

Minor exceedences of benzo (a) pyrene were also recorded in made ground in WS8 at 0.10m-0.40m and WS9 at 0.50m-0.80m. It has not been proposed to remove the soils from these areas and therefore a potential pollutant linkage exists.

Six soil samples were also submitted for speciated semi volatile organic compounds (SVOCs), the results of which are included in Appendix H and summarised in Tables 12 and 13

Contaminant	GAC mg/kg	Range of Results in mg/kg Made Ground (No. tested)	Pass/Fail (Failed in mg/kg)	Range of Results in mg/kg Natural (No. tested)	Pass/Fail (Failed in mg/kg)
Acenaphthene	7.1	<0.05 - 3 (4)	Pass	<0.05 - 0.07 (2)	Pass
Acenaphthylene	0.52	<0.05 - 0.3 (4)	Pass	<0.05 (2)	Pass
Anthracene	1,300	0.10- 8.94 (4)	Pass	<0.03 - 0.09 (2)	Pass
Benz(a)anthracene	5.2	0.5- 39.2 (4)	Fail WS7 @ 0.5-1.0 (39.2)	<0.06 - 0.8 (2)	Pass
Benzo(a)pyrene	0.95	0.3 - 48.0 (4)	Fail WS7 @ 0.5-1.0 (48.0) WS8 @ 0.1-0.4 (2.0) WS9 @ 0.5-0.8 (2.0)	<0.07 - 0.4 (2)	Pass
Benzo(b)fluoranthene	9.3	<0.6 - 57.7 (4)	Fail WS7 @ 0.5-1.0 (57.7)	0.1 - 0.7 (2)	Pass
Benzo(ghi)perylene	2,300	<0.5 - 24.4 (4)	Pass	0.08 - 0.4 (2)	Pass
Benzo(k)fluoranthene	9.6	<0.2 - 16.3 (4)	Fail WS7 @ 0.5-1.0 (16.3)	<0.05 - 0.2 (20)	Pass
Chrysene	80	0.7 - 38.1 (4)	Pass	0.2 - 0.8 (2)	Pass
Dibenzo(ah)anthracene	0.93	0.2 - 4.9 (4)	Fail WS7 @ 0.5-1.0 (4.9)	<0.1 (2)	Pass
Fluoranthene	13	2 - 44.6 (4)	Fail WS7 @ 0.5-1.0 (44.6)	0.1 - 2 (2)	Pass
Fluorene	85	0.08 - 2 (4)	Pass	<0.06 - 0.1 (2)	Pass
Indeno(123cd)pyrene	9.1	0.4 - 19.8 (4)	Fail WS7 @ 0.5-1.0 (19.8)	0.2 (5)	Pass
Naphthalene	1.5	0.2 - 1 (4)	Pass	0.1 - 0.3 (2)	Pass
Phenanthrene	790	1 - 33.5 (4)	Pass	0.2 - 1 (2)	Pass
Pyrene	130	2 - 32.8 (4)	Pass	0.2 - 2 (2)	Pass
Phenol	440	0.2 (4)	Pass	0.1 (2)	Pass

Table 12: Summary of Soil Test Results – SVOC

Table 13 lists the maximum concentration of detected SVOC which have no GAC available

Contaminant	Maximum in mg/kg Made Ground	Maximum mg/kg Natural
1,3-Dinitrobenzene	0.05	-
1,4-Dinitrobenzene	0.1	-
4-Chloroaniline	1	0.3
1-Methylnaphthalene	0.8	0.4
2-Methylnaphthalene	0.9	0.5
Di-n-butylphthalate	0.1	-
Di-n-butylphthalateBis(2-ethylhexyl)phthalate	0.9	-
Bis(2-chloroisopropyl) ether	0.2	-
Carbazole	2	-
Dibenzofuran	1	0.2
Dipethylphthalate	0.02	0.06
Pentachlorophenol	86.2	-
- not detected		

Table 13: Maximum Concentrations of SVOC for which no GAC are available

PAH concentrations were measured by GCMS in both a PAH suite and SVOC suite. For the purposes of this assessment the greatest recorded concentration of PAH was assumed to be representative of the sample.

In addition pentachlorophenol was measured at a concentration of 86.2mg/kg in WS7 at 0.50m to 1.00m and 56.6mg/kg in WS8 at 0.10m to 0.40m. It is intended to remove the affected soil in WS7 and since this is a category B2 carcinogen, affected soil from WS8 should also be removed or isolated.

5.2.2 Uptake of Contaminants by Vegetation Potentially Inhibiting Plant Growth

The results have been compared with the GAC presented in Appendix K for this linkage. The results are summarised in Table 14 and indicate very marginal exceedences of zinc in WS7 at 0.50m-1.00m and nickel in WS5 at 1.00m-1.50m. As discussed in Section 5.2.1, it is understood that the soils in the vicinity of WS7 will be removed prior to development. The exceedence of nickel in WS5 is considered so marginal that it can be discounted, as all other samples of the natural soils returned concentrations below the GAC values. It is therefore considered that no potential pollutant linkage will exist with regard to inhibition of plant growth.

Contaminant	pH (units)	GAC mg/kg	Range of Results in mg/kg <u>Made Ground</u> (No. tested)	Pass/Fail (Failed above in mg/kg)	Range of Results in mg/kg <u>Natural</u> (No. tested)	Pass/Fail (Failed above in mg/kg)
Zinc	>6	200	34-203 (4)	Fail WS7 @ 0.5-1.0m (203)	97-131 (5)	Pass
Copper	>6	135	19-110 (4)	Pass	29-34 (5)	Pass
Nickel	>6	75	19-45 (4)	Pass	33-76 (5)	Fail WS5 @ 1.0-1.5m (76)

Table 14: Summary of Soil Test Results – Phytotoxic Effects

5.2.3 Permeation of Plastic Utilities

The results have been compared with the GAC presented in Appendix K for this linkage, and indicate elevated arsenic concentrations in several locations, although none exceed the GAC. The GAC is, in this case, for the protection of residents during their lifetime, arsenic is not likely to permeate plastic pipes. Provision of adequate PPE will mitigate any potential risk to site workers when laying the utility pipes.

Elevated lead, mercury, PAH and petroleum hydrocarbon concentrations have been recorded in WS7 at 0.50m-1.00m. Although the PAH and petroleum hydrocarbon concentrations recorded could pose a risk via permeation of plastic utilities, this material is intended for removal and a relevant pollutant linkage associated with permeation of plastic utilities is not therefore considered to exist.

5.2.4 Leaching and Migration of Dissolved Phase Contaminants to Minor Aquifer and off-site Surface Water Bodies

Three groundwater samples were tested for metals, speciated TPH and speciated PAH. The results are presented in Appendix I. The concentrations have been compared with the GAC for minor aquifers, included in Appendix K. These, although very conservative, were considered the most appropriate GAC owing to the site's location on a minor aquifer.

The comparison indicates marginal exceedences of some GAC values, including the worst case values for chromium, copper, zinc (based on the Freshwater Environmental Quality Standards for all fish life and dependant upon hardness range) and selenium.

Given the marginal concentrations of contaminants present, that the site is underlain by clay (relatively impermeable), and that the closest surface water receptor is 200m from the site (and therefore dilution will almost certainly result in concentrations being below these criteria before they reach the receptor), it is considered highly unlikely that the

concentrations encountered pose a risk to controlled waters. Furthermore, it is very unlikely that the lower range conditions exist in the nearby surface water features.

5.2.5 Ground Gas

In order to assess the significance of ground gases at the site, measured concentrations and flow rates have been used to derive GSVs, as discussed in section 4.2.3 above. For the purposes of this assessment it has been assumed that the dwellings will have a ventilated sub-floor void. As such, the GSVs have been compared with the generic Traffic Lights, as presented within the NHBC ground gases guide ⁽³⁾.

The GSV for both methane and carbon dioxide is calculated by multiplying the maximum borehole flow rate by the maximum gas concentration. This calculation is automatically generated in the NHBC GSV worksheets presented in Appendix L, which also indicate the level of gas protection measures required, if any.

The results have characterised the site as Green, indicating a negligible gas regime for which gas protection measures are not required. However, the depleted oxygen concentrations pose a potential risk to construction workers from asphyxiation.

5.3 REFINED CONCEPTUAL SITE MODEL

Following intrusive investigations, subsequent monitoring and the GQRA, it is now possible to refine the outline conceptual site model as detailed in Section 3.10, given our better understanding of the site.

The identified potential contaminants and receptors have been reconsidered and are presented in Table 15 below.

Potential Source	Potential Receptor	Possible Pathway	Likelihood	Severity	Risk
Organic and inorganic soil and groundwater contamination and leachate associated with fill materials on or close to the site, including former pond	Off site surface water features	Surface water run-off, groundwater migration	Unlikely	Mild	Very low The nearest surface water feature is 200m from the site (a land drain); this is not considered sensitive and there is no evidence to suggest that any contamination is present on-site. The closest river is 700m from the site.
	Perched water, Groundwater (minor aquifer)	Vertical and horizontal migration of perched water and groundwater	Unlikely	Medium	Very Low Perched water is generally not present at the site, and very little contamination has been encountered. It is not considered that perched water or groundwater is contaminated (the low permeability superficial deposits beneath the site will reduce the likelihood of the pathway being realised).
	Site operatives	Vapour and dust inhalation, human ingestion, and dermal contact	Unlikely	Medium	Moderate The ashy layer encountered at WS7 and evident across part of the site has elevated PAH, lead, PCP and other compounds.

Potential Source	Potential Receptor	Possible Pathway	Likelihood	Severity	Risk
	Future site occupants	Vapour and dust inhalation, human ingestion and dermal contact	Likely	Medium	Moderate Elevated PAH lead and other organic compounds are evident in the ashy material, which is present at WS7 and across part of the site. Removal of this material will reduce the potential risk from this pathway to future residents.
	Neighbouring residents	Groundwater and leachate migration in permeable soils	Unlikely	Medium	Low The results of the laboratory analyses on soil samples have generally returned negligible to low concentrations of contaminants. Furthermore, site is underlain by impermeable superficial deposits, thereby reducing the likelihood of migration of any contaminants off-site.
Hazardous ground gases	Site operatives	Ground gas migration in permeable soils	Low likelihood	Severe	Moderate Although concentrations of hazardous ground gases are low, depleted oxygen concentrations have been recorded, representing an asphyxiation hazard unless precautions are taken.
	Future site occupants	Ground gas migration in permeable soils	Unlikely	Medium	Low Concentrations of hazardous ground gases have been recorded to be low, and are therefore not considered to pose a risk to human health.
	Neighbouring residents, building infrastructure & services	Ground gas migration in permeable soils	Unlikely	Medium	Low Concentrations of hazardous ground gases have been recorded to be low, and are therefore not considered to pose a risk to human health.

Table 15: Risk Estimation for Refined Conceptual Model

The refined conceptual model identifies the following potential pollutant linkages:

- Vapour and dust inhalation, human ingestion, and dermal contact by site operatives and future site occupants; and
- Inhalation of oxygen-depleted air by site operatives.

6. GEOTECHNICAL SITE ASSESSMENT

It is proposed to construct low-rise residential properties at the site. The aim of the geotechnical investigation is to ascertain ground conditions at the site and provide sufficient data regarding the soil parameters to enable the design of foundations, floor slabs and infrastructure to be carried out. This aim was achieved by:

- Drilling of nine probeholes to a maximum depth of 4.00m bgl using a competitor (windowless sample) rig;
- Drilling of one cable percussive borehole to 10.80m bgl using a shell and auger drilling rig;
- Excavation of ten hand-dug inspection pits to a maximum depth of 0.50m bgl;
- Completion of in-situ standard penetration tests (SPT); and

- Recovery of soil samples for inspection and laboratory analyses

6.1 METHODOLOGY

Information from the probeholes, borehole and hand-dug pits was used for the geotechnical assessment. Details of the intrusive investigation and the ground conditions encountered are provided in Sections 4.1 and 4.2. The methodology for the geotechnical intrusive investigation is presented below.

6.1.1 *In-situ Testing*

SPTs were carried out to assess the relative density of the strata. The values of penetration resistance (N values) are given in the probehole and borehole records (Appendices E and F, respectively).

6.1.2 *Laboratory Analysis*

pH and water soluble sulphate analysis was carried out on four samples of the made ground and five samples of the natural soils. An assessment of the potential for chemical attack on buried concrete based on current BRE guidance ⁽⁴⁾ was carried out.

The results of the laboratory pH and sulphate analysis are included in Appendix H.

6.1.3 *Assessment of Mining*

The mining and ground stability report, contained within the Envirocheck data (see Appendix C), indicates the property is not within an area likely to be affected by coal mining or brine subsidence. It is considered, therefore, that intrusive works to investigate mining issues are not required.

6.2 CHEMICAL ATTACK ON BURIED CONCRETE

This assessment of the potential for chemical attack on buried concrete is based on current BRE guidance ⁽⁴⁾. The desk study and site walkover indicate that, for the purposes of this assessment of the aggressive chemical environment, the site should be considered as a Brownfield site that has not been subject to previous industrial development and does not contain pyrite. A suite of chemical analyses appropriate to this site classification was carried out on soil samples, the results of which are included in Appendix H.

The maximum water-soluble sulphate content in soil of 0.09g/l has been taken as the characteristic value. As this value is below the limiting value of 3.0g/l consideration of magnesium is not required. Based on Table 2 in the BRE guidance, result one for Design Sulphate Class for the site is DS-1.

The maximum water-soluble sulphate content in groundwater of 0.081g/l has been taken as the characteristic value. As this value is below the limiting value of 3.0g/l, consideration of magnesium is not required. Result two for Design Sulphate Class for the site is therefore DS-1.

Although for the purposes of this assessment the site has been classified as Brownfield, the pH is nowhere less than the limiting value of 5.5. The third assessment of Design Sulphate Class specific to Brownfield sites is therefore not required in this case.

From consideration of results one and two, a Design Sulphate Class of DS-1 may be adopted for the site. It has been assumed that groundwater conditions are mobile. From consideration of the characteristic pH value, an Aggressive Chemical Environment for Concrete classification of AC-1 may be assumed for design purposes.

6.3 FOUNDATION DESIGN

Based on inspection of the soils encountered in the probeholes and boreholes, as well as the results of the in-situ testing and the anticipated structural loads for the proposed two-storey buildings, it is considered that the majority of the housing units may be supported on deep strip or trench fill foundations taken down through any made ground and soft soils and placed on the underlying firm or firm to stiff clay. The clay in BH1 was found to be soft to a depth of approximately 9m. Following discussions with our Structural Engineering colleagues in RSK Land & Development Engineering Limited (RSK LDE) it is therefore recommended that, in this area, a wide reinforced strip or semi rigid raft foundation solution be adopted. There is no obvious reason for the presence of lower strength soils in BH1 and it is possible that other areas of soft clays may be present, which will also require variation to traditional foundation. The natural clay soils generally had a soft upper layer but became firm or firm to stiff at depths of between 1.40m and 1.80m, which represent the minimum foundation depths. Careful inspection of all foundation excavations should be made by Taylor Wimpey Engineers and/or your consultant Structural Engineers, RSK LDE. This should ensure that foundations are constructed on clay soils with firm or firm to stiff consistency.

At one location (WS7) a layer of peat was recorded between depths of 1.00m and 1.50m underlain by soft clay to 2.10m. This location is in the vicinity of the former pond and the organic soils may relate to its presence. In this area it is understood that the made ground deposits are to be removed and it is recommended that the underlying peat and soft clays are also removed. These natural soils may be suitable to be retained on site. There are two foundation options for this area. The first would be infilling the ensuing void with well-compacted granular fill and constructing the buildings on semi-rigid raft foundations. The alternative would allow infilling with suitable site arisings without engineering control but with adoption of piled foundations.

When excavation and off-site removal of the made ground over the former pond area is completed it is important that this is inspected and supervised. This work should include excavation of the underlying peat layer and inspection should confirm the extent of this material. The potential compressibility of the peat means that it is unsuitable to remain beneath any built structure, service runs or road pavement.

Where trees are present on site or are to be planted, foundation depths should be in accordance with the guidance given in NHBC Chapter 4.2 Building near trees ⁽⁵⁾. The results of the plasticity index testing is not yet available and at this stage minimum foundation depths should be based on the Tables in NHBC Chapter 4.2 based on soils of a high volume change potential

Ground bearing floors may only be used where made ground is less than 600mm in thickness and where the bearing capacity of the ground is suitable (no peat, organic soils or very soft clays).

Foundations may generally be designed to an allowable net bearing pressure of 100kN/m². All formations should be inspected and if any pockets of soft to firm clay are found these should be excavated and the foundation locally deepened

6.4 ROAD CONSTRUCTION

Based upon inspection and the widespread presence of soft cohesive soils, road pavements should be designed on a California Bearing Ratio (CBR) value of less than 2%. Any loose or soft material at formation level (in particular the infilled pond material) should be removed and replaced with well-compacted granular material. All formations should be compacted to make good any disturbance caused by excavation. It is recommended that the formation not be exposed for any period of time during inclement weather. It may be beneficial to carry out in situ CBR tests to measure values at anticipated road pavement levels.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 ENVIRONMENTAL

The relevant pollutant linkages that require further action based on the available information are:

- Vapour and dust inhalation, human ingestion, and dermal contact by site operatives and future site occupants; and
- Inhalation of oxygen-depleted air by site operatives

Elevated lead, PAH and pentachlorophenol (PCP) concentrations were recorded in the made ground in WS7. It is understood that Taylor Wimpey intends to remove and dispose of this material, in which case no pollutant linkage exists in this area.

Elevated benzo(a)pyrene and other PAH concentrations were recorded in the made ground in WS8 and WS9 and elevated PCP in WS8. The elevated PAH and other compounds appear to be associated with a layer of ashy material, possibly placed as a levelling material under the playing fields. If this ashy layer were removed from this area, the potential source to future residents via contact with garden soil would be removed. If the ashy layer were to remain in place, and given that it appears to be present at several locations, it is recommended, at this stage, that a 600mm thickness of clean cover material be placed in private garden areas.

Gas monitoring was undertaken over six monitoring visits. The data have been used to assess the gas screening values for the site using NHBC guidance. The assessment indicates that gas protection measures are not required at the site. However, the depleted oxygen concentrations pose a potential risk to construction workers from asphyxiation. It will therefore be necessary to continually monitor excavations for oxygen concentrations and a policy of no man-entry into excavations should be adopted unless suitable conditions are proven by gas monitoring.

7.2 GEOTECHNICAL

The results of the pH and sulphate analysis indicate that a Design Sulphate Class of DS-1 may be adopted for the site, and that an Aggressive Chemical Environment for Concrete classification of AC-1 may be assumed for design purposes.

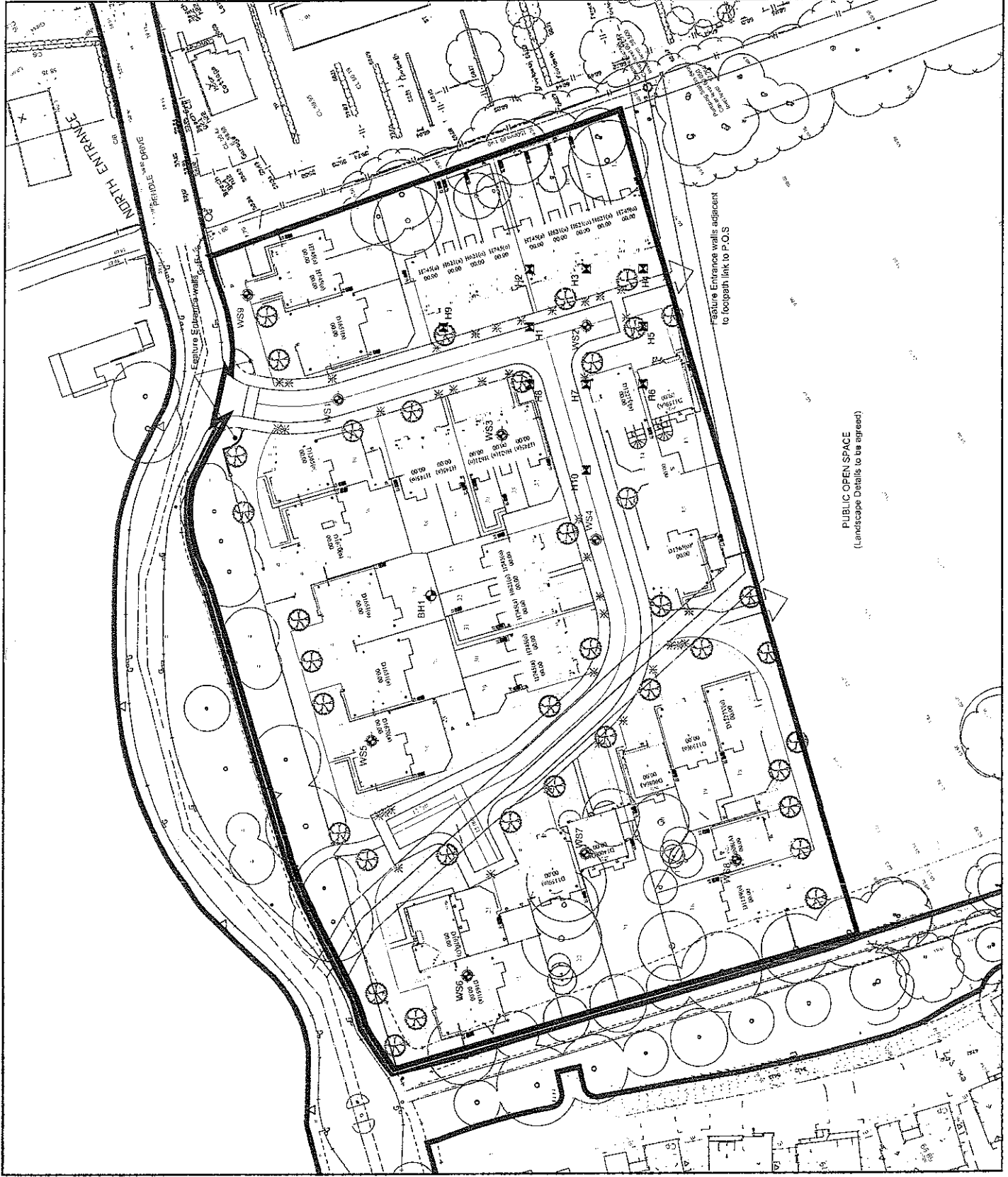
For the majority of the site, it is likely that deep strip and trench fill foundations will be suitable. All foundations should be taken down through any made ground and placed on the underlying firm clay. Foundations may be designed to an allowable net bearing pressure of 100kN/m². In the vicinity of the former pond foundation options include engineered backfill with a semi-rigid raft or piles.

It is anticipated that road pavements should be designed on a CBR value of less than 2%. Any loose material at formation level should be removed and replaced with well-compacted granular material.

8. REFERENCES

1. Environment Agency Model Procedures for the Management of Contaminated Land Contaminated Land Report Number 11 (CLR11). September 2004.
2. Environment Agency. Guidance on Requirements for Land Contamination Reports Version 1, July 2005.
3. Boyle, RA, and Witherington, PJ (2007, Edition 04) "Guidance On Evaluation Of Development Proposals On Sites Where Methane And Carbon Dioxide Are Present", National House Builders Council.
4. BRE Special Digest 1, Concrete in Aggressive Ground, BRE, Third Edition 17 June 2005.
5. NHBC Standards - Chapter 4.2, Building near Trees, National House Building Council, (current version effective 1 September 2006)

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LEGEND:

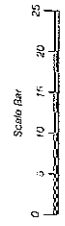
- WS Window sampling location
- BH Borehole location
- HP Hand-dug pit location

REV	DATE	DESCRIPTION	BY	CHKD	DATE
A	09.03.10	FIRST ISSUE	HD	IMP/SMR	



RSK
RISK SOLUTIONS
100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000

CUSTOMER	TAYLOR WIMPEY MANCHESTER
PROJECT	CALDERSTONES PARK, WALSLEY
TITLE	PROPOSED SITE LAYOUT INTRUSIVE INVESTIGATION LOCATION
JOB No.	16372
DRAWING FILE	16372-1(00)D002A
DATE	09.03.10
CONTRACT NO.	
REV	A
FIGURE 2	



Site plan of the proposed 100-unit residential development at 10000 10th Avenue, North. The plan shows a large rectangular lot with a curved boundary on the right. The development is divided into several blocks of units, with a central area designated as "PUBLIC OPEN SPACE (Landscape to be agreed)". A "NORTH ENTRANCE" is marked on the right side. The plan includes numerous circular symbols representing trees and various annotations for landscaping and site features.

