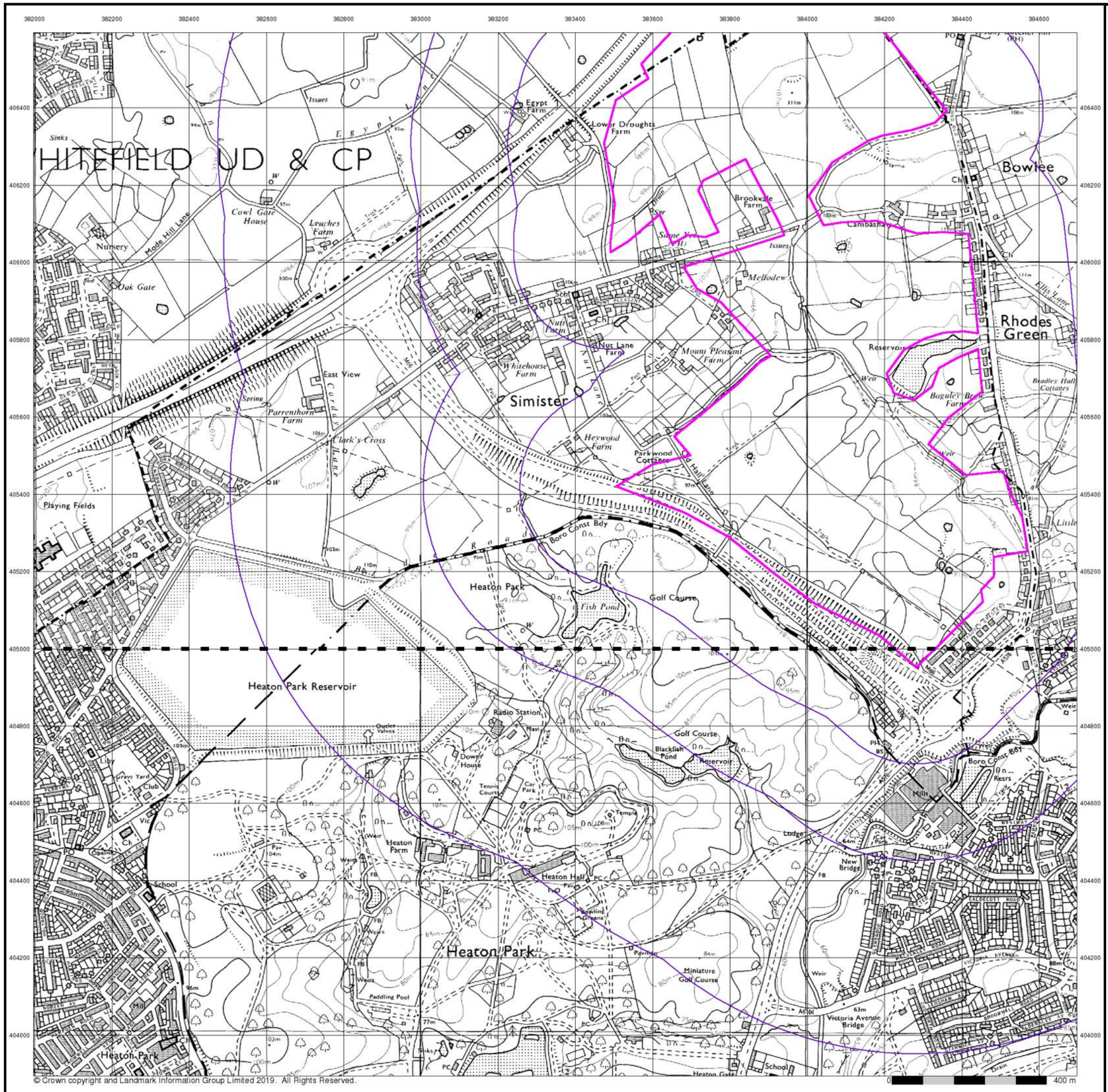
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Ordnance Survey Plan

Published 1974 - 1979

Source map scale - 1:10,000

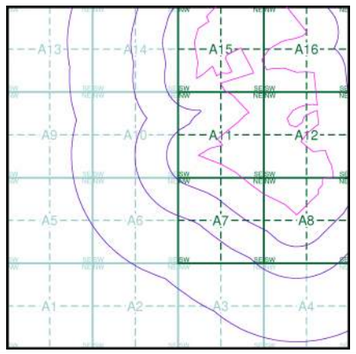
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)

SD80NW
1974
1:10,000

SD80SW
1979
1:10,000

Historical Map - Slice A



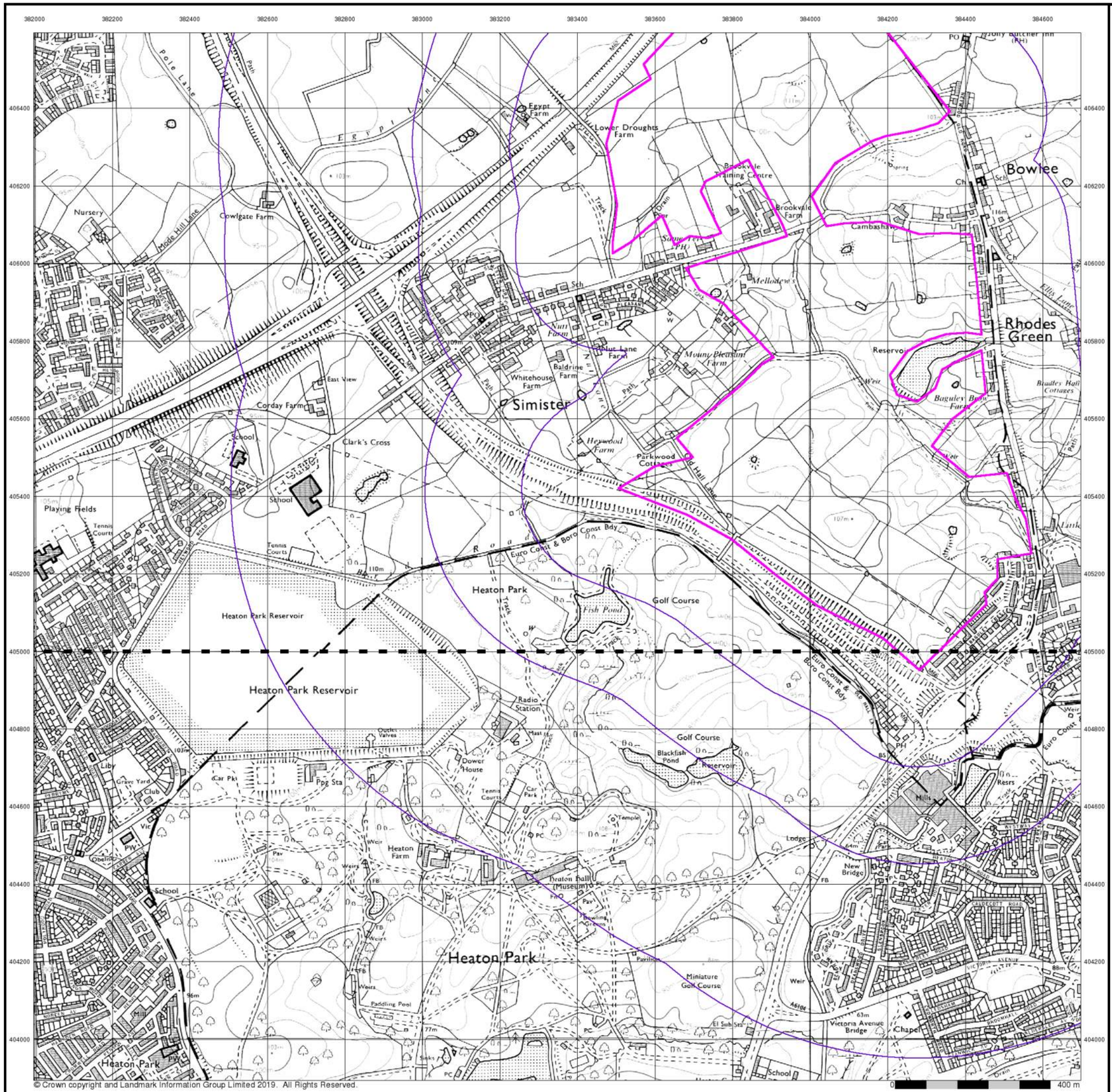
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Ordnance Survey Plan

Published 1983 - 1986

Source map scale - 1:10,000

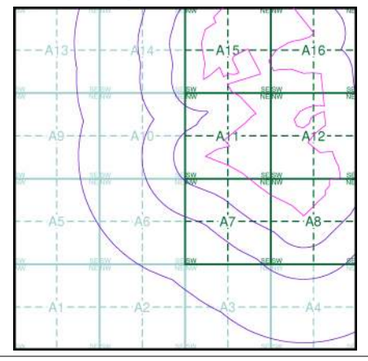
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some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

Map Name(s) and Date(s)

SD80NW
1983
1:10,000

SD80SW
1986
1:10,000

Historical Map - Slice A



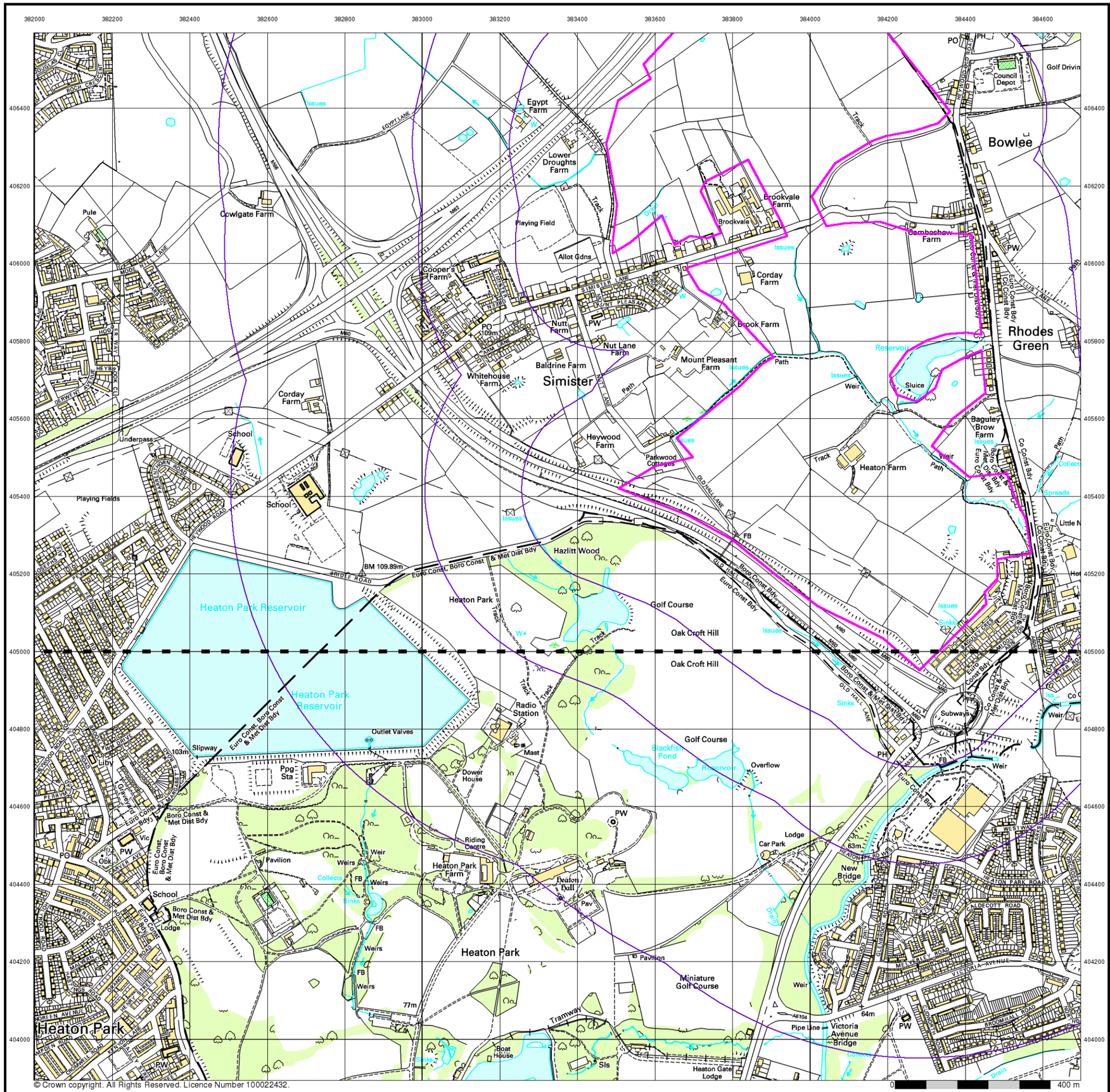
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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10k Raster Mapping

Published 1999

Source map scale - 1:10,000

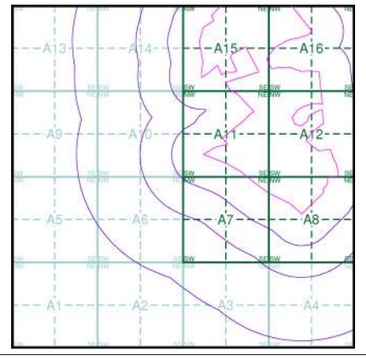
The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

Map Name(s) and Date(s)

SD80NW
1999
1:10,000

SD80SW
1999
1:10,000

Historical Map - Slice A



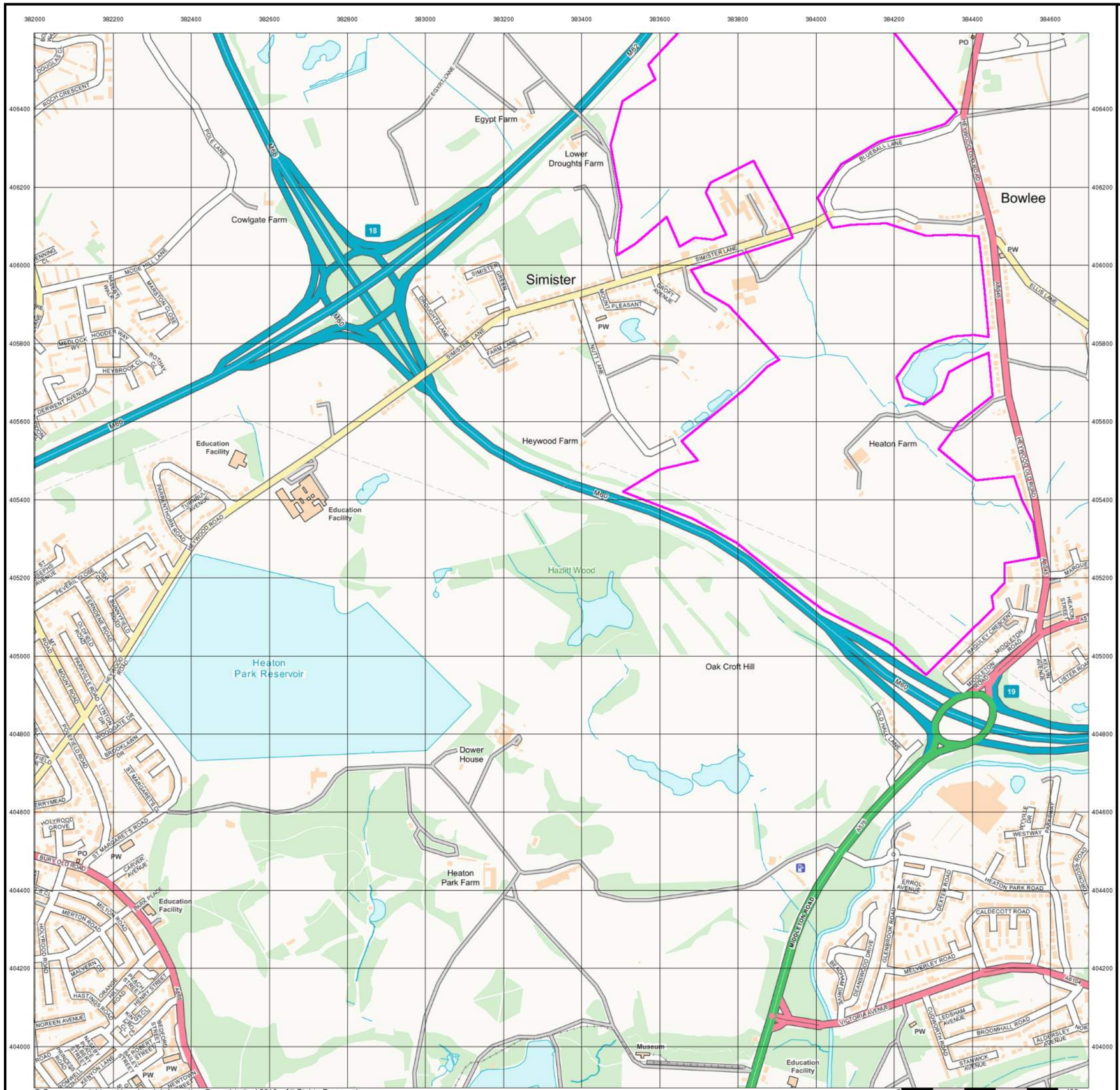
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

Site Details

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Street View

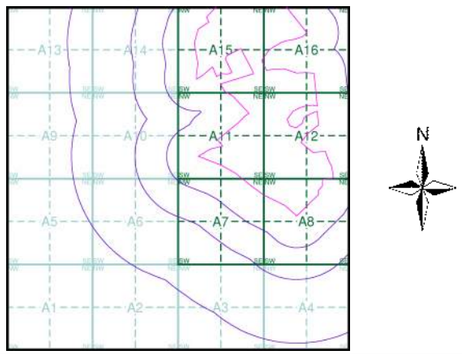
Published 2019

Source map scale - 1:10,000

Street View is a street-level map for the whole of Great Britain produced by the Ordnance Survey. These maps are provided at a nominal scale of 1:10,000

Map Name(s) and Date(s)

Street View Map - Slice A



Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	1000

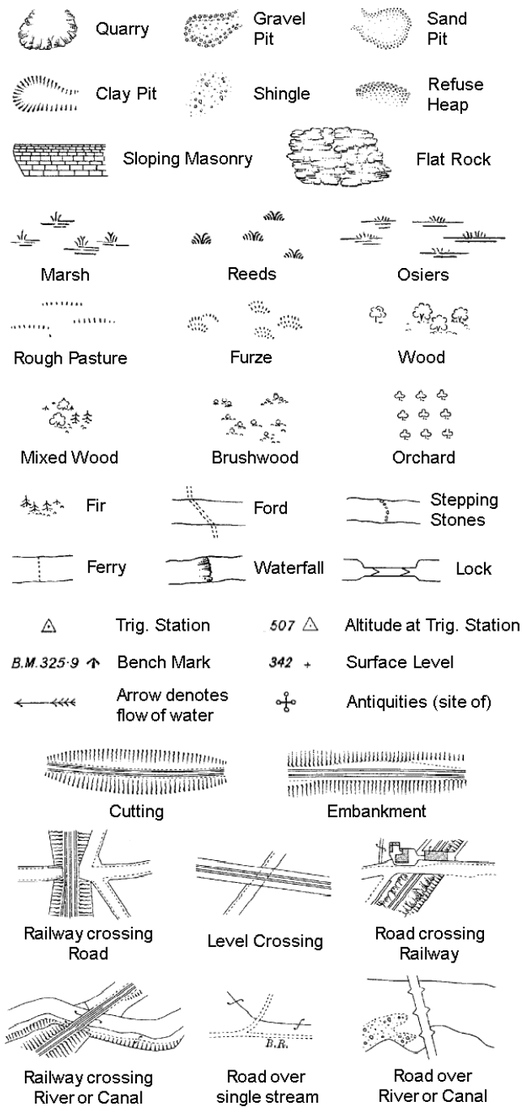
Site Details

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Historical Mapping Legends

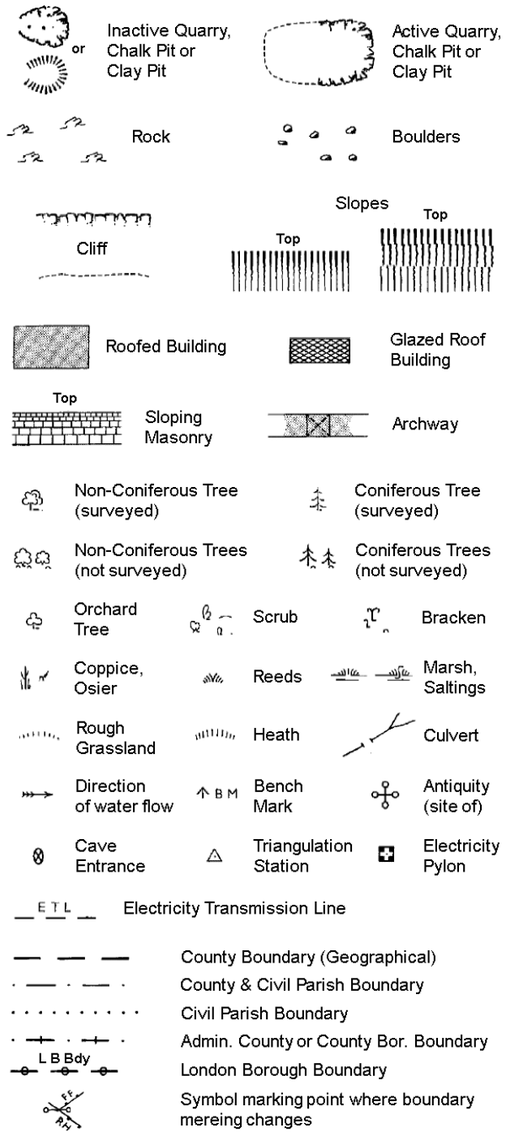
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

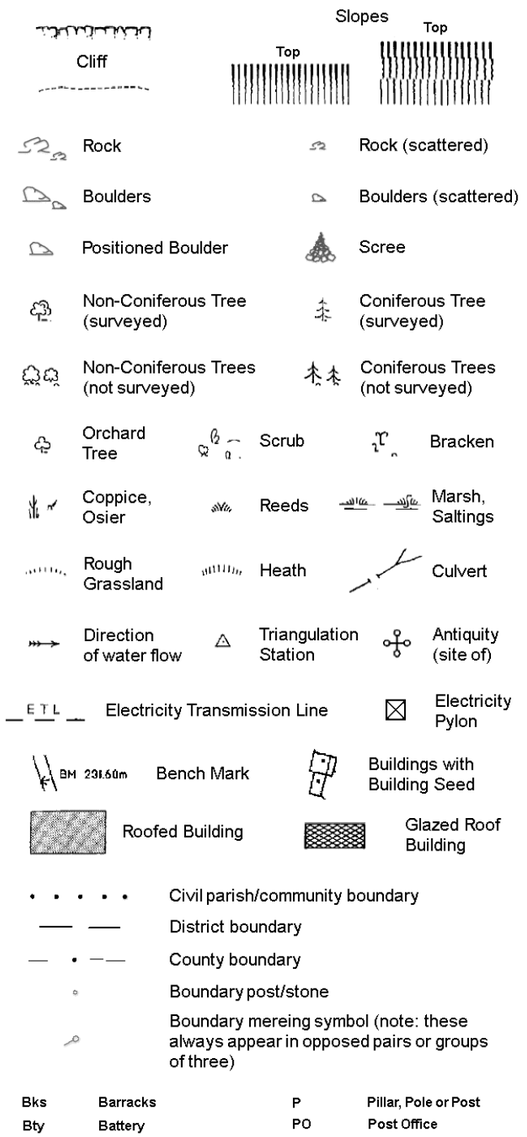
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



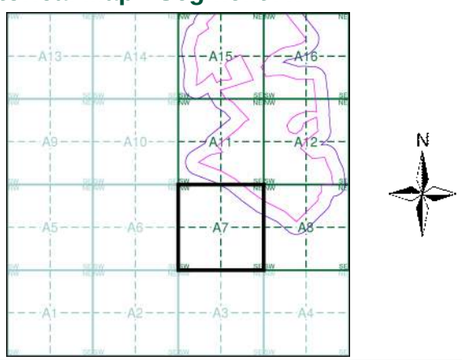
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1952 - 1955	5
Ordnance Survey Plan	1:2,500	1952 - 1956	6
Ordnance Survey Plan	1:2,500	1959 - 1971	7
Ordnance Survey Plan	1:1,250	1974 - 1978	8
Additional SIMs	1:2,500	1977	9
Additional SIMs	1:1,250	1977	10
Ordnance Survey Plan	1:2,500	1986	11
Additional SIMs	1:1,250	1991	12
Large-Scale National Grid Data	1:2,500	1992	13
Large-Scale National Grid Data	1:1,250	1992	14
Large-Scale National Grid Data	1:1,250	1996	15
Large-Scale National Grid Data	1:2,500	1996	16

Historical Map - Segment A7



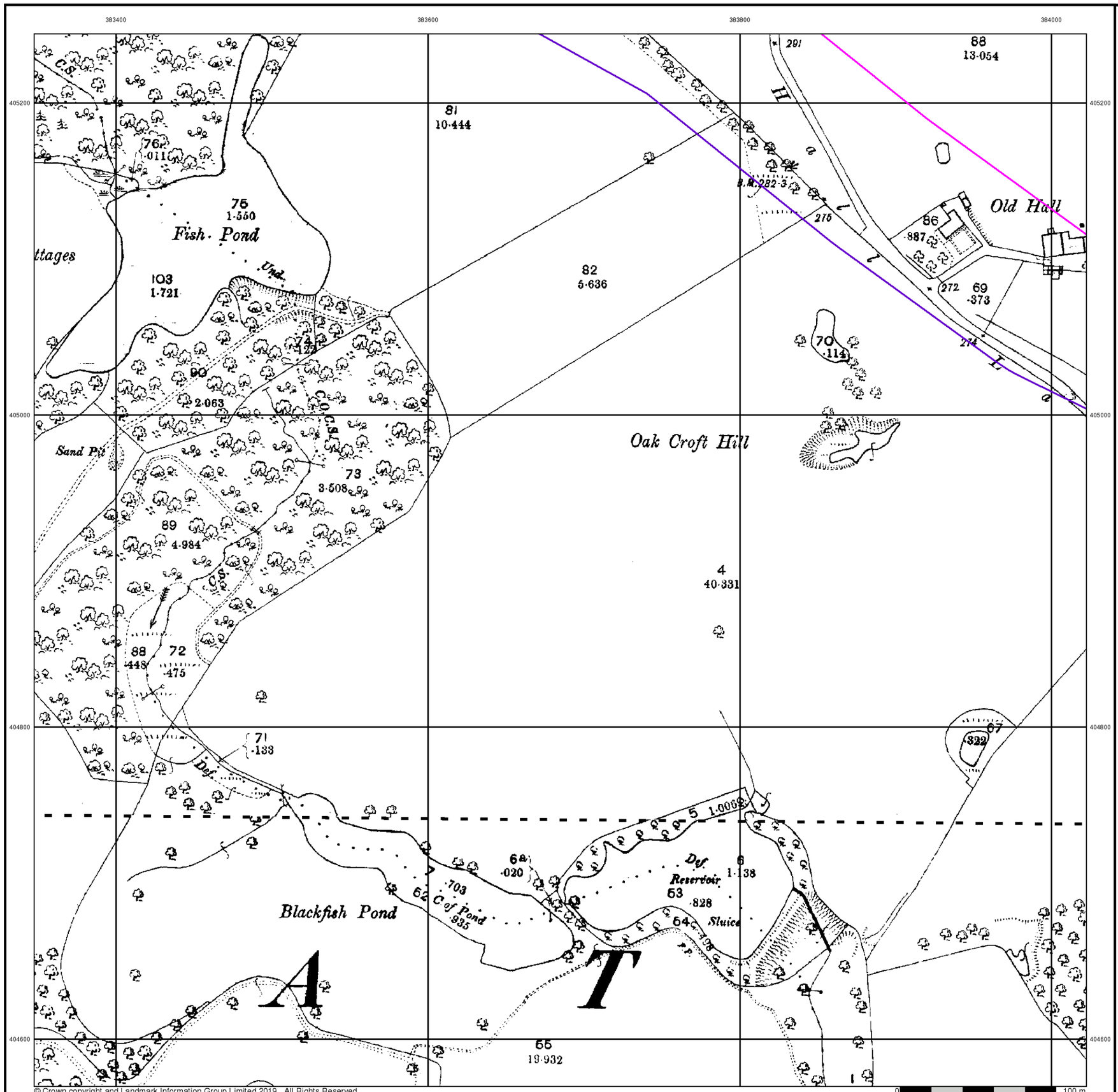
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 100

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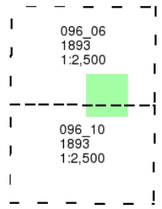
Lancashire And Furness

Published 1893

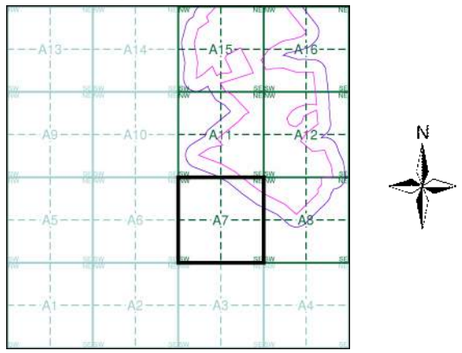
Source map scale - 1:2,500

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 A7



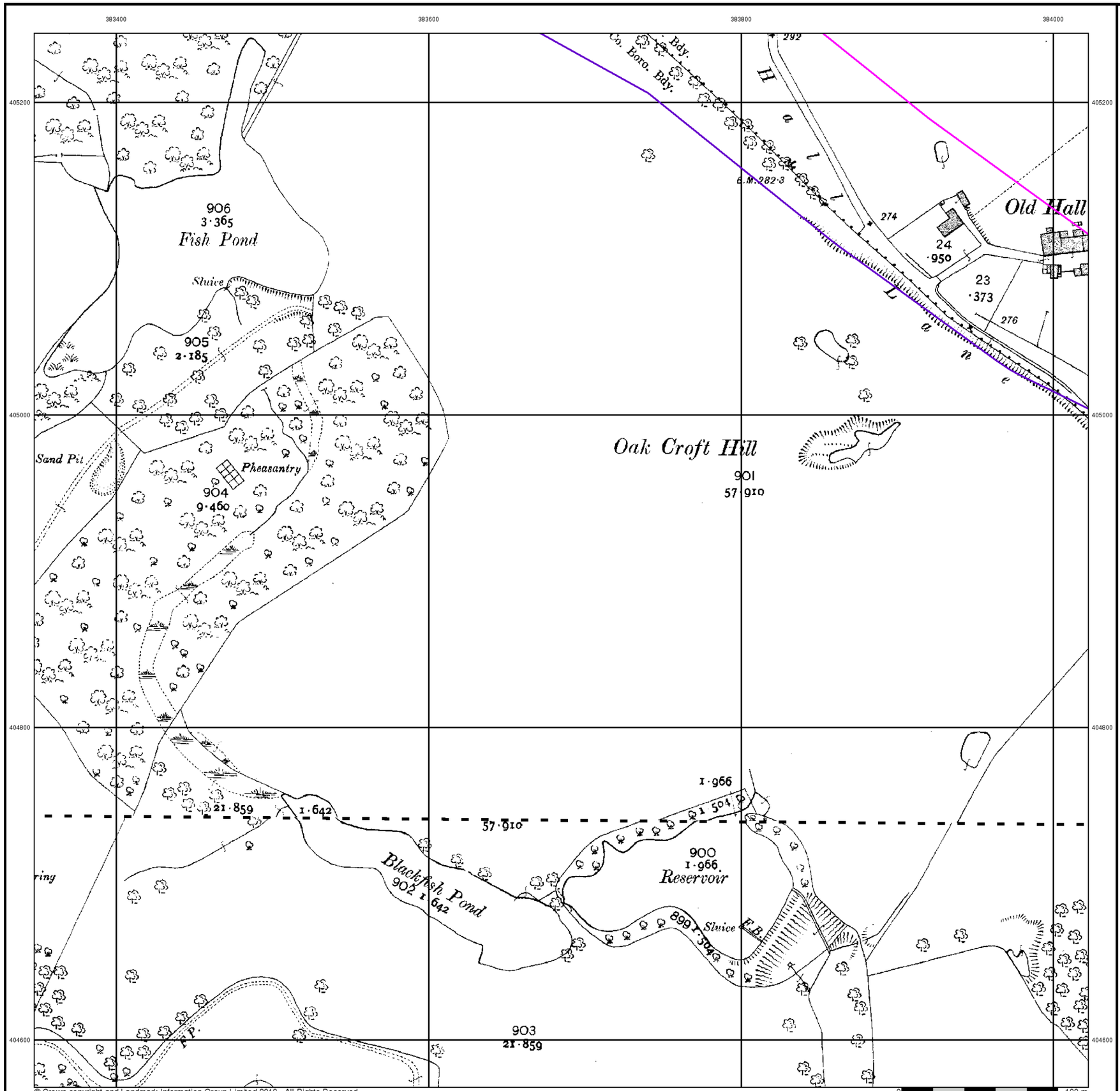
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

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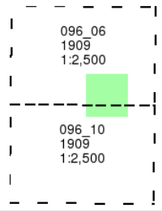
Lancashire And Furness

Published 1909

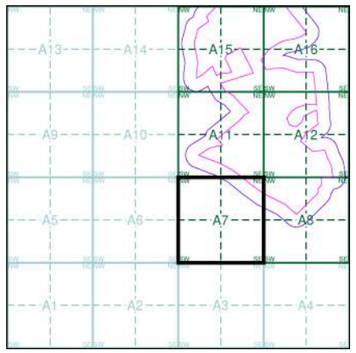
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



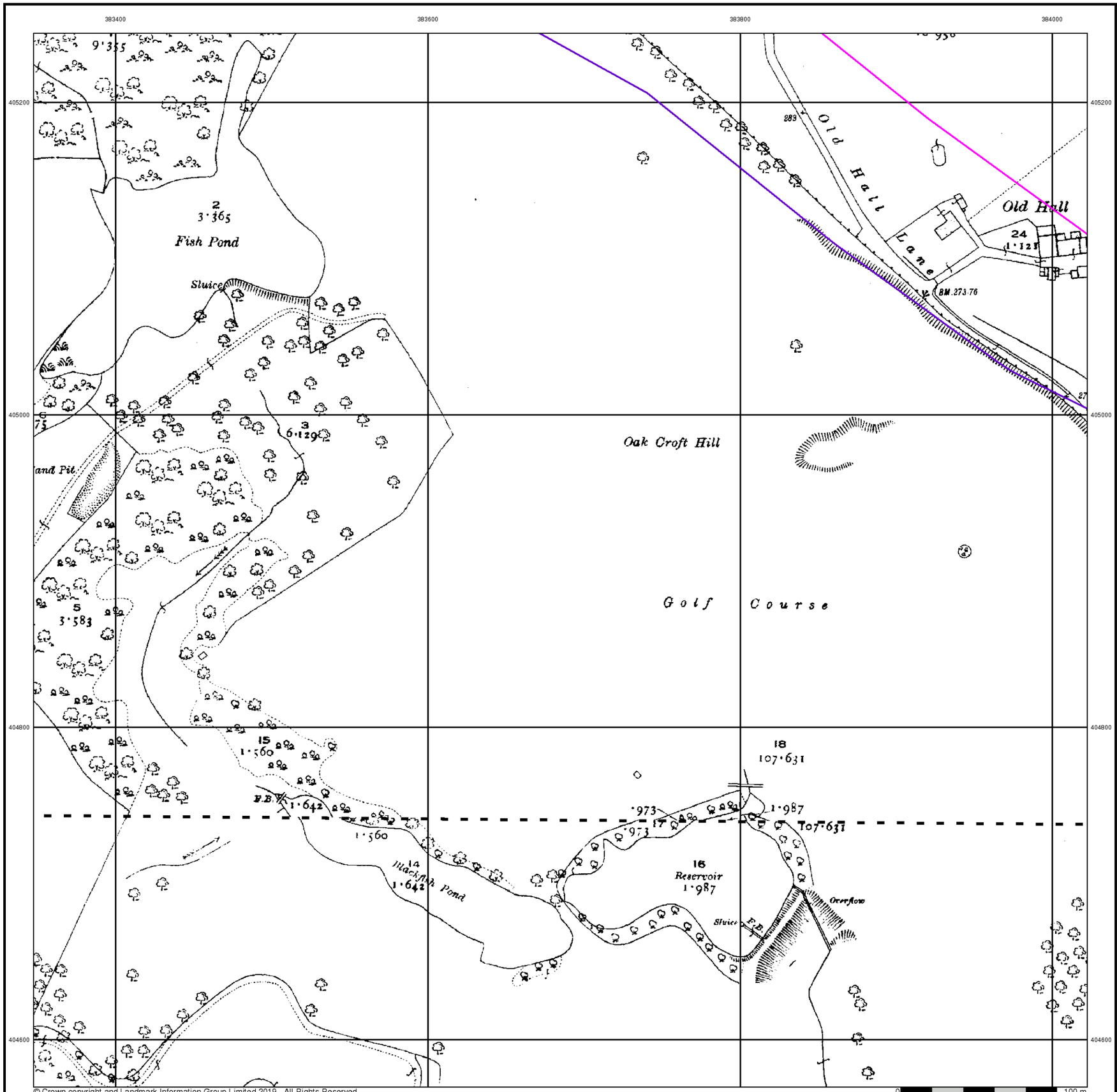
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Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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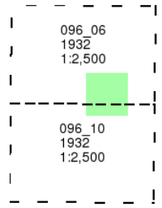
Lancashire And Furness

Published 1932

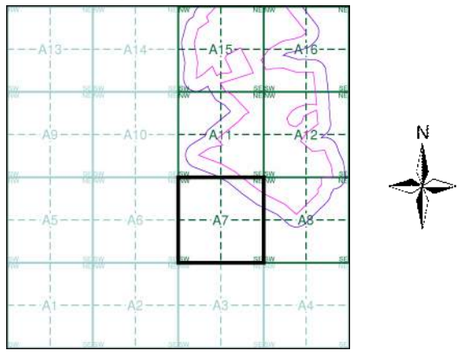
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Map Name(s) and Date(s)



Historical Map - Segment A7



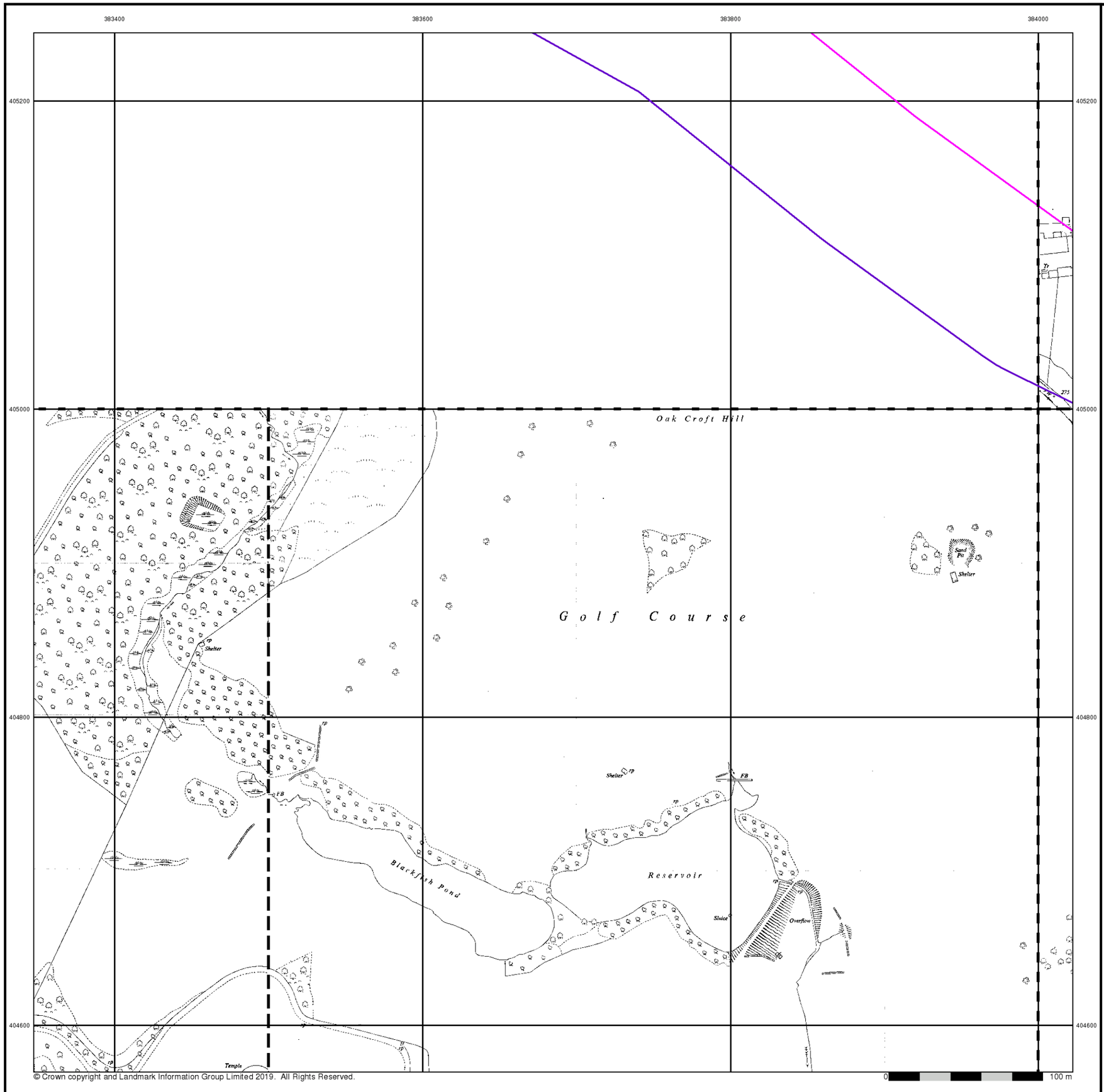
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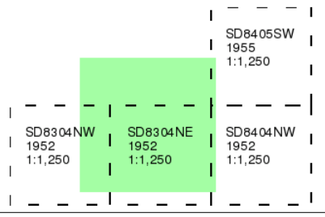
Ordnance Survey Plan

Published 1952 - 1955

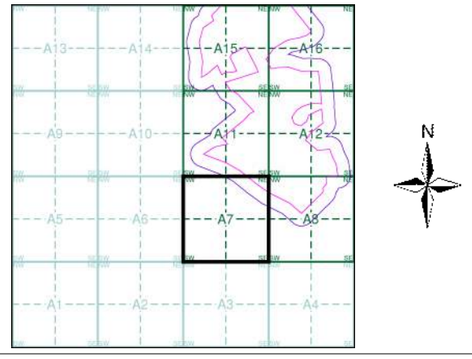
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A7



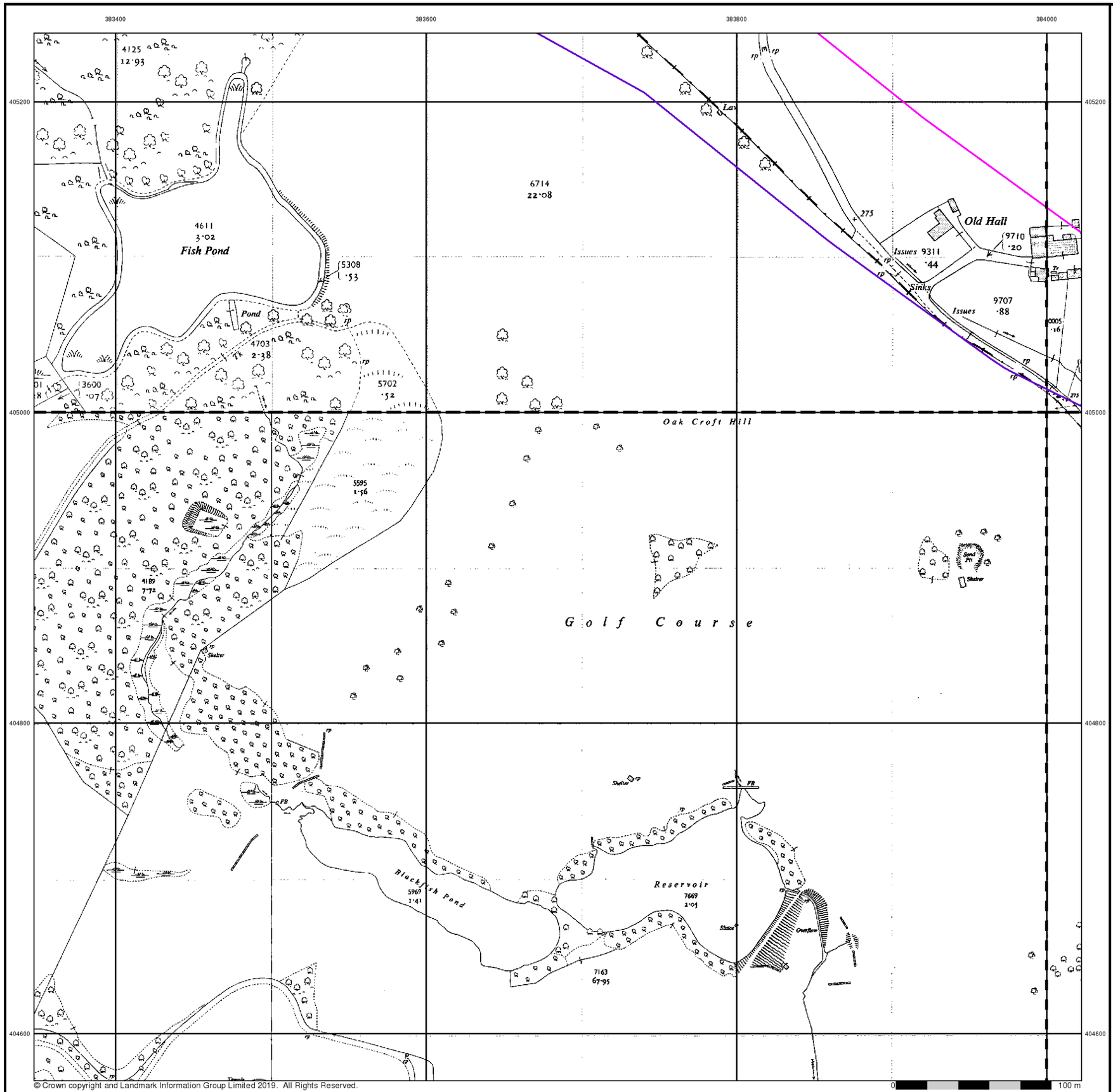
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Ordnance Survey Plan

Published 1952 - 1956

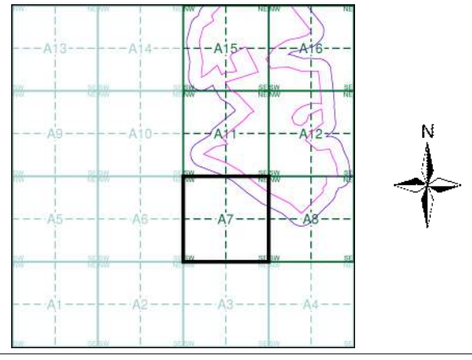
Source map scale - 1:2,500

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Map Name(s) and Date(s)

