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**Site 2, Ribble Valley Enterprise Park,
Barrow Brook, Clitheroe
Phase 1 Land Quality Assessment**

D1530-2-R-01

5 January 2012

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Document Control Sheet

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Job	Date	Issue	Copy
D1530-2	5 th January 2012	D1530-2-R-01-o	

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1.0 PREFACE

The site is located at Site 2, Ribble Valley Enterprise Park, Barrow Brook, Clitheroe. BB7 9WF (NGR 373979E, 438041N). Site occupies an area of approximately 4.3 hectares.

PSA Design were commissioned by Avalon Town Planning to provide a Phase 1 Land Quality Assessment of the site, in accordance with likely planning requirements by Ribble Valley Borough Council for a contamination survey of the site. It is understood that consideration is being given to the re-development of the site as a *residential* development.

PSA Design's investigation included a review of historical/environmental data and Environment Agency searches. A summary of salient geo-environmental issues is provided in the table below.

Issue	Remarks
Former uses	Site has been grassland throughout the recorded history.
Hazardous Gas	The potential presence of fill in local areas surrounding the site represents a low/moderate risk of ground gas generation. Therefore, in accordance with CIRIA C665 and in view of the nature of the residential development, it is recommended that a minimum of six gas monitoring visits be undertaken over a three month period.
Mining & Quarrying	No evidence of coal seams or workings in the vicinity of the development. No quarrying in the vicinity of the development.
Flooding & Drainage	The site does not lie within an Environment Agency River Flood Plain and is not likely to flood in extreme flood events however, the site is at risk from reservoir flooding. Site drainage is likely to enter the existing drainage network.
Anticipated Ground Conditions	Drift deposits – Glacial Till [Boulder Clay] Rock – Mudstone-Limestone [Undifferentiated Clitheroe Limestone & Hodder Mudstone –Carboniferous]
Contamination	Three potential sources, but following risk assessment, only one low/medium contamination risk to end-users within a small localized area in the NW corner of the site, related to potential migration of contaminants from the historic print-works' tanks.
Preparatory Works	Topsoil Strip.
Anticipated Foundation Solutions	Trench fill/strip footings to competent bearing strata are anticipated to be the most economic foundation solutions across the site subject to confirmatory site investigation.
Recommendations for Ground Investigation	Intrusive investigation comprising window sampler boreholes and trial pits across site, with gas/groundwater monitoring installations. Chemical and geotechnical soils analysis with subsequent gas and groundwater monitoring.

At this stage, anticipated significant developer abnormal costs relating to geo-environmental issues at the site are:

- Removal and treatment/disposal of localised contaminated soils, if present
- Allowance for adoption of basic gas exclusion measures within new buildings

Some further work is required, most notably:

- Intrusive ground investigation
- Tree Survey
- Topographical Survey
- Services Search

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2.0 INTRODUCTION

2.1 *Terms of Reference*

2.1.1 PSA Design were commissioned by Avalon Town Planning to carry out a Phase 1 Land Quality Assessment of the proposed development at Site 2, Ribble Valley Enterprise Park, Barrow Brook, Clitheroe.

2.1.2 The agreed scope of works included:

- A site walkover and inspection
- An assessment of land use history
- Determination of the site's environmental setting
- Assessment of anticipated ground conditions, including potential contaminants
- Assessment of anticipated foundation, road pavement and engineering issues associated with redevelopment for a *residential* end-use
- Provision of recommendations for an appropriate ground investigation

2.2 *Proposed Development*

2.2.1 It is understood that consideration is being given to the re-development of the site to the construction of residential properties with related infrastructure and gardens/landscaping.

2.2.2 A development layout plan has been provided, which is included in this report as Drawing No. D1530-2-03.

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3.0 SITE DESCRIPTION

3.1 General

- 3.1.1 The site location is shown on Drawing Number D1530-2-01. Site details are summarised in the Table below. Current site layout plan shown in Drawing Number D1530-2-02. The site is situated in a *rural* location.

Detail	Remarks
Location	Within E outskirts of Barrow Bridge Village (Dwg D1530-2-01).
Address	Site 2, Ribble Valley Enterprise Park, Barrow Brook, Clitheroe. BB7 9WF.
NGR	373979E, 438041N
Area	4.3 ha
Known services	No services plans have been provided/made available for the scheme.

3.2 Site Features

- 3.2.1 A PSA Design Engineer completed a walkover survey of the site on 4th January 2012 and the salient features are presented below. A selection of site photographs are included in the report as Appendix F.
- 3.2.2 The site is currently open grassland, surrounded on three sides by a wire-post fence and a watercourse on the N boundary. "Printworks" office building and electricity sub-station to N of site. Residential development to W of site. Large pond/reservoir, N of site.
- 3.2.3 No buildings or hard-standing on site. Road stub situated along N edge of site, with minor bund blocking the entrance to the site over a bridged culvert, straddling the E-W flowing watercourse.
- 3.2.4 Grassland vegetation throughout within semi-mature and mature trees and hawthorn hedges within and along all four boundaries of the site.
- 3.2.5 Ground relatively flat throughout. Regionally, land drops to the W.
- 3.2.6 Access to the site is off the access road from the highway, Holm Road to the N.
- 3.2.7 Existing salient features are summarised in the Table below and shown in Drawing Number D1530-2-02.

Feature	Remarks
Current Access	Off Holm Road.
Topography	Relatively flat though site, falling to W gently.
Approximate areas	0 m ² – existing buildings 43,000 m ² – grassland 0 m ² – hard-standing

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Nature of boundaries	N,E & S area- wooden/wire fence. W- watercourse.
Surrounding land uses	N- Commercial/open land E-Open land/highway W&S-Residential

3.3 *Site Operations*

- 3.3.1** No current site operations, with area, grassland and therefore not considered to represent a potential source of current ground contamination.

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4.0 HISTORICAL SITE INFORMATION

4.1 In order to investigate the development history and previous land uses at the site and immediate surrounding land, site centred extracts from Ordnance Survey (OS) plans dating back to 1892 were examined. These plans are presented in Appendix A to this report. In addition, reference has been made to the Lancashire County Council MARIO website first edition 1848-53 1:10000 scale mapping. The Table below provides a summary of the salient points relating to the history of the site with respect to the proposed end use. It is not the intention of this report to describe in detail all the changes that have occurred on or adjacent to the site. Significant former uses/operations are highlighted in bold text for ease of reference.

Date(s)	Site	Surrounding Land
1848-53	Site area is shown as open (assumed) agricultural land	Land uses throughout the immediate surrounding area are mixed greenfield with some small pockets of commercial and residential growth to the NW of the site. Barrow Bridge Print Works , including chimney 30m NW of site. Three Mill Ponds/Reservoirs servicing Barrow Bridge Print Works to N, nearest 20m N of site, feeding off a small brook running E to W.
1892-94	Trees recorded sporadically through site.	Small W mill pond infilled , with larger mill pond constructed within eastern side of mill pond series. Reservoir constructed to the E (upstream) of the series of Mill Ponds, 100m E of site. Print Works name change to Whalley Abbey. Chimney appears to have been demolished. Tanks noted 10m NW of site.
1910-15	No significant changes within site	W mill pond/reservoir infilled , 40m NW of site.
1929-33	No significant changes within site.	Further development of renamed Whalley Abbey Print Works, including chimney & tanks NW of site. Filter Beds 375m W of site. Tank 90m E of site. Small residential development 100m SW site.
1950	No significant changes within site.	No significant changes within surrounding area.
1966-69	No significant changes within site.	Print Works now an Engraving Works . Residential development along S border of site. Whiteacre School built 80m S of site.
1972-77	No significant changes within site.	A59 Highway constructed 50m E of site boundary. Infilling of some of mill ponds/reservoir.
1983	No significant changes within site.	Residential development 200m NW of site. Demolition of Engraving Works. Infilling of W mill pond/reservoir, 20m N of site.
1989-95	No significant changes within site.	No significant changes within surrounding area.
2002	No significant changes within site.	Holm Road constructed off new A59 roundabout with access road S into new office-type building constructed 18m N of site (named Printworks). Further ribbon-like residential development S of site.
2011-2012	No significant changes within site.	Commercial development of buildings off A59 roundabout 120m N of site including petrol station . Electrical sub-station 80m N of site. Recent construction of Food Store road and Electrical Sub-station 200m N of site.

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5.0 ENVIRONMENTAL SETTING

5.1 Background Information

5.1.1 Environmental and Geotechnical Information is presented in the Groundwise EnviroInsight Report (Appendix B), GeoInsight Report (Appendix C), Environment Agency Website (Appendix D) and other sources set out below.

Issue	Data reviewed	Summary
Geology	1:50,000 BGS map (Sheet 68) Solid & Drift BGS Memoir Clitheroe BGS Website Borehole Index	Drift – Glacial Till (boulder clay) beneath site (8.25m thick, 240m NE of site [BH ref. SD73NW/159] & 15.24m thick, 350m NW of site [BH ref. SD73NW/4] . Solid – Mudstone (Undifferentiated Clitheroe Limestone Formation & Hodder Mudstone Formation)
Landfills	Historical OS Plans EA Website	There is one historical landfill, 8m N of site. Barrow Lake Landfill imported inert waste.
Mining	BGS maps/OS Maps	None.
Quarrying	Historical OS Plans	Reference to historical maps indicate no presence of quarries within a 250m radius of the study site.
Radon	BRE Report BR211 BGS Stage 2 Report HPA Report RPD-033 Indicative Atlas of Radon in England & Wales	Less than 1% of homes are above the Radon Action Level, therefore no protective measures are necessary in the construction of new dwellings or extensions.
Hydrogeology	Environment Agency Groundwater Vulnerability map (Sheet 10, Central Lancashire)	The site is not located within a groundwater source protection zone. Site underlain by unproductive superficial aquifer & Secondary (A) bedrock aquifer. Solid Geology (Mudstone/Limestone - Carboniferous). Groundwater abstraction 214 NE of site & surface water abstraction 155 E of site.
Hydrology	OS Map	Nearest watercourse(s) – Barrow Brook (running E-W), 1m N of site. Reservoir 5m N of site. No pollution incidents within 250m of site. No currently active discharge consents within a 500m radius.
Potential Contaminated Land Usage	Historical OS Plans EA Website	Four recorded potentially polluting current activities within 250m of site, Petrol Station 122m N of site, Food Store, 140m to N. Electrical sub-stations, 71m N, 75m N & 140m N of site & Industrial tanks, 95m E of site. Walkover showed no evidence of any contamination from spills or fly tipping. Existing site in decent maintained condition.
Flood Risk	Environment Agency	Site not within a floodplain. Site at risk to Reservoir Flooding.

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6.0 HAZARD ASSESSMENT

6.1 Sources

6.1.1 The industrial processes and activities undertaken on or adjacent to the site that may act as potential historical or current sources of environmental hazard are shown in the Table below.

Type of Issue	SOURCE-Specific Issue	HAZARD-Remarks
Potential on-site contamination sources HISTORICAL	None	None
Potential off-site contamination sources HISTORICAL	1. Infilled reservoir (Barrow Lake Landfill). 2. Print/Engraving Works (Tanks)	1. Risk of ground gas production (CO ₂ & CH ₄). 1&2. Potential sources of migration of metals/PAH into soil and groundwater.
Potential on-site contamination sources CURRENT	None.	None
Potential off-site contamination sources CURRENT	1. Potential isolated spill/leaks from petrol station or food store. 2. Potential isolated spill/leaks from Electrical sub-station N & S of site). 3. Tanks 90m E of site.	1&3. Potential sources of migration of hydrocarbons & PAH into soil and groundwater. 2. Potential sources of migration of PCB's into soil and groundwater.
Potential geotechnical hazards	1. Proximity of mature trees within and along boundary edge of site.	1. Tree effect on foundation depth in potentially shrinkable soils.

6.2 Pathways and Receptors

6.2.1 Five pollutant receptors have been identified for the site, and are listed in the table below, together with the pathways through which they may be linked to pollutant sources.

Receptor	Pathways
HUMAN HEALTH Re-development workers End users-residents	Inhalation, ingestion, skin contact
WATER ENVIRONMENT Groundwater	Controlled water
FAUNA & FLORA Landscaping	Root uptake
BUILT ENVIRONMENT Buildings and services	Diffusion of vapours through ground Direct contact with contaminated soil and groundwater. Diffusion of landfill gas through ground and collection in confined spaces.

6.3 Conceptual Model and Qualitative Risk Assessment

6.3.1 A preliminary conceptual model of pollutant linkages is given in the table below, together with a qualitative risk assessment for each linkage. The risk assessment uses the method of risk evaluation set out in CIRIA 552 'Contaminated Land Risk Assessment'. The scale of risk is determined from a matrix that combines the *consequence* of a hazard with the *likelihood* of the event happening. Details of the assessment method are included in Appendix E. Potential contaminated features are illustrated in Drawing D1530-2-04. A schematic summary of the conceptual model is given in Drawing No D1530-2-05

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Source	Pathway	Receptor	Consequence	Probability	Risk Classification
Methane & Carbon Dioxide from off-site infilled reservoir source.	Migration, ingress, accumulation and inhalation	Re-development workers	severe	unlikely	Moderate/low risk
		End users- residents	severe	unlikely	Moderate/low risk
		Buildings and Services	medium	unlikely	low risk

Source	Pathway	Receptor	Consequence	Probability	Risk Classification
Off-site historic sources of migration of contaminated ground/groundwater from infilled reservoir to N	Inhalation, ingestion, skin contact	Re-development workers	medium	unlikely	Low risk
		End users- residents	medium	unlikely	Low risk
	Root Uptake	Landscaping Vegetation	minor	unlikely	Very low risk
	Groundwater	Controlled Waters	mild	unlikely	Very low risk
	Direct Contact	Buildings and Services	medium	unlikely	Low risk

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Source	Pathway	Receptor	Consequence	Probability	Risk Classification
Off-site historic sources of ground/groundwater contamination arising from migration of contaminated materials from Tanks of Whalley Abbey Print Works to NW of site.	Inhalation, ingestion, skin contact	Re-development workers	medium	likely	Moderate risk
		End users- residents	medium	low	Moderate/low risk
	Root Uptake	Landscaping Vegetation	minor	unlikely	Very low risk
	Groundwater	Controlled Waters	mild	likely	Moderate/low risk
	Diffusion of vapour	Buildings and Services	minor	unlikely	Very low risk
	Direct Contact	Buildings and Services	medium	low	Moderate/low risk

Source	Pathway	Receptor	Consequence	Probability	Risk Classification
Off-site current sources of migration of contaminated ground/groundwater from Petrol Station, Food Store, Electrical sub-station & Tanks.	Inhalation, ingestion, skin contact	Re-development workers	medium	unlikely	Low risk
		End users- residents	medium	unlikely	Low risk
	Root Uptake	Landscaping Vegetation	minor	unlikely	Very low risk
	Diffusion of vapour	Buildings and Services	minor	unlikely	Very low risk
	Groundwater	Controlled Waters	mild	unlikely	Very low risk
	Direct Contact	Buildings and Services	medium	unlikely	Low risk

6.3.2 *Off-site gassing soils from historic infilled reservoir*

The potential hazards from gas from historic infilled ground have been linked with several receptors, which include construction workers and end-users and the built environment. For moderate/low risk receptors (Re-development Construction Workers and End Users) the consequences of gas inhalation are necessarily severe, but the probability of such an event is considered to be *unlikely*. This is due to several factors age of waste (>25years), type of waste likely to be inert materials (demolition materials from Engraving Works), unlikely to be significantly putrescible and a major source of gas, lack of permanent pathways to site (clay drift deposits), with the age of the fill material from the infilled ground being up to >25years old and thus have been naturally venting out of the surface of the infilled pit for the majority of this period. The consequential risk classification is therefore *moderate/low*. Buildings and Services (Low). The consequences of a damage from gas is necessarily *medium*, but the probability of such an event is estimated to be *unlikely* for similar reasons to those stated above, giving a classification of *low*.

6.3.3 *Off-site ground and groundwater contamination from migration of historical migration of contaminated groundwater from infilled reservoir*

The risk classification for five pollutant linkages relating to potential sources of contamination in the underlying ground and groundwater from migration of historic off-site contamination sources, north of the site varied between *low* risk to *very low* risk. Investigation, if not already undertaken, is normally required in cases where the risk is classified as *moderate* or higher, and some remedial works may be required. Three *low* risks were identified for the residents, re-development workers and services receptors via the pathway of direct contact with contaminated soil/groundwater. The risk of pollution from the historic infill was assumed to be relatively low risk due to various factors. These included distance from the site, ground conditions (a thick blanket of relatively impermeable boulder clay encapsulating area, and buffering any migration), inert material type of fill, topography (flat) and hydrogeology. The *very low* risk was identified for gardens/landscaping, groundwater & buildings that were deemed less of a risk due to the *minor/mild* consequences from pollution.

6.3.4 *Off-site ground and groundwater contamination from migration of historical migration of contaminated groundwater from print-works*

The risk classification for six pollutant linkages relating to potential sources of contamination in the natural materials from possible migration of spillages/leaks of oils/hydrocarbons related to the Print-works' tanks varied between *very low* risk to *moderate* risk. Investigation, if not already undertaken, is normally required in cases where the risk is classified as *moderate* or higher, and some remedial works may be required. The five receptors include human health (construction workers and end users-residents), controlled waters, landscaping vegetation and gardens, and buildings and services.

One *moderate* and three *moderate/low* risks were identified for the re-development workers, services (water supply pipes), residents and surface water receptors via the pathway of direct contact with contaminated soil/groundwater. The risks for these four elements can be reduced by suitable remedial measures such as suitable PPE for

construction workers, potential removal of Made Ground/suitable barrier systems and sterile trenches. The location of the likely contamination source to the immediate border of the NW corner of the site is likely to affect only this localised area. Further investigation of the ground conditions within the NW area of the site, with suitable chemical testing will qualify whether further remedial measures are required to protect the health of the end users-residents. Two *very low* risks were identified that were deemed less of a risk due to the *low* probability of the pollution linkage occurring. Reasons include the assumed lack of mobility of pollutants, due to natural ground composition, impermeable properties of local drift deposits and *low* risk identified for landscaping/vegetation and gardens that were deemed less of a risk due to the *minor* consequences from pollution to the receptor.

6.3.5 *Off-site ground and groundwater contamination from migration of current spillages/leaks from petrol station, food store, electrical sub-station & tank sources*

The risk classification for six pollutant linkages relating to potential sources of contamination in the underlying ground and groundwater from migration of current/historic off-site contamination sources, west of the site varied between *low* risk to *very low* risk. Investigation, if not already undertaken, is normally required in cases where the risk is classified as *moderate* or higher, and some remedial works may be required. Three *low* risks were identified for the residents, re-development workers and services receptors via the pathway of direct contact & vapour diffusion with contaminated soil/groundwater. The risk of pollution from the current petrol station, food store, electrical sub-station & tank sources was assumed to be relatively low risk due to various factors. These included significant distance from the site, ground conditions (a thick blanket of relatively impermeable boulder clay acting as a buffer to any migration), working practices reducing pollution linkages (petrol station/food store will adopt suitable measures, ie drainage/hard-standing areas, waste oil collection, bunded areas to prevent spillages/waste deposition), topography (flat) and hydrogeology. The *very low* risk was identified for landscaping, groundwater & buildings that were deemed less of a risk due to the *minor/mild* consequences from pollution.

6.3.6 *Uncertainties*

There remains the possibility that some historical occupation of the site has not been identified, which could lead to unforeseen ground contamination.

7.0 CONCLUSIONS/RECOMMENDATIONS

7.1 General

7.1.1 It is understood that consideration is being given to the re-development of the site as residential buildings with associated infrastructure and gardens.

7.1.2 The main issues considered in this report, and in particular in Sections 4, 5 and 6 are based on a review of historical data and available information. The report provides a preliminary assessment of potential geo-environmental issues and implications for the current and proposed use of the site, together with issues associated with the proposed re-development of the site.

7.2 Contamination

7.2.1 Three potential sources of contamination have been identified for the site, which are associated with:

- the potential risk for contamination from leached contaminants and groundwater from the off-site *historically* infilled reservoir (to the N) is assumed minimal due to the limited effect on likely receptors due to distance, ground conditions and type of source materials.
- the potential risk for contamination from leached contaminants and groundwater from the off-site *historical* print-works (to the N) is assessed as of low/medium risk (within a very localised area, NW corner of site) due to the close proximity of the potential contamination source to boundary.
- the potential for migration of contaminated soils and groundwater from the off-site *current* petrol station, food store, electrical sub-stations & tank sources is assumed minimal due to distance, ground conditions and site practices.

7.2.2 It is advised that further investigation works are required to assess soil contamination within the far NW corner of the site only, as this area of site has been assessed of being at a *low/medium* risk from soils contamination, whereas the remainder of the site is at *low* risk. The potential area at risk from migration of pollution from the off-site Printworks Tanks is a localised zone of approximately 900m², which would be in an area of proposed gardens. A targeted investigation of this zone should be conducted to resolve the uncertainty of migration affecting the end-users.

7.3 Hazardous Gas

7.3.1 The presence of potentially infilled ground within 250m of the site represents a *moderate/low* risk of elevated concentrations of ground gas at the site.

7.3.2 Based on the nature of the proposed residential development, and with reference to CIRIA C665 and the Ground Gas Handbook [2009], it is recommended that *six* monitoring visits must be undertaken over a *three* monthly monitoring period (*High* sensitivity and *very low* generation potential of source (CIRIA 2007 Recommended Monitoring Periods))

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- 7.3.3 Provision of gas protection measures in the building development should be considered but not specified until full monitoring results are analysed.

7.4 Mining & Quarrying

- 7.4.1 The site is not in a mining area. There are no quarries within 250m of the site.

7.5 Foundations

- 7.5.1 At present, no geotechnical ground investigation data is available for the site. Consequently it is only possible to estimate the ground conditions. Before firm foundation recommendations can be given, it may be necessary to undertake an appropriate ground investigation. However, tentative recommendations are provided below.

- 7.5.2 The published geological data suggests the site is underlain by drift deposits, including glacial till. The glacial till may provide a suitable founding stratum, subject to inspection of the formation.

- 7.5.3 The proximity of vegetation on the margins of the site, in particular the mature trees should be taken into consideration when designing the depth of foundation.

7.6 Highway, Drainage and External Works Issues

- 7.6.1 The main vehicle access to the site will be off Holm Road.

- 7.6.2 It is assumed that surface water discharge from the proposed development and foul water drainage is likely to flow into the existing local drainage network in the vicinity of the site. It is recommended that the developer contact United Utilities with respect to capacity in existing foul and surface water sewers in the vicinity of the development area.

- 7.6.3 The site is relatively flat and it is anticipated that minimal site re-grading will be required.

7.7 Potential Development Constraints

- 7.7.1 Full STATS information is required prior to the site development.

- 7.7.2 No risk of flooding on the site from rivers, but risk from reservoir.

7.8 Further Investigation

- 7.8.1 Whilst the site is considered suitable for its current and proposed use, the proposed change in use will require intrusive investigation.

- 7.8.2 This would include borehole drilling and trial pitting, with associated geotechnical analysis

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should be carried out to enable foundation recommendations and to determine near surface ground conditions including depth to competent founding strata, presence of buried obstructions, groundwater and stability.

7.8.3 An appropriate schedule of chemical testing should be carried out on soils and groundwater, to assess the significance of contamination, if any, at the site as a result of former potentially contaminative land use.

7.8.4 An appropriate ground investigation strategy is presented below:

Exploratory holes	Purpose
Window Sampler Boreholes	To retrieve geotechnical data from depth. To determine the general nature of soils underlying the site, including the: • nature, distribution and thickness of made ground (if any) • nature, degree and extent of contamination • proportion of undesirable elements e.g. biodegradable matter etc • suitability of the ground for founding structures.
Window Sampler Boreholes	To install monitoring wells across the sites in order to: • monitor for hazardous gas. • determine groundwater levels and assess flow direction.
Trial Pits	To determine the general nature of soils underlying the site, including the: • nature, distribution and thickness of made ground • nature, degree and extent of contamination • proportion of undesirable elements e.g. biodegradable matter etc • suitability of the ground for founding structures and highways

7.8.5 Proposed exploratory hole locations would be selected to provide a representative view of the strata beneath the site and to target potential areas of interest identified in the conceptual model. Additional exploratory locations would probably be scheduled by the site engineer in light of the ground conditions encountered. The number of representative samples taken would be reflective of the geological complexity encountered during the intrusive investigation. An assessment of potential contaminants associated with the former uses has been undertaken, which is based upon the professional judgement of PSA Design. As a consequence of this assessment, anticipated potential contaminants, within soil and/or groundwater include: Localised inorganic contaminants, elevated PAH concentrations and hydrocarbons for the NW area of the site.

7.8.6 Gas installation, monitoring and assessment should make reference to the CIRIA Publication C665 "Assessing risks posed by hazardous ground gases to buildings", 2007 and NHBC document "Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present", Ed 4, March 2007 and *The Ground Gas Handbook* (2009).

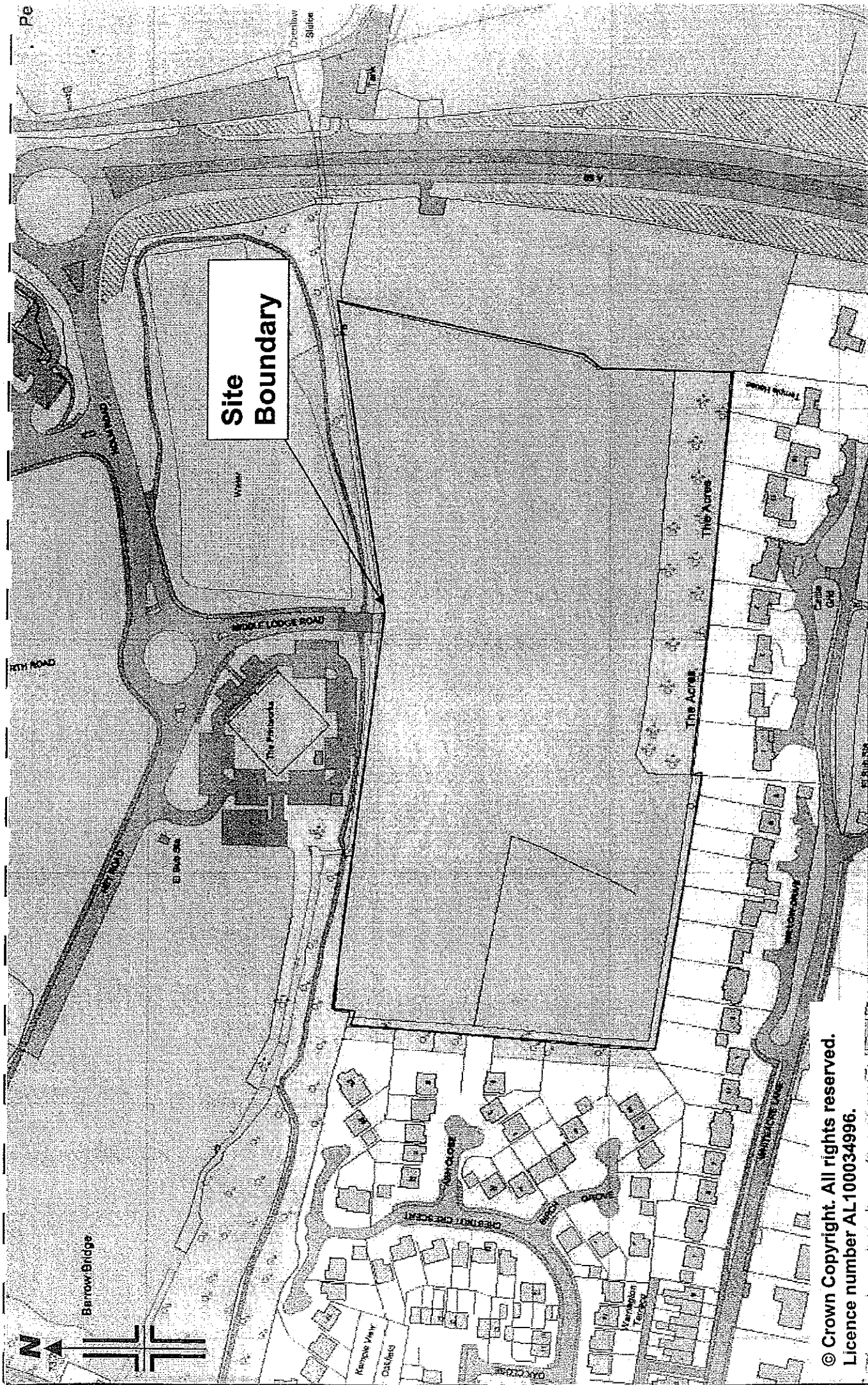
7.8.7 Following completion of the site investigation, it will be necessary to undertake a quantitative risk assessment, and dependent upon the outcome provide a remediation statement for approval by the regulatory authorities. A validation report will be required to demonstrate that the remedial measures have been undertaken in accordance with the approved plan.

8.0 REPORT LIMITATIONS

- 8.1 PSA Design believes that providing information with regard to limitations is essential to assist *the client* identify and therefore manage its risks. The ground is a product of continuing natural and artificial processes and, as a result, may exhibit a variety of characteristics which may vary from place to place, and with time. The risks associated with these variations may be mitigated by appropriate investigations, but cannot be eliminated.
- 8.2 This report contains interpretations of information which has been gathered from published sources and observations. Such information is only relevant to the ground at the published sources and observations. The information from these is interpreted here in good faith and is believed to be accurate. PSA Design cannot guarantee the authenticity of data obtained from external sources.
- 8.3 An interpretation or recommendation based on this information and given in this report is based on our judgment and experience of this information and not on any greater knowledge that might be implied.
- 8.4 The interpretations and recommendations contained herein represent our opinions which are provided for the sole use of our client in accordance with a specific brief. As such these do not necessarily address all aspects of ground behaviour at the site. Should these interpretations be used by any third party to assess ground conditions then verification should be made by reference to the appropriate factual information.

Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

DRAWINGS



Site Boundary

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 PSA Design The Old Bank House 6 Berry Lane, Longridge Preston, PR3 3JA Tel. 01772 786066 civil, structural, geotechnical, transport engineering your environment	Client	Newclose Properties Ltd	Drawn	JB	Date	03.01.12	Drawing No.	D1530-02-02
	Job	Site 2, Ribbles Valley Enterprise Park, Barrow Bridge	Checked		Scale	NTS	Rev	
	Title	Current Site Features Plan	Approved					



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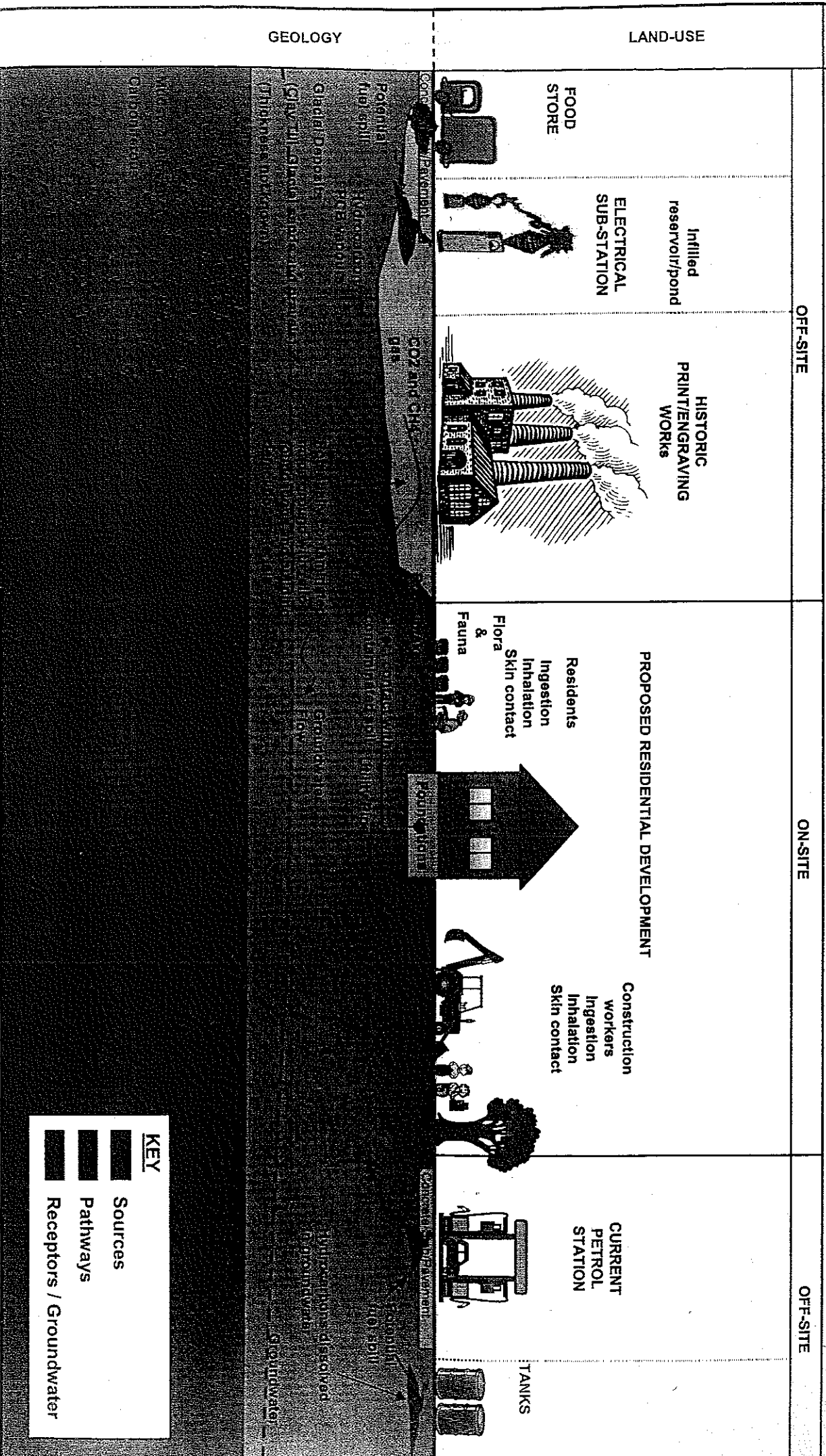
Client Newclose Properties Ltd
Job Site 2, Ribbles Valley Enterprise Park, Barrow Bridge
Title Development Proposal

Drawn
Checked
Approved

Date
Scale

03.01.12
NTS

Drawing No.
D1530-02-03
Rev



KEY

- Sources
- Pathways
- Receptors / Groundwater

PSA Design

The Old Bank House
6 Berry Lane, Longridge
Preston, PR3 3JA
Tel. 01772 786066

Client: Newclose Properties Ltd

Job: Site 2, Ribbles Valley Enterprise Park, Barrow Bridge

Title: Conceptual Model

Drawn: JB

Checked:

Approved:

Date: 03.01.12

Scale: Not to Scale

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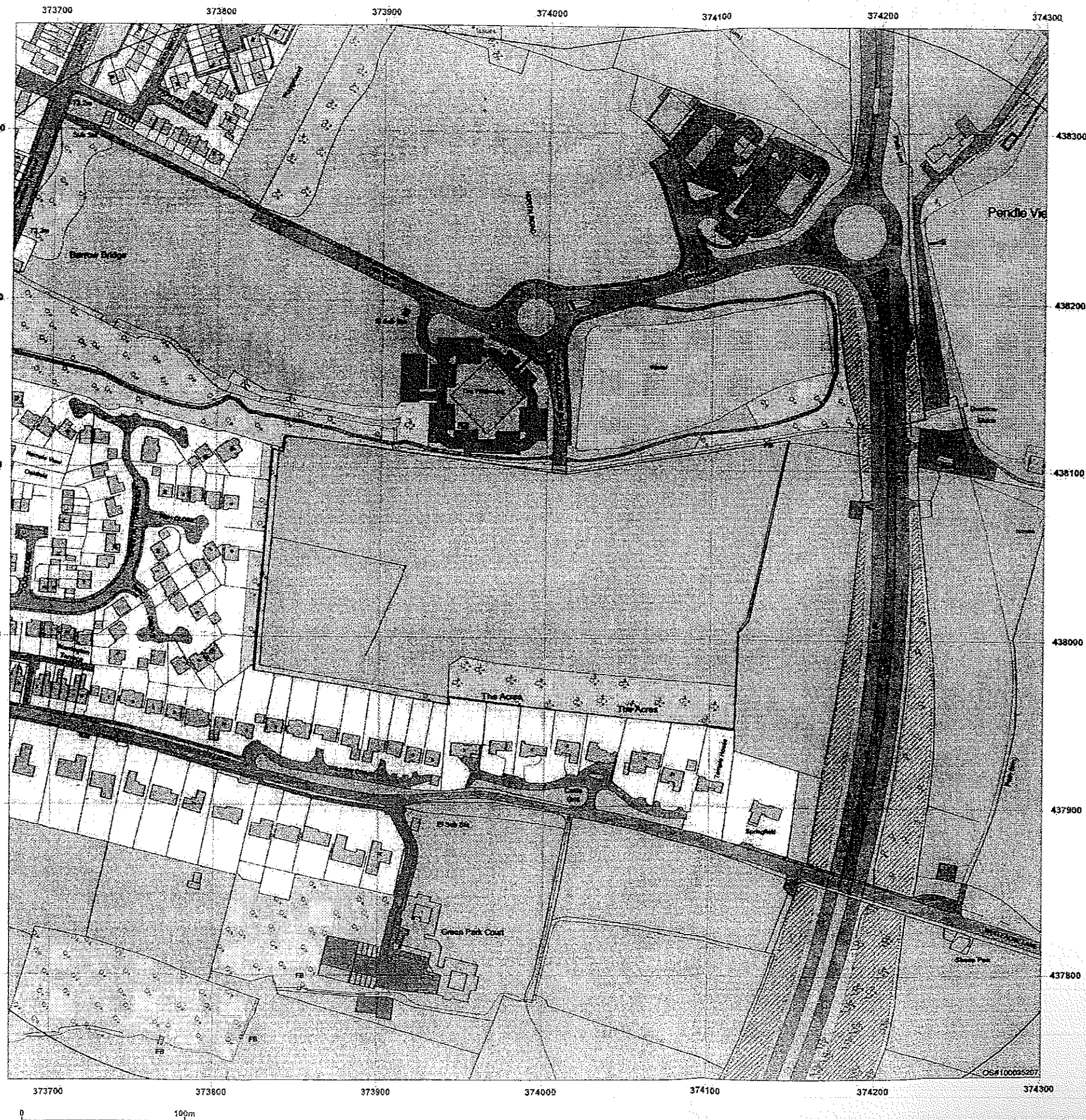
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Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDICES

Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDIX A GROUNDSURE REPORT-HISTORICAL INFORMATION



Site Details:

Site 2, RIBBLE VALLEY
ENTERPRISE PARK, HOLM
ROAD, BARROW, CLITHEROE,
BB7 9WF

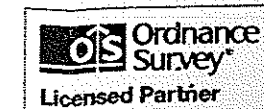
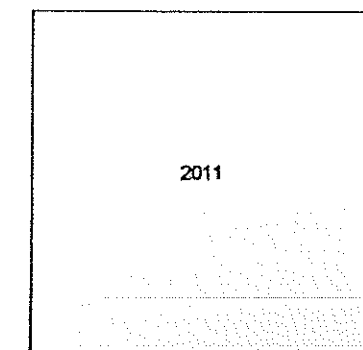
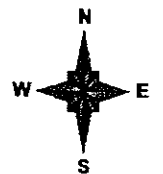
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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: MasterMap

Map date: 2011

Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

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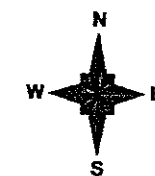
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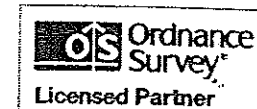
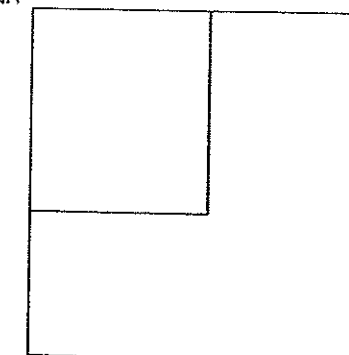
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Edition N/A
Copyright N/A
Levelled N/A

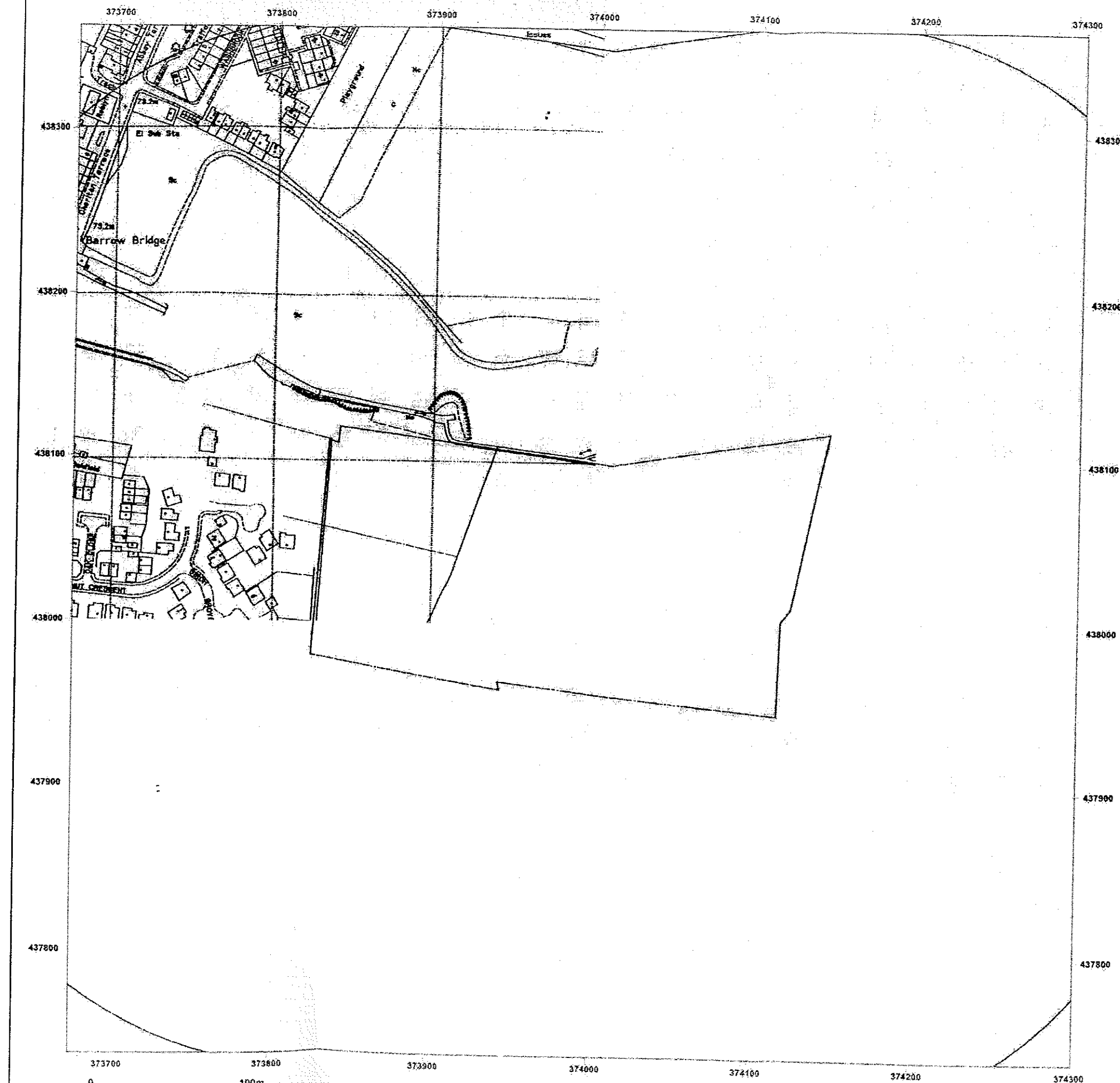


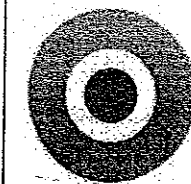
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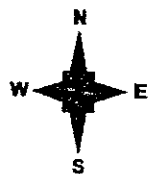
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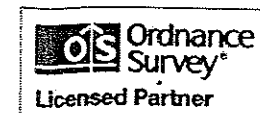
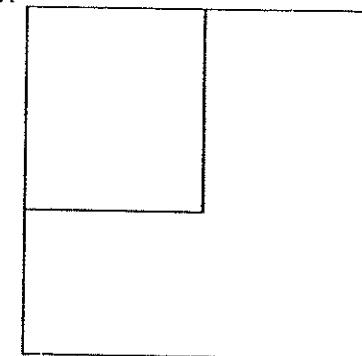
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Site Details:

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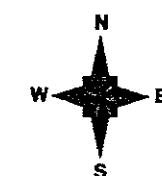
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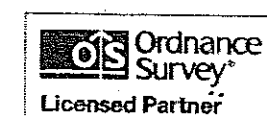
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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1962
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Levelled 1962

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Copyright N/A
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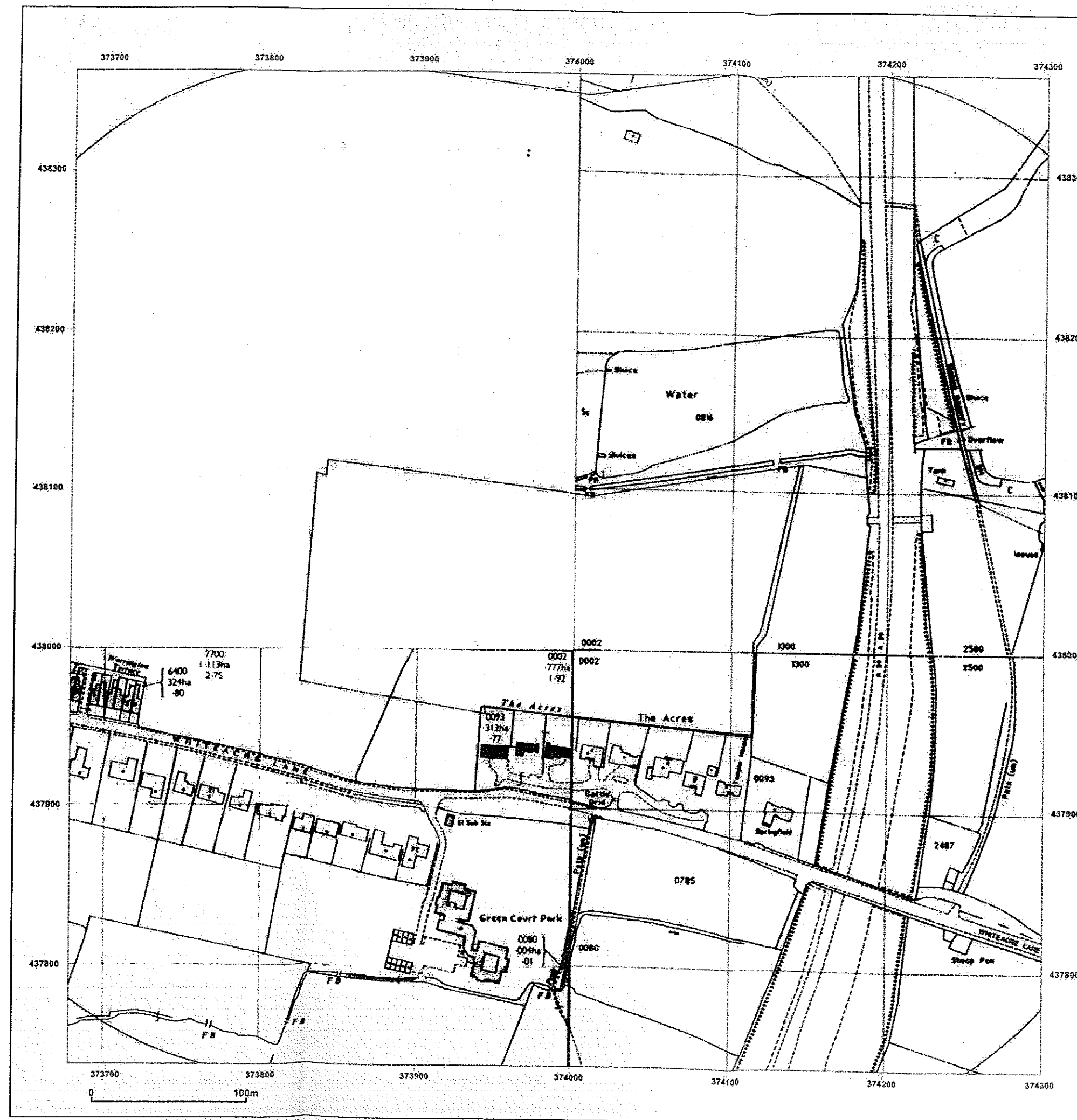


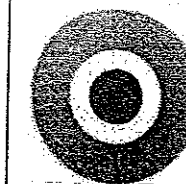
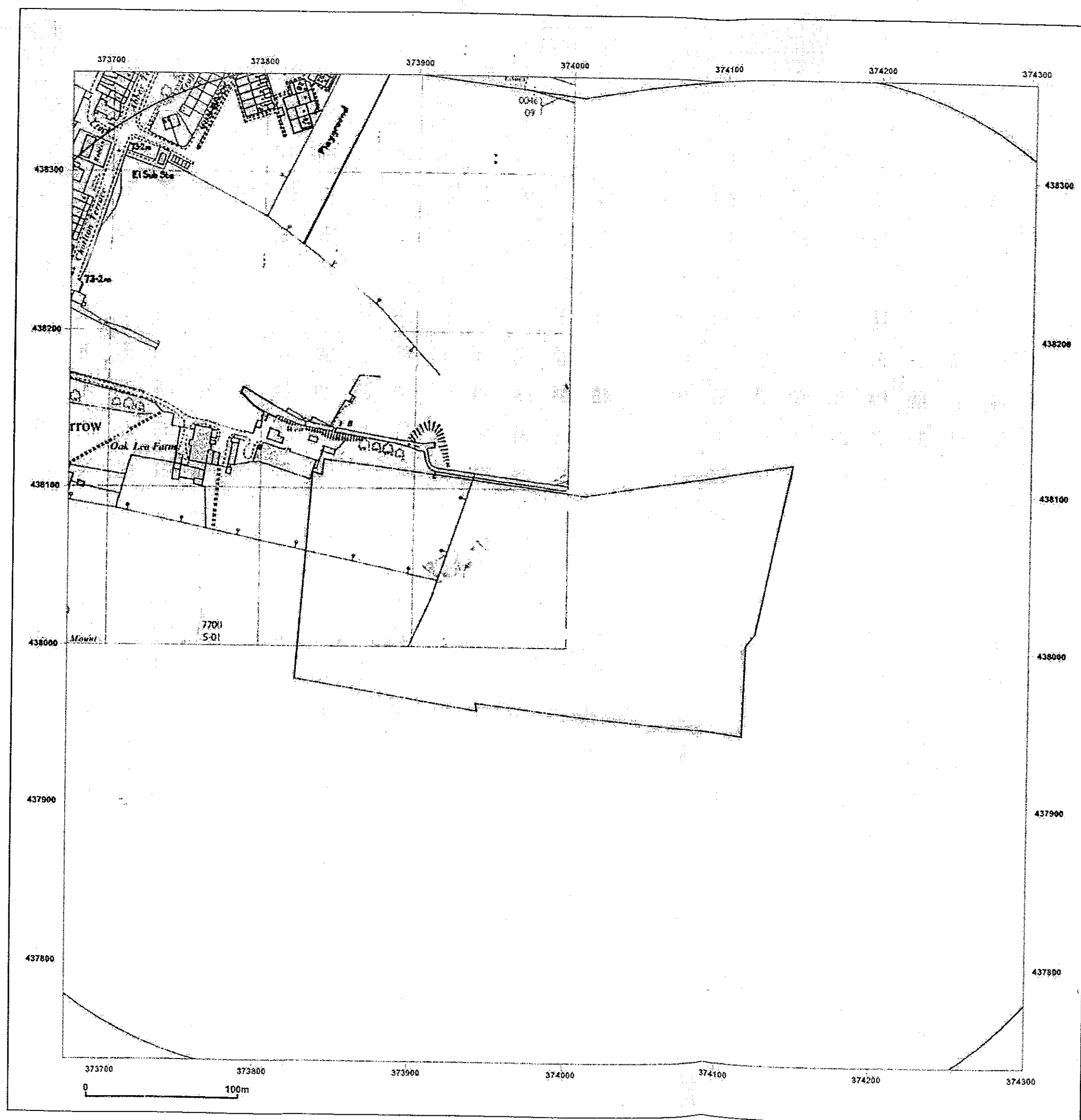
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BB7 9WF

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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

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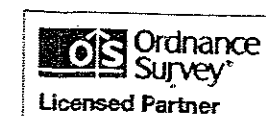
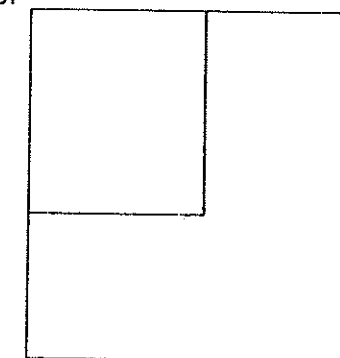
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Printed at: 1:2,500



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Edition N/A
Copyright 1983
Levelled 1961



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BB7 9WF

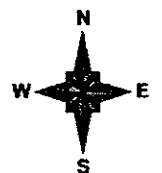
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Map date: 1972-1977

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1972
Revised 1972
Edition N/A
Copyright 1973
Levelled 1962

Surveyed 1966
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1977
Revised 1977
Edition N/A
Copyright 1978
Levelled 1962

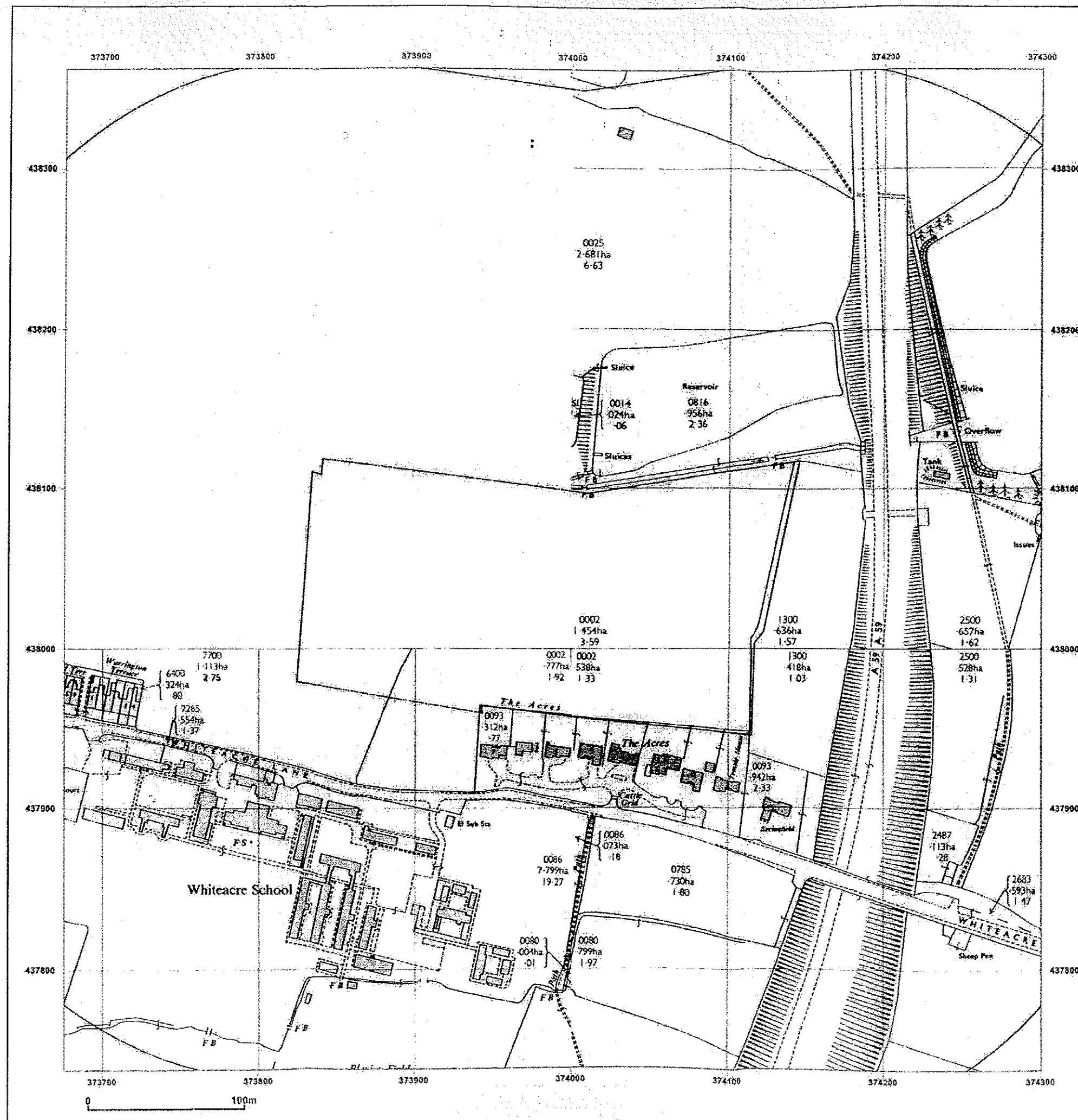


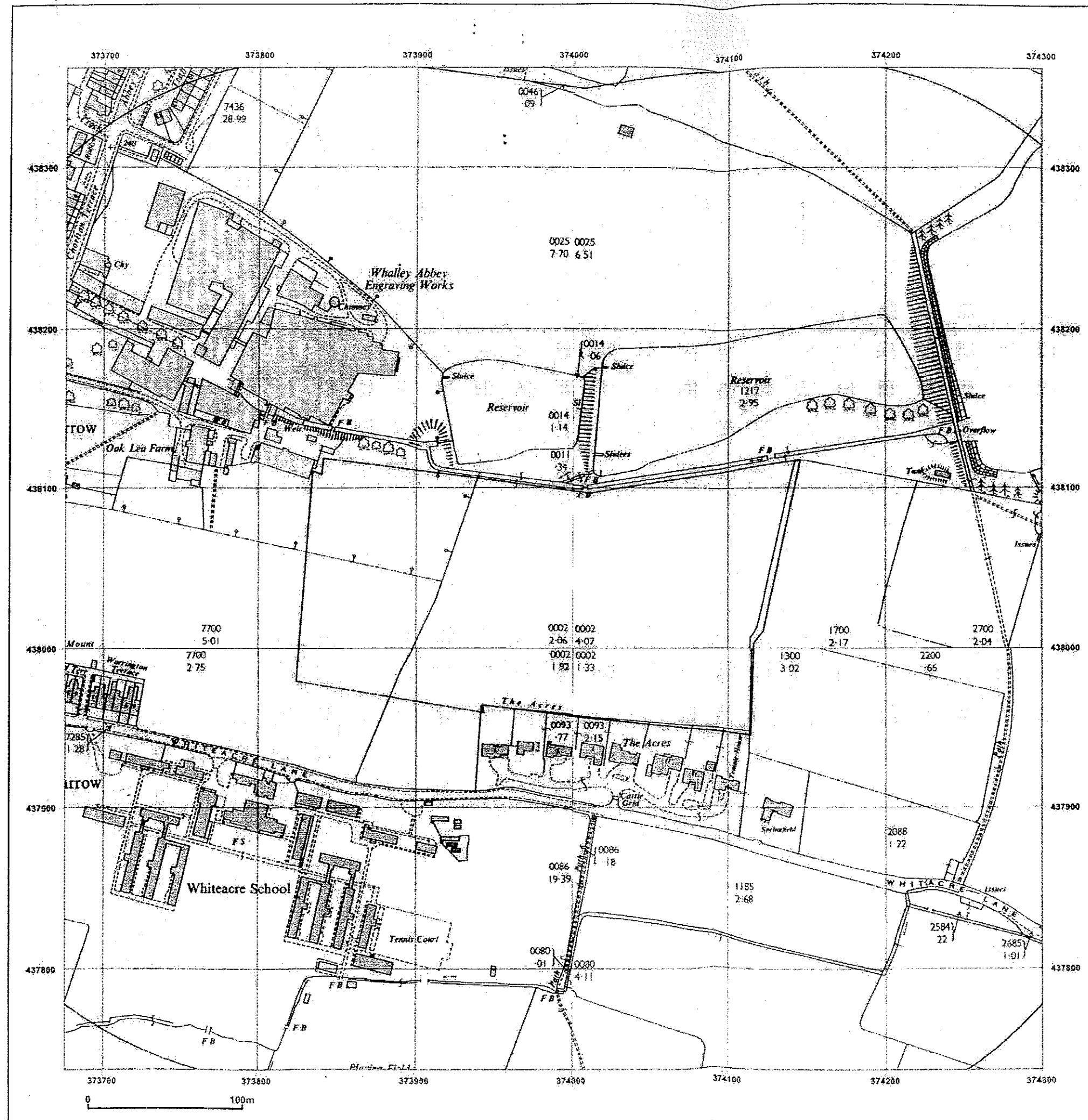
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Client Ref: D1530-2
Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: National Grid

Map date: 1966-1967

Scale: 1:2,500

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Surveyed 1966
Revised 1966
Edition N/A
Copyright 1967
Levelled 1961

Surveyed 1966
Revised 1966
Edition N/A
Copyright 1967
Levelled 1962

Surveyed 1966
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Copyright N/A
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1969
Levelled 1962

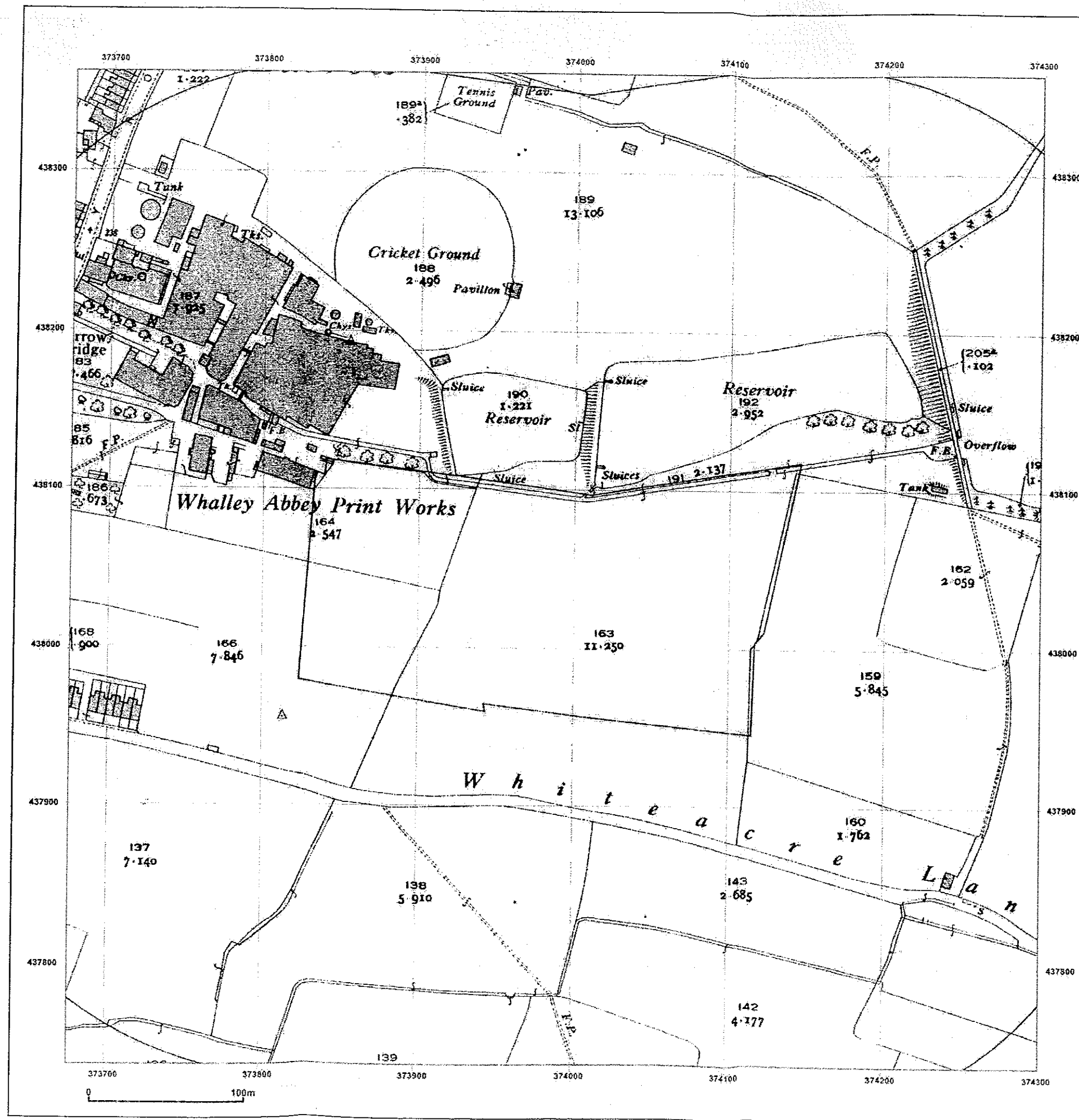


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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

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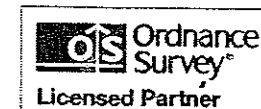
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Edition NA
Copyright NA
Levelled NA

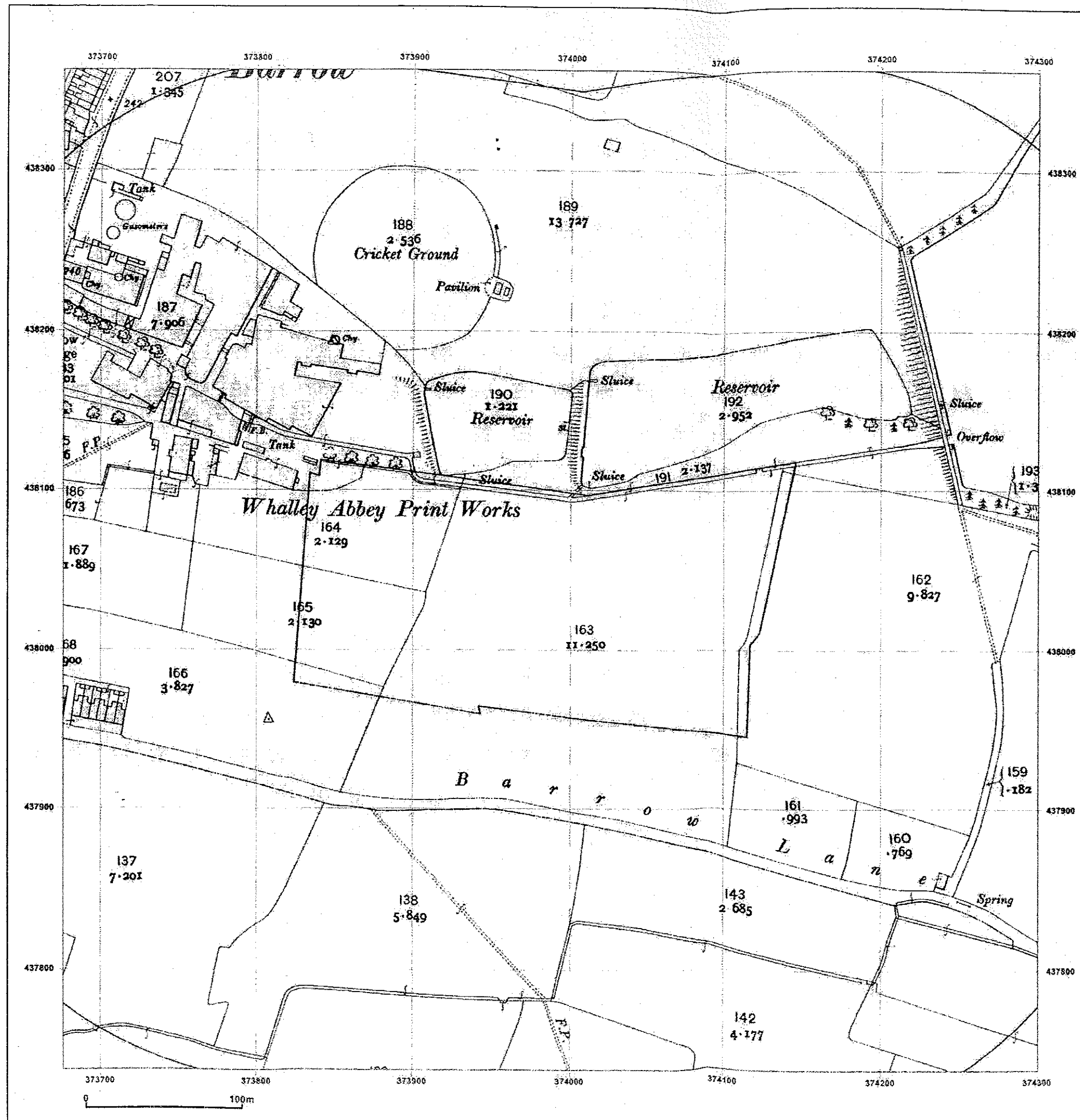


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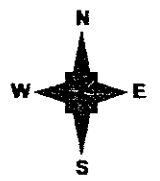
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Report Ref: HMD-336-225272
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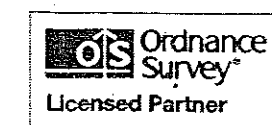
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Surveyed 1912
Revised 1912
Edition NA
Copyright NA
Levelled NA

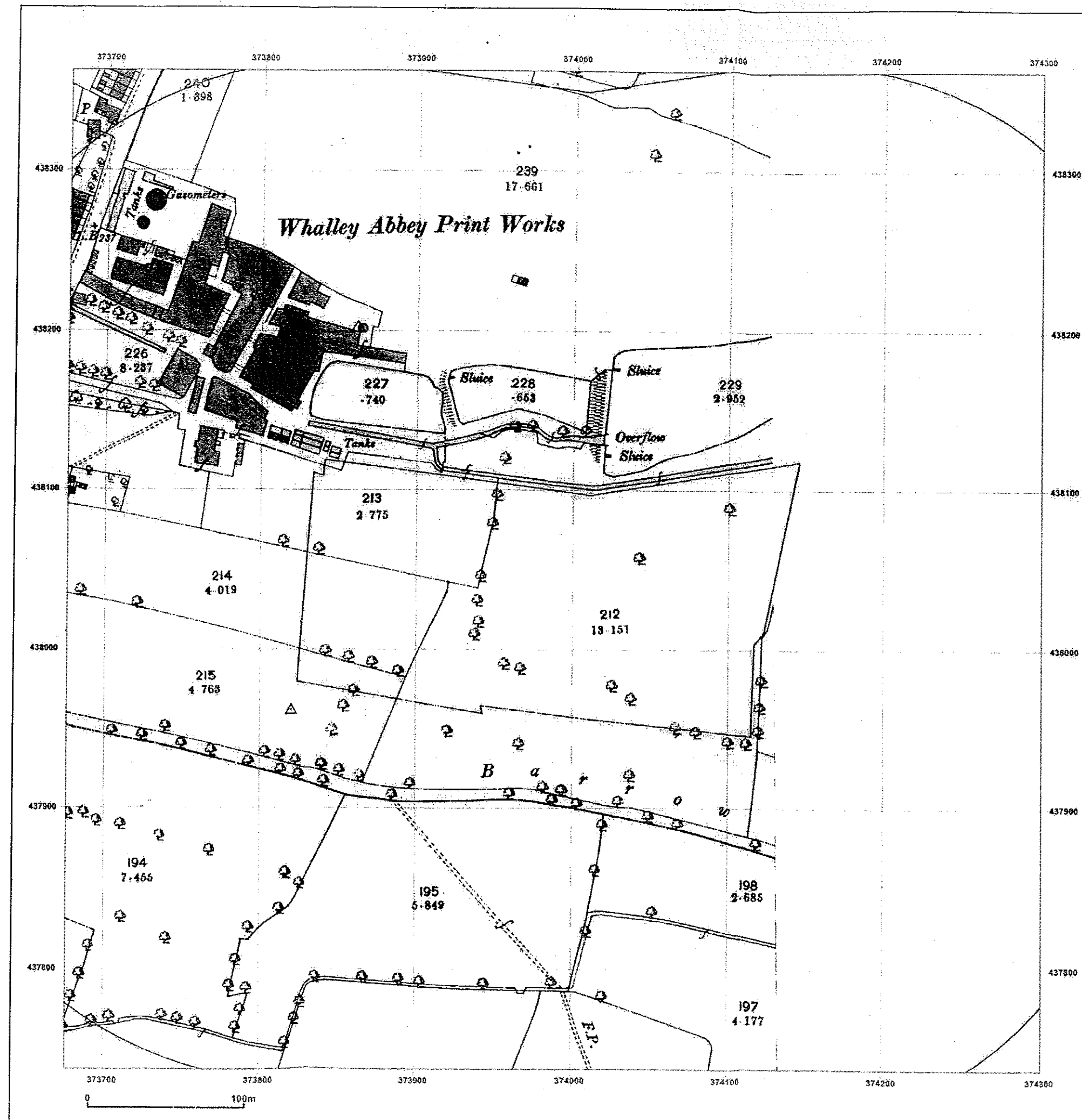


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BB7 9WF

Client Ref: D1530-2
Report Ref: HMD-336-225272
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Map Name: County Series

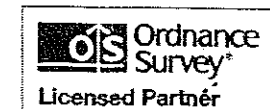
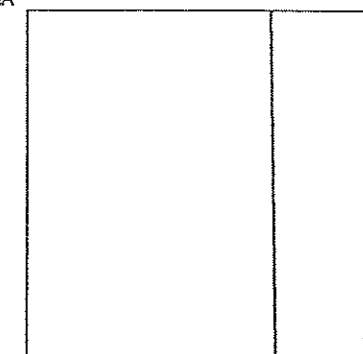
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Copyright NA
Levelled NA