Home Name	No. Births	Home Name	SOFT	No. Home	Total SOFT	
H-743	✓	Mamas	621	13	4658	
D-968	✓	Diaborn	508	8	3816	
D-1919	4	Diaborn	1955	7	2458	
D-1535	2	Diaborn	1385	5	1708	
D-1000	4	Diaborn	1400	7	2730	
D-1757	✓	Diaborn	1651	4	6624	
D-1670	✓	Diaborn	1870	5	5910	
SINCE LAST REPORT					39	33923
Deaths (Total 660)					11	853
Sp. Value					12955	793

[illegible]

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FIGURES

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APPENDIX A

Summary of Legislation and Policy Relating to Contaminated Land

Summary of Legislation and Policy Relating to Contaminated Land

Part IIA of the Environmental Protection Act (EPA) and its associated Contaminated Land Regulations 2000 (SI 2000/227), which came into force in England on 1 April 2000, are the basis for the current regulatory framework and form the statutory regime for the identification and remediation of contaminated land.

Part IIA of the EPA 1990 defines contaminated land as 'any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused'. Controlled waters, defined by the Water Resources Act, are considered all groundwater, inland waters and estuaries.

The intention of the EPA 1990 Part IIA is to deal with contaminated land issues that are considered to cause significant harm, on land that is not undergoing development, (see circular 2-2000 for definitions of what is significant harm, website link - <http://www.defra.gov.uk/environment/land/contaminated/circ2-2000/index.htm>).

The Water Framework Directive 2000/60/EC (WFD) legislation aims to deliver long-term protection of the water environment and to improve the quality of all water bodies, including rivers, wetlands, coasts, estuaries, lakes, man-made structures and groundwater.

The Water Resources Act 1991 introduces an offence to cause or knowingly permit pollution of controlled waters. The Act provides the Environment Agency with powers to implement remediation necessary to protect controlled waters and recover all reasonable costs of doing so. The Groundwater Regulations, 1998, aim to complement EPA 1990. These regulations give the Environment Agency the power to *prevent* the discharge of List I substances and *restrict* the discharge of List II substances to groundwater.

Contaminated land is often dealt with through planning because of land redevelopment. This approach is documented in Planning Policy Statement: Planning and Pollution Control PPS23, which states that it remains the responsibility of the landowner and developer to identify land affected by contamination and carry out sufficient remediation to render the land suitable for use. The overall aim of the planning and pollution control policy is to promote the sustainable and beneficial use of land (in particular, encouraging reuse of previously developed land in preference to greenfield sites). Within this aim, polluting activities that are necessary for society and the economy should be so sited and planned, and subject to such planning conditions, that their adverse effects are minimised and contained to within acceptable limits.

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APPENDIX B

Service Constraints

**RSK STATS GEOCONSULT LIMITED
SERVICE CONSTRAINTS**

- 1 This report and the site investigation carried out in connection with the report (together the 'Services') were compiled and carried out by RSK STATS Geoconsult Limited (RSK) for Taylor Wimpey Manchester (the 'client') in accordance with the terms of a contract between RSK and the "client". The Services were performed by RSK with the skill and care ordinarily exercised by a reasonable environmental consultant at the time the Services were performed. Further and in particular the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources including financial and manpower resources agreed between RSK and the client.
- 2 Other than that expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
- 3 Unless otherwise agreed the Services were performed by RSK exclusively for the purposes of the client. RSK is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**
- 4 It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date hereof, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
- 5 The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
- 6 The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK Limited. RSK is not liable for the existence of any condition the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials.
- 7 The Services are based upon RSK's observations of existing physical conditions at the Site gained from a walkover survey of the site together with RSK's interpretation of information including documentation obtained from third parties and from the client on the history and usage of the site. The Services are also based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely. The Services clearly are limited by the accuracy of the information, including documentation reviewed by RSK and the observations possible at the time of the walkover survey. Further, RSK was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services. RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the client and RSK.
- 8 The phase II or intrusive environmental site investigation aspects of the Services is a limited sampling of the site at pre-determined borehole and soil vapour locations based on the operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the soil and groundwater conditions together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and RSK] [based on an understanding of the available operational and historical information] and it should not be inferred that other chemical species are not present.
- 9 Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on and surrounding the site.

320110837P

APPENDIX C

Envirocheck Report (CD)

320110837P

Envirocheck[®] Report:

Geology 1:50,000 Maps

Order Details:

Order Number:

29946638_1_1

Customer Reference:

16372

National Grid Reference:

372540, 437330

Slice:

A

Site Area (Ha):

1.25

Search Buffer (m):

1000

Site Details:

3 Pendle Drive

Whalley

CLITHEROE

Lancashire

BB7 9JT

Client Details:

MS G Harrison

RSK STATS Geoconsult Ltd

Spring Lodge

172 Chester Road

Helsby

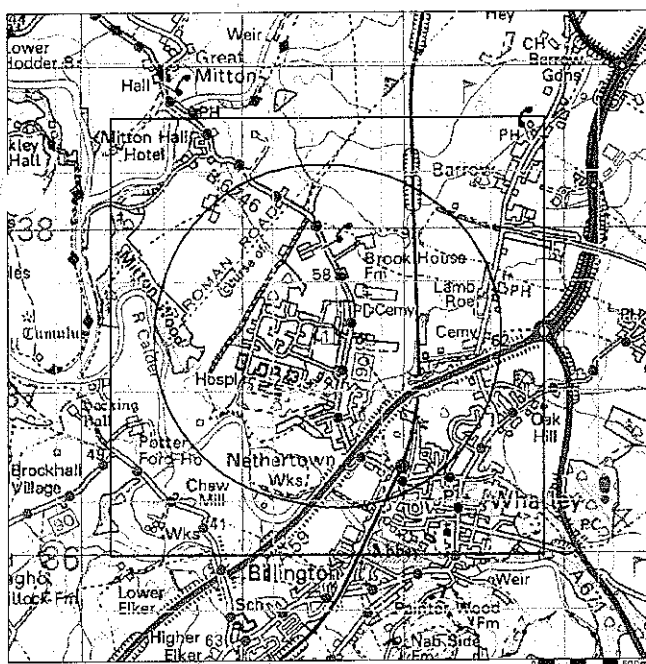
Cheshire

WA6 0AR

This report is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. The report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50 000 scale. This mapping may be more up to date than previously published paper maps.

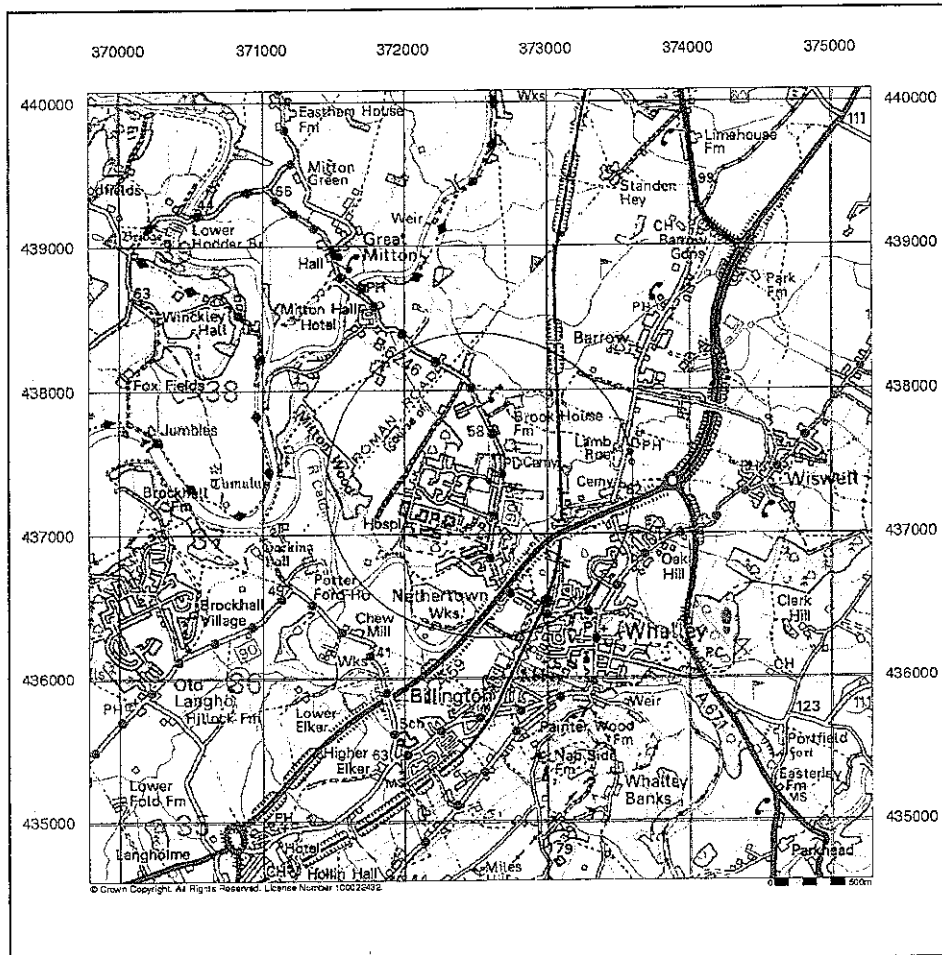
The various geological layers - artificial (man-made) and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps. The final map, that of 'Combined Surface Geology', superimposes all these distinct layers into one, producing a map that shows the rocks that occur at the surface just beneath the soil. NOTE: The legend is in chronological order in accordance with the BGS geological age index.

Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

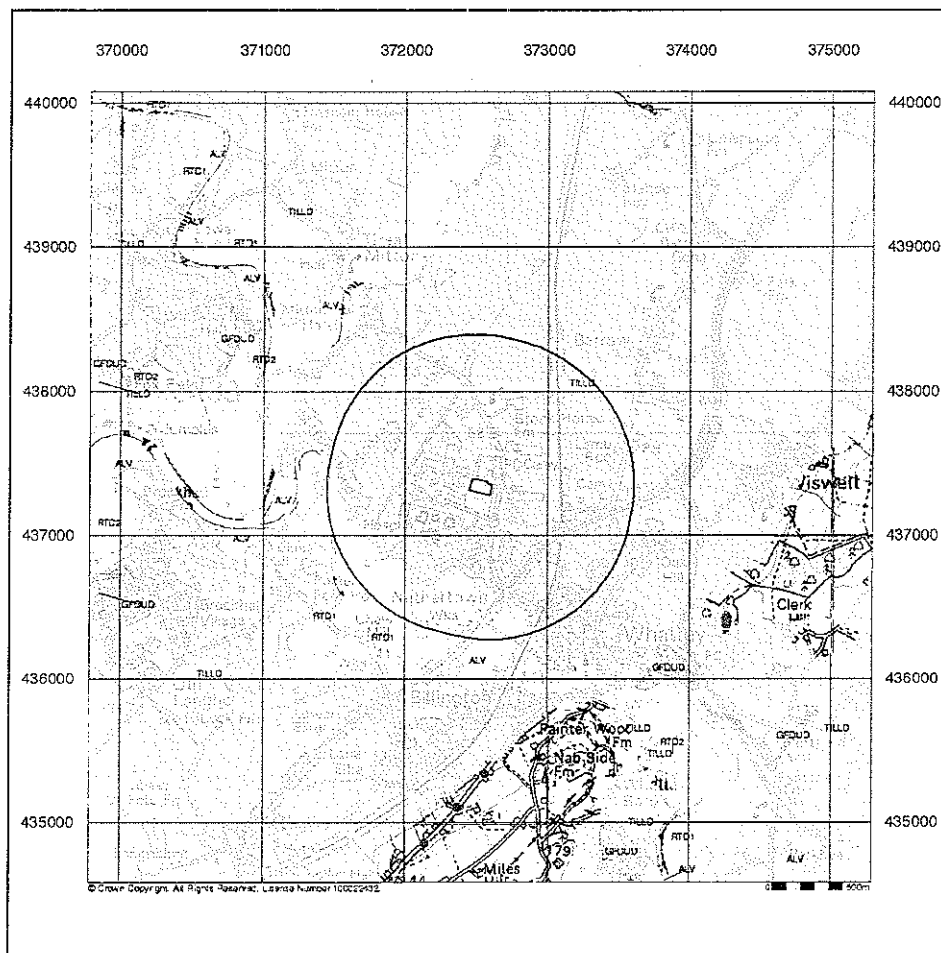


Legend	
	Map ID
	Specified Site
	Specified Buffer
	Slice
	Segment within a Slice

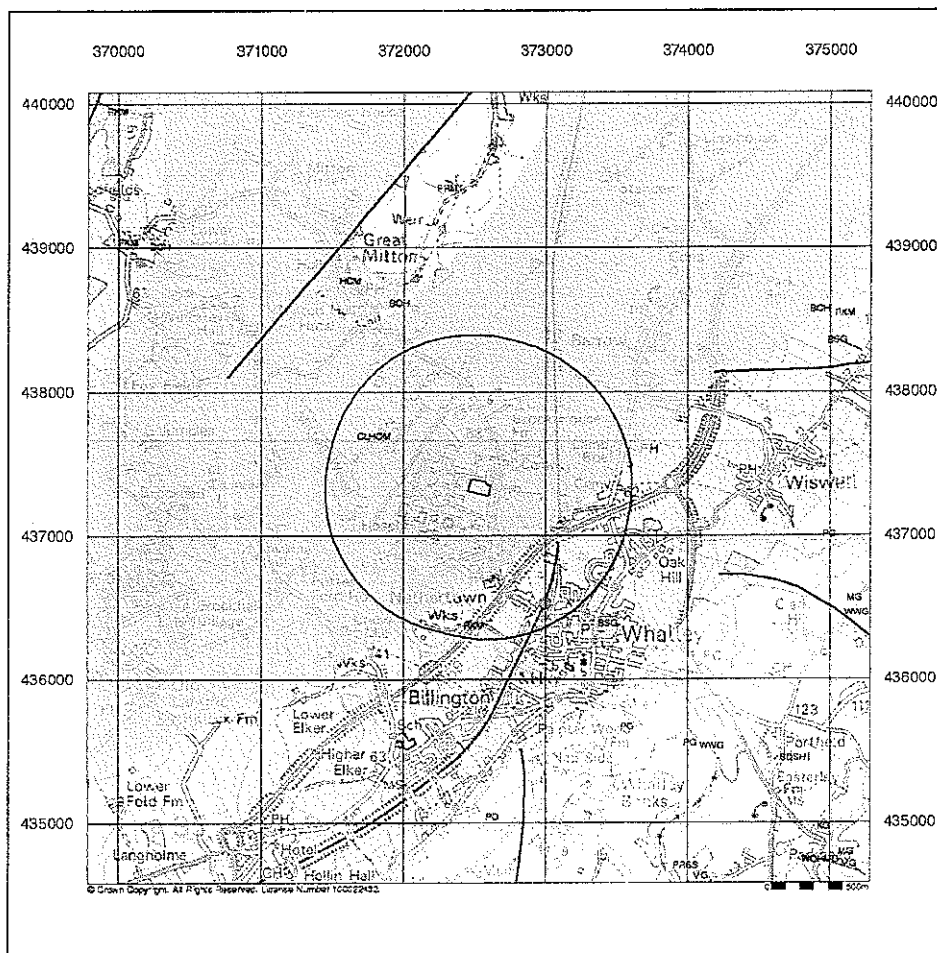
BGS 1:50,000 Geological Mapping Coverage	
Map ID:	1
Map Sheet No:	068
Map Name:	Clitheroe
Map Date:	1975
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Not Available
Faults:	Available
Landslip:	Available
Rock Segments:	Available



ap Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
-----------	----------	-----------	-----------	-----------------

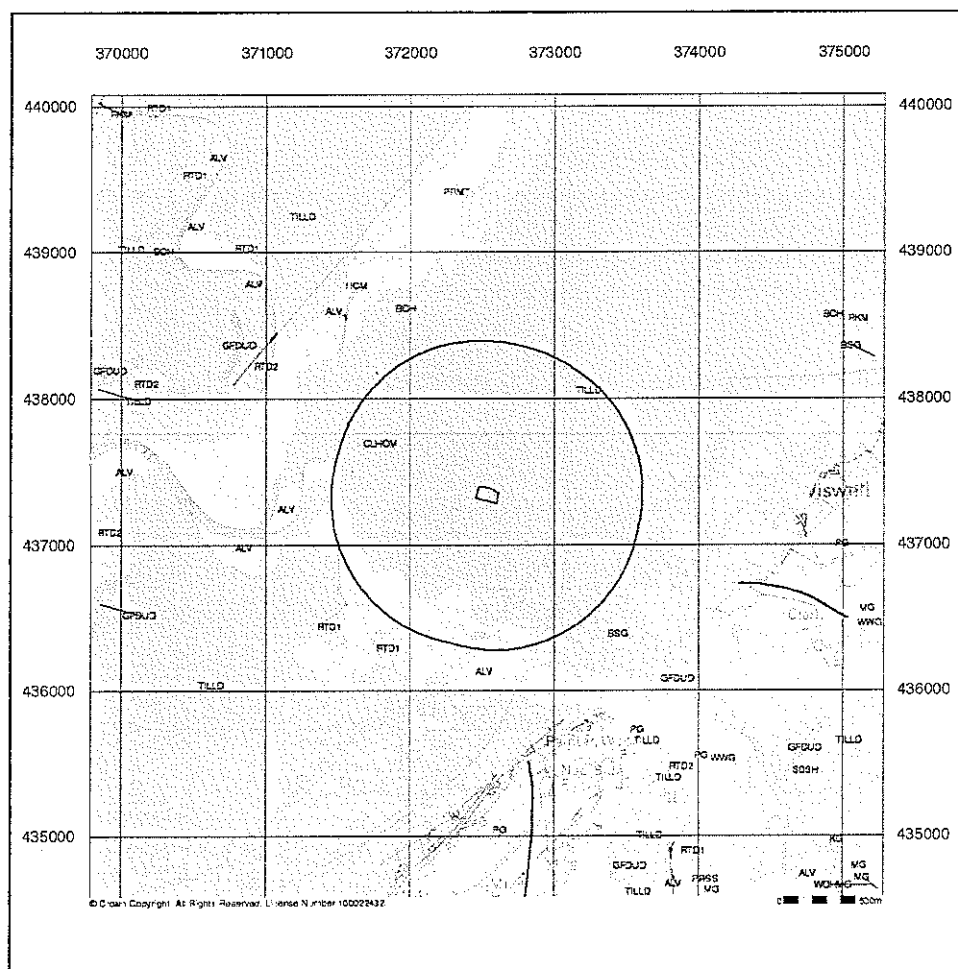


Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Devensian - Devensian
	TILLD	Till, Devensian	Diamicton	Devensian - Devensian
	RTD2	River Terrace Deposits, 2	Sand and Gravel	Quaternary - Quaternary
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Quaternary - Quaternary



Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PRMT	Permian Rocks and Triassic Rocks (Undifferentiated)	Sandstone and Mudstone	Triassic - Permian
	WOHMG	Woodhouse Flags and Midgley Grit (Undifferentiated)	Sandstone	Marsdenian - Marsdenian
	PRSS	Parsonage Sandstone	Sandstone	Kinderscoutian - Kinderscoutian
	KG	Kinderscout Grit	Sandstone	Kinderscoutian - Kinderscoutian
	SDSH	Sabden Shales	Mudstone and Siltstone	Kinderscoutian - Arnsbergian
	PG	Pendle Grit Member	Sandstone	Pendleian - Pendleian
	PG	Pendle Grit Member	Siltstone and Sandstone	Pendleian - Pendleian
	WWG	Warley Wise Grit	Sandstone and Siltstone, Interbedded	Pendleian - Pendleian
	MG	Millstone Grit Group [See also Migr]	Mudstone, Siltstone and Sandstone	Namurian - Namurian

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	BSG	Bowland Shale Formation	Mudstone	Yeadonian - Asbian
	RKM	Rad Brook Mudstone Member	Mudstone	Holkerian - Holkerian
	BOH	Hodderense Limestone Formation	Limestone	Holkerian - Holkerian
	CLHOM	Clitheroe Limestone Formation and Hodder Mudstone Formation (Undifferentiated)	Mudstone	Holkerian - Chadian
	HOM	Hodder Mudstone Formation	Mudstone	Holkerian - Chadian
		Faults		



Additional information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey - Enquiry Service
British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
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NG12 5GG
Telephone: 0115 936 3143
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Email: enquiries@bgs.ac.uk
Website: www.bgs.ac.uk



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

320110837P

Envirocheck® Report:

Datasheet

Order Details:

Order Number:

29946638_1_1

Customer Reference:

16372

National Grid Reference:

372540, 437330

Slice:

A

Site Area (Ha):

1.25

Search Buffer (m):

1000

Site Details:

3 Pendle Drive

Whalley

CLITHEROE

Lancashire

BB7 9JT

Client Details:

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RSK STATS Geoconsult Ltd

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172 Chester Road

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WA6 0AR

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	8
Hazardous Substances	-
Geological	9
Industrial Land Use	11
Sensitive Land Use	13
Data Currency	14
Data Suppliers	18
Useful Contacts	19

Introduction

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

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Peter Brett Associates Copyright Notice

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Radon Potential dataset Copyright Notice

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Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			3	4
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 2			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2		Yes		
Pollution Incidents to Controlled Waters	pg 2			3	10
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters	pg 5				1
Registered Radioactive Substances					
River Quality	pg 5				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 5				1
Water Abstractions	pg 5				1 (*6)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 6	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 8		2		1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Recorded Landfill Sites					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 8			1	

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS Recorded Mineral Sites	pg 9		1	1	1
BGS 1:625,000 Solid Geology	pg 9	Yes	n/a	n/a	n/a
Brine Compensation Area			n/a	n/a	n/a
Shallow Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Natural and Mining Cavities					
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 9	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Shallow Mining Hazards				n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 11		2	4	11
Fuel Station Entries	pg 12				1

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 13	1	1		
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Kingsmill Stw, Nr Whalley, Lancashire Authority: Environment Agency North West Region Catchment Area: Not Given Reference: 017160329 Permit Version: 1 Effective Date: 1st January 1900 Issued Date: Not Supplied Revocation Date: 1st January 1900 Discharge Type: Trade Boiler Blowdown Effluent: Unspecified Discharge: Freshwater Stream/River Environment: Receiving Water: River Ribble Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	393	1	372350 437760
2	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Kingsmill Stw, Nr Whalley, Lancashire Authority: Environment Agency North West Region Catchment Area: Not Given Reference: 017180349 Permit Version: 2 Effective Date: 25th April 1990 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Calder Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A18SE (N)	395	1	372650 437760
2	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewage Disposal Works - Water Company Location: Kingsmill Stw, Nr Whalley, Lancashire Authority: Environment Agency North West Region Catchment Area: Not Supplied Reference: 017180349 Permit Version: 1 Effective Date: 12th September 1989 Issued Date: Not Supplied Revocation Date: 24th April 1990 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Calder Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m	A18SE (N)	395	1	372650 437760
3	Discharge Consents Operator: Derek Hamilton Clegg Property Type: Sewage Disposal Works - Other Location: Brook House Farm, Mitton Road, Whalley Lancashire Bb7 4jh Authority: Environment Agency North West Region Catchment Area: Ribble Reference: 017190784 Permit Version: 1 Effective Date: 1st December 2003 Issued Date: 24th October 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Barrow Brook Status: New Consent (Water Resources Act 1991 Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18NE (N)	680	1	372780 438020