SD8305 1956 1:2,500
SD8405 1955 1:2,500
SD8304 1953 1:2,500
SD8404 1952 1:2,500

Historical Map - Segment A7



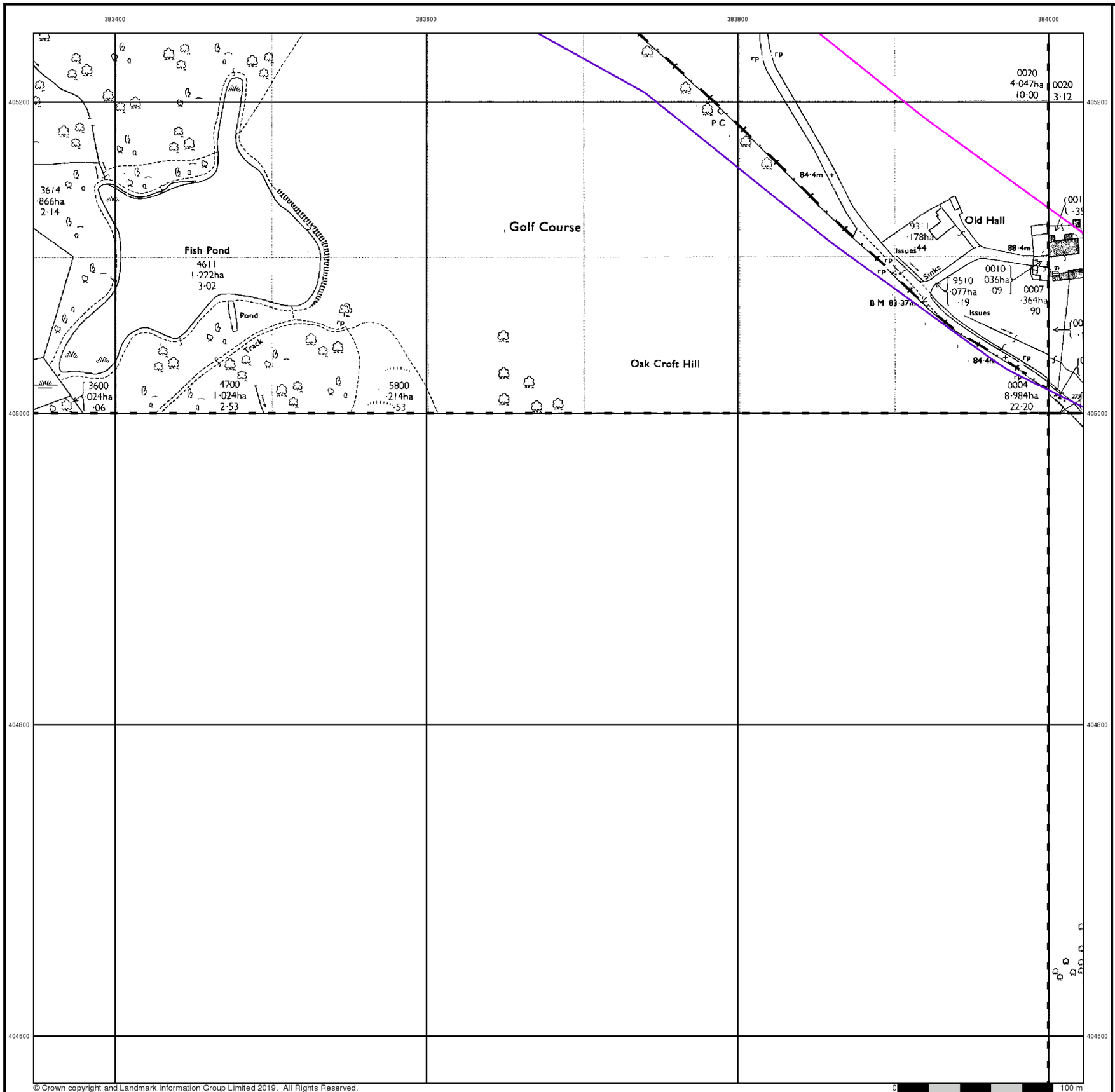
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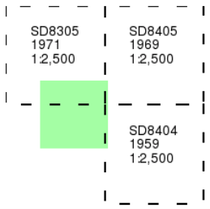
Ordnance Survey Plan

Published 1959 - 1971

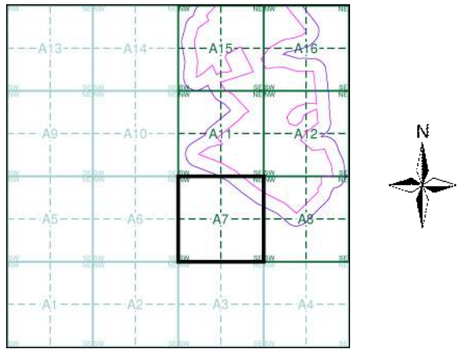
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



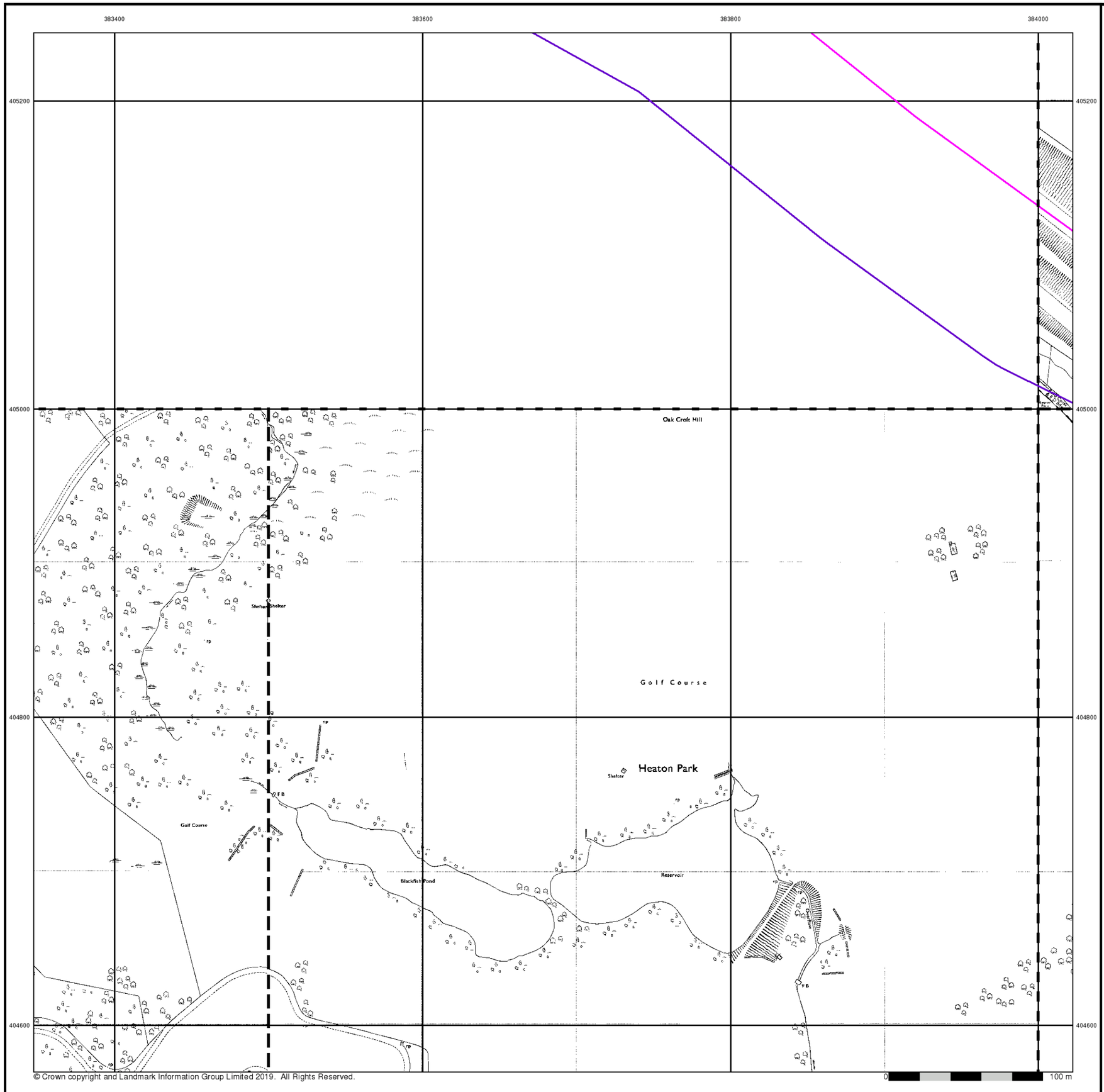
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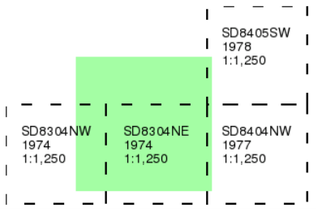
Ordnance Survey Plan

Published 1974 - 1978

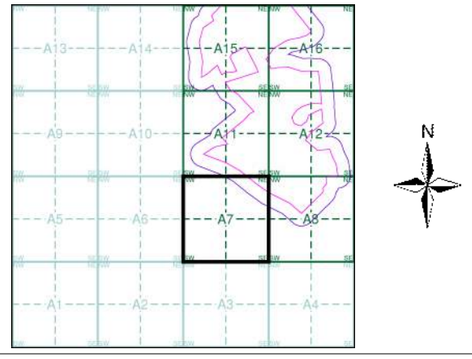
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A7



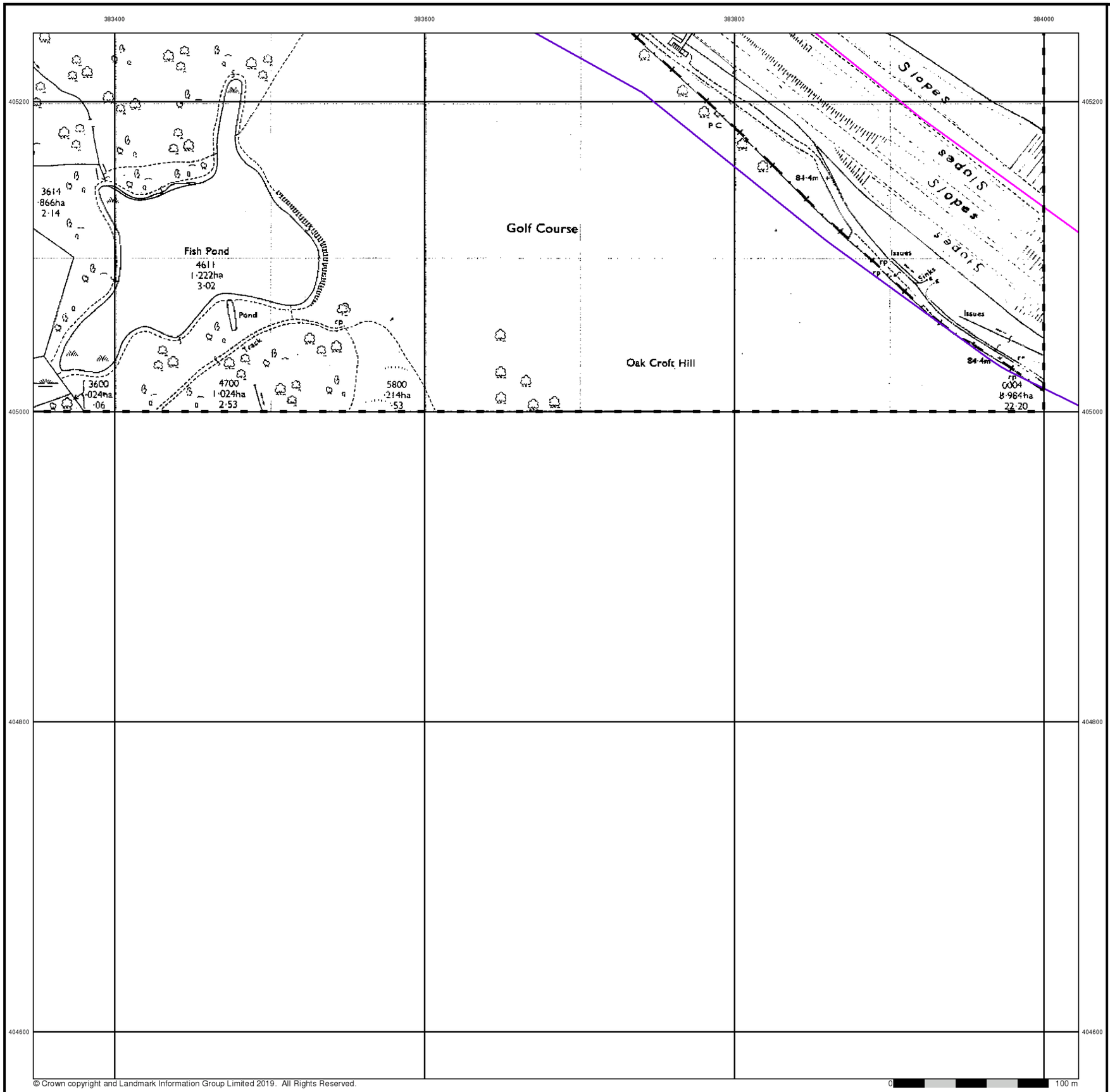
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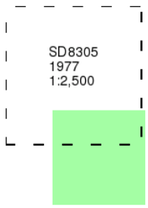
Additional SIMs

Published 1977

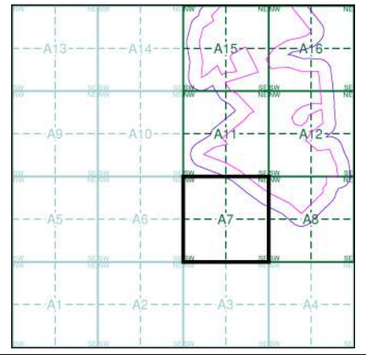
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



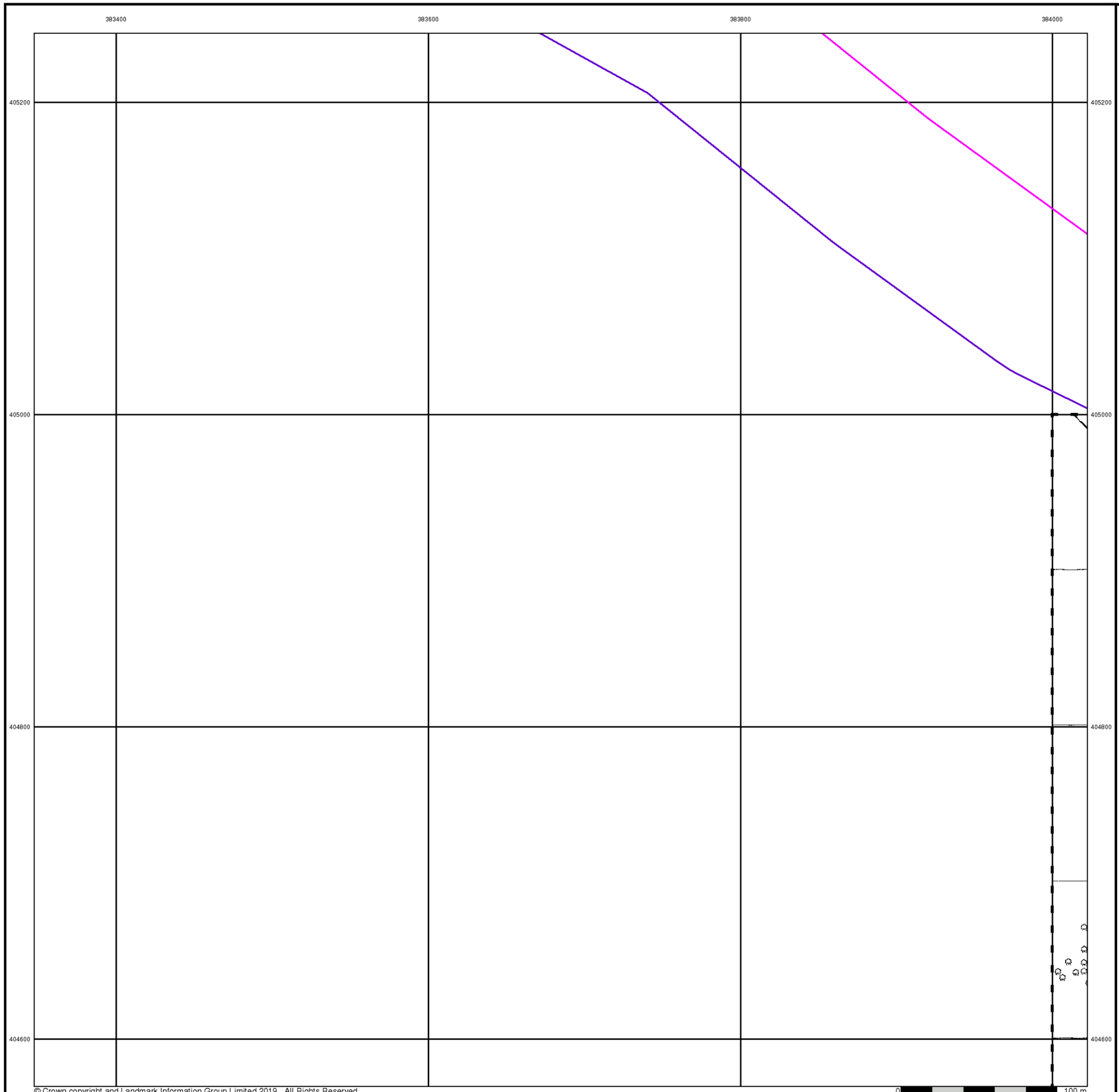
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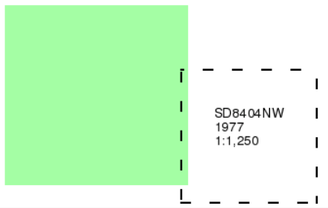
Additional SIMs

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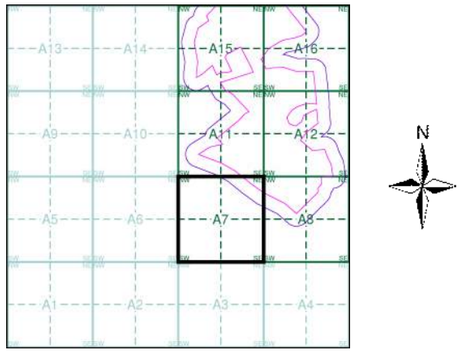
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A7



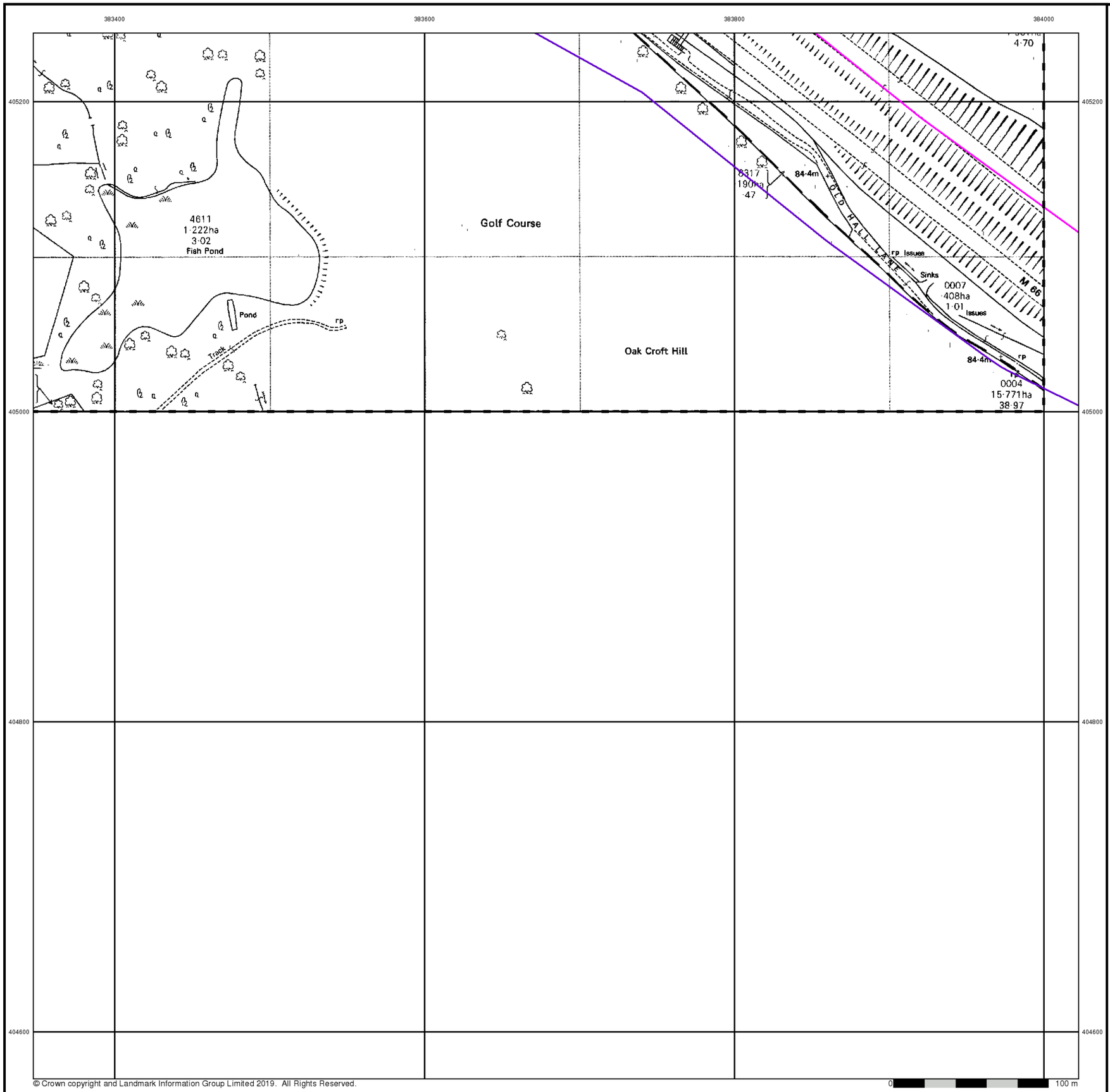
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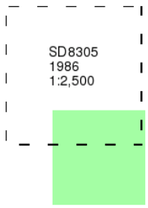
Ordnance Survey Plan

Published 1986

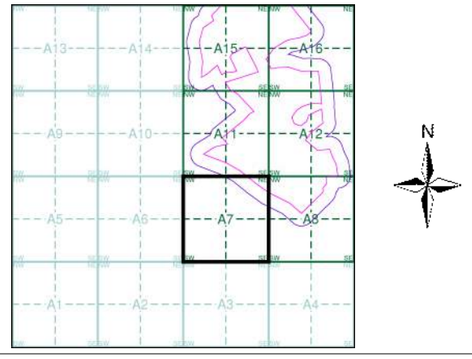
Source map scale - 1:2,500

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Map Name(s) and Date(s)



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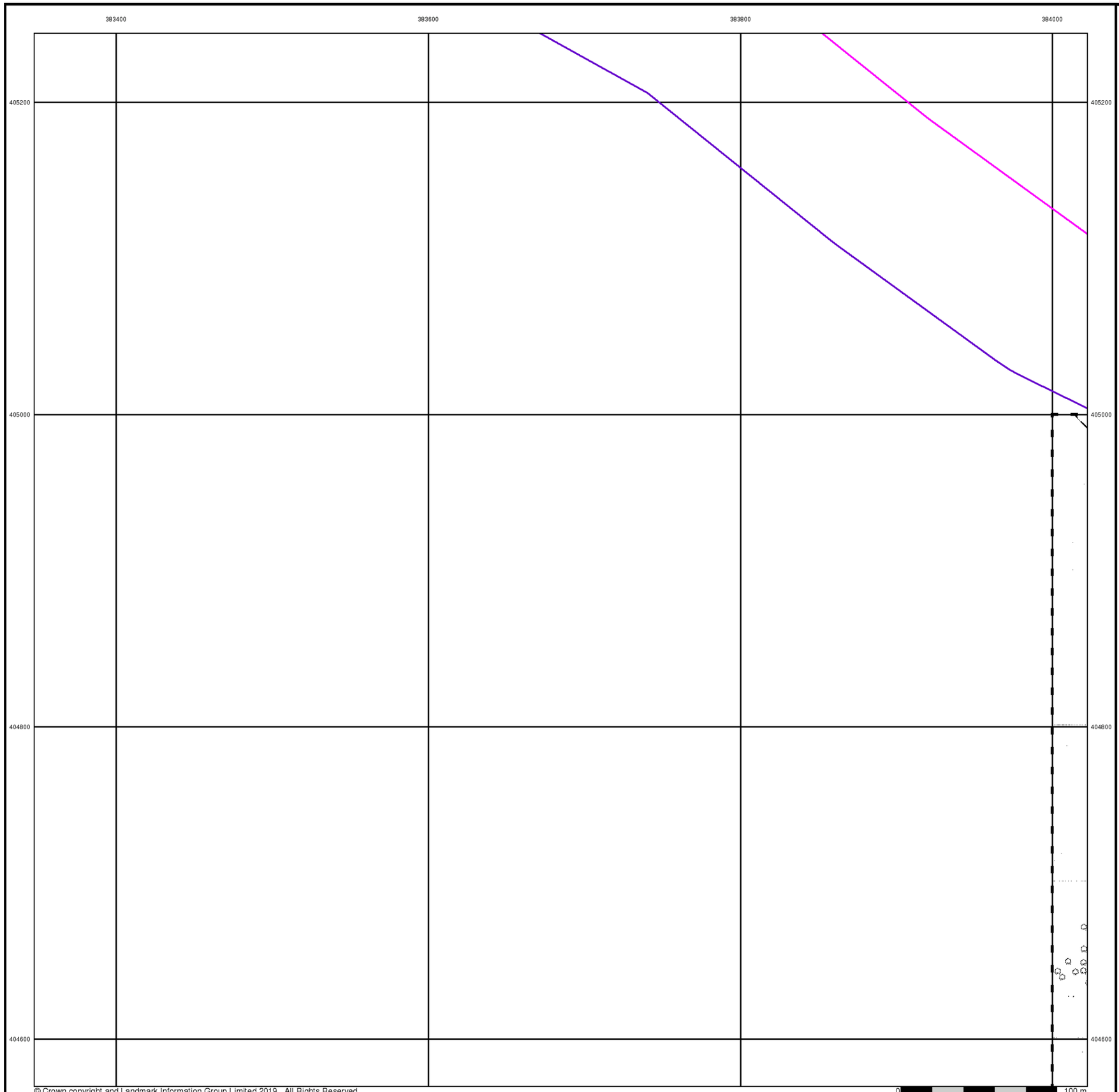
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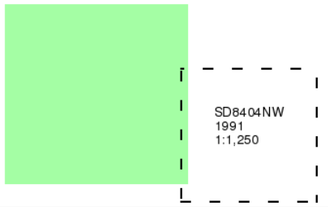
Additional SIMs

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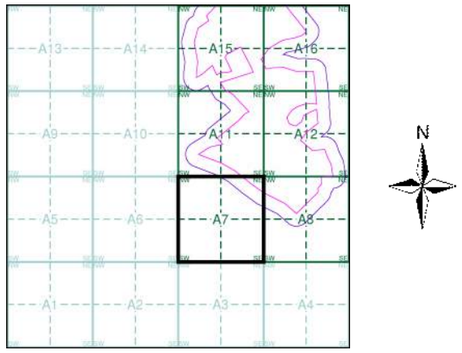
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A7



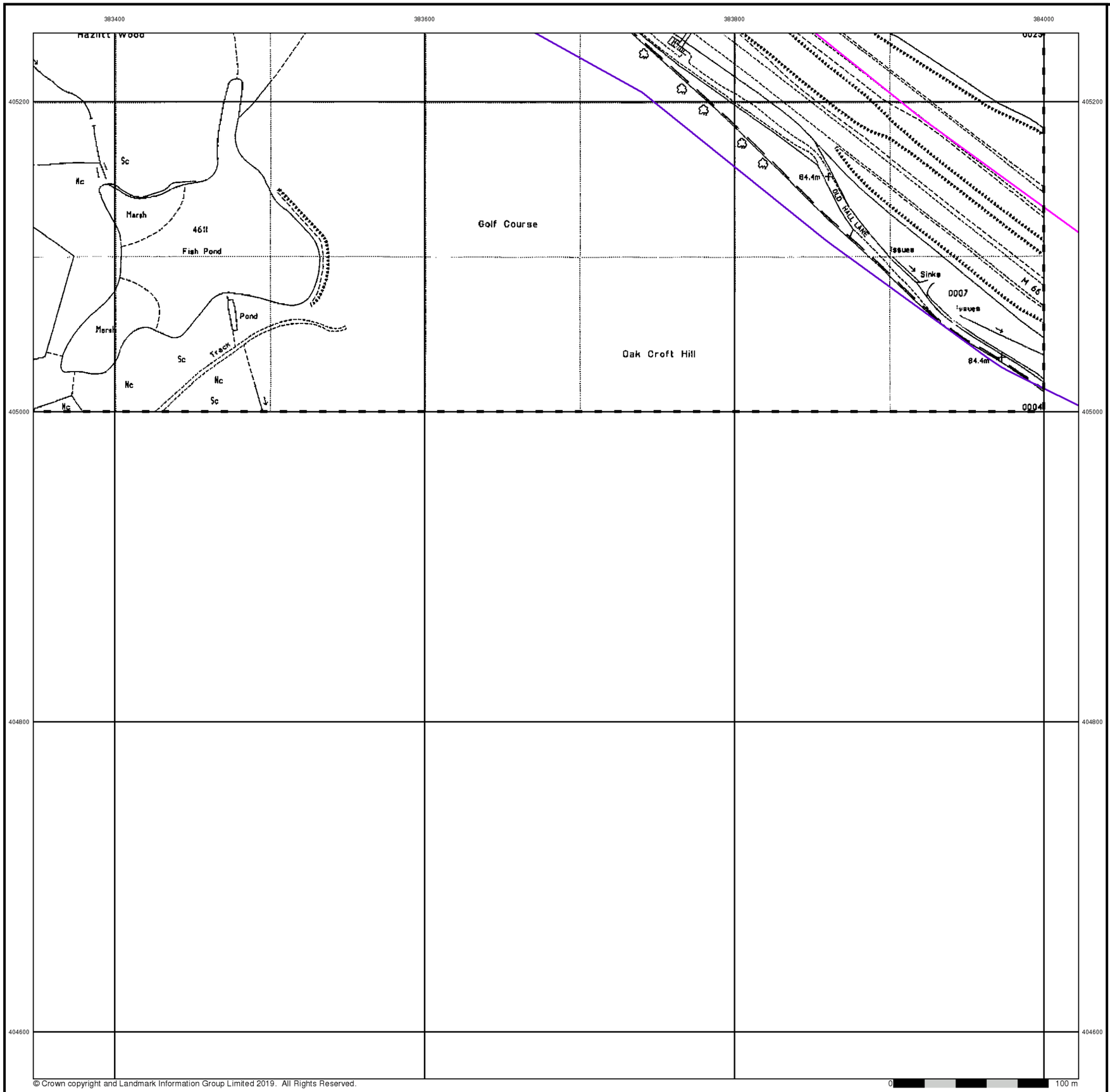
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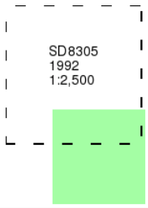
Large-Scale National Grid Data

Published 1992

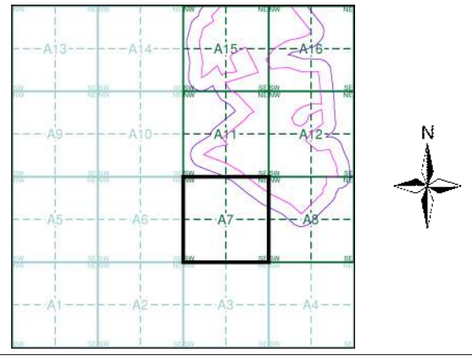
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A7



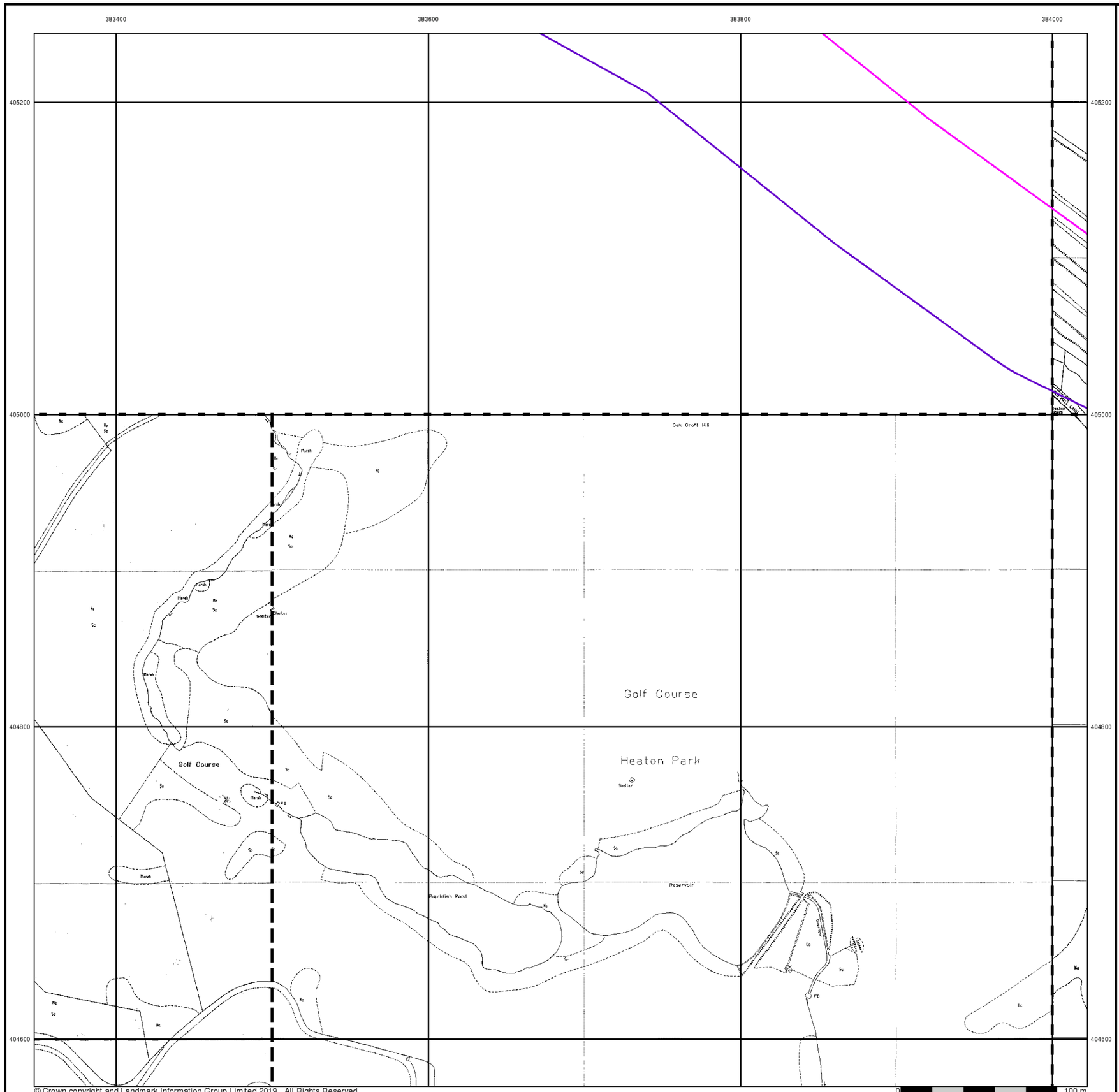
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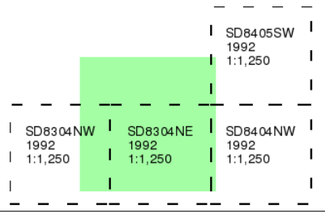
Large-Scale National Grid Data

Published 1992

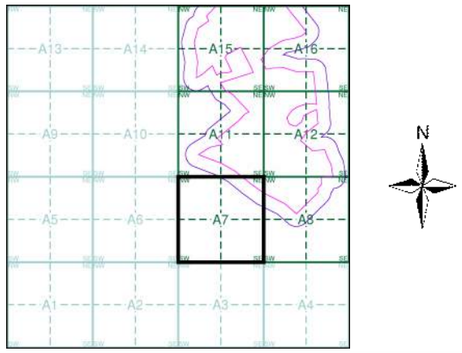
Source map scale - 1:1,250

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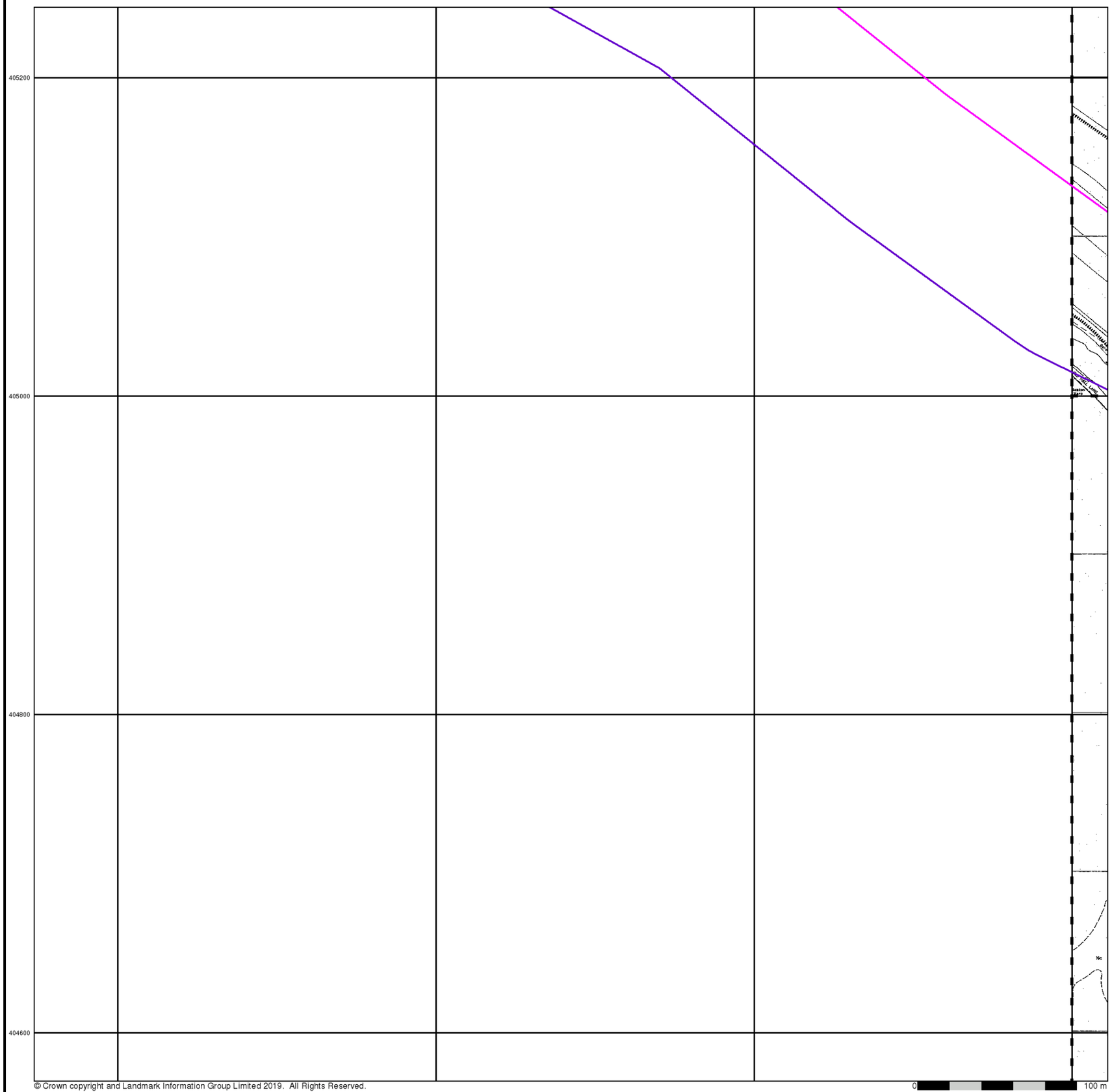
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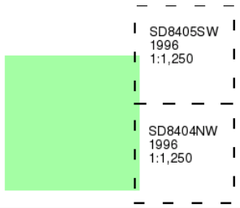
Large-Scale National Grid Data

Published 1996

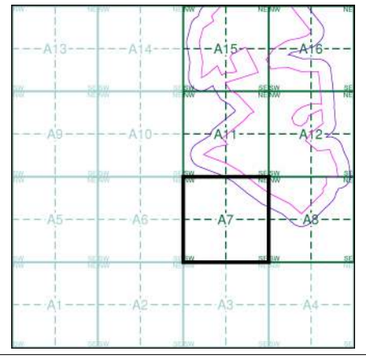
Source map scale - 1:1,250

'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 A7



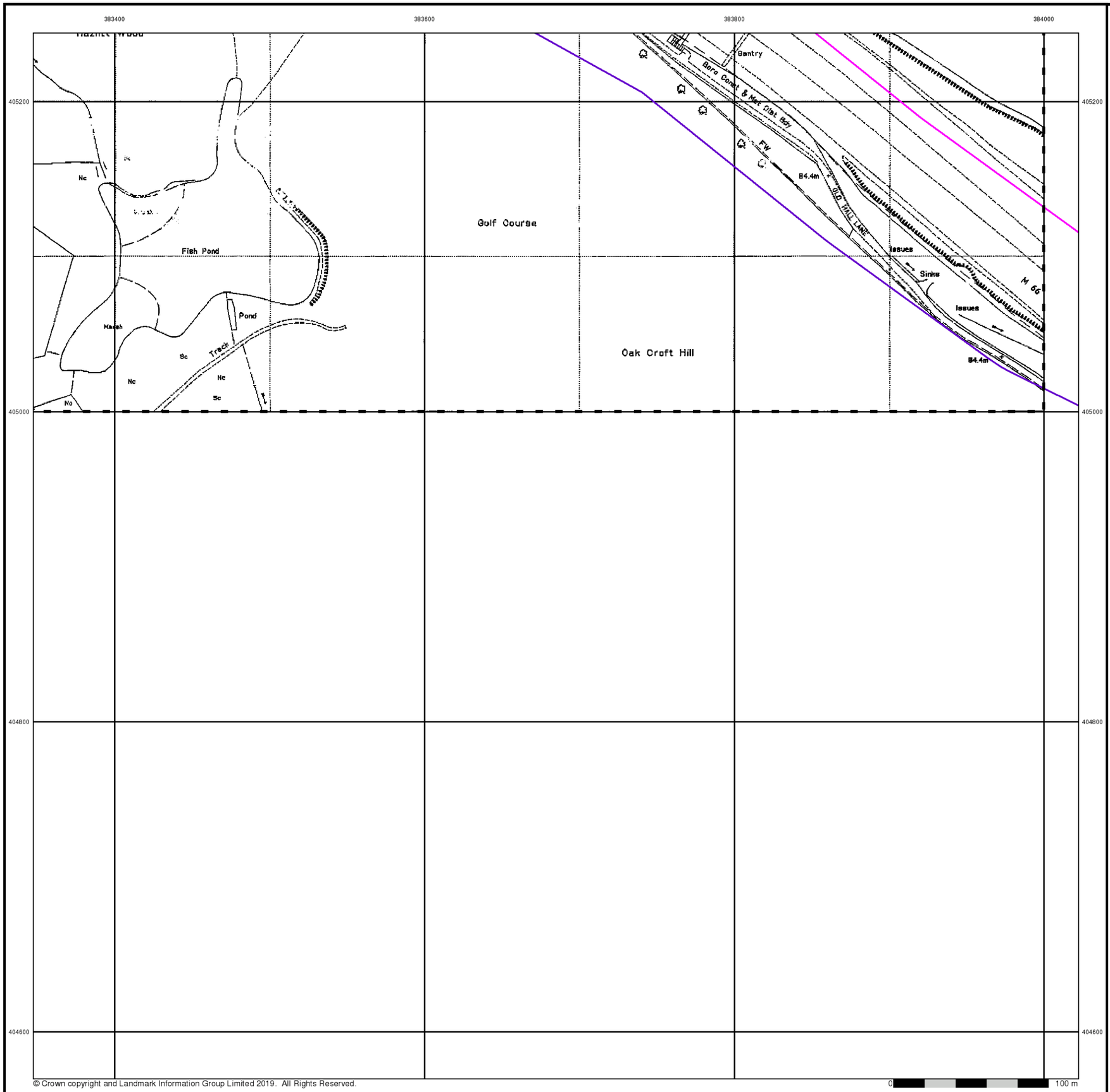
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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0 100 m

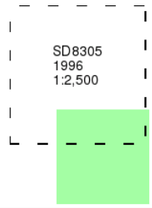
Large-Scale National Grid Data

Published 1996

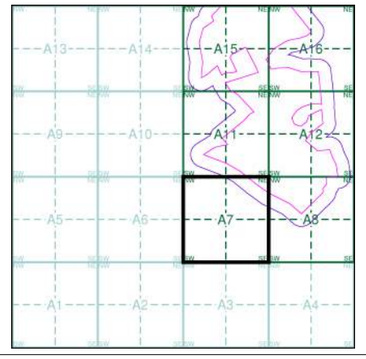
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

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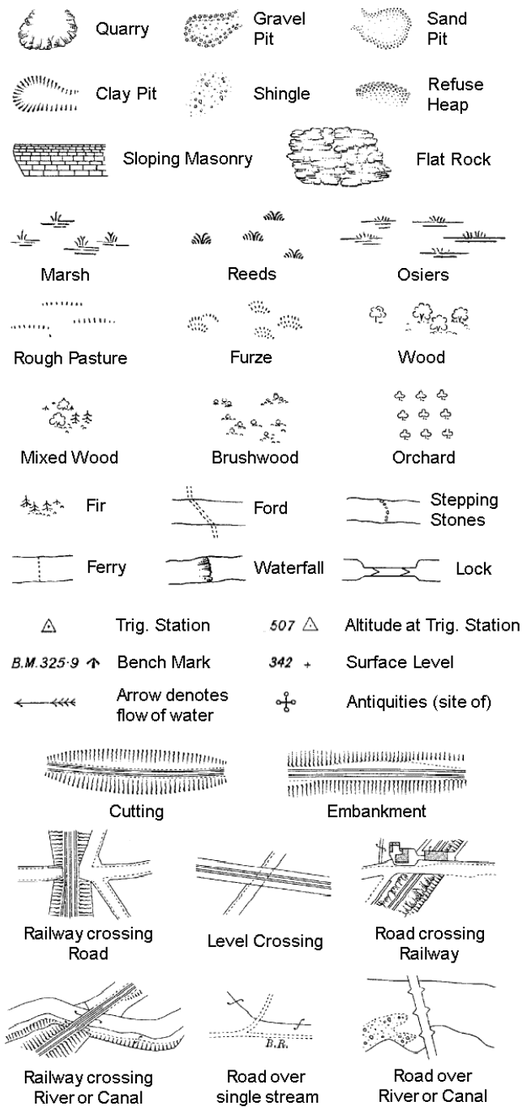
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Historical Mapping Legends