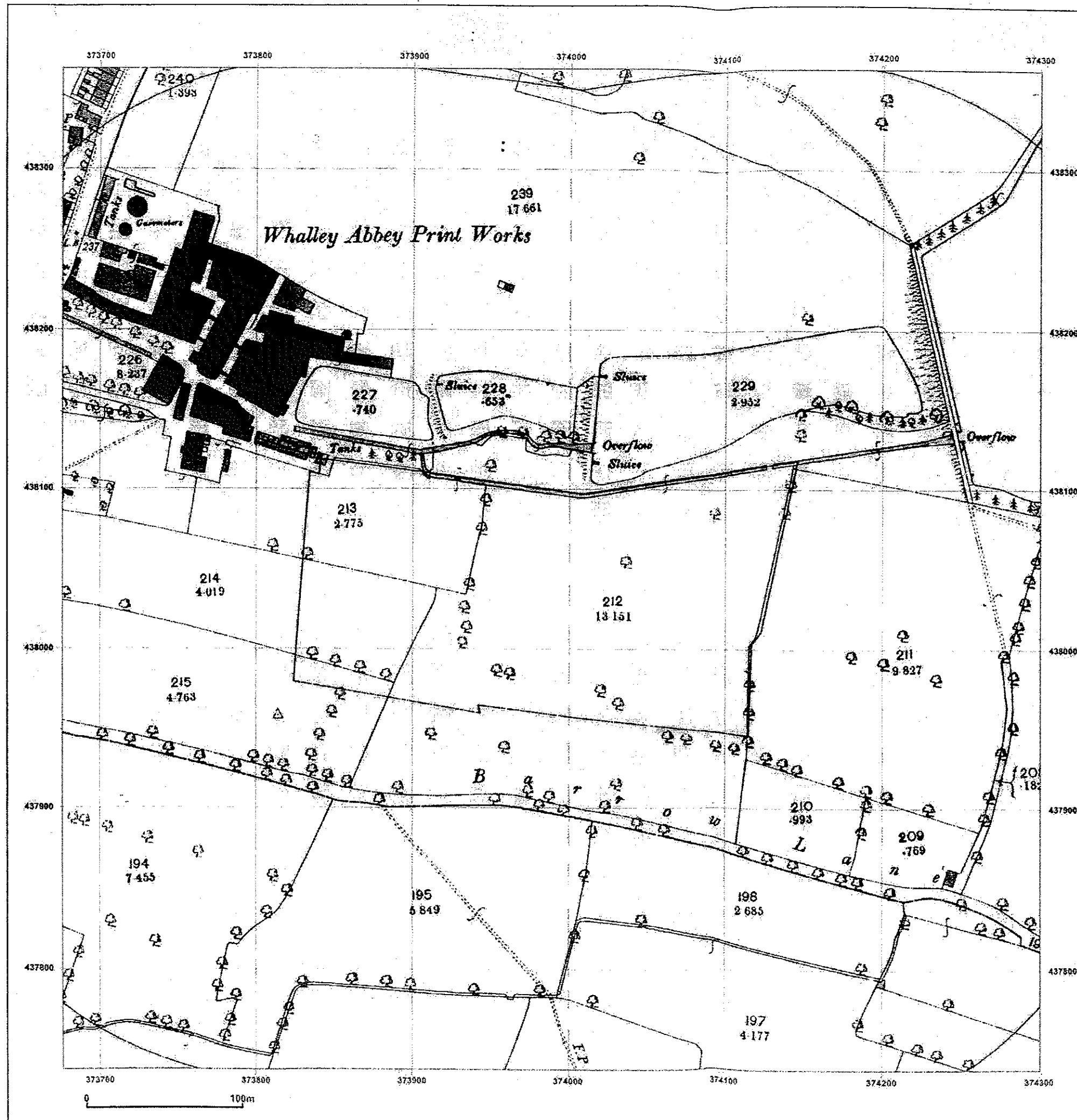


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Site Details:

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BB7 9WF

Client Ref: D1530-2
Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: County Series

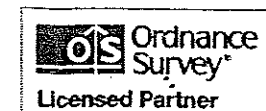
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Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1892
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Edition NA
Copyright NA
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Site Details:

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BB7 9WF

Client Ref: D1530-2
Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: National Grid

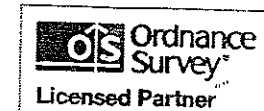
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2011

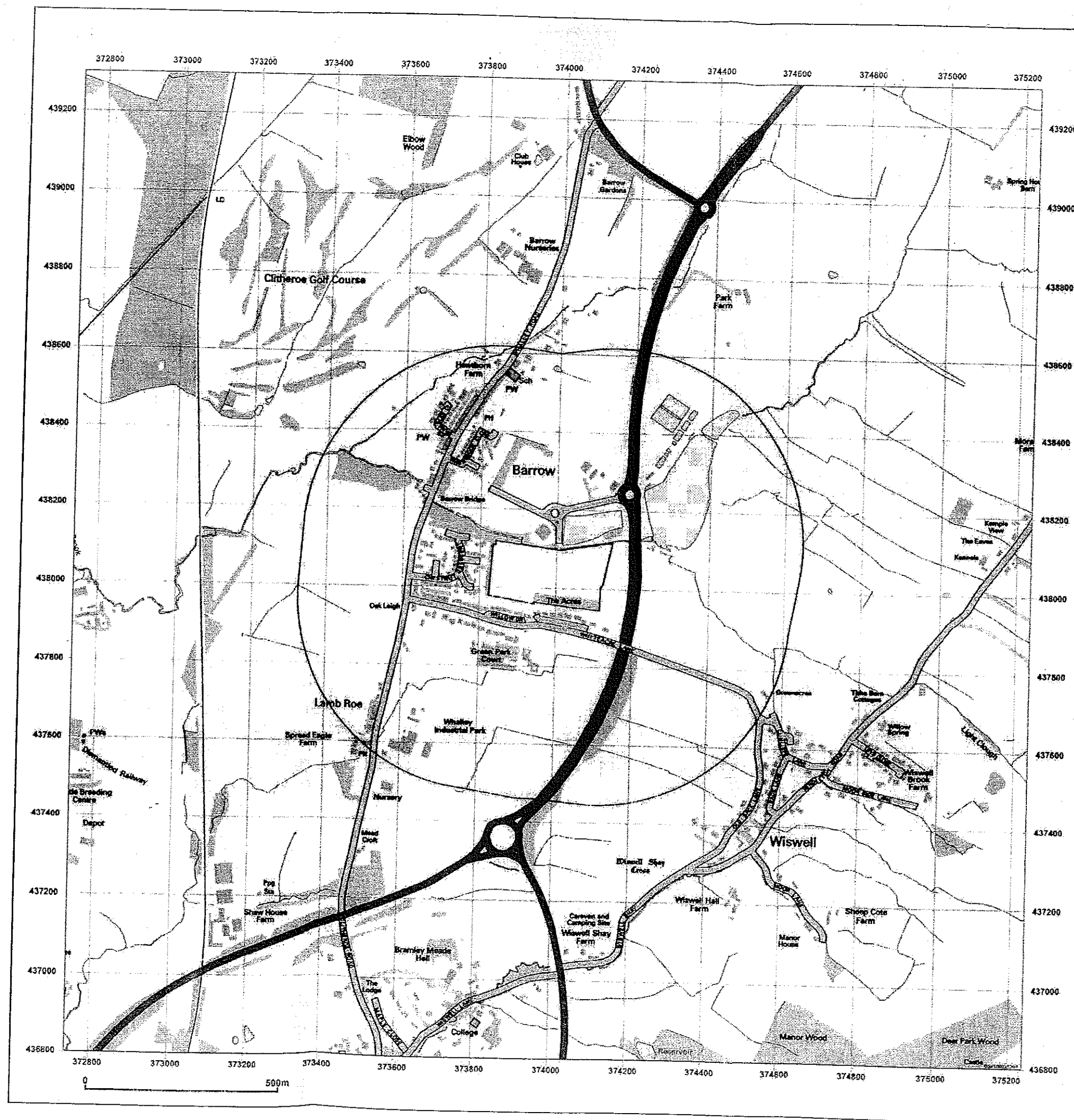


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BB7 9WF

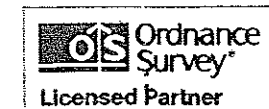
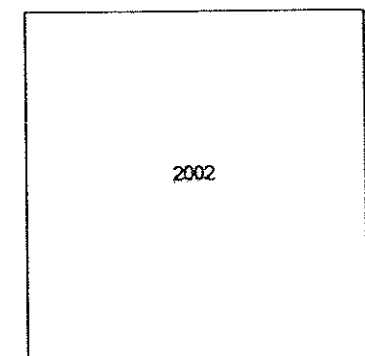
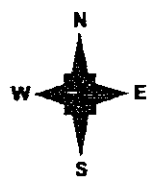
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Grid Ref: 373988, 438050

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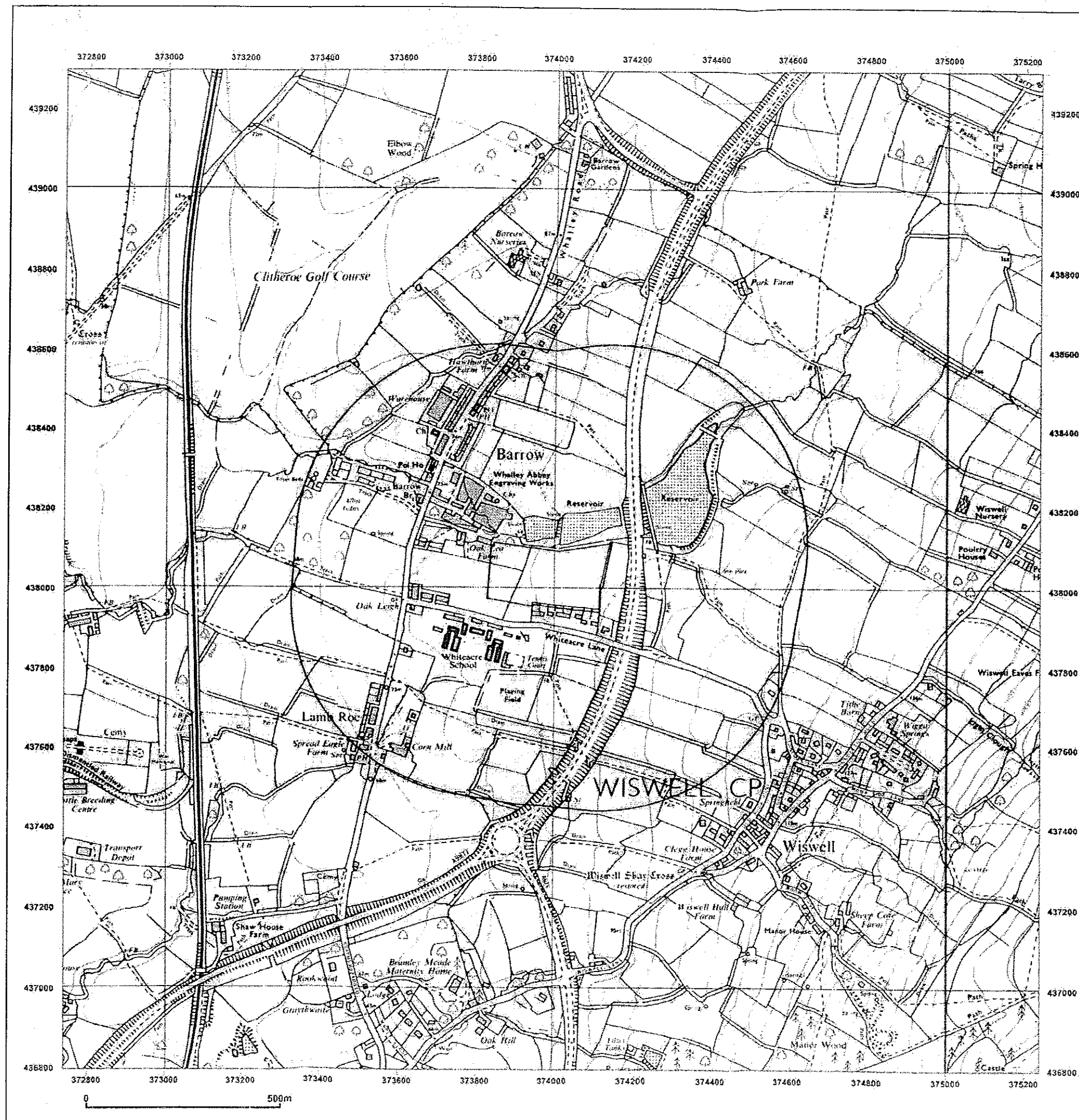


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Site Details:

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BB7 9WF

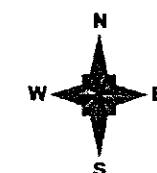
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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: National Grid

Map date: 1973

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1972
Revised 1973
Edition NA
Copyright NA
Levelled NA

Surveyed 1973
Revised 1973
Edition NA
Copyright NA
Levelled NA

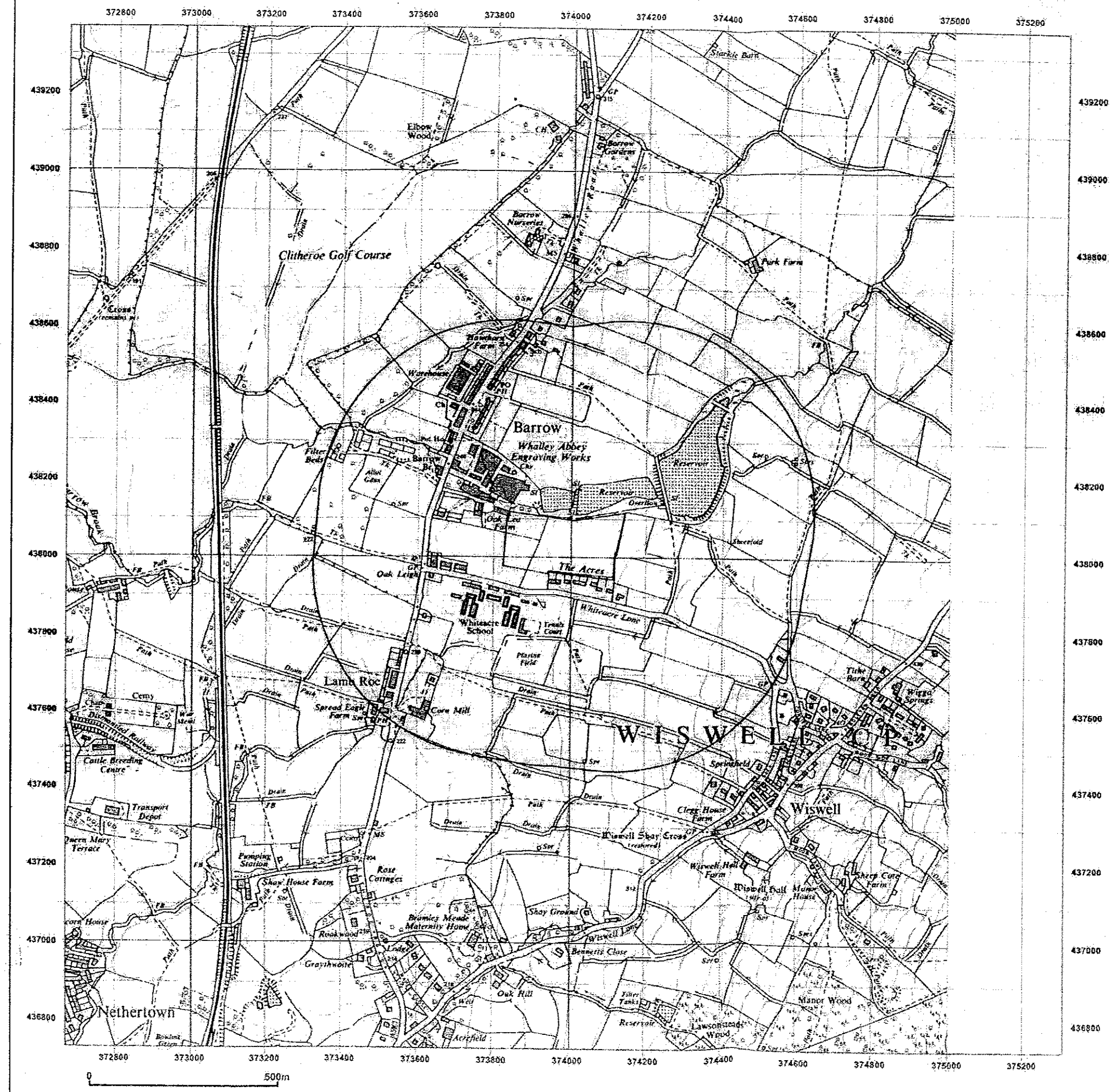


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BB7 9WF

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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: Provisional

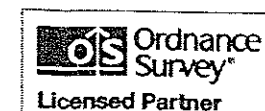
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Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1969
Revised 1969
Edition NA
Copyright NA
Levelled NA

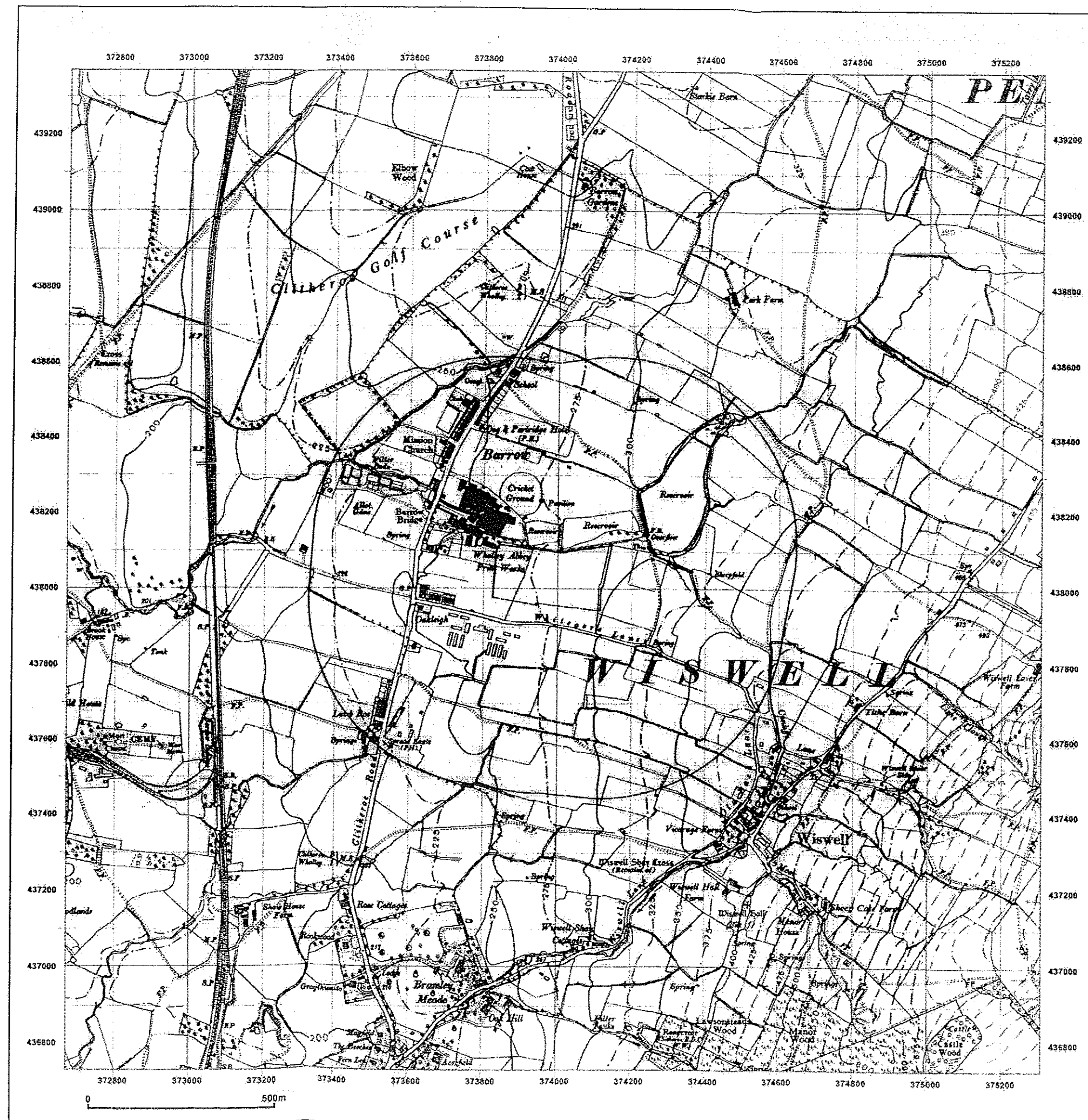


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Site Details:

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BB7 9WF

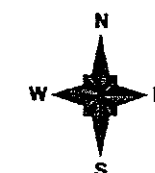
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Grid Ref: 373988, 438050

Map Name: Provisional

Map date: 1950

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1950
Revised 1950
Edition NA
Copyright NA
Levelled NA

Surveyed 1950
Revised 1950
Edition NA
Copyright NA
Levelled NA

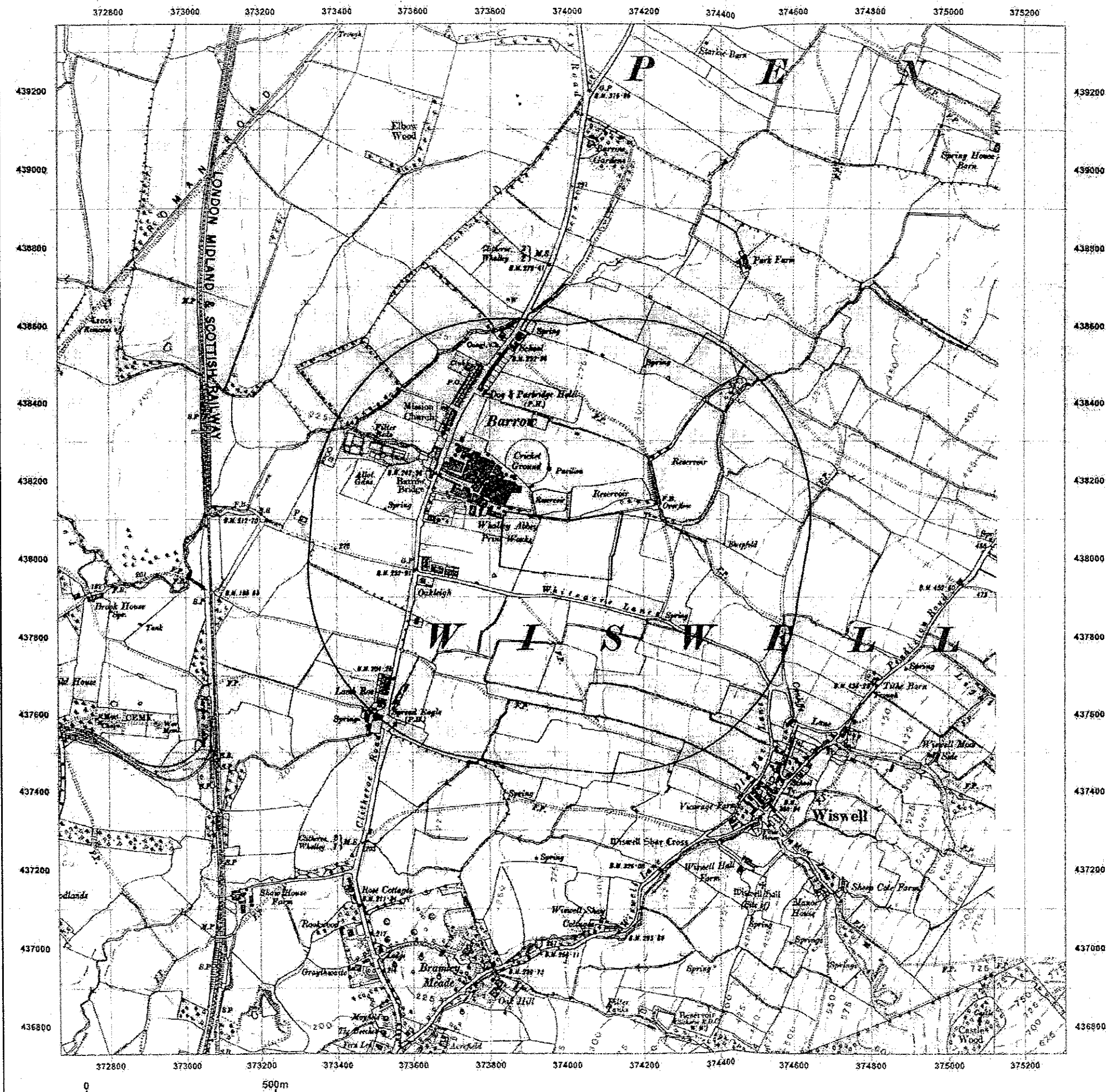


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W: www.groundsure.com

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Production date: 22 December 2011

To view map legend click here [Legend](#)



Site Details:

Site 2, RIBBLE VALLEY
ENTERPRISE PARK, HOLM
ROAD, BARROW, CLITHEROE,
BB7 9WF

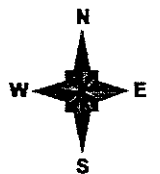
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Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: County Series

Map date: 1929-1933

Scale: 1:10,560

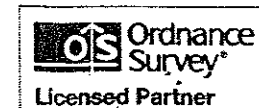
Printed at: 1:10,560



Surveyed 1844
Revised 1932
Edition NA
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Levelled NA

Surveyed 1844
Revised 1933
Edition NA
Copyright NA
Levelled NA

Surveyed 1844
Revised 1929
Edition NA
Copyright NA
Levelled NA



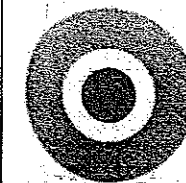
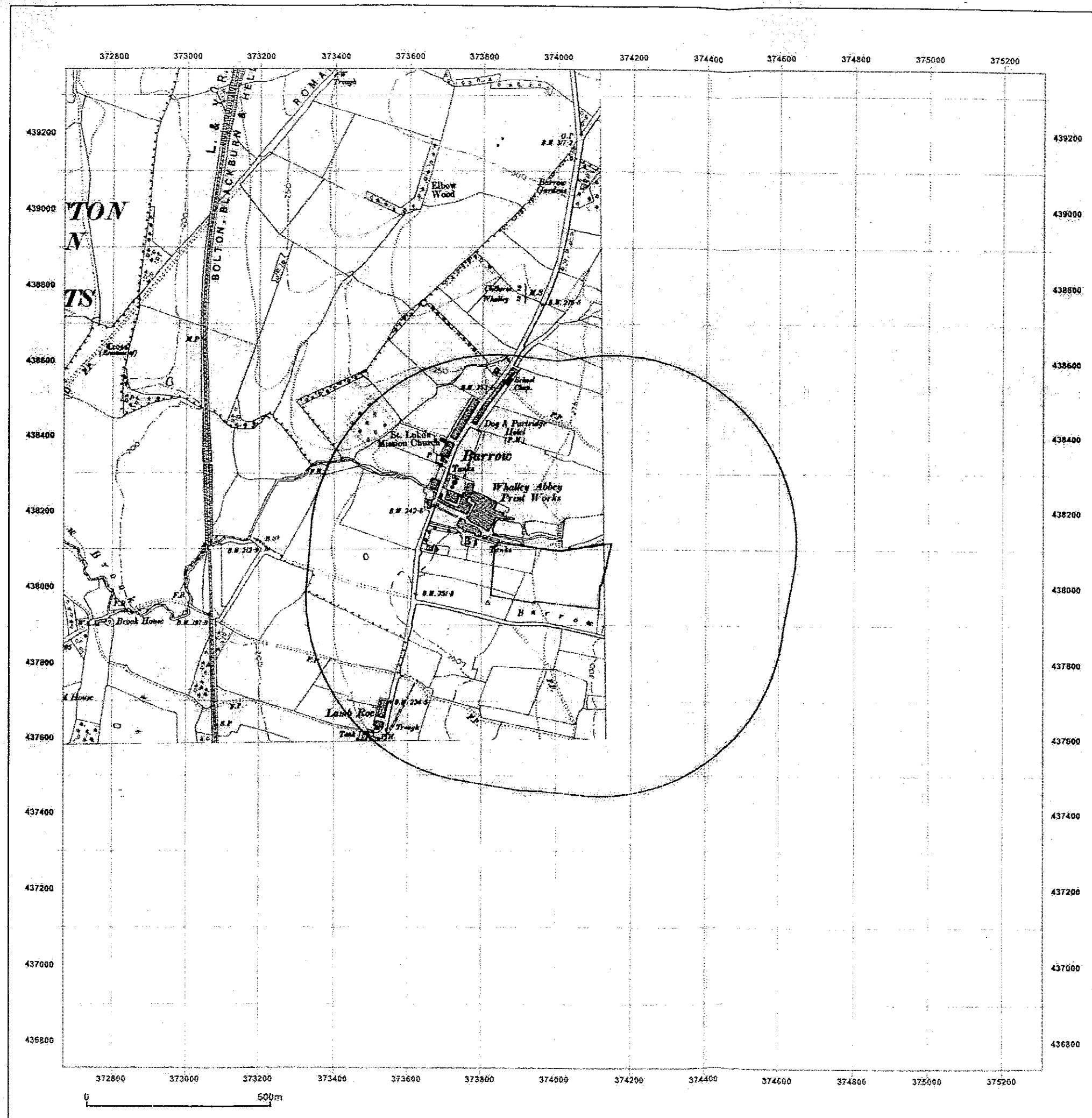
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Production date: 22 December 2011

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GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

Site 2, RIBBLE VALLEY
ENTERPRISE PARK, HOLM
ROAD, BARROW, CLITHEROE,
BB7 9WF

Client Ref: D1530-2
Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: County Series

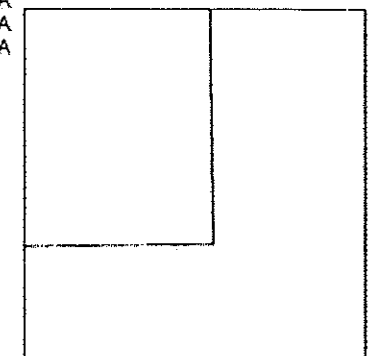
Map date: 1911

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1911
Edition NA
Copyright NA
Levelled NA

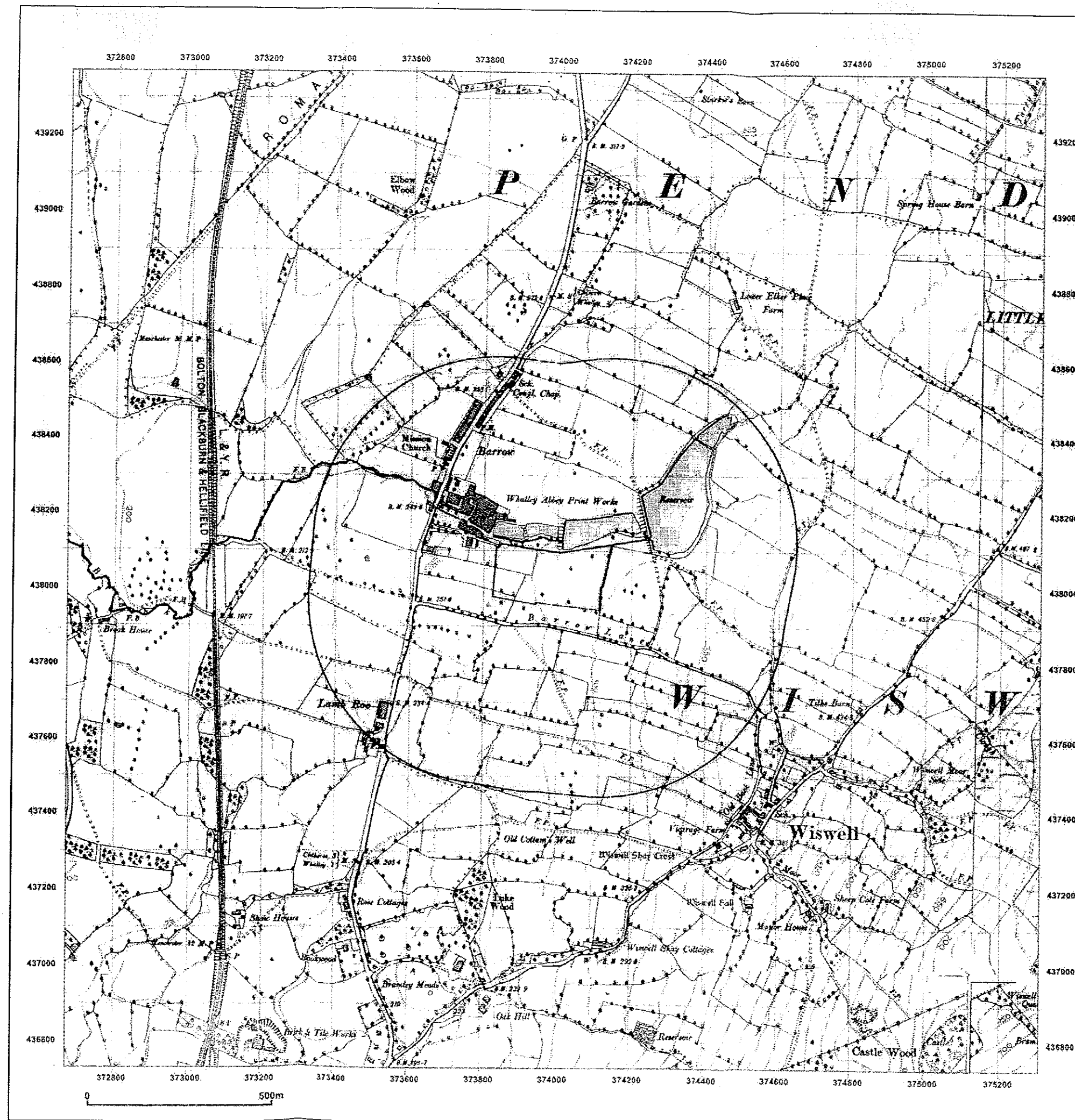


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Production date: 22 December 2011

To view map legend click here [Legend](#)



Site Details:

Site 2, RIBBLE VALLEY
ENTERPRISE PARK, HOLM
ROAD, BARROW, CLITHEROE,
BB7 9WF

Client Ref: D1530-2
Report Ref: HMD-336-225272
Grid Ref: 373988, 438050

Map Name: County Series

Map date: 1892

Scale: 1:10,560

Printed at: 1:10,560

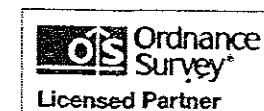


Surveyed 1892
Revised 1892
Edition NA
Copyright NA
Levelled NA

Surveyed 1892
Revised 1892
Edition NA
Copyright NA
Levelled NA

Surveyed 1892
Revised 1892
Edition NA
Copyright NA
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Revised 1892
Edition NA
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To view map legend click here [Legend](#)

Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDIX B GROUNDSURE REPORT-ENVIROINSIGHT



GroundSure
ENVIRONMENTAL INSIGHT

PSA Design
The Old Bank House,
Preston, PR33JA

GroundSure Reference:	HMD-336-225273
Your Reference:	D1530-2
Report Date:	Dec 22, 2011
Report Delivery Method:	xml
Client Email:	john.birtwhistle@psadesign.co.uk

GroundSure EnviroInsight

Address: Site 2, RIBBLE VALLEY ENTERPRISE PARK, HOLM ROAD, BARROW, CLITHEROE, BB7 9WF

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the GroundSure EnviroInsight as requested

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
GroundSure EnviroInsight

GroundSure EnviroInsight

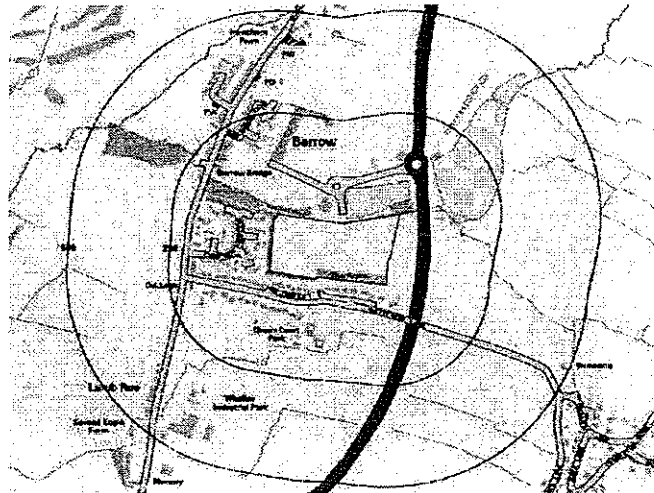
Address: Site 2, RIBBLE VALLEY ENTERPRISE PARK, HOLM ROAD, BARROW, CLITHEROE, BB7
9WF

Date: Dec 22, 2011

GroundSure Reference: HMD-336-225273

Your Reference: D1530-2

Client: PSA Design



Brought to you by GroundSure

Aerial Photograph of Study Site



Site Name: Site 2, RIBBLE VALLEY ENTERPRISE PARK,
HOLM ROAD, BARROW, CLITHEROE, BB7 9WF
Grid Reference: 373888,438170
Size of Site: 4.39 ha

Aerial photography supplied by Getmapping PLC.
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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary					
----------------	---	--	--	--	--	--

1. Environmental Permits, Incidents and Registers	on-site	0-50	51-250	251-500	501-1000	1000-1500
---	---------	------	--------	---------	----------	-----------

1.1 Industrial Sites Holding Environmental Permits and/or Authorisations

Records of historic IPC Authorisations	0	0	0	0	-	-
Records of Part A(1) and IPPC Authorised Activities	0	0	0	0	-	-
Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0	-	-
Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0	-	-
Records of List 1 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of List 2 Dangerous Substances Inventory sites	0	0	0	0	-	-
Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0	-	-
Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0	-	-
Records of Licensed Discharge Consents	0	0	4	0	-	-
Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0	-	-

1.2 Records of COMAH and NIHHS sites

0	0	0	0	-	-
---	---	---	---	---	---

1.3 Environment Agency Recorded Pollution Incidents

National Incidents Recording System, List 2	0	0	0	-	-	-
National Incidents Recording System, List 1	0	0	0	-	-	-

1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990

0	0	0	0	-	-
---	---	---	---	---	---

2. Landfill and Other Waste Sites	on-site	0-50	51-250	251-500	501-1000	1000-1500
-----------------------------------	---------	------	--------	---------	----------	-----------

2.1 Landfill Sites

Environment Agency Registered Landfill Sites	0	0	0	0	0	-
Landfill Data - Operational Landfill Sites	0	0	0	0	0	-
Environment Agency Historic Landfill Sites	0	1	0	0	0	2
Landfill Data - Non-Operational Landfill Sites	0	0	0	0	0	-
BGS/DoE Landfill Site Survey	0	0	0	0	0	0
GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0

2.2 Landfill and Other Waste Sites Findings

Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	-	-
Environment Agency Licensed Waste Sites	0	0	0	0	0	0

3. Current Land Uses	on-site	0-50	51-250	251-500	501-1000	1000-1500
3.1 Current Industrial Sites Data	0	1	7	-	-	-
3.2 Records of Petrol and Fuel Sites	0	0	1	1	-	-
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0	-	-

4. Geology	Description
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? *	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site? *	Yes
4.3 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	

Source: Scale: 1:50,000 BGS Sheet 068

* This includes an automatically generated 50m buffer zone around the site.