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consents Operator: Linda Ann Clegg Property Type: Sewage Disposal Works - Other Location: Brook House Farm, Milton Road, Whalley Lancashire Bb7 4jh Authority: Environment Agency North West Region Catchment Area: Ribble Reference: 017190784 Permit Version: 1 Effective Date: 1st December 2003 Issued Date: 24th October 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Barrow Brook Status: New Consent (Water Resources Act 1991 Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A18NE (N)	680	1	372780 438020
4	Discharge Consents Operator: Whitbread Bowland Inns Property Type: Public Houses & Bars Location: Whitbread Bowland Inns, Nr Whalley, Lancashire Authority: Environment Agency North West Region Catchment Area: Not Given Reference: 01719190201 Permit Version: 1 Effective Date: 8th September 1986 Issued Date: Not Supplied Revocation Date: 1st November 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib For Drainage Area 72 Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m	A14NE (E)	900	1	373500 437500
5	Discharge Consents Operator: United Utilities Water Plc Property Type: Sewerage Network - Sewers - Water Company Location: Whalley Relief Sewer Sso, Whalley Lancashire Authority: Environment Agency North West Region Catchment Area: Not Given Reference: 01rib0043 Permit Version: 1 Effective Date: 1st July 1991 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Unknown Environment: Receiving Water: Unknown Outlet; Licence Status: Revoked Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 100m	A3NW (S)	996	1	372350 436310
6	Local Authority Pollution Prevention and Controls Name: Calderstones Hospital Location: Milton Road, Whalley, CLITHEROE, Lancashire, BB6 9PE Authority: Ribble Valley Borough Council Environmental Health Department Permit Reference: Rvbc/Epa/03/92 Dated: 1st February 1993 Process Type: Local Authority Air Pollution Control Description: PG5/1Clinical waste incineration processes under 1 tonne an hour Status: Authorisation revokedRevoked Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	365	2	372156 437101
	Nearest Surface Water Feature	A13SE (S)	182	-	372581 437093
7	Pollution Incidents to Controlled Waters Property Type: Farm Drainage Location: Location Description Not Available Authority: Environment Agency North West Region Pollutant: Agricultural: General Note: Tributary River Calder Incident Date: 16th January 1991 Incident Reference: 91330003 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	348	1	372900 437100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Lancashire Authority: Environment Agency North West Region Pollutant: Unknown Note: No Pollution Found; None Pollution Found Incident Date: 25th April 1995 Incident Reference: 95330088 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	358	1	372300 437700
9	Pollution Incidents to Controlled Waters Property Type: Private Sewage (Non-PLC): Sewerage Systems Location: Location Description Not Available Authority: Environment Agency North West Region Pollutant: Crude Sewage Note: Tributary Calder Incident Date: 15th November 1994 Incident Reference: 94330294 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	417	1	372200 437700
10	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Lancashire Authority: Environment Agency North West Region Pollutant: Not Given Note: Tributary River Calder; No Pollution Found Incident Date: 13th July 1991 Incident Reference: 91330190 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	675	1	372600 436600
11	Pollution Incidents to Controlled Waters Property Type: Hospital Location: River Calderstones Hospital Authority: Environment Agency North West Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 24th June 1998 Incident Reference: CE980568 Catchment Area: Calder - Lancs Receiving Water: Freshwater Stream/River Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (SW)	754	1	372200 436600
12	Pollution Incidents to Controlled Waters Property Type: Mixed Agricultural Location: WHALLEY Authority: Environment Agency, North West Region Pollutant: Organic Wastes: Animal Carcasses Note: Dead Sheep In Stream Incident Date: 7th April 1998 Incident Reference: CE980409 Catchment Area: Calder - Lancs Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (S)	781	1	372500 436500
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Tributary River Calder Incident Date: 7th February 1992 Incident Reference: 92330035 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	799	1	373400 437200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Lancashire Authority: Environment Agency North West Region Pollutant: Not Given Note: None Pollution Found Incident Date: 25th March 1992 Incident Reference: 92330085 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	800	1	373400 437195
14	Pollution Incidents to Controlled Waters Property Type: Spillage; Accident - Static Site Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Filter Backwash Water Note: Tributary Calder Incident Date: 14th June 1993 Incident Reference: 93330180 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	826	1	373400 437600
15	Pollution Incidents to Controlled Waters Property Type: Connection To Surface Drains Location: Location Description Not Available Authority: Environment Agency North West Region Pollutant: Other Sewage Note: Tributary River Calder; Wrong Connections Incident Date: 25th April 1995 Incident Reference: 95330097 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NW (SW)	860	1	371700 436900
16	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Lancashire Authority: Environment Agency North West Region Pollutant: Not Given Note: River Calder; None Pollution Found Incident Date: 9th August 1993 Incident Reference: 93330246 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (S)	880	1	372500 436400
17	Pollution Incidents to Controlled Waters Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Unknown Note: Tributary River Calder Incident Date: 15th July 1993 Incident Reference: 93330217 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	921	1	373500 437595
17	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency North West Region Pollutant: Oils - Other Oil Note: Tributary Calder; Oil/Silt Incident Date: 12th June 1993 Incident Reference: 93330178 Catchment Area: Calder - Lancs Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	922	1	373500 437600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Prosecutions Relating to Controlled Waters Location: River Calder, Calderstone Park, Whalley Prosecution Text: A blocked sewer led to backed-up effluent spilling out into a nearby watercourse Prosecution Act: Wra91 S85(1) Hearing Date: 8th September 2004 Verdict: Guilty Fine: 10000 Cost: 1610 Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	632	1	371983 436890
	River Quality Name: Calder GQA Grade: River Quality C Reach: Whalley Weir To Ribble Estimated Distance (km): 4.2 Flow Rate: Flow less than 20 cumecs Flow Type: River Year: 2000	A7NE (SW)	705	1	371949 436820
19	Substantiated Pollution Incident Register Authority: Environment Agency - North West Region North Area Incident Date: 19th September 2003 Incident Reference: 191160 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A7SE (SW)	747	1	372107 436649
20	Water Abstractions Operator: Clitheroe Golf Club Ltd Licence Number: 2671309037 Permit Version: Not Supplied Location: Clitheroe Golf Club, CLITHEROE Authority: Environment Agency North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Unknown Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Impoundment Of Unnamed Stream Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14NW (E)	606	1	373200 437500
	Water Abstractions Operator: Colin And Vivien Middleton Licence Number: 2671310010 Permit Version: 100 Location: Borehole At Clitheroe Authority: Environment Agency, North West Region Abstraction: General Agriculture; General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 18 Yearly Rate (m3): 6570 Details: Land At Little Mitton Farm Mitton Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 15th May 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NW (NW)	1057	1	371800 438200
	Water Abstractions Operator: Clitheroe Golf Club Ltd Licence Number: 2671309036 Permit Version: Not Supplied Location: Barrow Brook, Pendleton, CLITHEROE Authority: Environment Agency North West Region Abstraction: Industrial & Transfer Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 11 Yearly Rate (m3): 3404 Details: Additional Purpose: Transfer of water; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19NE (NE)	1237	1	373400 438300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Clitheroe Golf Club Ltd Licence Number: 2671309037 Permit Version: Not Supplied Location: Clitheroe Golf Club, CLITHEROE Authority: Environment Agency North West Region Abstraction: Not Supplied Abstraction Type: Not Supplied Source: Unknown Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Inpoundment Of Unnamed Stream Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24SW (NE)	1290	1	373200 438500
	Water Abstractions Operator: Pendle View Fisheries Ltd Licence Number: 2671309044 Permit Version: 102 Location: Reservoir At Barrow Blackburn Authority: Environment Agency, North West Region Abstraction: Aquaculture: Fish Farm/Cress Pond Throughflow Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land & Premises-Whalley Trout Fisher Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 26th October 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1847	1	374300 438100
	Water Abstractions Operator: Howard Rayner & Associates Licence Number: 2671309044 Permit Version: 101 Location: Reservoir At Barrow Blackburn Authority: Environment Agency, North West Region Abstraction: Aquaculture: Fish Farm/Cress Pond Throughflow Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 655 Yearly Rate (m3): 238938 Details: Land & Premises-Whalley Trout Fisher Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 11th October 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(NE)	1847	1	374300 438100
	Water Abstractions Operator: Pendle View Fisheries Ltd Licence Number: 2671309052 Permit Version: 2 Location: Land At Pendle View Fisheries, Clitheroe Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th June 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1891	1	374240 438310
	Groundwater Vulnerability Geological Classification: Minor Aquifer (Variably permeable) - These can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although not producing large quantities of water for abstraction they are important for local supplies and in supplying base flow to rivers Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 10 Central Lancashire Scale: 1:100,000	A7NE (SW)	0	1	371993 436819

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Drift Deposits Drift Deposit: Low permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints brickearth peat river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 10 Central Lancashire Scale: 1:100,000	ASNW (S)	0	1	372350 436711
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	Historical Landfill Sites Licence Holder: Not Supplied Location: Off Mitton Road, Whalley Moor Blackburn Lancashire Name: Calderstones Hospital A Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL07479 First Input Date: Not Supplied Last Input Date: 31st December 1974 Specified Waste: Deposited Waste included Inert Commercial and Household Waste Type: EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 2300/0173 BGS Ref: Not Supplied Other Ref: K1/01/021	A13NW (NW)	144	1	372374 437489
22	Historical Landfill Sites Licence Holder: Not Supplied Location: Off Mitton Road, Whalley Moor Blackburn Lancashire Name: Calderstones Hospital B Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL07517 First Input Date: 31st December 1980 Last Input Date: 31st December 1992 Specified Waste: Deposited Waste included Inert Commercial and Household Waste Type: EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 2300/0173 BGS Ref: Not Supplied Other Ref: K1/03/021	A13NW (NW)	222	1	372320 437546
23	Historical Landfill Sites Licence Holder: Not Supplied Location: Riding Lane, Whalley, Blackburn Lancashire Name: Whalley Sewage Works Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL07127 First Input Date: Not Supplied Last Input Date: 31st December 1973 Specified Waste: Deposited Waste included Commercial and Household Waste Type: EA Waste Ref: Not Supplied Regis Ref: Not Supplied WRC Ref: 2300/0174 BGS Ref: Not Supplied Other Ref: K1/03/022	A8SW (S)	974	1	372304 436345
	Local Authority Landfill Coverage Name: Ribbles Valley Borough Council - Had landfill data but passed it to the relevant environment agency		0	2	373752 435574
	Local Authority Landfill Coverage Name: Lancashire County Council - Had landfill data but passed it to the relevant environment agency		0	8	369315 431789
24	Registered Waste Treatment or Disposal Sites Licence Holder: Burnley Pendle & Rossendale H A Licence Reference: L 417 Site Location: Calderstones Hospital Mitton Road Whalley Clitheroe Lancashire Operator Location: As Site Address Authority: Environment Agency - North West Region Central Area Site Category: Storage Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Licence has completion certificateSurrendered Dated: 1st July 1992 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Clinical - As In Coll/Disp Regs Of 88 Max Storage Of Ash Max Storage Of Clinical Max Waste Permitted By Licence	A13SW (W)	252	1	372226 437207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	BGS Recorded Mineral Sites Site Name: Whalley Moor Brick Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92793 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clitheroe Limestone Formation And Hodder Mudstone Formation (Undifferentiated) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13NW (W)	77	3	372384 437338
26	BGS Recorded Mineral Sites Site Name: Whalley Moor Tile Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92792 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clitheroe Limestone Formation And Hodder Mudstone Formation (Undifferentiated) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	452	3	372146 437696
27	BGS Recorded Mineral Sites Site Name: Whalley Brick & Tile Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92758 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rad Brook Mudstone Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	782	3	373235 436819
	BGS 1:625 000 Solid Geology Description: Tournaisian and Visean (Carboniferous Limestone Series)	A23SW (N)	0	3	372219 438599
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A8NW (S)	0	3	372375 436725
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	68	3	372675 437375
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6SE (S)	0	3	372600 436500
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A8NW (S)	0	3	372375 436725
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7SE (SW)	0	3	371950 436350
	Radon Potential - Radon Affected Areas Affected Area: The property is not in a radon affected area as less than 1% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	3	372825 437000
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	3	372825 437000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Shallow Mining Hazards No Hazard				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	Contemporary Trade Directory Entries Name: Walmsley Location: 14, Pendle Drive, Whalley, Clitheroe, Lancashire, BB7 9JT Classification: Paper & Cardboard Products & Packaging - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A13NW (NW)	90	-	372403 437440
29	Contemporary Trade Directory Entries Name: Barnes & Tipping Ltd Location: Milton Road, Whalley, Clitheroe Lancashire BB7 9JU Classification: Road Haulage Services Status: Active Positional Accuracy: Automatically positioned to the address	A13NE (E)	113	-	372727 437334
30	Contemporary Trade Directory Entries Name: Calderstone Nhs Trust Location: Milton Road Whalley Clitheroe Lancashire BB7 9PE Classification: Hospitals Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (SW)	306	-	372210 437127
31	Contemporary Trade Directory Entries Name: Appliance Repairs Location: 39, Beech Drive, Whalley, Clitheroe, Lancashire BB7 9RA Classification: Washing Machines - Servicing & Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A12NE (W)	347	-	372126 437420
32	Contemporary Trade Directory Entries Name: Whalley Corn Mills Ltd Location: Milton Rd, Whalley, Clitheroe Lancashire BB7 9PF Classification: Pet Foods & Animal Feeds Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A18SE (N)	405	-	372561 437790
33	Contemporary Trade Directory Entries Name: Crompton Location: 3, Kingsmill Avenue, Whalley Clitheroe Lancashire BB7 9PG Classification: Fireplaces & Mantelpieces Status: Active Positional Accuracy: Automatically positioned to the address	A18SW (N)	471	-	372453 437859
34	Contemporary Trade Directory Entries Name: Hurst Green Plastics Ltd Location: Bowland House, The Sidings Whalley CLITHEROE Lancashire BB7 9SE Classification: Plastics - Vacuum Forming Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	700	-	373074 436760
34	Contemporary Trade Directory Entries Name: Hurst Green Plastics Ltd Location: Bowland House, The Sidings, Whalley Clitheroe Lancashire BB7 9SE Classification: Plastic Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A9NW (SE)	700	-	373074 436760
34	Contemporary Trade Directory Entries Name: Hurst Green Plastics Location: Bowland House, The Sidings, Whalley Clitheroe Lancashire BB7 9SE Classification: Plastic Products - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	700	-	373074 436760
34	Contemporary Trade Directory Entries Name: Still Glorious Card Co Location: Marathan House The Sidings, Whalley, Clitheroe Lancashire BB7 9SE Classification: Greeting Card Publishers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9NW (SE)	728	-	373071 436720
35	Contemporary Trade Directory Entries Name: Gilmartin Sheet Metal Ltd Location: Unit 16, The Sidings Whalley Clitheroe Lancashire BB7 9SE Classification: Sheet Metal Work Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	798	-	373055 436620
35	Contemporary Trade Directory Entries Name: Sm Uk Solutions Location: Unit 12, The Sidings, Station Rd, Whalley, Clitheroe Lancashire BB7 9RH Classification: Staircase Balustrade & Handrail Manufacturers Status: Active Positional Accuracy: Manually positioned to the address or location	A9SW (SE)	823	-	373054 436589

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	Contemporary Trade Directory Entries Name: Coco Moyo Location: Unit 12, The Sidings, Whalley Clitheroe Lancashire BB7 9SE Classification: Confectionery Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	823	-	373054 436589
35	Contemporary Trade Directory Entries Name: Station Press Location: Unit 14, The Sidings Whalley Clitheroe Lancashire BB7 9SE Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (SE)	834	-	373067 436585
35	Contemporary Trade Directory Entries Name: Mantle Packaging Machinery Ltd Location: Unit 5, The Sidings, Whalley, Clitheroe, Lancashire BB7 9SE Classification: Packaging & Wrapping Equipment & Supplies Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	857	-	373059 436551
36	Contemporary Trade Directory Entries Name: B & H Transport Location: Clitheroe Rd, Barrow, Clitheroe Lancashire BB7 9AQ Classification: Road Haulage Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	868	-	373481 437308
37	Contemporary Trade Directory Entries Name: Farnsworth S Location: Cumberland House, The Sidings Whalley Clitheroe Lancashire BB7 9SE Classification: Sausage Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A9SW (SE)	873	-	373052 436528
38	Fuel Station Entries Name: Pendle Garage Location: Clitheroe Road Barrow CLITHEROE Lancashire BB7 9AQ Brand: UNBRANDED Premises Type: Petrol Station Status: Open Positional Accuracy: Automatically positioned to the address	A15NW (E)	973	-	373559 437575

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	Nitrate Vulnerable Zones Name: Not Supplied Description: Surface Water - Designated 2002 Source: Department for Environment Food and Rural Affairs (DEFRA - formerly FRCA)	A13NE (E)	0	7	372600 437350
40	Nitrate Vulnerable Zones Name: Not Supplied Description: Surface Water - Designated 2006 Source: Department for Environment Food and Rural Affairs (DEFRA - formerly FRCA)	A13NE (E)	2	7	372600 437350

320110837P

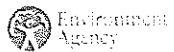
Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Pendle Borough Council - Environmental Health Department Hyndburn Borough Council - Environmental Health Department Ribble Valley Borough Council - Environmental Health Department	December 2009 September 2009 September 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - North West Region	October 2009	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region	January 2010	As notified
Integrated Pollution Controls Environment Agency - North West Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - North West Region	October 2009	Quarterly
Local Authority Integrated Pollution Prevention And Control Pendle Borough Council - Environmental Health Department Hyndburn Borough Council - Environmental Health Department Ribble Valley Borough Council - Environmental Health Department	August 2009 February 2009 October 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Controls Pendle Borough Council - Environmental Health Department Hyndburn Borough Council - Environmental Health Department Ribble Valley Borough Council - Environmental Health Department	August 2009 February 2009 October 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Pendle Borough Council - Environmental Health Department Hyndburn Borough Council - Environmental Health Department Ribble Valley Borough Council - Environmental Health Department	August 2009 February 2009 October 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	November 2009	Quarterly
Pollution Incidents to Controlled Waters Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North West Region	January 2010	As notified
Prosecutions Relating to Controlled Waters Environment Agency - North West Region	January 2010	As notified
Registered Radioactive Substances Environment Agency - North West Region	October 2009	Quarterly
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	January 2009	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	January 2009	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	October 2009 October 2009	Quarterly Quarterly
Water Abstractions Environment Agency - North West Region	October 2009	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2009	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	January 1999	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable

Agency & Hydrological	Version	Update Cycle
Source Protection Zones Environment Agency - Head Office	October 2009	Variable
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2009	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	December 2009	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	December 2009	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	December 2009	Quarterly
Flood Defences Environment Agency - Head Office	December 2009	Quarterly
Waste	Version	Update Cycle
GS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	October 2009 October 2009	Quarterly Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	October 2009 October 2009	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	October 2009 October 2009	Quarterly Quarterly
Local Authority Landfill Coverage Hyndburn Borough Council - Environmental Health Department Lancashire County Council - Waste Management Group Pendle Borough Council - Environmental Health Department Ribble Valley Borough Council - Environmental Health Department	May 2000 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Pendle Borough Council - Environmental Health Department Hyndburn Borough Council - Environmental Health Department Lancashire County Council - Waste Management Group Ribble Valley Borough Council - Environmental Health Department	April 2003 May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable
Registered Landfill Sites Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	March 2003 March 2003	Not Applicable Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North West Region - Central Area Environment Agency - North West Region - North Area	March 2003 March 2003	Not Applicable Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	October 2009	Bi-Annually
Explosive Sites Health and Safety Executive	January 2009	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Hyndburn Borough Council - Planning Ribble Valley Borough Council Pendle Borough Council - Planning Lancashire County Council	April 2009 July 2009 March 2009 September 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Hyndburn Borough Council - Planning Ribble Valley Borough Council Pendle Borough Council - Planning Lancashire County Council	April 2009 July 2009 March 2009 September 2009	Annual Rolling Update Annual Rolling Update Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2009	Bi-Annually
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	November 2002	As notified
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural and Mining Cavities Peter Brett Associates	November 2009	Variable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	May 2007	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	May 2007	As notified
Shallow Mining Hazards British Geological Survey - National Geoscience Information Service	August 2002	Not Applicable

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2009	Quarterly
Fuel Station Entries Catalist Ltd - (Fuel Station Data)	October 2009	Quarterly
Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt Hyndburn Borough Council Pendle Borough Council Ribbles Valley Borough Council	December 2009 December 2009 December 2009	As notified As notified As notified
Areas of Unadopted Green Belt Hyndburn Borough Council Pendle Borough Council Ribbles Valley Borough Council	December 2009 December 2009 December 2009	As notified As notified As notified
Areas of Outstanding Natural Beauty Natural England	December 2009	Bi-Annually
Environmentally Sensitive Areas Natural England	December 2009	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	December 2009	Bi-Annually
Marine Nature Reserves Natural England	September 2009	Bi-Annually
National Nature Reserves Natural England	December 2009	Bi-Annually
National Parks Natural England	December 2009	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2009	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2009	Annually
Ramsar Sites Natural England	December 2009	Bi-Annually
Sites of Special Scientific Interest Natural England	December 2009	Bi-Annually
Special Areas of Conservation Natural England	December 2009	Bi-Annually
Special Protection Areas Natural England	December 2009	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Countryside Council for Wales	
Scottish Natural Heritage	
Natural England	
Health Protection Agency	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544 Templeborough Rotherham S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
2	Ribble Valley Borough Council - Environmental Health Department Council Offices Church Walk Clitheroe Lancashire, BB7 2RA	Telephone: 01200 425111 Fax: 01200 26339 Website: www.ribblevalley.gov.uk
3	British Geological Survey - Enquiry Service British Geological Survey Kingsley Dunham Centre Keyworth, Nottingham Nottinghamshire NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
4	Ribble Valley Borough Council Council Offices Church Walk Clitheroe Lancashire BB7 2RA	Telephone: 01200 425111 Fax: 01200 414488 Website: www.ribblevalley.gov.uk
5	Hyndburn Borough Council Development Services Eagle Street Accrington Lancashire BB5 1LN	Telephone: 01254 388111 Fax: 01254 391625 Website: www.hyndburnbc.gov.uk
6	Natural England Northminster House Northminster Road Peterborough Cambridgeshire PE1 1UA	Telephone: 0845 600 3078 Fax: 01733 455103 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
7	Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Government Buildings Otley Road Lawnswood Leeds West Yorkshire LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
8	Lancashire County Council - Waste Management Group Environment Directorate Guild House Cross Street Preston Lancashire PR1 8RD	Website: www.lancashire.gov.uk
-	Health Protection Agency - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton Didcot Oxfordshire OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@hpa.org.uk Website: www.hpa.org.uk
-	Landmark Information Group Limited The Smith Centre Henley On Thames Oxfordshire RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:

29946638_1_1

Customer Reference:

16372

National Grid Reference:

372540, 437330

Slice:

A

Site Area (Ha):

1.25

Search Buffer (m):

1000

Site Details:

3 Pendle Drive

Whalley

CLITHEROE

Lancashire

BB7 9JT

Client Details:

MS G Harrison

RSK STATS Geoconsult Ltd

Spring Lodge

172 Chester Road

Helsby

Cheshire

WA6 0AR

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	-
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping identifying areas where historically the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	2
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	4
The Ground Stability (1:50,000) section includes the BGS Geosure data suite reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted and subsidence insurance claims and insurance investigations data, which is not plotted.	
Motion Map Data (1:2,500)	5
The Motion Map Data (1:2 500) section contains data which is plotted to indicate long-term stability trends from analysis of satellite radar data.	
Historical Map List	8
The Historical Map List section details the historical mapping that has been analysed for your site in relation to the Historical Land Use Information sections.	
Data Currency	9
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The brine subsidence data relating to the Droitwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage including in direct or consequential loss arising from the use of this data.