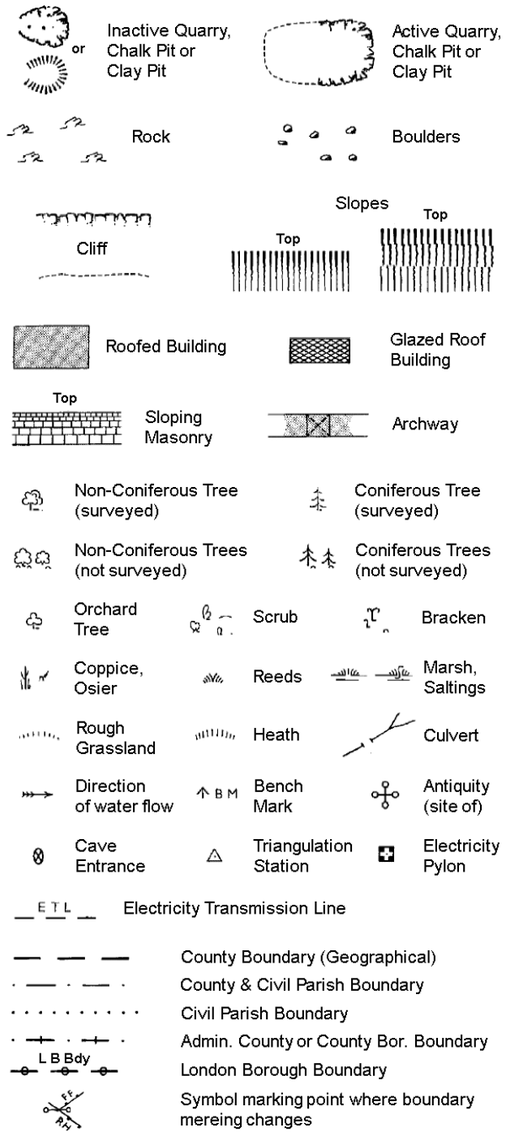
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

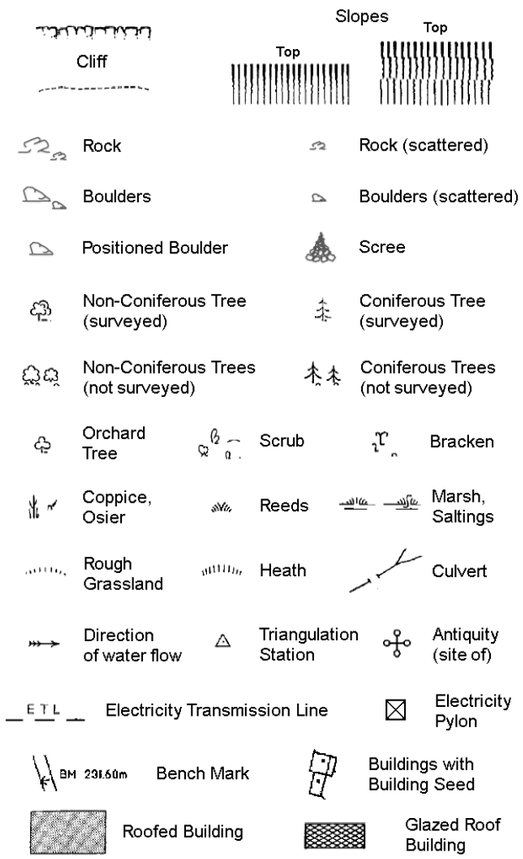
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



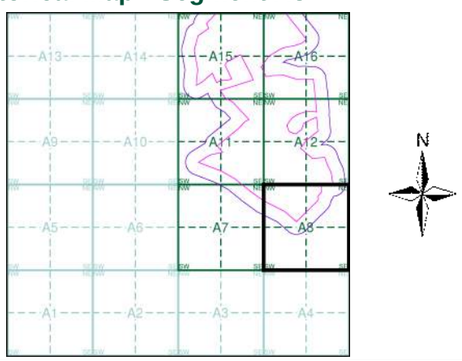
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:2,500	1952 - 1955	5
Ordnance Survey Plan	1:1,250	1952 - 1955	6
Ordnance Survey Plan	1:1,250	1958 - 1978	7
Ordnance Survey Plan	1:2,500	1959 - 1969	8
Additional SIMs	1:1,250	1977 - 1990	9
Additional SIMs	1:1,250	1991	10
Large-Scale National Grid Data	1:1,250	1992	11
Large-Scale National Grid Data	1:1,250	1996	12

Historical Map - Segment A8



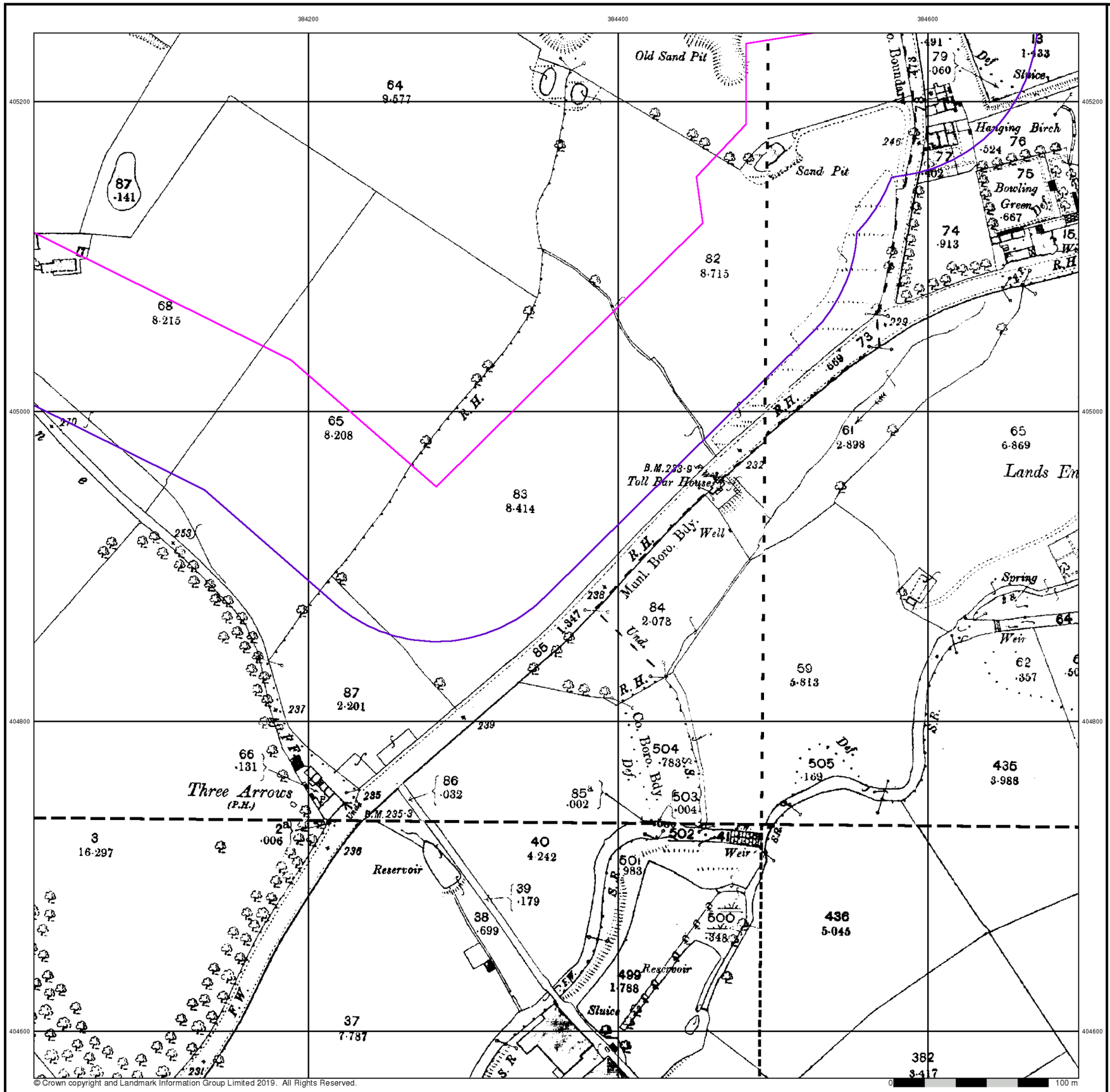
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 100

Site Details

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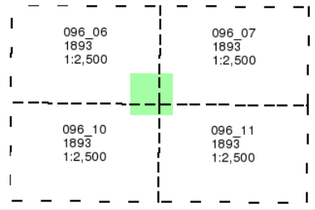
Lancashire And Furness

Published 1893

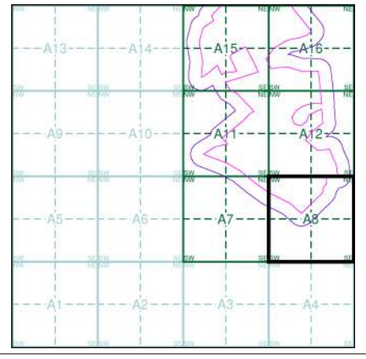
Source map scale - 1:2,500

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 A8



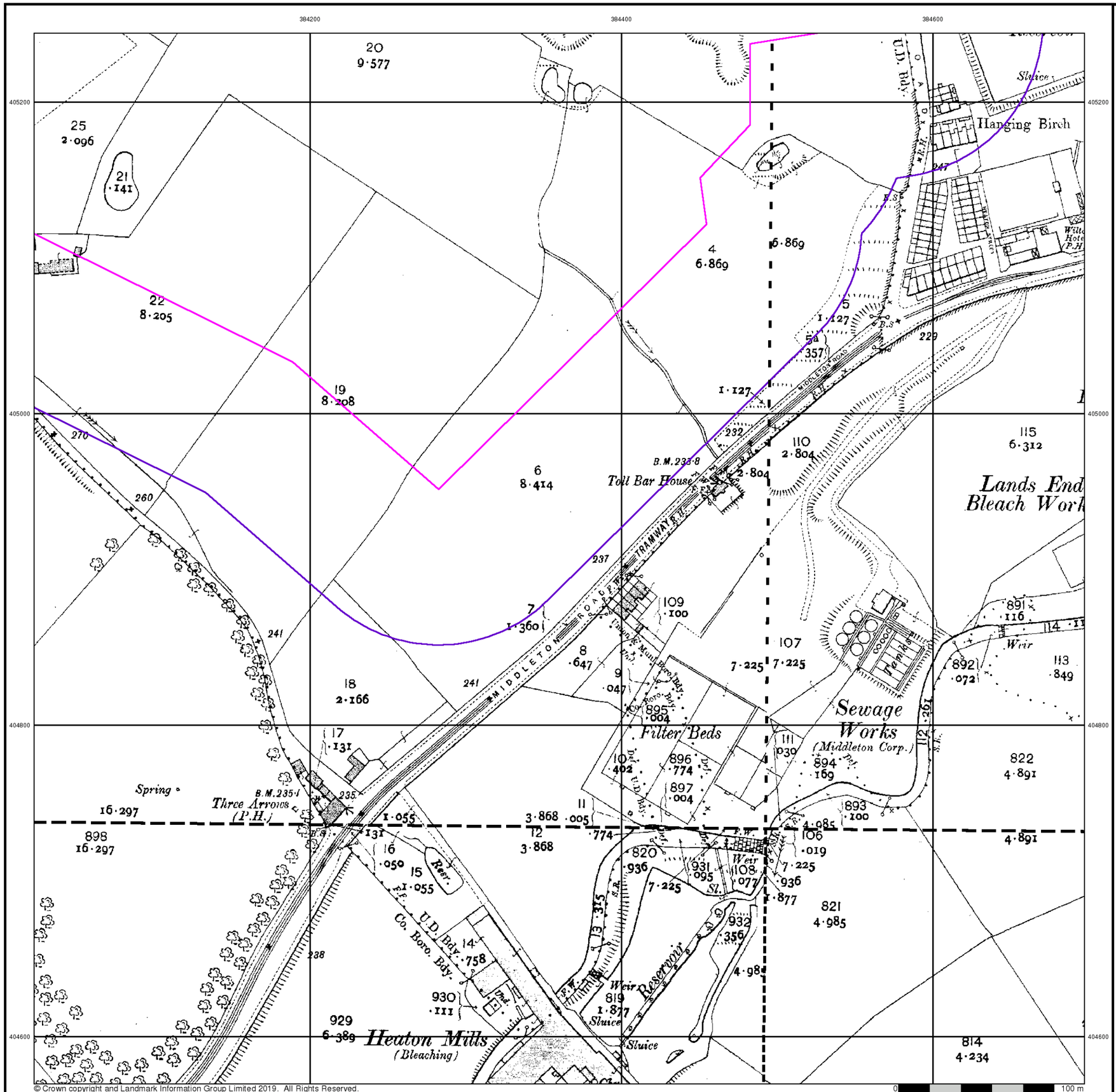
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
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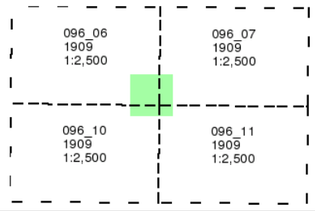
Lancashire And Furness

Published 1909

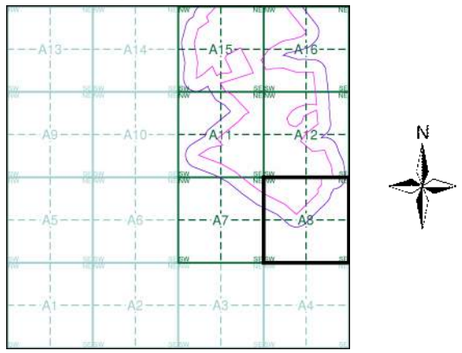
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

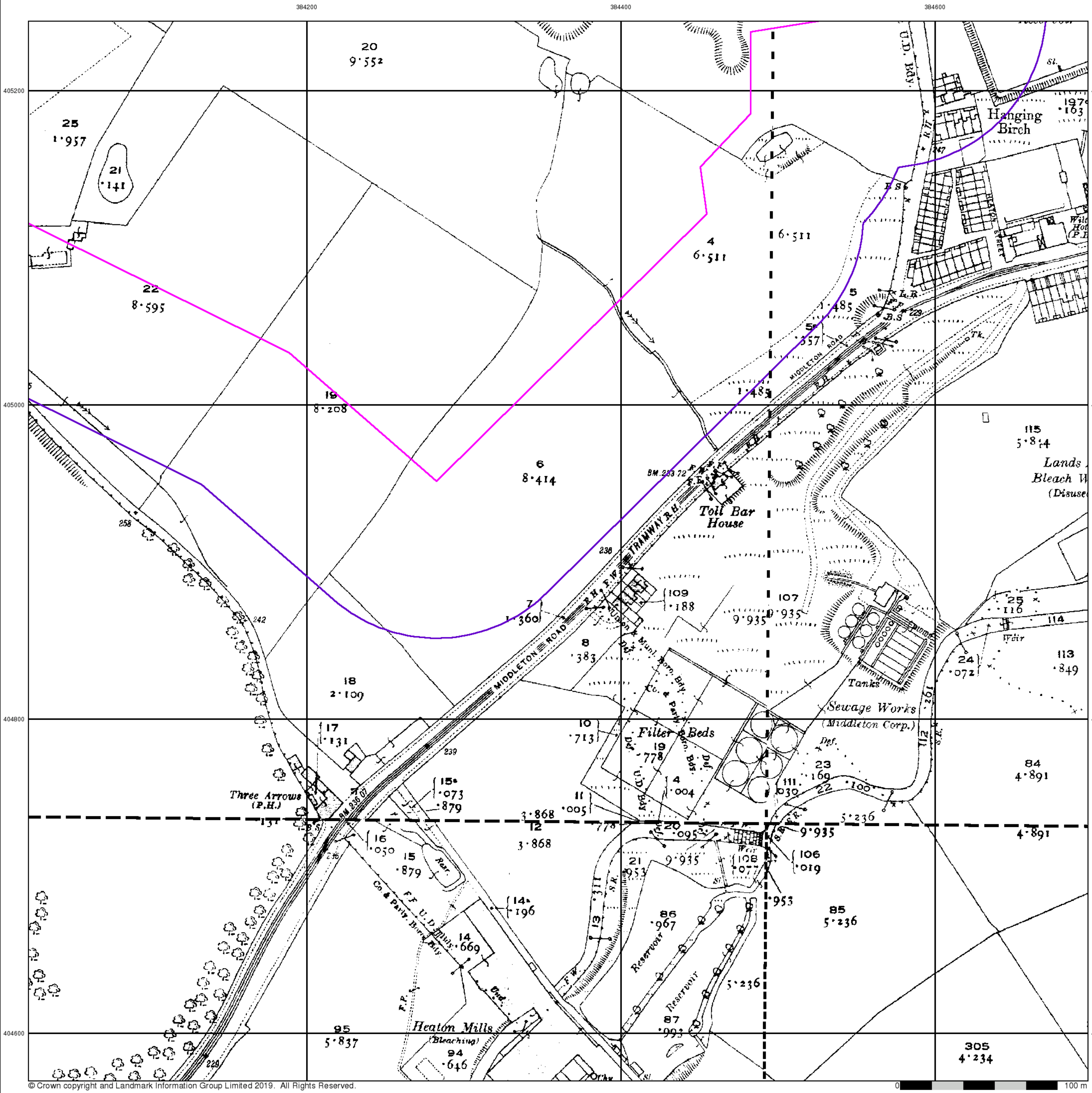
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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
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0 100 m

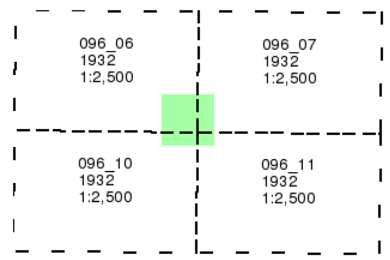
Lancashire And Furness

Published 1932

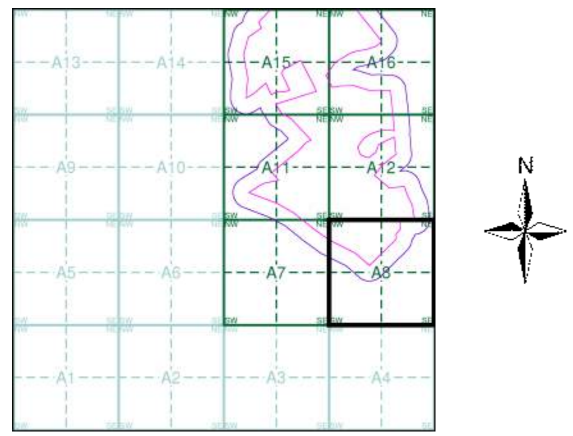
Source map scale - 1:2,500

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 A8



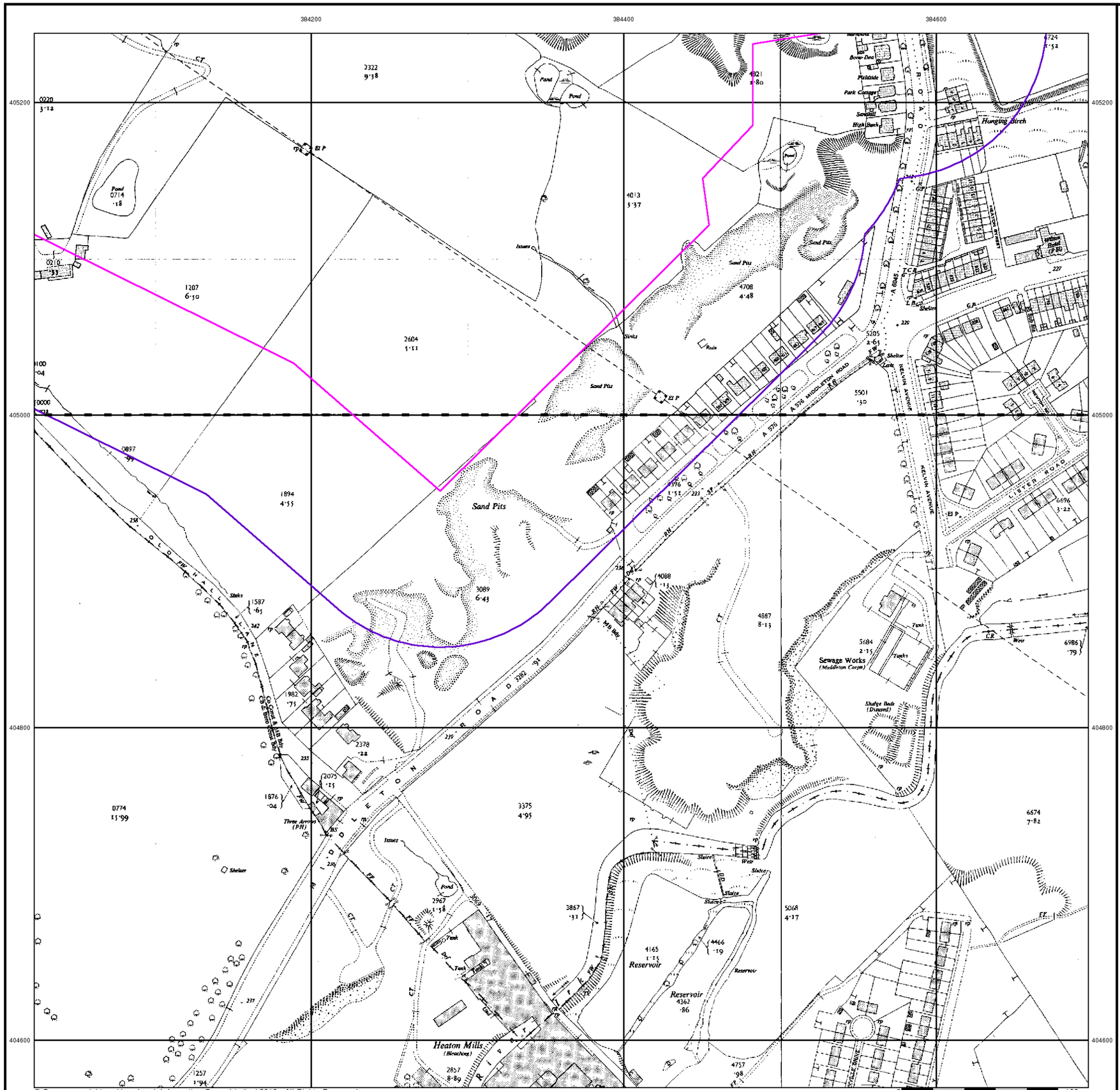
Order Details

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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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Ordnance Survey Plan

Published 1952 - 1955

Source map scale - 1:2,500

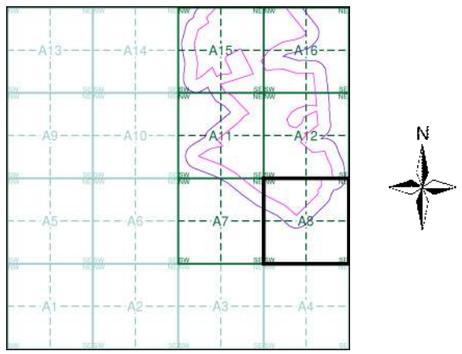
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

SD8405
1955
1:2,500

SD8404
1952
1:2,500

Historical Map - Segment A8



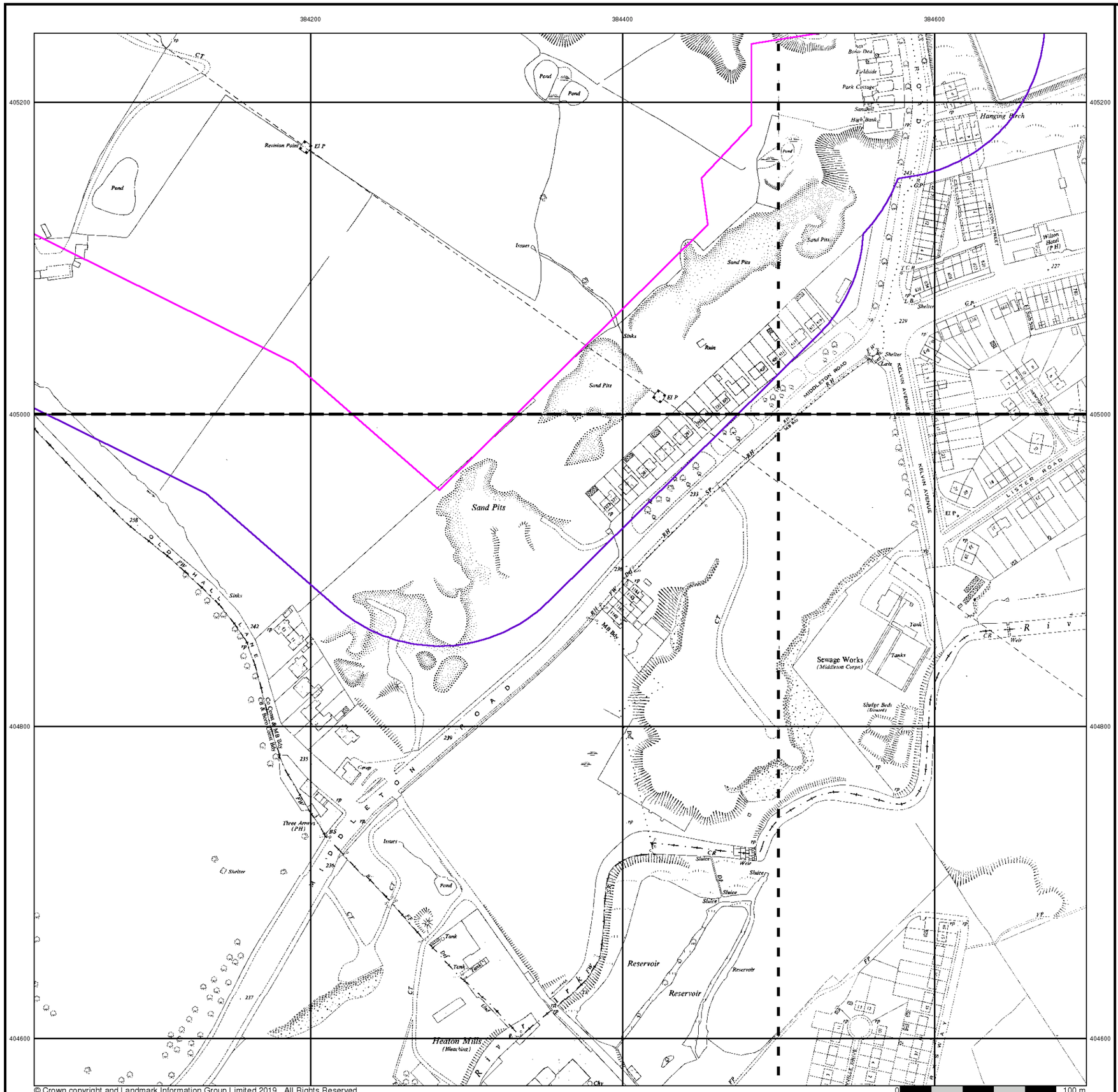
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Ordnance Survey Plan

Published 1952 - 1955

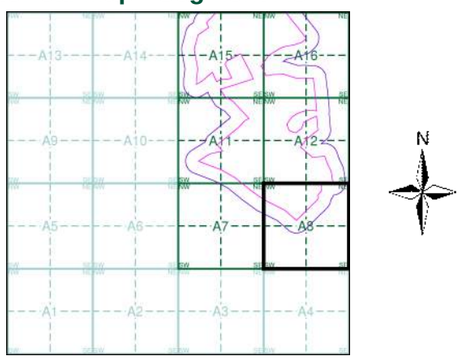
Source map scale - 1:1,250

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)

SD8405SW 1955 1:1,250	SD8405SE 1955 1:1,250
SD8404NW 1952 1:1,250	SD8404NE 1952 1:1,250

Historical Map - Segment A8



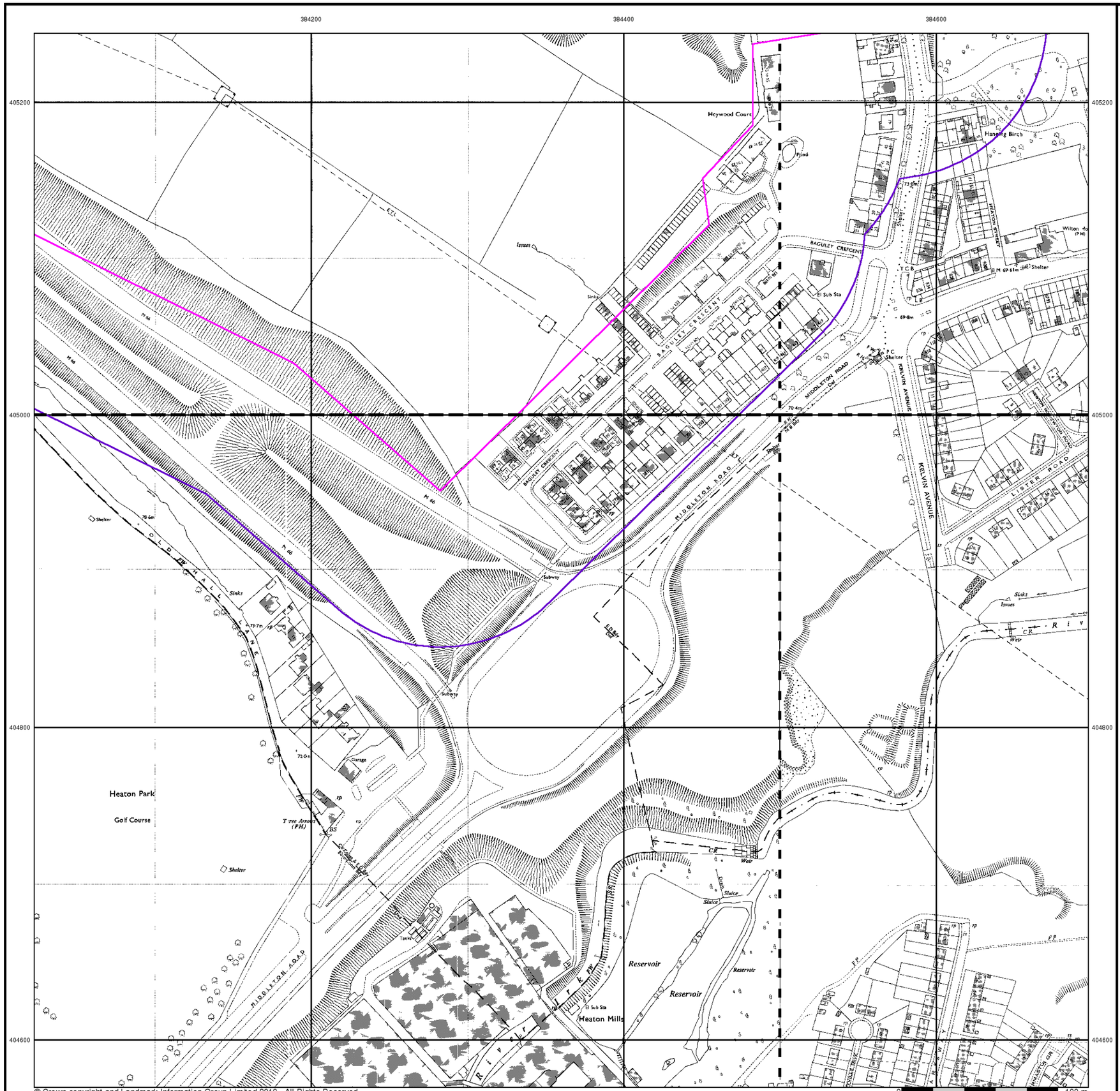
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Ordnance Survey Plan

Published 1958 - 1978

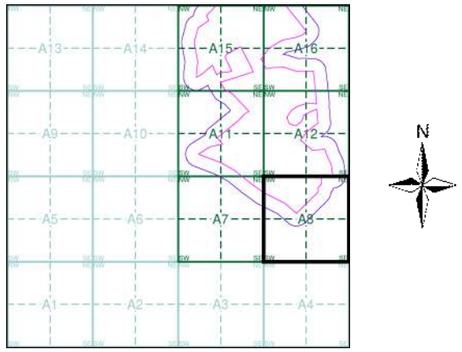
Source map scale - 1:1,250

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)

SD8405SW 1978 1:1,250	SD8405SE 1970 1:1,250
SD8404NW 1977 1:1,250	SD8404NE 1958 1:1,250

Historical Map - Segment A8



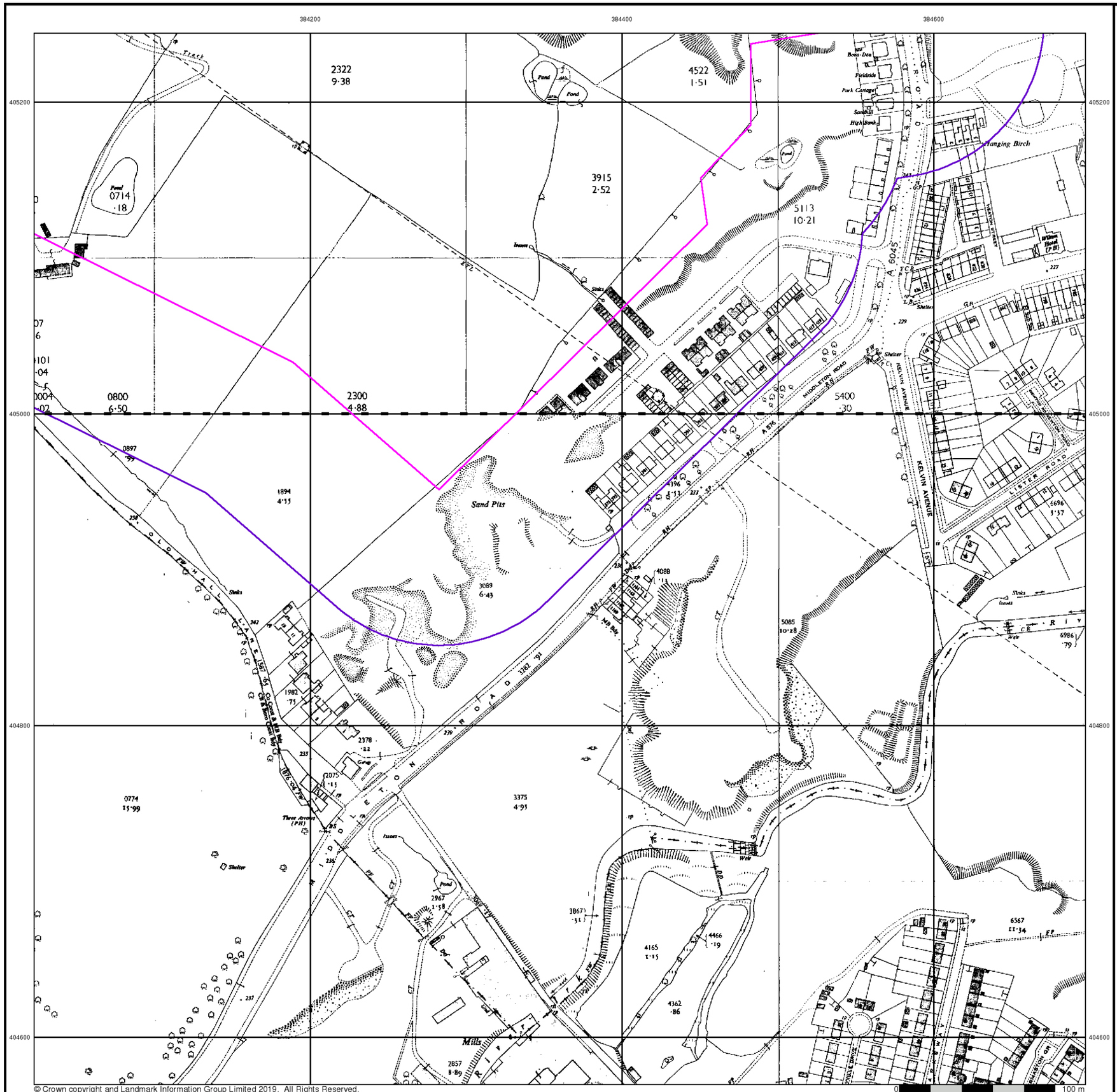
Order Details

Order Number:	202263147_1_1
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National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

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Ordnance Survey Plan

Published 1959 - 1969

Source map scale - 1:2,500

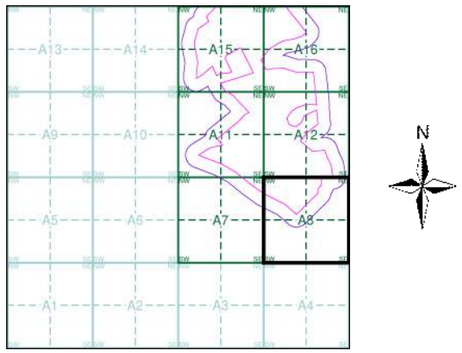
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

SD8405
1969
1:2,500

SD8404
1959
1:2,500

Historical Map - Segment A8



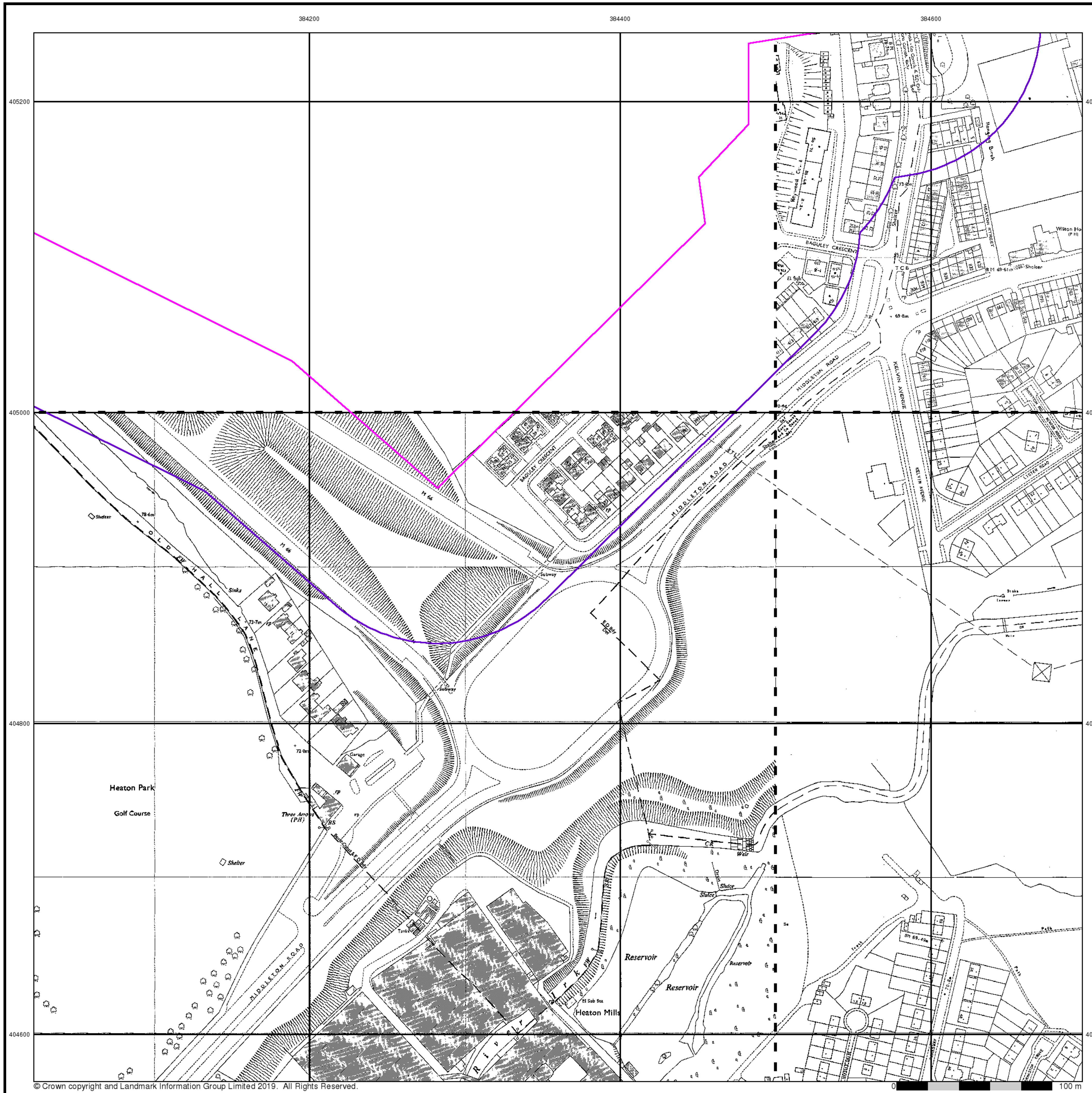
Order Details

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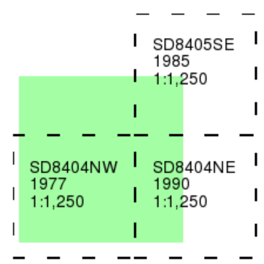
Additional SIMs

Published 1977 - 1990

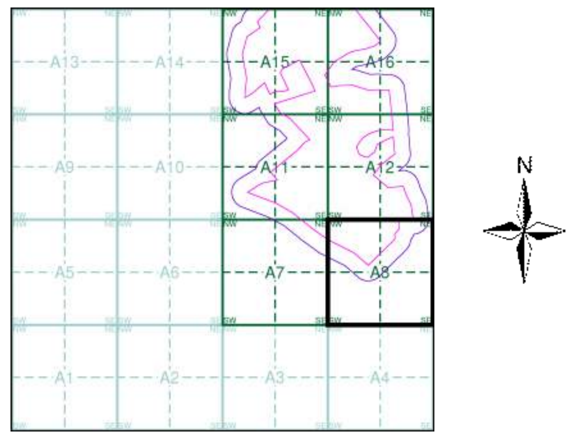
Source map scale - 1:1,250

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)



Historical Map - Segment A8



Order Details

Order Number:	202263147_1_1
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0 100 m

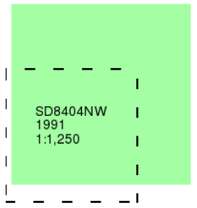
Additional SIMs

Published 1991

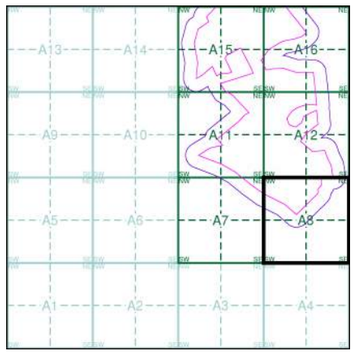
Source map scale - 1:1,250

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)



Historical Map - Segment A8



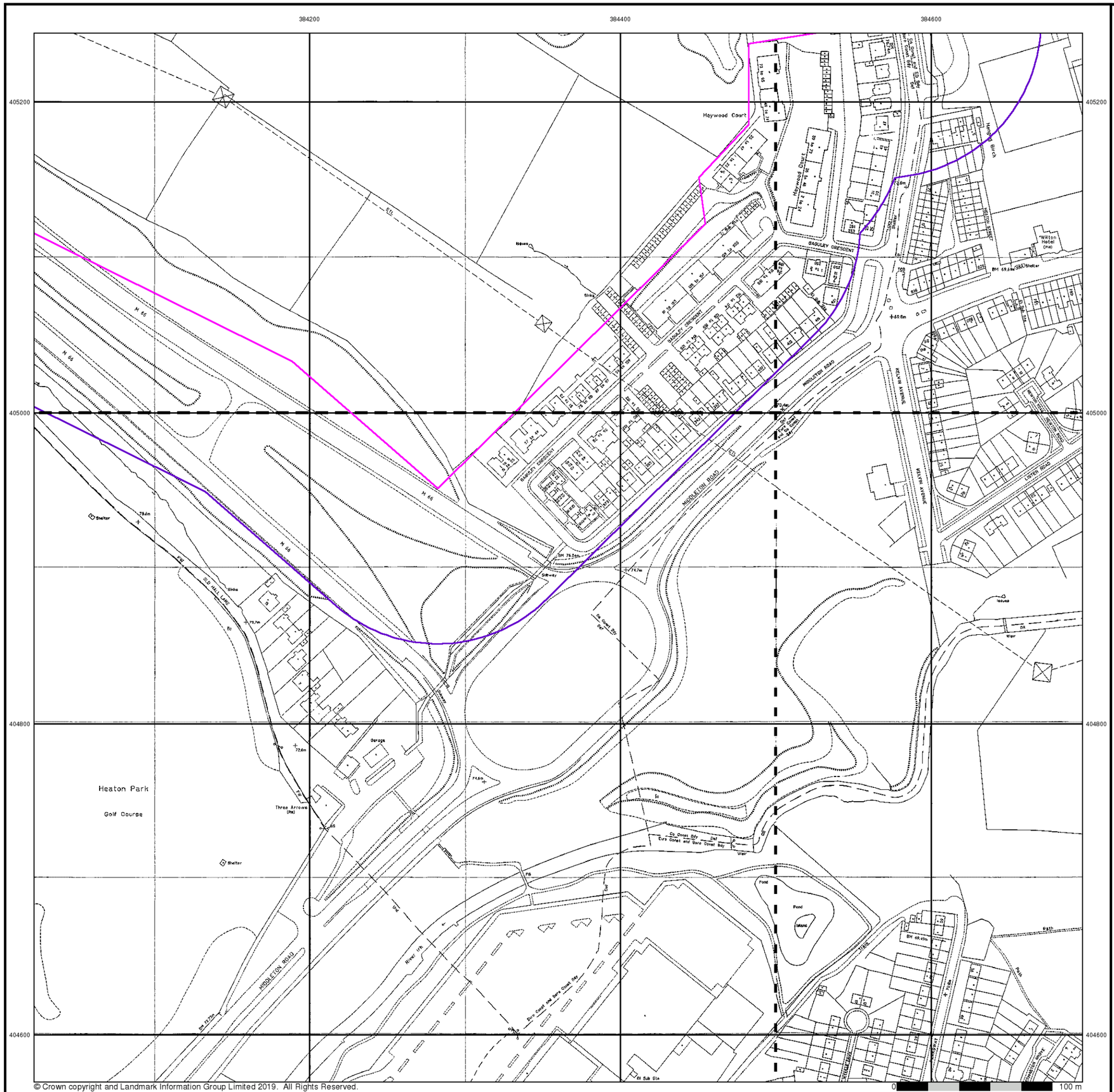
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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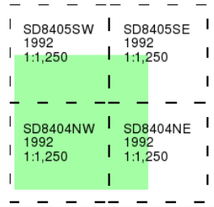
Large-Scale National Grid Data