5. Hydrogeology and Hydrology	on-site	0-50	51-250	251-500	501-1000	1001-2000
5.1 Are there any records of Productive Strata in the Superficial Geology within 500m of the study site?				Yes		
5.2 Are there any records of Productive Strata in the Bedrock Geology within 500m of the study site?				Yes		
5.3 Groundwater Abstraction Licences (within 1000m of the study site).	0	0	1	0	0	-
5.4 Surface Water Abstraction Licences (within 1000m of the study site)	0	0	2	0	6	-
5.5 Potable Water Abstraction Licences (within 2000m of the study site).	0	0	0	0	2	3
5.6 Are there any Source Protection Zones within 500m of the study site?				No		
5.7 River Quality						
Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
5.8 Detailed River Network entries within 500m of the site	0	1	9	21	-	-
5.9 Surface water features within 250m of the study site	Yes	Yes	Yes	-	-	-

6. Flooding	
6.1 Are there any Environment Agency indicative Zone 2 floodplains within 250m of the study site?	No
6.2 Are there any Environment Agency indicative Zone 3 floodplains within 250m of the study site?	No
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Very High
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

7. Designated Environmentally Sensitive Sites	on-site	0-50	51-250	251-500	501-1000	1001-1500
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	-	-
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	-	-

7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	-	-
7.3 Records of Local Nature Reserves (LNR)	0	0	0	0	-	-
7.4 Records of Special Areas of Conservation (SAC)	0	0	0	0	-	-
7.5 Records of Special Protection Areas (SPA)	0	0	0	0	-	-
7.6 Records of Ramsar sites	0	0	0	0	-	-
7.7 Records of World Heritage Sites	0	0	0	0	-	-
7.8 Records of Environmentally Sensitive Areas	0	0	0	0	-	-
7.9 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	-	-
7.10 Records of National Parks	0	0	0	0	-	-
7.11 Records of Nitrate Sensitive Areas	0	0	0	0	-	-
7.12 Records of Nitrate Vulnerable Zones	1	0	0	0	-	-

8. Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?

Very Low

9. Mining

9.1 Are there any coal mining areas within 75m of the study site?

No

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?

Negligible

9.3 Are there any brine affected areas within 75m of the study site?

No

Using this Report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

1. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

5. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites. These searches are conducted using radii of up to 500m.

8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

9. Mining

Provides information on areas of coal and shallow mining.

10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (08444 159000) for further information and guidance.

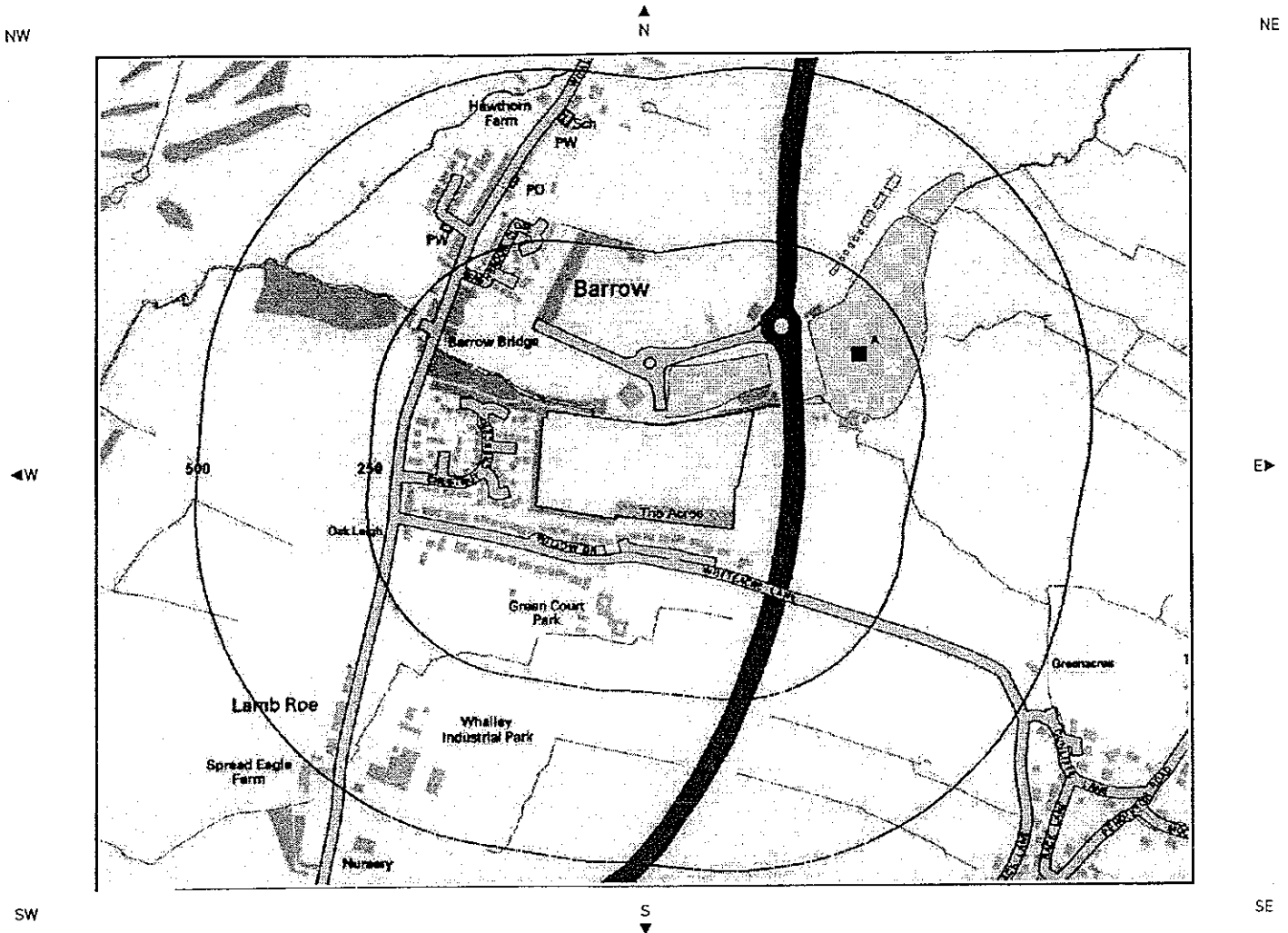
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Environmental Permits, Incidents and Registers Map



Authorisations, Incidents and Registers Legend

Enabled by **Ordnance Survey**

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- | | | |
|--------------------|---------------------------------|--|
| Site Outline | ★ Recorded Pollution Incident | ▼ RAS 3 & 4 Authorisations |
| Search Buffers (m) | ◆ Dangerous Substances (List 1) | ▲ Part A(1) Authorised Processes and Historic IPC Authorisations |
| 250
500 | ◇ Dangerous Substances (List 2) | △ Part A(2) and Part B Authorised Processes |
| | ▣ Water Industry Referrals | ⬢ COMAH / NIHHS Sites |
| | ■ Licenced Discharge Consents | ⬢ Sites Determined as Contaminated Land |
| | ▤ Red List Discharge Consents | ⬢ Hazardous Substance Consents and Enforcements |

1. Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

Records of historic IPC Authorisations within 500m of the study site: 0

Database searched and no data found.

Records of Part A(1) and IPPC Authorised Activities within 500m of the study site: 0

Database searched and no data found.

Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 0

Database searched and no data found.

Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: 0

Database searched and no data found.

Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: 0

Database searched and no data found.

Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: 0

Database searched and no data found.

Records of Category 3 or 4 Radioactive Substance Licences within 500m of the study site: 0

Database searched and no data found.

Records of Licensed Discharge Consents within 500m of the study site: 4

Report Reference: HMD-336-225273

The following Licensed Discharge Consents records are represented as points on the Authorisations, Incidents and Registers map:

ID	Distance	Direction	NGR	Details	
1A	174.0	NE	374300, 438200	Address: Whalley Trout Fishery, A59 By Pass, Barrow, Blackburn, Lancashire Effluent Type: Trade Discharges - Process Effluent - Not Water Company Permit Number: 017190396 Permit Version: 1	Receiving Water: Barrow Brook Status: Revoked - Unspecified Issue date: - Effective Date: 10/6/1991 Revocation Date: 31/3/1993
2A	174.0	NE	374300, 438200	Address: Whalley Trout Fishery, A59 By Pass, Barrow, Blackburn, Lancashire Effluent Type: Trade Discharges - Process Effluent - Not Water Company Permit Number: 017190396 Permit Version: 1	Receiving Water: Barrow Brook Status: Revoked - Unspecified Issue date: - Effective Date: 10/6/1991 Revocation Date: 31/3/1993
3A	174.0	NE	374300, 438200	Address: Whalley Trout Fishery, A59 By Pass, Barrow, Blackburn, Lancashire Effluent Type: Trade Discharges - Process Effluent - Not Water Company Permit Number: 017190396 Permit Version: 2	Receiving Water: Barrow Brook Status: Revoked - Unspecified Issue date: - Effective Date: 1/4/1993 Revocation Date: 3/8/1993
4A	174.0	NE	374300, 438200	Address: Whalley Trout Fishery, A59 By Pass, Barrow, Blackburn, Lancashire Effluent Type: Trade Discharges - Process Effluent - Not Water Company Permit Number: 017190396 Permit Version: 2	Receiving Water: Barrow Brook Status: Revoked - Unspecified Issue date: - Effective Date: 1/4/1993 Revocation Date: 3/8/1993

Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 0

Database searched and no data found.

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found

1.3 Environment Agency Recorded Pollution Incidents

Records of National Incidents Recording System, List 2 within 250m of the study site: 0

Database searched and no data found.

Records of National Incidents Recording System, List 1 within 250m of the study site: 0

Database searched and no data found.

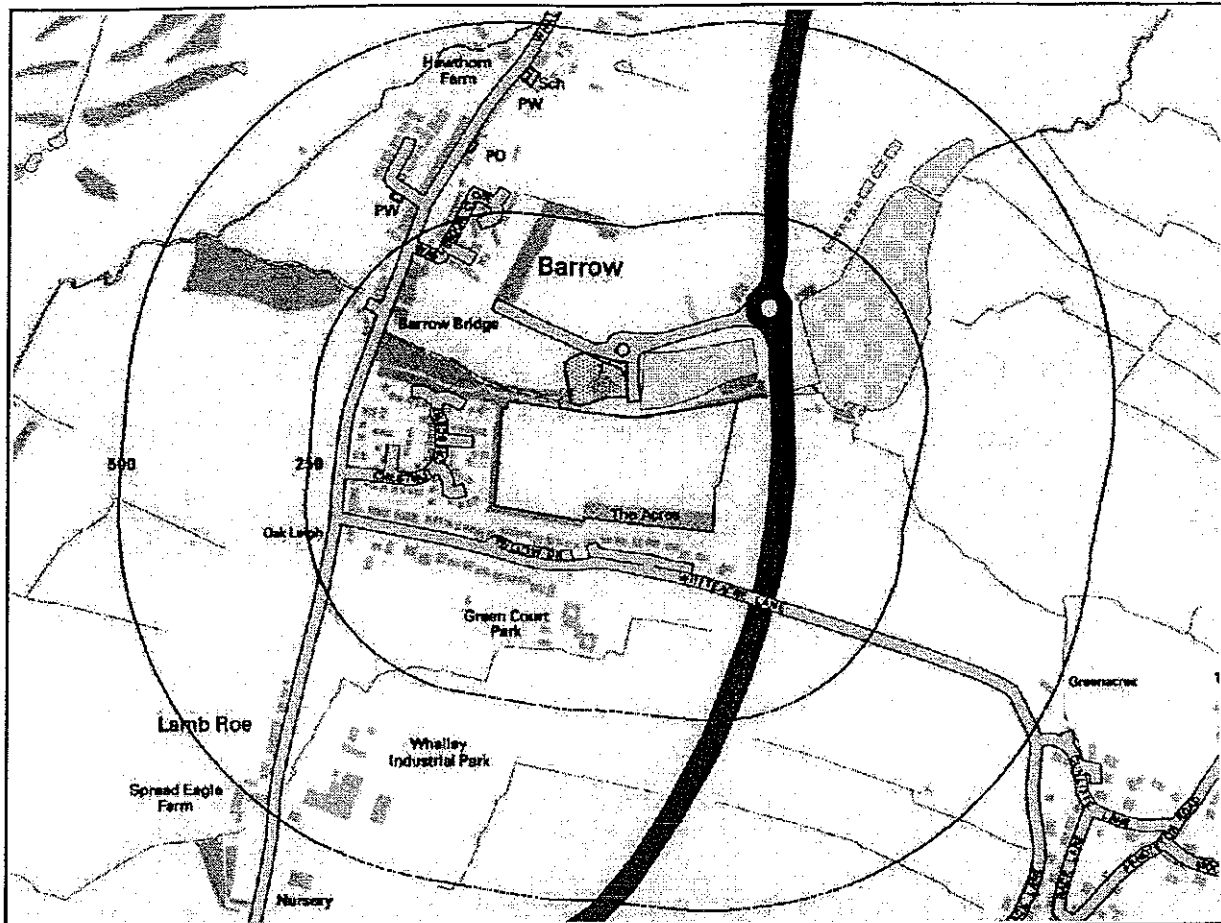
1.4 Sites Determined as Contaminated Land under Part IIA EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

Report Reference: HMD-336-225273

2. Landfill and Other Waste Sites Map



Landfill & Other Waste Sites Legend

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- | | | |
|--------------------|---------------------------------------|-------------------------------------|
| Site Outline | E.A. Active Landfill | Operational Waste Treatment Licence |
| Search Buffers (m) | E.A. Historic Landfill (Area Data) | Closed Waste Treatment Licence |
| | E.A. Historic Landfill (Point Data) | REGIS Waste Licence |
| | BGS / DoE Survey Landfill | Operational Landfill |
| | Local Authority Landfill (Area Data) | Closed Landfill |
| | Local Authority Landfill (Point Data) | |

2. Landfill and Other Waste Sites

2.1 Landfill Sites

Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

Records of operational landfill sites sourced from Landmark within 1000m of the study site:

0

Database searched and no data found.

Records of Environment Agency historic landfill sites within 1500m of the study site:

3

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance	Direction	NGR	Details	
1	8.0	N	373900, 438100	Site Address: Barrow Lake, Whalley Road, Whalley, Blackburn, Lancashire Waste Licence: - Site Reference: K1/03/043 Waste Type: Inert Regis Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1471.0	W	372300, 437500	Site Address: Calderstones Hospital A, Off Mitton Road, Whalley Moor, Blackburn, Lancashire Waste Licence: - Site Reference: K1/01/021 Waste Type: Inert, Commercial, Household Regis Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1484.0	W	372300, 437600	Site Address: Calderstones Hospital B, Off Mitton Road, Whalley Moor, Blackburn, Lancashire Waste Licence: - Site Reference: K1/03/021 Waste Type: Inert, Commercial, Household Regis Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -

Records of non-operational landfill sites sourced from Landmark within 1000m of the study site:

0

Database searched and no data found.

Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

Records of Local Authority landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.2 Other Waste Sites

Report Reference: HMD-336-225273

Records of operational waste treatment, transfer or disposal sites within 500m of the study site: 0

Database searched and no data found.

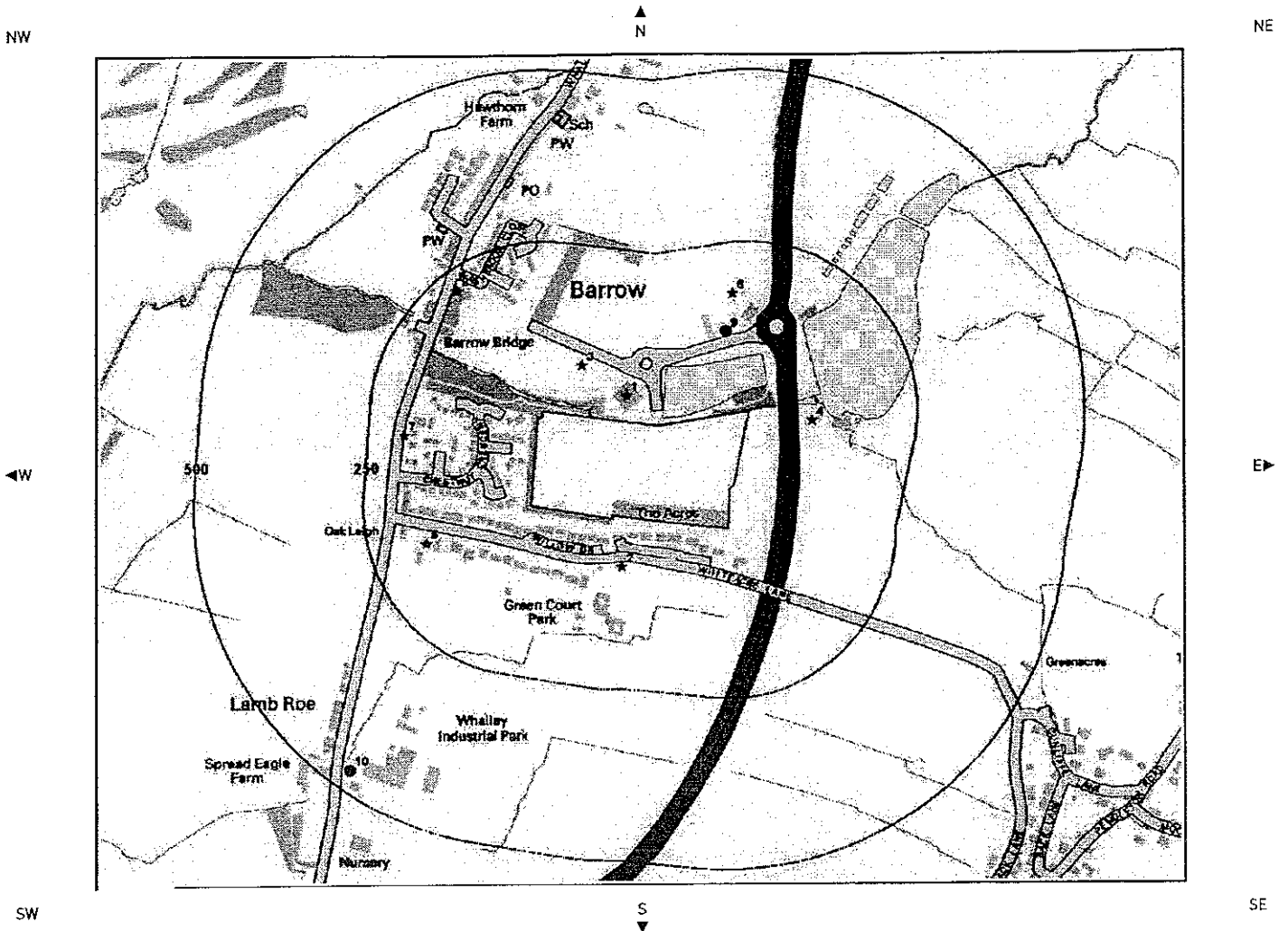
Records of non-operational waste treatment, transfer or disposal sites within 500m of the study site: 0

Database searched and no data found.

Records of Environment Agency licensed waste sites within 1500m of the study site: 0

Database searched and no data found.

3. Current Land Use Map



Current Land Use Legend

Enabled by Ordnance Survey

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- Site Outline
- Search Buffers (m)
- Current Industrial Sites
- Petrol & Fuel Sites
- Underground High Pressure Oil & Fuel Pipelines

3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

8

The following records are represented as points on the Current Land Uses map.

ID	Distance	Direction	Company	Address	Activity	Category
1	38.0	N	Whittle Eastern Europe Logistics	The Printworks Ribble Valley Enterprise Park, Hey Road, Barrow, Clitheroe, BB7 9WA	Distribution and Haulage	Transport, Storage and Delivery
2	71.0	S	Electricity Sub Station	BB7	Electrical Features	Infrastructure and Facilities
3	75.0	N	Electricity Sub Station	BB7	Electrical Features	Infrastructure and Facilities
4	95.0	E	Tank	BB7	Tanks (Generic)	Industrial Features
5	165.0	W	Channel 6 Europe Ltd	2, Whiteacre Lane, Barrow, Clitheroe, BB7 9BJ	Electronic Equipment	Industrial Products
6	176.0	N	Co-Op Clitheroe	Ribble Valley Enterprise Park, Clitheroe, Lancashire, BB7 9HW	Petrol and Fuel Stations	Road and Rail
7	198.0	W	Electricity Sub Station	BB7	Electrical Features	Infrastructure and Facilities
8	219.0	NW	Electricity Sub Station	BB7	Electrical Features	Infrastructure and Facilities

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

2

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance	Direction	NGR	Company	Address	LPG	Status
9	122.0	N	374112, 438236	Texaco	Co-op Clitheroe, Ribble Valley Enterprise Park, Ribble Valley Enterprise Park, Clitheroe, Lancashire, BB7 9HW	Yes	Open
10	470.0	SW	373554, 437595	Unbranded	Pendle Garage Fuel Station, Clitheroe Road, Clitheroe Road, Barrow, Clitheroe, Lancashire, BB7 9AQ	No	Open

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site:

0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

4.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

LEX Code	Description	Rock Type
CLHOM-MDST	CLITHEROE LIMESTONE FORMATION AND HODDER MUDSTONE FORMATION (UNDIFFERENTIATED)	MUDSTONE
BOH-LMST RKM-MDST	HODDERENSE LIMESTONE FORMATION RAD BROOK MUDSTONE MEMBER	LIMESTONE MUDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

For more detailed geological and ground stability data please refer to the "GroundSure GeoInsight". Available from our website.

5a. Hydrogeology - Aquifer Within Superficial Geology

NW

N

NE

W

E

SW

S

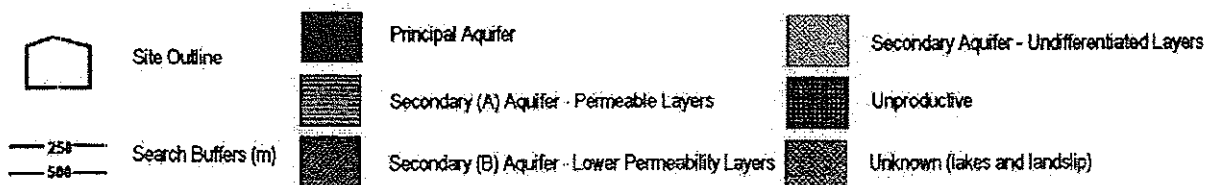
SE



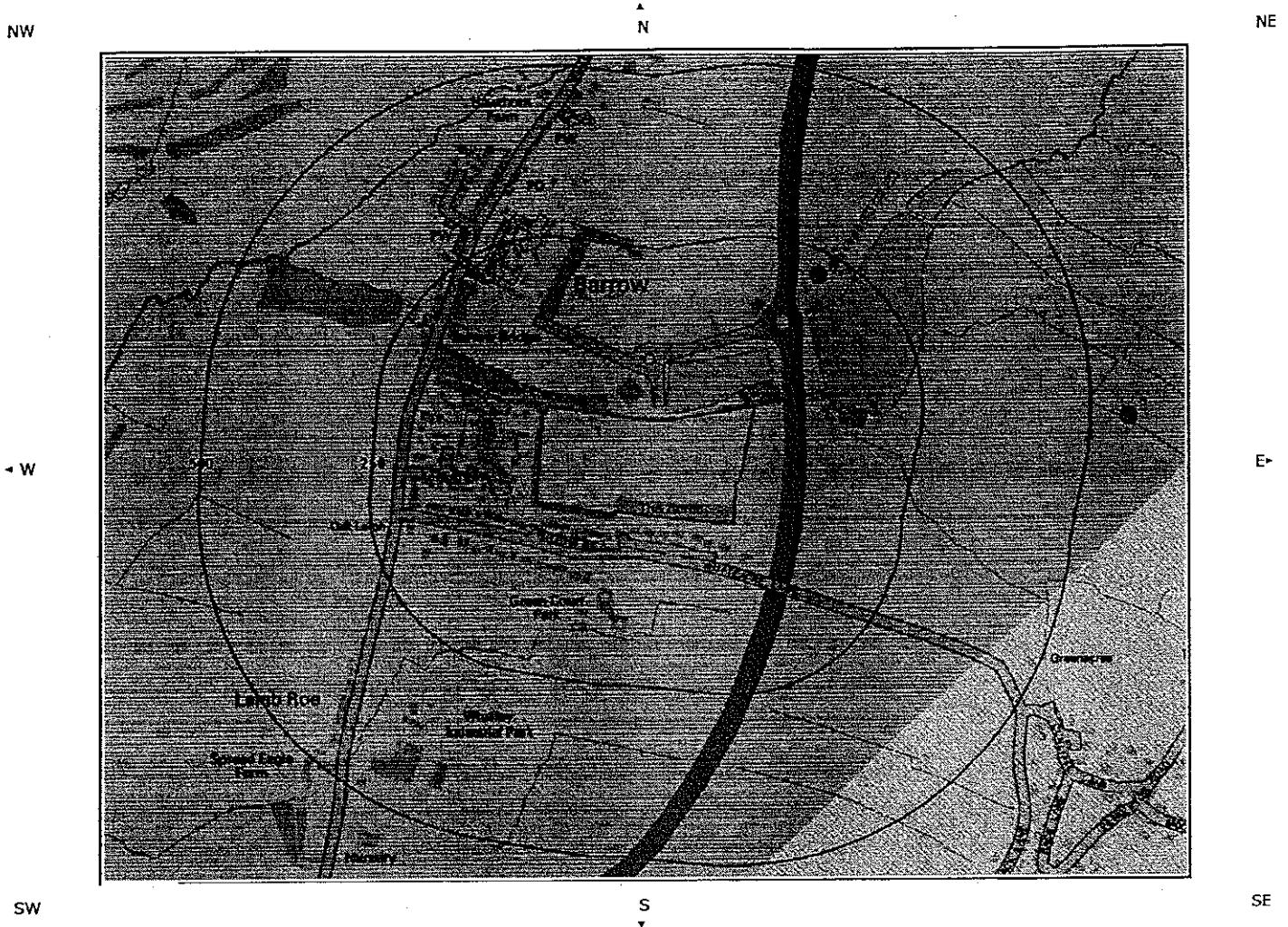
Aquifer Within Superficial Geology Legend

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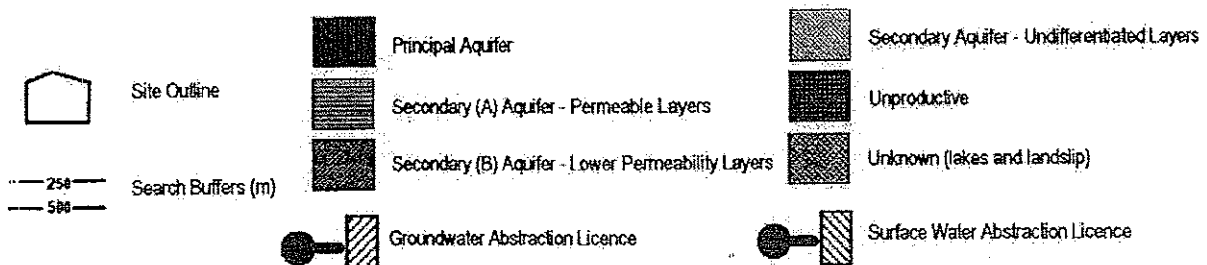
5b. Hydrogeology - Aquifer Within Bedrock Geology and Abstraction Licenses



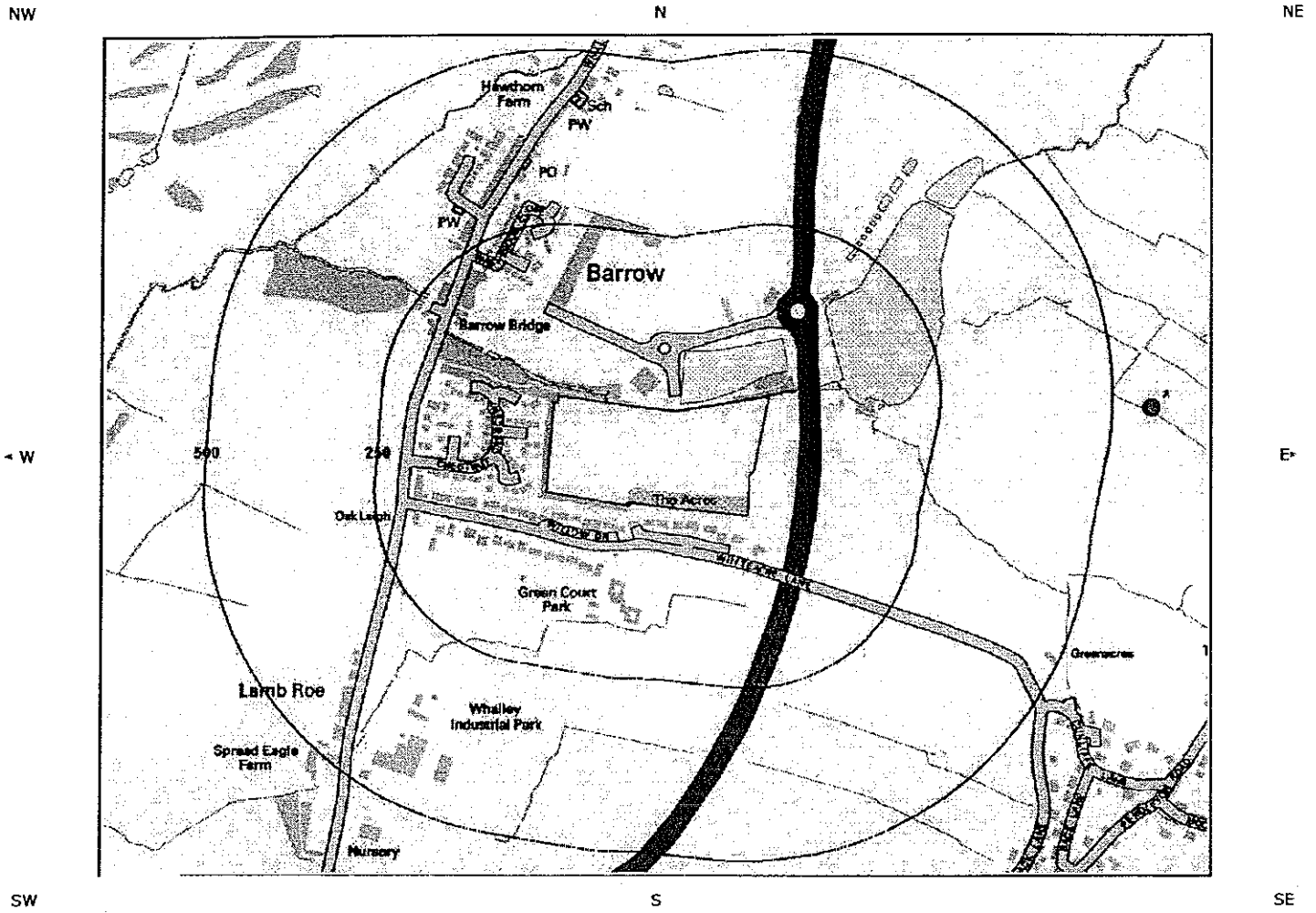
Aquifer Within Bedrock Geology Legend

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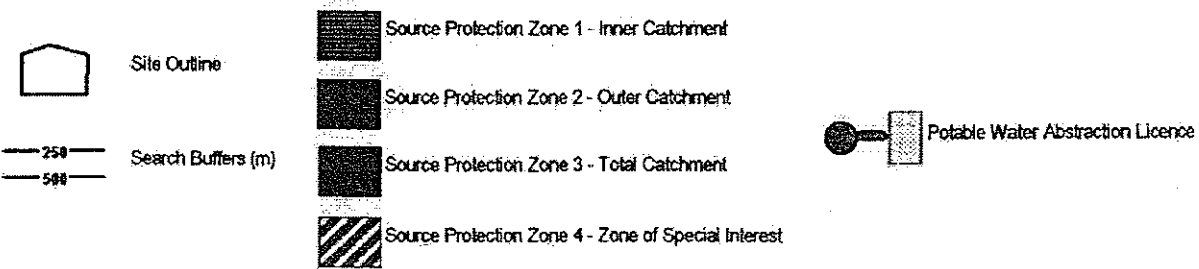
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



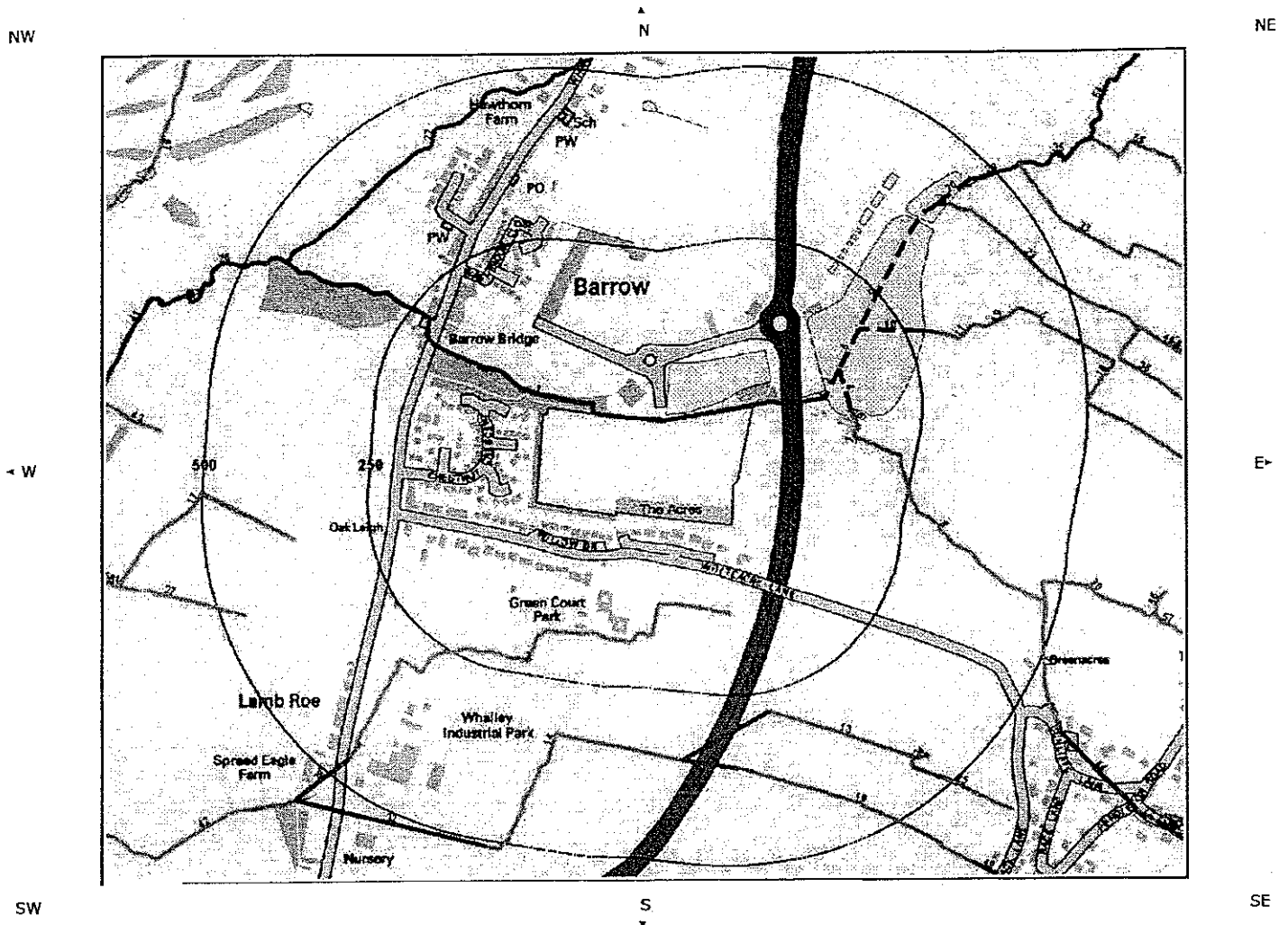
SPZ and Potable Water Abstraction Licenses
Legend

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5d. Hydrology – Detailed River Network and River Quality



Hydrology Legend

	Site Outline		Primary River		Canal
	250		Secondary River		Canal Tunnel
	500		Tertiary River		Extended Culvert (greater than 50m)
			Lake/Reservoir		D/S of High Water Mark
			Underground River (inferred)		D/S seaward extension
			General Quality Assessment: Chemistry		General Quality Assessment: Biology

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5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

Are there records of productive strata within the superficial geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (5a):

ID	Distance [m]	Direction	Designation	Description
1	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

5.2 Aquifer within Bedrock Deposits

Are there records of productive strata within the bedrock geology at or in proximity to the property? **Yes**

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance [m]	Direction	Designation	Description
1	0.0	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
3	395.0	SE	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

5.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 1000m of the study site? **Yes**

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance	Direction	NGR	Details
5	214.0	NE	374240, 438310	Licence No: 2671309052 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: Land At Pendle View Fisheries, Clitheroe Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 8732 Original Start Date: 29/6/2004 Expiry Date: 31/3/2012 Issue No: 2 Version Start Date: 29/6/2004 Version End Date:

5.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 1000m of the study site?

Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance	Direction	NGR	Details	
6A	155.0	E	374300, 438100	Licence No: 2671309044 Details: Fish Farm/Cress Pond Throughflow Direct Source: "surface, Non-tidal - North West Region" Point: "reservoir At Barrow , Blackburn" Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 7043 Original Start Date: 21/2/1991 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
7A	155.0	E	374300, 438100	Licence No: 2671309044 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-tidal - North West Region Point: Reservoir At Barrow , Blackburn Data Type: Point	Annual Volume (m³): 238937.76 Max Daily Volume (m³): 654.62 Application No: 7043 Original Start Date: 21/2/1991 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
8B	554.0	E	374700, 438100	Licence No: 2671309047 Details: Fish Farm/Cress Pond Throughflow Direct Source: "surface, Non-tidal - North West Region" Point: "spring Fed Storage Tank At Barrow , Blackburn" Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
9B	554.0	E	374700, 438100	Licence No: 2671309047 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "surface, Non-tidal - North West Region" Point: "spring Fed Storage Tank At Barrow , Blackburn" Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
10B	554.0	E	374700, 438100	Licence No: 2671309047 Details: Fish Farm/Cress Pond Throughflow Direct Source: Surface, Non-tidal - North West Region Point: Spring Fed Storage Tank At Barrow , Blackburn Data Type: Point	Annual Volume (m³): 119867.11 Max Daily Volume (m³): 328.4 Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
11B	554.0	E	374700, 438100	Licence No: 2671309047 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-tidal - North West Region Point: Spring Fed Storage Tank At Barrow , Blackburn Data Type: Point	Annual Volume (m³): 119867.11 Max Daily Volume (m³): 328.4 Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: 26/10/2001 Version End Date:
Not shown	975.0	SE	374600, 437100	Licence No: 2671336001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: "surface, Non-tidal - North West Region" Point: "spring At Sheepeate Farm, wiswell." Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 3785 Original Start Date: 11/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/3/1966 Version End Date:
Not shown	975.0	SE	374600, 437100	Licence No: 2671336001 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Surface, Non-tidal - North West Region Point: Spring At Sheepeate Farm, wiswell. Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Application No: 3785 Original Start Date: 11/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/3/1966 Version End Date:

Report Reference: HMD-336-225273

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (5c):

ID	Distance	Direction	NGR	Details	
1A	554.0	E	374700, 438100	Licence No: 2671309047 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "surface, Non-tidal - North West Region" Point: "spring Fed Storage Tank At Barrow , Blackburn" Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
2A	554.0	E	374700, 438100	Licence No: 2671309047 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-tidal - North West Region Point: Spring Fed Storage Tank At Barrow , Blackburn Data Type: Point	Annual Volume (m³): 119867.11 Max Daily Volume (m³): 328.4 Original Application No: 7043 Original Start Date: 12/2/1993 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1063.0	SE	374600, 437000	Licence No: 2671336006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Surface, Non-tidal - North West Region Point: Spring Fed Tank At Wiswell, Clitheroe Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 4976 Original Start Date: 5/4/1976 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1063.0	SE	374600, 437000	Licence No: 2671336006 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: "surface, Non-tidal - North West Region" Point: "spring Fed Tank At Wiswell, Clitheroe" Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 4976 Original Start Date: 5/4/1976 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1761.0	SE	375600, 437000	Licence No: 2671335026 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - North West Region Point: Borehole At Wiswell Moor Meats Data Type: Point	Annual Volume (m³): 13638 Max Daily Volume (m³): 54.55 Original Application No: 7080 Original Start Date: 17/1/1992 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

5.7 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

No

Biological Quality:

Database searched and no data found.

Report Reference: HMD-336-225273

Chemical Quality:

Database searched and no data found.

5.8 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (5d):

ID	Distance	Direction	Details
1	1.0	N	River Name: Barrow Brook Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Catchment: - Drain: NO Main River Status: Currently Undefined
2	108.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
3	123.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
4	138.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
5	140.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
6	144.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
7	159.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
8	159.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
9	196.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
10	196.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
11	272.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
12	279.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Extended Culvert (greater than 50m) Catchment: - Drain: NO Main River Status: Currently Undefined
13	279.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
14	328.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
15	349.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: - River Type: Extended Culvert (greater than 50m) Catchment: - Drain: NO Main River Status: Currently Undefined

Report Reference: HMD-336-225273

16	356.0	S	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
17	363.0	W	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
18	391.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
19	391.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
20	406.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
21	406.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Catchment: - Drain: NO Main River Status: Currently Undefined
22	412.0	NW	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Catchment: - Drain: NO Main River Status: Currently Undefined
23	413.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
24	430.0	SE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
25	430.0	SE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
26	444.0	NW	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Catchment: - Drain: NO Main River Status: Currently Undefined
27	463.0	W	River Name: Drain Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: YES Main River Status: Currently Undefined
28	465.0	SW	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Extended Culvert (greater than 50m) Catchment: - Drain: NO Main River Status: Currently Undefined
29	467.0	NE	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Catchment: - Drain: NO Main River Status: Currently Undefined
30	470.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined
31	477.0	E	River Name: - Water Course Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Catchment: - Drain: NO Main River Status: Currently Undefined

5.9 Surface Water Features

Are there any surface water features within 250m of the study site?

Yes

The following surface water records are not represented on mapping:

Distance to Surface Water (m)	on-site	0-50	51-250
Surface water features within 250m of the study site	Yes	Yes	Yes

Report Reference: HMD-336-225273

6. Environment Agency Flood Map

NW

N

NE

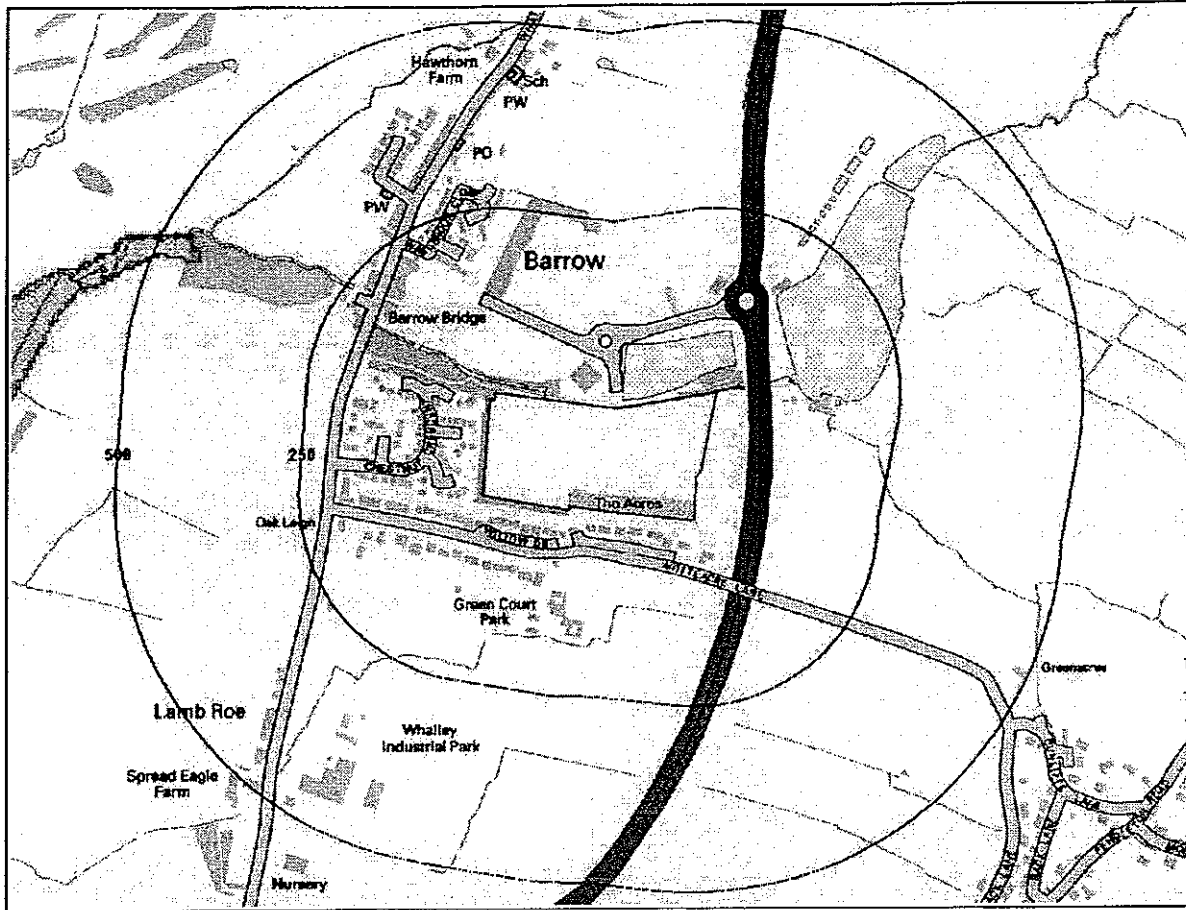
W

E

SW

S

SE



Environment Agency Flood Legend

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Site Outline



Search Buffers (m)



Zone 2 Floodplain



Zone 3 Floodplain



Flood Storage Area



Area Benefiting from Flood Defences



Flood Defences

6. Flooding

6.1 Zone 2 Flooding

Zone 2 floodplain estimates the annual probability of flooding as one in one thousand (0.1%) or greater from rivers and the sea but less than 1% from rivers or 0.5% from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 2 floodplain? **No**

Database searched and no data found.

6.2 Zone 3 Flooding

Zone 3 estimates the annual probability of flooding as one in one hundred (1%) or greater from rivers and a one in two hundred (0.5%) or greater from the sea. Alternatively, where information is available they may show the highest known flood level.

Is the site within 250m of an Environment Agency indicative Zone 3 floodplain? **No**

Database searched and no data found.

6.3 Flood Defences

Are there any Flood Defences within 250m of the study site? **No**

6.4 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? **No**

6.5 Areas used for Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? **No**

6.6 Groundwater Flooding Susceptibility Areas

Are there any British Geological Survey groundwater flooding susceptibility flood areas within 50m of the boundary of the study site? **Yes**

What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions? **Very High**

6.7 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result?

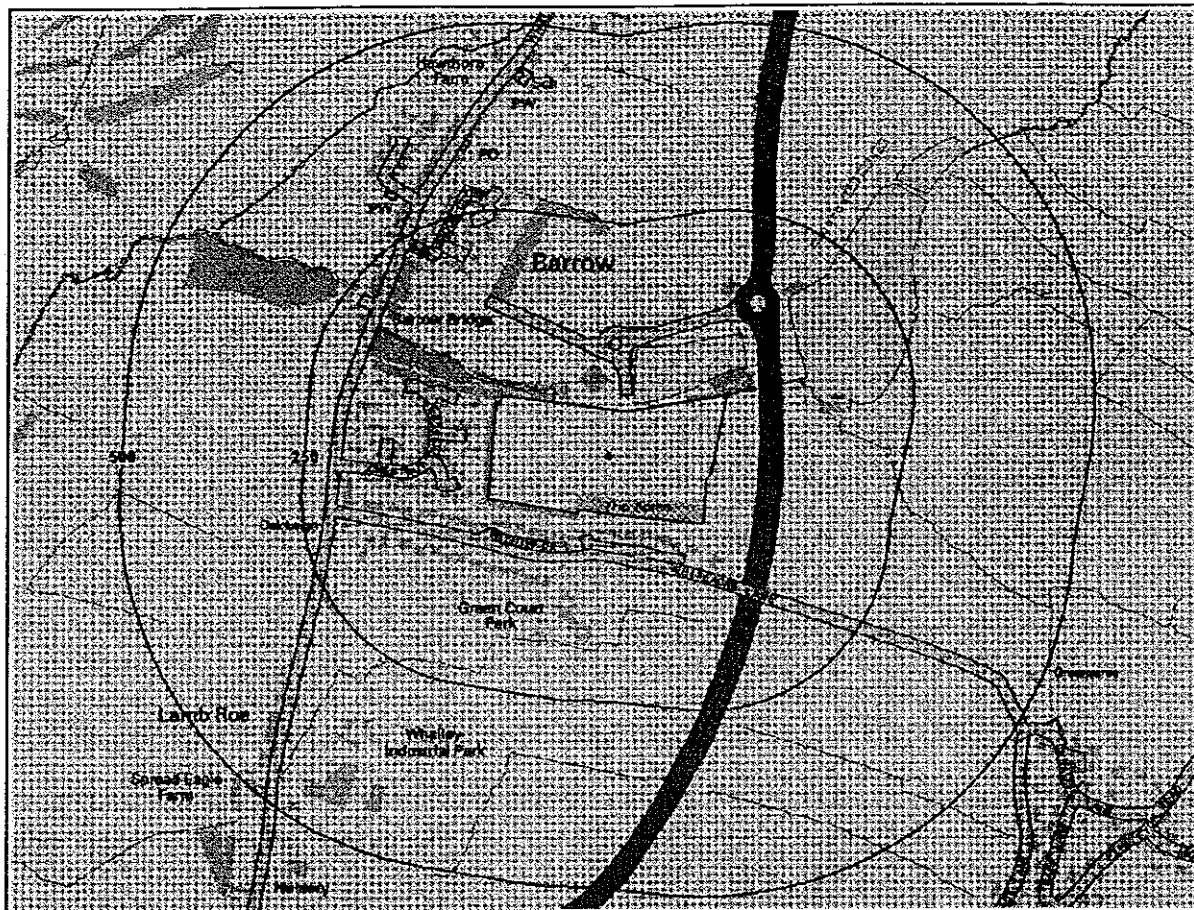
High

Notes:

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The **confidence rating** is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

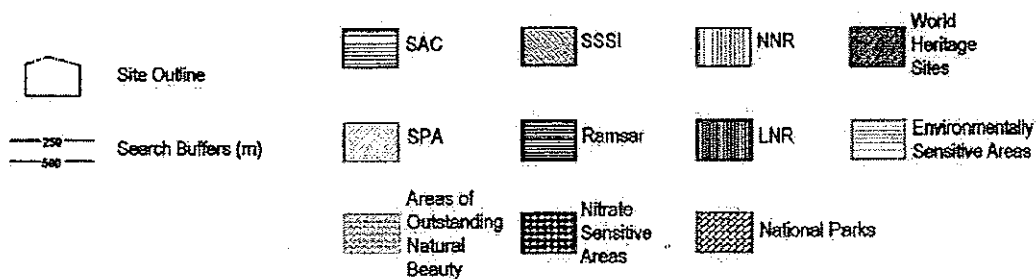
7. Designated Environmentally Sensitive Sites Map



Designated Environmentally Sensitive Sites Legend

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7. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 500m of the study site? **Yes**

Records of Sites of Special Scientific Interest (SSSI) within 500m of the study site: **0**

Database searched and no data found.

Records of National Nature Reserves (NNR) within 500m of the study site: **0**

Database searched and no data found.

Records of Special Areas of Conservation (SAC) within 500m of the study site: **0**

Database searched and no data found.

Records of Special Protection Areas (SPA) within 500m of the study site: **0**

Database searched and no data found.

Records of Ramsar sites within 500m of the study site: **0**

Database searched and no data found

Records of Local Nature Reserves (LNR) within 500m of the study site: **0**

Database searched and no data found.

Records of World Heritage Sites within 500m of the study site: **0**

Database searched and no data found.

Records of Environmentally Sensitive Areas within 500m of the study site: **0**

Database searched and no data found.

Records of Areas of Outstanding Natural Beauty (AONB) within 500m of the study site: **0**

Database searched and no data found

Records of National Parks (NP) within 500m of the study site: **0**

Database searched and no data found.

Report Reference: HMD-336-225273

Records of Nitrate Sensitive Areas within 500m of the study site:**0**

Database searched and no data found.

Records of Nitrate Vulnerable Zones within 500m of the study site:**1**

The following Nitrate Vulnerable Zone records produced by DEFRA are not represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance	Direction	NVZ Name	Data Source
1	0.0	On Site	No place name provided	DEFRA

8. Natural Hazards Findings

8.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a GroundSure GeoInsight, available from our website. The following information has been found:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

8.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site?

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

8.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site?

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Report Reference: HMD-336-225273

No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

8.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

8.1.6 Running Sand

What is the maximum Running Sand* hazard rating identified on the study site?

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site?

No

Database searched and no data found.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*?

Negligible

*Please note this data is searched with a 150m buffer.

9.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site?

No

Database searched and no data found.

10. Contacts

GroundSure Helpline
 Telephone: 08444 159 000
 info @ groundsure.com



British Geological Survey (England & Wales)
 Kingsley Dunham Centre
 Keyworth, Nottingham NG12 5GG
 Tel: 0115 936 3143. Fax: 0115 936 3276. Email:
 enquiries@bgs.ac.uk
 Web: www.bgs.ac.uk
 BGS Geological Hazards Reports and general geological
 enquiries



Environment Agency
 National Customer Contact Centre
 PO Box 544
 Rotherham
 S60 1BY
 Tel: 08708 506 506
 Web: www.environment-agency.gov.uk
 Email: enquiries@environment-agency.gov.uk



Health Protection Agency
 Chilton, Didcot, Oxon, OX11 0RQ
 Tel: 01235 822622 www.hpa.org.uk/radiation
 Radon measures and general radon information and
 guidance



The Coal Authority
 200 Lichfield Lane, Mansfield, Notts NG18 4RG
 Tel: 0845 762 6848. DX 716176 Mansfield 5
 www.coal-authority.co.uk
 Coal mining reports and related enquiries



Ordnance Survey
 Romsey Road
 Southampton SO16 4GU
 Tel: 08456 050505



Local Authority
 Authority: Ribble Valley Borough Council
 Phone: 01200 425111
 Web: www.ribblevalley.gov.uk
 Address: Council Offices, Church Walk, Clitheroe,
 Lancashire, BB7 2RA

Get Mapping PLC
 Virginia Villas, High Street, Hartley Witney, Hampshire RG27
 8NW
 Tel: 01252 845444



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Report Reference: HMD-336-225273

Standard Terms and Conditions

1 Definitions

In these conditions unless the context otherwise requires:

- "Beneficiary" means the Client or the customer of the Client for whom the Client has procured the Services.
- "Commercial" means any building which is not Residential.
- "Commission" means an order for Consultancy Services submitted by a Client.
- "Consultancy Services" mean consultancy services provided by GroundSure including, without limitation, carrying out interpretation of third party and in-house environmental data, provision of environmental consultancy advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items
- "Content" means any data, database or other information contained in a Report or Mapping which is provided to GroundSure by a Data Provider.
- "Contract" means the contract between GroundSure and the Client for the performance of the Services which arises upon GroundSure's acceptance of an Order or Commission and which shall incorporate these conditions, the relevant GroundSure User Guide, proposal by GroundSure and the content of any subsequent report, and any agreed amendments in accordance with clause 11.
- "Client" means the party that submits an Order or Commission.
- "Data Provider" means any third party providing Content to GroundSure.
- "Data Report" means reports comprising factual data with no professional interpretation in respect of the level of likely risk and/or liability available from GroundSure.
- "GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028 and whose registered office is at Greater London House Hampstead Road, London NW1 7EJ.
- "Intellectual Property" means any patent, copyright, design rights, service marks, moral rights, data protection rights, know-how, trademark or any other intellectual property rights.
- "Mapping" an historical map or a combination of historical maps of various ages, time periods and scales available from GroundSure
- "Order" means an order form submitted by the Client requiring Services from GroundSure in respect of a specified Site.
- "Order Website" means online platform via which Orders may be placed.
- "Report" means a Risk Screening Report or Data Report for commercial or residential property available from GroundSure relating to the Site prepared in accordance with the specifications set out in the relevant User Guide.
- "Residential" means any building used as or suitable for use as an individual dwelling.
- "Risk Screening Report" means one of GroundSure's risk screening reports, comprising factual data with interpretation in respect of the level of likely risk and/or liability, excluding "Consultancy Services".
- "Services" means the provision of any Report Mapping or Consultancy Services which GroundSure has agreed to carry out for the Client/Beneficiary on these terms and conditions in respect of the Site.
- "Site" means the landsite in respect of which GroundSure provides the Services.
- "User Guide" means the relevant current version of the user guide available upon request from GroundSure.

2 Scope of Services

- 2.1 GroundSure agrees to carry out the Services in accordance with the Contract and to the extent set out therein.
- 2.2 GroundSure shall exercise all the reasonable skill, care and diligence to be expected of experienced environmental consultants in the performance of the Services.
- 2.3 The Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in the Contract.
- 2.4 Terms and conditions appearing on a Client's order form, printed stationery or other communication, including invoices, to GroundSure, its employees, servants, agents or other representatives or any terms implied by custom, practice or course of dealing shall be of no effect and these terms and conditions shall prevail over all others.
- 2.5 In the event that a Client/Beneficiary opts to take out insurance in conjunction with or as a result of the Services, such insurance shall be subject solely to the terms of any policy issued to it in that respect and GroundSure will have no liability therefore.
- 2.6 GroundSure's quotations/proposals are valid for a period of 30 days only. GroundSure reserves the right to withdraw any quotation at any time before GroundSure accepts an Order or Commission. GroundSure's acceptance of an Order or Commission shall be effective only where such acceptance is in writing and signed by GroundSure's authorised representative or where accepted via GroundSure's Order Website.
- 3 The Client's obligations
- 3.1 The Client shall ensure the Beneficiary complies with and is bound by the terms and conditions set out in the Contract and shall provide that GroundSure may in its own right enforce such terms and conditions against the Beneficiary pursuant to the Contracts (Rights of Third parties) Act 1999. The Client shall be liable for all breaches of the Contract by the Beneficiary as if they were breaches by the Client. The Client shall be solely responsible for ensuring that the Report/Mapping ordered is appropriate and suitable for the Beneficiary's needs.
- 3.2 The Client shall (or shall procure that the Beneficiary shall) supply to GroundSure as soon as practicable and without charge all information necessary and accurate relevant data including any specific and/or unusual environmental information relating to the Site known to the Client/Beneficiary which may pertain to the Services and shall give such assistance as GroundSure shall reasonably require in the performance of the Services (including, without limitation, access to a Site, facilities and equipment as agreed in the Contract).
- 3.3 Where Client/Beneficiary approval or decision is required, such approval or decision shall be given or procured in reasonable time as not to delay or disrupt the performance of any other part of the Services.
- 3.4 The Client shall not and shall not knowingly permit the Beneficiary to, save as expressly permitted by these terms and conditions, re-sell, alter, add to, amend or use out of context the content of any Report, Mapping or, in respect of any Services, Information given by GroundSure. For the avoidance of doubt, the Client and Beneficiary may make the Report, Mapping or GroundSure's findings available to a third party who is considering acquiring the whole or part of the Site or providing funding in relation to the Site but such third party cannot rely on the same unless expressly permitted under clause 4.
- 3.5 The Client is responsible for maintaining the confidentiality of its user name and password if using GroundSure's internet ordering service and accepts responsibility for all activity that occurs under such account and password.

4 Reliance

- 4.1 Upon full payment of all relevant fees and subject to the provisions of these terms and conditions, the Client and Beneficiary are granted an irrevocable royalty-free licence to access the information contained in a Report, Mapping or in a report prepared by GroundSure in respect of or arising out of Consultancy Services. The Services may only be used for the benefit of the Client and those persons listed in clauses 4.2 and 4.3.
- 4.2 In relation to Data Reports, Mapping and Risk Screening Reports, the Client shall be entitled to make Reports available to (i) the Beneficiary, (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate), (iv) the first purchaser or first tenant of the Site (v) the professional advisers and lenders of the first purchaser or tenant of the Site. Accordingly GroundSure shall have the same duties and obligations to those persons in respect of the Services as it has to the Client and those persons shall have the benefit of any of the Client's rights under the Contract as if those persons were parties to the Contract. For the avoidance of doubt, the limitations of GroundSure's liability as set out in clauses 7 and 11.6 shall apply.
- 4.3 In relation to Consultancy Services, reliance shall be limited to the Client, Beneficiary and named parties on the Report.
- 4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise agreed in writing with GroundSure, any other party considering the information supplied by GroundSure as part of the Services, including (but not limited to) insurance underwriters, does so at their own risk and GroundSure has no legal obligations to such party unless otherwise agreed in writing.
- 4.5 The Client shall not and shall not knowingly permit any person (including the Beneficiary) who is provided with a copy of any Report, (except as permitted herein or by separate agreement with GroundSure) to: (a) remove, suppress or modify any trade mark, copyright or other proprietary marking from the Report or Mapping; (b) create any product which is derived directly or indirectly from the data contained in the Report or Mapping; (c) combine the Report or Mapping with, or incorporate the Report or Mapping into any other information data or service; or (d) re-format or otherwise change (whether by modification, addition or enhancement) data or images contained in the Report or Mapping.
- 4.6 Notwithstanding clause 4.5, if the Client acts in a professional capacity, it may make reasonable use of a Report and/or findings made as a result of Consultancy Services to advise Beneficiaries. However, GroundSure shall have no liability in respect of any opinion or report given to such Beneficiaries by the Client or a third party.

5 Fees and Disbursements

- 5.1 GroundSure shall charge the Client fees at the rate and frequency specified in the Contract together, in the case of Consultancy Services, with all proper disbursements incurred by GroundSure in performing the Services. For the avoidance of doubt, the fees payable for the Services are as set out in GroundSure's written proposal, Order Website or Order acknowledgement form. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services.
- 5.2 Unless GroundSure requires prepayment, the Client shall promptly pay all fees disbursements and other monies due to GroundSure in full without deduction, counterclaim or set off together with such value added tax or other tax as may be required within 30 days from the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). GroundSure reserves the right to charge interest which shall accrue on a daily basis from 30 days after the date of Payment Date until the date of payment (whether before or after judgment) at the rate of five per cent per annum above the Bank of England base rate from time to time.
- 5.3 In the event that the Client disputes the amount payable in respect of GroundSure's invoice it shall notify GroundSure no later than 28 days after the date thereof that it is in dispute. In default of such notification the Client shall be deemed to have agreed the amount thereof. As soon as reasonably practicable following receipt of a notification in respect of any disputed invoice, a member of the management team at GroundSure shall contact the Client and the parties shall use all reasonable endeavours to resolve the dispute.

6 Intellectual Property

- 6.1 Subject to the provisions of clause 4.1, the Client and the Beneficiary hereby acknowledge that all Intellectual Property in the Services and Content are and shall remain owned by either GroundSure or the Data Providers and nothing in these terms purports to transfer or assign any rights to the Client or the Beneficiary in respect of the Intellectual Property.
- 6.2 The Client shall acknowledge the ownership of the Content where such Content is incorporated or used in the Client's own documents, reports, systems or services whether or not these are supplied to a third party.
- 6.3 Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.
- 6.4 The Client acknowledges that the proprietary rights subsisting in copyright, database rights and any other intellectual property rights in respect of any data and information contained in any Report are and shall remain (subject to clause 11.1) the property of GroundSure and/or any third party that has supplied data or information used to create a Report, and that these conditions do not purport to grant, assign or transfer any such rights in respect thereof to a Client and/or a Beneficiary.
- 6.5 The Client and each of the parties set out in clause 4.2 are permitted to make up to 8 (commercial) or 2 (residential) printed copies of the Report only. Further copies of the Report may not be made in whole or in part without the prior written permission of GroundSure who shall be entitled to make a charge for each additional copy.
- 6.6 The Client shall (and shall procure that any recipients of the Report as permitted under clause 4.2 shall):
 - (i) not remove, suppress or modify any trademark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
 - (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

- (iii) not create any product or report which is derived directly or indirectly from the data contained in the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service; and
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), data contained in the Services (save that those acting in a professional capacity to the Beneficiary shall not be in breach of this clause 6.6(v) where such reformatting is in the normal course of providing advice based upon the Services).

6.7 The Client and/or Beneficiary shall and shall procure that any party to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability

- 7.1 Nothing in these terms and conditions shall limit GroundSure's liability for causing death or personal injury through negligence or willful default.
- 7.2 Save as otherwise set out in these conditions, any information provided by one party ("Disclosing Party") to the other party ("Receiving Party") shall be treated as confidential except so far as authorised by the Disclosing Party to provide such information in whole or in part to a third party.
- 7.3 Nothing in these conditions shall affect the statutory rights of a consumer under the applicable consumer protection legislation from time to time.
- 7.4 In relation to Data Reports, Mapping and Risk Screening Reports, GroundSure's liability under the Contract shall cease upon the expiry of six years from the date when the Beneficiary became aware that it may have a claim against GroundSure in respect of the Services provided always that there shall be no liability at the expiration of twelve years from the completion of the Contract. For the avoidance of doubt, any claims in respect of which proceedings are notified to GroundSure in writing prior to the expiry of the time periods referred to in this clause shall survive the expiry of those time periods provided any such claim is actually commenced within six months of notification.
- 7.5 In relation to Consultancy Services GroundSure's liability under the Contract shall cease upon the expiry of six years from the date the Services were completed.
- 7.6 GroundSure shall not be liable to the Client or any person to whom the Client provides a copy of a Data Report, Mapping or Risk Screening Report in any circumstances whatsoever unless arising out of a breach on its part of the obligations set out in the Contract.
- 7.7 GroundSure shall not be liable if the Data Reports, Mapping or Risk Screening Report are used otherwise than as provided or referred to in these conditions and the relevant User Guide.
- 7.8 Subject to the provisions of clause 7.3, GroundSure makes no representation, warranties, express or implied, as to the accuracy, reliability, completeness, validity or fitness for purpose of any Content and shall not be liable for any omission, error or inaccuracy in relation thereto unless GroundSure should reasonably have been alerted to any omission, error or inaccuracy in the Content.
- 7.9 Subject to the provisions of clause 7.1 and irrespective of whether multiple parties make use of the same Services the total liability of GroundSure under or in connection with the Contract, whether in contract in tort for breach of statutory duty or otherwise shall not exceed £10 million per claim or series of connected claims.
- 7.10 Whilst GroundSure will use all reasonable endeavours to maintain operability of its internet ordering service it will not be liable for any loss or damages caused by a delay or loss of use of such service. The Client shall use GroundSure's internet ordering service at its own risk. GroundSure shall not be responsible for any damage to a Client or permitted assignee's computer, software, modem, telephone or other property resulting from the use of GroundSure's internet ordering service.
- 7.11 The Client accepts, and shall use all reasonable endeavours to procure that anyone who is provided with a copy of the Report accepts, that it has no claim or recourse to any Data Provider or to GroundSure in respect of the acts or omissions of such Data Providers including Content supplied by them.
- 7.12 GroundSure shall provide the Services using reasonable skill and care. However, GroundSure shall not be liable for any inaccurate statement or risk rating in a Report which resulted from a reasonable interpretation of the Content.
- 7.13 Subject to clause 7.1, GroundSure shall not be liable to the Client, the Beneficiary or any third party in contract, tort (including without limitation, negligence) or for misrepresentation or breach of statutory duty or otherwise in respect of any loss of profits, goodwill, revenue or opportunity, or any indirect or consequential loss (even if such loss was reasonably foreseeable).
- 7.14 GroundSure undertakes for the duration of the liability periods referred to in clauses 7.4 and 7.5 to maintain professional indemnity insurance in respect of its liabilities under this Contract. GroundSure shall produce evidence of such insurance if requested by the Client. A greater level of cover may be available upon request and agreement with the Client.

8. GroundSure right to suspend or terminate

- 8.1 In the event that GroundSure reasonably believes that the Client or Beneficiary as applicable has not provided the information or assistance required to enable the proper performance of the Services, GroundSure shall be entitled on fourteen days written notice to suspend all further performance of the Services until such time as any such deficiency has been made good.
- 8.2 GroundSure may additionally terminate the Contract immediately on written notice in the event that:
 - (i) the Client shall fail to pay any sum due to GroundSure within 28 days of the Payment Date; or
 - (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an Administration Order made against it or if a Receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
 - (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
 - (iv) the Client or the Beneficiary breaches any material term of the Contract (including, but not limited to, the obligations in clause 4) incapable of remedy or if remediable is not remedied within 14 days of notice of the breach.

9. Client's Right to Terminate and Suspend

- 9.1 Subject to clause 10.2, the Client may at any time after commencement of the Services by notice in writing to GroundSure require GroundSure to terminate or suspend immediately performance of all or any of the Services.
- 9.2 The Client waives all and any right of cancellation it may have under the Consumer Protection (Distance Selling) Regulations 2000 (as amended) in respect of the Order of a Report/Mapping. This does not affect the Beneficiary's statutory rights.

10. Consequences of Withdrawal, Termination or Suspension

- 10.1 Upon termination or any suspension of the Services, GroundSure shall take steps to bring to an end the Services in an orderly manner vacate any Site with all reasonable speed and shall deliver to the Client/Beneficiary any property of the Client/Beneficiary in GroundSure's possession or control.
- 10.2 In the event of termination/suspension of the Contract under clauses 8 or 9 the Client shall pay to GroundSure all and any fees payable in respect of the performance of the Services up to the date of termination/suspension. In respect of any Consultancy Services provided the Client shall also pay GroundSure any additional costs incurred in relation to the termination/suspension of the Contract.

11. General

- 11.1 The mapping contained in the Services is protected by Crown copyright and must not be used for any purpose outside the context of the Services or as specifically provided in these terms.
- 11.2 GroundSure reserves the right to amend these terms and conditions. No variation to these terms shall be valid unless signed by an authorised representative of GroundSure.
- 11.3 No failure on the part of GroundSure to exercise and no delay in exercising, any right, power or provision under these terms and conditions shall operate as a waiver thereof.
- 11.4 Save as expressly provided in clauses 4.2, 4.3, 6.3 and 11.5, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
- 11.5 The Secretary of State for Communities and Local Government acting through Ordnance Survey may enforce breach of clause 6.1 of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
- 11.6 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:
 - (i) the Client or Beneficiary's failure to provide facilities, access or information;
 - (ii) fire, storm, flood, tempest or epidemic;
 - (iii) Acts of God or the public enemy;
 - (iv) riot, civil commotion or war;
 - (v) strikes, labour disputes or industrial action;
 - (vi) acts or regulations of any governmental or other agency;
 - (vii) suspension or delay of services at public registries by Data Providers; or
 - (viii) changes in law.
- 11.7 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.
- 11.8 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email and on the second working day after the day of posting if sent by first class post.
- 11.9 The Contract constitutes the entire contract between the parties and shall supersede all previous arrangements between the parties.
- 11.10 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.
- 11.11 These terms and conditions shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with these terms and conditions shall be subject to the exclusive jurisdiction of the English courts.
- 11.12 If the Client or Beneficiary has a complaint about the Services, notice can be given in any format eg writing, phone, email to the Compliance Officer at GroundSure who will respond in a timely manner.