Report Version v47.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1		1	1	1
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Shallow Mining Hazards				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap unknown constituents					
Mineral Railway	pg 2		2		
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 2	1			
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 2	1	1	1	1
Potentially Infilled Land (Water)	pg 2		2	6	7

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
Brine Compensation Area			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 4		Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes		n/a	n/a
Oil Mining Related Features					
Subsidence Insurance Claims				n/a	n/a
Subsidence Investigations				n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)	pg 5		56	n/a	n/a

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	BGS Recorded Mineral Sites Site Name: Whalley Moor Brick Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92793 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clitheroe Limestone Formation And Hodder Mudstone Formation (Undifferentiated) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13NW (W)	77	1	372384 437338
2	BGS Recorded Mineral Sites Site Name: Whalley Moor Tile Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92792 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Clitheroe Limestone Formation And Hodder Mudstone Formation (Undifferentiated) Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	452	1	372146 437696
3	BGS Recorded Mineral Sites Site Name: Whalley Brick & Tile Works Location: Whalley, Great Harwood, Lancashire Source: British Geological Survey National Geoscience Information Service Reference: 92758 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Rad Brook Mudstone Member Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A9NE (SE)	782	1	373235 436819
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Shallow Mining Hazards No Hazard				

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	Mineral Railway Use: Not Supplied Date of Mapping: 1914	A13NW (NW)	78	-	372396 437390
5	Mineral Railway Use: Not Supplied Date of Mapping: 1914	A13NW (NW)	160	-	372324 437434
6	Quarrying of sand & clay, operation of sand & gravel pits Use: Not Supplied Date of Mapping: 1914	A13NW (W)	0	-	372492 437335
7	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit quarry etc) Date of Mapping: 1975	A13NW (W)	0	-	372492 437335
8	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit quarry etc) Date of Mapping: 1975	A13NW (NW)	102	-	372454 437488
9	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit quarry etc) Date of Mapping: 1975	A12NE (NW)	420	-	372122 437613
10	Potentially Infilled Land (Non-Water) Use: Unknown Filled Ground (Pit quarry etc) Date of Mapping: 1975	A9NW (SE)	698	-	373135 436828
11	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1914	A13NE (NE)	54	-	372649 437387
12	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1914	A13SW (SW)	208	-	372428 437103
13	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1895	A13SE (SE)	253	-	372701 437043
14	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1914	A13SW (SW)	289	-	372198 437179
15	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1914	A13SW (S)	290	-	372408 437023
16	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1914	A13NE (NE)	352	-	372819 437631
17	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1895	A12SE (W)	430	-	372028 437266
18	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1895	A7NE (SW)	494	-	372082 436986
19	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A8NE (S)	557	-	372692 436725
20	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A18SE (N)	580	-	372741 437928
21	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A14SE (E)	691	-	373270 437111
22	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A9SW (SE)	792	-	372935 436558
23	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A9SW (SE)	876	-	373080 436543
24	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A14SE (E)	887	-	373459 437058

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond marsh river stream dock etc) Date of Mapping: 1955	A14SE (E)	934	-	373540 437226

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Brine Compensation Area The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
	Potential for Collapsible Ground Stability Hazards No Hazard				
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A8NW (S)	0	1	372375 436725
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	68	1	372675 437375
26	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A8SE (S)	0	1	372600 436500
27	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A8NW (S)	0	1	372375 436725
28	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7SE (SW)	0	1	371950 436350

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Motion Map Average Velocity -0.7 Gradient (mm/year):	A13NE (NE)	21	-	372605 437370
29	Motion Map Average Velocity -0.8 Gradient (mm/year):	A13NE (NE)	22	-	372608 437369
29	Motion Map Average Velocity -0.3 Gradient (mm/year):	A13NE (NE)	25	-	372608 437373
29	Motion Map Average Velocity 0.0 Gradient (mm/year):	A13NE (NE)	25	-	372605 437374
30	Motion Map Average Velocity -0.1 Gradient (mm/year):	A13SE (E)	30	-	372640 437324
30	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13SE (E)	32	-	372643 437328
31	Motion Map Average Velocity 0.5 Gradient (mm/year):	A13SE (SE)	31	-	372630 437270
31	Motion Map Average Velocity -0.4 Gradient (mm/year):	A13SE (SE)	34	-	372630 437262
31	Motion Map Average Velocity -0.1 Gradient (mm/year):	A13SE (SE)	34	-	372632 437269
32	Motion Map Average Velocity 0.0 Gradient (mm/year):	A13SE (E)	31	-	372636 437297
32	Motion Map Average Velocity -0.1 Gradient (mm/year):	A13SE (E)	31	-	372634 437293
32	Motion Map Average Velocity -0.3 Gradient (mm/year):	A13SE (SE)	31	-	372633 437289
33	Motion Map Average Velocity -0.4 Gradient (mm/year):	A13SE (SE)	34	-	372629 437258
33	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13SE (SE)	36	-	372630 437258
34	Motion Map Average Velocity -0.4 Gradient (mm/year):	A13SE (SE)	45	-	372621 437235
34	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13SE (SE)	48	-	372620 437231
34	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13SE (SE)	50	-	372623 437231
34	Motion Map Average Velocity 0.0 Gradient (mm/year):	A13SE (SE)	52	-	372621 437227
35	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13NW (NW)	61	-	372428 437425
35	Motion Map Average Velocity 0.0 Gradient (mm/year):	A13NW (NW)	63	-	372428 437429

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13SE (SE)	65	-	372616 437212
37	Motion Map Average Velocity -0 9 Gradient (mm/year):	A13NW (W)	70	-	372390 437336
37	Motion Map Average Velocity 0 5 Gradient (mm/year):	A13NW (W)	72	-	372389 437336
37	Motion Map Average Velocity -0 1 Gradient (mm/year):	A13NW (W)	73	-	372387 437332
37	Motion Map Average Velocity 0 1 Gradient (mm/year):	A13SW (W)	75	-	372384 437329
3	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (NW)	72	-	372402 437386
38	Motion Map Average Velocity -0 2 Gradient (mm/year):	A13NW (W)	72	-	372399 437379
38	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (W)	73	-	372400 437383
38	Motion Map Average Velocity 0 7 Gradient (mm/year):	A13NW (NW)	74	-	372402 437394
38	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (W)	74	-	372399 437383
39	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (NW)	84	-	372394 437404
39	Motion Map Average Velocity 0 1 Gradient (mm/year):	A13NW (NW)	87	-	372391 437405
39	Motion Map Average Velocity 0 1 Gradient (mm/year):	A13NW (NW)	88	-	372389 437401
39	Motion Map Average Velocity 0 2 Gradient (mm/year):	A13NW (NW)	89	-	372387 437398
39	Motion Map Average Velocity -0 6 Gradient (mm/year):	A13NW (NW)	89	-	372389 437405
40	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (W)	87	-	372378 437351
41	Motion Map Average Velocity -0 2 Gradient (mm/year):	A13NW (NW)	92	-	372406 437447
41	Motion Map Average Velocity 0 0 Gradient (mm/year):	A13NW (NW)	96	-	372404 437451
42	Motion Map Average Velocity 1 0 Gradient (mm/year):	A13NE (NE)	92	-	372636 437440
42	Motion Map Average Velocity 1 0 Gradient (mm/year):	A13NE (NE)	95	-	372636 437444

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	Motion Map Average Velocity 0.5 Gradient (mm/year):	A13SW (W)	94	-	372362 437314
43	Motion Map Average Velocity 0.5 Gradient (mm/year):	A13SW (W)	95	-	372362 437310
43	Motion Map Average Velocity 0.3 Gradient (mm/year):	A13SW (W)	96	-	372360 437306
43	Motion Map Average Velocity 0.6 Gradient (mm/year):	A13SW (W)	97	-	372359 437315
43	Motion Map Average Velocity 0.2 Gradient (mm/year):	A13SW (W)	98	-	372358 437311
43	Motion Map Average Velocity -0.1 Gradient (mm/year):	A13SW (W)	98	-	372358 437307
43	Motion Map Average Velocity 0.4 Gradient (mm/year):	A13SW (W)	98	-	372358 437307
44	Motion Map Average Velocity 0.1 Gradient (mm/year):	A13SW (W)	96	-	372361 437302
44	Motion Map Average Velocity -0.2 Gradient (mm/year):	A13SW (W)	98	-	372359 437303
44	Motion Map Average Velocity -0.1 Gradient (mm/year):	A13SW (W)	99	-	372358 437299
45	Motion Map Average Velocity 0.0 Gradient (mm/year):	A13NW (NW)	96	-	372383 437411
45	Motion Map Average Velocity 0.1 Gradient (mm/year):	A13NW (NW)	99	-	372381 437415
45	Motion Map Average Velocity 0.3 Gradient (mm/year):	A13NW (NW)	100	-	372382 437419
46	Motion Map Average Velocity 0.1 Gradient (mm/year):	A13SW (W)	98	-	372362 437281
46	Motion Map Average Velocity 0.3 Gradient (mm/year):	A13SW (W)	99	-	372360 437286
47	Motion Map Average Velocity 0.1 Gradient (mm/year):	A13NW (W)	98	-	372365 437350

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Lancashire And Furness	055_10	1912
Lancashire And Furness	055_10	1932
Ordnance Survey Plan	SD7236	1968
Ordnance Survey Plan	SD7237	1968

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Lancashire And Furness	055_00	1848
Yorkshire	198_00	1848
Lancashire And Furness	055_NW	1895
Lancashire And Furness	055_SW	1895
Yorkshire	198_00	1896
Yorkshire	198_NW	1911
Lancashire And Furness	055_SW	1913
Lancashire And Furness	055_NW	1914
Lancashire And Furness	055_NW	1932
Lancashire And Furness	055_SW	1932
Ordnance Survey Plan	SD73NW	1955
1:10,000	Mapsheet	Published Date
Ordnance Survey Plan	SD73NW	1975

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2009	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Mining Report Service	January 2006	As notified
Man Made Mining Cavities Peter Brett Associates	November 2009	Variable
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2009	Variable
Shallow Mining Hazards British Geological Survey - National Geoscience Information Service	August 2002	Not Applicable
Historical Land Use Information (1:2,500)	Version	Update Cycle
Subterranean Features Landmark Information Group Limited	November 2009	Bi-Annually
Ground Stability Data (1:50,000)	Version	Update Cycle
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	November 2002	As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2009	Annually
Subsidence Insurance Claims SP Property Services	August 2009	Quarterly
Subsidence Investigations CET Group	August 2009	Quarterly
Brine Subsidence Solution Area Johnson Poole & Bloomer	October 2008	As notified
Motion Map Data (1:2,500)	Version	Update Cycle
Motion Map Nigel Press Associates - Preston	May 2009	As notified

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	 Wardell Armstrong The world of land and water
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	Landmark Information Group Limited The Smith Centre, Henley On Thames, Oxfordshire, RG9 6AB	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

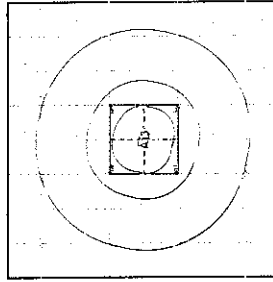


GROUP PLC

Ground Stability Data (1:50,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Map ID
 - Bearing Reference Point
- Potential for Compressible Ground Stability Hazards**
- High
 - Moderate
 - Very Low
- Potential for Collapsible Ground Stability Hazards**
- Moderate
 - Low
- Brine Pumping and Salt Mining**
- Brine Pumping Related Feature
 - Salt Mining Related Feature
 - Point
 - Polygon

Mining and Ground Stability - Slice A



Order Details

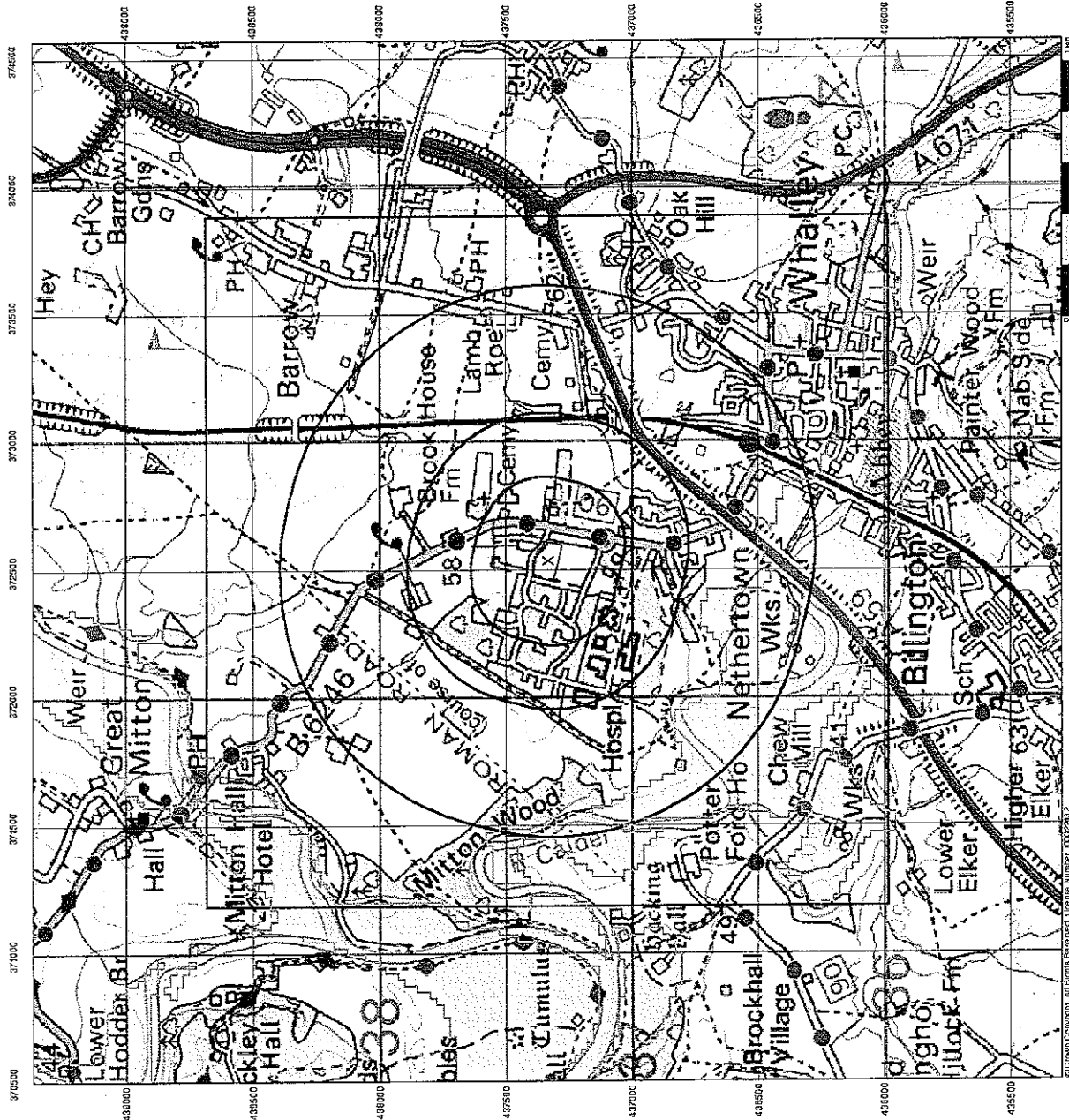
Order Number: 29946638
 Customer Ref: 16372
 National Grid Reference: 372540, 437330
 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9JT



Tel: 0844 844 9852
 Fax: 0844 844 9851
 Web: www.landmark.co.uk



Ground Stability Data (1:50,000)

General			
	Specified Site		Specified Buffer(s)
☐	Slice	☒	Map ID
			Beating Reference Point

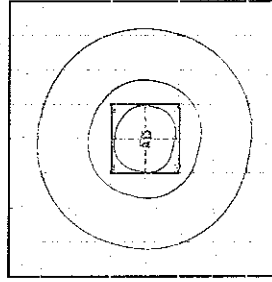
Potential for Landslide Ground Stability Hazards

High	Moderate	Low	Very Low
			

Potential for Ground Dissolution Stability Hazards

High	Moderate	Low	Very Low
			

Mining and Ground Stability - Slice A



Order Details

Order Details

Order Number:	29945638_1_i
Customer Ref:	16372
National Grid Reference:	372540, 437330
Slice:	A
Site Area (Ha):	1.25
Search Buffer (m):	1000

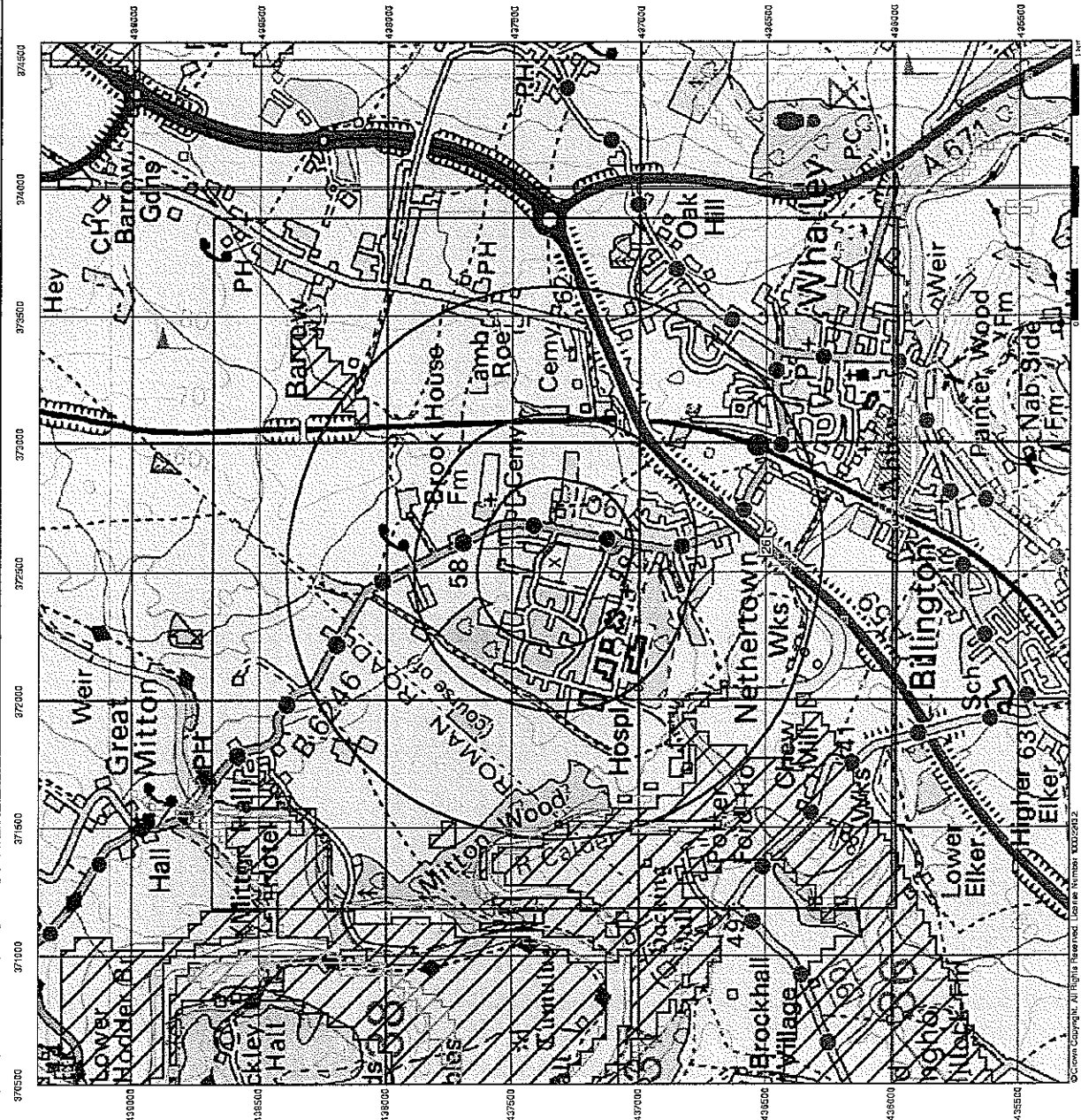
Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B97 9JT

Landmark

Tel: 0844 844 9852
Fax: 0844 844 9951
Web: www.anvilscheck.co.uk

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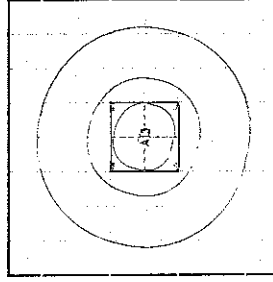
RSK

GROUP PLC

Ground Stability Data (1:50,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Potential for Running Sand Ground Stability Hazards**
- High
 - Moderate
 - Low
 - Very Low
- Potential for Shrinking or Swelling Clay Ground Stability Hazards**
- High
 - Moderate
 - Low
 - Very Low

Mining and Ground Stability - Slice A



320110837

Order Details

Order Number: 29946638_L1
 Customer Ref: 16372
 National Grid Reference: 372540, 437330
 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B97 9JT

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

Landmark
 A Landmark Group Company



Groundwater Vulnerability

General
 Specified Site Specified Buffer (m) Bearing Reference Point
 Site Map ID

Agency and Hydrogeological

Geological Classes

Major Aquifer
(Highly Permeable)

Minor Aquifer
(Variably Permeable)

Non-Aquifer
(Negligibly Permeable)

Water or Sea

Drift Deposit

Soil Classes

High (H) 1, 2, 3 U

Intermediate (I) 1, 2

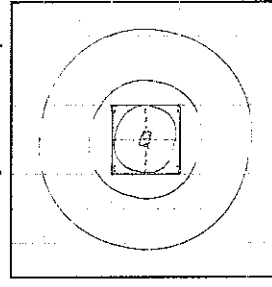
Low

High (H) 1, 2, 3 U

Intermediate (I) 1, 2

Low

Site Sensitivity Context Map - Slice A



320110837P

Order Details

Order Number: 29946638_1_1

Customer Ref: 16372

National Grid Reference: 372540, 437330

Site: A

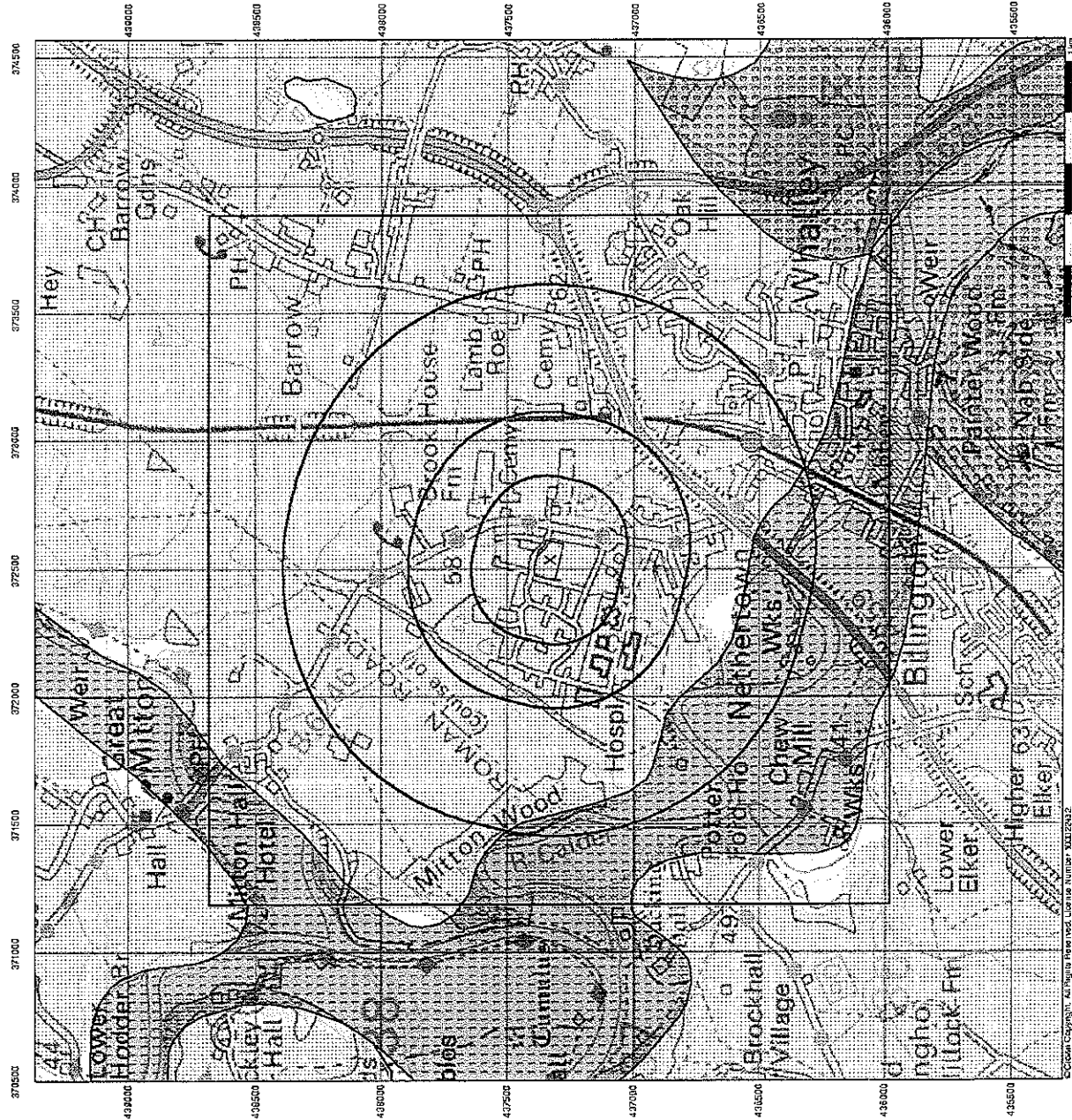
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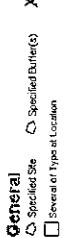
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B