Published 1992

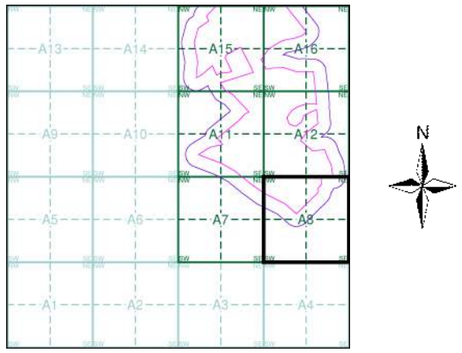
Source map scale - 1:1,250

'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 A8



Order Details

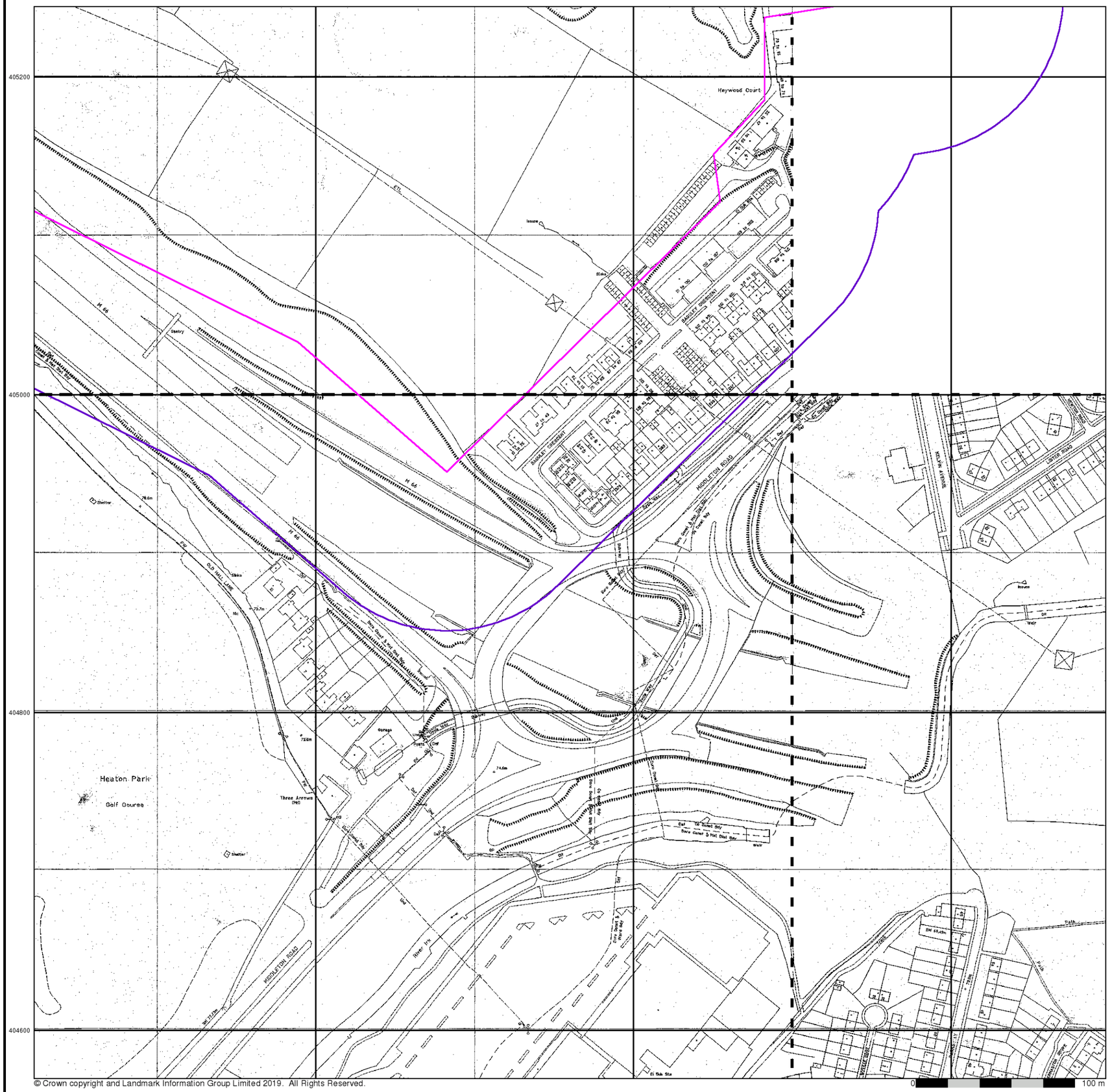
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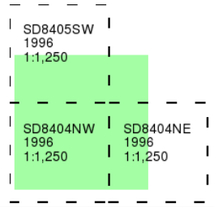
Large-Scale National Grid Data

Published 1996

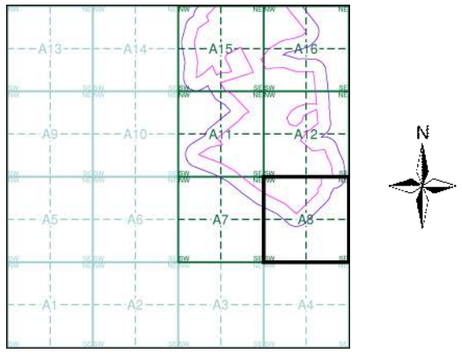
Source map scale - 1:1,250

'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 A8



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Site Details

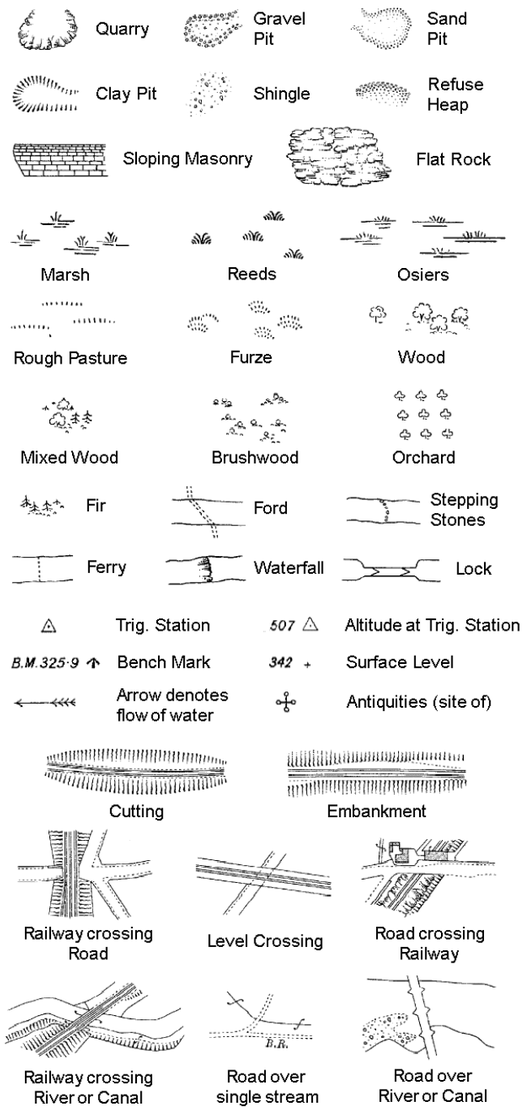
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Historical Mapping Legends

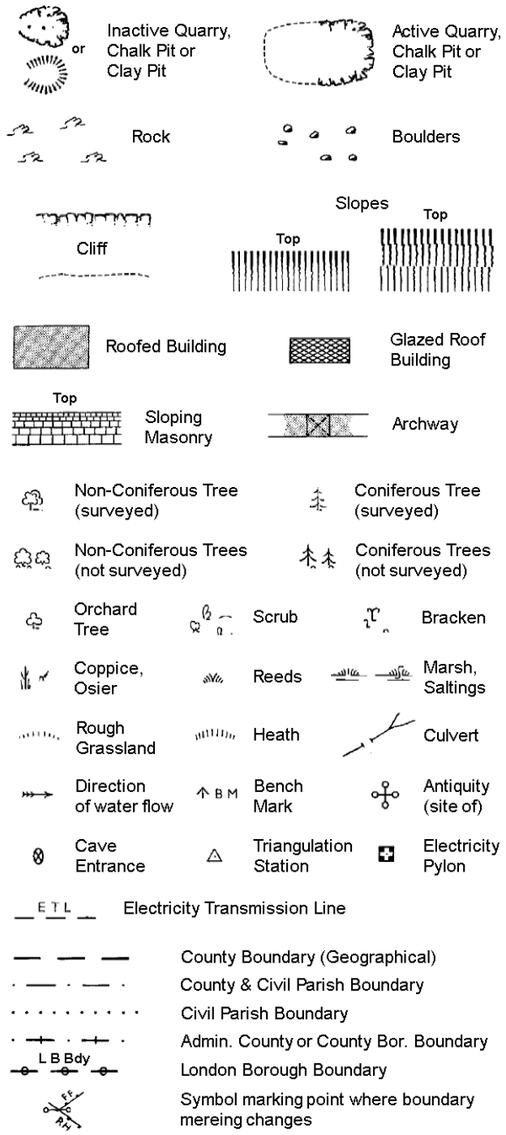
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

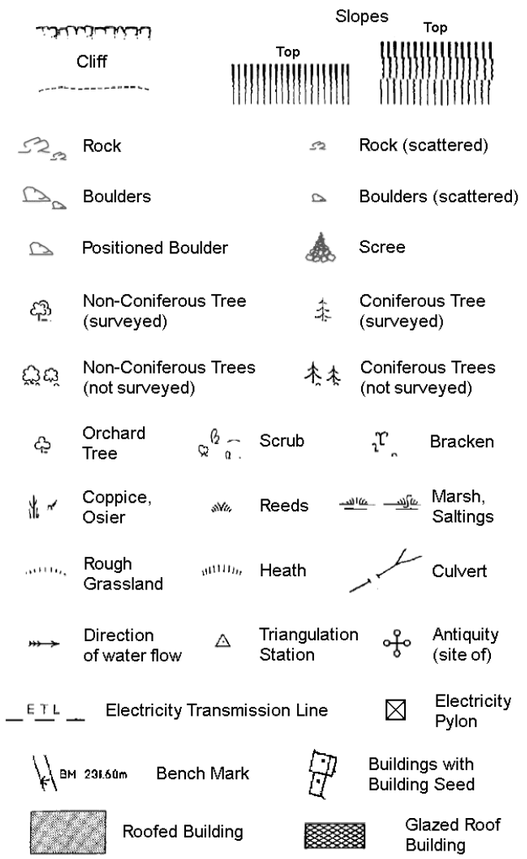
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



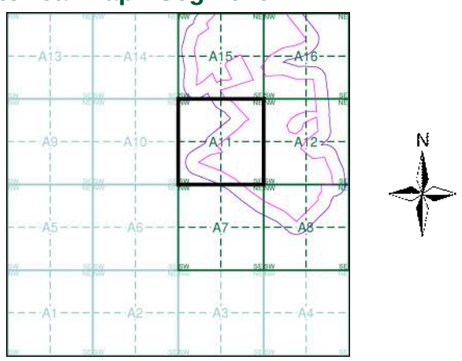
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1955	5
Ordnance Survey Plan	1:2,500	1955 - 1956	6
Ordnance Survey Plan	1:2,500	1969 - 1971	7
Additional SIMs	1:2,500	1977	8
Ordnance Survey Plan	1:1,250	1978	9
Ordnance Survey Plan	1:2,500	1986	10
Large-Scale National Grid Data	1:2,500	1992	11
Large-Scale National Grid Data	1:1,250	1992	12
Large-Scale National Grid Data	1:1,250	1996	13
Large-Scale National Grid Data	1:2,500	1996	14

Historical Map - Segment A11



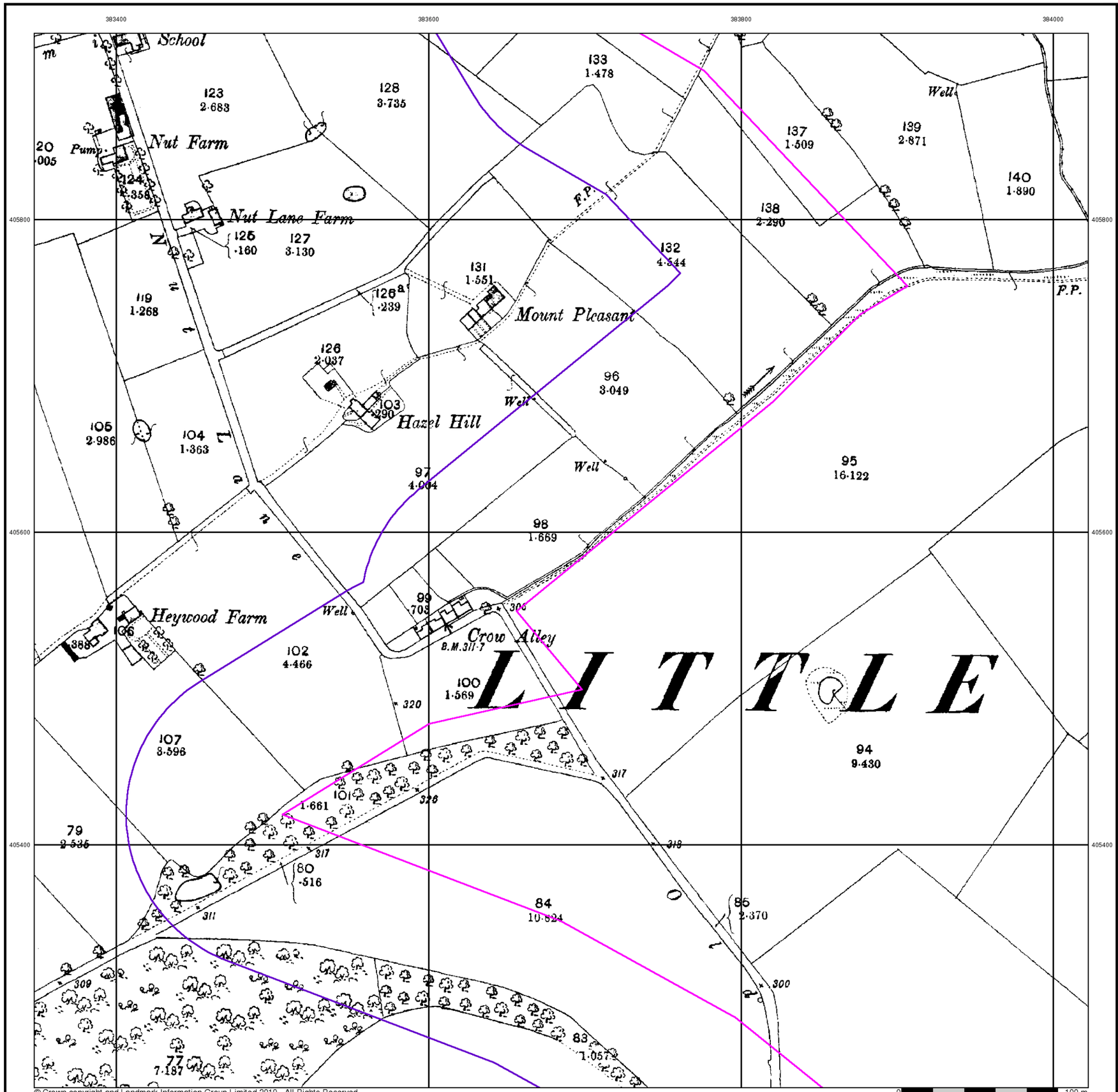
Order Details

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Search Buffer (m):	100

Site Details

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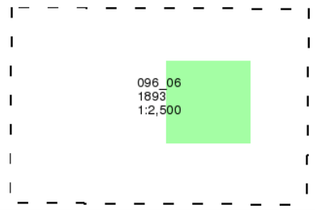
Lancashire And Furness

Published 1893

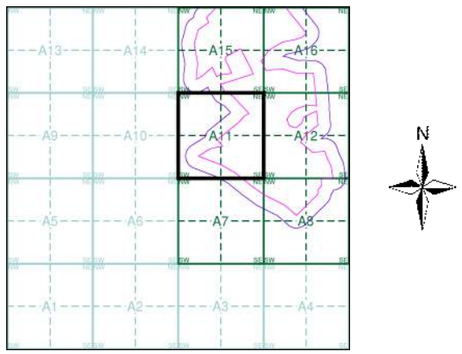
Source map scale - 1:2,500

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 A11



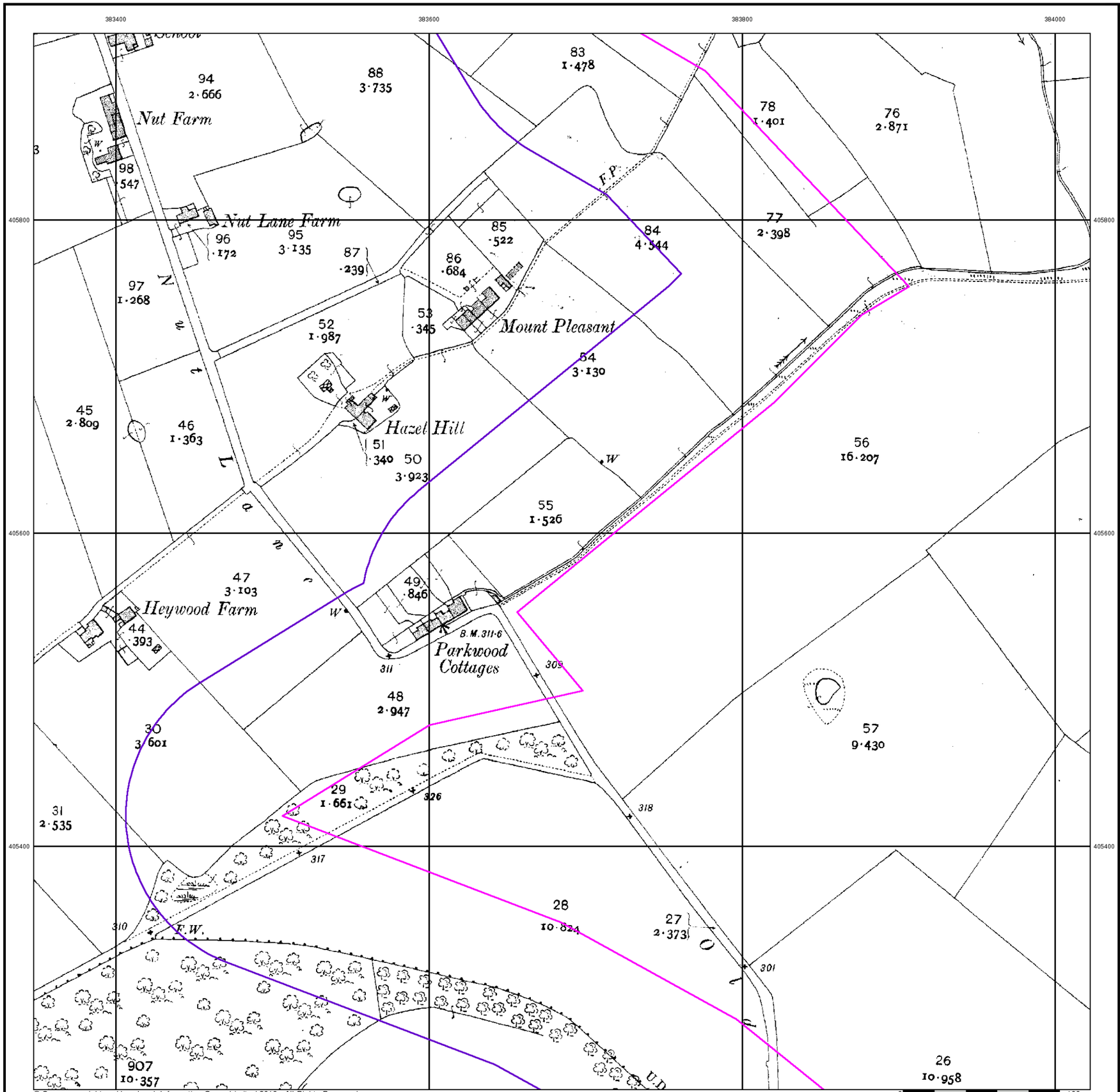
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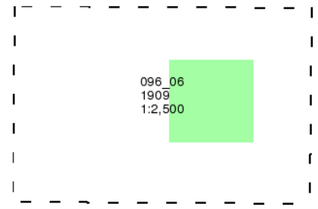
Lancashire And Furness

Published 1909

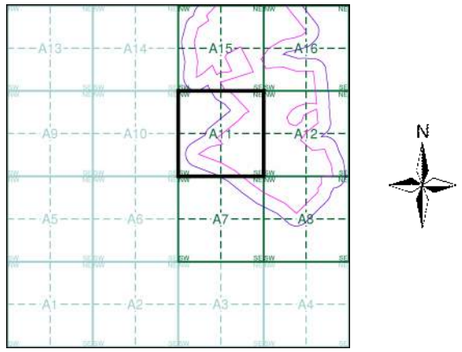
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



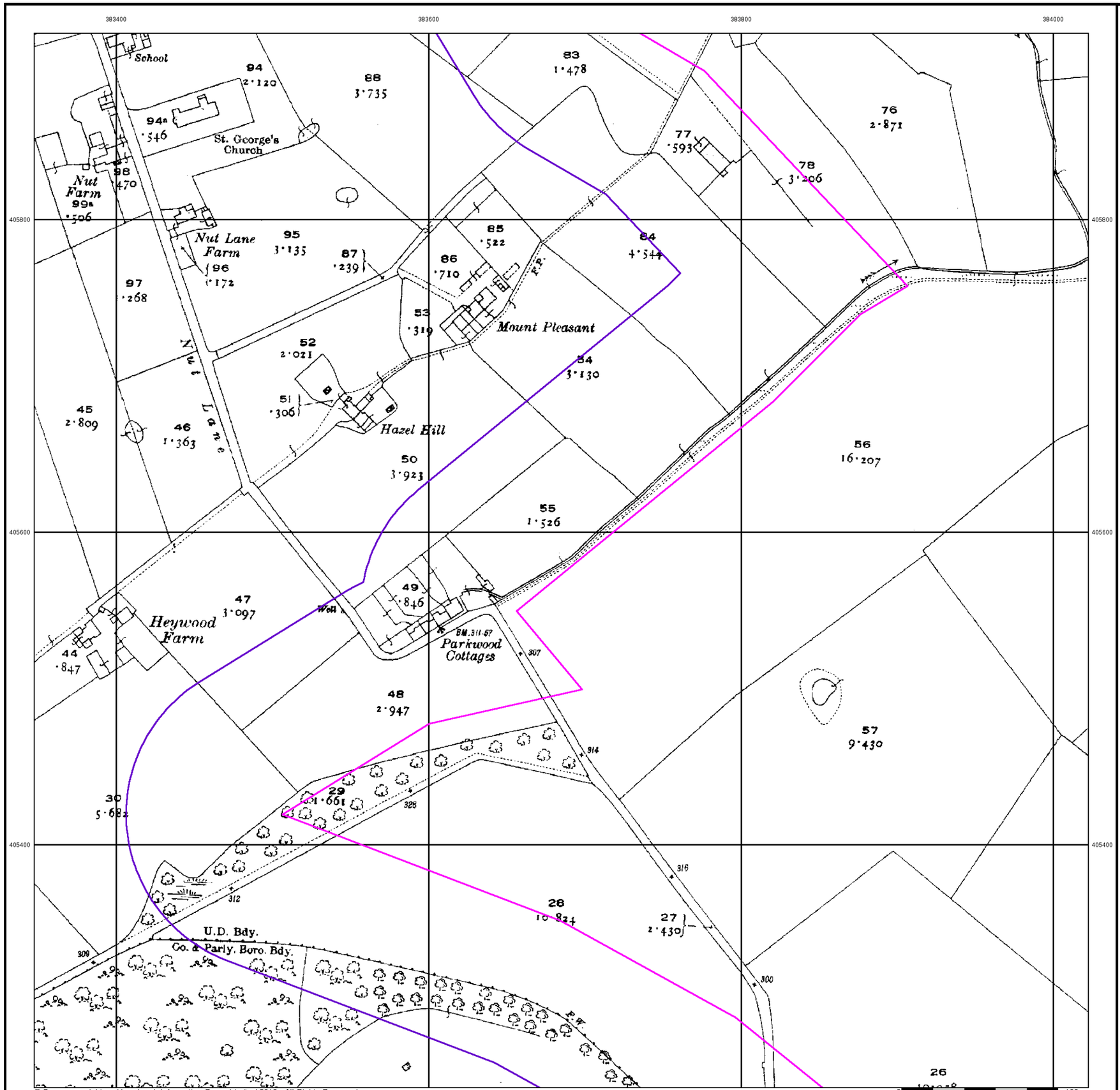
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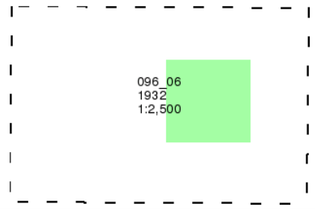
Lancashire And Furness

Published 1932

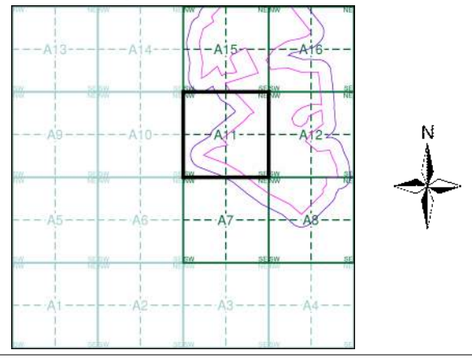
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



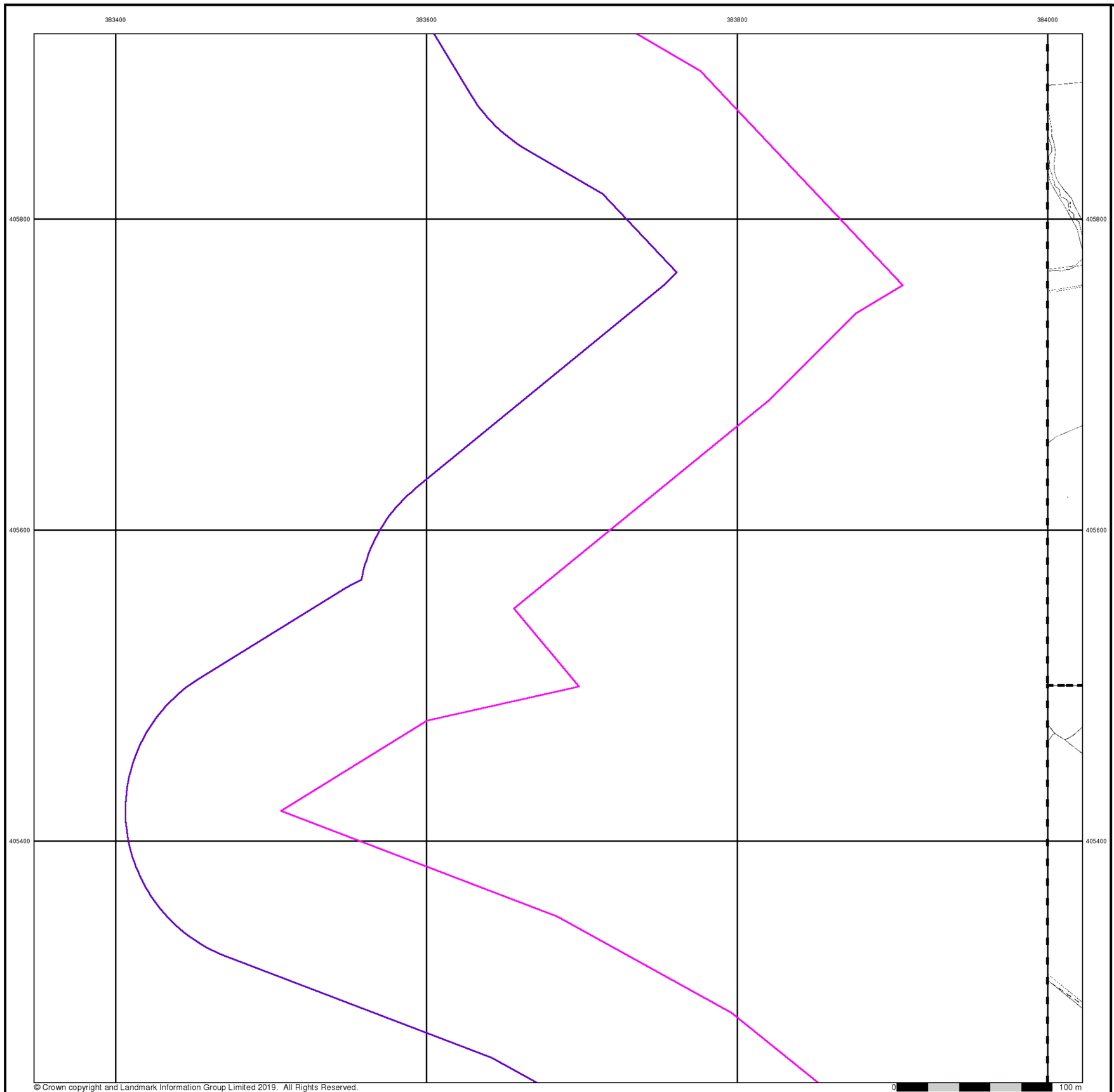
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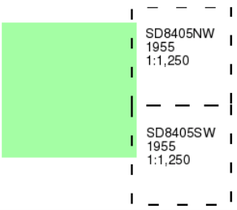
Ordnance Survey Plan

Published 1955

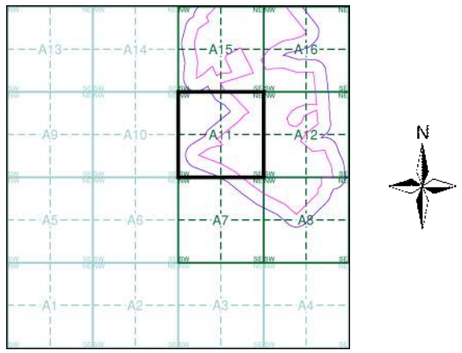
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A11



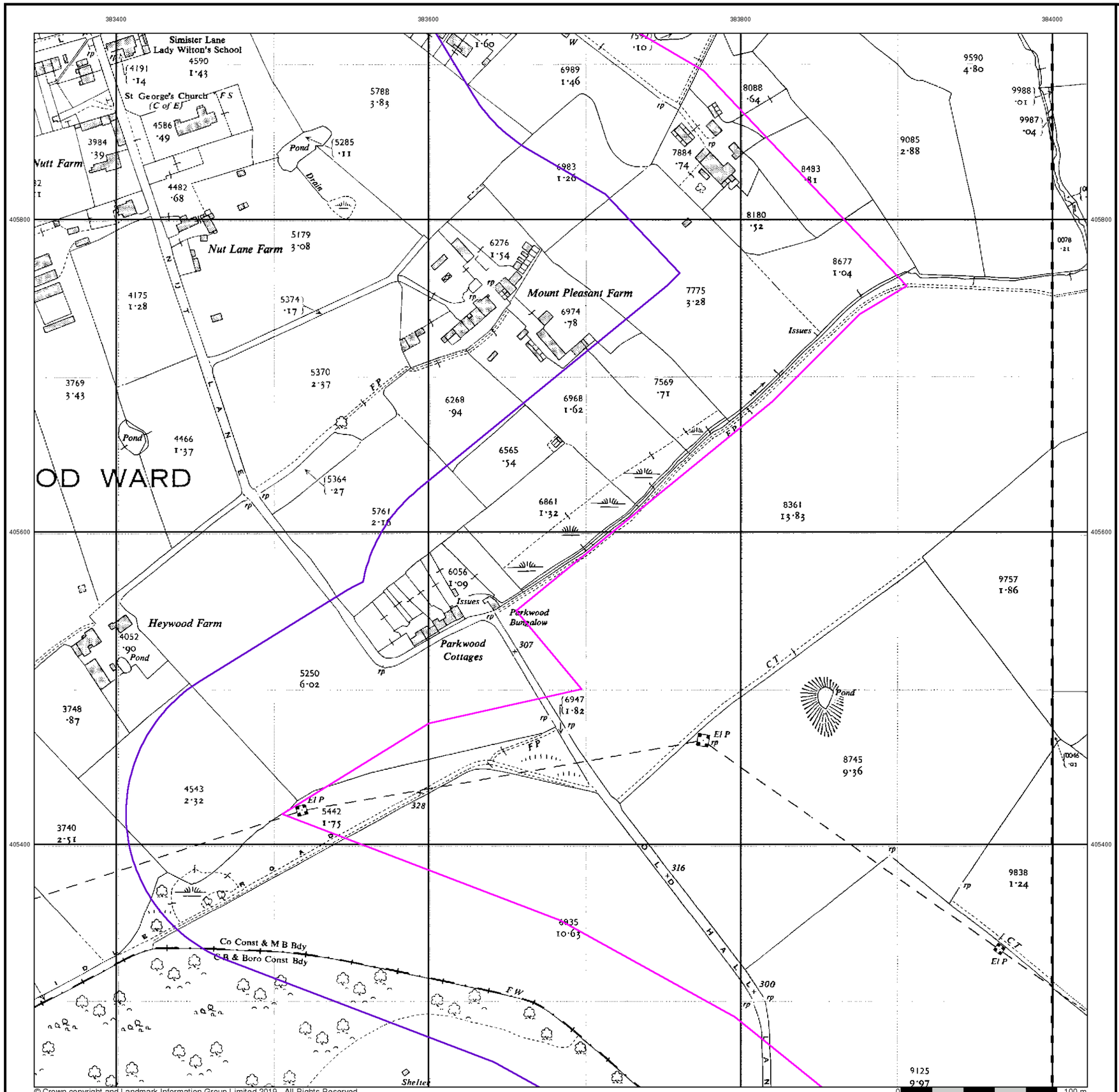
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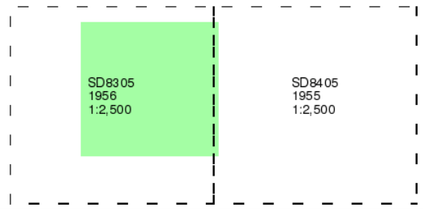
Ordnance Survey Plan

Published 1955 - 1956

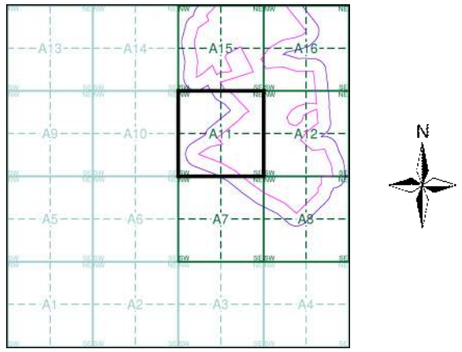
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



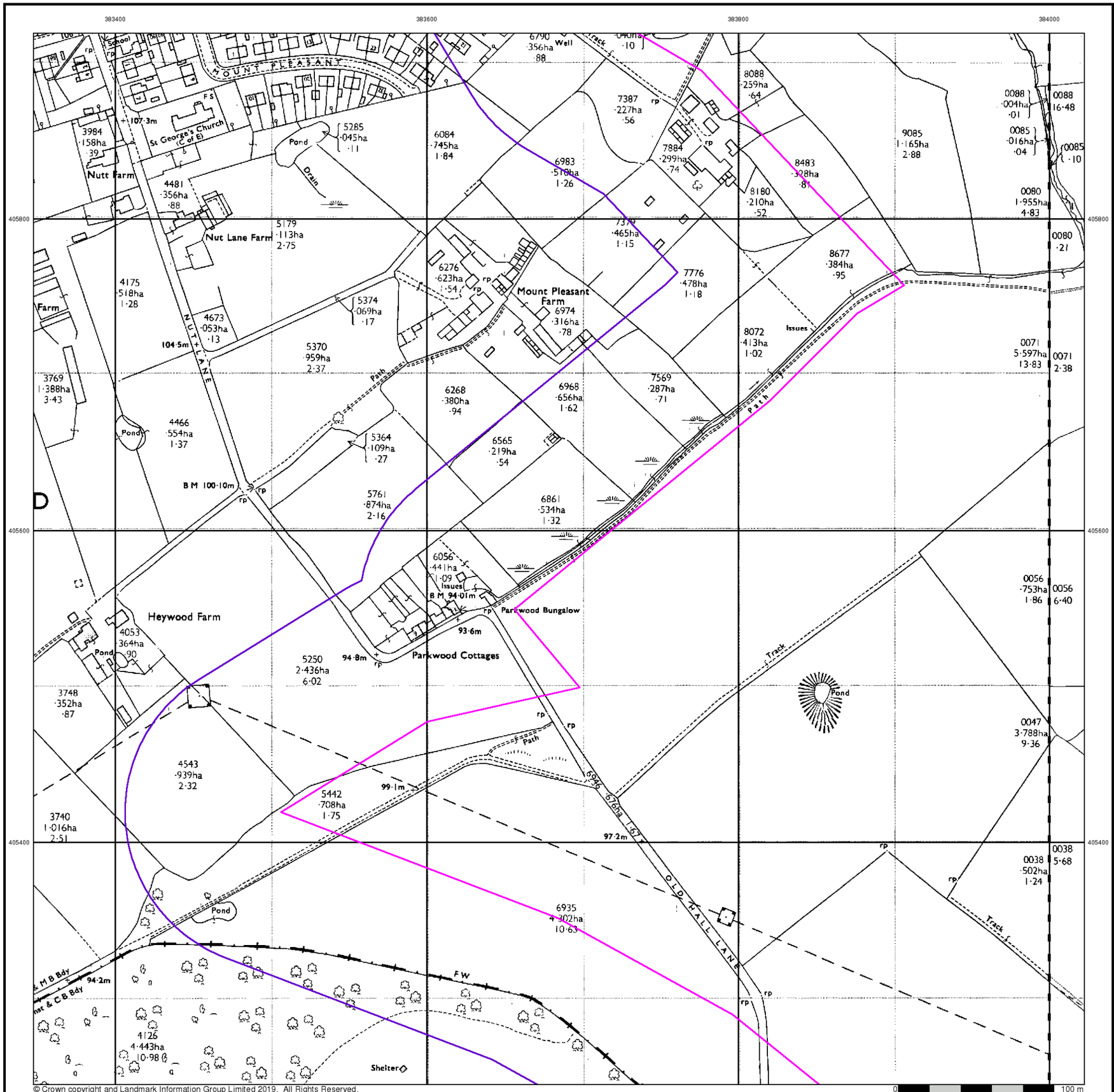
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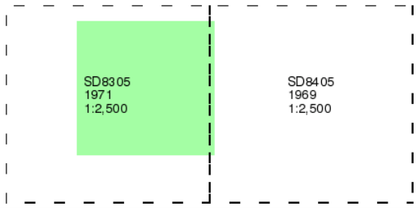
Ordnance Survey Plan

Published 1969 - 1971

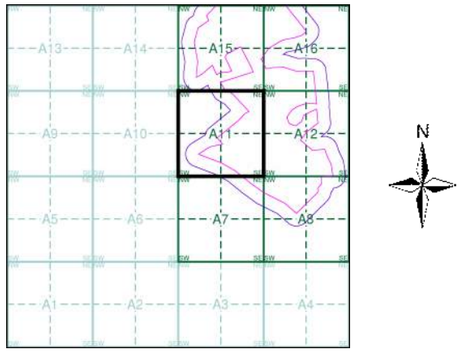
Source map scale - 1:2,500

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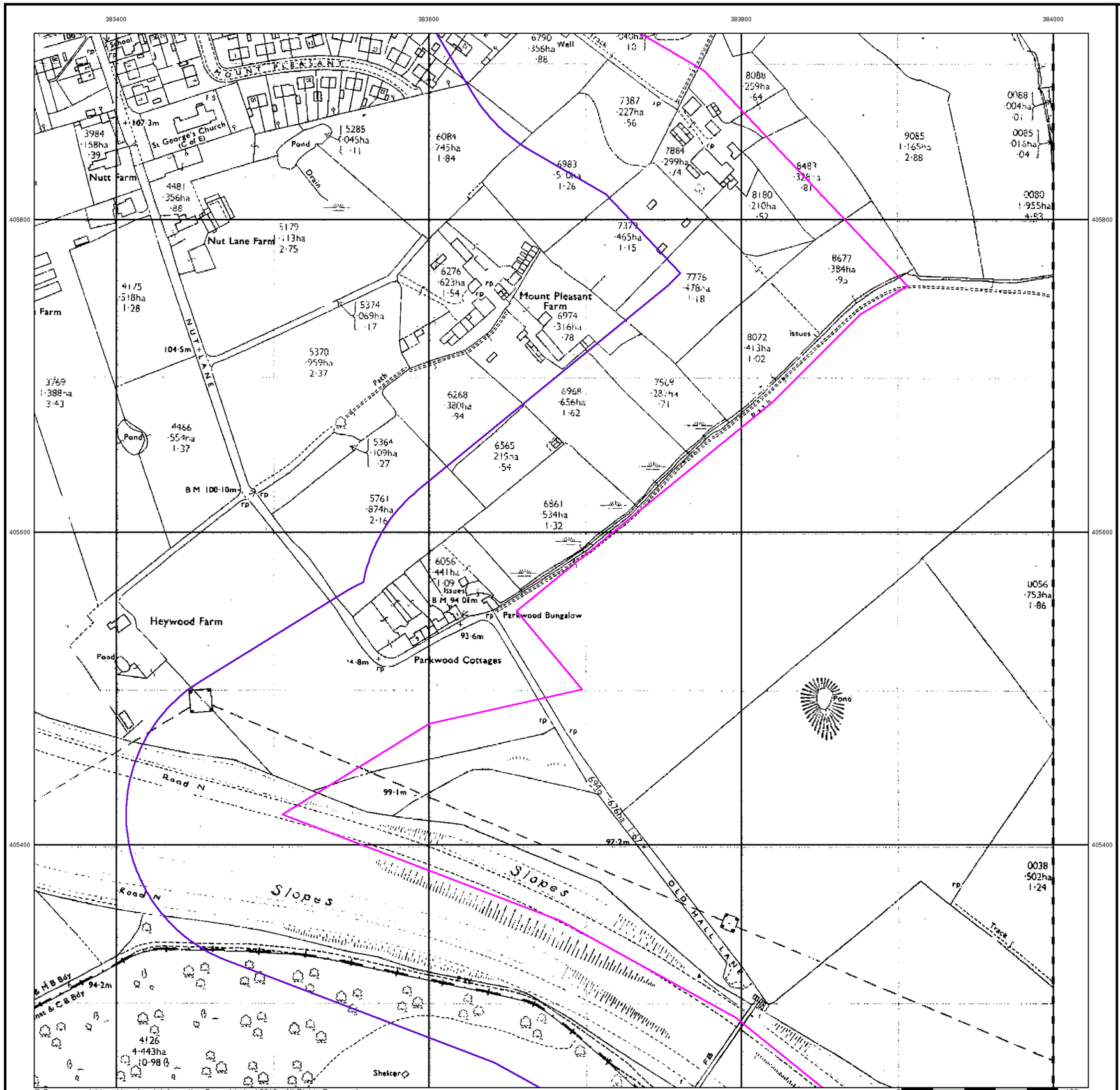
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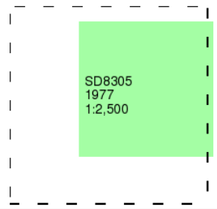
Additional SIMs

Published 1977

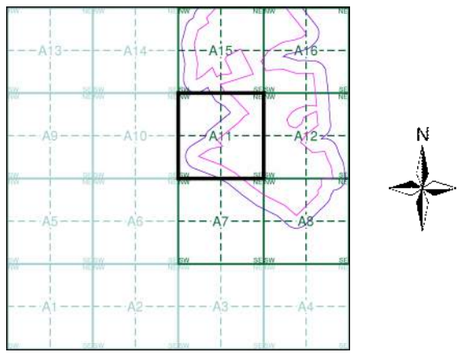
Source map scale - 1:2,500

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 A11



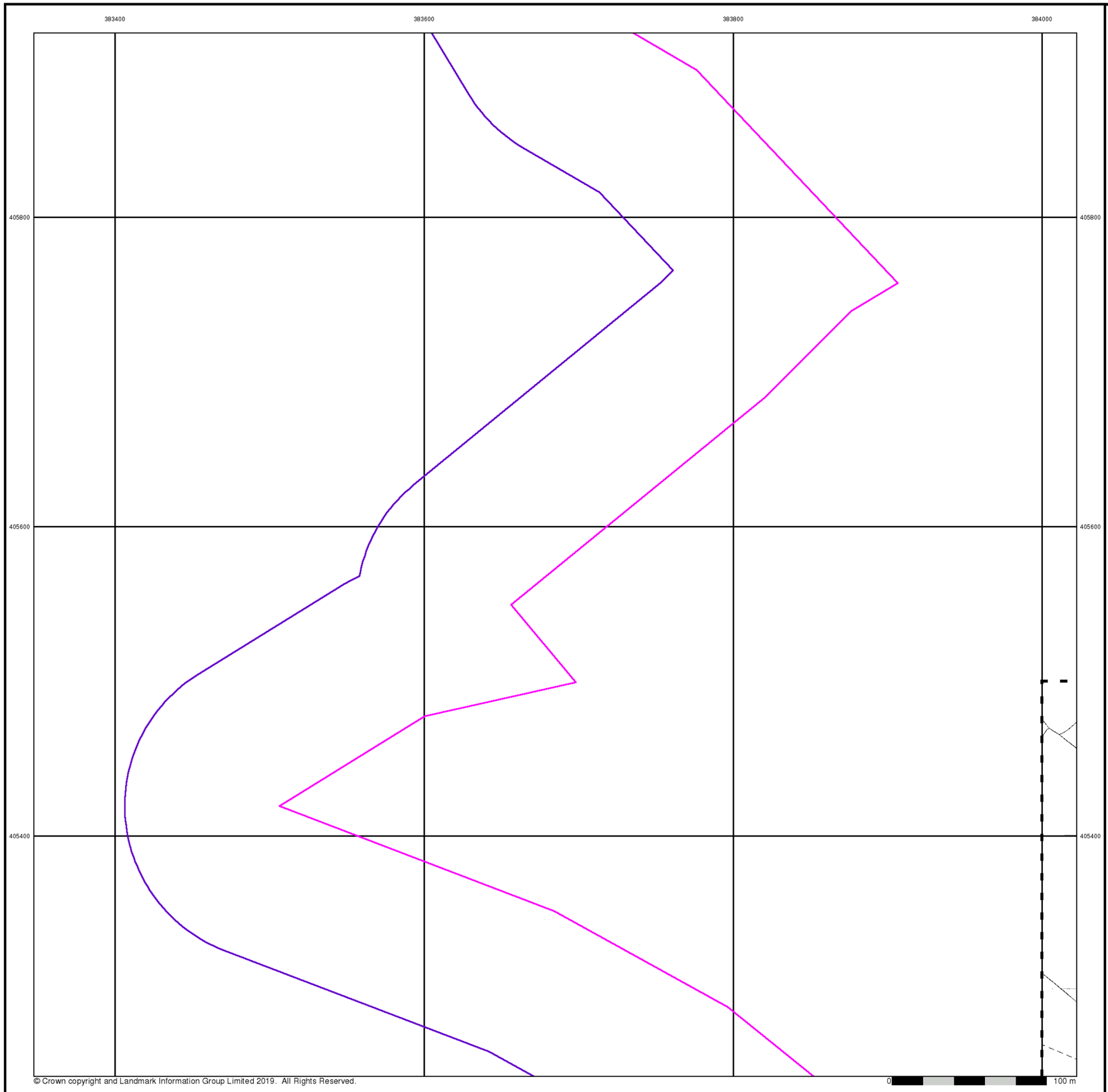
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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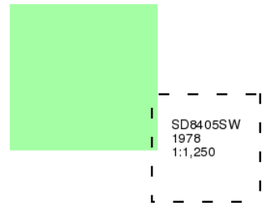
Ordnance Survey Plan