©GroundSure Limited - January 2011

Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDIX C GROUNDSURE REPORT- GEOINSIGHT



GroundSure
ENVIRONMENTAL INSIGHT

PSA Design
The Old Bank House,
Preston, PR33JA

GroundSure Reference:	HMD-336-225274
Your Reference:	D1530-2
Report Date	Dec 22, 2011
Report Delivery Method:	Email - pdf

GroundSure GeoInsight

Address: Site 2, RIBBLE VALLEY ENTERPRISE PARK, HOLM ROAD, BARROW, CLITHEROE, BB7 9WF

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure GeoInsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
GroundSure GeoInsight

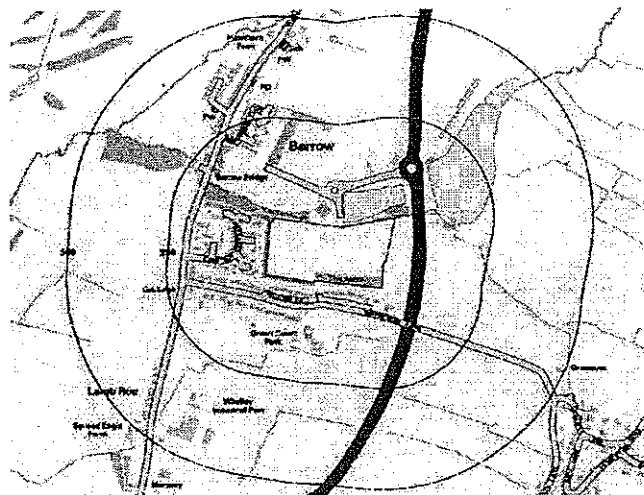
GroundSure GeoInsight

Address: Site 2, RIBBLE VALLEY ENTERPRISE PARK, HOLM ROAD, BARROW,
CLITHEROE, BB7 9WF

Date: Dec 22, 2011

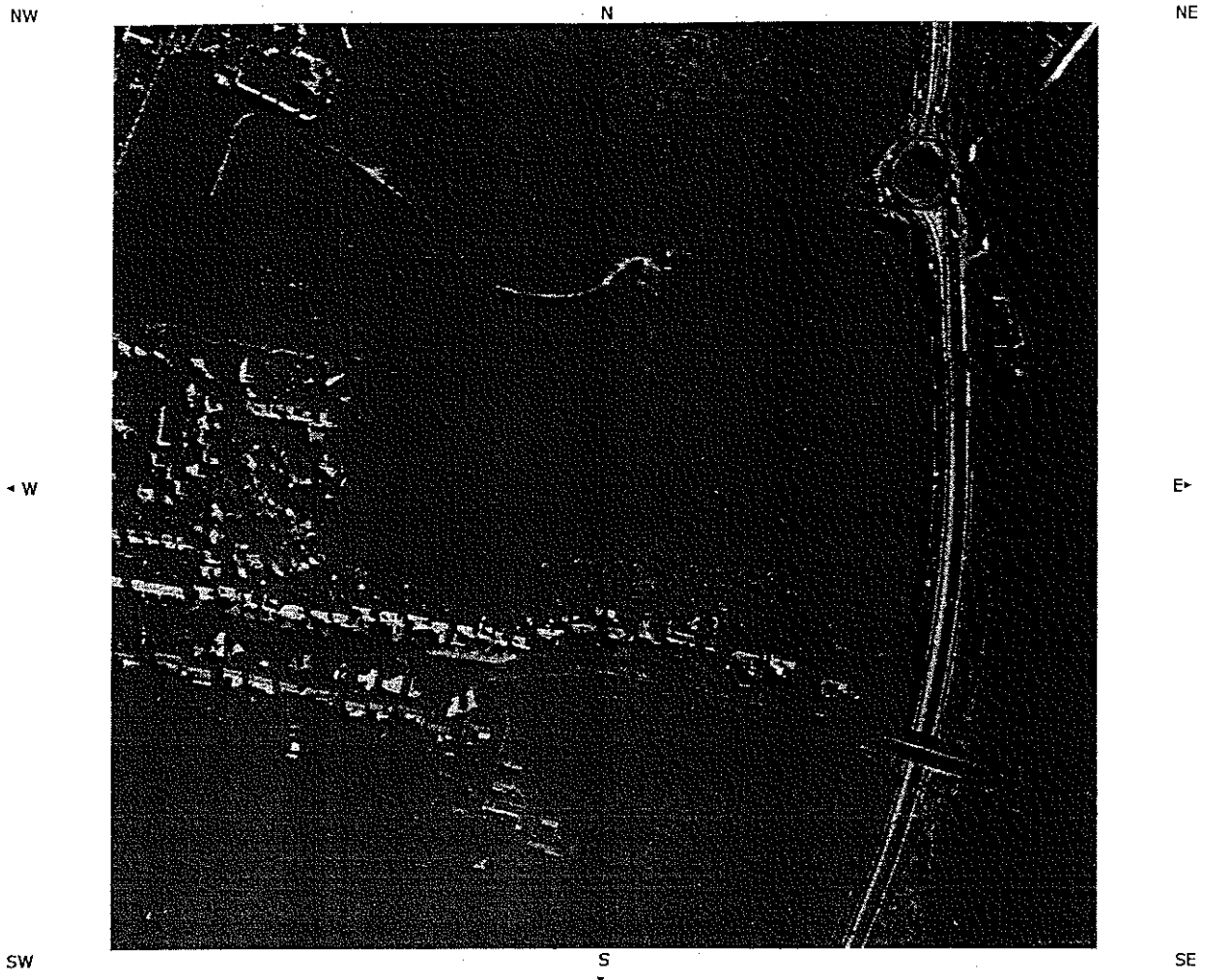
GroundSure Reference: HMD-336-225274

Your Reference: D1530-2



Brought to you by GroundSure

Aerial Photograph of Study Site



Site Name: Site 2, RIBBLE VALLEY ENTERPRISE PARK,
HOLM ROAD, BARROW, CLITHEROE, BB7 9WF
Grid Reference: 373888,438170
Size of Site: 4.39 ha

Aerial photography supplied by Getmapping PLC.
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Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary
1. Geology	Description
1.1 Artificial Ground,	
1.1.1 Is there any Artificial Ground /Made Ground present beneath the study site?*	No
1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology & Landslips	
1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site* boundary?	Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
1.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No
1.3 Bedrock, Solid Geology & Faults	
1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
1.3.2 Are there any records relating to permeability of bedrock within the study site* boundary?	Yes
1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.3.4 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level
1.3.5 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

* This includes an automatically generated 50m buffer zone around the site

Source: Scale 1:50 000 BGS Sheet No:068

Report Reference: HMD-336-225274

2. Ground Workings	on-site	0-50	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	3	9	8	-	-
2.2 Historical Underground Workings Features from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	0	0

3. Mining, Extraction & Natural Cavities	on-site	0-50	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poolé and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining*	1	0	0	0	1
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

*This includes an automatically generated 50m buffer zone around the site

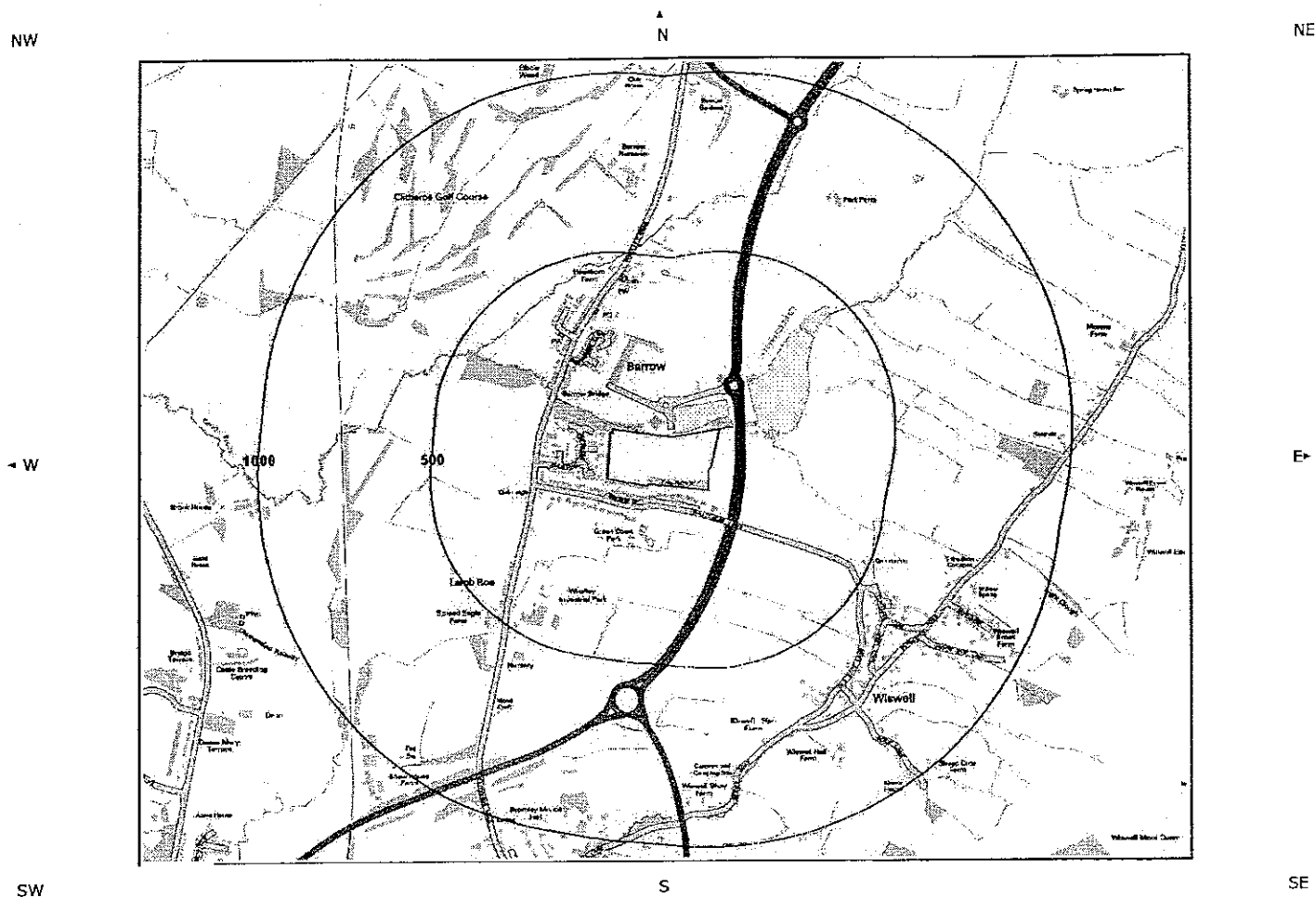
4. Natural Ground Subsidence	on-site*	0-50	51-250	251-500	501-1000
4.1 Shrink-Swell Clay	Very Low	-	-	-	-
4.2 Landslides	Very Low	-	-	-	-
4.3 Ground Dissolution of Soluble Rocks	Negligible	-	-	-	-
4.4 Compressible Deposits	Negligible	-	-	-	-
4.5 Collapsible Deposits	Very Low	-	-	-	-
4.6 Running Sand	Very Low	-	-	-	-

* This includes an automatically generated 50m buffer zone around the site

5. Borehole Records	on-site	0-50	51-250	251-500	501-1000
5.1 BGS Recorded Boreholes	0	0	13	-	-

6. Estimated Background Soil Chemistry	on-site	0-50	51-250	251-500	501-1000
6.1 Records of Background Soil Chemistry	5	2	0	-	-

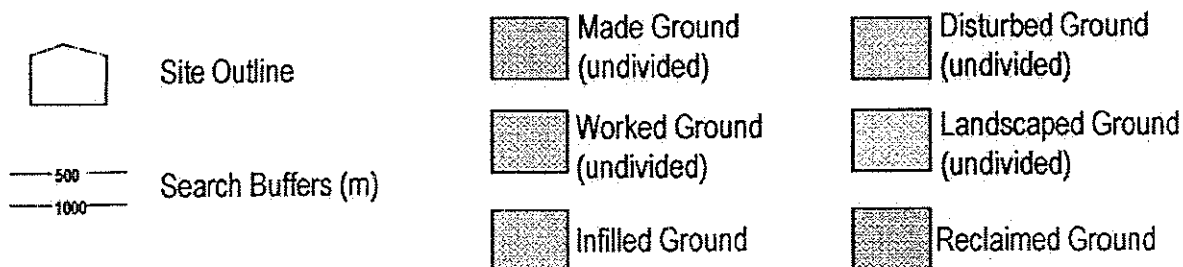
1.1 Artificial Ground Map



Artificial Ground Legend

Enabled by **Ordnance Survey**

Crown Copyright: All Rights Reserved
Licence Number: 100035207



Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:068

1.1.1 Artificial/Made Ground

Are there any records of Artificial/Made Ground within 500m of the study site boundary? **No**

Database searched and no data found.

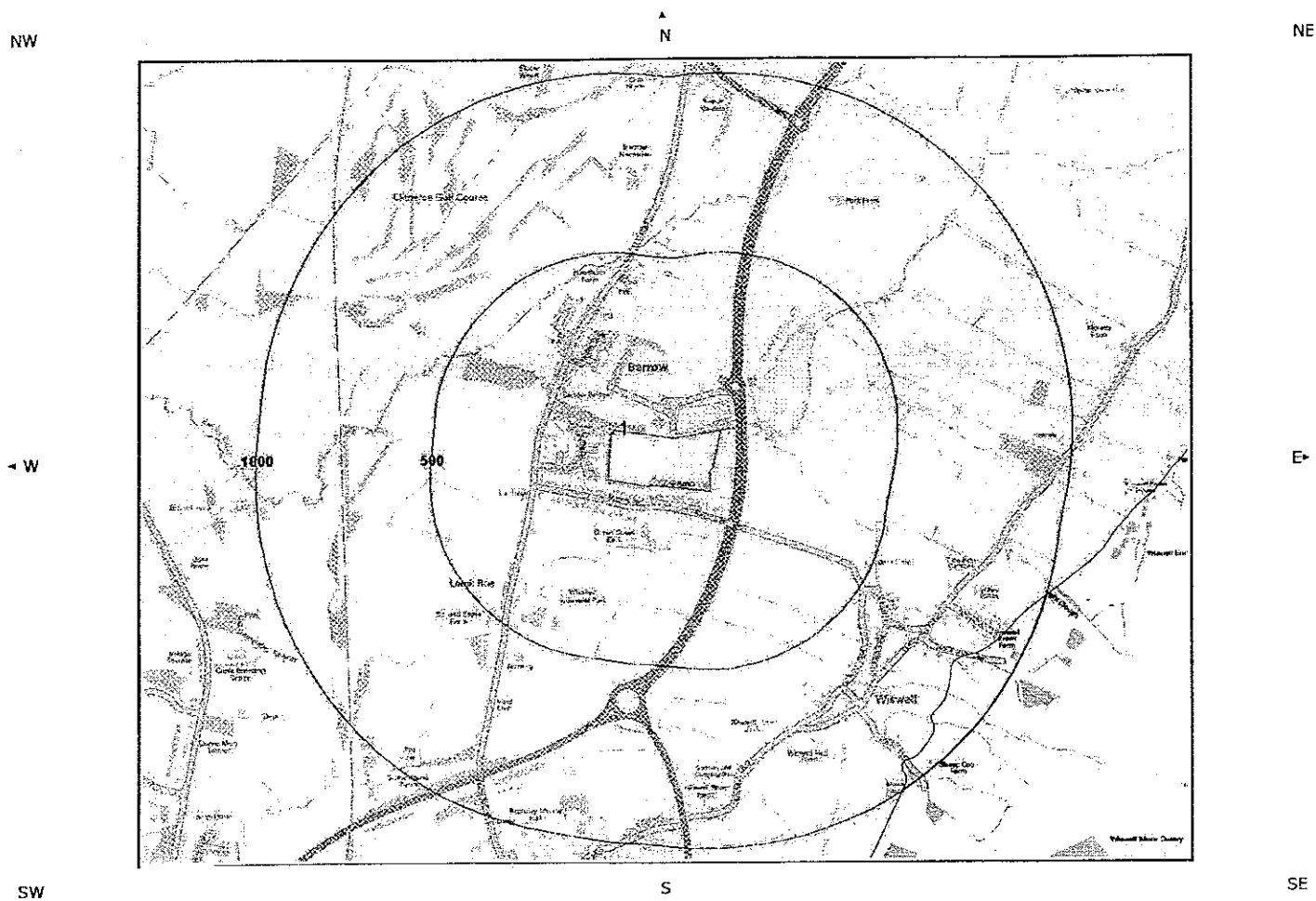
1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site* boundary? **No**

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site.

1.2 Superficial Deposits and Landslips Map



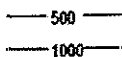
Superficial and Landslips Legend



Crown Copyright All Rights Reserved
Licence Number: 100035207



Site Outline



Search Buffers (m)

Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/Drift Geology

Are there any records of Superficial Deposits/Drift Geology within 500m of the study site boundary? **Yes**

ID	Distance (m)	Direction	Lex Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site* boundary? **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? **No**

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

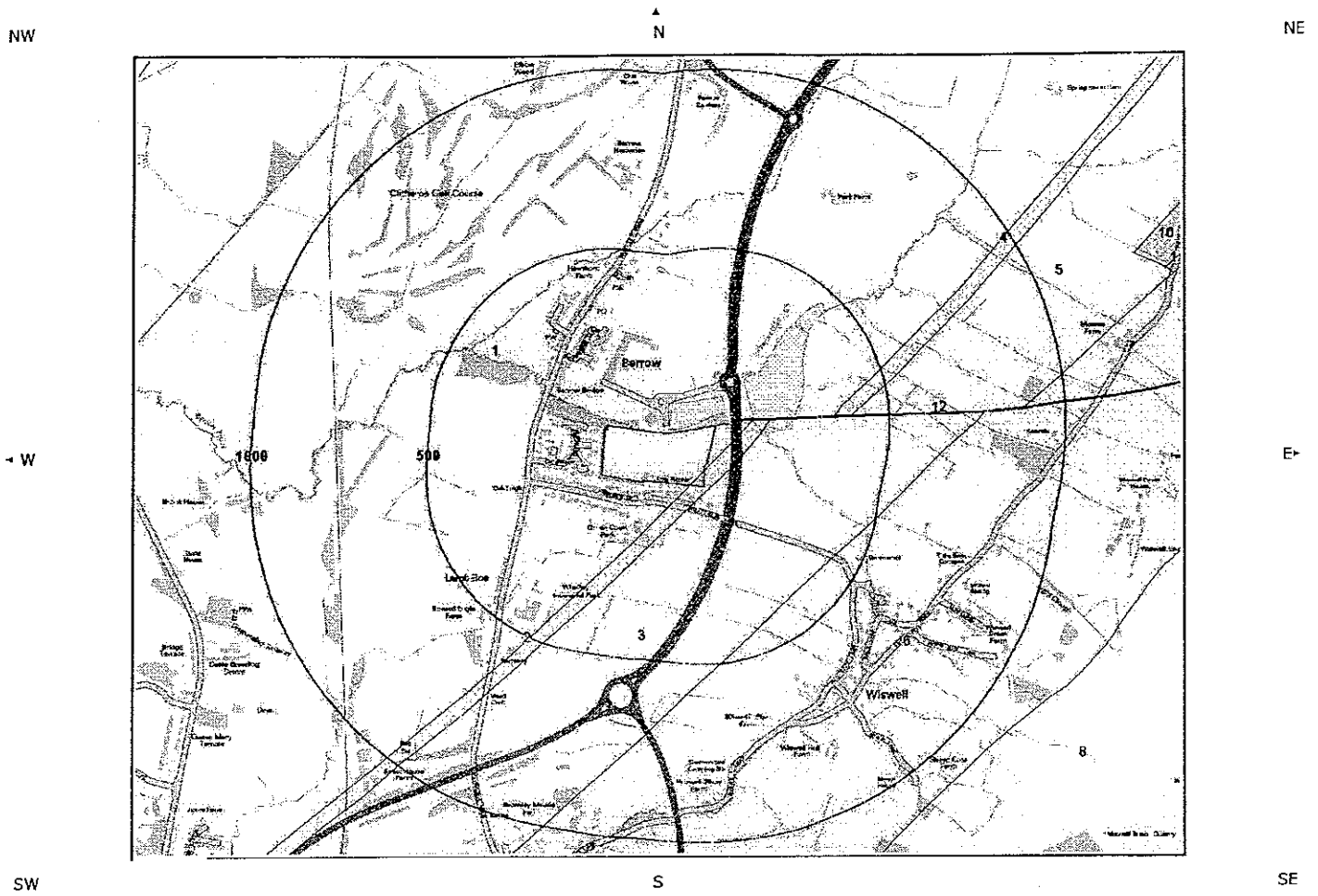
1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site* boundary? **No**

Database searched and no data found.

*This includes an automatically generated 50m buffer zone around the site.

1.3 Bedrock and Faults Map



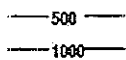
Bedrock & Faults Deposits Legend



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Site Outline



Search Buffers (m)

Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:068

1.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	CLHOM-MDST	Clitheroe Limestone Formation And Hodder Mudstone Formation (undifferentiated) - Mudstone	Holkerian / Chadian
2	0.0	On Site	BOH-LMST	Hodderense Limestone Formation - Limestone	Holkerian
3	13.0	SE	RKM-MDST	Rad Brook Mudstone Member - Mudstone	Holkerian
4	342.0	E	BOH-LMST	Hodderense Limestone Formation - Limestone	Holkerian
5	389.0	E	RKM-MDST	Rad Brook Mudstone Member - Mudstone	Holkerian
6	395.0	SE	BSG-MDST	Bowland Shale Formation - Mudstone	Yeadonian / Asbian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? **Yes**

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low
0.0	On Site	Fracture	High	High
13.0	SE	Fracture	Low	Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? **Yes**

ID	Distance (m)	Direction	Category Description	Feature Description
12	51.0	E	FAULT	Normal fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3.4 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level

* This includes an automatically generated 50m buffer zone around the site.

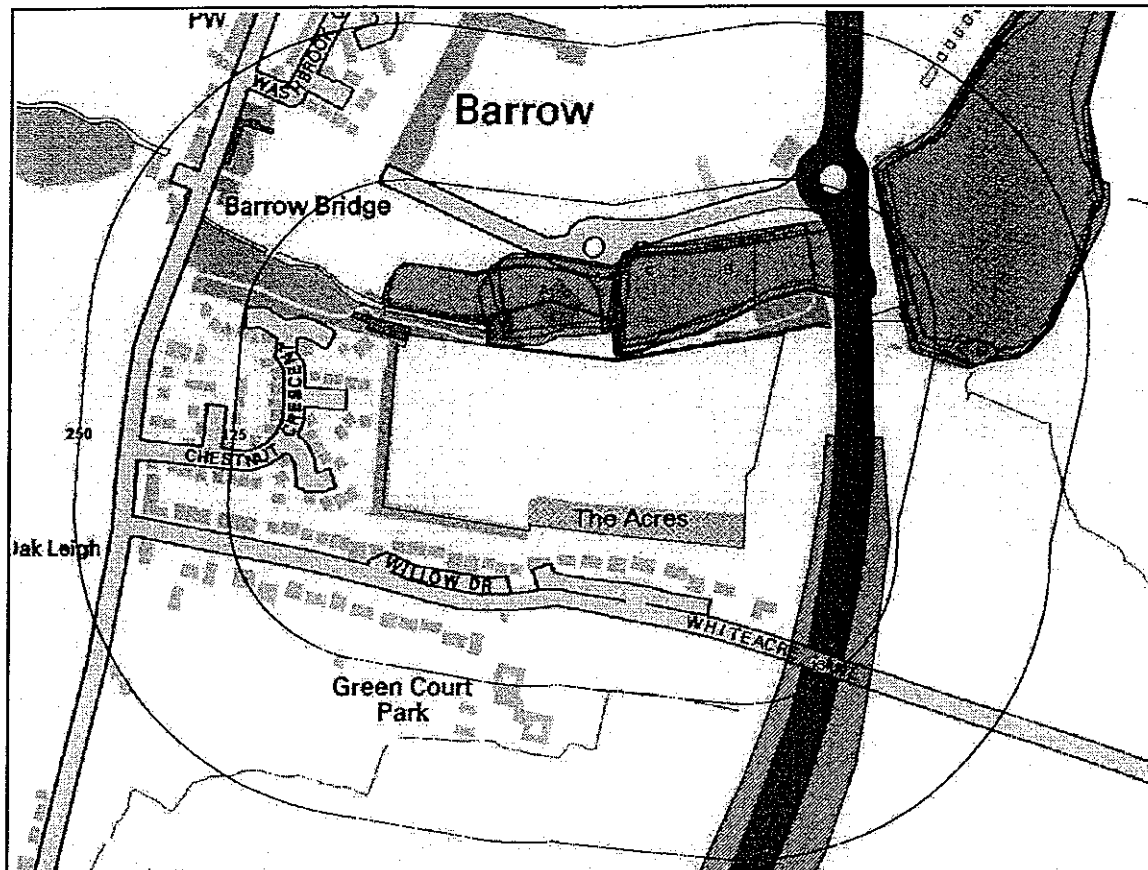
Report Reference: HMD-336-225274

1.3.5 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?

No radon protective measures are necessary

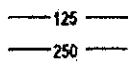
2. Ground Workings Map



Ground Workings Legend

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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |

2. Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	373821,438126	Pond	1892
2A	0.0	N	373955,438142	Reservoir	1932
3A	0.0	N	373955,438142	Reservoir	1910
4B	4.0	N	374113,438152	Reservoir	1932
5B	4.0	N	374113,438152	Reservoir	1910
6	4.0	N	373975,438148	Ponds	1911
7C	5.0	N	374022,438154	Ponds	1892
8A	7.0	N	373961,438149	Reservoir	1969
9A	7.0	N	373961,438149	Reservoir	1950
10	10.0	N	374114,438159	Reservoir	1969
B					
11	10.0	N	374114,438159	Reservoir	1950
B					
12	14.0	N	374044,438161	Reservoir	1973
C					
13	52.0	E	374129,437690	Cuttings	1973
14	97.0	E	374347,438278	Reservoir	1910
D					
15	97.0	E	374347,438278	Reservoir	1932
D					
16	99.0	E	374327,438270	Reservoir	1950
D					
17	102.0	E	374347,438280	Reservoir	1892
D					
18	111.0	E	374320,438261	Reservoir	1969
E					
19	111.0	E	374320,438261	Reservoir	1973
E					
20	195.0	NW	373702,438275	Ponds	1892

2.2 Historical Underground Workings Features derived from Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

2.3 Current Ground Workings

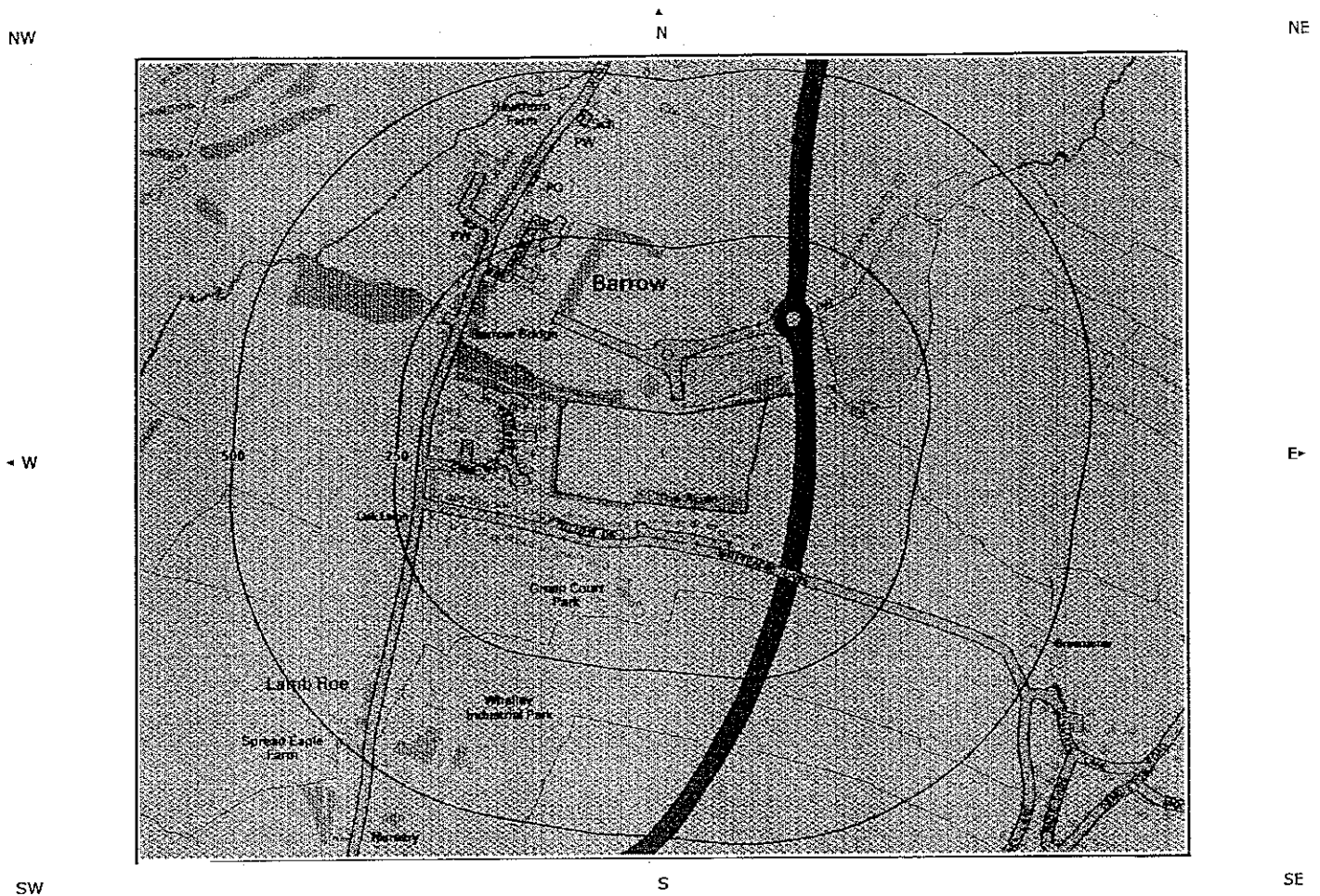
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary?

No

Database searched and no data found..

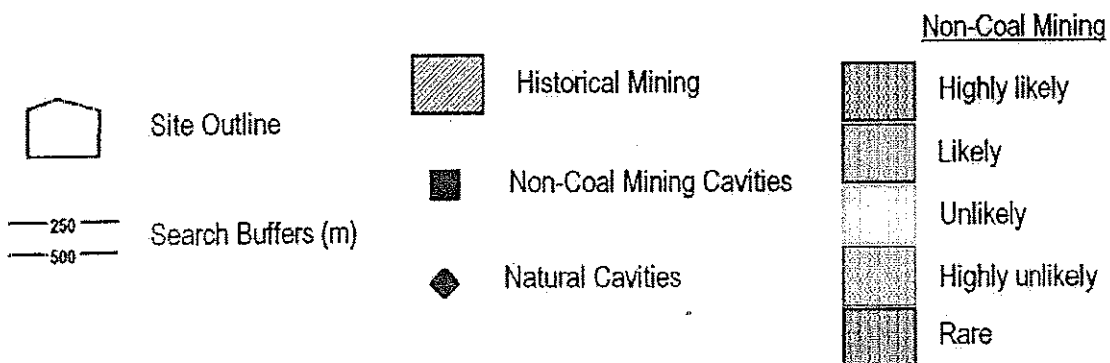
3. Mining, Extraction & Natural Cavities Map



Mining, Extraction & Natural Cavities
Legend

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3. Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from GroundSure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary?

No

The following information provided by JPB is not represented on Mapping:

Database searched. No results found.

3.4 Non – Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary?

Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Highly Unlikely - Localised small scale mining may have occurred but restricted in extent.
Not shown	854.0	E	Not available	Vein Mineral	Highly Unlikely - Localised small scale mining may have occurred but restricted in extent.

3.5 Non – Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary?

No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary?

No

Database searched and no data found.

3.7 Brine Extraction

This dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

Are there any Brine Extraction areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level. More detailed information on potential Tin Mining may be found in Section 3.4 – Non-Coal Mining Hazards.

Are there any Tin Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.10 Clay Mining

Report Reference: HMD-336-225274

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

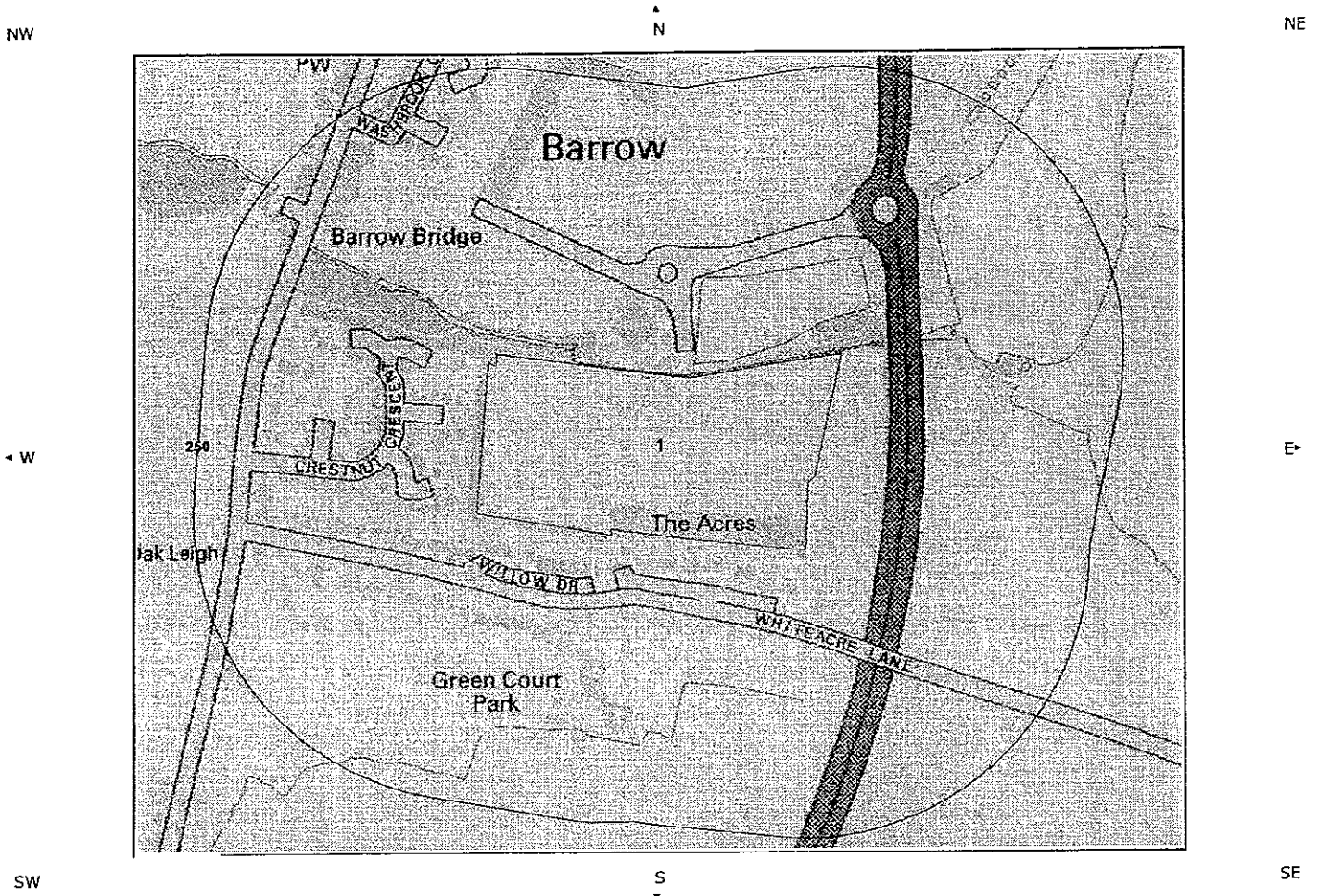
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4. Natural Ground Subsidence

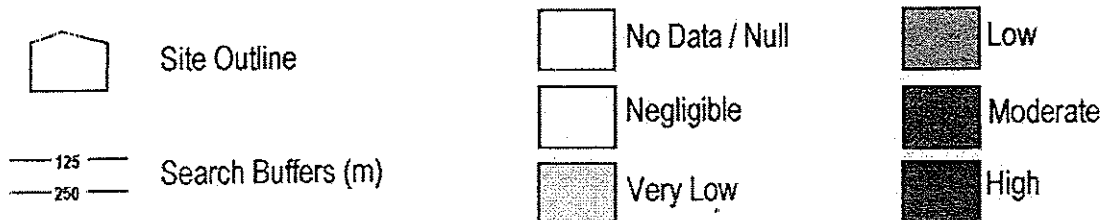
4.1 Shrink-Swell Clay Map



Shrink-Swell Clay Legend

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4.2 Landslides Map

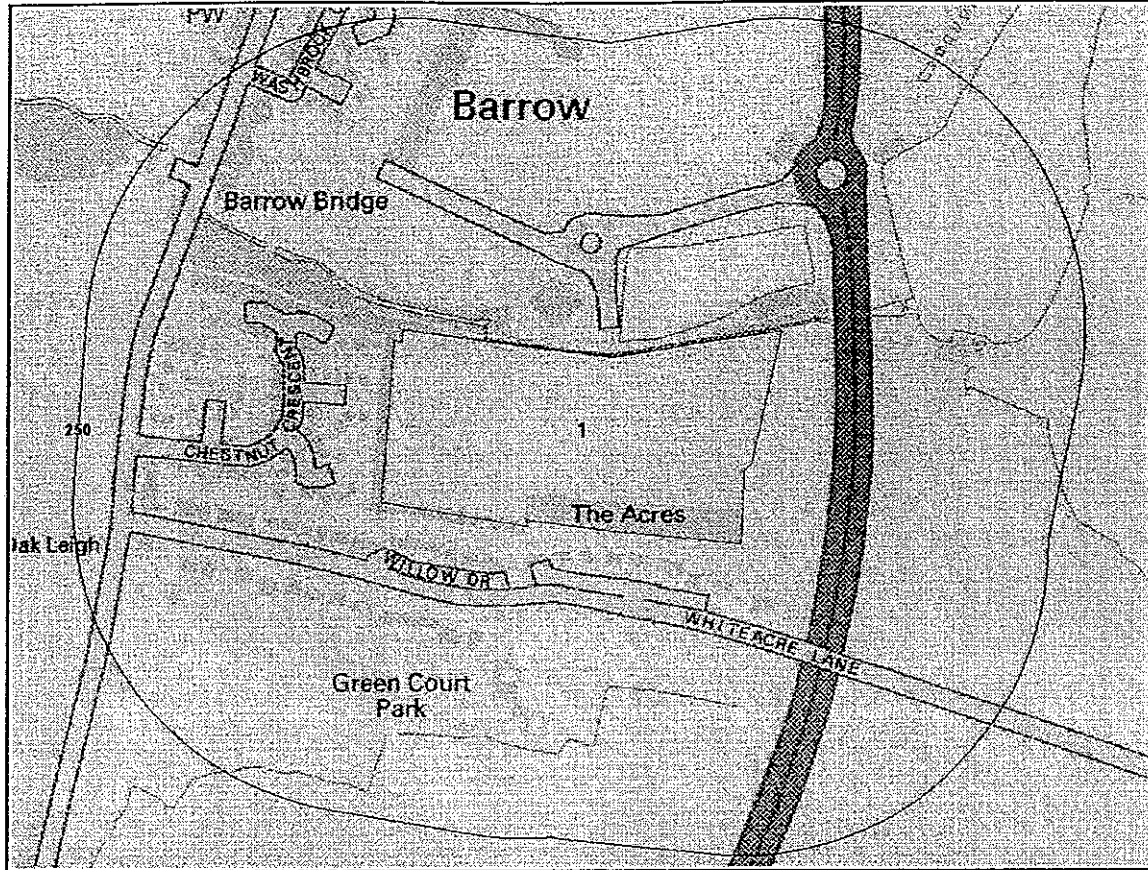
NW

N

NE

W

E



SW

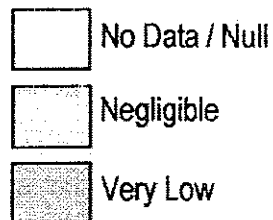
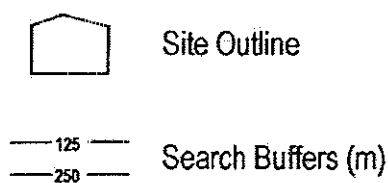
S