Landmark
 Total: 0844 844 8965
 Fax: 0844 844 8951
 Web: www.earthcheck.co.uk





- [illegible]

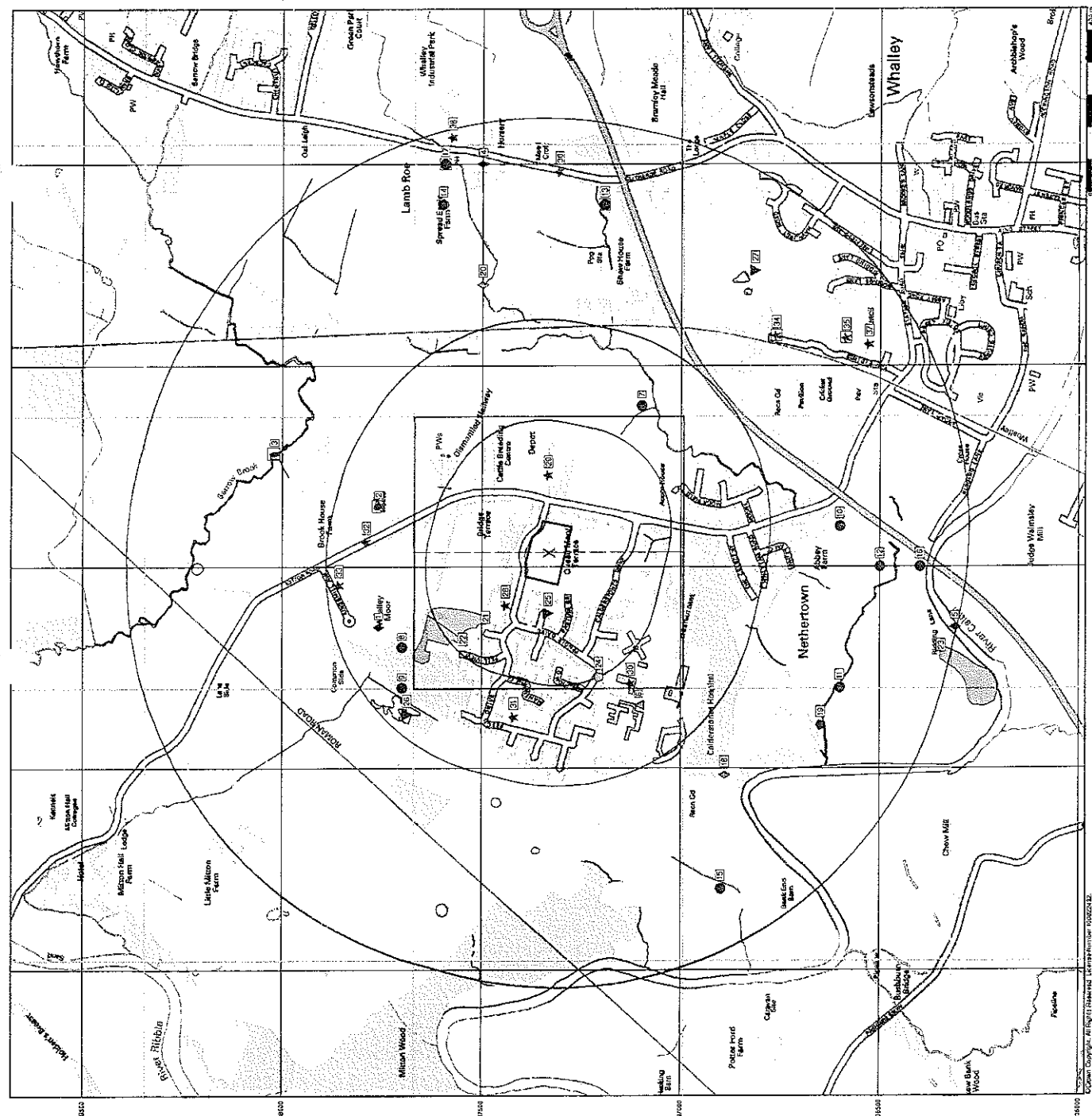
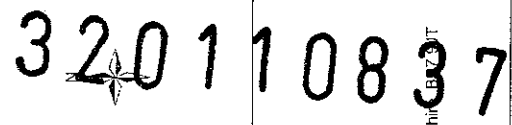
Order Details
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Customer Ref: 16372
National Grid Reference: 372540, 437330
A
Slice: 1.25
Site Area (Ha): 1000
Search Buffer (m):

Site Details



Landmark
Real Estate Services, Inc.

0844 844 9952
0844 844 9952
0844 844 9952



General

- Specified Site
- Specified Duff(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

Extreme Flooding from Rivers or Sea without Defences (Zone 2)

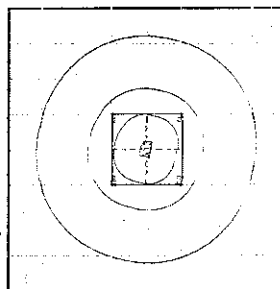
Flooding from Rivers or Sea without Defences (Zone 3)

Area Benefiting from Flood Defence

Flood Water Storage Areas

Flood Defence

Flood Map - Slice A



Order Details

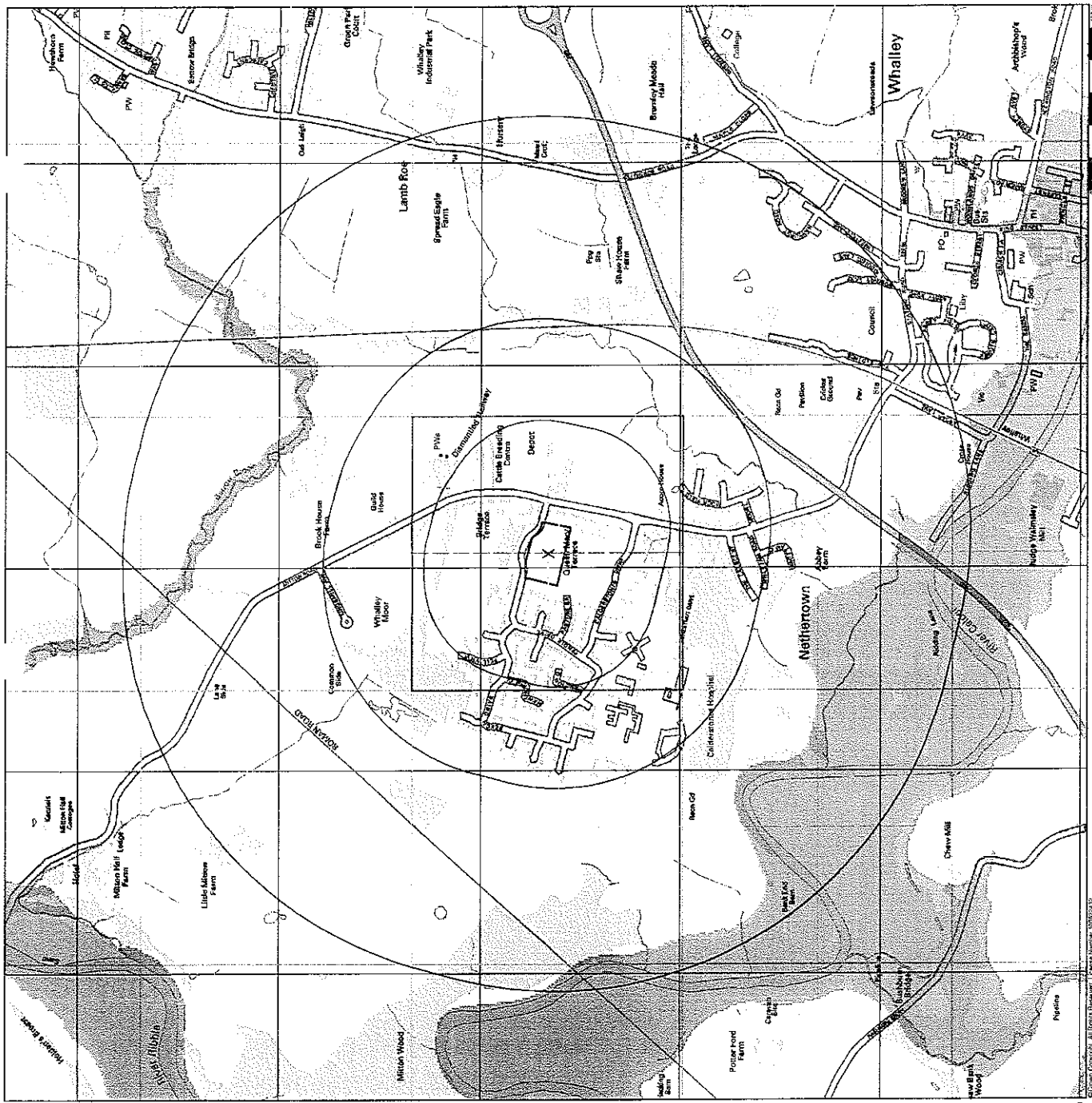
Order Number: 29946638_1_i
 Customer Ref: 16372
 National Grid Reference: 372540, 437330
 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB3 6JT



Tel: 0844 844 9922
 Fax: 0844 844 9851
 Web: www.landmark.co.uk



General

- ☐ Specified Site
- ☐ Specified Profile(s)
- ☒ Bearing Reference Point
- ☐ Map ID
- ☐ Section of Type at Location

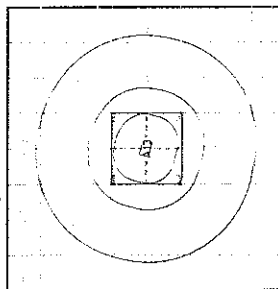
Agency and Hydrological (Boreholes)

- ☐ BGS Borehole Depth 0 - 10m
- ☐ BGS Borehole Depth 10 - 30m
- ☐ BGS Borehole Depth 30m +
- ☐ Confidential
- ☐ Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



320110837



Order Details

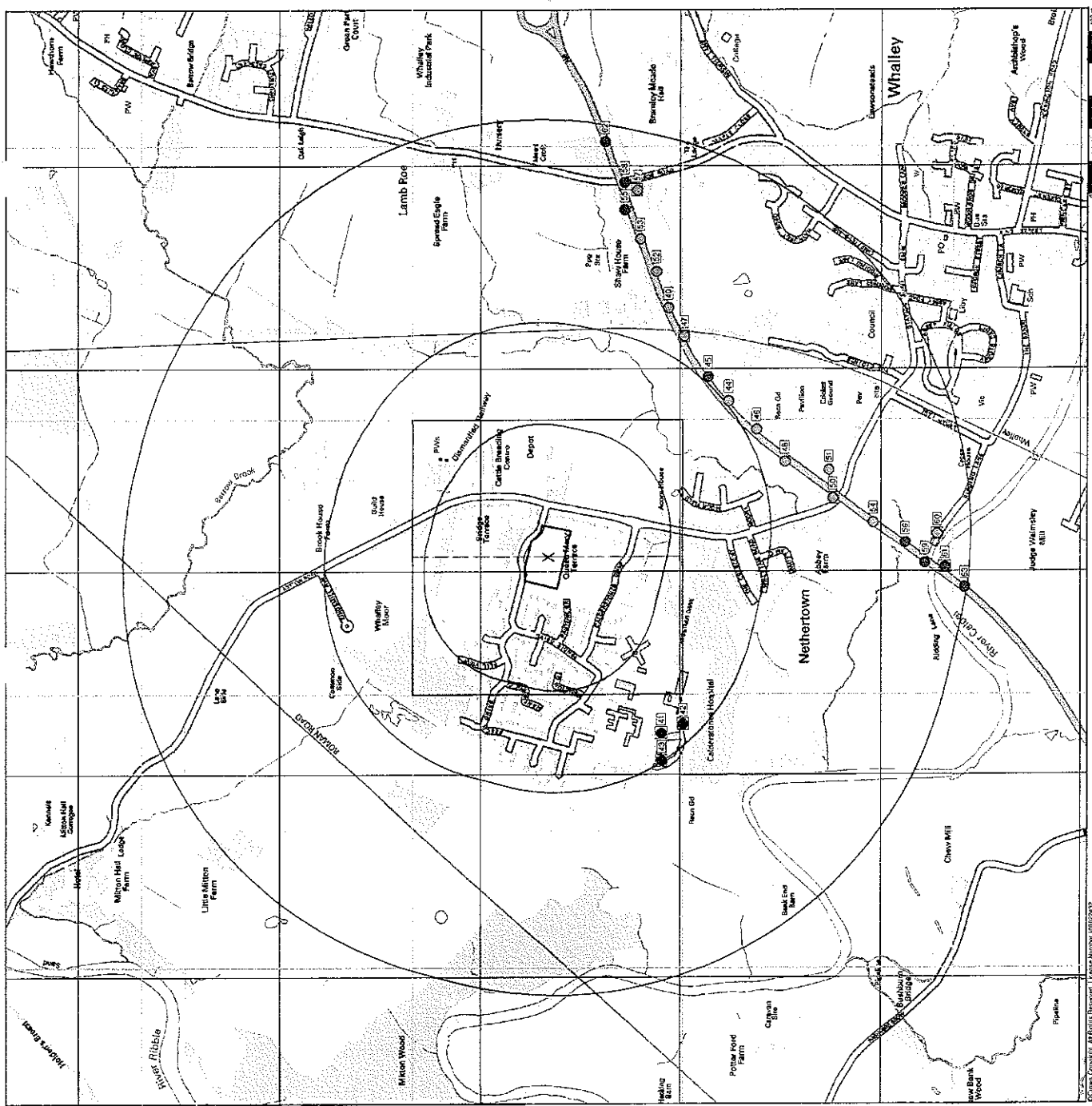
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 Customer Ref: 16372
 National Grid Reference: 372540, 437330
 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B87 3JT



Tel: 0544 844 831
 Fax: 0544 844 831
 Web: www.envirocheck.co.uk



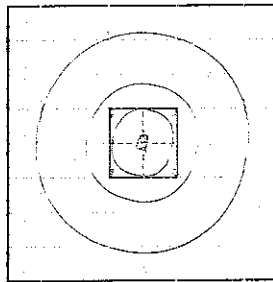


GROUP PLC

Source Protection Zones

- General**
- Specified Site
 - Specified Buffer(s)
 - Map ID
 - Beating Reference Point
- Agency and Hydrological**
- Source Protection Zone I
 - Source Protection Zone II
 - Source Protection Zone III
 - Zone of Special Interest
 - Source Protection Zone Boundary

Site Sensitivity Context Map - Slice A



Order Details

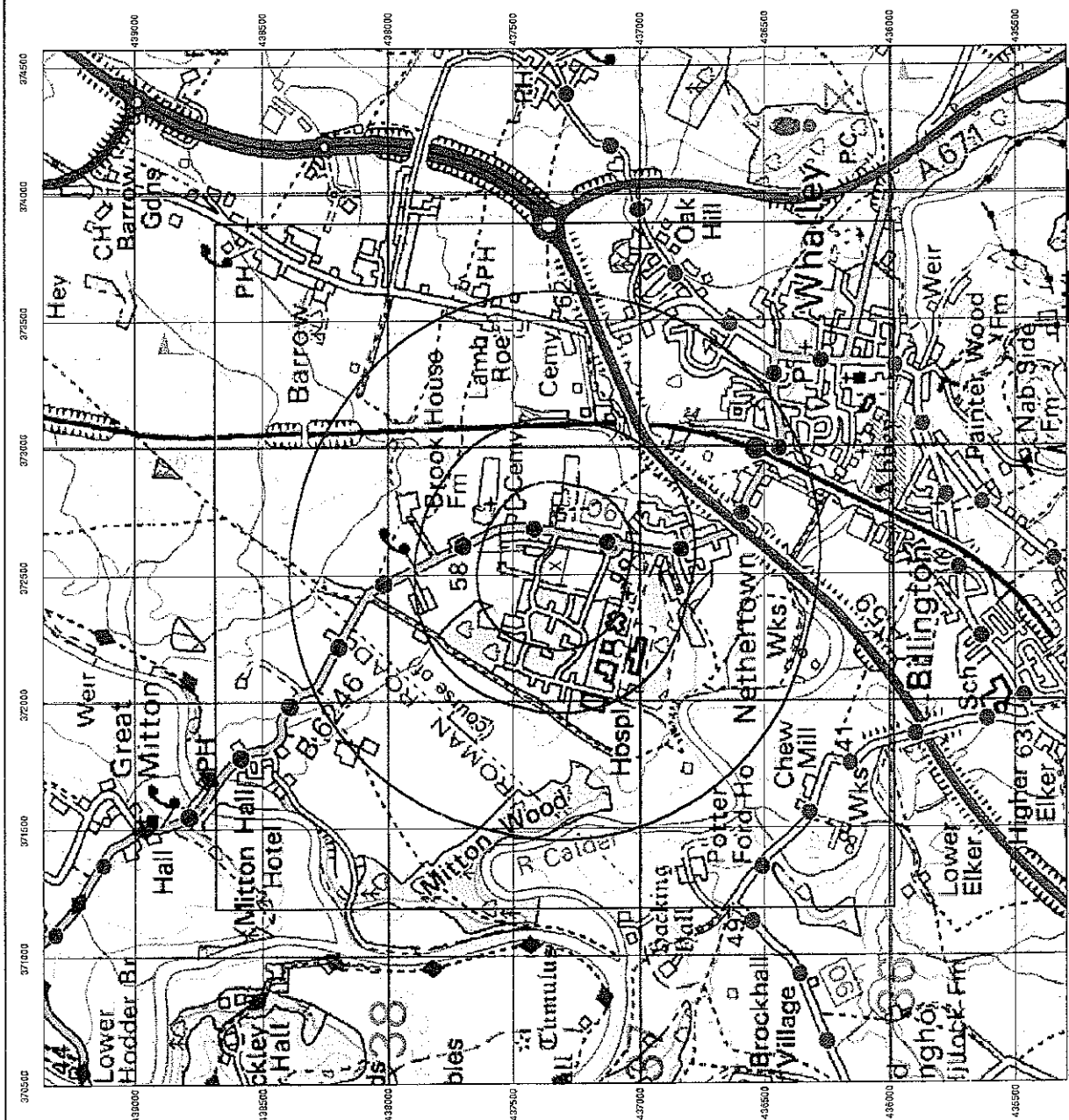
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Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 6JT



Tel: 0844 844 9932
Fax: 0844 844 9851
Web: www.earthcheck.co.uk



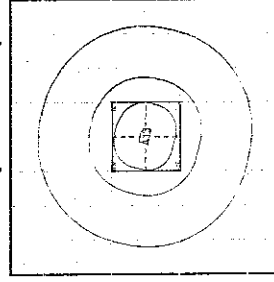


GROUP PLC

Sensitive Land Uses

- General**
- Specified Site
 - Specified Buffer(s)
 - Map ID
 - Beating Reference Point
- Sensitive Land Uses**
- Area of Adopted Green Belt
 - Area of Unadopted Green Belt
 - Area of Outstanding Natural Beauty
 - Environmentally Sensitive Area
 - Forest Park
 - Local Nature Reserve
 - Marine Nature Reserve
 - National Nature Reserve
 - National Park
 - Nature Sensitive Area
 - Nature Vulnerable Zone
 - Ramsar Site
 - Site of Special Scientific Interest
 - Special Area of Conservation
 - Special Protection Area

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, OL16 9JW, Lancashire, BB7 9JW



Tel: 0144 844 9652
Fax: 0844 844 9651
Web: www.landmark.co.uk

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

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

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry	Sand Pit	Gravel Pit	Disused Pit or Quarry	Lake, Loch or Pond	Boulders	Non-Coniferous Trees
Refuse or Slag Heap	Dunes	Coniferous Trees	Orchard	Scrub	Heath	Reeds
Marsh	Marsh	Marsh	Marsh	Marsh	Marsh	Marsh
Building	Glasshouse	Pylon	Electricity Transmission Line	Pole		
Sloping Masonry						
Cutting	Embankment	Standard Gauge Multiple Track	Standard Gauge Single Track	Siding, Tramway or Mineral Line	Narrow Gauge	
Road over Road	Road over Road	Road over Road	Road over Road	Road over Road	Road over Road	Road over Road
Geographical County	Administrative County, County Borough or County of City	Municipal Borough, Urban or Rural District, Borough or District Council	Borough, Burgh or County Constituency	Shown only when not coincident with other boundaries	Civil Parish	Shown whenever coincidence of boundaries occurs
BP, BS	Boundary Post or Stone	Ch Church	Police Station	Post Office	Public Convenience	Public House
CH	Club House	PC	Police Station	Public House	Public House	Public House
FE Sta	Fire Engine Station	PH	Police Station	Public House	Public House	Public House
FB	Foot Bridge	SB	Signal Box	Signal Box	Signal Box	Signal Box
Fn	Fountain	Spr	Spring	Spring	Spring	Spring
GP	Guide Post	TCS	Telephone Call Box	Telephone Call Box	Telephone Call Box	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post	Telephone Call Post	Telephone Call Post	Telephone Call Post
MS	Mile Stone	W	Well	Well	Well	Well

1:10,000 Raster Mapping

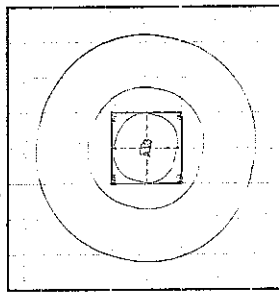
Gravel Pit	Rock	Boulders	Shingle	Sand	Slopes	General detail	Overhead detail	Multi-track railway	Civil, parish or community boundary	District, Unitary, Metropolitan, London Borough boundary	Area of wooded vegetation	Non-coniferous trees (scattered)	Coniferous trees (scattered)	Orchard	Rough Grassland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

RSK GROUP PLC

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1848	2
Lancashire And Furness	1:10,560	1848	3
Lancashire And Furness	1:10,560	1895	4
Yorkshire	1:10,560	1896	5
Yorkshire	1:10,560	1911	6
Lancashire And Furness	1:10,560	1913, 1914	7
Lancashire And Furness	1:10,560	1932-1933	8
Ordnance Survey Plan	1:10,000	1955	9
Ordnance Survey Plan	1:10,000	1970	10
Ordnance Survey Plan	1:10,000	1975	11
10K Raster Mapping	1:10,000	2001	12
10K Raster Mapping	1:10,000	2006	13
10K Raster Mapping	1:10,000	2009	14

Historical Map - Slice A



320110837P

Order Details

Order Number: 29046638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB3 9JT



Tel: 0844 844 9652
Fax: 0844 844 9551
Web: www.landmark.co.uk



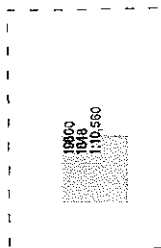
Yorkshire

Published 1848

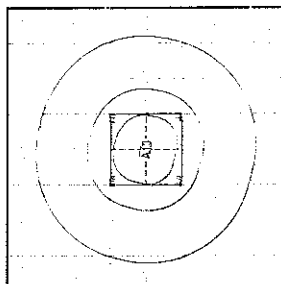
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas: these maps were used to update the 1:10,560 maps. The published data given therefore is often some years later than the surveyed date. Before 1838, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlining areas. In the late 1840's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear to have been based on the Cassini Projection. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



32011083

Order Details

Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

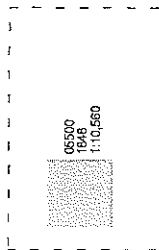
3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BA5 2 14



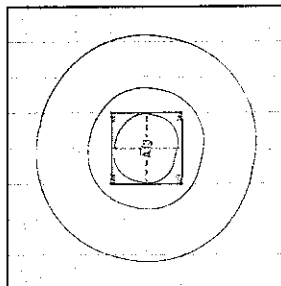
Tel: 0844 844 8922
Fax: 0844 844 8951
Web: www.landmark.co.uk

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

Map Name(s) and Date(s)