Published 1978

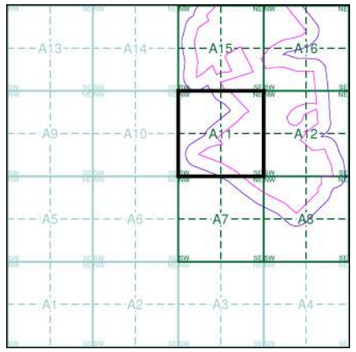
Source map scale - 1:1,250

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)



Historical Map - Segment A11



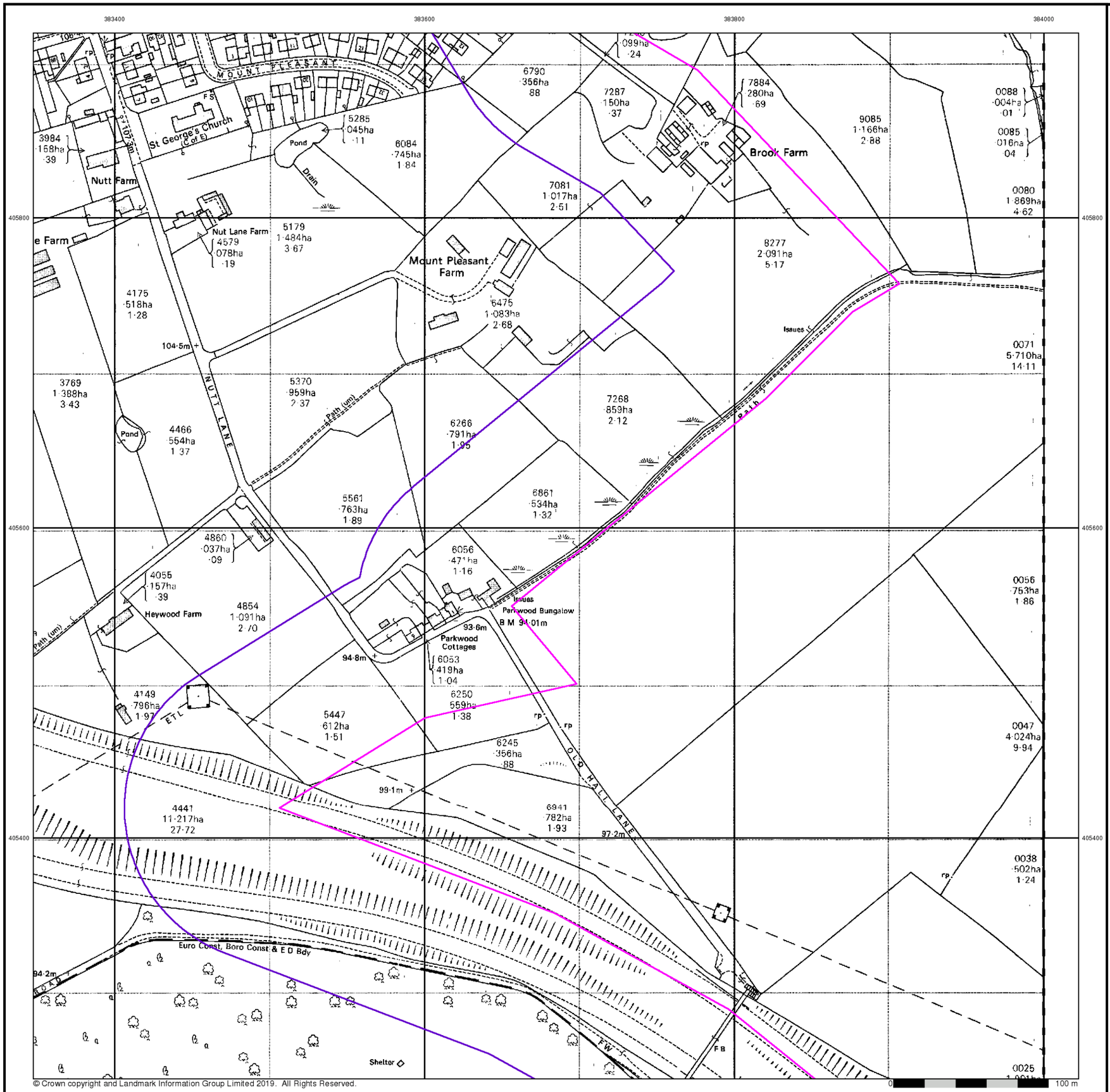
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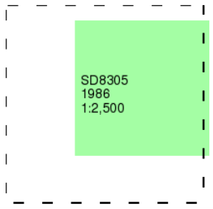
Ordnance Survey Plan

Published 1986

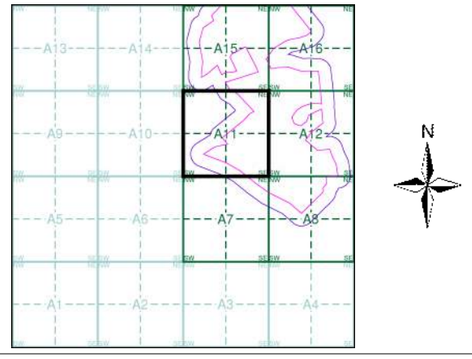
Source map scale - 1:2,500

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 A11



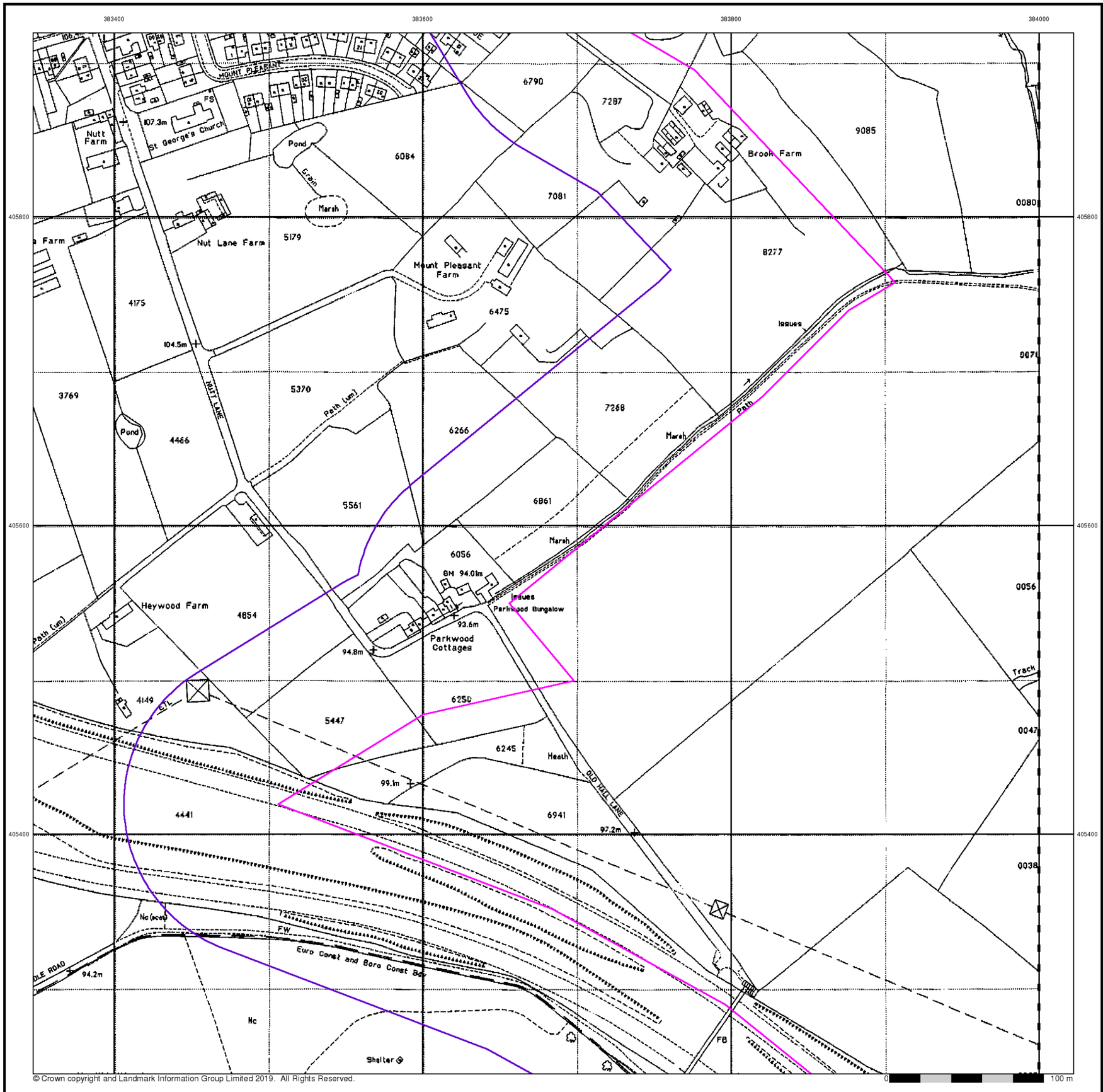
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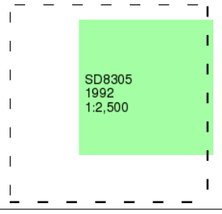
Large-Scale National Grid Data

Published 1992

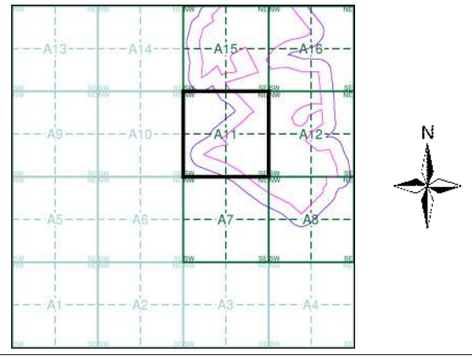
Source map scale - 1:2,500

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

Map Name(s) and Date(s)



Historical Map - Segment A11



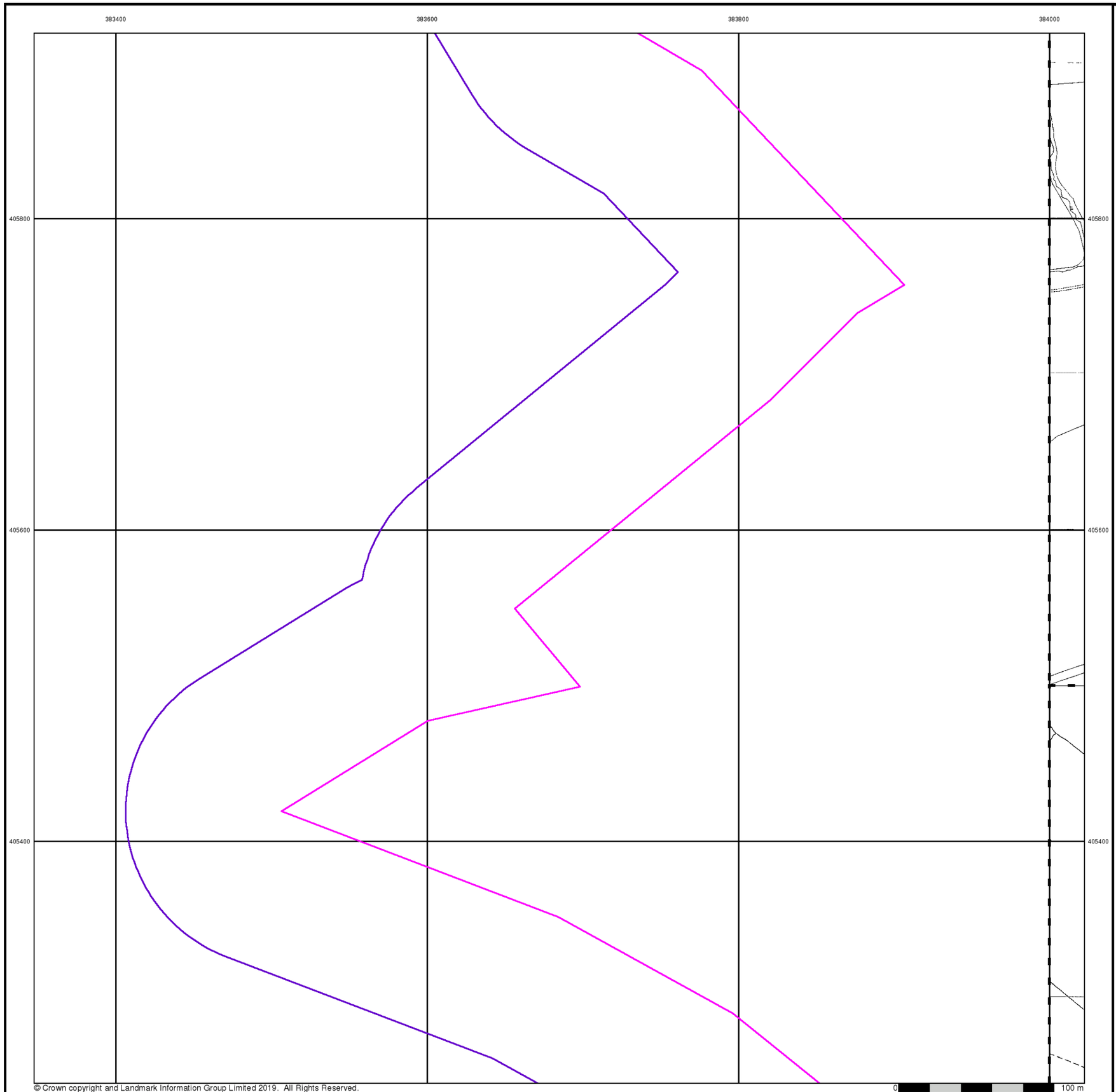
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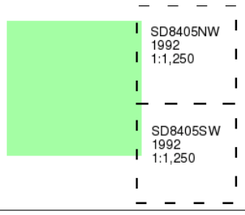
Large-Scale National Grid Data

Published 1992

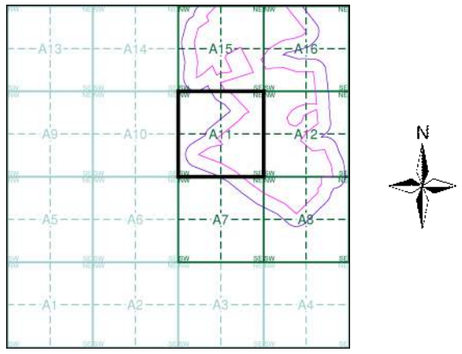
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A11



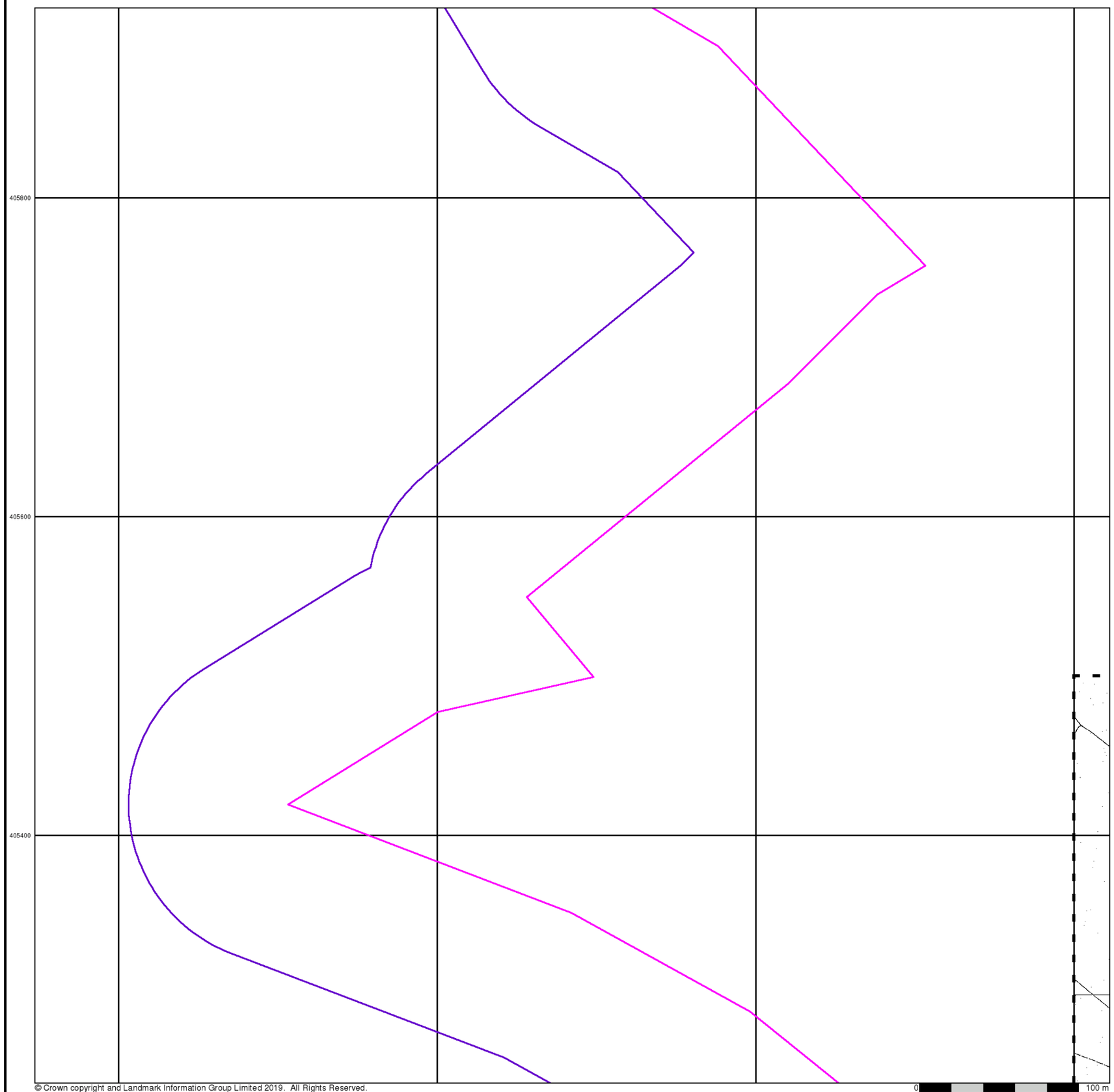
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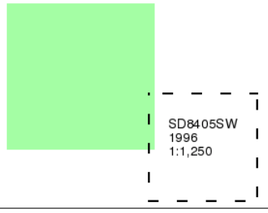
Large-Scale National Grid Data

Published 1996

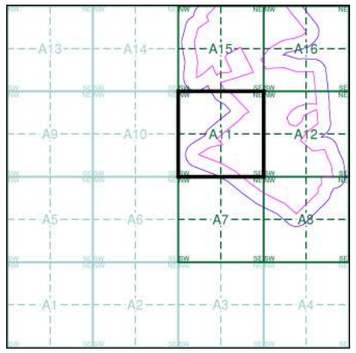
Source map scale - 1:1,250

'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 A11



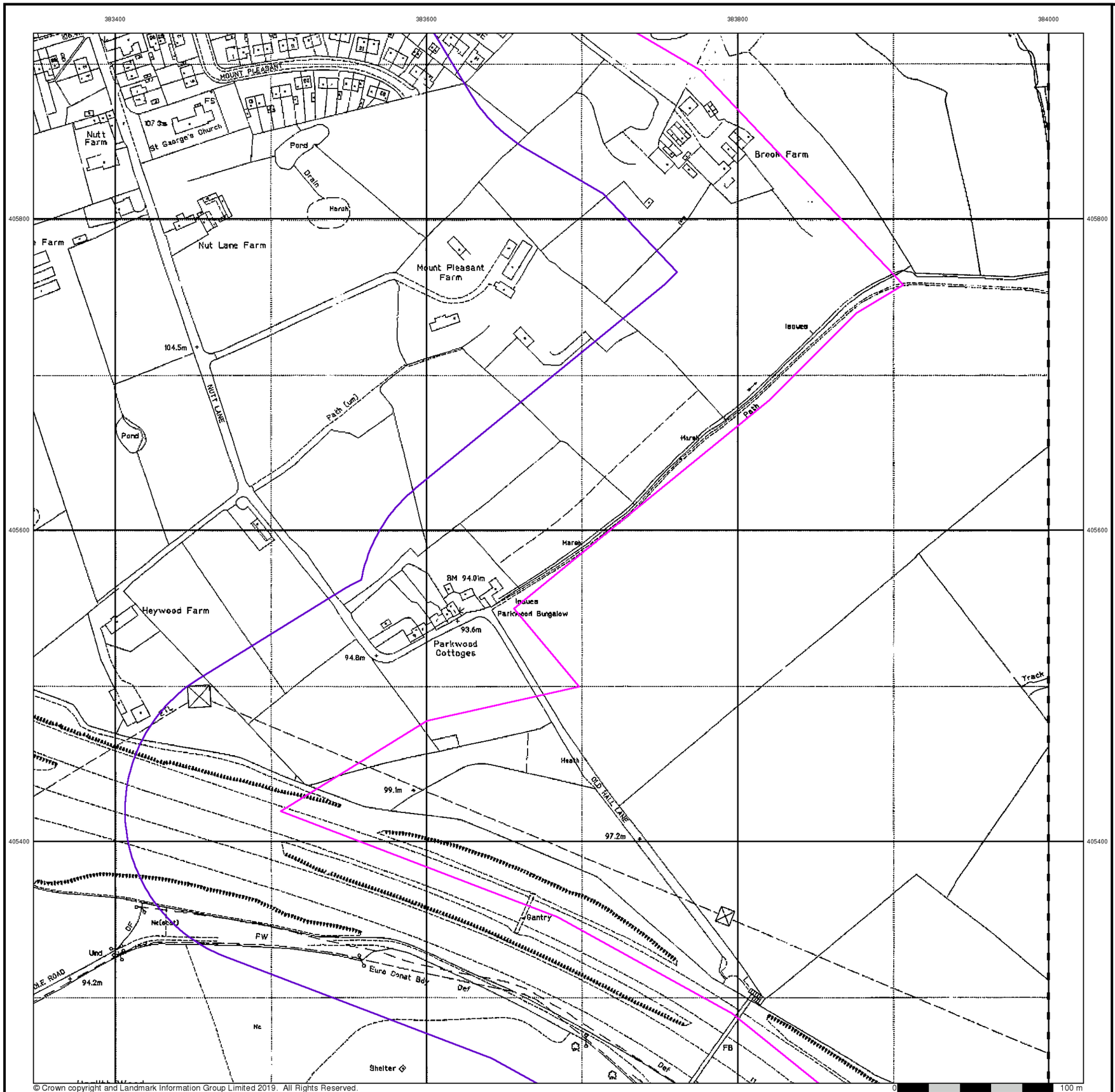
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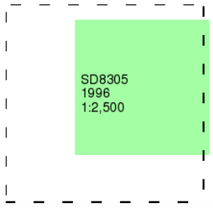
Large-Scale National Grid Data

Published 1996

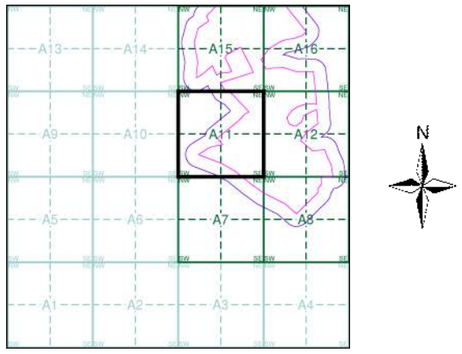
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

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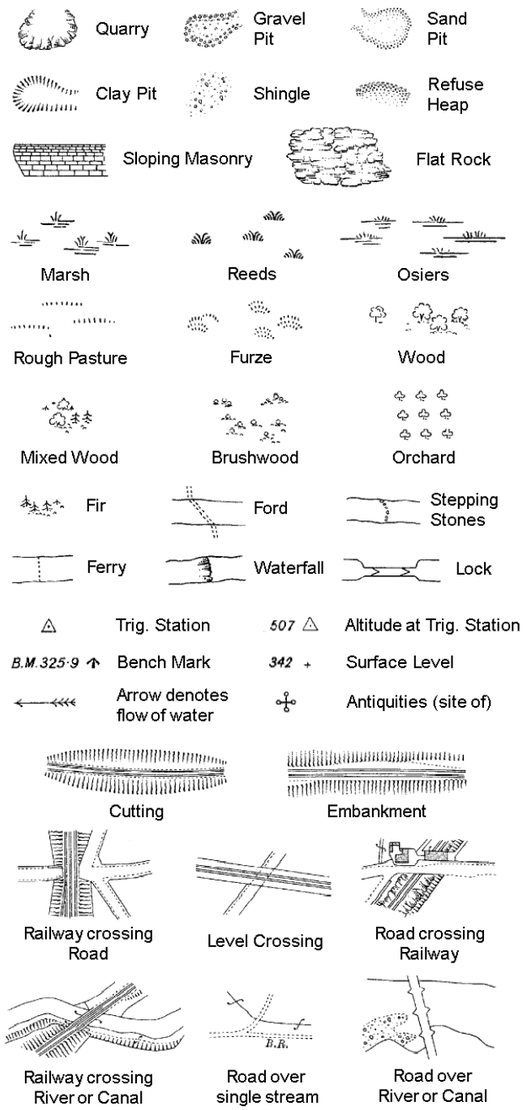
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Historical Mapping Legends

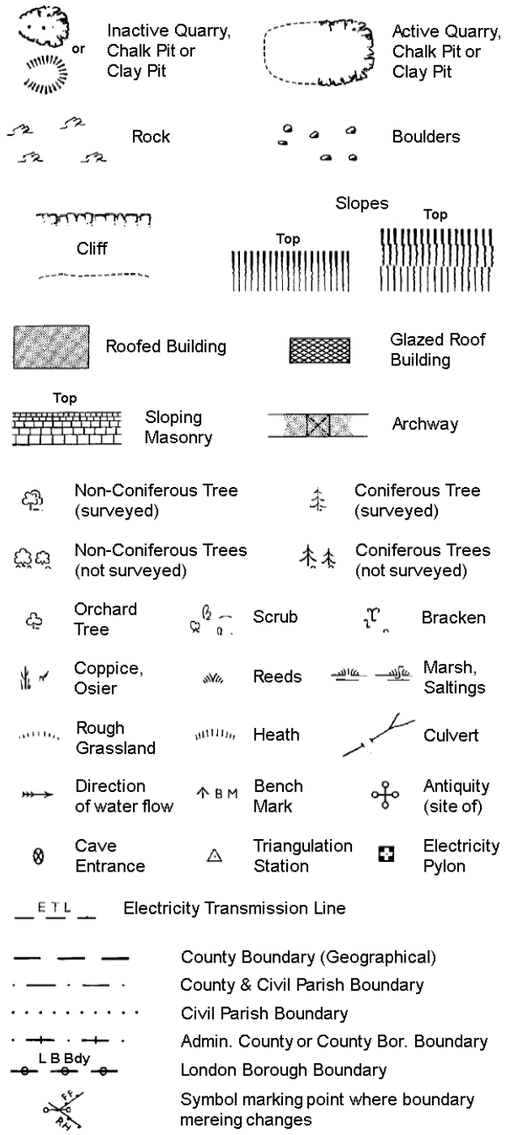
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

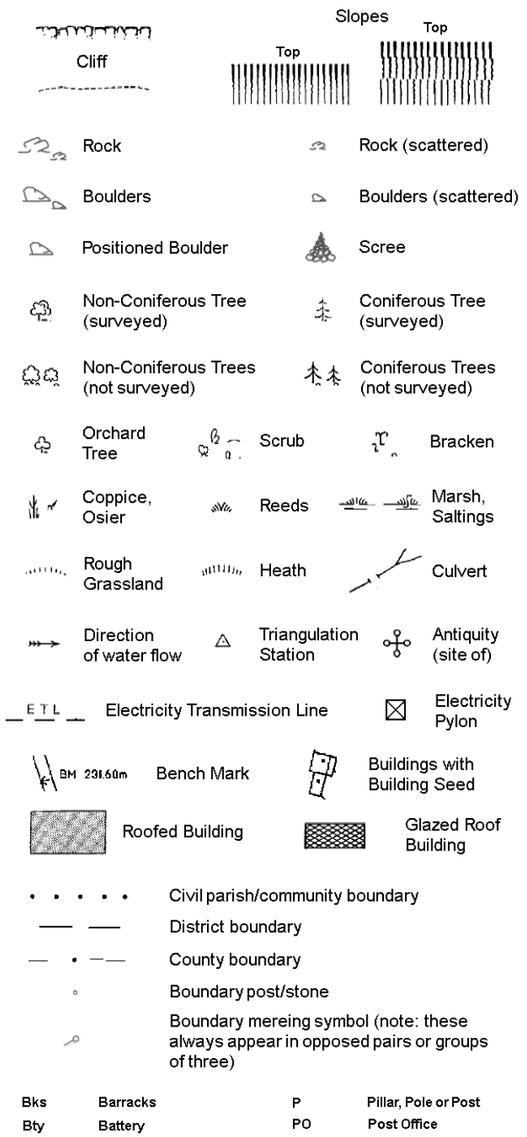
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



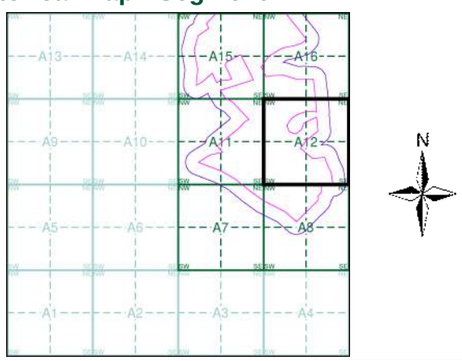
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:2,500	1955	5
Ordnance Survey Plan	1:1,250	1955	6
Ordnance Survey Plan	1:2,500	1969	7
Ordnance Survey Plan	1:1,250	1970 - 1978	8
Additional SIMs	1:1,250	1985	9
Large-Scale National Grid Data	1:1,250	1992	10
Large-Scale National Grid Data	1:1,250	1996	11

Historical Map - Segment A12



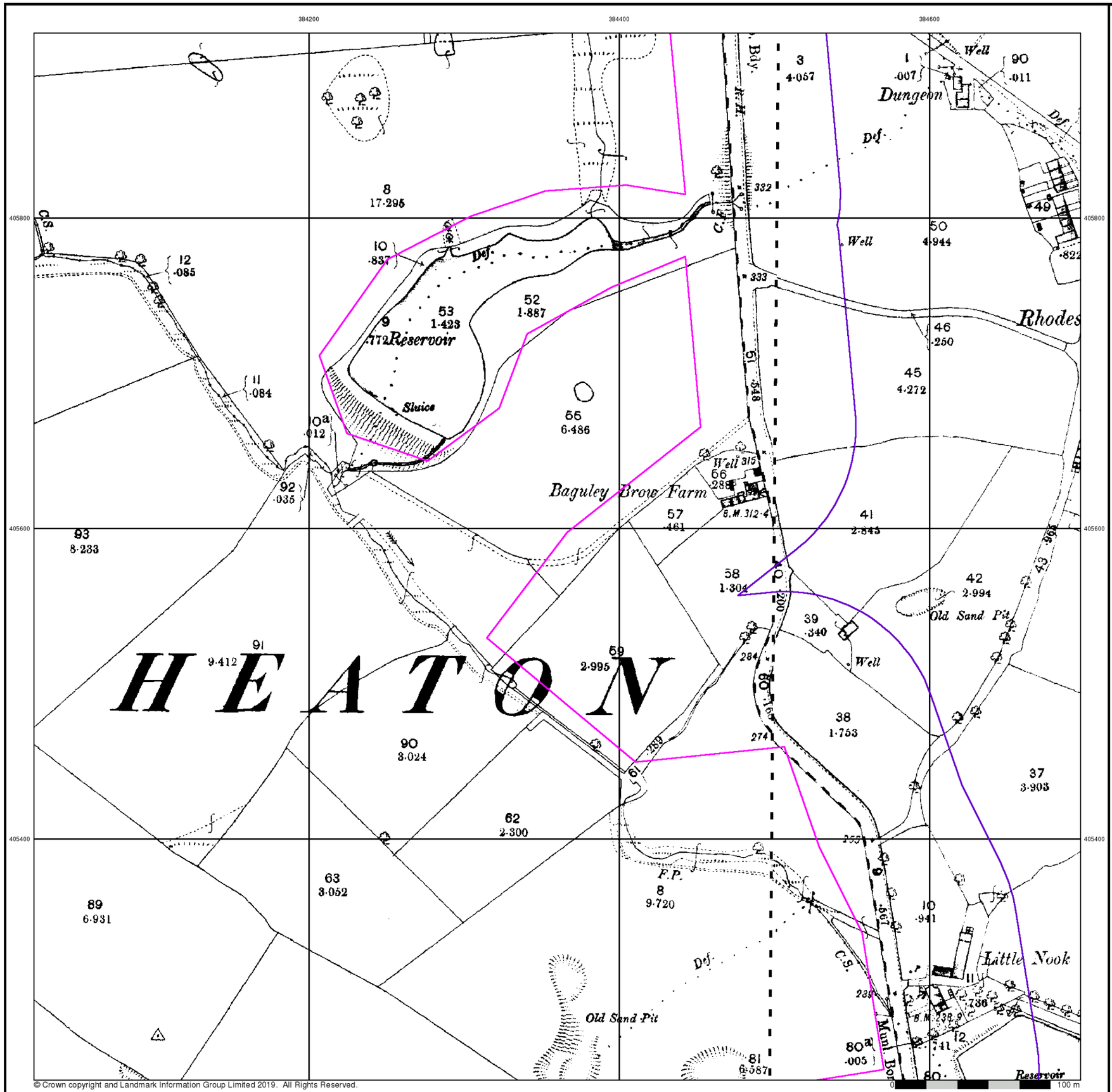
Order Details

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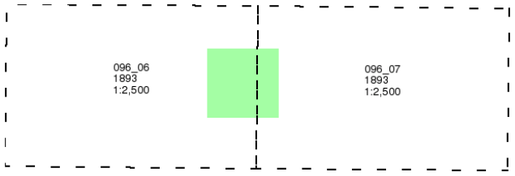
Lancashire And Furness

Published 1893

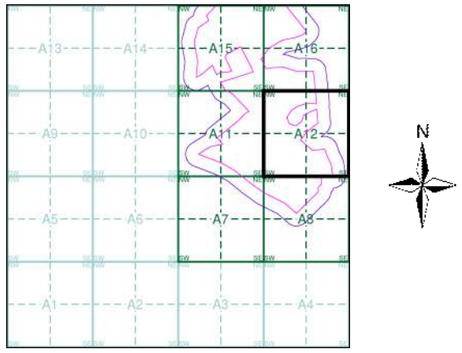
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A12



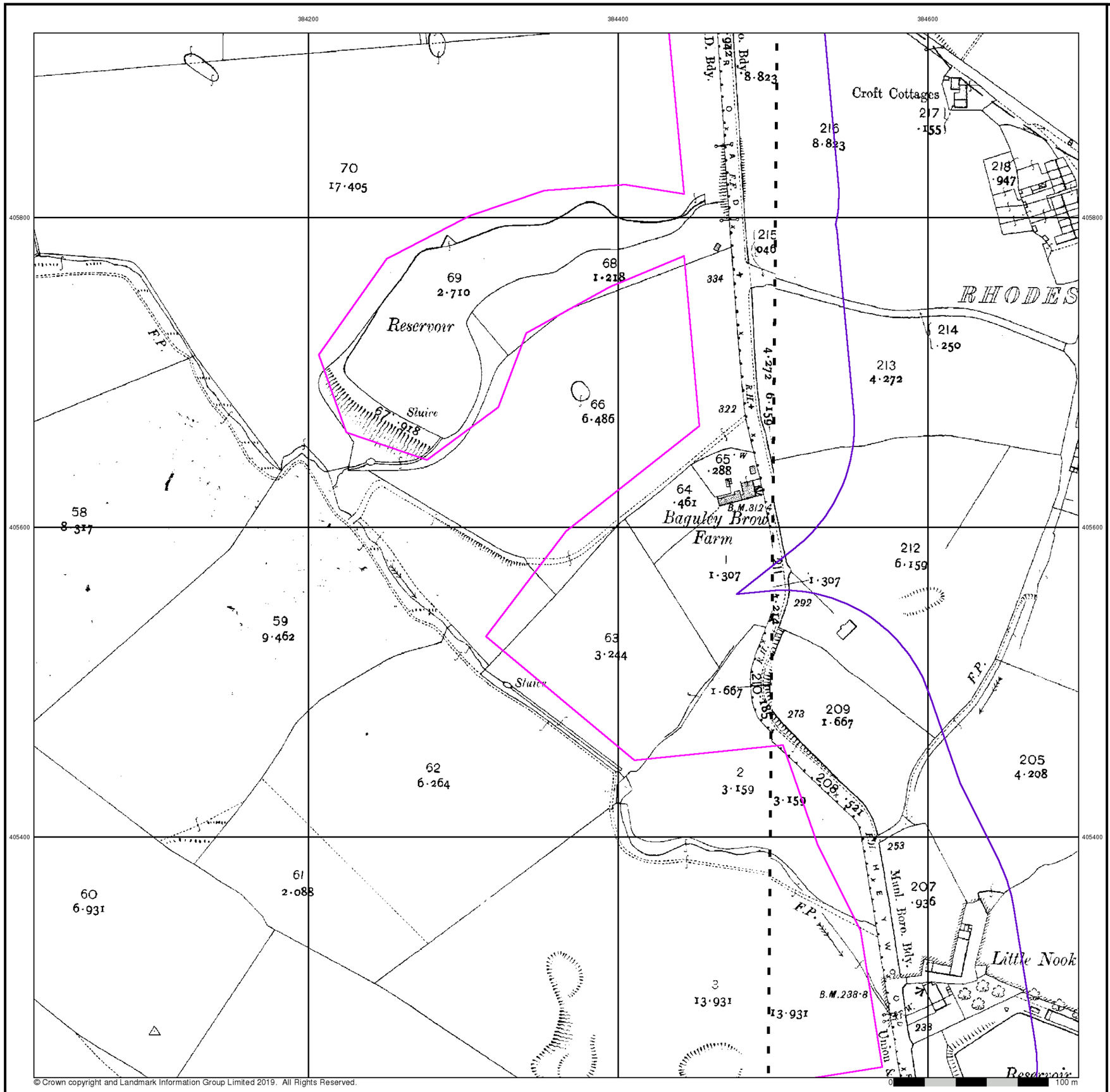
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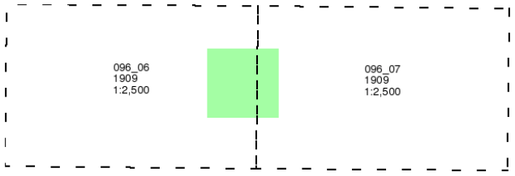
Lancashire And Furness

Published 1909

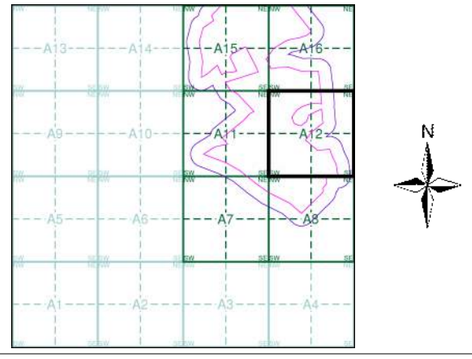
Source map scale - 1:2,500

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Historical Map - Segment A12



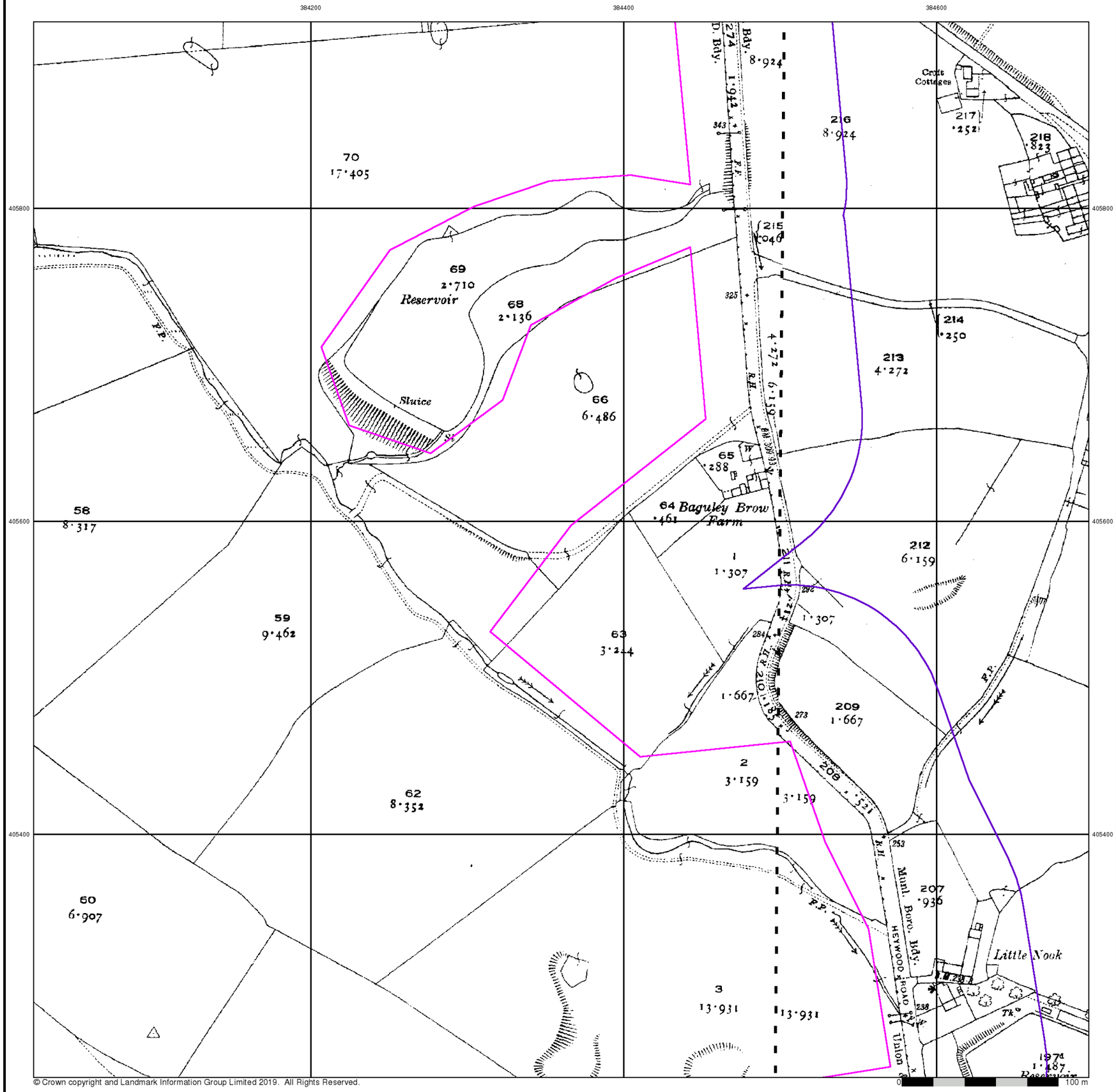
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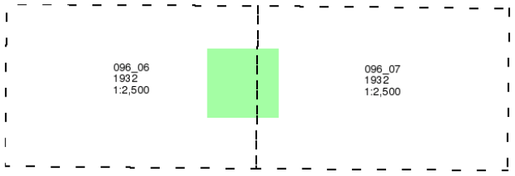
Lancashire And Furness

Published 1932

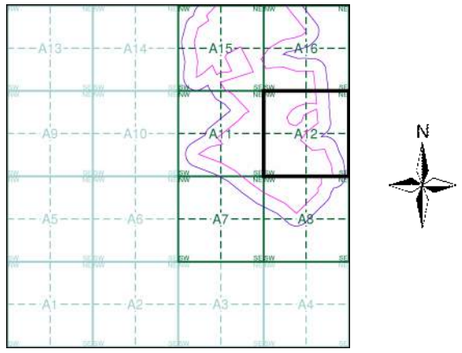
Source map scale - 1:2,500

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 A12



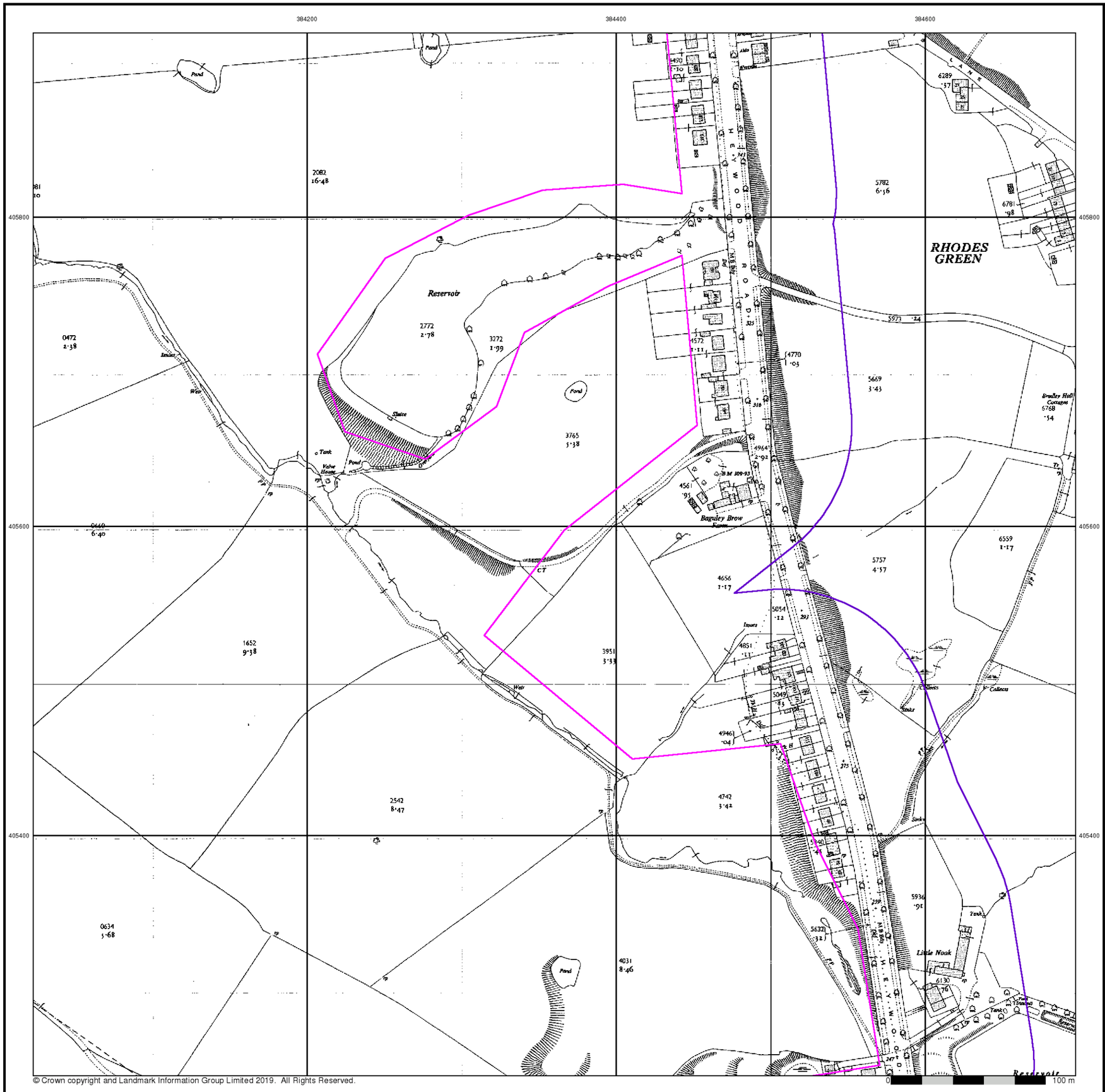
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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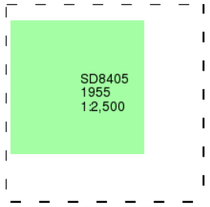
Ordnance Survey Plan