SE

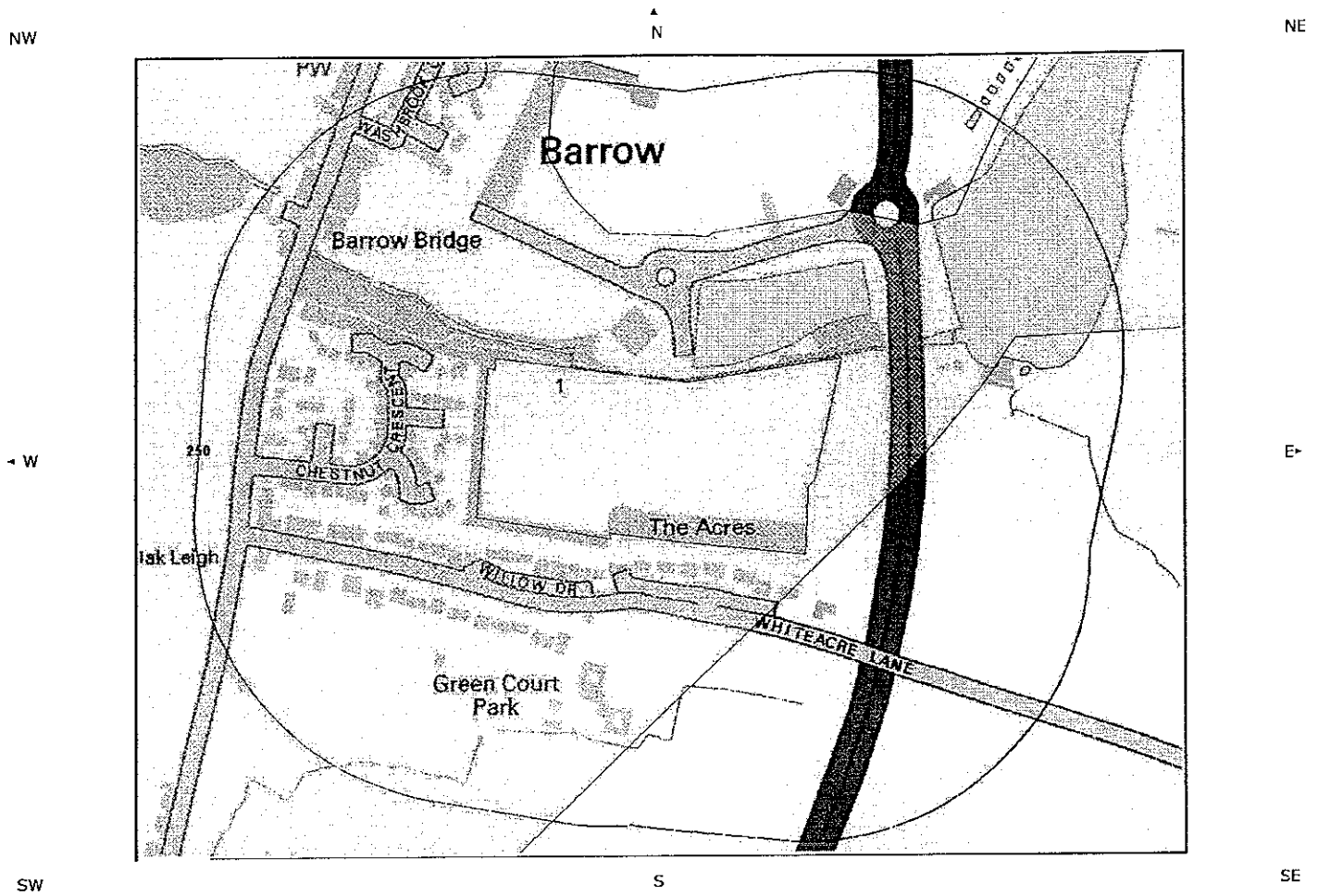
Landslides Legend

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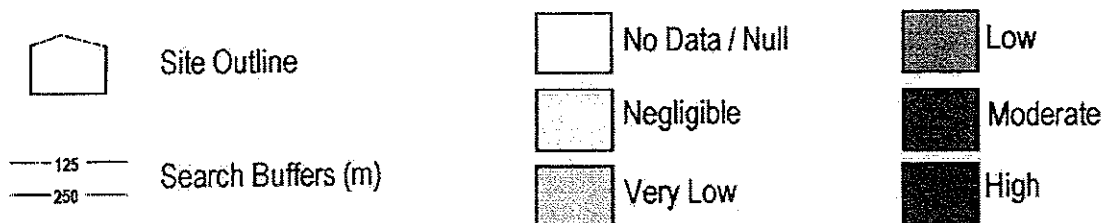
4.3 Ground Dissolution Soluble Rocks Map



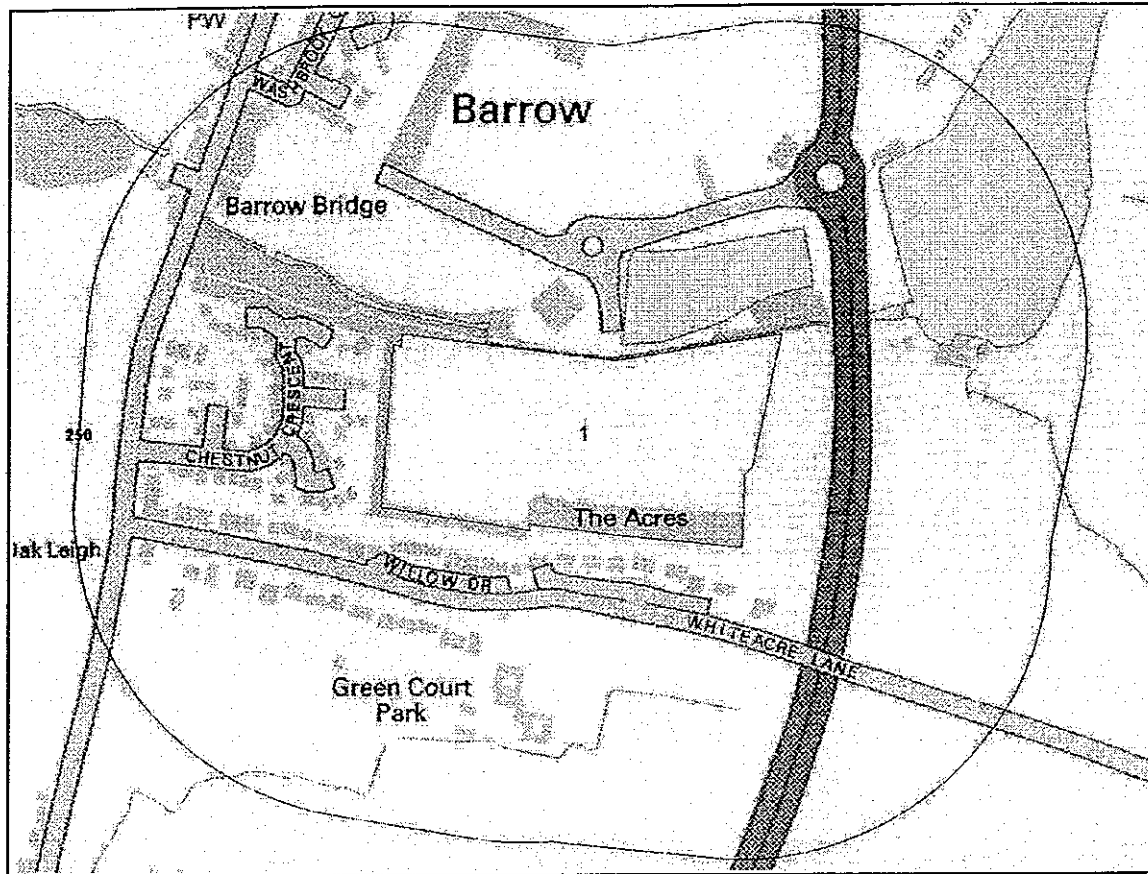
Ground Dissolution Soluble Rocks
Legend

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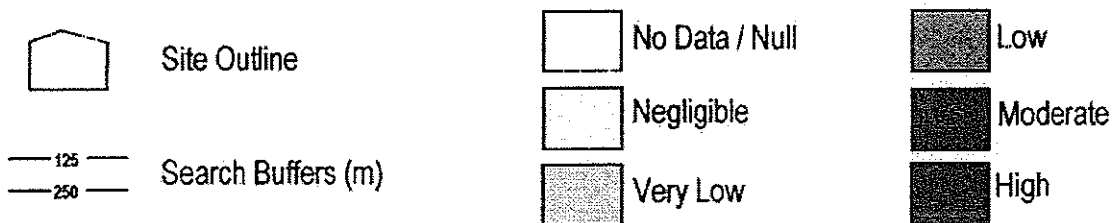
4.4 Compressible Deposits Map



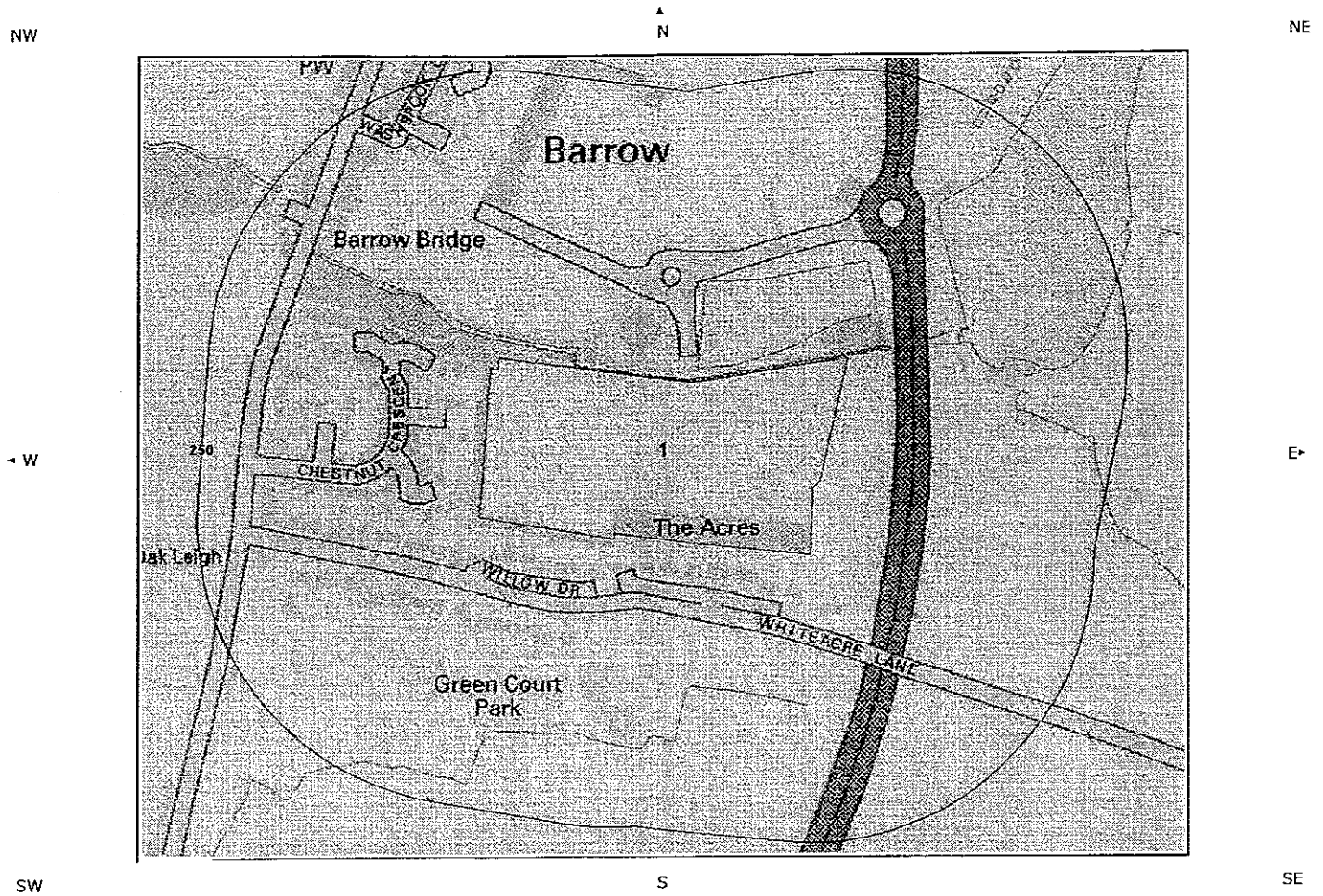
Compressible Deposits Legend

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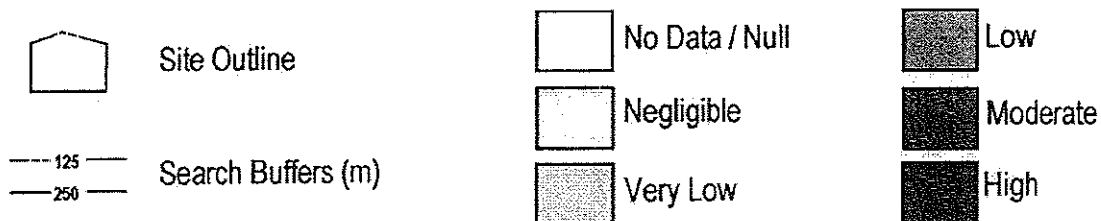
4.5 Collapsible Deposits Map



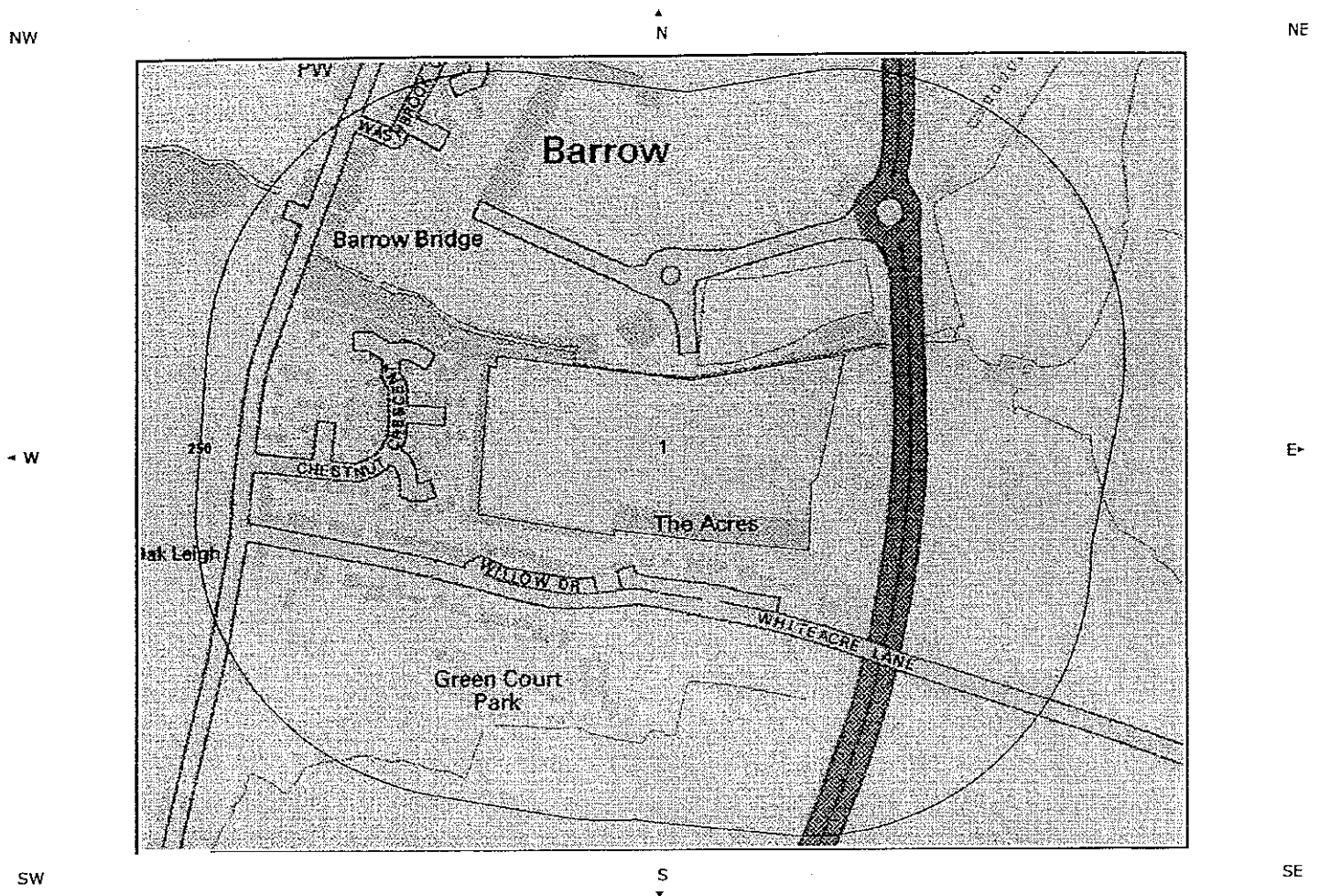
Collapsible Deposits Legend



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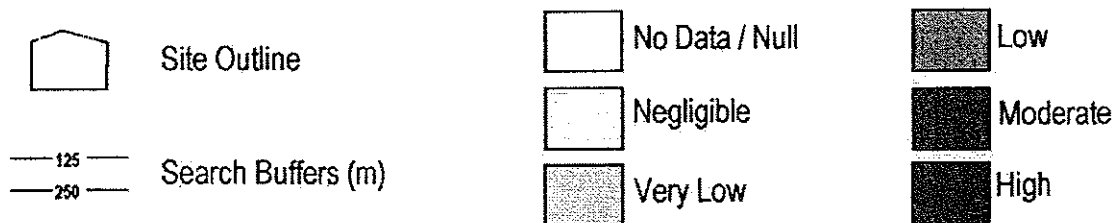
4.6 Running Sand Map



Running Sand Legend

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4. Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? **Very Low**

4.1 Shrink – Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Soluble Rocks information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Ground information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

*This includes an automatically generated 50m buffer zone around the study site boundary.

Report Reference: HMD-336-225274

4.5 Collapsible Deposits

The following Collapsible Rocks information is provided by the British Geological Survey:

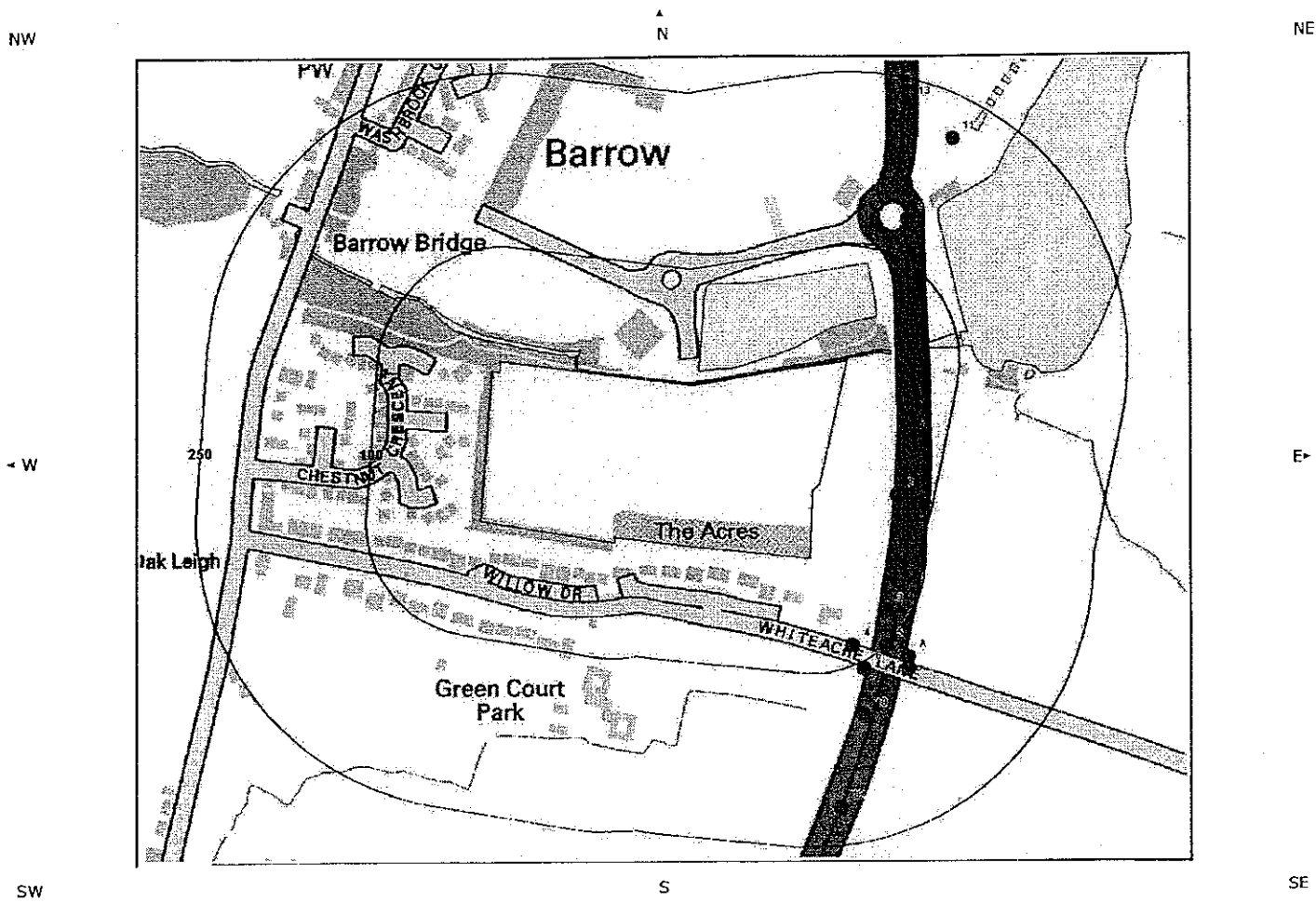
ID	Distance (m) *	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

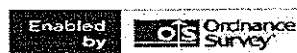
The following Running Sands information is provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

5. Borehole Records Map



Borehole Records Legend



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- Site Outline
- Borehole Locations
- Search Buffers (m)

5. Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

13

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length (m)	Borehole Name
1	67.0	E	374200,438050	SD73NW80	4.57	A59 WALLEY-CLITHEROE BY-PASS 31
2	68.0	E	374190,438000	SD73NW79	7.62	A59 WALLEY-CLITHEROE BY-PASS 30
3	80.0	SE	374180,437900	SD73NW78	9.14	A59 WALLEY-CLITHEROE BY-PASS 29
4	84.0	SE	374150,437870	SD73NW74	11.89	A59 WALLEY-CLITHEROE BY-PASS 5833/2
5	100.0	SE	374180,437870	SD73NW75	12.27	A59 WALLEY-CLITHEROE BY-PASS 5833/3
6	106.0	SE	374160,437850	SD73NW73	11.02	A59 WALLEY-CLITHEROE BY-PASS 5833/1
7A	121.0	SE	374200,437860	SD73NW76	12.24	A59 WALLEY-CLITHEROE BY-PASS 5833/4
8A	128.0	SE	374200,437850	SD73NW77	13.11	A59 WALLEY-CLITHEROE BY-PASS 5833/5
9	133.0	NE	374200,438240	SD73NW81	4.57	A59 WALLEY-CLITHEROE BY-PASS 32
10	143.0	S	374160,437810	SD73NW72	9.14	A59 WALLEY-CLITHEROE BY-PASS 28
11	214.0	NE	374240,438310	SD73NW159	50.0	PENDLE VIEW FISHERIES
12	217.0	S	374140,437730	SD73NW71	14.63	A59 WALLEY-CLITHEROE BY-PASS 27
13	228.0	N	374200,438340	SD73NW82	4.57	A59 WALLEY-CLITHEROE BY-PASS 33

6. Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

7

For further information on how this data is calculated and limitations upon its use, please see the GroundSure GeoInsight User Guide, available on request.

Estimated Geometric Mean Soil Concentrations (mg/kg)							
Distance (m)*	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
7.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
13.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7. Contacts

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info @ groundsure.com



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Acknowledgements

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Standard Terms and Conditions

1 Definitions

In these conditions unless the context otherwise requires:

"Beneficiary" means the Client or the customer of the Client for whom the Client has procured the Services.

"Commercial" means any building which is not Residential.

"Commission" means an order for Consultancy Services submitted by a Client.

"Consultancy Services" mean consultancy services provided by GroundSure including, without limitation, carrying out interpretation of third party and in-house environmental data, provision of environmental consultancy advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Content" means any data, database or other information contained in a Report or Mapping which is provided to GroundSure by a Data Provider.

"Contract" means the contract between GroundSure and the Client for the performance of the Services which arises upon GroundSure's acceptance of an Order or Commission and which shall incorporate these conditions, the relevant GroundSure User Guide proposal by GroundSure and the content of any subsequent report, and any agreed amendments in accordance with clause 11.

"Client" means the party that submits an Order or Commission.

"Data Provider" means any third party providing Content to GroundSure.

"Data Report" means reports comprising factual data with no professional interpretation in respect of the level of likely risk and/or liability available from GroundSure.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028 and whose registered office is at Greater London House, Hampstead Road, London NW1 7EL.

"Intellectual Property" means any patent, copyright, design rights, service marks, moral rights, data protection rights, know-how, trademark or any other intellectual property rights.

"Mapping" an historical map or a combination of historical maps of various ages, time periods and scales available from GroundSure.

"Order" means an order form submitted by the Client requiring Services from GroundSure in respect of a specified Site.

"Order Website" means online platform via which Orders may be placed.

"Report" means a Risk Screening Report or Data Report for commercial or residential property available from GroundSure relating to the Site prepared in accordance with the specifications set out in the relevant User Guide.

"Residential" means any building used as or suitable for use as an individual dwelling.

"Risk Screening Report" means one of GroundSure's risk screening reports, comprising factual data with interpretation in respect of the level of likely risk and/or liability excluding "Consultancy Services".

"Services" means the provision of any Report, Mapping or Consultancy Services which GroundSure has agreed to carry out for the Client/Beneficiary on these terms and conditions in respect of the Site.

"Site" means the land in respect of which GroundSure provides the Services.

"User Guide" means the relevant current version of the user guide, available upon request from GroundSure.

2 Scope of Services

2.1 GroundSure agrees to carry out the Services in accordance with the Contract and to the extent set out therein.

2.2 GroundSure shall exercise all the reasonable skill, care and diligence to be expected of experienced environmental consultants in the performance of the Services.

2.3 The Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in the Contract.

2.4 Terms and conditions appearing on a Client's order form, printed stationery or other communication, including invoices, to GroundSure, its employees, servants, agents or other representatives or any terms implied by custom, practice or course of dealing shall be of no effect and these terms and conditions shall prevail over all others.

2.5 In the event that a Client/Beneficiary opts to take out insurance in conjunction with or as a result of the Services, such insurance shall be subject solely to the terms of any policy issued to it in that respect and GroundSure will have no liability therefore.

2.6 GroundSure's quotations/proposals are valid for a period of 30 days only. GroundSure reserves the right to withdraw any quotation at any time before GroundSure accepts an Order or Commission. GroundSure's acceptance of an Order or Commission shall be effective only where such acceptance is in writing and signed by GroundSure's authorised representative or where accepted via GroundSure's Order Website.

3 The Client's obligations

3.1 The Client shall ensure the Beneficiary complies with and is bound by the terms and conditions set out in the Contract and shall provide that GroundSure may in its own right enforce such terms and conditions against the Beneficiary pursuant to the Contracts (Rights of Third Parties) Act 1999. The Client shall be liable for all breaches of the Contract by the Beneficiary as if they were breaches by the Client. The Client shall be solely responsible for ensuring that the Report/Mapping ordered is appropriate and suitable for the Beneficiary's needs.

3.2 The Client shall (or shall procure that the Beneficiary shall) supply to GroundSure as soon as practicable and without charge all information necessary and accurate relevant data including any specific and/or unusual environmental information relating to the Site known to the Client/Beneficiary which may pertain to the Services and shall give such assistance as GroundSure shall reasonably require in the performance of the Services (including, without limitation, access to a Site, facilities and equipment as agreed in the Contract).

3.3 Where Client/Beneficiary approval or decision is required, such approval or decision shall be given or procured in reasonable time as not to delay or disrupt the performance of any other part of the Services.

3.4 The Client shall not and shall not knowingly permit the Beneficiary to, save as expressly permitted by these terms and conditions, re-sell, alter, add to, amend or use out of context the content of any Report, Mapping or, in respect of any Services, information given by GroundSure. For the avoidance of doubt, the Client and Beneficiary may make the Report, Mapping or GroundSure's findings available to a third party who is considering acquiring the whole or part of the Site or providing funding in relation to the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.5 The Client is responsible for maintaining the confidentiality of its user name and password if using GroundSure's internet ordering service and accepts responsibility for all activity that occurs under such account and password.

4 Reliance

4.1 Upon full payment of all relevant fees and subject to the provisions of these terms and conditions, the Client and Beneficiary are granted an irrevocable royalty-free licence to access the information contained in a Report, Mapping or in a report prepared by GroundSure in respect of or arising out of Consultancy Services. The Services may only be used for the benefit of the Client and those persons listed in clauses 4.2 and 4.3.

4.2 In relation to Data Reports, Mapping and Risk Screening Reports, the Client shall be entitled to make Reports available to (i) the Beneficiary, (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate), (iv) the first purchaser or first tenant of the Site (v) the professional advisers and lenders of the first purchaser or tenant of the Site. Accordingly GroundSure shall have the same duties and obligations to those persons in respect of the Services as it has to the Client and those persons shall have the benefit of any of the Client's rights under the Contract as if those persons were parties to the Contract. For the avoidance of doubt, the limitations of GroundSure's liability as set out in clauses 7 and 11.6 shall apply.

4.3 In relation to Consultancy Services, reliance shall be limited to the Client, Beneficiary and named parties on the Report.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise agreed in writing with GroundSure, any other party considering the information supplied by GroundSure as part of the Services including (but not limited to) insurance underwriters, does so at their own risk and GroundSure has no legal obligations to such party unless otherwise agreed in writing.

4.5 The Client shall not and shall not knowingly permit any person (including the Beneficiary) who is provided with a copy of any Report, (except as permitted herein or by separate agreement with GroundSure) to: (a) remove, suppress or modify any trade mark, copyright or other proprietary marking from the Report or Mapping; (b) create any product which is derived directly or indirectly from the data contained in the Report or Mapping; (c) combine the Report or Mapping with, or incorporate the Report or Mapping into any other information data or service; or (d) re-format or otherwise change (whether by modification, addition or enhancement) data or images contained in the Report or Mapping.

4.6 Notwithstanding clause 4.5, if the Client acts in a professional capacity, it may make reasonable use of a Report and/or findings made as a result of Consultancy Services to advise Beneficiaries. However, GroundSure shall have no liability in respect of any opinion or report given to such Beneficiaries by the Client or a third party.

5 Fees and Disbursements

5.1 GroundSure shall charge the Client fees at the rate and frequency specified in the Contract together, in the case of Consultancy Services, with all proper disbursements incurred by GroundSure in performing the Services. For the avoidance of doubt, the fees payable for the Services are as set out in GroundSure's written proposal, Order Website or Order acknowledgement form. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services.

5.2 Unless GroundSure requires prepayment, the Client shall promptly pay all fees disbursements and other monies due to GroundSure in full without deduction, counterclaim or set off together with such value added tax or other tax as may be required within 30 days from the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("Payment Date"). GroundSure reserves the right to charge interest which shall accrue on a daily basis from 30 days after the date of Payment Date until the date of payment (whether before or after judgment) at the rate of five per cent per annum above the Bank of England base rate from time to time.

5.3 In the event that the Client disputes the amount payable in respect of GroundSure's invoice it shall notify GroundSure no later than 28 days after the date thereof that it is in dispute. In default of such notification the Client shall be deemed to have agreed the amount thereof. As soon as reasonably practicable following receipt of a notification in respect of any disputed invoice, a member of the management team at GroundSure shall contact the Client and the parties shall use all reasonable endeavours to resolve the dispute.

6 Intellectual Property

6.1 Subject to the provisions of clause 4.1, the Client and the Beneficiary hereby acknowledge that all Intellectual Property in the Services and Content are and shall remain owned by either GroundSure or the Data Providers and nothing in these terms purports to transfer or assign any rights to the Client or the Beneficiary in respect of the Intellectual Property.

6.2 The Client shall acknowledge the ownership of the Content where such Content is incorporated or used in the Client's own documents, reports, systems or services whether or not these are supplied to a third party.

6.3 Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client acknowledges that the proprietary rights subsisting in copyright, database rights and any other intellectual property rights in respect of any data and information contained in any Report are and shall remain (subject to clause 11.1) the property of GroundSure and/or any third party that has supplied data or information used to create a Report, and that these conditions do not purport to grant, assign or transfer any such rights in respect thereof to a Client and/or a Beneficiary.

6.5 The Client and each of the parties set out in clause 4.2 are permitted to make up to 8 (commercial) or 2 (residential) printed copies of the Report only. Further copies of the Report may not be made in whole or in part without the prior written permission of GroundSure who shall be entitled to make a charge for each additional copy.

6.6 The Client shall (and shall procure that any recipients of the Report as permitted under clause 4.2 shall):

(i) not remove, suppress or modify any trademark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

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(iii) not create any product or report which is derived directly or indirectly from the data contained in the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
 (iv) not combine the Services with or incorporate such Services into any other information data or service; and
 (v) not reformat or otherwise change (whether by modification, addition or enhancement), data contained in the Services (save that those acting in a professional capacity to the Beneficiary shall not be in breach of this clause 6.6(v) where such reformatting is in the normal course of providing advice based upon the Services) in each case of parts (iii) to (v) inclusive, whether or not such product or report is produced for commercial profit or not.
 6.7 The Client and/or Beneficiary shall and shall procure that any party to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability

7.1 Nothing in these terms and conditions shall limit GroundSure's liability for causing death or personal injury through negligence or willful default.
 7.2 Save as otherwise set out in these conditions, any information provided by one party ("Disclosing Party") to the other party ("Receiving Party") shall be treated as confidential except so far as authorised by the Disclosing Party to provide such information in whole or in part to a third party.
 7.3 Nothing in these conditions shall affect the statutory rights of a consumer under the applicable consumer protection legislation from time to time.
 7.4 In relation to Data Reports, Mapping and Risk Screening Reports, GroundSure's liability under the Contract shall cease upon the expiry of six years from the date when the Beneficiary became aware that it may have a claim against GroundSure in respect of the Services provided always that there shall be no liability at the expiration of twelve years from the completion of the Contract. For the avoidance of doubt, any claims in respect of which proceedings are notified to GroundSure in writing prior to the expiry of the time periods referred to in this clause shall survive the expiry of those time periods provided any such claim is actually commenced within six months of notification.
 7.5 In relation to Consultancy Services GroundSure's liability under the Contract shall cease upon the expiry of six years from the date the Services were completed.
 7.6 GroundSure shall not be liable to the Client or any person to whom the Client provides a copy of a Data Report, Mapping or Risk Screening Report in any circumstances whatsoever unless arising out of a breach on its part of the obligations set out in the Contract.
 7.7 GroundSure shall not be liable if the Data Reports, Mapping or Risk Screening Report are used otherwise than as provided or referred to in these conditions and the relevant User Guide.
 7.8 Subject to the provisions of clause 7.3, GroundSure makes no representation, warranties, express or implied, as to the accuracy, reliability, completeness, validity or fitness for purpose of any Content and shall not be liable for any omission, error or inaccuracy in relation thereto unless GroundSure should reasonably have been alerted to any omission, error or inaccuracy in the Content.
 7.9 Subject to the provisions of clause 7.1 and irrespective of whether multiple parties make use of the same Services the total liability of GroundSure under or in connection with the Contract, whether in contract in tort for breach of statutory duty or otherwise shall not exceed £10 million per claim or series of connected claims.
 7.10 Whilst GroundSure will use all reasonable endeavours to maintain operability of its internet ordering service it will not be liable for any loss or damages caused by a delay or loss of use of such service. The Client shall use GroundSure's internet ordering service at its own risk. GroundSure shall not be responsible for any damage to a Client or permitted assignee's computer, software, modem, telephone or other property resulting from the use of GroundSure's internet ordering service.
 7.11 The Client accepts, and shall use all reasonable endeavours to procure that anyone who is provided with a copy of the Report accepts, that it has no claim or recourse to any Data Provider or to GroundSure in respect of the acts or omissions of such Data Providers including Content supplied by them.
 7.12 GroundSure shall provide the Services using reasonable skill and care, however, GroundSure shall not be liable for any inaccurate statement or risk rating in a Report which resulted from a reasonable interpretation of the Content.
 7.13 Subject to clause 7.1 GroundSure shall not be liable to the Client, the Beneficiary or any third party in contract, tort (including, without limitation, negligence) or for misrepresentation or breach of statutory duty or otherwise in respect of any loss of profits, goodwill, revenue or opportunity, or any indirect or consequential loss (even if such loss was reasonably foreseeable).
 7.14 GroundSure undertakes for the duration of the liability periods referred to in clauses 7.4 and 7.5 to maintain professional indemnity insurance in respect of its liabilities under this Contract. GroundSure shall produce evidence of such insurance if requested by the Client. A greater level of cover may be available upon request and agreement with the Client.

8. GroundSure Right to suspend or terminate

8.1 In the event that GroundSure reasonably believes that the Client or Beneficiary as applicable has not provided the information or assistance required to enable the proper performance of the Services, GroundSure shall be entitled on fourteen days written notice to suspend all further performance of the Services until such time as any such deficiency has been made good.
 8.2 GroundSure may additionally terminate the Contract immediately on written notice in the event that:
 (i) the Client shall fail to pay any sum due to GroundSure within 28 days of the Payment Date; or
 (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an Administration Order made against it or if a Receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
 (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
 (iv) the Client or the Beneficiary breaches any material term of the Contract (including, but not limited to, the obligations in clause 4) incapable of remedy or if remediable is not remedied within 14 days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.2, the Client may at any time after commencement of the Services by notice in writing to GroundSure require GroundSure to terminate or suspend immediately performance of all or any of the Services.
 9.2 The Client waives all and any right of cancellation it may have under the Consumer Protection (Distance Selling) Regulations 2000 (as amended) in respect of the Order of a Report/Mapping. This does not affect the Beneficiary's statutory rights.

10. Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination or any suspension of the Services, GroundSure shall take steps to bring to an end the Services in an orderly manner vacate any Site with all reasonable speed and shall deliver to the Client/Beneficiary any property of the Client/Beneficiary in GroundSure's possession or control.
 10.2 In the event of termination/suspension of the Contract under clauses 8 or 9, the Client shall pay to GroundSure all and any fees payable in respect of the performance of the Services up to the date of termination/suspension. In respect of any Consultancy Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination/suspension of the Contract.