Historical Map - Slice A

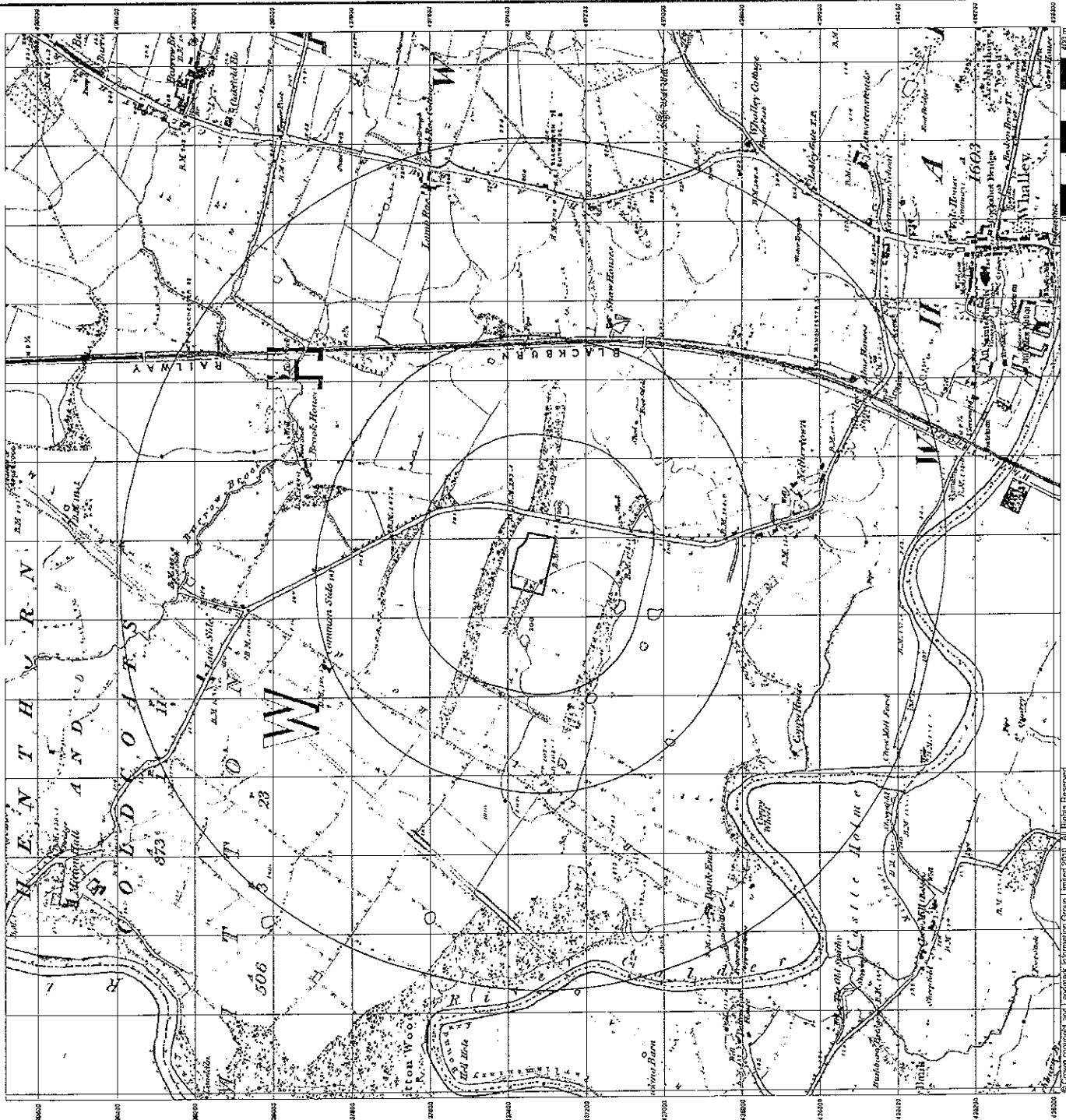


Order Details

Order Number: 29946638
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
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Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B83 0JT

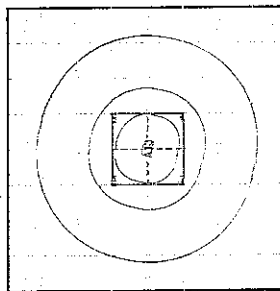


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:25,000 scale was adopted for the Ordnance Survey. The maps shown are often some years later than the surveyed date. Before 1858, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

OSNW	1895
1:10,560	
OSSW	1949
1:10,560	

Historical Map - Slice A



320110837



Order Details

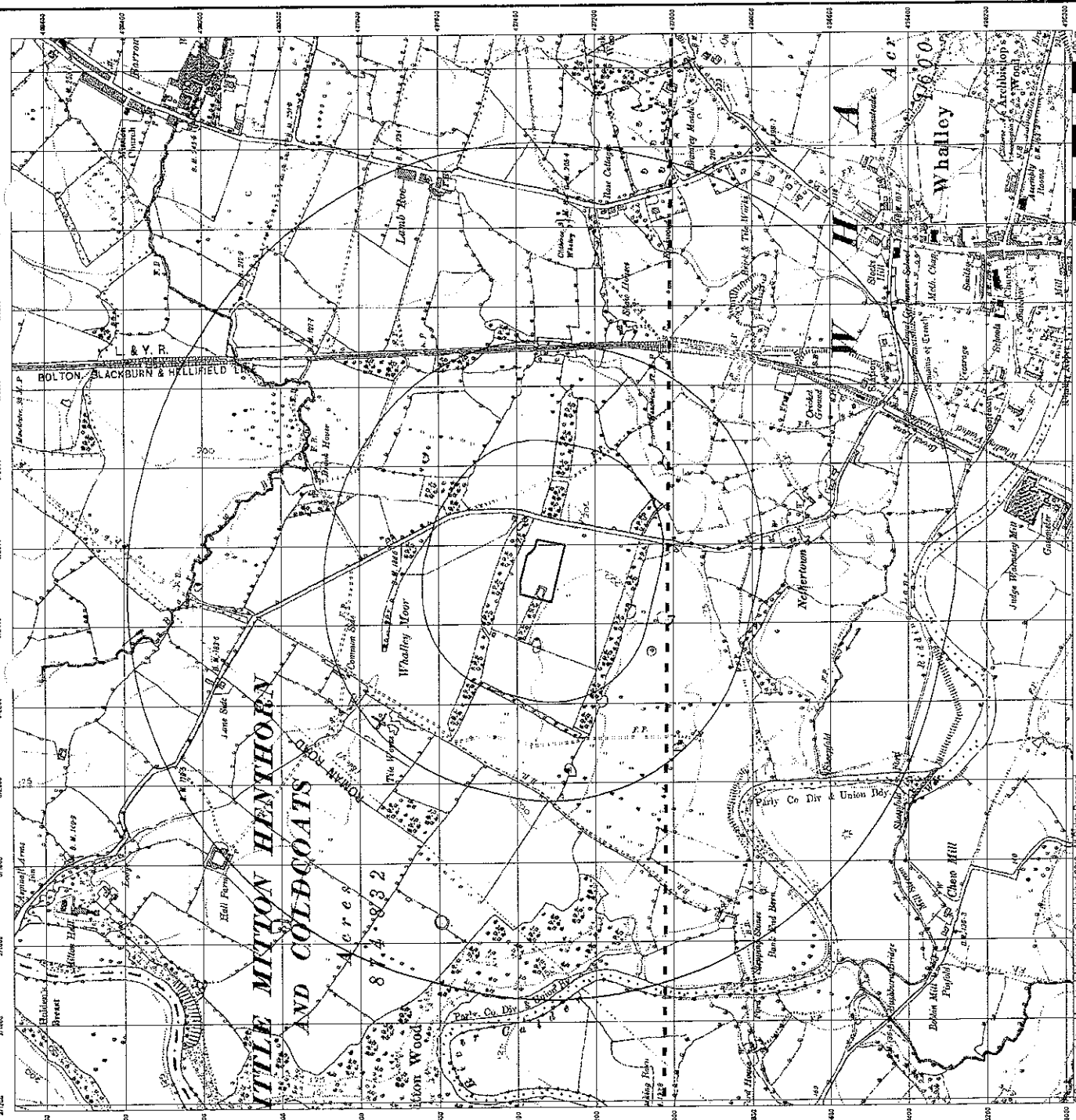
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 Customer Ref: 16372
 National Grid Reference: 372540, 487330
 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB12 8JL



Tel: 0544 844 8852
 Fax: 0544 844 8853
 Email: sales@landmark.co.uk
 Website: www.landmark.co.uk





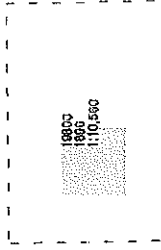
Yorkshire

Published 1896

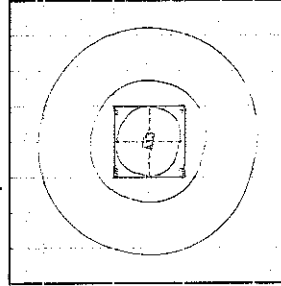
Source map scale - 1:10,560

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

Map Name(s) and Date(s)



Historical Map - Slice A



32011083



Order Details

Order Number: 28946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB1 9PQ



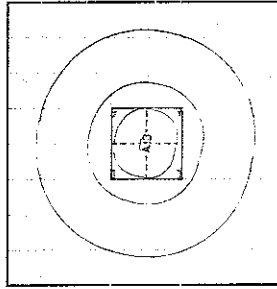
Tel: 0844 844 0952
Fax: 0844 844 0953
Web: www.landmark.co.uk

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1954 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unannounced, all military camps and other strategic sites removed. These maps were initially used for the Ordnance Survey's Ordnance Survey's 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

198NW
1911
1:10,560

Historical Map - Slice A



Order Details

Order Number: 29948638_L_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

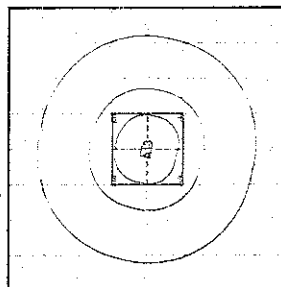
3 Pendle Drive, Whalley, CLITHEROE, Lancashire, Bury 901

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:50,000 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear undistorted, but military camps and other strategic sites are moved. These initial maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

OS55NW	1914
OS55SW	1913

Historical Map - Slice A

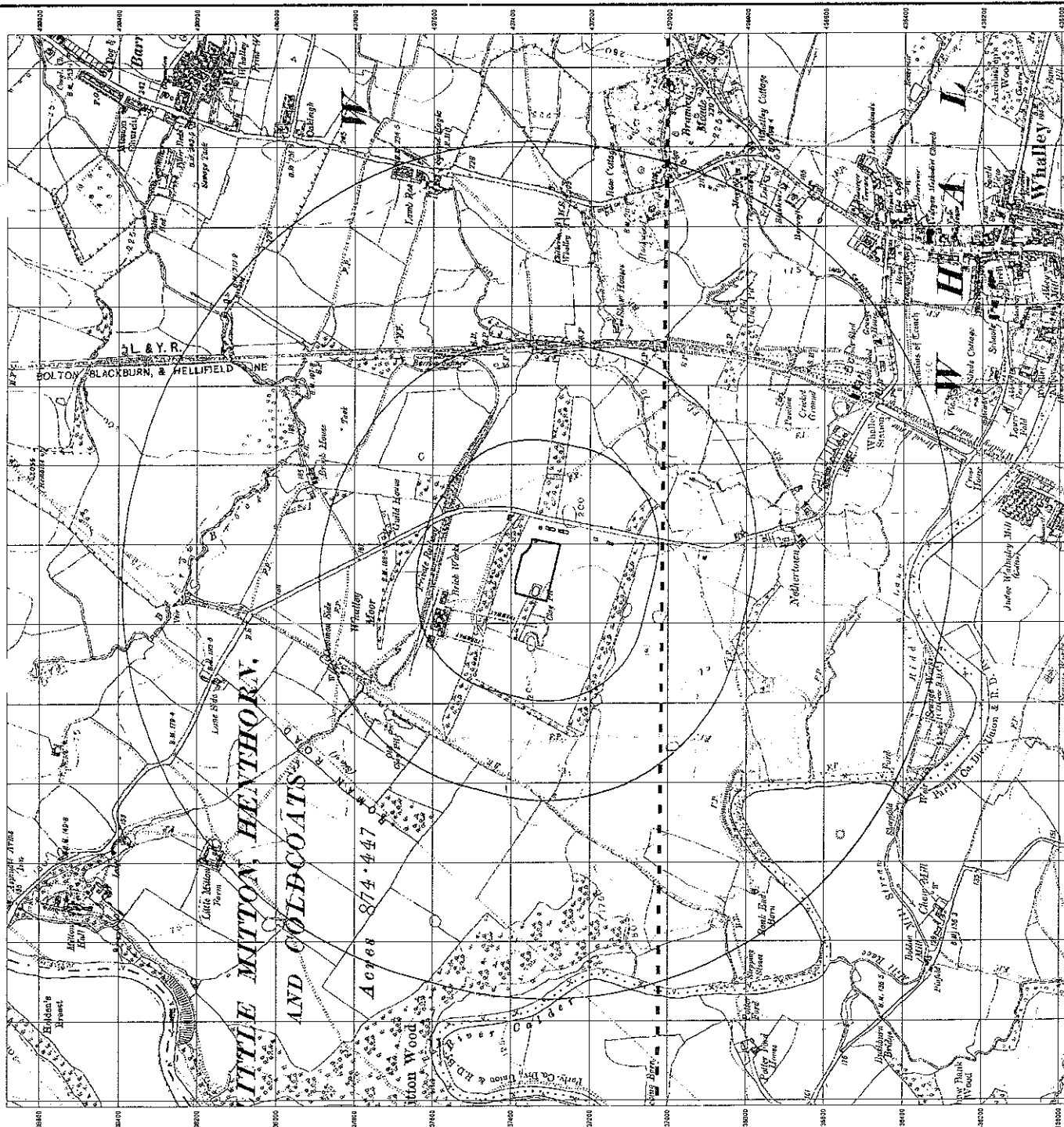


Order Details

Order Number: 29946639_1_1
 Customer Ref: 16372
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 Slice: A
 Site Area (Ha): 1.25
 Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB8 9U





Lancashire And Furness

Published 1932 - 1933

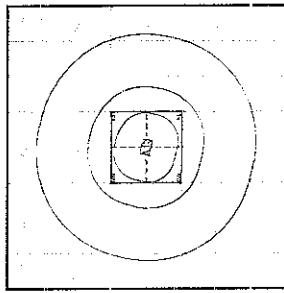
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1954 the 1:50,000 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unaltered, with all military camps and other strategic features removed. These maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

OS5NW	1932
1:10,560	
OS5SW	1933
1:10,560	

Historical Map - Slice A



Order Details

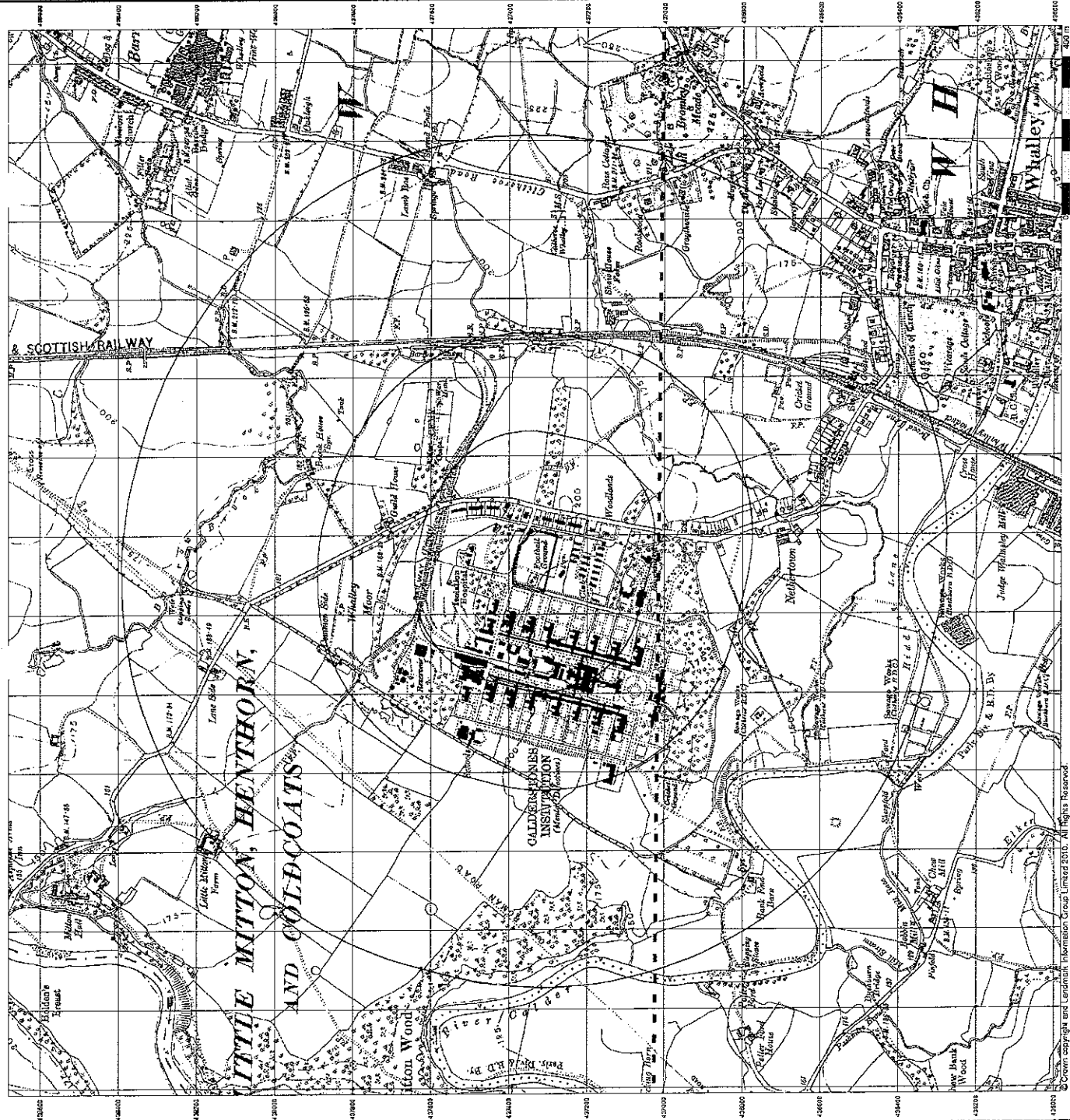
Order Number: 29946638_L
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9JT



Landmark
Tel: 01252 861111
Fax: 01252 861111
Web: www.landmark.co.uk

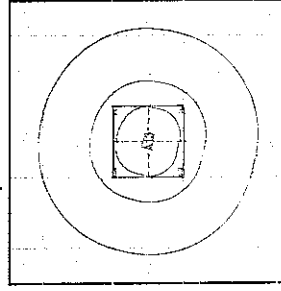


The historical maps shown were reproduced from maps predominantly held at the scale applied for England, Wales and Scotland in the 1940's. In 1954 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,000 maps. The published date given therefore is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single area. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD21NW
1955
1:10,000

Historical Map - Slice A



320110837P

Order Details

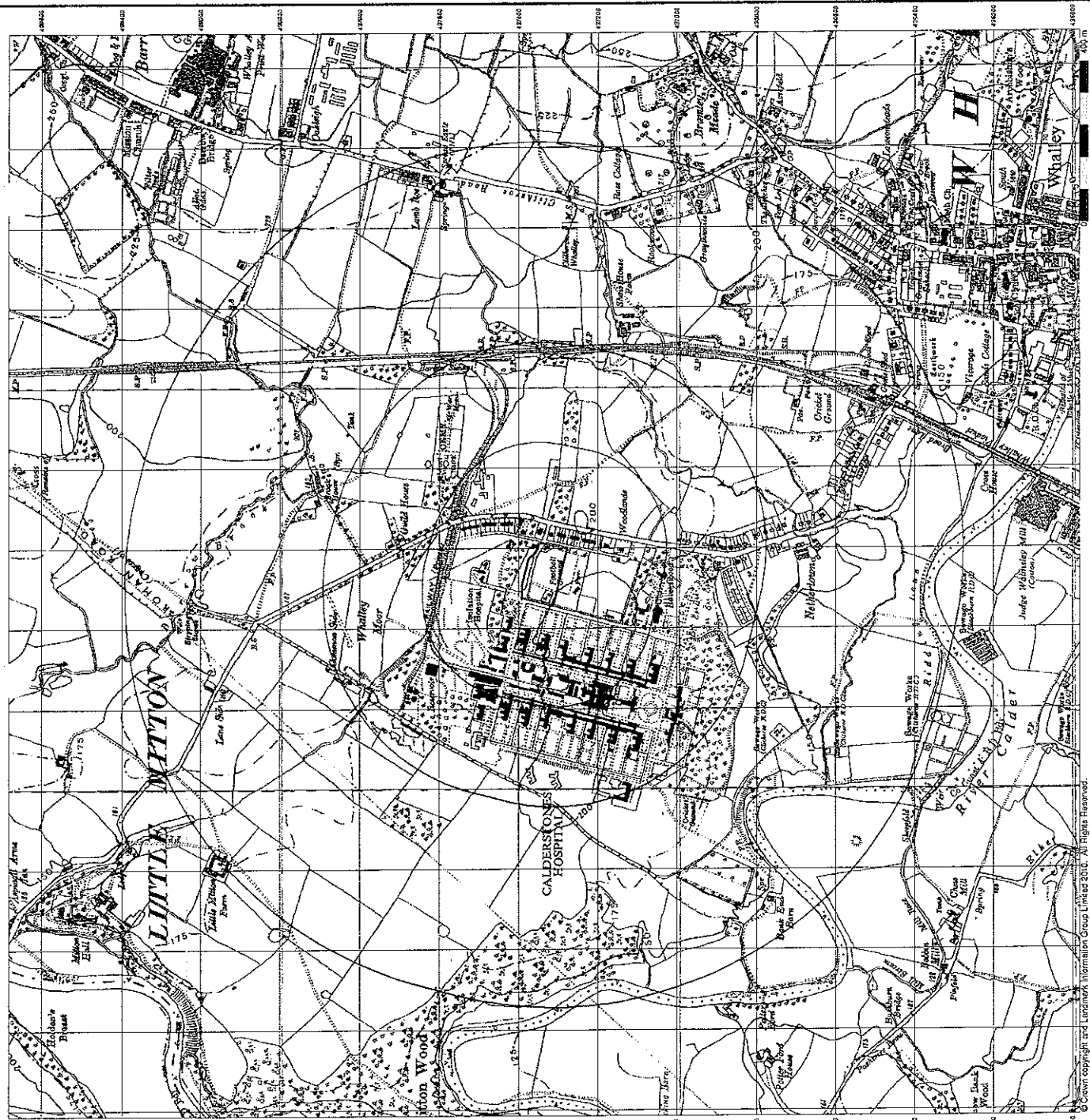
Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9JT



Tel: 0844 844 6952
Fax: 0844 844 6951
Web: www.landmark.co.uk



RSK

GROUP PLC

Ordnance Survey Plan

Published 1970

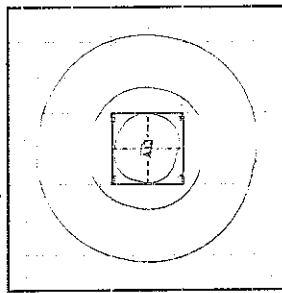
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1954 the 1:2,500 scale was adopted for mapping urban areas: these maps were used to update the 1:10,000 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant distortions on joining the sheets. In 1938, the Ordnance Survey adopted the Transverse Mercator Projection, with the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD2NW
1970
1:10,000