Published 1955

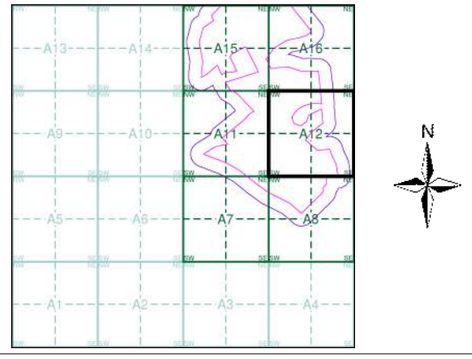
Source map scale - 1:2,500

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 A12



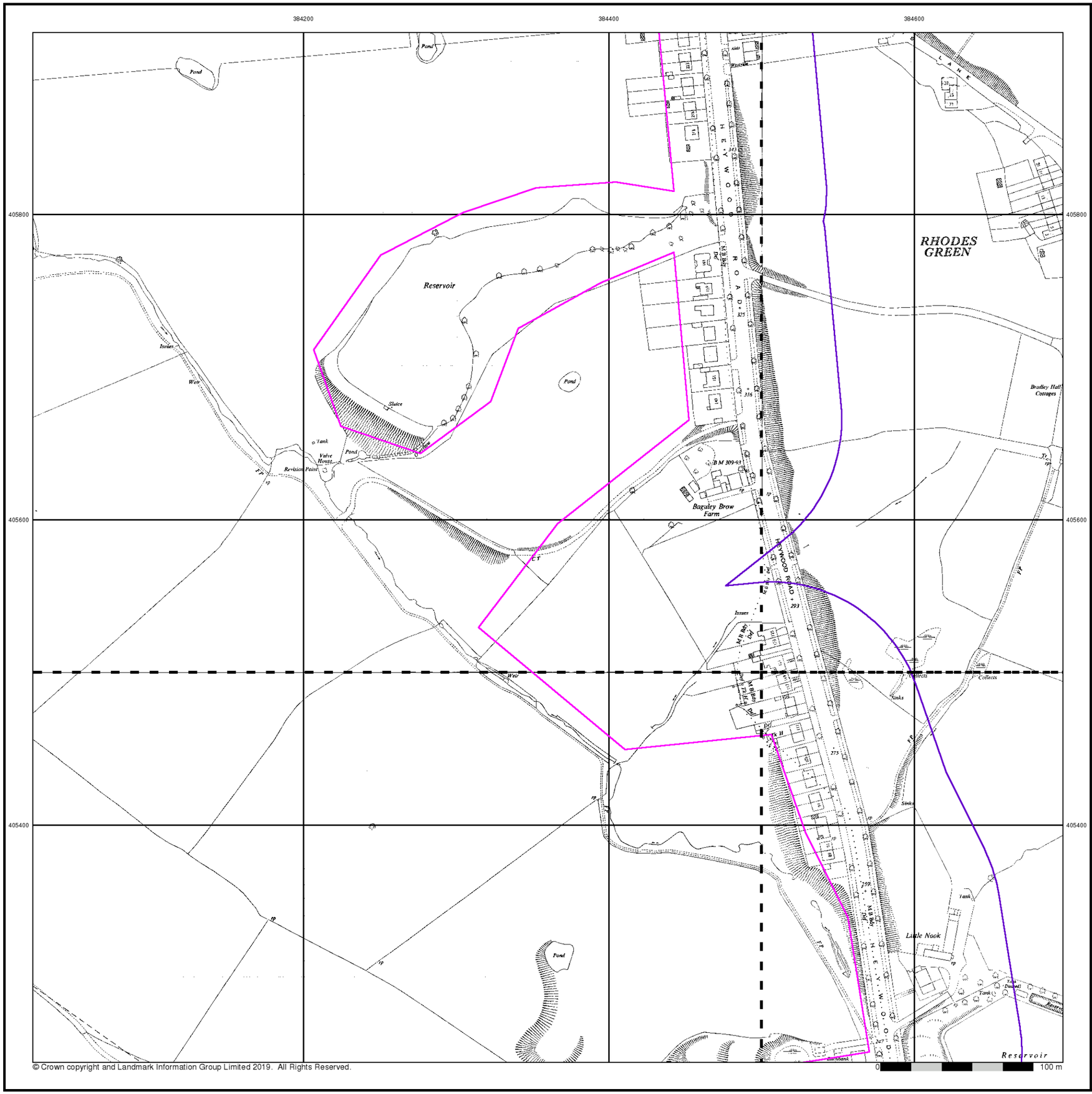
Order Details

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National Grid Reference:	383690, 405420
Slice:	A
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Ordnance Survey Plan

Published 1955

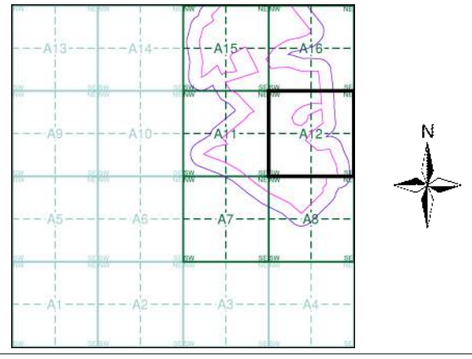
Source map scale - 1:1,250

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)

SD8405NW 1955 1:1,250	SD8405NE 1955 1:1,250
SD8405SW 1955 1:1,250	SD8405SE 1955 1:1,250

Historical Map - Segment A12



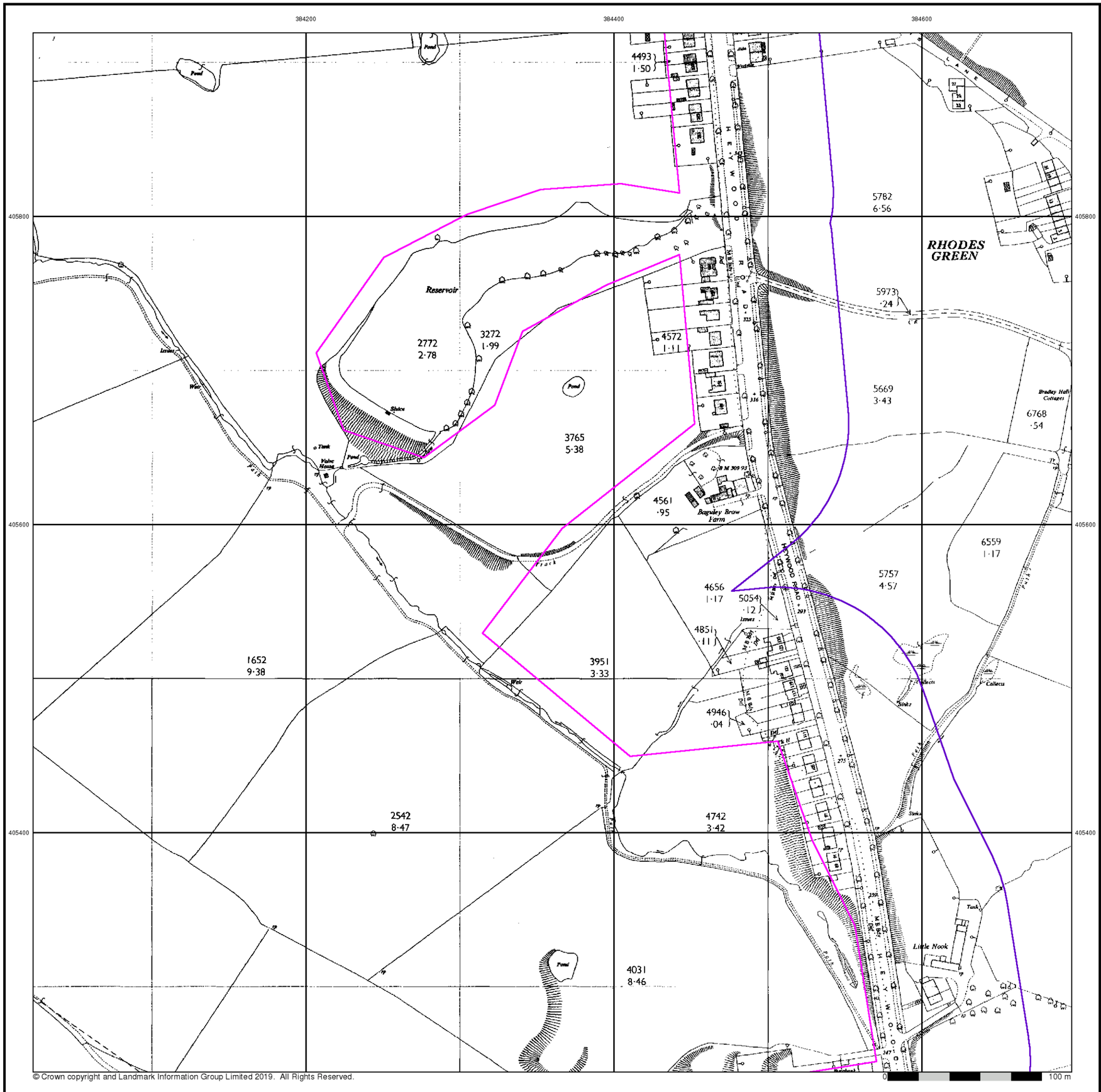
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National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
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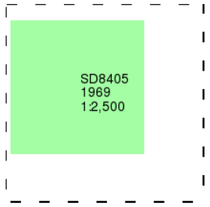
Ordnance Survey Plan

Published 1969

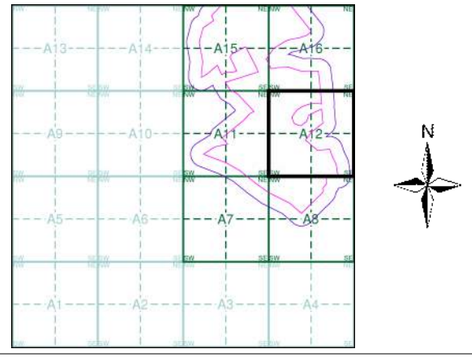
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A12



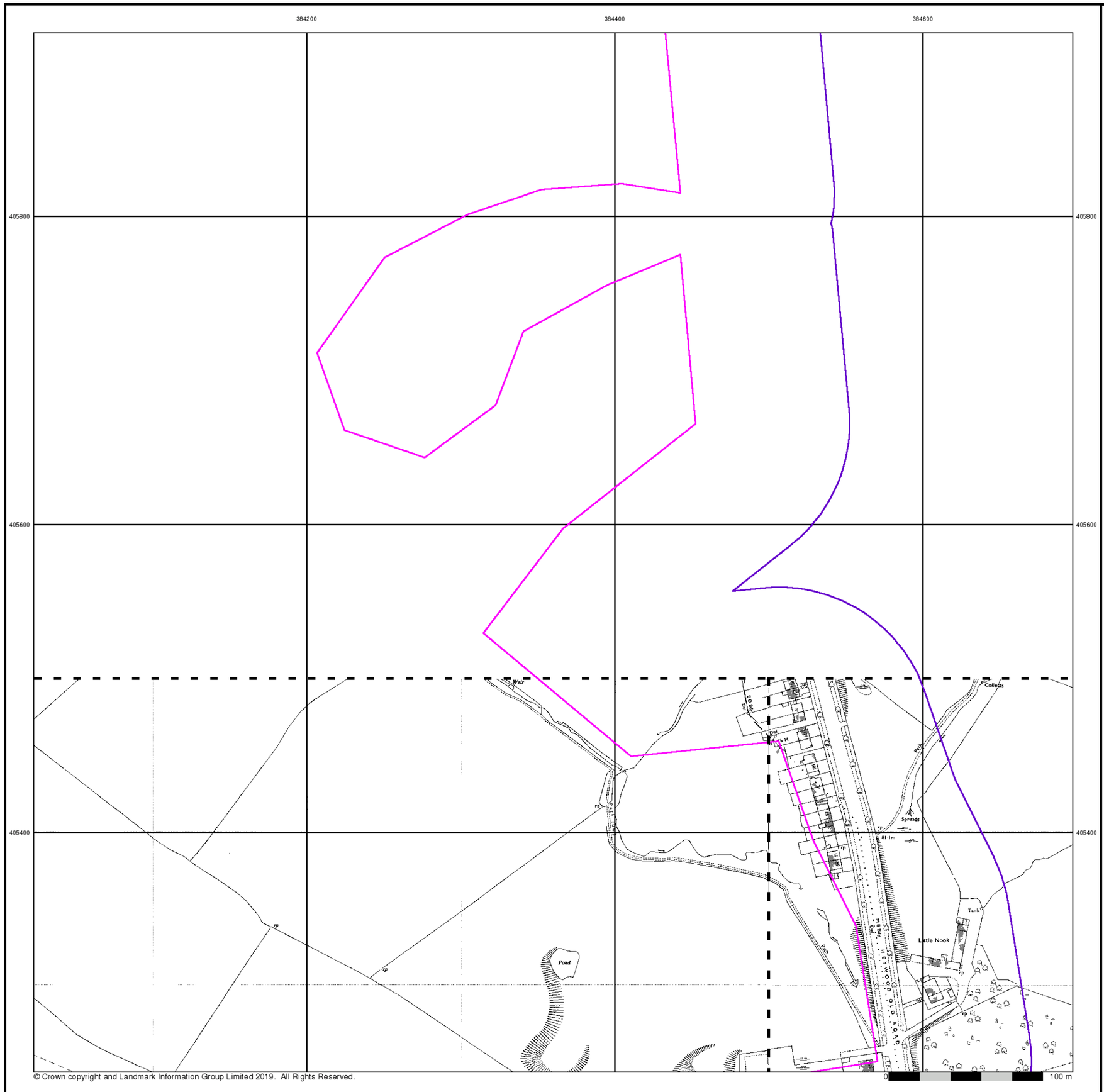
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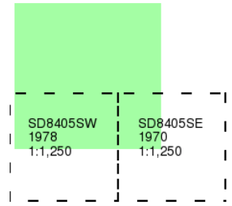
Ordnance Survey Plan

Published 1970 - 1978

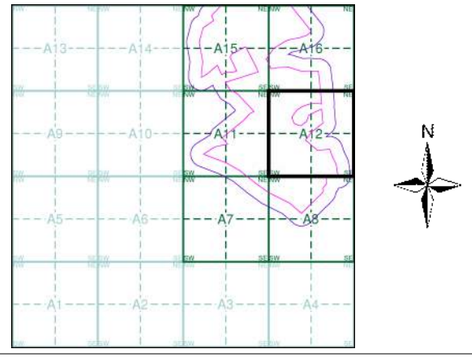
Source map scale - 1:1,250

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)



Historical Map - Segment A12



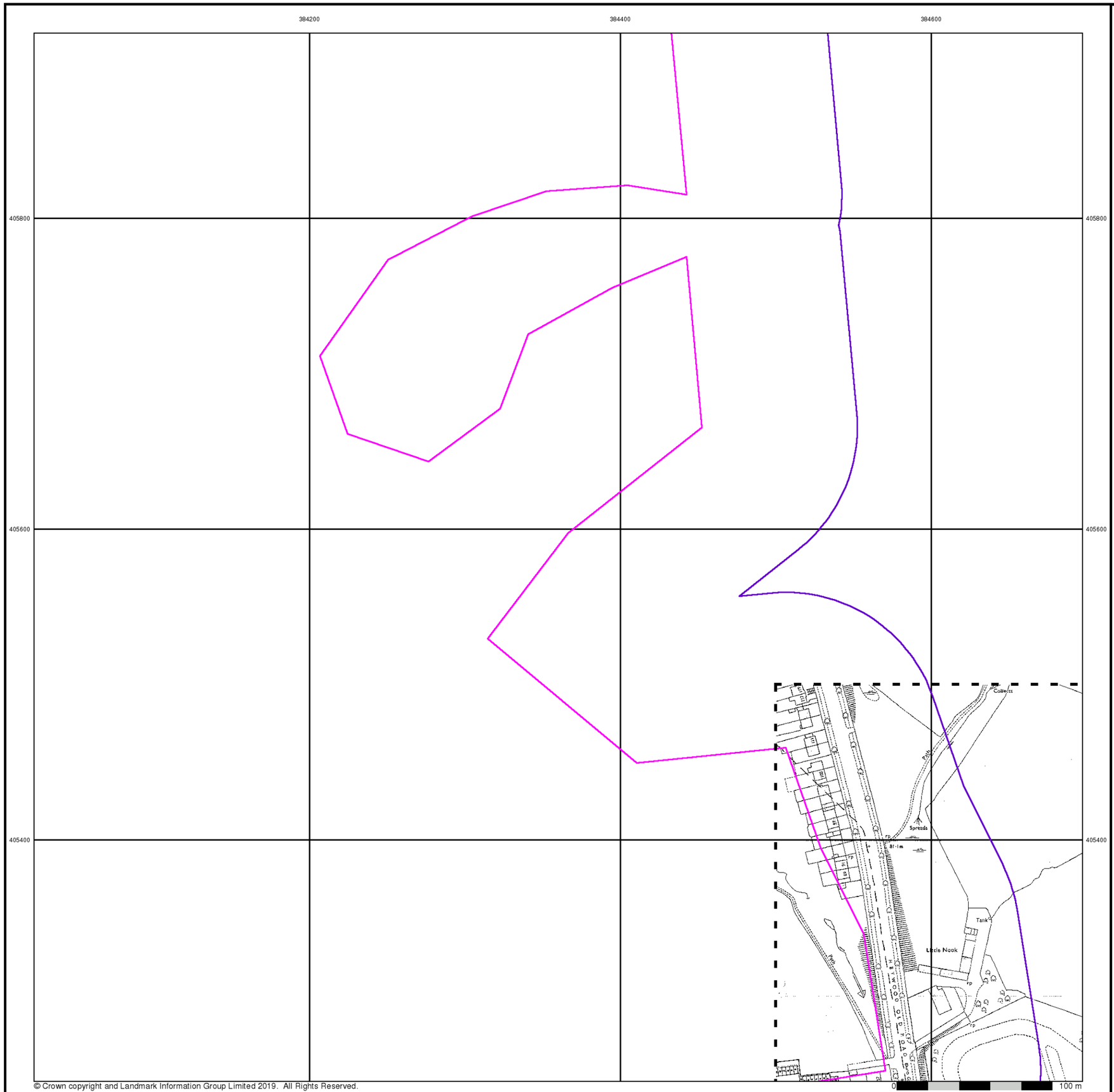
Order Details

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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

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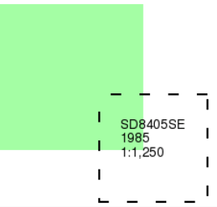
Additional SIMs

Published 1985

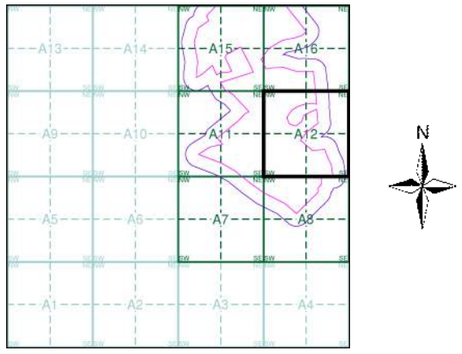
Source map scale - 1:1,250

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)



Historical Map - Segment A12



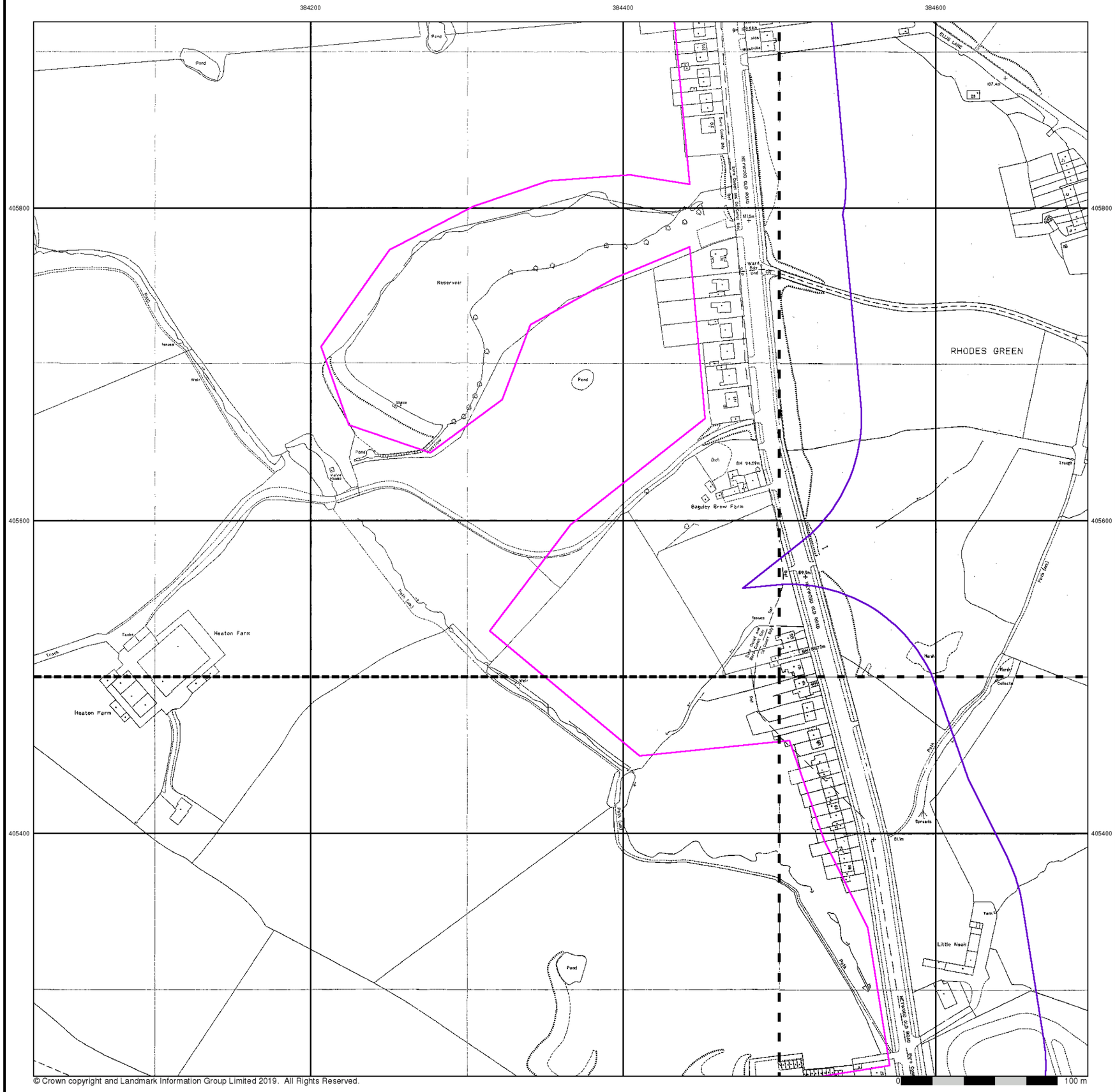
Order Details

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Slice:	A
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Large-Scale National Grid Data

Published 1992

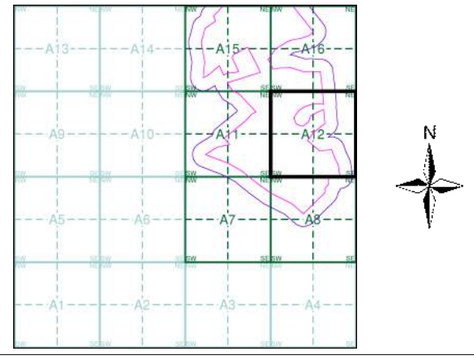
Source map scale - 1:1,250

'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)

SD8405NW 1992 1:1,250	SD8405NE 1992 1:1,250
SD8405SW 1992 1:1,250	SD8405SE 1992 1:1,250

Historical Map - Segment A12



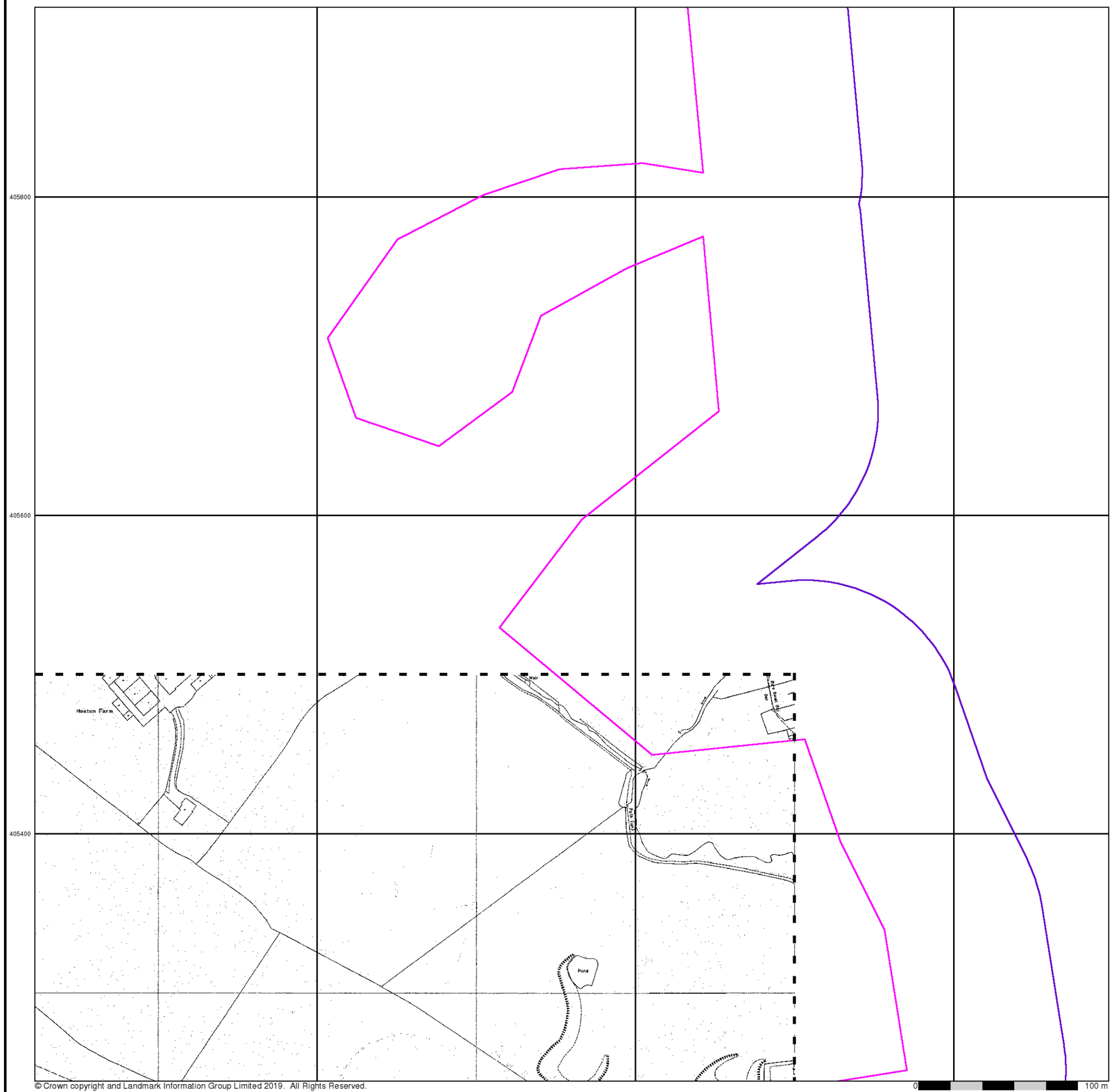
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
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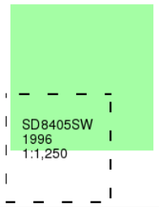
Large-Scale National Grid Data

Published 1996

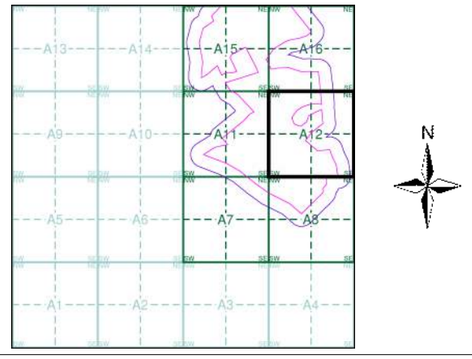
Source map scale - 1:1,250

'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 A12



Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

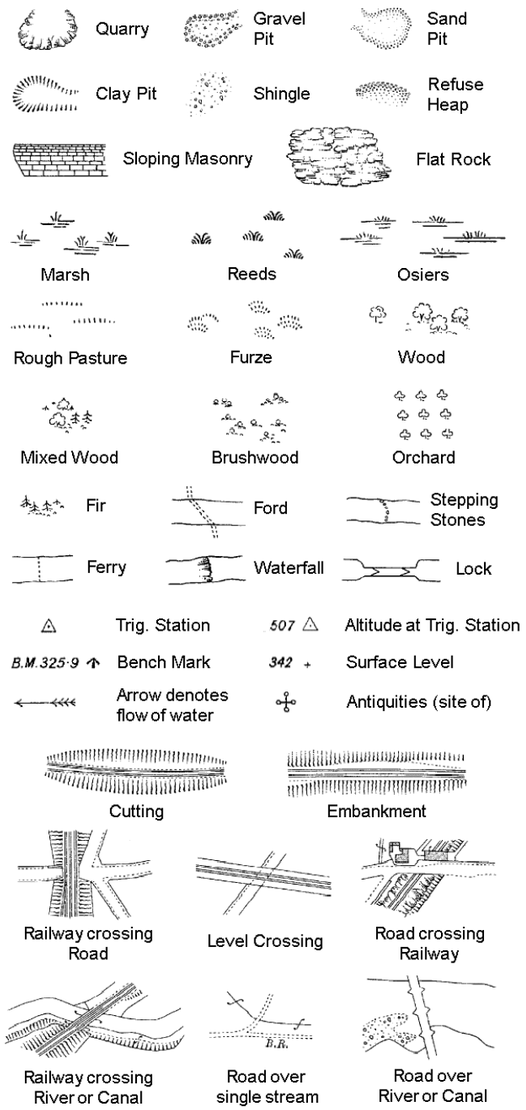
Site Details

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Historical Mapping Legends

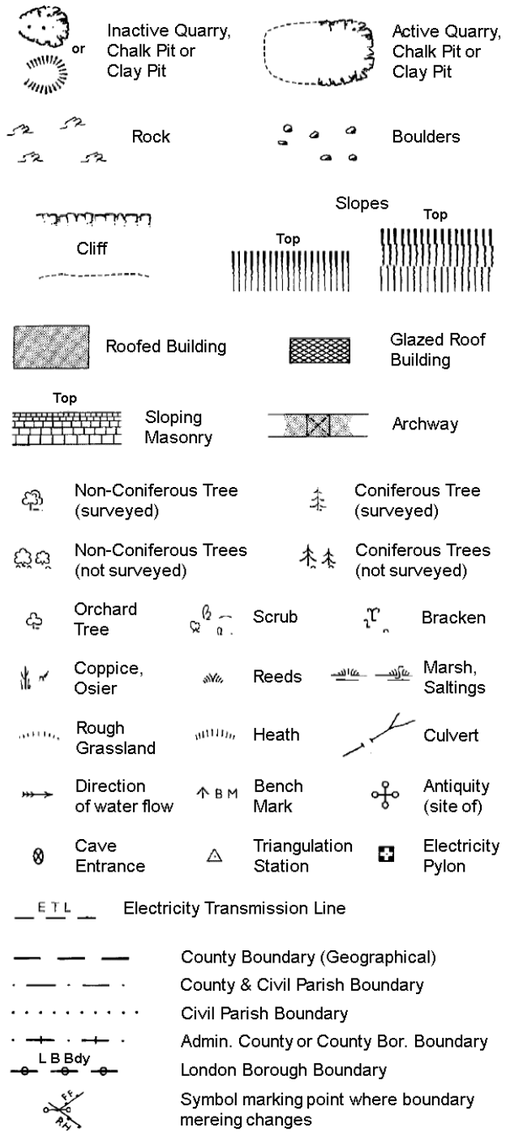
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

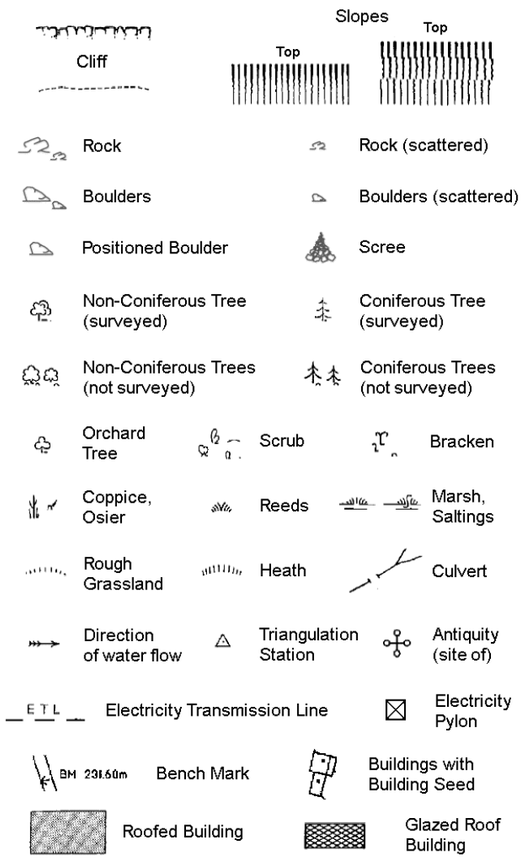
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



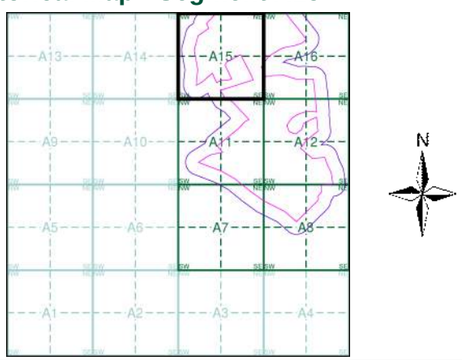
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1891 - 1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1932	4
Ordnance Survey Plan	1:1,250	1955	5
Ordnance Survey Plan	1:2,500	1955 - 1956	6
Ordnance Survey Plan	1:2,500	1968 - 1977	7
Additional SIMs	1:2,500	1977	8
Ordnance Survey Plan	1:2,500	1986	9
Large-Scale National Grid Data	1:1,250	1992	10
Large-Scale National Grid Data	1:2,500	1992	11
Large-Scale National Grid Data	1:2,500	1996	12

Historical Map - Segment A15



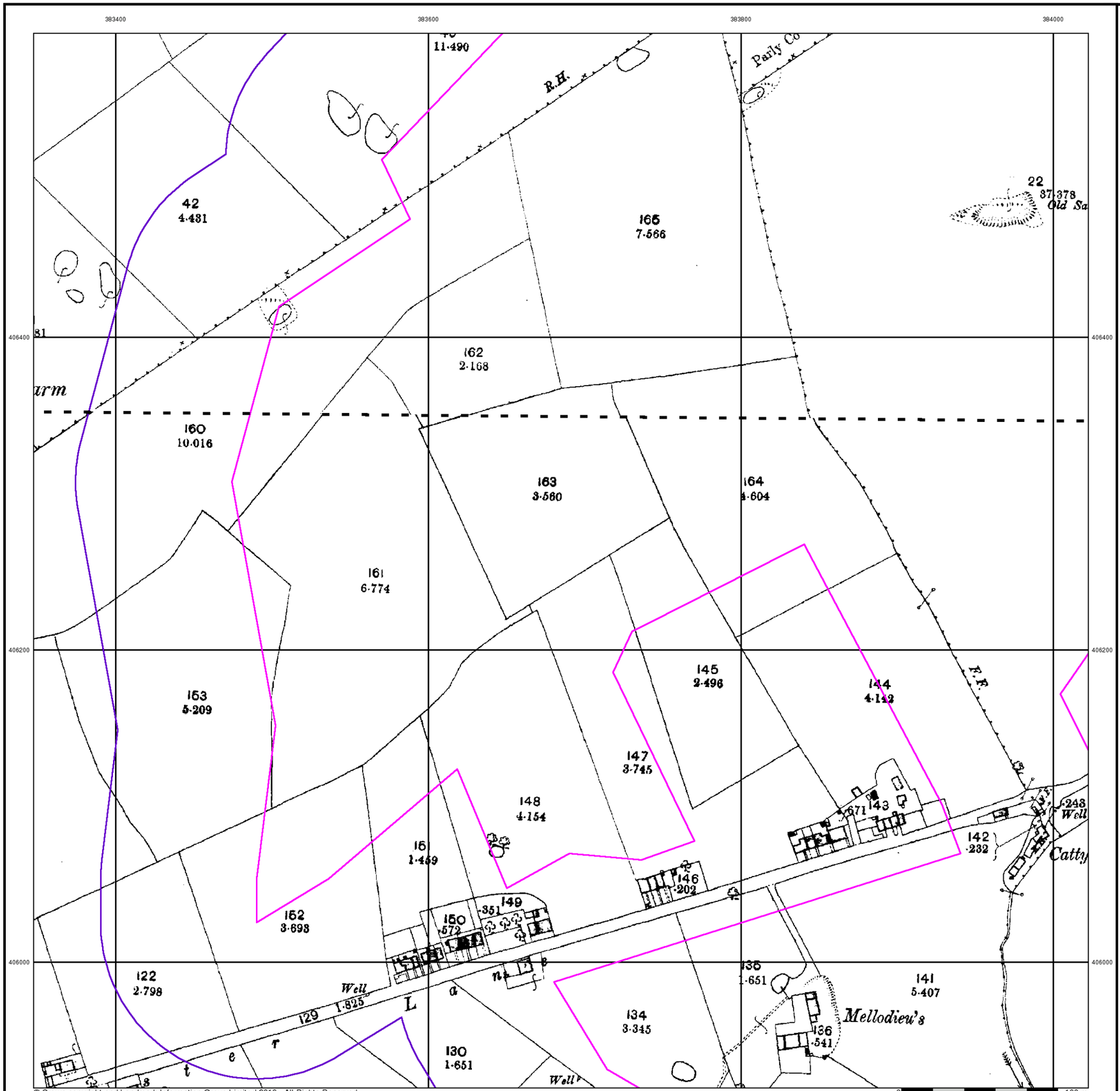
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 100

Site Details

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Lancashire And Furness

Published 1891 - 1893

Source map scale - 1:2,500

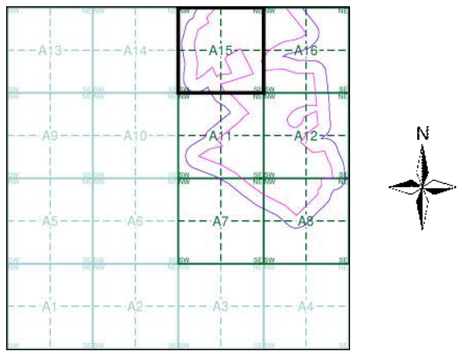
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. 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)

096_02
1891
1:2,500

096_06
1893
1:2,500

Historical Map - Segment A15



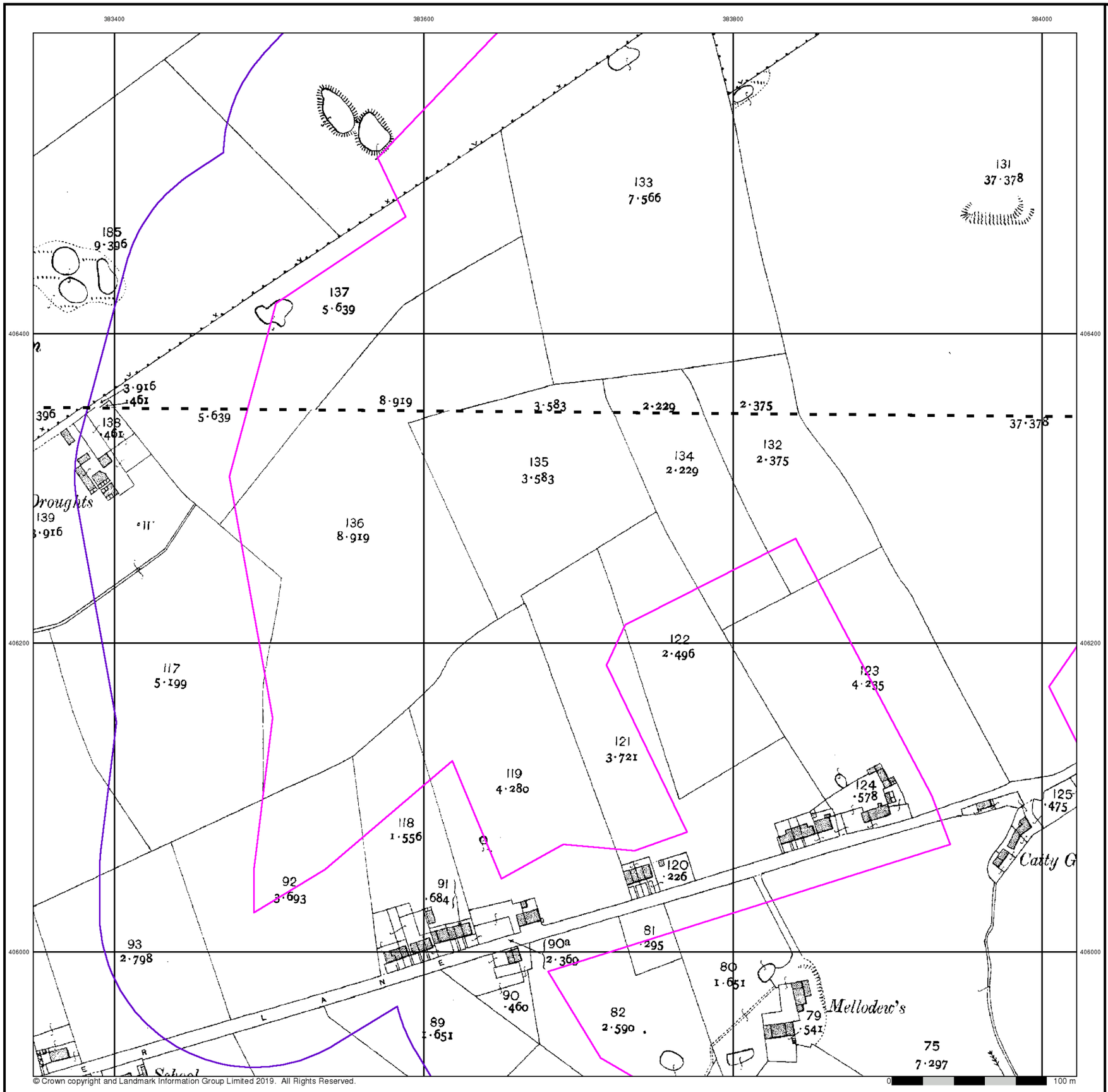
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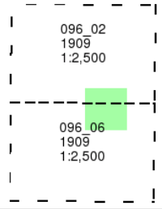
Lancashire And Furness

Published 1909

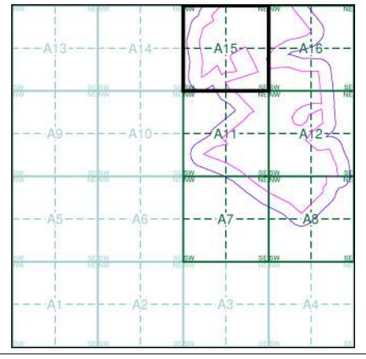
Source map scale - 1:2,500

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



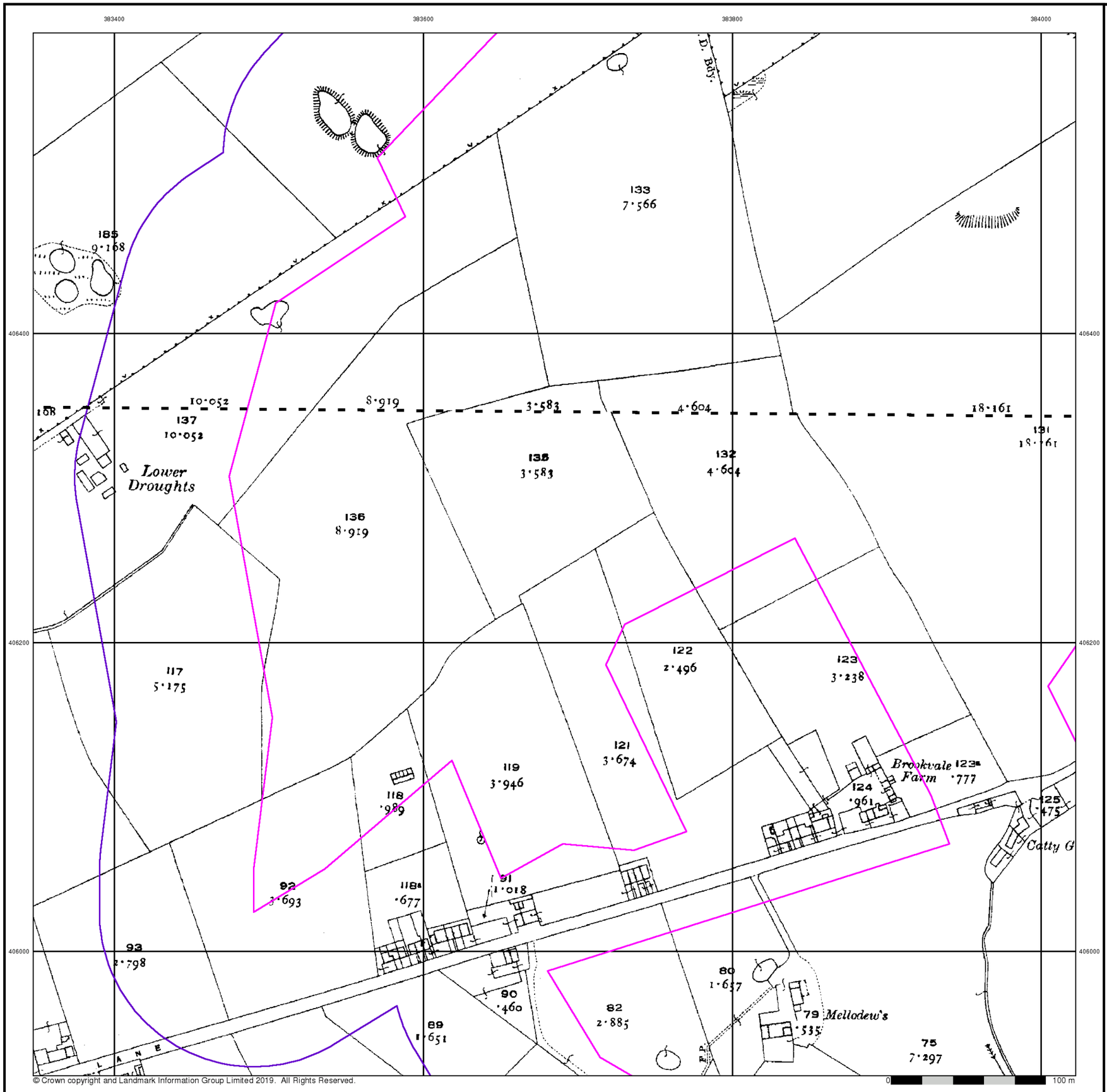
Order Details

Order Number:	202263147_1_1
Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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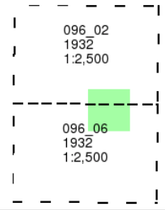
Lancashire And Furness