11. General

11.1 The mapping contained in the Services is protected by Crown copyright and must not be used for any purpose outside the context of the Services or as specifically provided in these terms.
 11.2 GroundSure reserves the right to amend these terms and conditions. No variation to these terms shall be valid unless signed by an authorised representative of GroundSure.
 11.3 No failure on the part of GroundSure to exercise and no delay in exercising, any right, power or provision under these terms and conditions shall operate as a waiver thereof.
 11.4 Save as expressly provided in clauses 4.2, 4.3, 6.3 and 11.5, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
 11.5 The Secretary of State for Communities and Local Government acting through Ordnance Survey may enforce breach of clause 6.1 of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
 11.6 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:
 (i) the Client or Beneficiary's failure to provide facilities, access or information;
 (ii) fire, storm, flood, tempest or epidemic;
 (iii) Acts of God or the public enemy;
 (iv) riot, civil commotion or war;
 (v) strikes, labour disputes or industrial action;
 (vi) acts or regulations of any governmental or other agency;
 (vii) suspension or delay of services at public registries by Data Providers; or
 (viii) changes in law.

11.7 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.
 11.8 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email and on the second working day after the day of posting if sent by first class post.

11.9 The Contract constitutes the entire contract between the parties and shall supersede all previous arrangements between the parties.

11.10 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provision shall not in any way be tainted or impaired.

11.11 These terms and conditions shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with these terms and conditions shall be subject to the exclusive jurisdiction of the English courts.

11.12 If the Client or Beneficiary has a complaint about the Services, notice can be given in any format eg writing, phone, email to the Compliance Officer at GroundSure who will respond in a timely manner.

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Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDIX D ENVIRONMENT AGENCY WEBSITE INFORMATION

BB7 9WF at scale 1:10,000

Text only version

Map legend

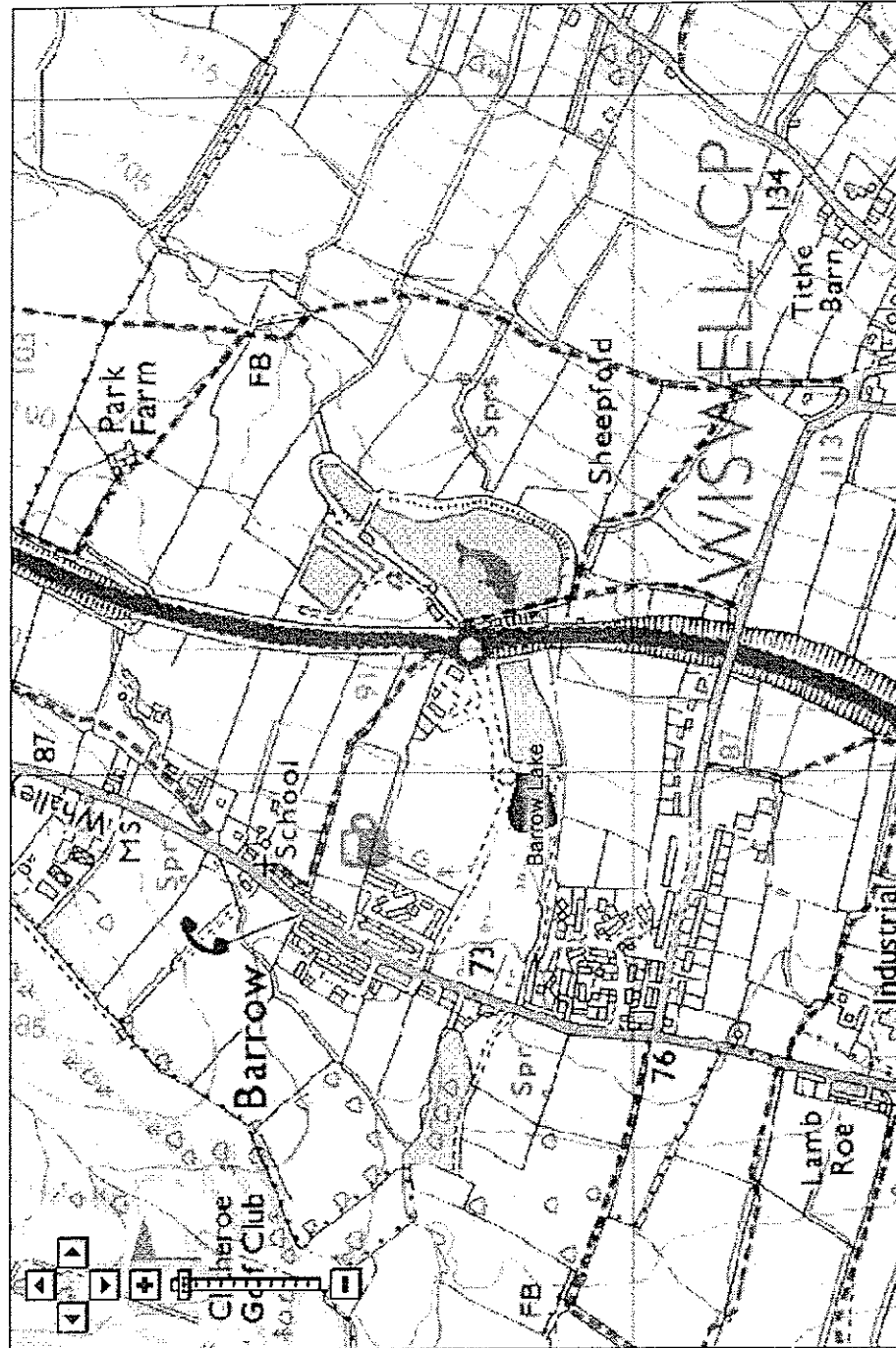
Click on a feature for details of that site

☐ Authorised Landfill

☐ Site boundary

☒ Historic landfill

☐ Site boundary



Historic landfill (Grid reference: X: 373,954 S; Y: 438,142.28)

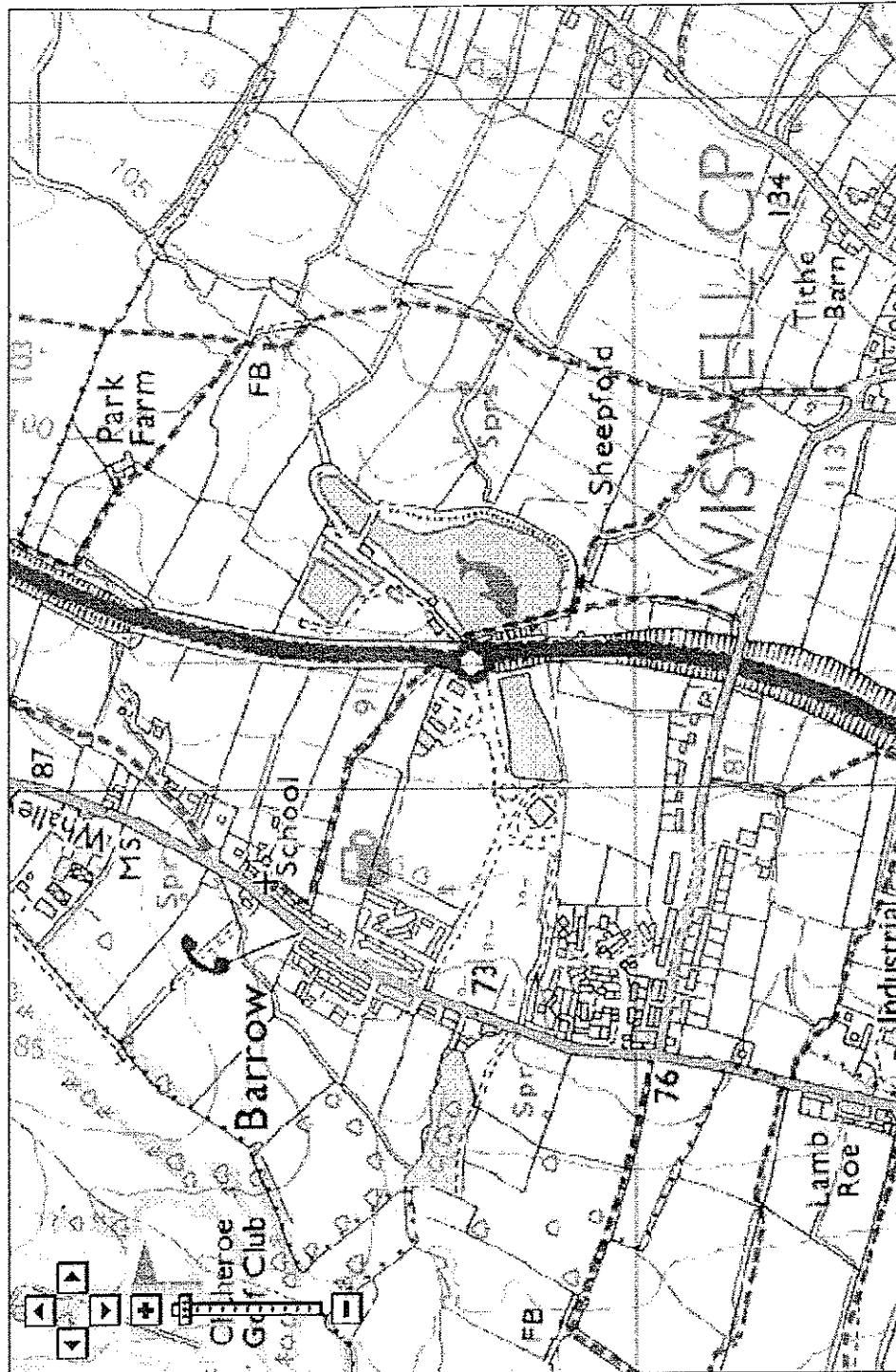
Page 1 of 1 (1 result for selected location)

Site name	Site address	First waste received	Last waste received
Barrow Lake	Whalley Road, Whalley, Blackburn, Lancashire		

Type of waste buried

A 'Yes' is shown in the right hand box where there is evidence that the type of waste may have been buried. If there is no evidence or no data currently available, then the box is left blank.

Inert:
Waste which remains largely unaltered once buried such as glass, concrete, bricks, tiles, soil and stones



Map legend

Click on a feature for details of that site

☒ Industrial Pollution

- ☒ Fuel & Power
- ☒ Metal
- ☒ Mineral
- ☒ Chemical
- ☒ Waste
- ☒ Water
- ☒ Radioactive
- ☒ Associated
- ☒ Other
- ☒ Not Classified

☒ Industrial Operator Scores (OPRA)

★ Permitted Sites

☒ Pollution Incidents

▲ Major

▲ Significant

Enter a postcode or place name:



Other topics for this area...

[Risk of Flooding from Rivers and Sea](#)

Risk of Flooding from Rivers and Sea

Text only version

Map of X: 374,145; Y: 438,264 at scale 1:10,000

Map legend

Click on the map to see what is the Risk of Flooding at a particular location.

☒ Flood Maps

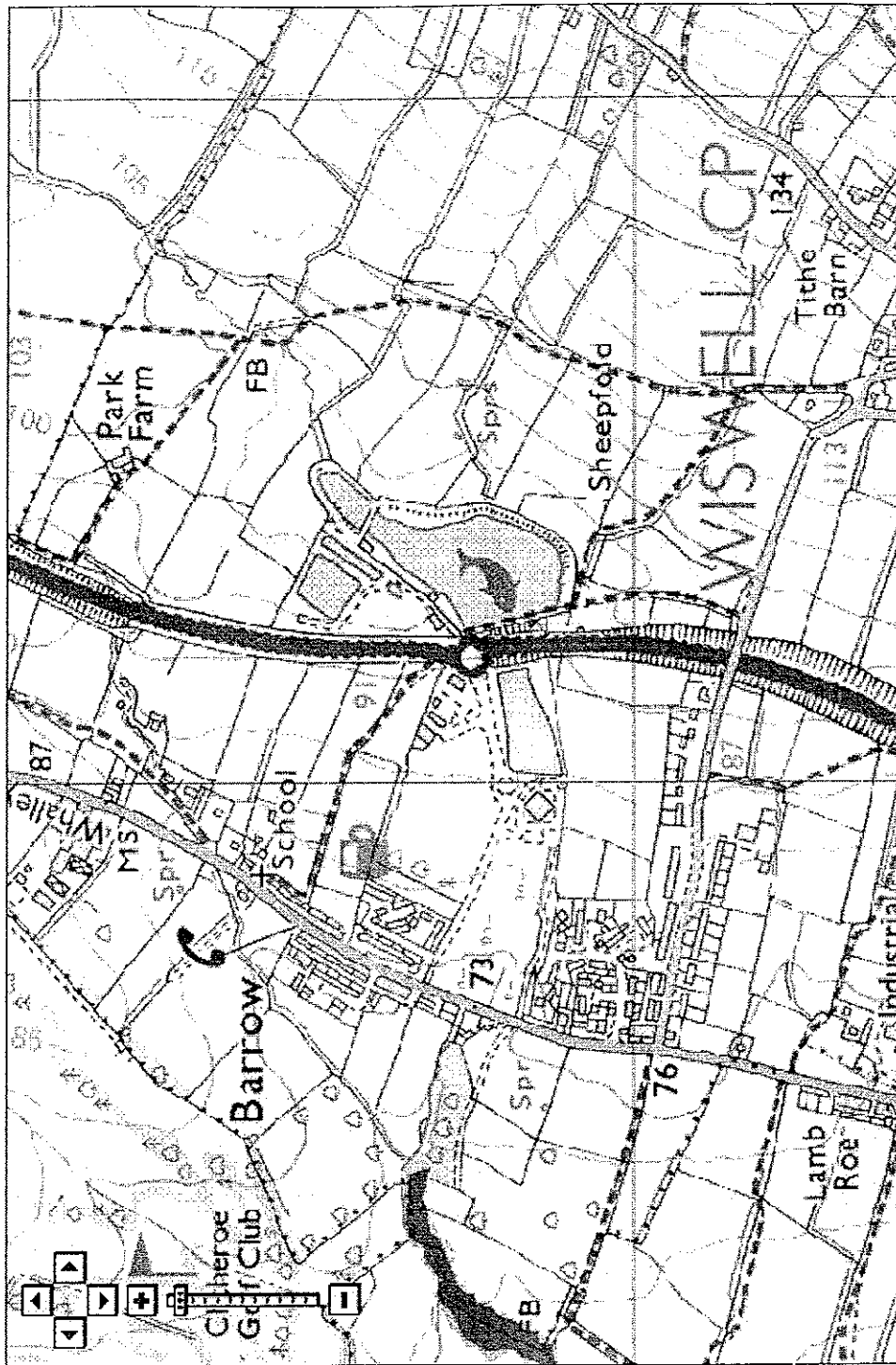
Flooding from rivers or sea without defences

Extent of extreme flood

Flood defences

Areas benefiting from flood defences

Main rivers



Enter a postcode or place name:

Other topics for this area...

Risk of Flooding from Reservoirs

Risk of Flooding from Reservoirs



Map legend

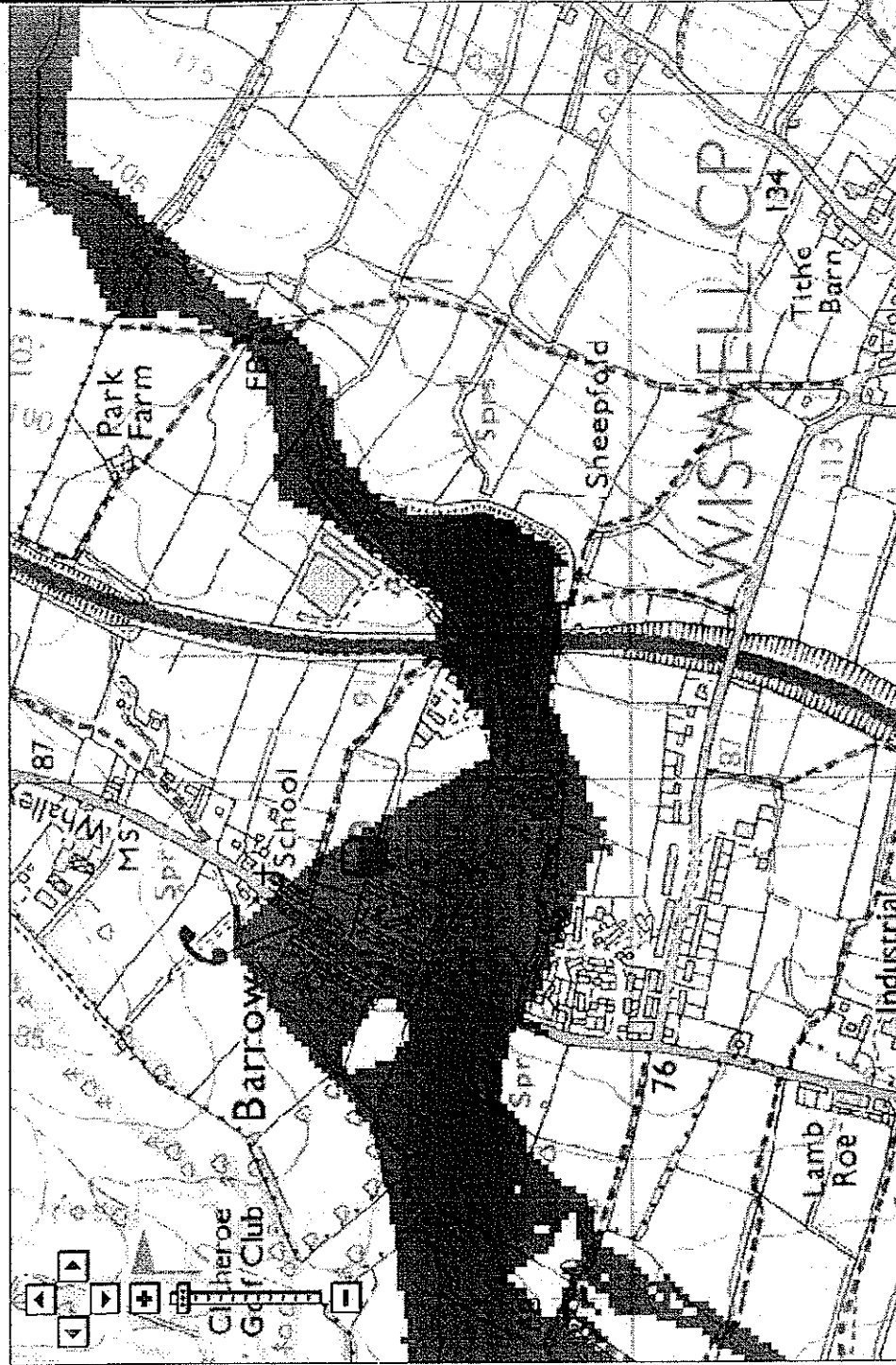
Click within the extent of flooding to see which reservoirs affect this area

☒ Risk of Flooding from Reservoirs

☐ Maximum extent of flooding

Map of X: 374,145; Y: 438,264 at scale 1:10,000

Text only version



Enter a postcode or place name:



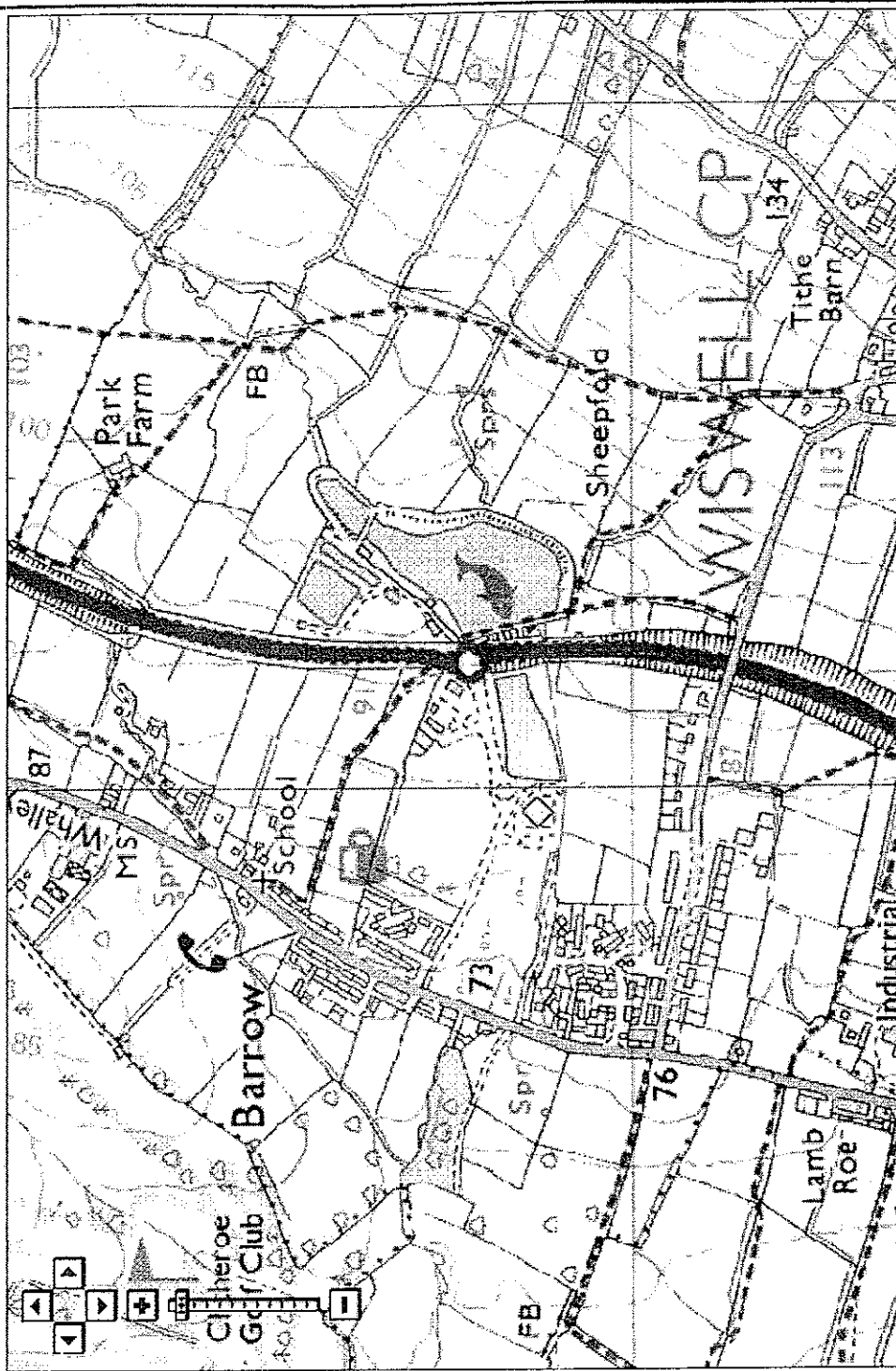
Other topics for this area...

Groundwater

Text only version

Map of X: 374,145; Y: 438,264 at scale 1:10,000

Map legend	
The map displays the extents of groundwater zones	
☒	Groundwater source protection zones
	Inner zone (Zone 1)
	Outer zone (Zone 2)
	Total catchment (Zone 3)
	Special interest (Zone 4)
☒	Aquifer Maps - Superficial Deposits Designation
	Principal
	Secondary A
	Secondary B
	Secondary (undifferentiated)
	Unknown (lakes and land slip)



APPENDIX E

RISK ASSESSMENT METHOD

Table 6.3 Classification of Consequence

Classification	Definition	Examples
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 significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem (note: the definitions of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied)
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 significance of pollution). A significant change in 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).	Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the Draft Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

Table 6.4 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 pollution 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 such an event would take place, and is 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.

Table 6.5 Comparison of consequence against probability

		consequence			
		severe	medium	mild	minor
probability	high likelihood	very high risk			moderate/low risk
	likely			moderate/low risk	low risk
	low likelihood		moderate/low risk	low risk	very low risk
	unlikely	moderate/low risk	low risk	very low risk	very low risk

Table 6.6 Description of the classified risks and likely action required

Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard OR, there is evidence that severe harm to a designated receptor is currently happening This risk, if realised, is likely to result in a substantial liability Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability Urgent investigation (if not undertaken already) is required and remedial work may be necessary in the short term and are likely over the longer term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, if it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Site 2, Ribble Valley Enterprise Park, Barrow Bridge, Clitheroe
Phase 1 Land Quality Assessment

APPENDIX F PHOTOGRAPHS



Photo 1 – NW grassland site from centre of site, looking NW. Mature trees along boundary of site.



Photo 2 – SW area of site, looking SW. Mature trees and hedges within site as well as along boundary.

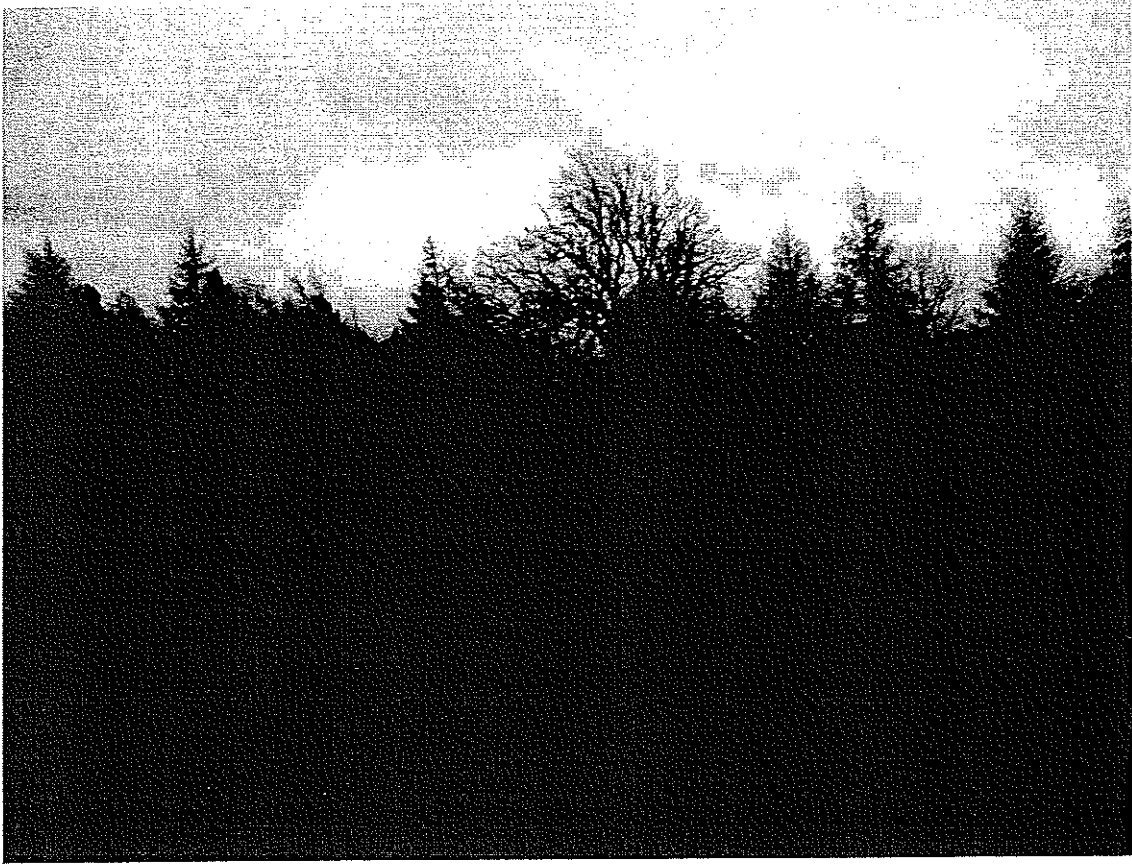


Photo 3 – S grassland area of site, looking S with housing in background.



Photo 4 – N area of site, looking N with mature tree in foreground.



Photo 5 – NE corner of site, looking NE.



Photo 6 – N area of site with access road and "Printworks" office building (left) and pond/reservoir in background, looking N.



Photo 7 – N area of site, looking N with “Printworks” new office building to N of site (on site of infilled mill ponds).



Photo 8 – Semi-mature vegetation within central/western area of site, looking SW.



Photo 9 – W area of site, looking W with residential development in background.



Photo 10 – Bridge over engineered open channel watercourse running along N boundary, looking N.

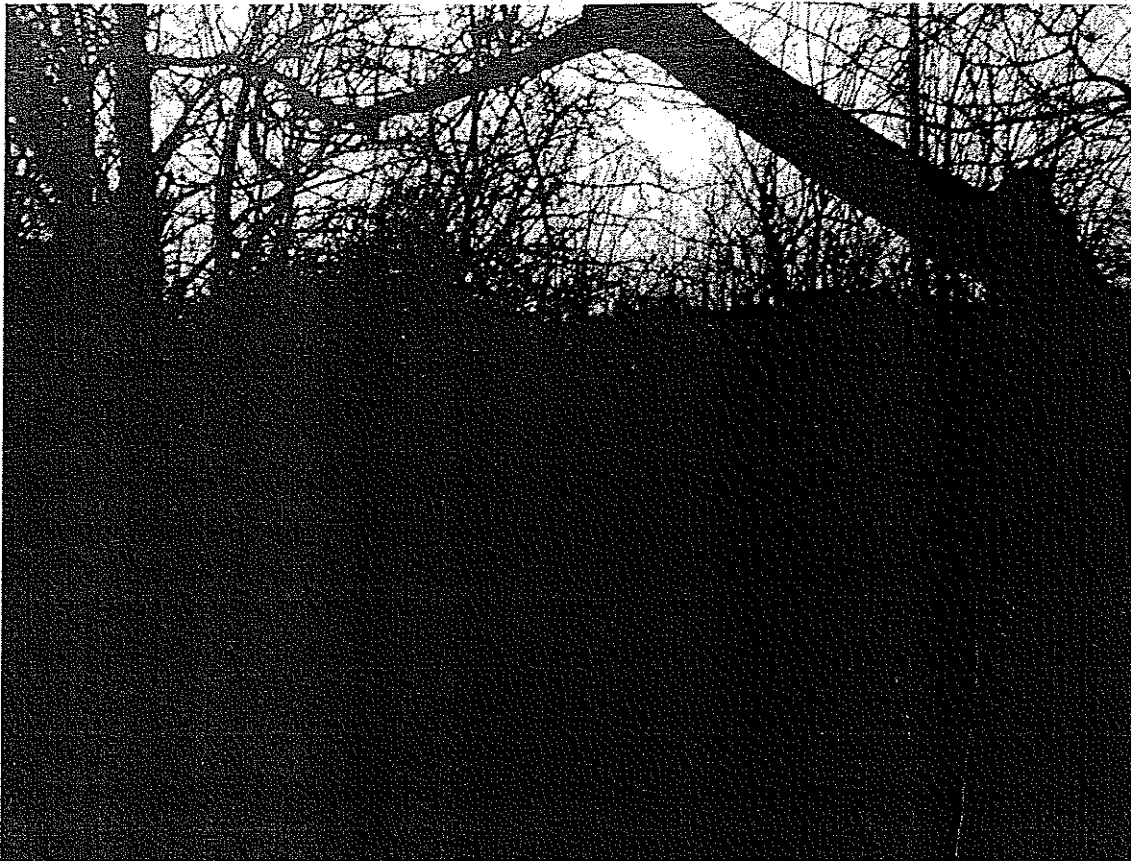


Photo 11 – Watercourse along N boundary of site, looking NW.



Photo 12 – E area of site, looking SE.



Photo 13 – Access road into site, looking N with pond/reservoir (foreground) and petrol station (background)

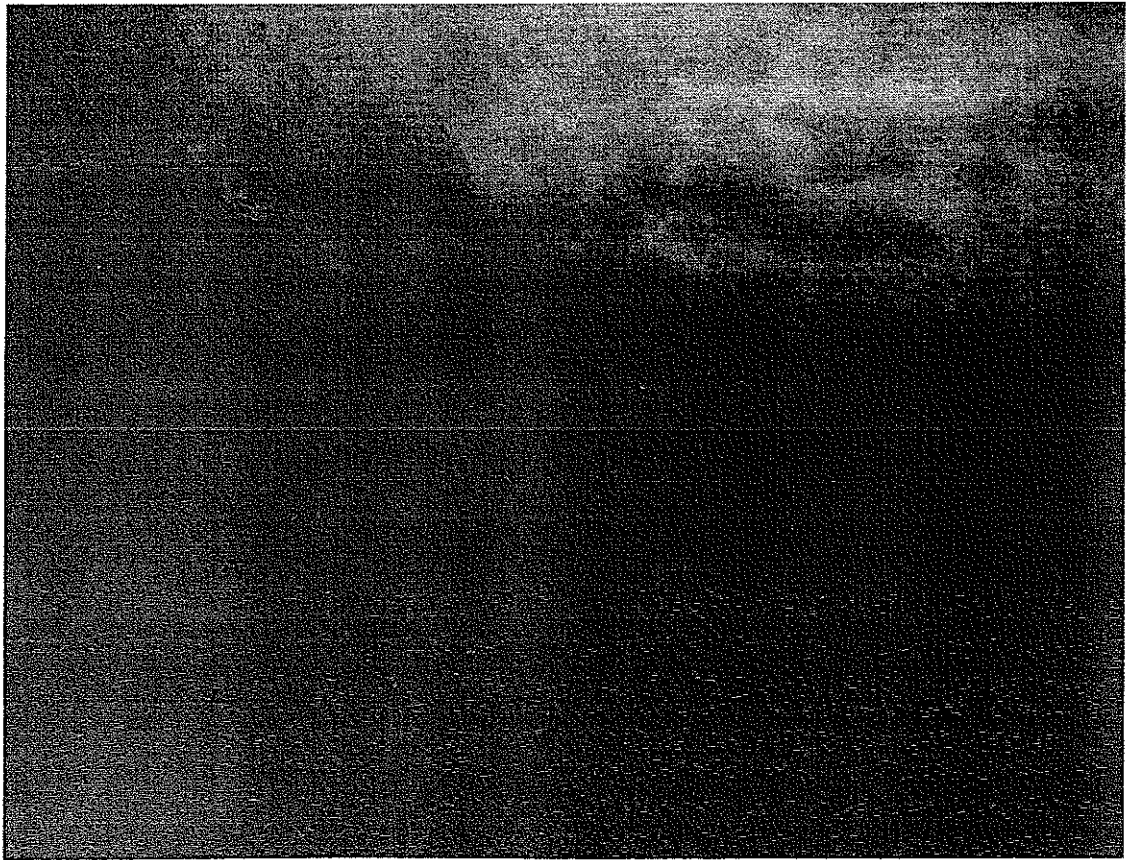


Photo 14 – E area of site (background), looking S taken from Holm Road over pond/reservoir.

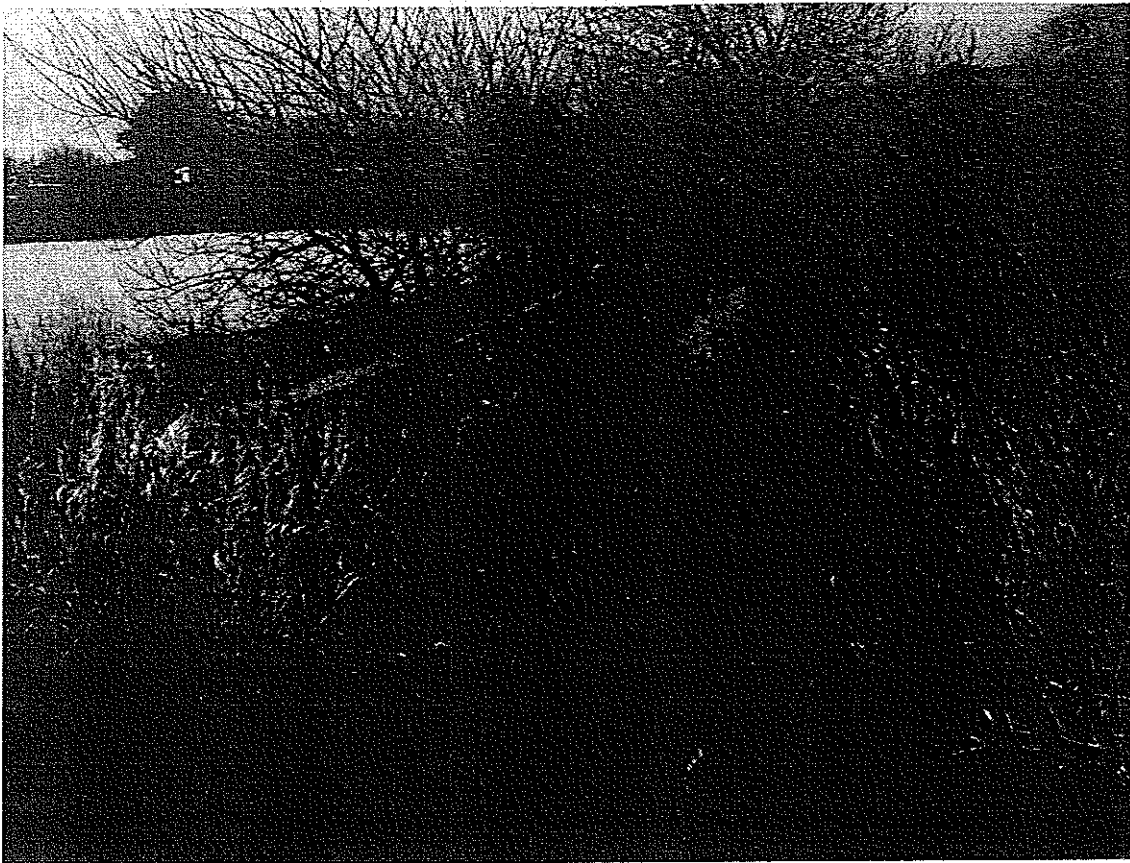


Photo 15 – Watercourse along N border of site, looking E, taken from bridge culvert access road.



Photo 16 – Access road in off Holm Road, looking S, currently servicing car park for "Printworks" office building (right).