Historical Map - Slice A



Order Details

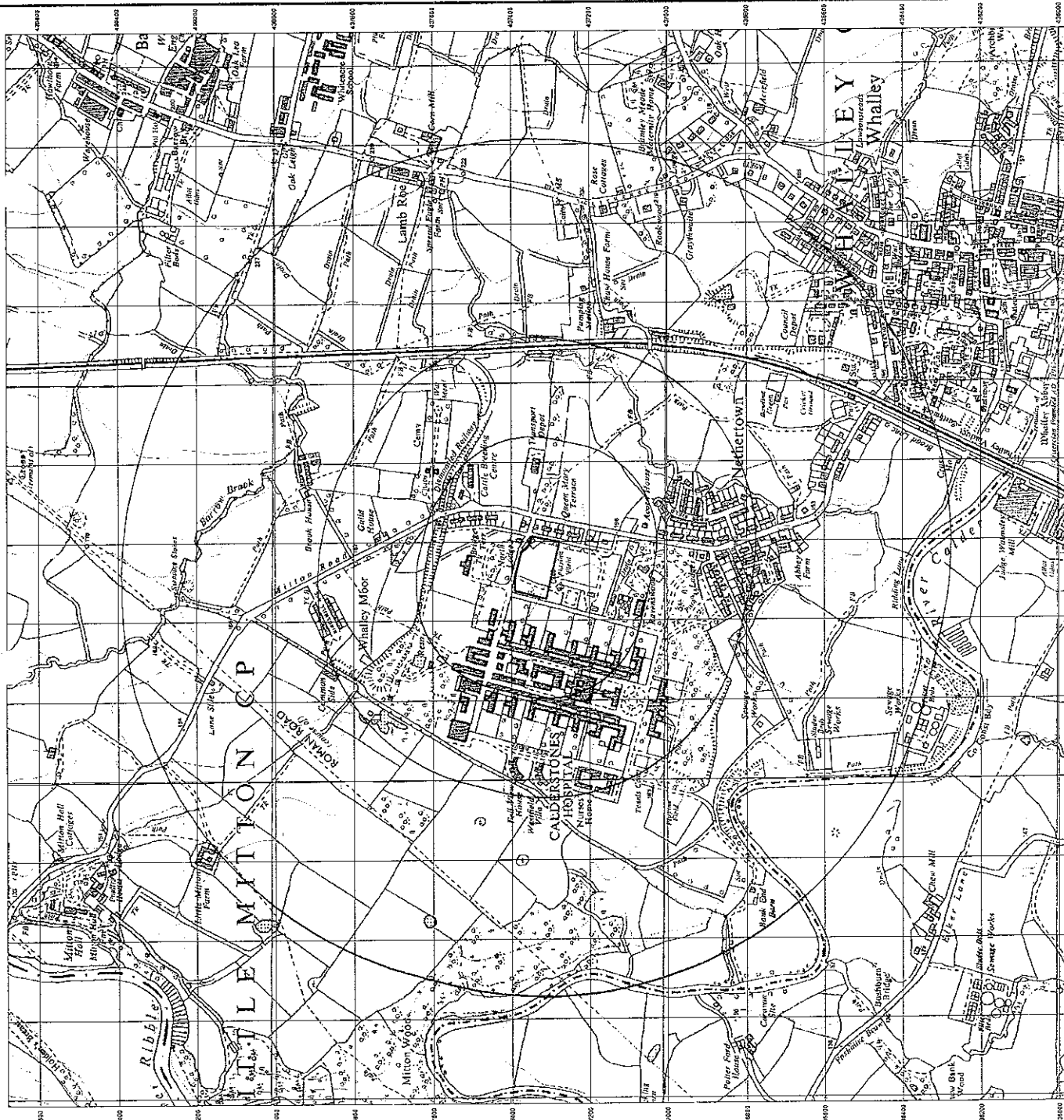
Order Number: 2994638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9UJ

Landmark
Information Group

Tel: 0844 644 9552
Fax: 0844 644 9251
Web: www.environment.co.uk

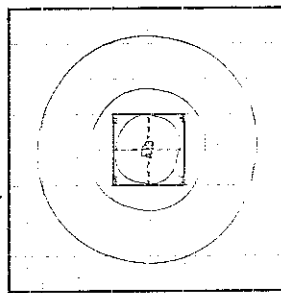


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,000 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in adjoining areas. In 1946, a Provisional Edition was produced, which updated the maps to the Transverse Mercator Projection. The published date given is therefore the date of the Provisional Edition. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD23NW
1975
1:10,000

Historical Map - Slice A



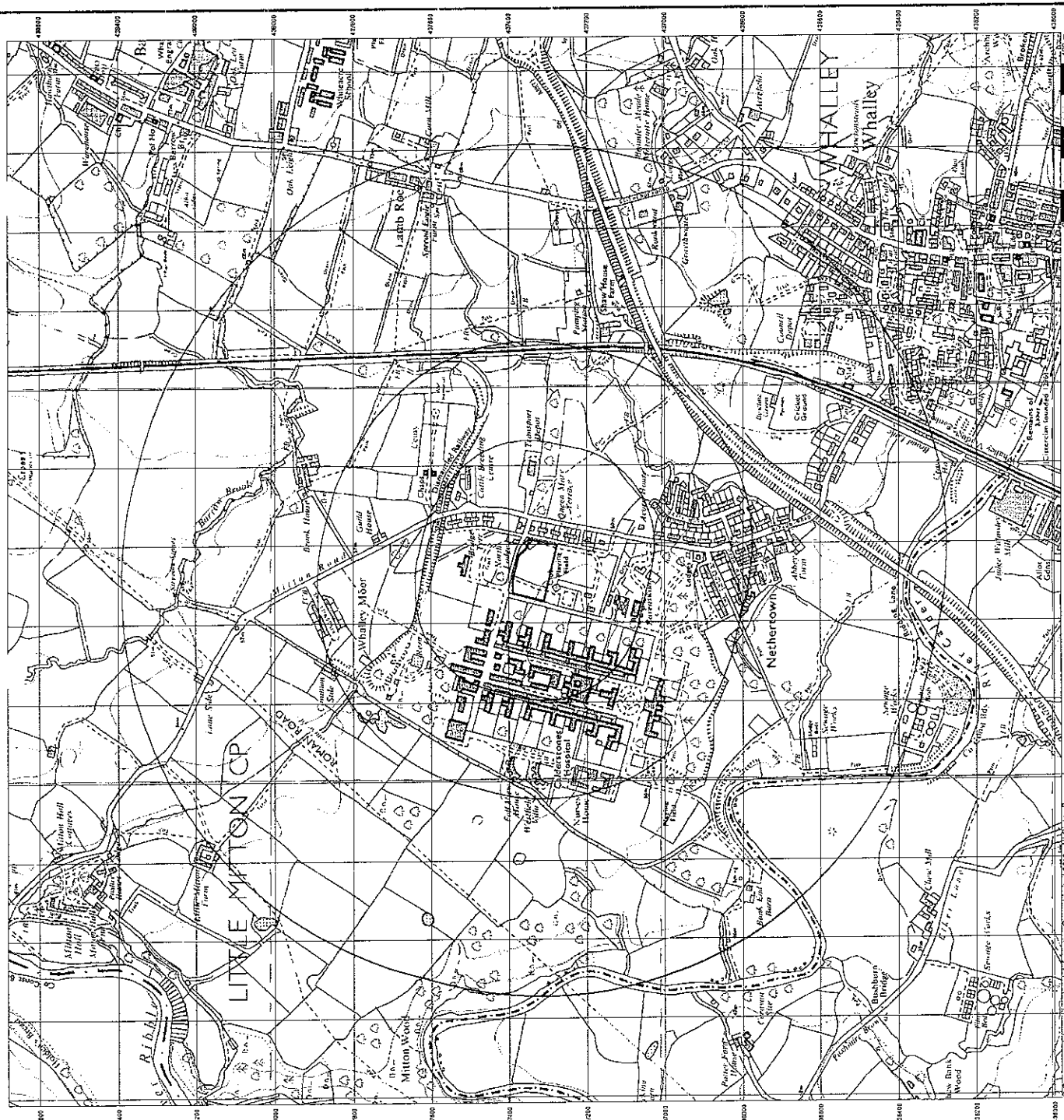
320110837P

Order Details

Order Number: 29948638_L1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9NT

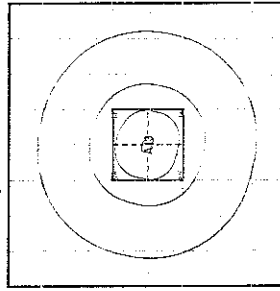


The historical maps shown were produced from the Ordnance Survey's 1:10,000 scale maps. These maps were produced in 1970. The data which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

Map Name(s) and Date(s)

SD23NW
2001
1:10,000

Historical Map - Slice A



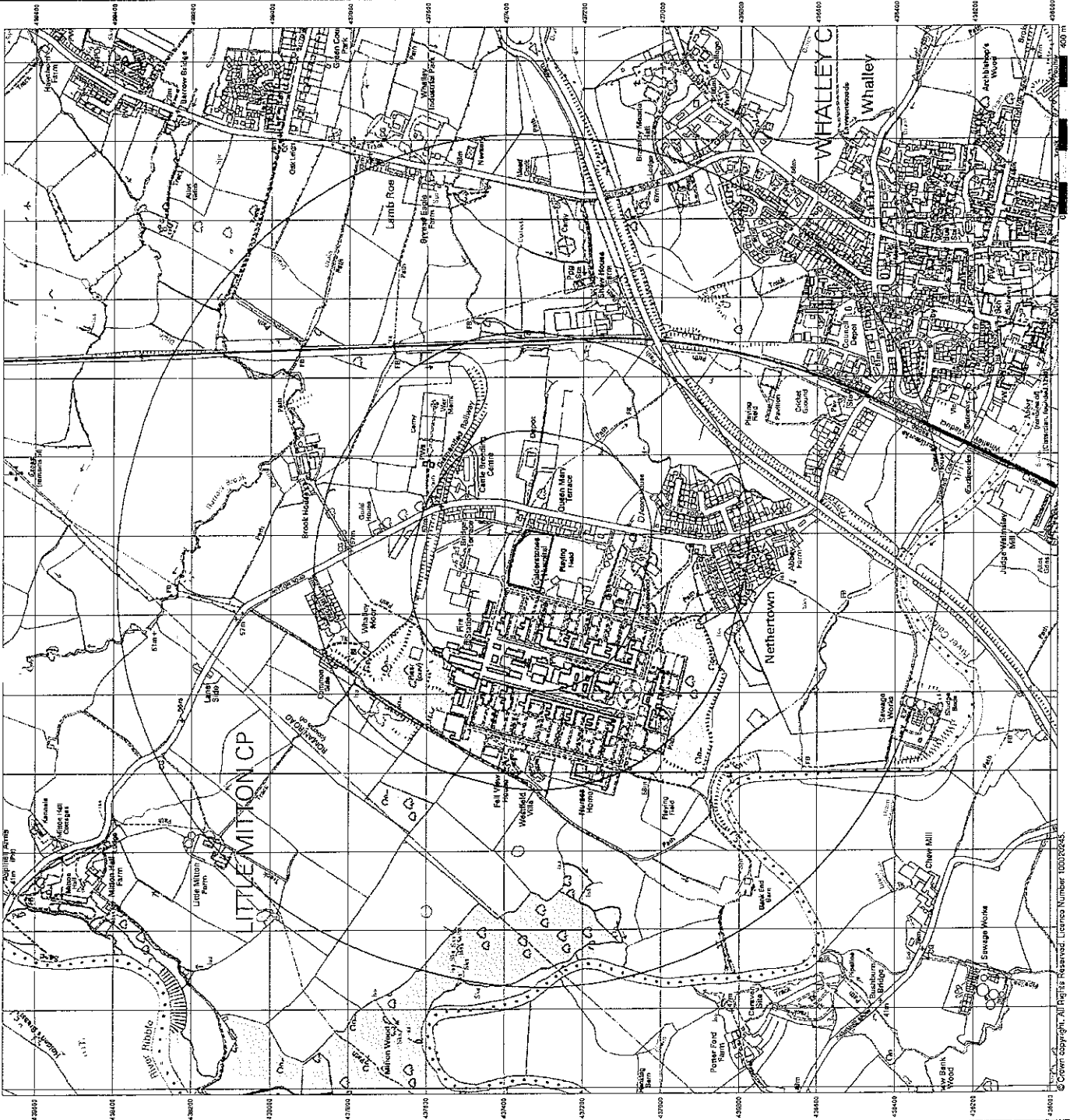
320110837P

Order Details

Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire BB7 9JF





10k Raster Mapping Published 2006

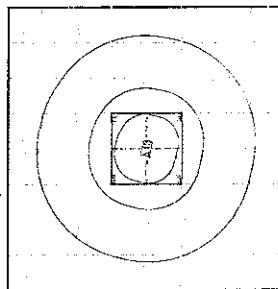
Source map scale - 1:10,000

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

Map Name(s) and Date(s)

SD73NW
2005
1:10,000

Historical Map - Slice A



3201108370



Order Details

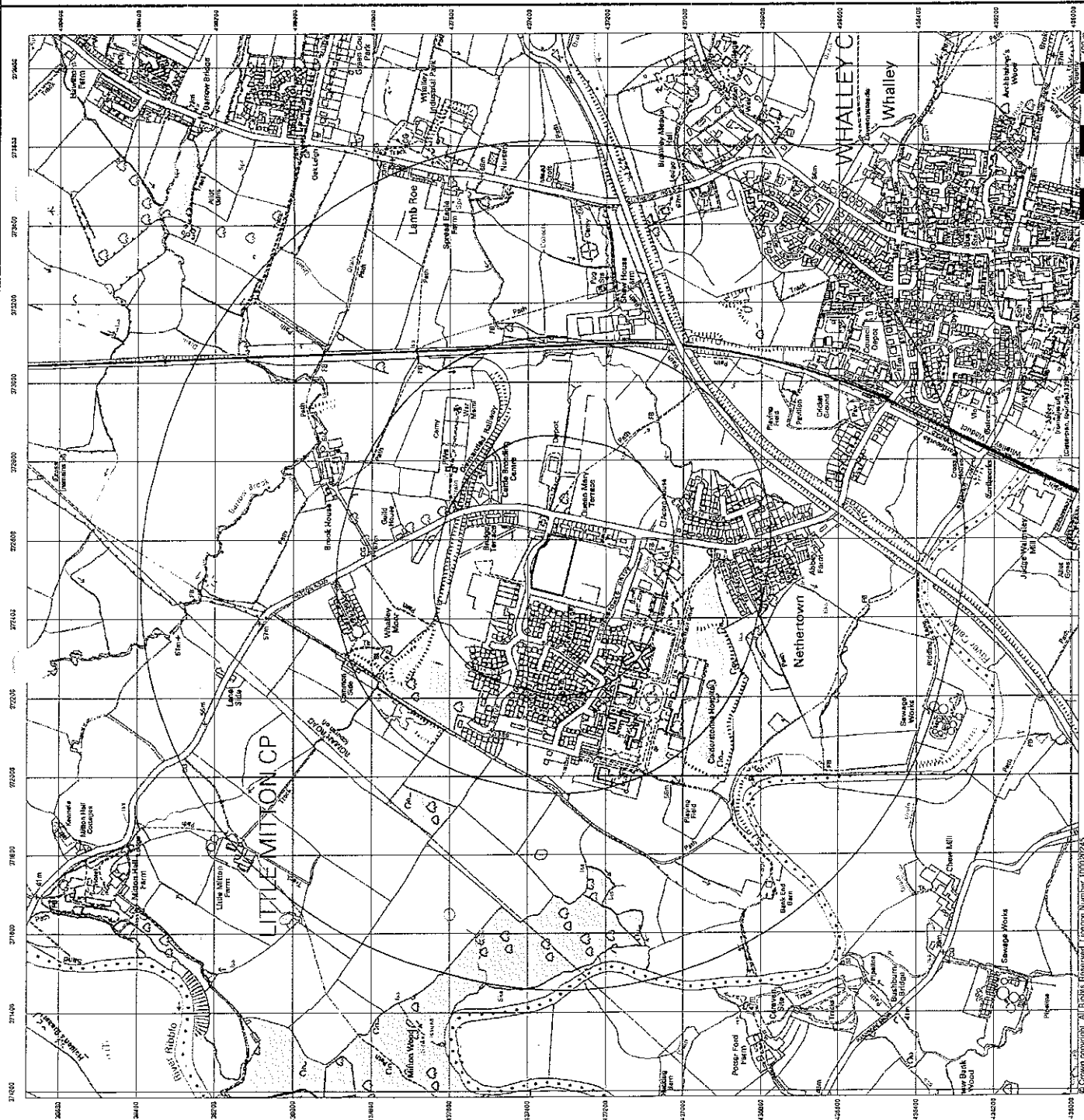
Order Number: 29946639_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, Bury



Tel: 0544 844 9922
Fax: 0544 844 9951
Web: www.landmark.co.uk

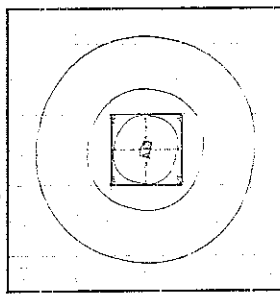


The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks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

Map Name(s) and Date(s)

SD73NW
2000
1:10,000

Historical Map - Slice A



320110837P

Order Details

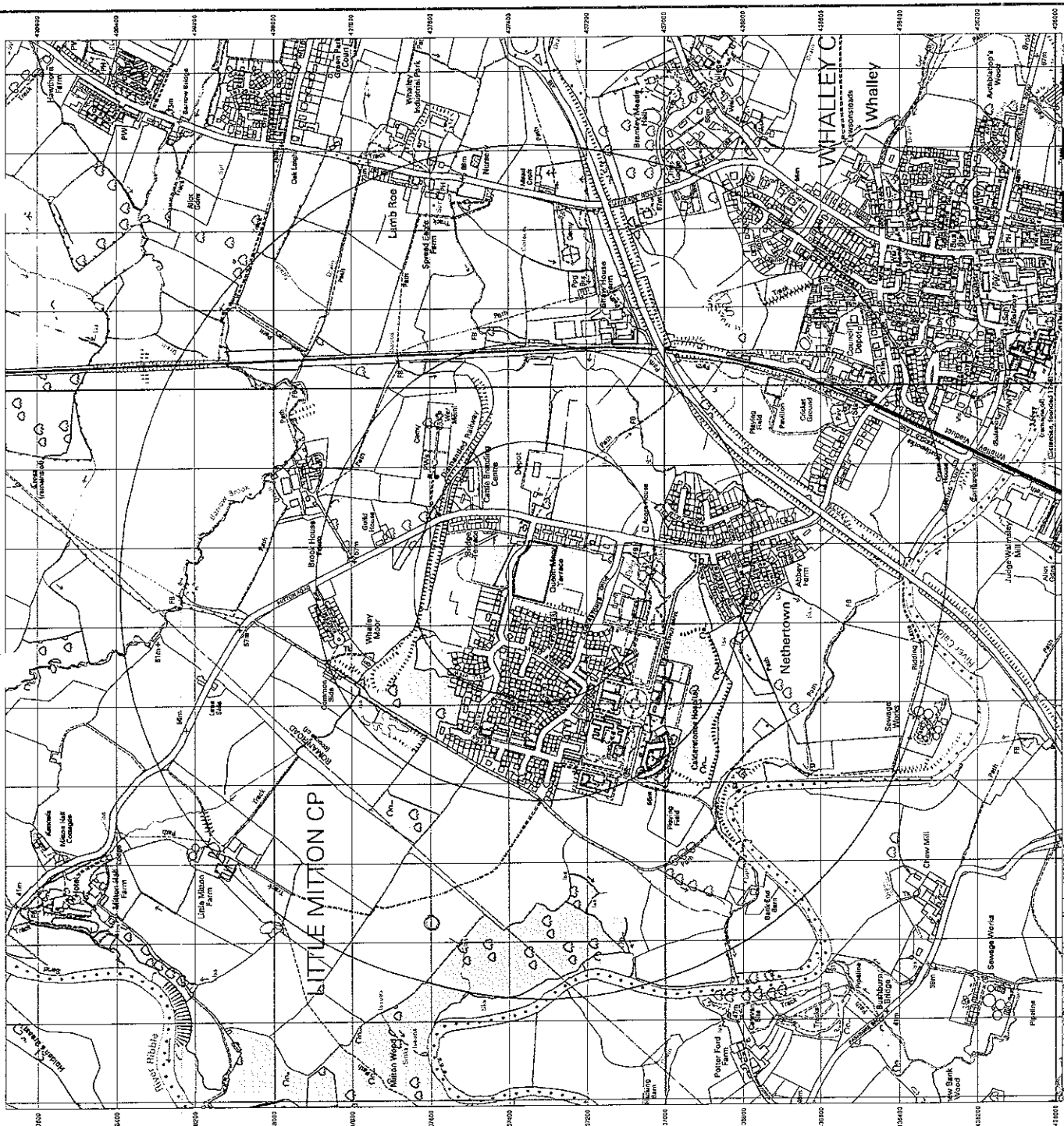
Order Number: 29946838_L1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (Ha): 1.25
Search Buffer (m): 1000

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB1 3



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Historical Mapping Legends

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

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

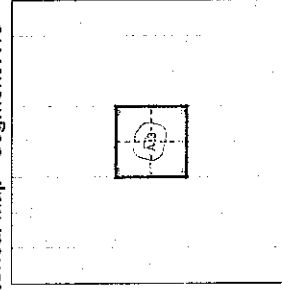
Large-Scale National Grid Data 1:2,500 and 1:1,250

RSK GROUP PLC

Historical Mapping & Photography included:

Mapping Type	Scale	Date	PQ
Lancashire And Furness	1:2,500	1893 - 1894	2
Yorkshire	1:2,500	1894	3
Yorkshire	1:2,500	1908	4
Lancashire And Furness	1:2,500	1912	5
Lancashire And Furness	1:2,500	1932	6
Lancashire And Furness	1:2,500	1938	7
Ordnance Survey Plan	1:2,500	1968	8
Ordnance Survey Plan	1:2,500	1975	9
Additional SIMs	1:2,500	1975	10
Large-Scale National Grid Data	1:2,500	1992	11
Large-Scale National Grid Data	1:2,500	1993	12

Historical Map - Segment A13



320110837

Order Details

Order Number: 28946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B011 1T



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Lancashire And Furness

Published 1893 - 1894

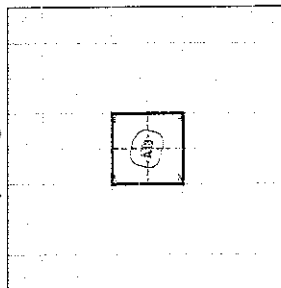
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

065 06	055 06
12,500	12,500
065 09	055 09
12,500	12,500

Historical Map - Segment A13



Order Details

Order Number: 29846636_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (Ha): 1.25
Search Buffer (m): 100

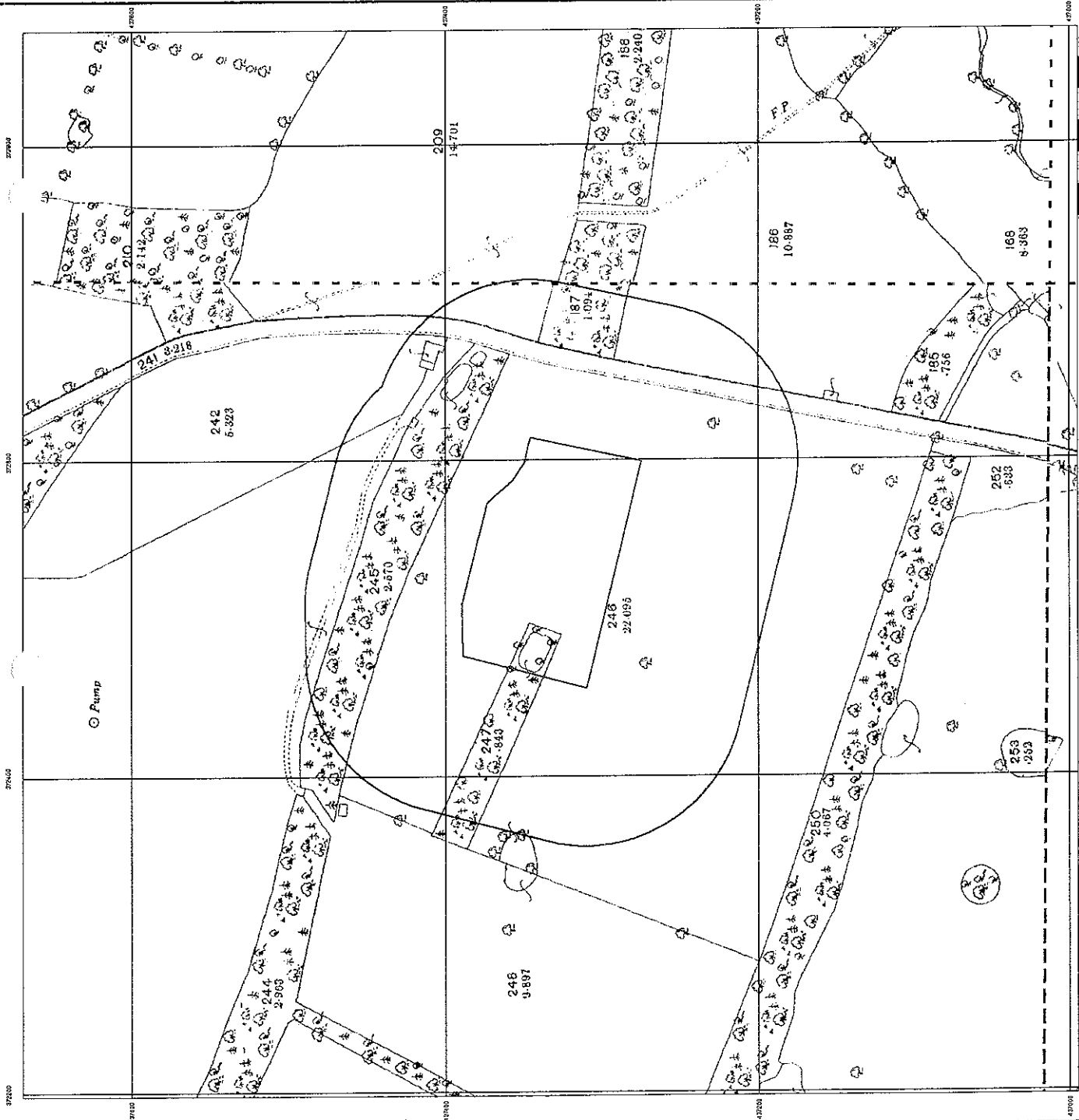
Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B0101