Published 1932

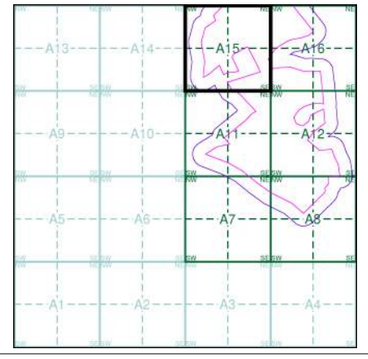
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A15



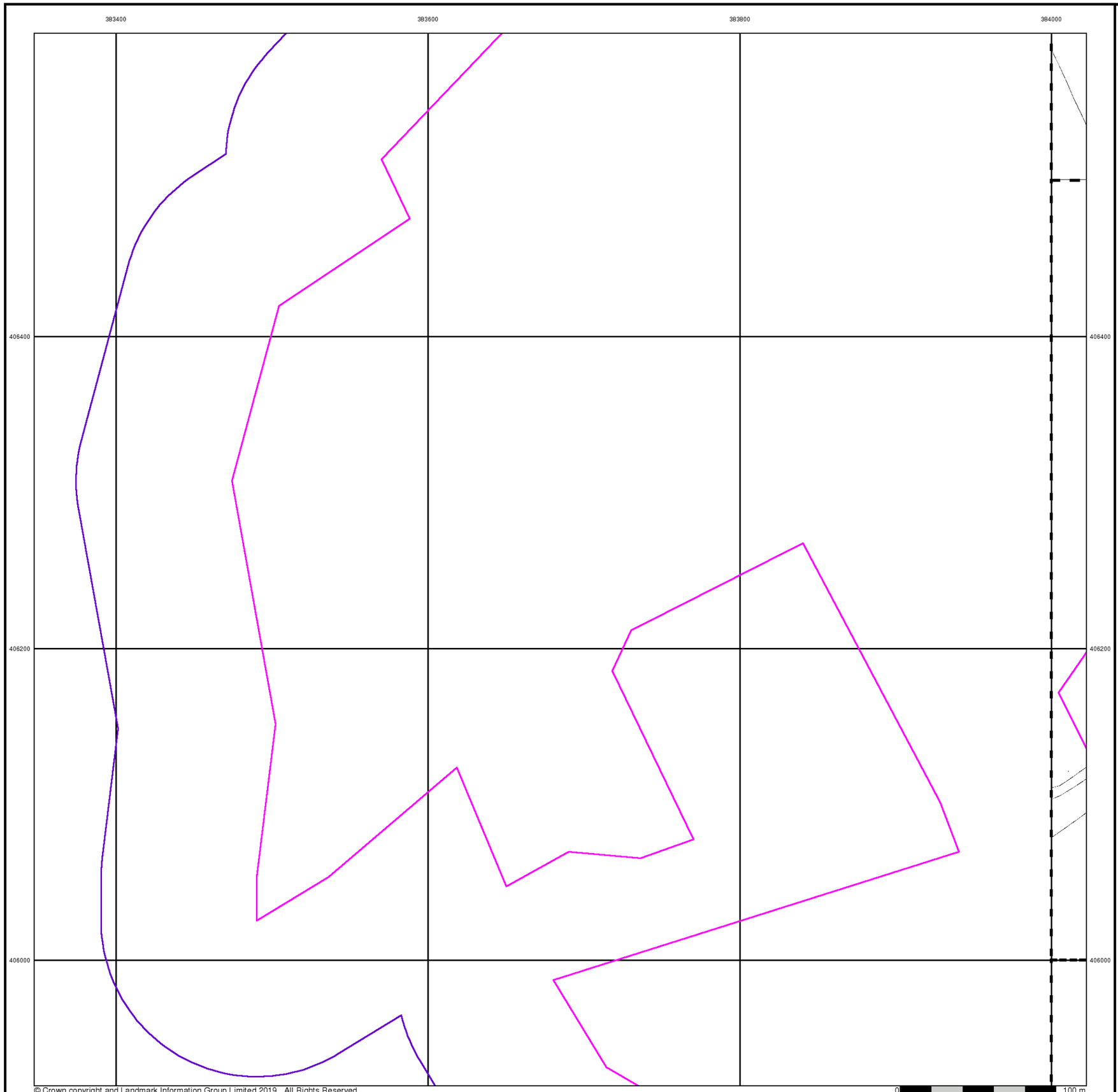
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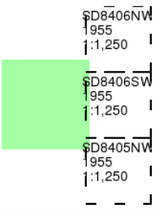
Ordnance Survey Plan

Published 1955

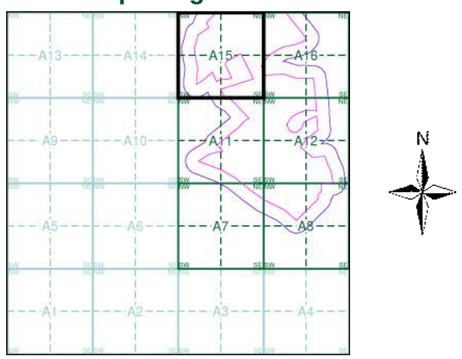
Source map scale - 1:1,250

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)



Historical Map - Segment A15



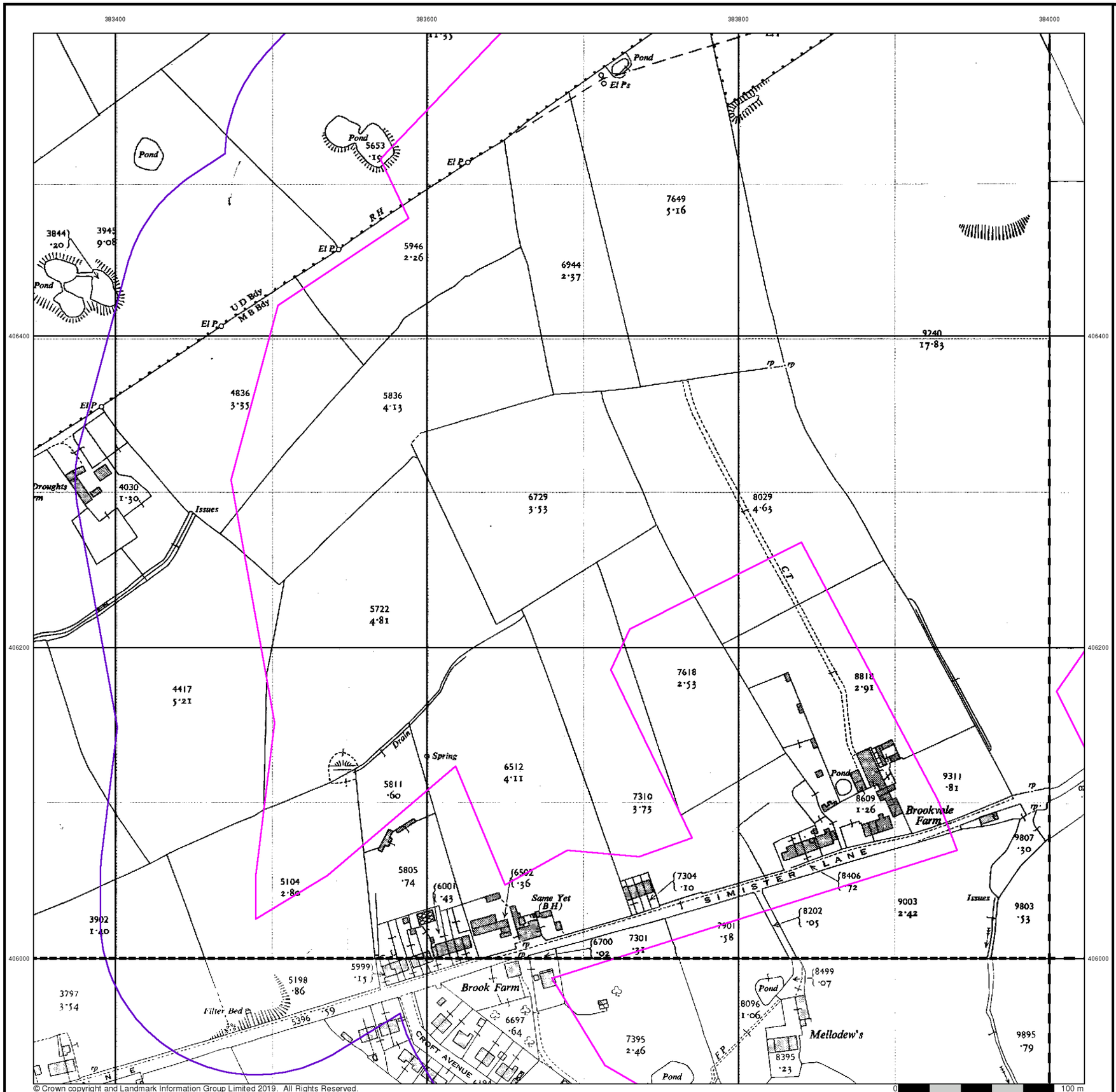
Order Details

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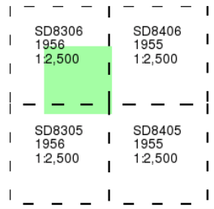
Ordnance Survey Plan

Published 1955 - 1956

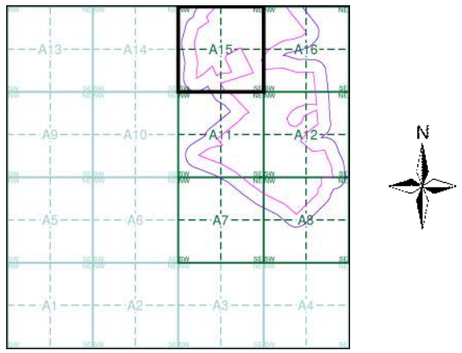
Source map scale - 1:2,500

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)



Historical Map - Segment A15



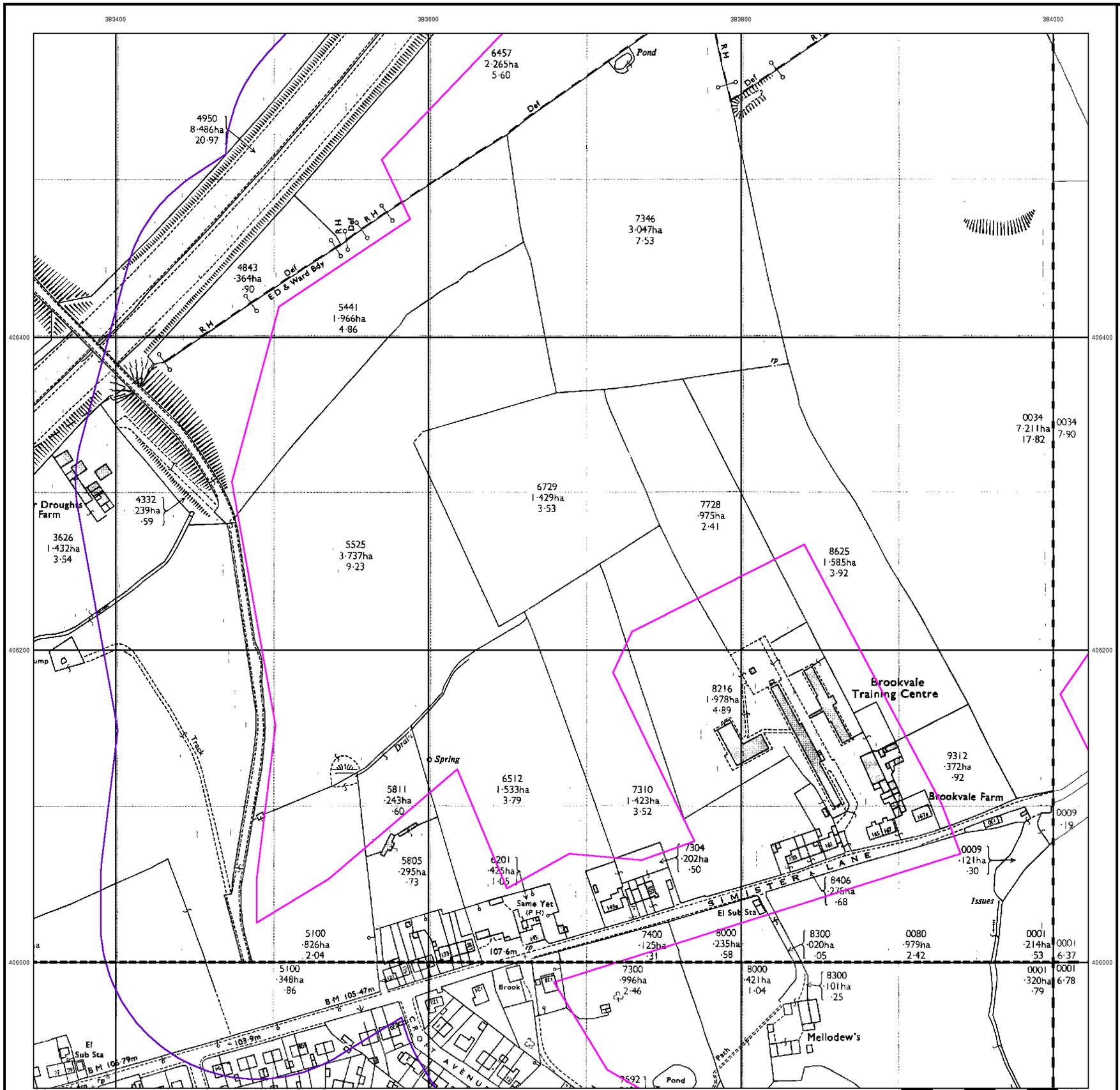
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Ordnance Survey Plan

Published 1968 - 1977

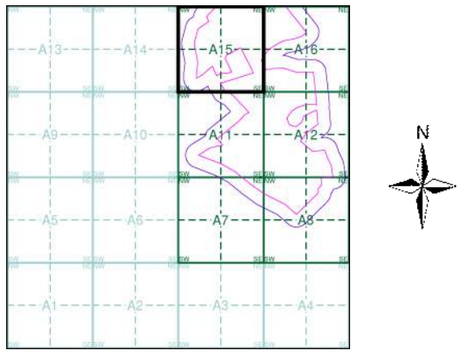
Source map scale - 1:2,500

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Map Name(s) and Date(s)

SD8306 1977 1:2,500	SD8406 1968 1:2,500
SD8305 1971 1:2,500	SD8405 1969 1:2,500

Historical Map - Segment A15



Order Details

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National Grid Reference:	383690, 405420
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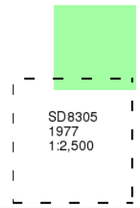
Additional SIMs

Published 1977

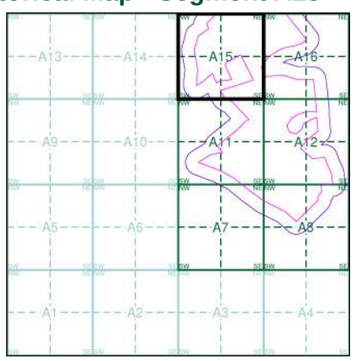
Source map scale - 1:2,500

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 A15



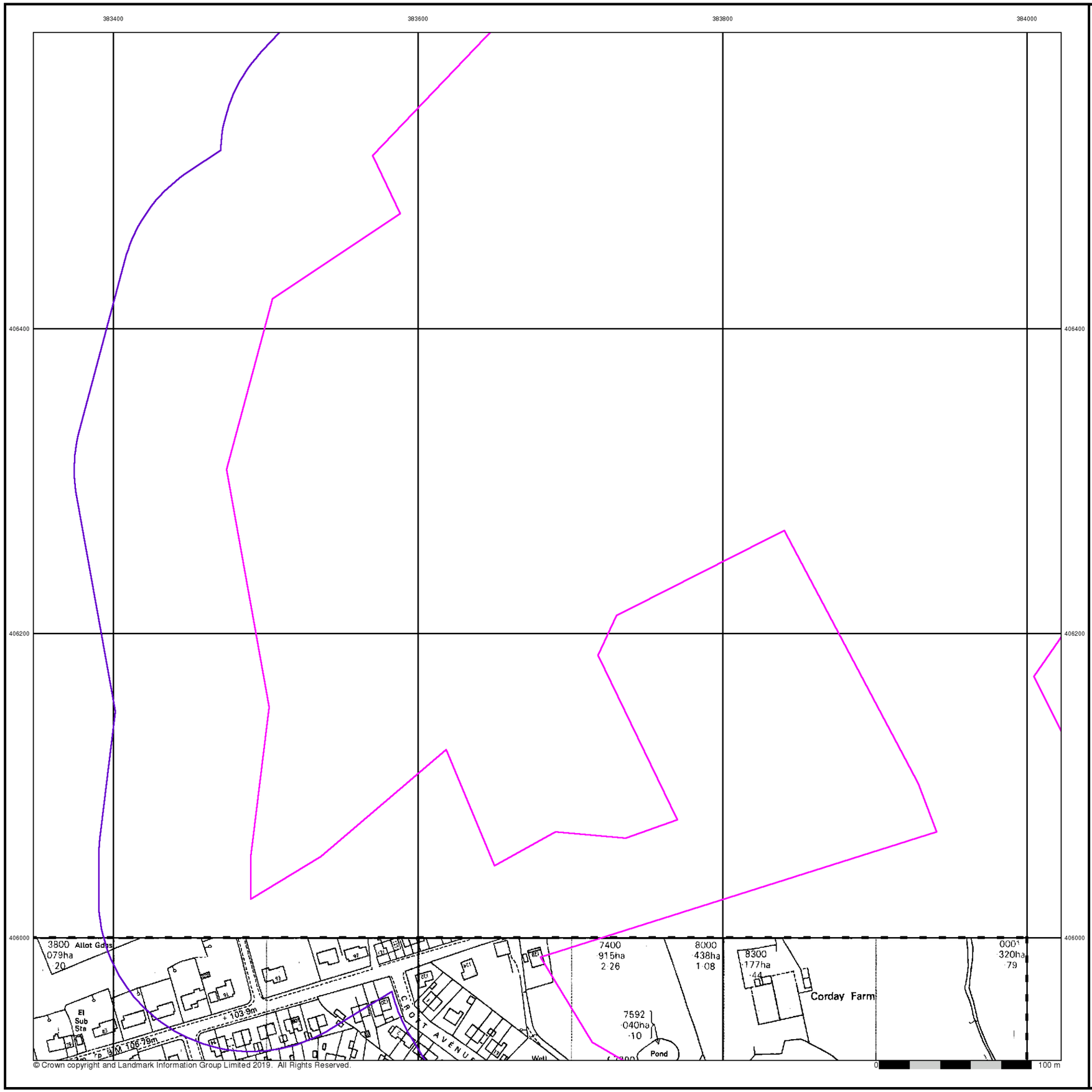
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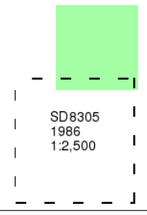
Ordnance Survey Plan

Published 1986

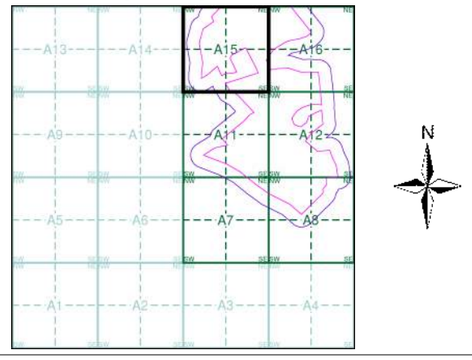
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A15



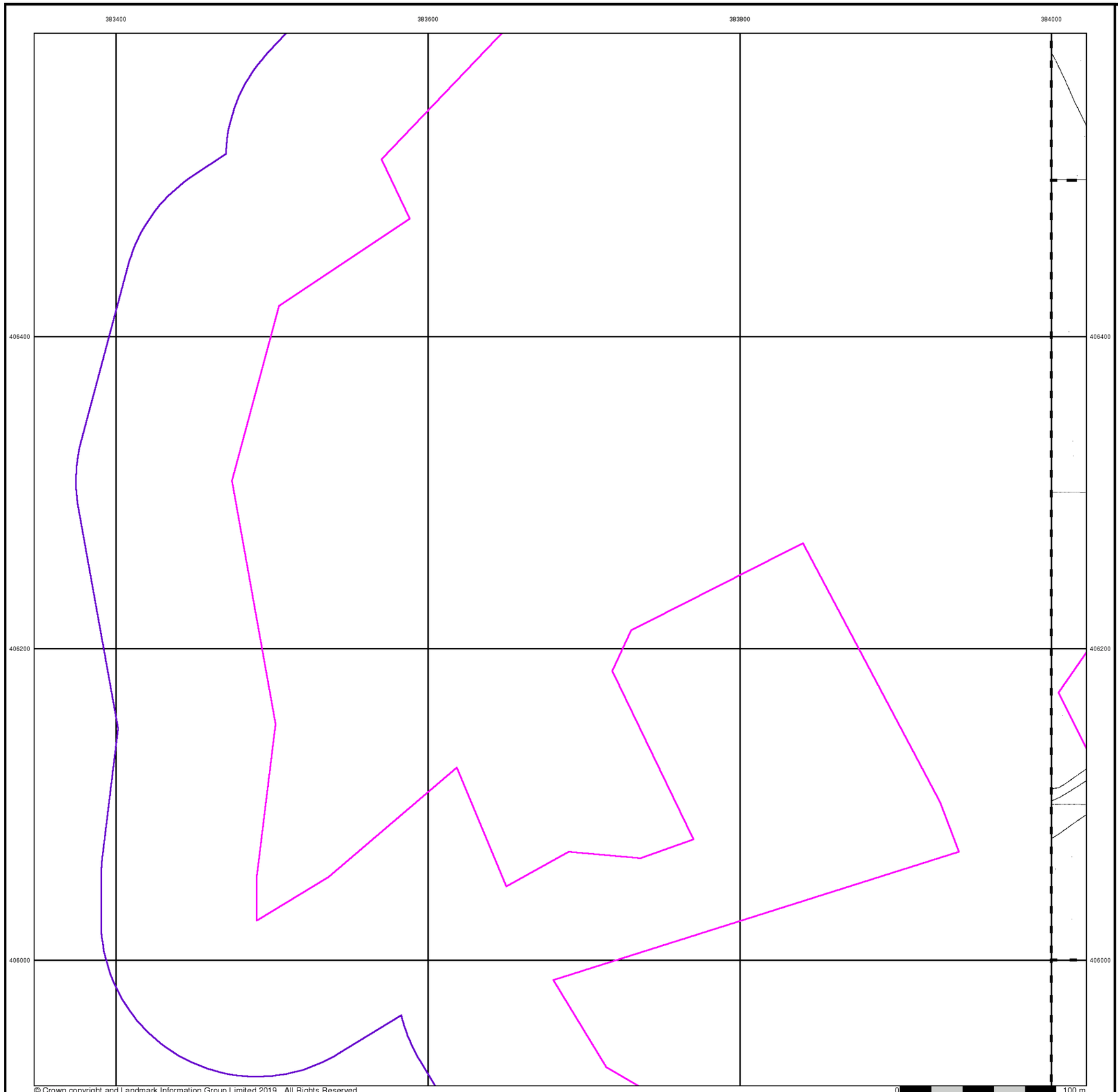
Order Details

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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
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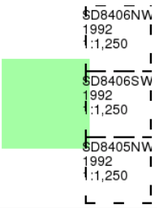
Large-Scale National Grid Data

Published 1992

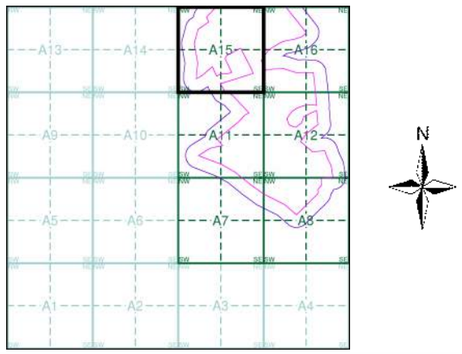
Source map scale - 1:1,250

'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 A15



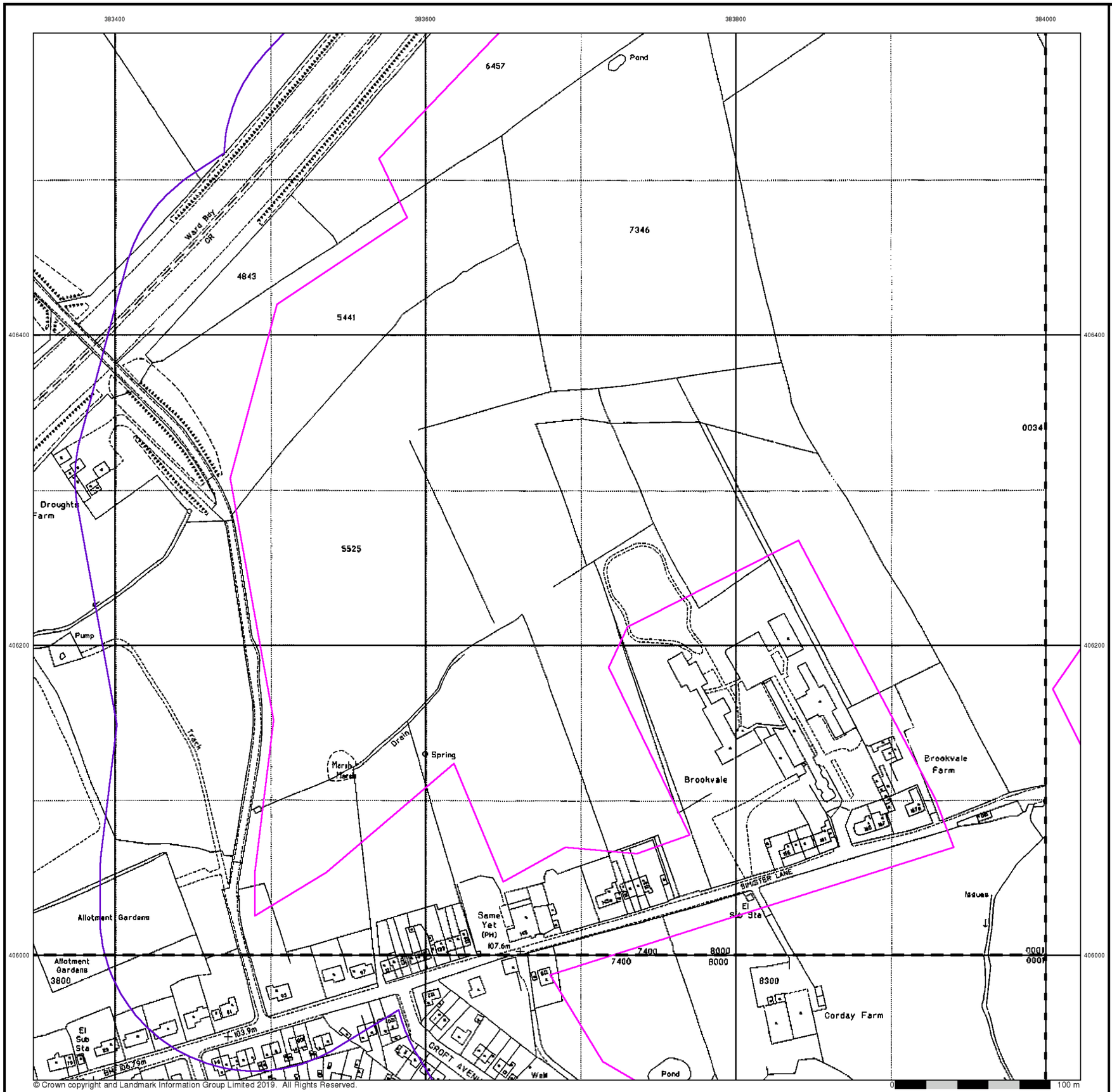
Order Details

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Customer Ref:	A104444-1
National Grid Reference:	383690, 405420
Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

Site Details

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Large-Scale National Grid Data

Published 1992

Source map scale - 1:2,500

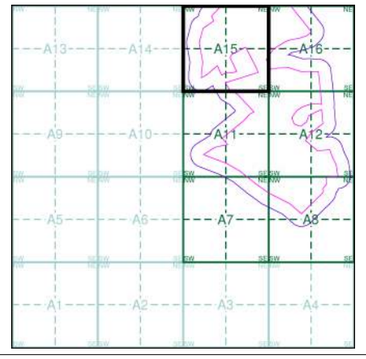
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Map Name(s) and Date(s)

SD8306
1992
1:2,500

SD8305
1992
1:2,500

Historical Map - Segment A15



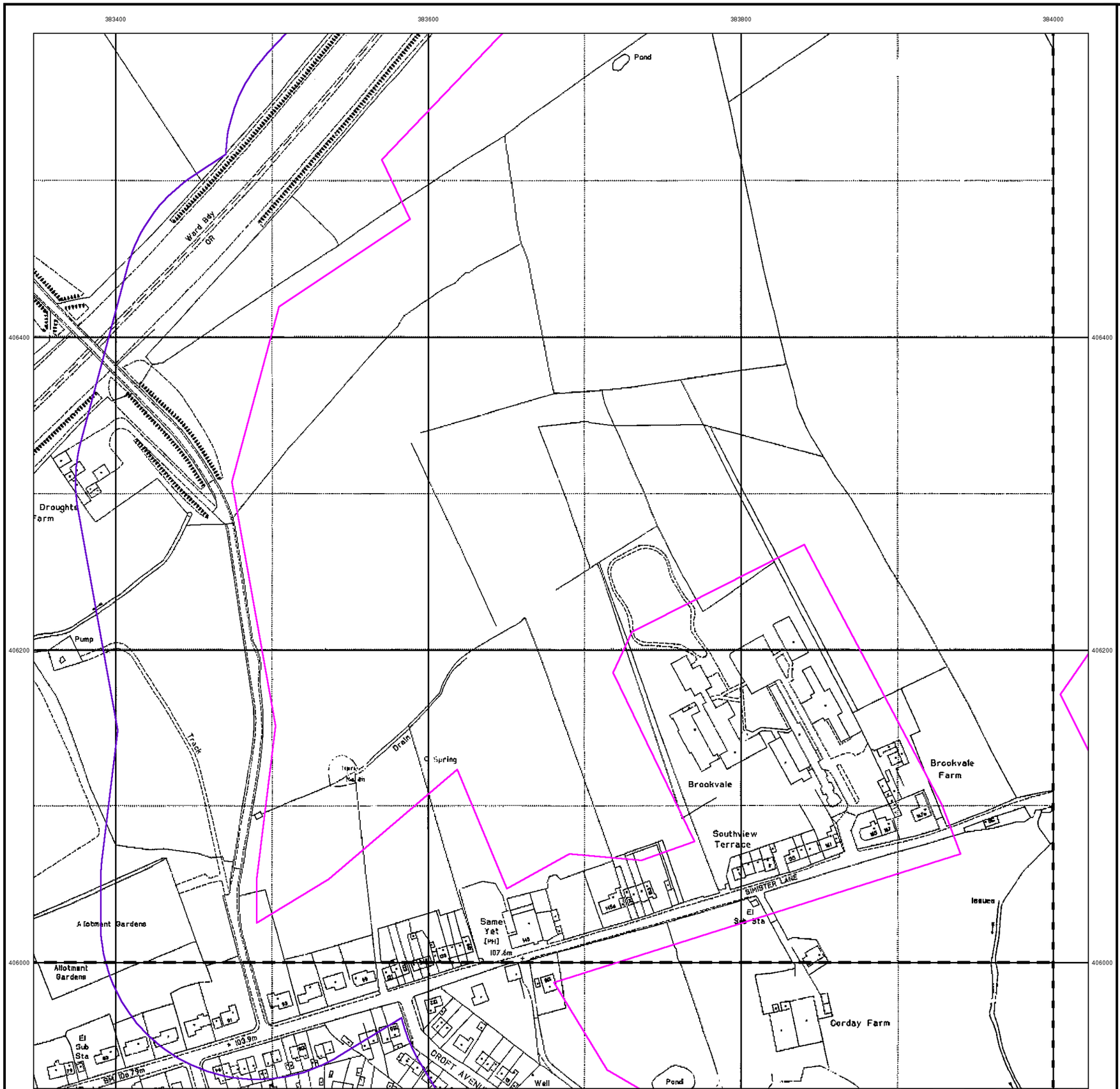
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Large-Scale National Grid Data

Published 1996

Source map scale - 1:2,500

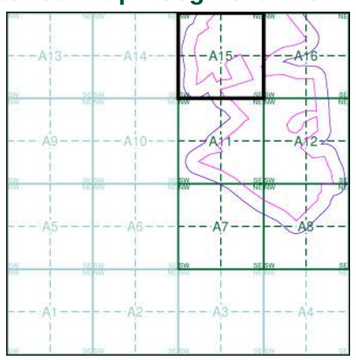
'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic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

Map Name(s) and Date(s)

SD8306
1996
1:2,500

SD8305
1996
1:2,500

Historical Map - Segment A15



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Slice:	A
Site Area (Ha):	105.63
Search Buffer (m):	100

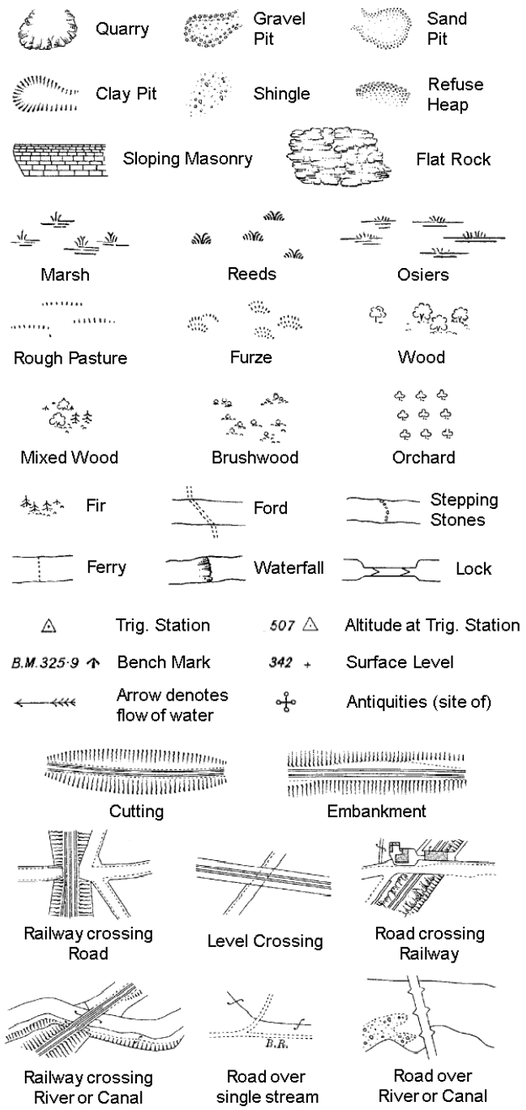
Site Details

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Historical Mapping Legends

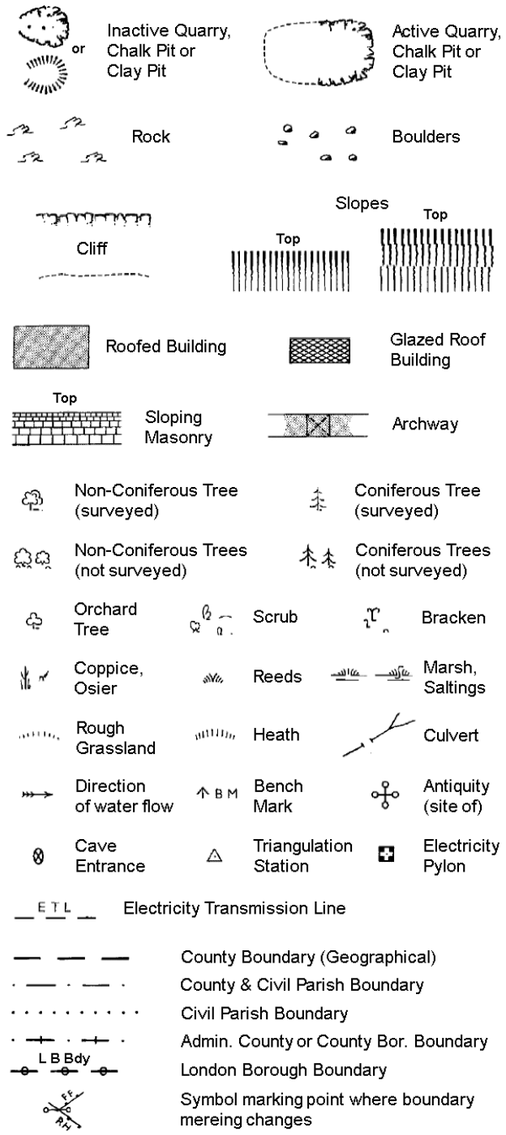
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

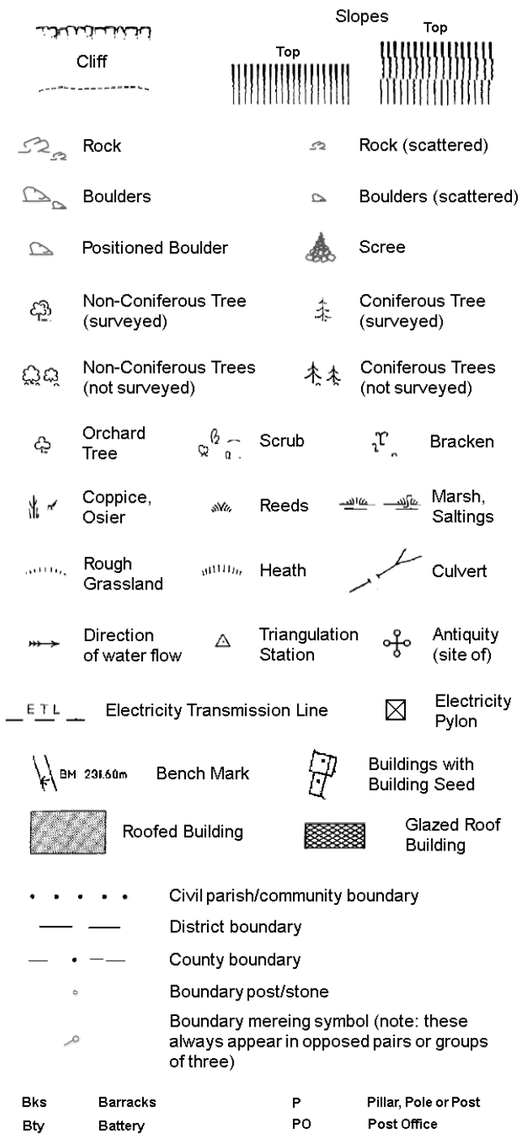
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

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



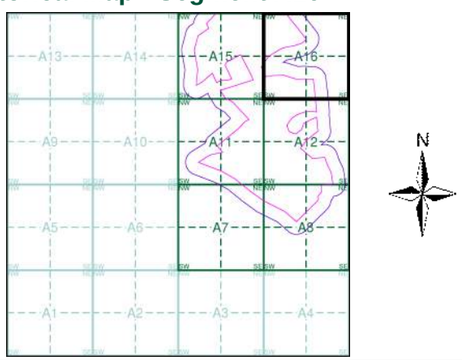
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1891 - 1893	2
Lancashire And Furness	1:2,500	1909	3
Lancashire And Furness	1:2,500	1922 - 1932	4
Ordnance Survey Plan	1:1,250	1955	5
Ordnance Survey Plan	1:2,500	1955	6
Ordnance Survey Plan	1:1,250	1960	7
Ordnance Survey Plan	1:2,500	1968 - 1969	8
Additional SIMs	1:1,250	1984	9
Large-Scale National Grid Data	1:1,250	1992	10

Historical Map - Segment A16



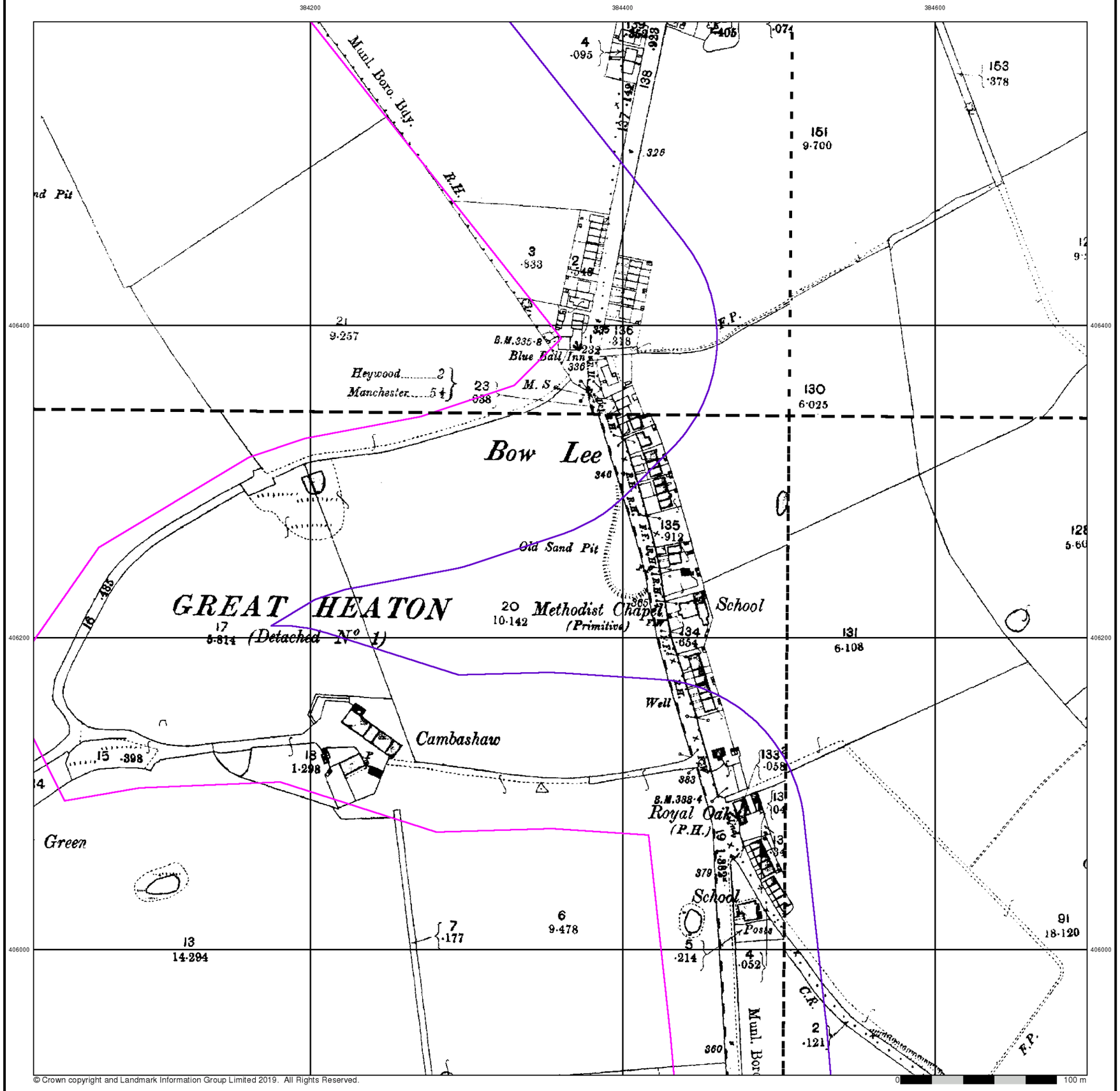
Order Details

Order Number: 202263147_1_1
Customer Ref: A104444-1
National Grid Reference: 383690, 405420
Slice: A
Site Area (Ha): 105.63
Search Buffer (m): 100

Site Details

82, Baguley Crescent, Middleton, MANCHESTER, M24 4GU

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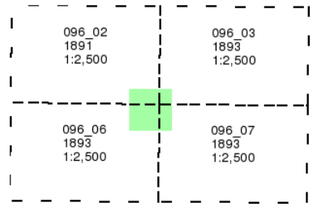
Lancashire And Furness

Published 1891 - 1893

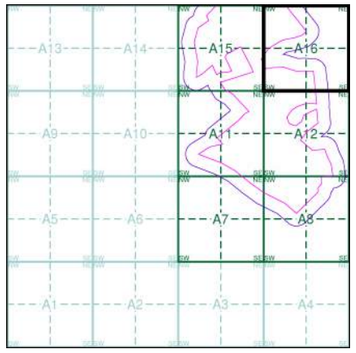
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Map Name(s) and Date(s)



Historical Map - Segment A16



Order Details

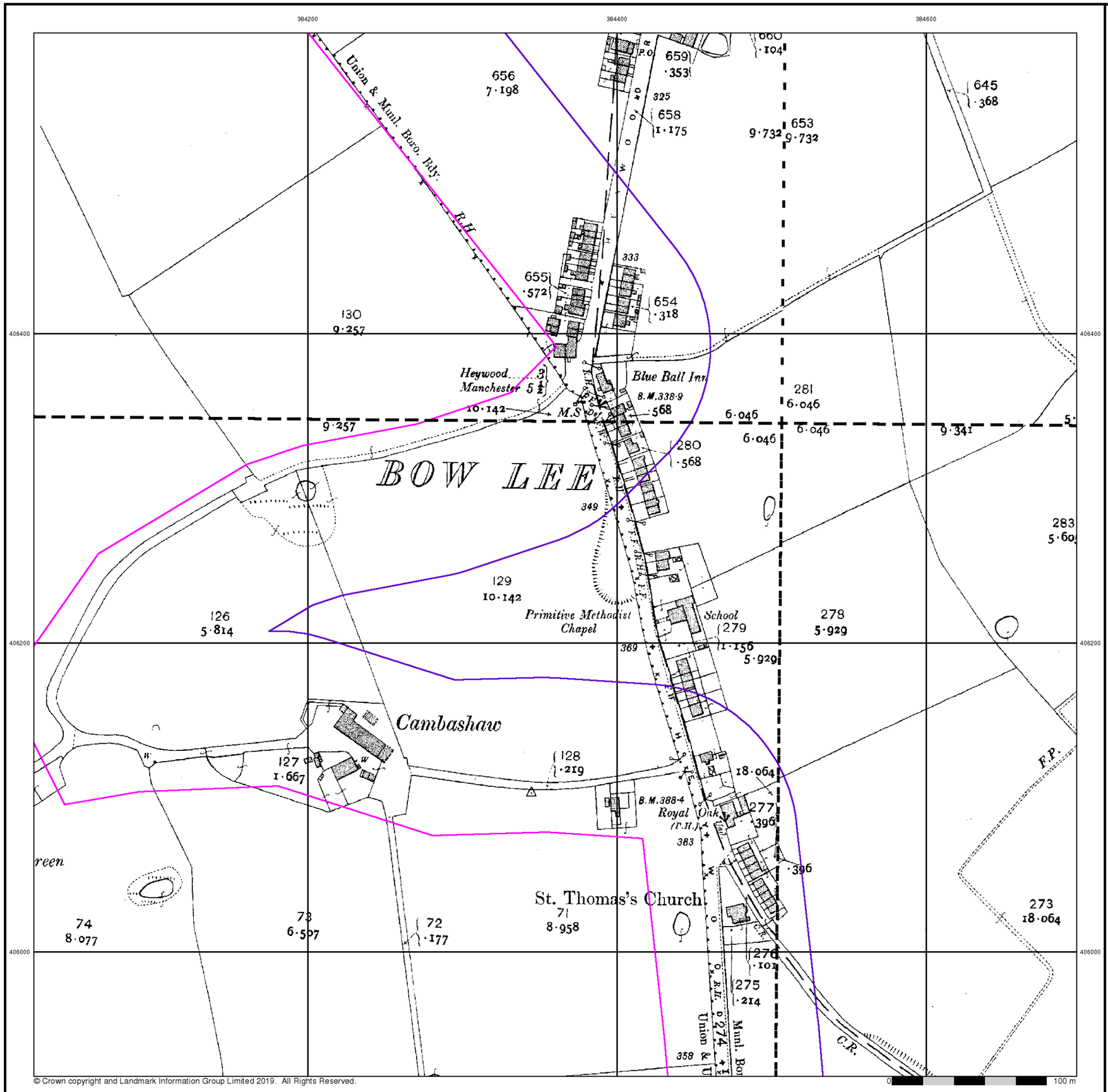
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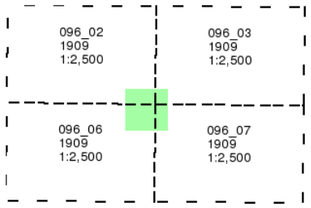
Lancashire And Furness

Published 1909

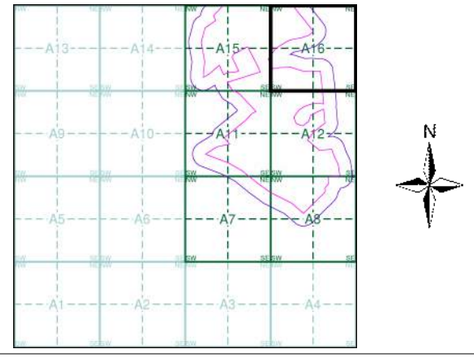
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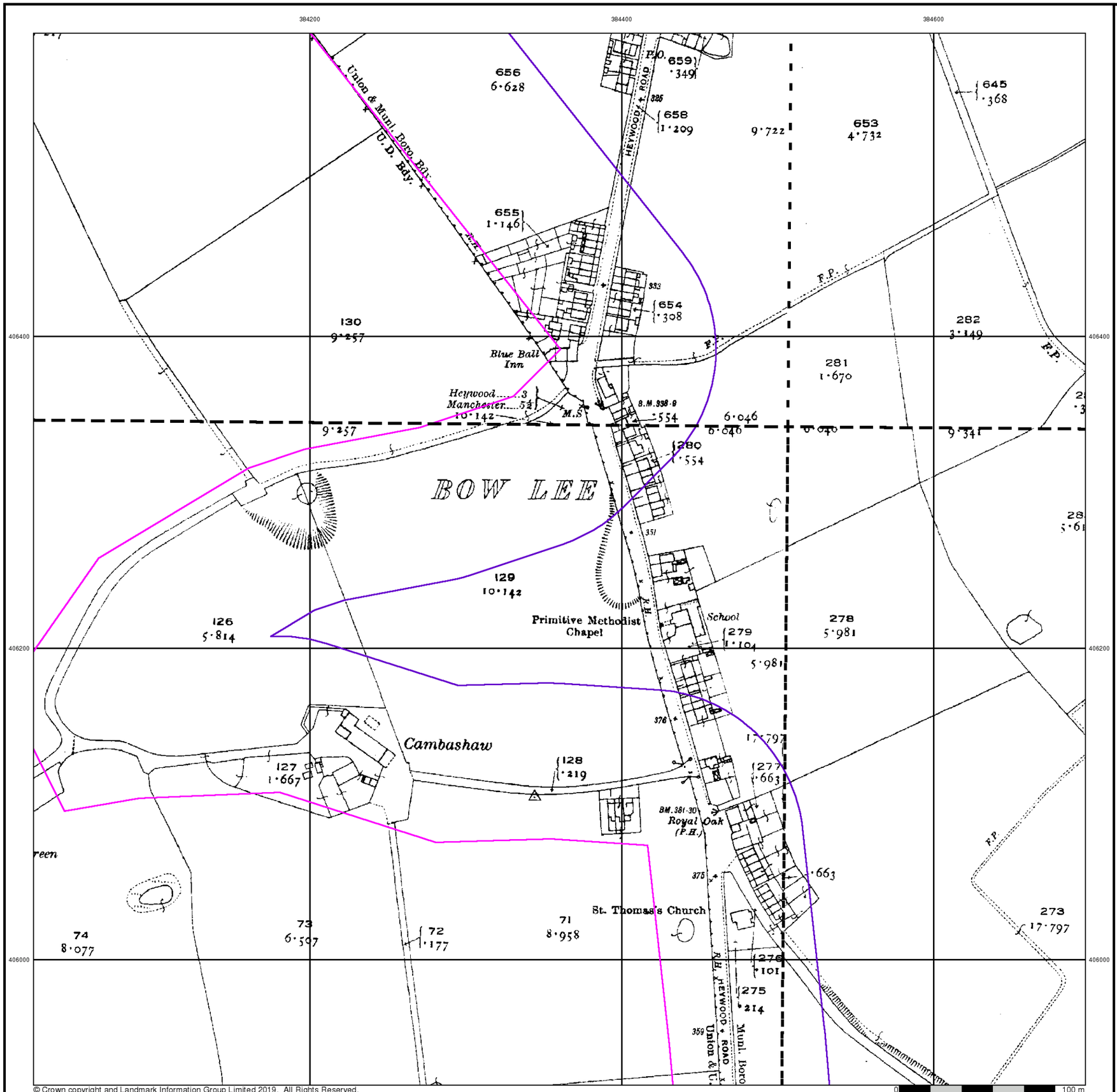
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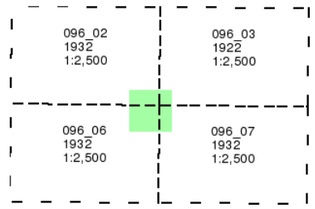
Lancashire And Furness

Published 1922 - 1932

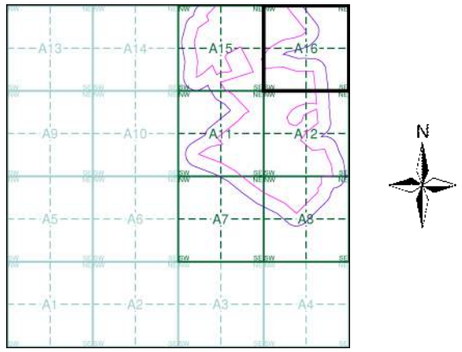
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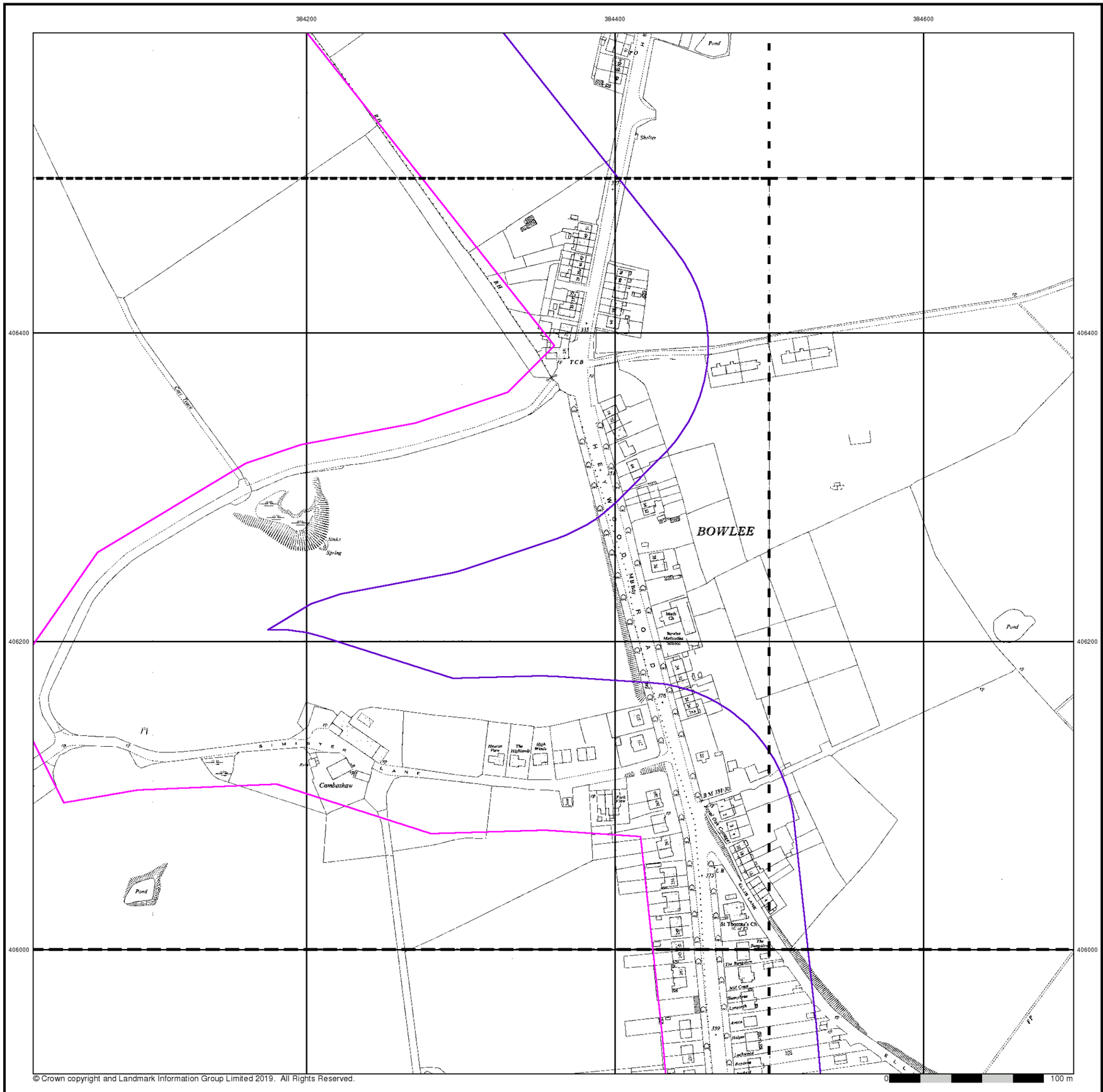
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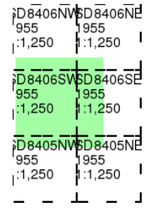
Ordnance Survey Plan

Published 1955

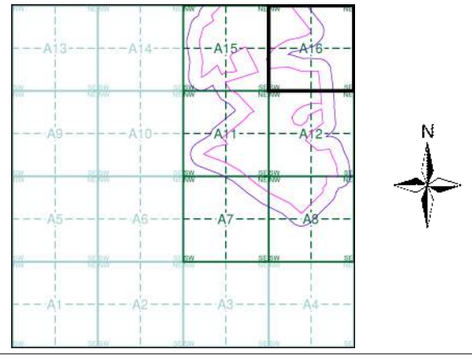
Source map scale - 1:1,250

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)



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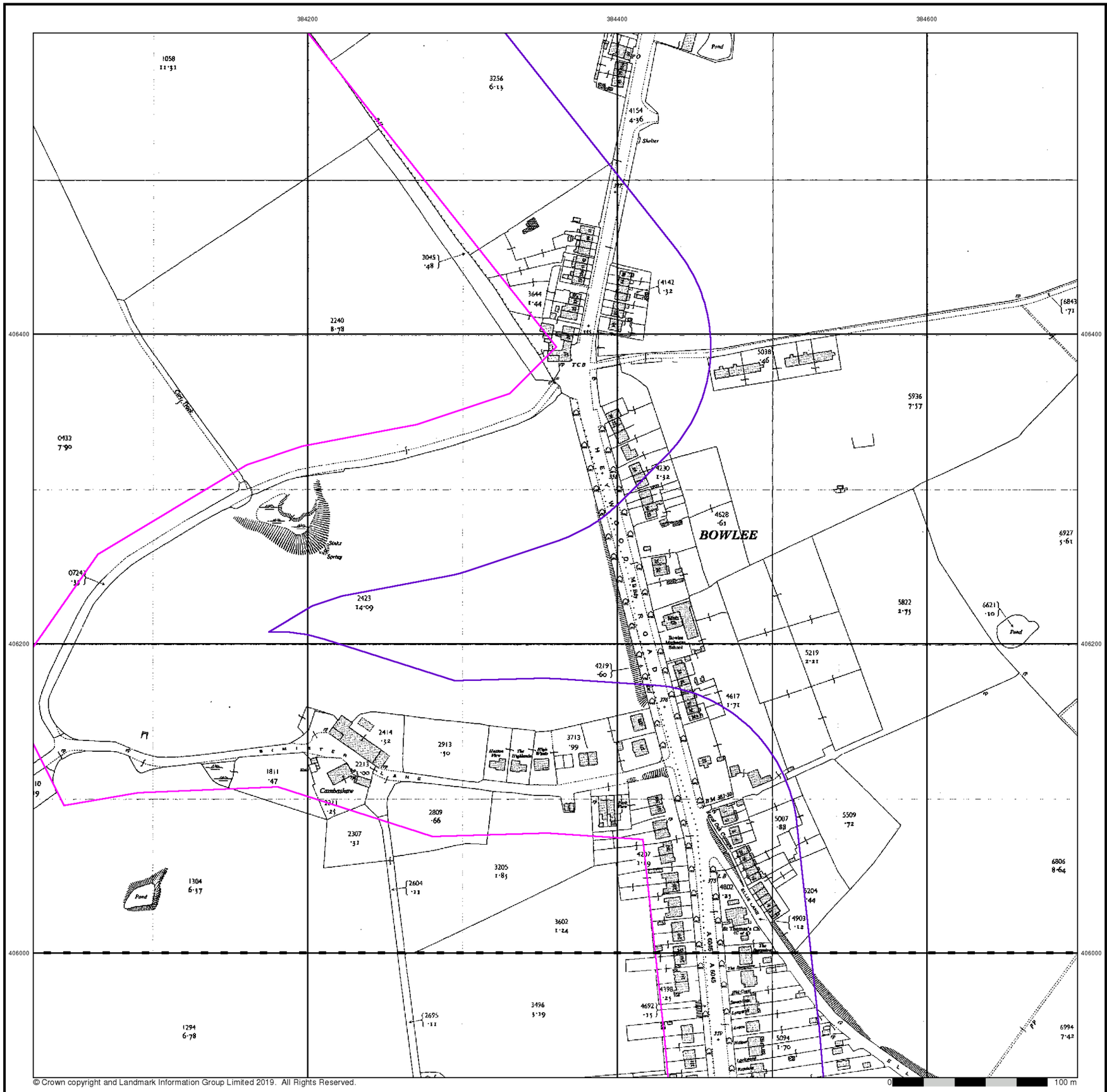
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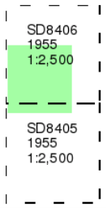
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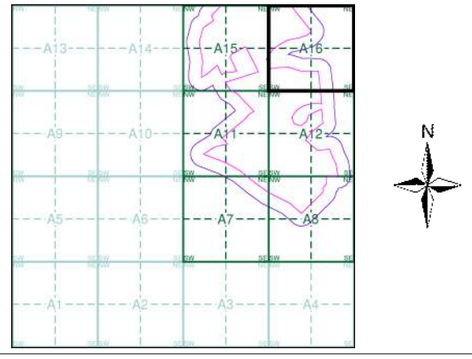
Source map scale - 1:2,500

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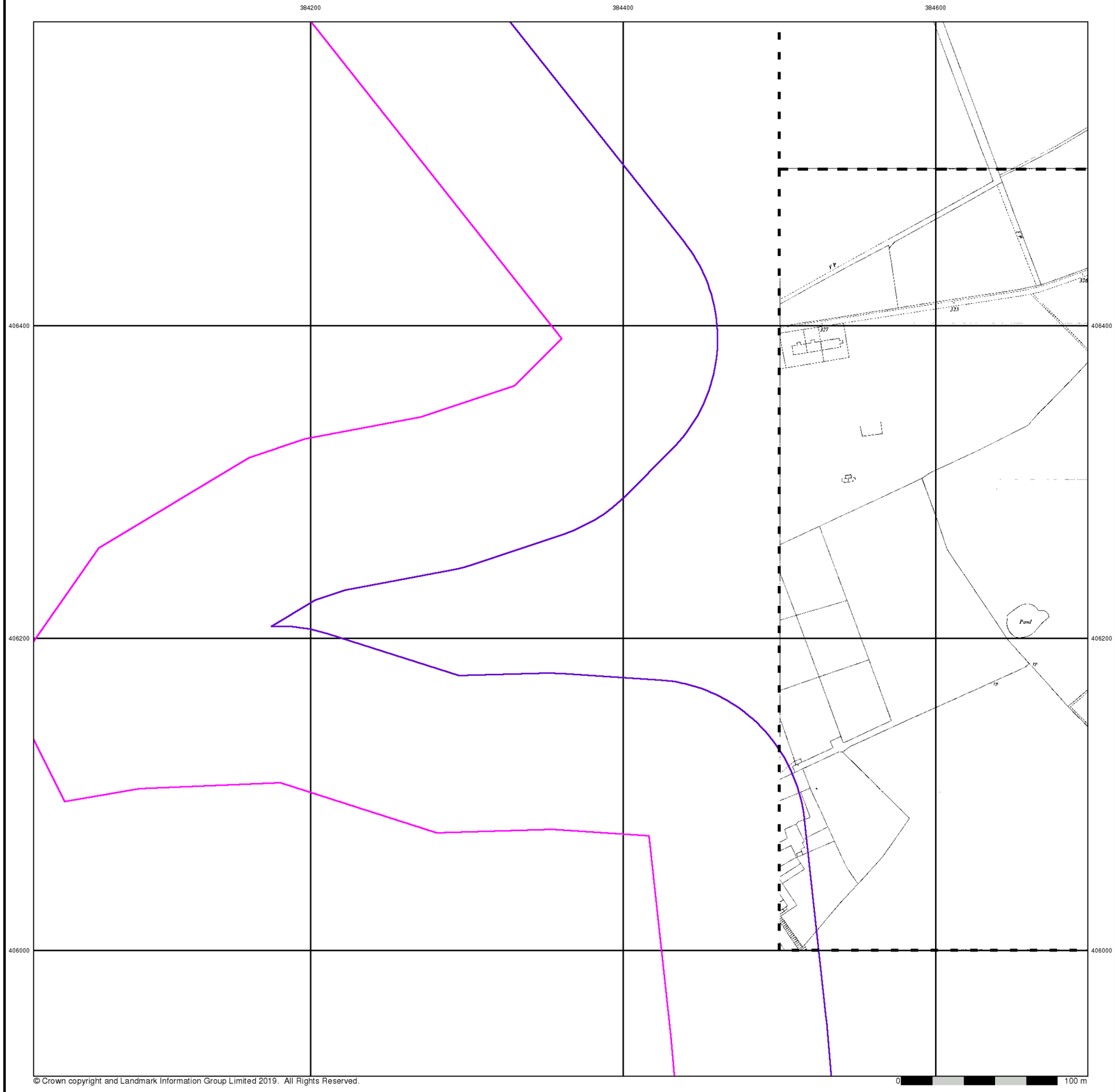
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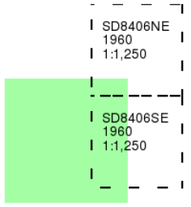
Ordnance Survey Plan

Published 1960

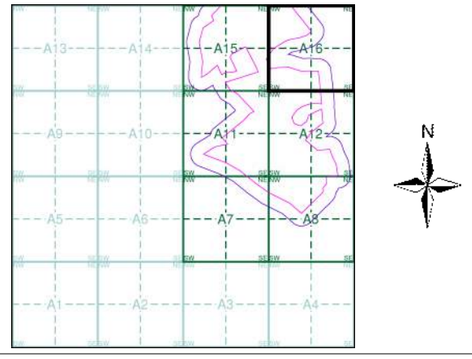
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Map Name(s) and Date(s)



Historical Map - Segment A16



Order Details

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Site Area (Ha):	105.63
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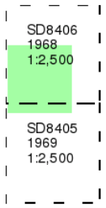
Ordnance Survey Plan

Published 1968 - 1969

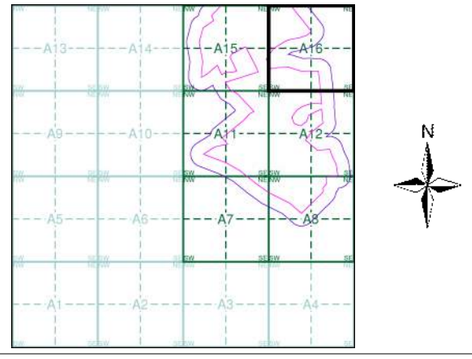
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Map Name(s) and Date(s)



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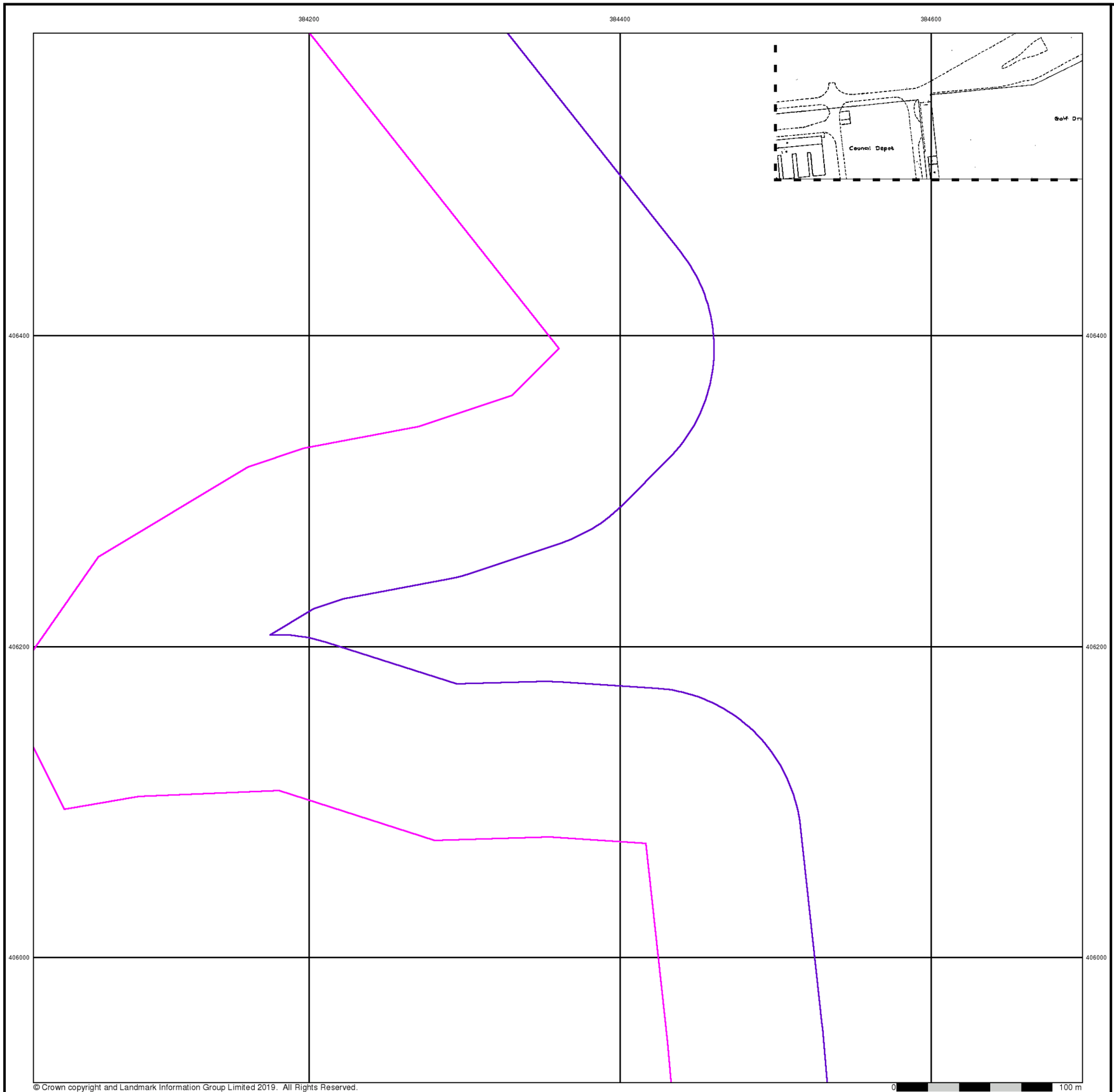
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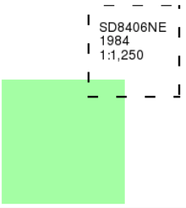
Additional SIMs

Published 1984

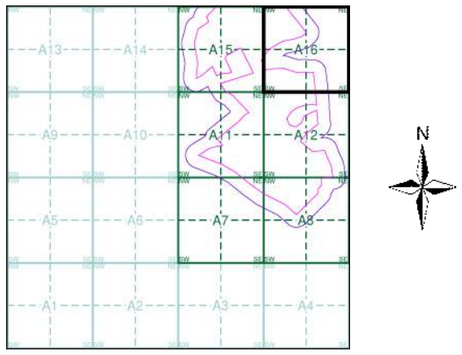
Source map scale - 1:1,250

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)



Historical Map - Segment A16



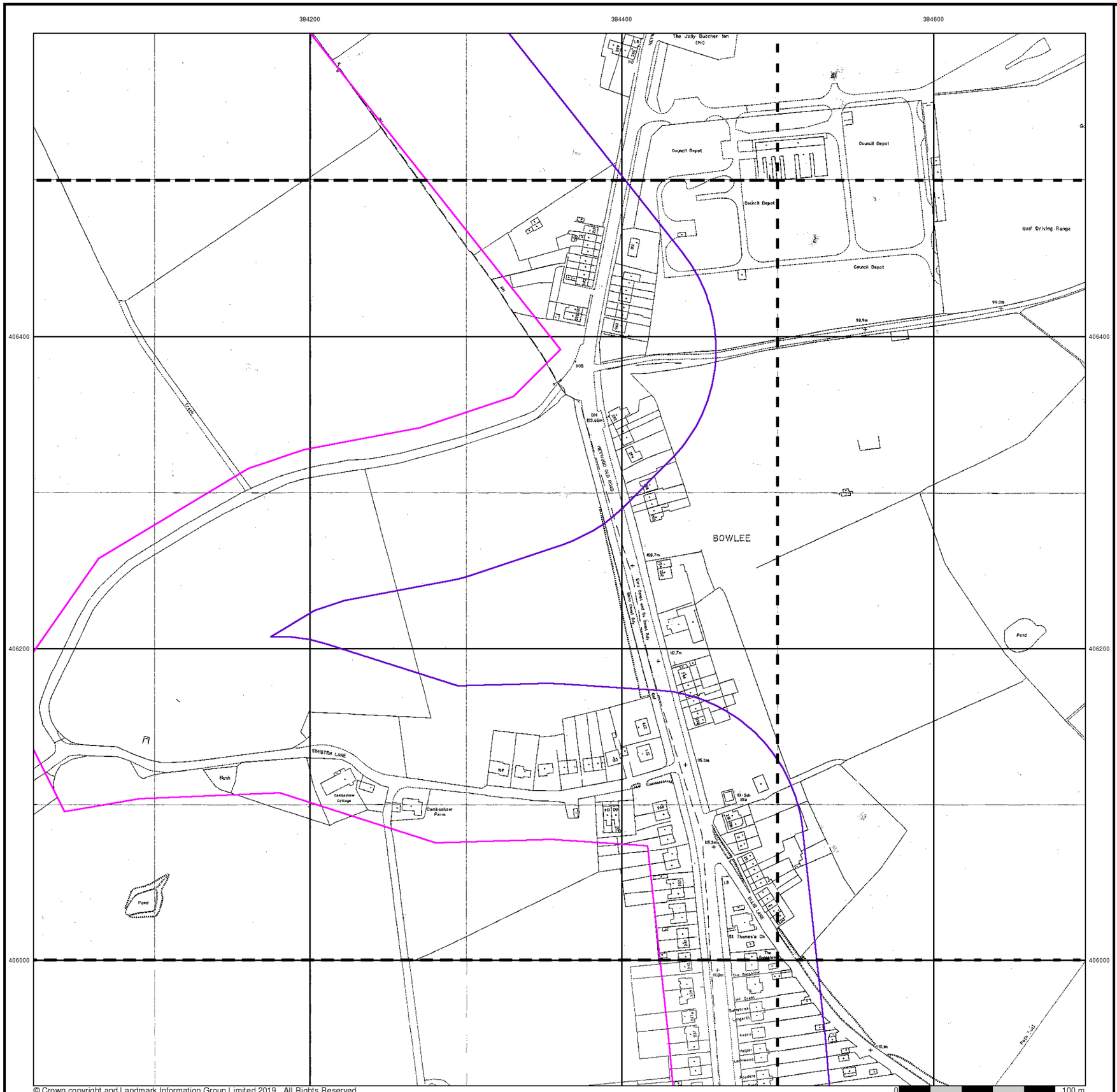
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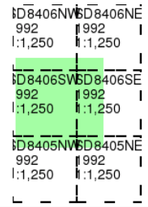
Large-Scale National Grid Data

Published 1992

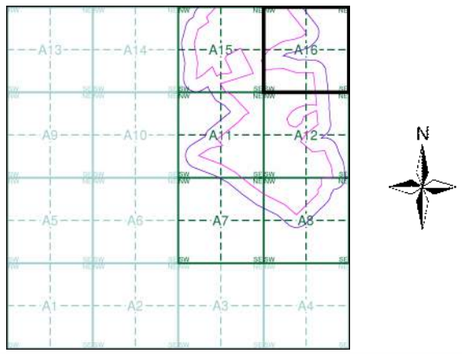
Source map scale - 1:1,250

'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 A16



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APPENDIX D – UNEXPLODED ORDNANCE

UNEXPLODED BOMB RISK MAP

zeticaUXO

SITE LOCATION

Location: M24 4QR,
Map Centre: 384448,405919



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**
Transport | **Docks** | **Luftwaffe targets**
Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

APPENDIX E – CIRIA C552 RISK METHODOLOGY

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

Classification of consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Matrix of consequence against probability to gain a risk classification

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

APPENDIX 8.1 – LVIA EIA Methodology

Appendix 8.1: LVIA Methodology

1.1. The methodology and guidelines used in the preparation of this assessment have been developed from the following document:

- An Approach to Landscape Character Assessment, Natural England, Second Version, October 2014;
- Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, LI and IEMA, 2013;
- Visual Representation of Development Proposals (TGN 06/19), LI, September 2019;
- Assessing landscape value outside national designations (TGN 02/21), May 2021; and
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (LITGN-2024-01), LI, August 2024.

1.2. To assist the reader in understanding the purpose for undertaking landscape assessment work, the definition of 'landscape' as defined by the European Landscape Convention (ELC, 2000) is set out below.

"'Landscape' means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

1.3. In the context of this definition the assessment process seeks to consider the likely significant effects of the Proposed Development on landscape and visual receptors in an objective and systematic manner whilst recognising the perceptual and therefore subjective response to the landscape. Whilst subjectivity can never be removed from the assessment process, by following a systematic and structured framework of assessment, a more robust assessment can be performed, and more rational and transparent conclusions drawn.

1.4. Furthermore, the LVIA process deals with the separate but interlinked issues of:

- Landscape Character: The effects of the Proposed Development upon discrete character areas and/or character types comprising features possessing a particular quality or merit; and
- Visual Context: The effects of the Proposed Development on views from visual receptors, and upon the amenity value of the views.

1.5. Landscape character is defined in the GLVIA3 as:

"A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."

1.6. Changes to the landscape character can arise as a result of:

- Changes to the fabric of the landscape including either the loss of key elements or introduction of new features which alter the distinct character of the landscape; and
- Changes which alter the way in which the landscape is perceived or appreciated.



1.7. Changes to views will occur where there is alteration of the view in terms of elements present and their distribution or dominance. Such changes may or may not have a significant effect on the visual amenity of identified visual receptors.

1.8. The assessment process is set out in further detail below but involves the following steps:

- Baseline appraisal of landscape, visual and planning policy baseline;
- Identification of potential receptors to change and their sensitivity;
- Assessment of potential effects on identified receptors;
- Proposed mitigation measures.

Baseline Appraisal

1.9. The baseline appraisal process is a crucial part of any assessment and includes:

- A desktop and on-site appraisal of the landscape features and topography of the area;
- The identification of relevant designations at national and local level;
- The review of relevant planning policy and evidence base;
- An on-site review of the character of the Site and its surroundings;
- The review of relevant published landscape character assessments;
- Field work to determine the extent to which the Site can be seen from the wider area, taking into account any significant vegetation or built form which restricts or limits the extent of visibility; and
- Identification of representative viewpoints and determination of likely visual receptors.

Identification of Receptors and Their Sensitivity

1.10. The desktop and on-site appraisals are used to identify potential receptors to change. Landscape receptors may be individual landscape elements, such as trees and hedgerows, or landscape character. Visual receptors are always people. The sensitivity of the identified receptors to change are then assessed.

Identification of Receptors

1.11. Receptors are identified through the baseline analysis as set out above. This is used to identify areas of landscape character, landscape elements and visual receptors that may be affected by the Proposed Development. Receptors that are identified but then deemed to not be affected by the Proposed Development are scoped out of the assessment in accordance with the GLVIA3.

Landscape Sensitivity

1.12. Landscape sensitivity is dependent on:

- The susceptibility of the landscape to the type of change proposed; and

- The value placed on the landscape.

1.13. As a general rule, those landscape resources which make a notable contribution to the character and cannot be replaced or substituted, or where the type of proposed development is inconsistent with the baseline situation will be of a high sensitivity. Those resources which are replaceable or contribute little to the overall character of the landscape, and where the type of proposals complement the baseline situation will be of low sensitivity.

1.14. Landscape susceptibility indicates the ability of a defined landscape receptor to accommodate the Proposed Development *"without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies."* (GLVIA, 3rd edition, para 5.40). An example of how susceptibility can be described at each end of the continuum of low to high is provided in Table 1 below.

1.15. Landscape Value is *"the relative value that is attached to different landscapes by society"* (GLVIA, 3rd edition, page 157). Box 5.1 (GLVIA 3rd version, page 84) sets out factors to be considered in the assessment of the value of designated landscapes, with TGN 02/21 relating to non-designated landscapes.

1.16. The GLVIA3 also recognises that individual components of the landscape, including landscape features and notable aesthetic or perceptual qualities can be judged on their own importance, as well as their contribution to the overall character and value of the wider landscape (paragraph 5.30, page 85).

Visual Sensitivity

1.17. The sensitivity of people (visual receptors) who may experience a change to views and visual amenity arising from the proposed development is a combination of the susceptibility of the receptor and the value of the view.

1.18. Susceptibility for visual receptors (people) relate to "the occupation or activity of people experiencing views at particular locations and the extent to which their attention may be focused on the views and the visual amenity they experience at a particular location." (GLVIA, 3rd edition, para 6.32). An example of how susceptibility can be described at each end of the continuum of low to high is provided in Table 2 below.

1.19. In visual terms, value relates to that attached to views experienced by receptors (people). An example of how value can be described at each end of the continuum of low to high is provided below for visual receptors in Table 2 below.

Magnitude of Effects

1.20. The assessment of the magnitude of effects is undertaken in the knowledge of the scheme proposals and the existing baseline situation.

1.21. Scale of effect is assessed for both landscape and visual receptors and identifies the degree of change which would arise from the development. An example of how Scale of effect can be described for landscape and visual receptors at each end of the continuum of large to negligible is provided in Tables 3 and 4 below.

1.22. Geographical Extent of effect is assessed for both landscape and visual receptors and indicates the geographic area over which the effects will be felt. An example of how Geographical Extent can be described at each end of the continuum of low to high is provided in the tables below for both landscape and visual receptors.



1.23. Duration and Reversibility of effect is assessed for all landscape and visual receptors and identifies the time period over which the change to the receptor would arise as a result of the development. An example of how Duration and Reversibility can be described at each end of the continuum of low to high is provided in the tables below for both landscape and visual receptors.

1.24. The above elements are combined using professional judgement to reach an assessment of the magnitude of effect.

Importance of Effects

1.25. Best practice guidelines stipulate that the level of any landscape or visual effect should be evaluated, both during the construction works and following completion of the development. The level of any landscape and visual effect is a function of the sensitivity of the affected landscape resources and visual receptors against the magnitude of change that they would experience.

1.26. It is also important to note that the latest GLVIA (3rd Edition) places greater emphasis on professional judgement and the supporting narrative and less emphasis on a formulaic, mechanistic approach; a transparent assessment process should be evident.

1.27. Matrix 5 below indicates how the general relationship between sensitivity and magnitude of change determines the level of effect. The level of effect is rated within the range of Large – Major / Moderate – Moderate – Moderate / Minor – Minor – Negligible.

1.28. Impacts which are moderate-major and above are considered ‘significant’.

Nature of Effects

1.29. Landscape and visual effects are considered likely to arise during both the Construction and Operation phases of the Proposed Development. For the purposes of the assessment, the terms ‘impact’ refers to the causation of change. The changes will be judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity.

1.30. The following terms have been used to define landscape effects:

- Adverse: The Proposed Development may result in direct loss of physical landscape/townscape resources, weaken key characteristics or negatively affect the integrity of a landscape/townscape designation; and

- Beneficial: The Proposed Development may replace poor quality elements of the existing landscape/townscape or strengthen existing landscape/townscape characteristics.

1.31. Where there will be negligible or no change, the nature of effect can be considered ‘Neutral’.

Mitigation Measures

1.32. The consideration of mitigation with the aim where possible, of avoiding, reducing or offsetting adverse landscape or visual effects is determined during the course of the assessment where this can be addressed through a suitably worded condition.

1.33. The evaluation of landscape and visual effects following mitigation, are known as residual effects. For the purposes of this report, the term ‘impact’ refers to the causation of change and effects that are the results of the changes to the landscape and visual context.

Photography Methodology

1.34. Photographs will be taken from selected viewpoints with a digital camera with an equivalent 50mm focal length lens at eye level (approximately 1600mm above ground). Photographs were stitched in Photoshop using the cylindrical method and presented on photosheets in accordance with the Landscape Institute TGN 06/19 set out above.

Table 1: Sensitivity of Landscape Receptors

	Landscape Value **Characteristics and features as recognised in published landscape character assessments or policy**	**Landscape Susceptibility** **The ability of a defined landscape to accommodate the specific proposed development without undue negative consequences**	
High ↕ **Low**	Assessment of landscape value is undertaken using the criteria set out in Landscape Institute Technical Guidance Note 02/21 for non designated landscapes, and using Box 5.1 of the GLVA3 for designated landscapes.	The landscape is such that changes in terms of the proposed development would be entirely at odds with the character of the local area, related to matters including pattern, grain, use, scale and mass. The proposed development has a degree of consistency with the existing scale, pattern, grain, land use of the prevailing character, although mitigation may be appropriate to enhance assimilation. The proposed development is entirely consistent with the character of the local area, related to matters including pattern, grain, use, scale and mass.	**High** ↕ **Low**



Table 2: Sensitivity of Visual Receptors

	Value (attached to views)	**Visual Susceptibility** **The occupation or activity of people experiencing the view and the extent to which their attention or interest may be focused on the views and their visual amenity at particular locations**	
High ↓ **Low**	Recognised national / Important Viewpoints, including those identified within and protected by policy. These viewpoints may be tourist destinations and marked on maps. Designed views, including from within historic landscapes. Users of nationally recognized routes e.g. National Cycle Network, National Trails. Land with public access (i.e. Open Access Land and National Trust Land). Locally important views/ views. Views from within locally designated landscapes e.g. Conservation Areas and local planning policy. Views from local routes identified on maps Permissive routes, not recognised by policy or identified on maps. No designations present	People visiting recognised viewpoints People using Public Rights of Way and Access Land Users of local roads where speeds are lower and where footways may be present People using recreational facilities or playing outdoor sports but for whom views are not the main focus. People travelling along major roads or using transport routes where the focus is not on the views and speeds are high People at places of work where attention is not on the views.	**High** ↓ **Low**



Table 3: Magnitude of Effect of Landscape Receptors

	Scale **identifies the degree of change which would arise from the development**	**Geographical Extent** **of effect indicates the geographic area over which the effects will be felt**	**Duration and Reversibility** **of effect identifies the time period over which the change to the receptor would arise as a result of the development.**
Large	Highly noticeable change, affecting most key characteristics and dominating the experience of the Landscape/Townscape; introduction of highly conspicuous new development; and the baseline situation will be fundamentally changed.	Extensive, affecting the majority or all the character area / receptor.	Long-term or permanent, the change is expected to be in place for 10+ years and there may be no intention for it to be reversed or only partially reversed.
Medium	Partial alteration to key elements, features, qualities or characteristics, such that post development the baseline situation will be largely unchanged but noticeable despite discernible differences.	Partial, affecting a moderate amount of the character area / receptor.	Medium-term, the change is expected to be in place for 5-10 years and the effects may be reversed or partially reversed.
Small	Minor alteration to few elements, features qualities or characteristics resulting in a barely perceptible change.	Affecting the character area / receptor to a minor extent.	
Negligible / None	Negligible to no perceptible change	Affecting an extremely limited part of the character area/receptor.	Short-term, the change is expected to be in place for 0-5 years and the effects are likely to be reversed.

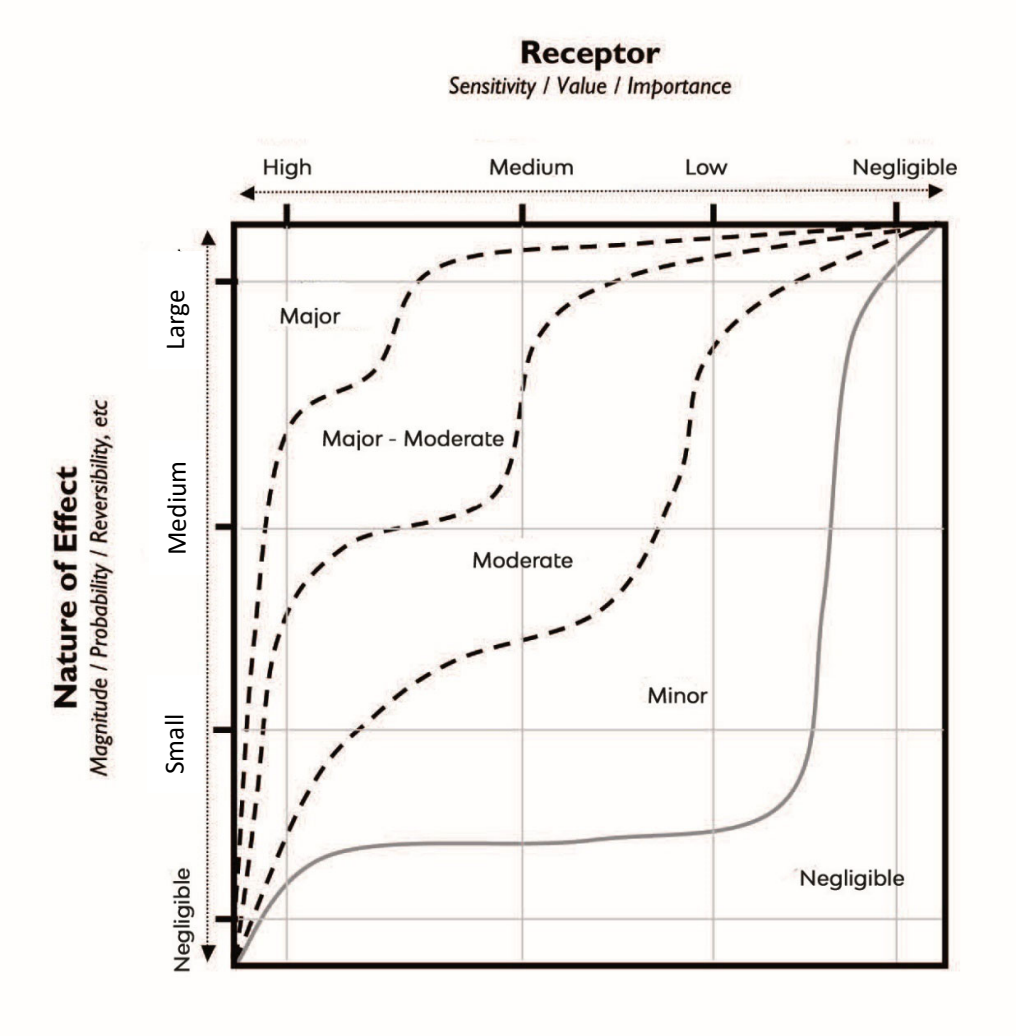


Table 4: Magnitude of Effect of Visual Receptors

	Scale **identifies the degree of change which would arise from the development**	**Geographical Extent** **Wide, and/or within close proximity, and/or open views.**	**Duration and Reversibility** **identifies the time period over which the change to the receptor would arise as a result of the development.**
Large	Intensive/dominant or major alteration to key elements of the baseline view.	Changes perceived over wide area.	Long-term or permanent, the change is expected to be in place for 10+ years and there may be no intention for it to be reversed or only partially reversed.
Medium	Partial/noticeable or minor alteration to key elements of the baseline view.	Changed perceived by receptors over moderate to localised area.	Medium-term, the change is expected to be in place for 5-10 years and the effects may be reversed or partially reversed.
Small	Minor alteration to few elements of the baseline view.	Changes perceived by receptors over a localised or isolated extent e.g., a single viewpoint.	Short-term, the change is expected to be in place for 0-5 years and the effects are likely to be reversed.
Negligible / None	Barely perceptible or no change to the baseline view.		



Table 5: Landscape and Visual Importance Matrix (derived from IEMA 2011[1])



[1] IEMA (2011) Special Report – The State of Environmental Impact Assessment Practice in the UK