Tel: 0844 844 8932
Fax: 0844 844 9951
Web: www.landmark.co.uk

A Landmark Information Group Service v40.0 22-Jan-2010 Page 2 of 12

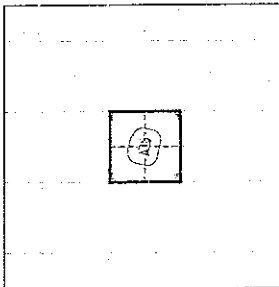


The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1895 it covered the whole of what were considered to be the urban areas of Great Britain. The maps were produced by the Ordnance Survey and the first surveyed date. Before 1939, all OS maps were based on the Cassini projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



320:1 0837

Order Details

Order Number: 29946638_1_1
Customer Ref: 18372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9JT



GROUP PLC

Lancashire And Furness

Published 1912

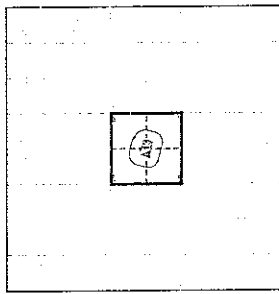
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1886 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed data. Before 1936, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

OS 05 1872 1:2,500	OS 08 1912 1:2,500
OS 09 1872 1:2,500	OS 10 1912 1:2,500

Historical Map - Segment A13



320110837

P

Order Details

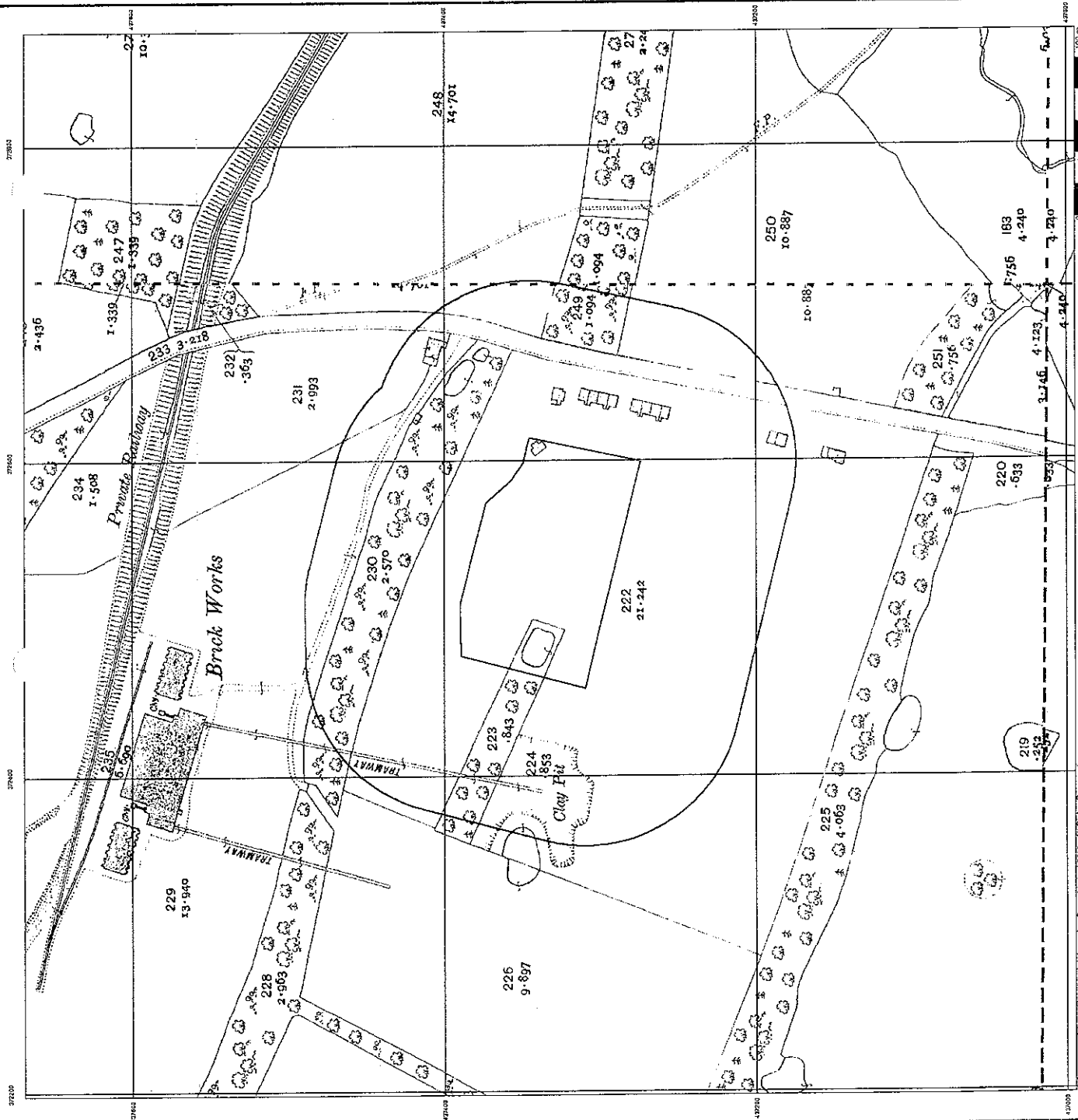
Order Number: 29946838_1_i
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B97 9JT



Tel: 0844 84 0911
Fax: 0844 84 0911
Web: www.landmark.co.uk





Lancashire And Furness Published 1932

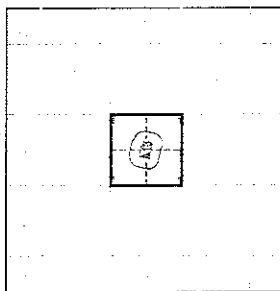
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1899 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published data given below is often some years later than the surveyed data. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

655 05 1932 1:2,500	655 06 1932 1:2,500
655 09 1932 1:2,500	655 10 1932 1:2,500

Historical Map - Segment A13



Order Details

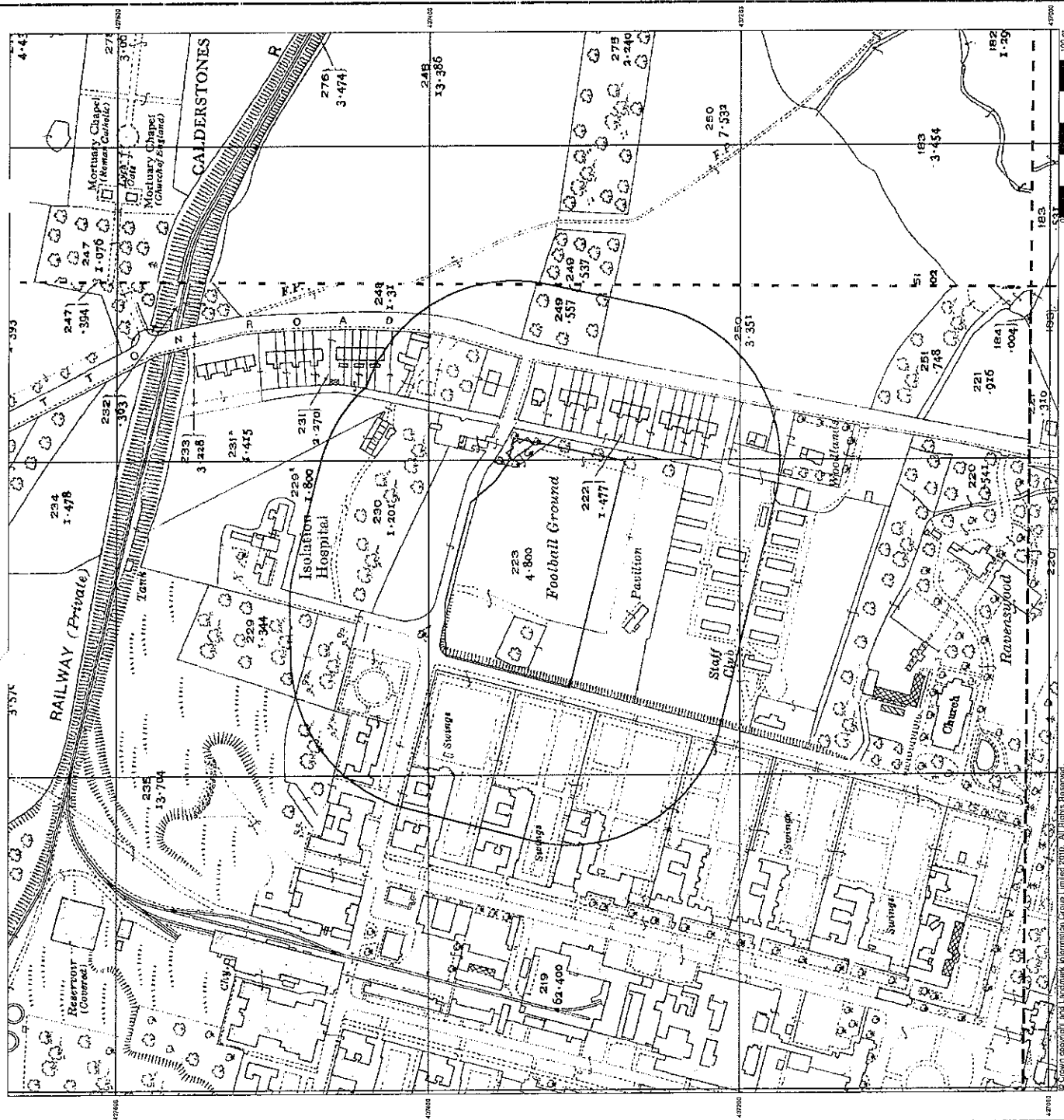
Order Number: 28948638_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BL02 7JT



Tel: 0844 844 8932
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Web: www.landmark.co.uk





Lancashire And Furness

Published 1938

Source map scale - 1:2,500

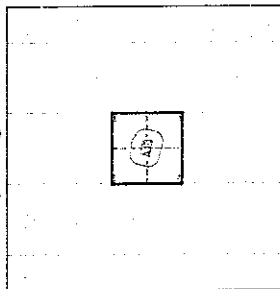
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain.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

Map Name(s) and Date(s)



OS 10
1938
1:2,500

Historical Map - Segment A13



320110837P

Order Details

Order Number: 2994638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9JT



Tel: 0844 844 9952
Fax: 0844 844 9931
Web: www.enrichment.co.uk



Ordnance Survey Plan

Published 1968

Source map scale - 1:2,500

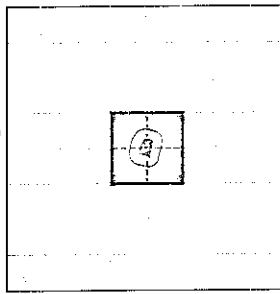
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1886 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD7257
1968
1:2,500

SD7258
1968
1:2,500

Historical Map - Segment A13



320110837P



Order Details

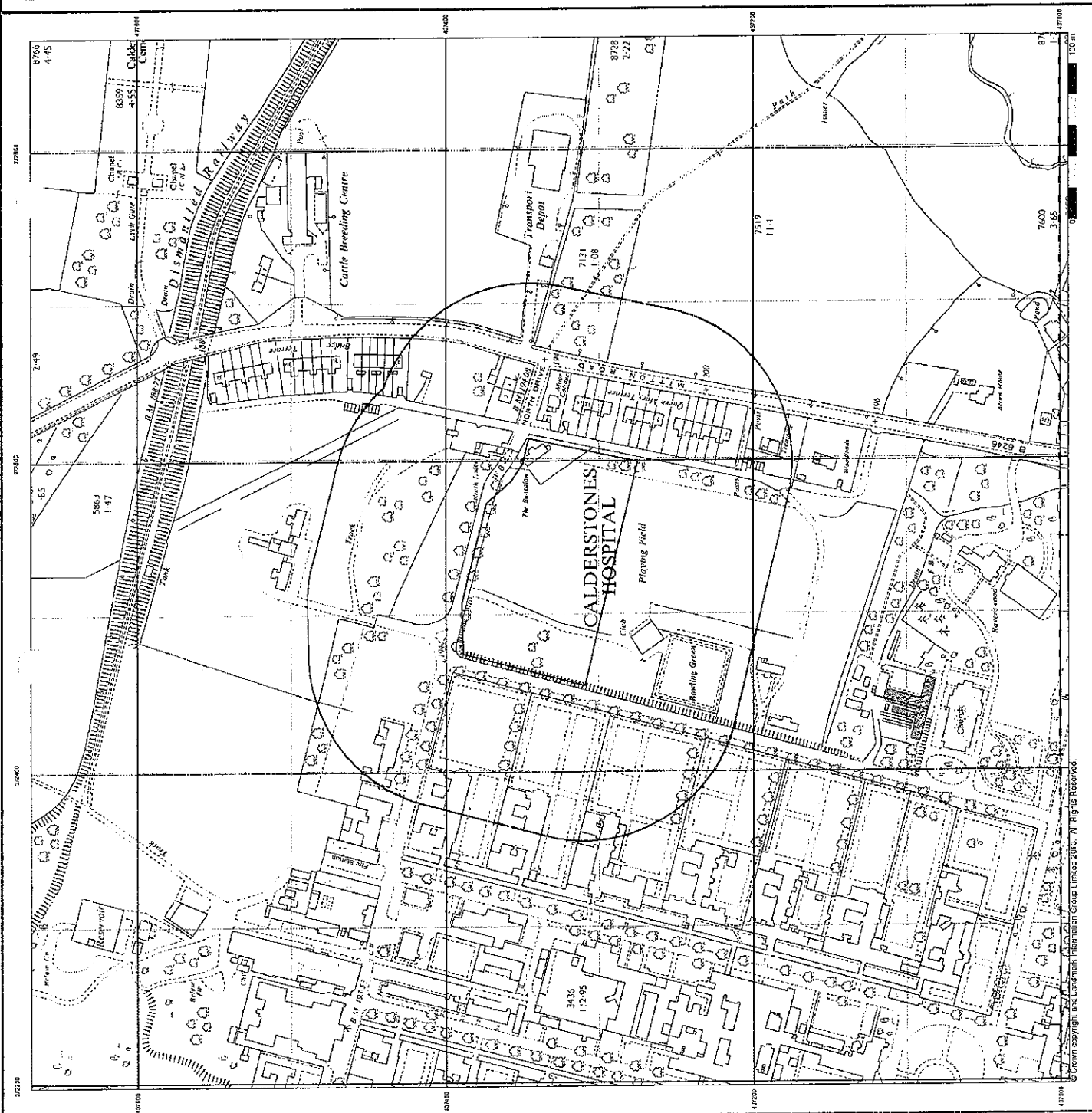
Order Number: 29946638_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BZ9 9JT



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





Ordinance Survey Plan Published 1975

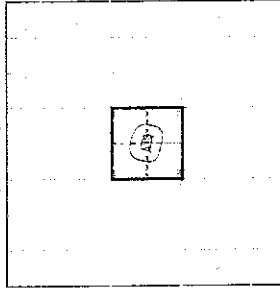
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1940's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1899 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1939, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SD7238
1975
1:2,500

Historical Map - Segment A13



320110837P



Order Details

Order Number: 29946838_L1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB7 9L



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Fax: 0844 844 0951
Web: www.dmr.police.co.uk

RSK

GROUP PLC

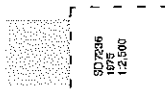
Additional SIMs

Published 1975

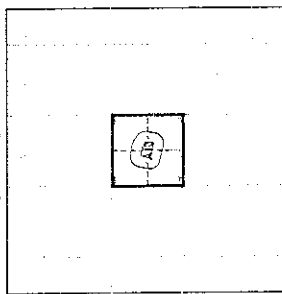
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1964, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



320110837P

Order Details

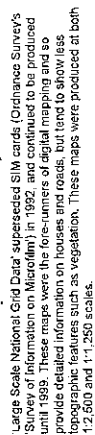
Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire, BB10 4

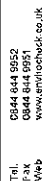
Landmark

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

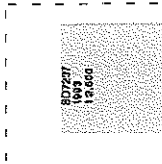


SO7237	1992	1:2:500
SO7236	1992	1:2:500

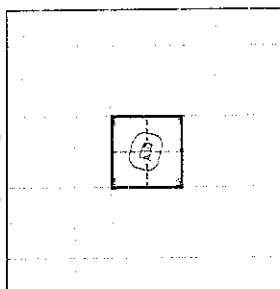
3 Pendle Drive, Whalley, CLITHEROE, Lancashire, B67 9UT



Map Name(s) and Date(s)



Historical Map - Segment A13



320110837P

Order Details

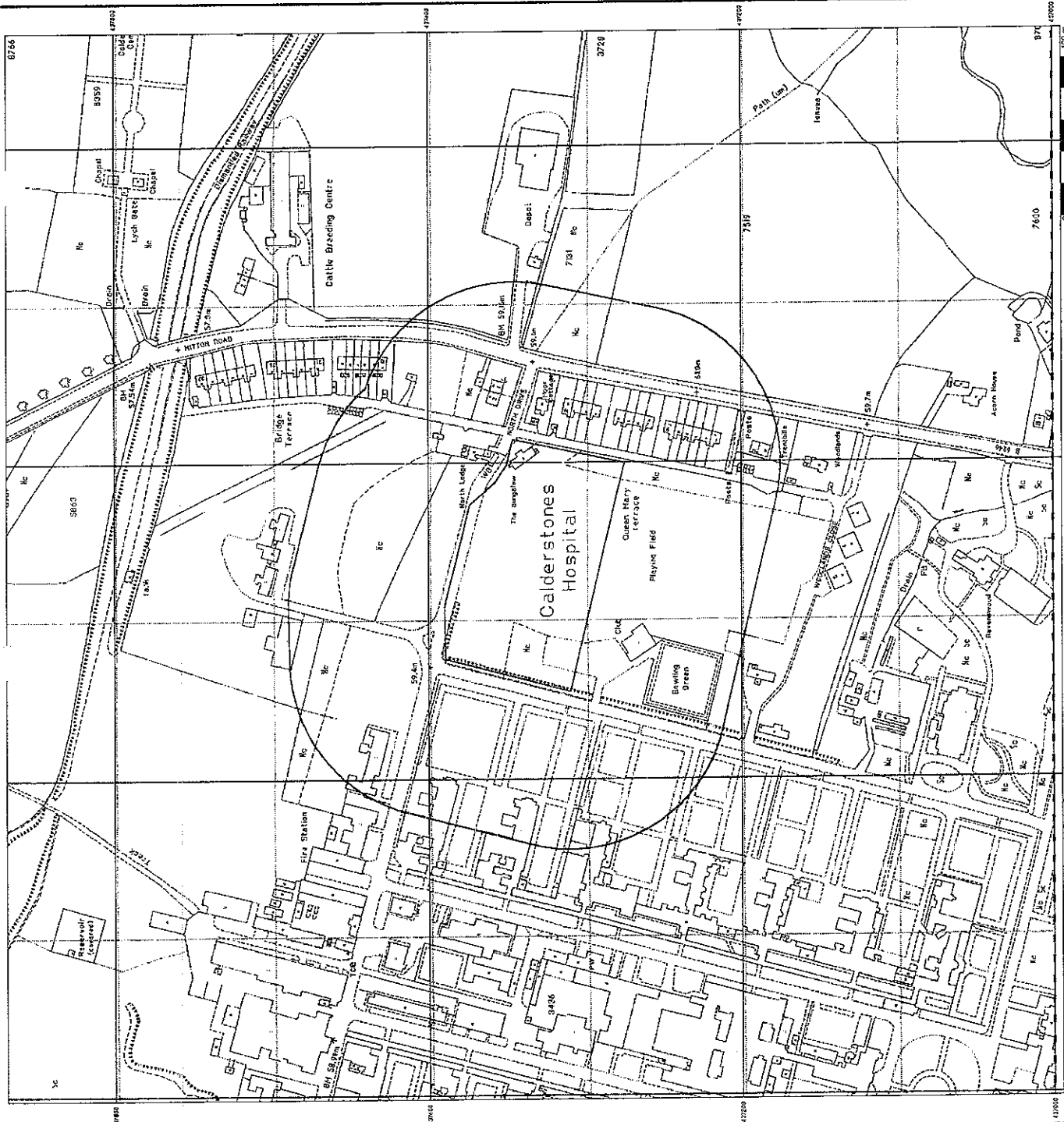
Order Number: 29946638_1_1
Customer Ref: 16372
National Grid Reference: 372540, 437330
Slice: A
Site Area (Ha): 1.25
Search Buffer (m): 100

Site Details

3 Pendle Drive, Whalley, CLITHEROE, Lancashire BB7 9JT



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320110837P

APPENDIX D

Methodology of Risk Assessment

Risk Assessment Methodology

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. Under CLR11, three stages of risk assessment exist: Preliminary, Generic Quantitative and Detailed Quantitative. An outline Conceptual Model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) pollutant linkages (source-pathway-receptor) and is used as the basis for design of the site investigation. The outline Conceptual Model is updated as further information becomes available, for example as a result of the site investigation.

Production of a Conceptual Model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- Highly likely: the event 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: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- Low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term; and
- Unlikely: circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- 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 of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);
- Medium: chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000);

- Mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment; and
- Minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services

Once the likelihood of an event occurring and its severity have been classified, a risk category can be assigned the table below.

		Consequences			
		Severe	Medium	Mild	Minor
Pro bab ility	Highly likely	Very high	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

Definitions of these risk categories are as follows together with an assessment of the further work that might be required:

- Very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability and urgent investigation and remediation are likely to be required;
- High: harm is likely to occur. Realisation of the risk is likely to present a substantial liability and urgent investigation is required and remedial works may be necessary in the short term and are likely over the long term;
- Moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term;
- Low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild; and
- Very Low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.

320110837P

APPENDIX E

Probehole Records

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372



Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):

Record on: WS1
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 10-0 40 D 001		0.0	0.0	Brown sandy clayey TOPSOIL		
		0.40		Soft to firm grey, mottled orange slightly sandy thinly laminated CLAY		
1 00-1 45 S 002	1 00m SPT N=19 (3 3 4 5 5 5)	(1 10) 1.0				
1 50-2 00 D 003		1.50		Firm to stiff grey slightly sandy CLAY		
2 00-2 45 S 004	2 00m SPT N=23 (4 5 5 6 6 6)	2.0				
		(2 50)				
3 00-3 45 S 005	3 00m SPT N=23 (2 3 4 5 6 8)	3.0				
4 00-4 45 S 006	4 00m SPT N=25 (3 4 6 6 6 7)	4.00 4.0		End of Window Sample at 4 45 m		
		5.0				
		6.0				
		7.0				
		8.0				
		9.0				
		10.0				

General Remarks:

The borehole was cased to 1 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered
 No standpipe installation

Water Strikes

Strike
 Level

Chiselling

From:
 To:
 Time:
 (hr's)

Borehole and Casing Details

Borehole

Depth
 (m)
 4 00

Diam
 (mm)
 115

Casing

Depth
 (m)
 1 00

Diam
 (mm)
 -

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201100372
RSK
 GROUP PLC

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : WS2
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 10-0 40 D 001			0.0	Brown sandy TOPSOIL		
			0.20			
			0.40	MADE GROUND (black subangular medium to coarse gravel with ash and occasional clinker)		
1 00-1 30 D 002 1 00-1 45 S 003	1 00m SPT N=10 (2 2 2 3 3)		(1 20) 1.0	Soft to firm grey slightly sandy CLAY with occasional partings of peat, thinly laminated with occasional plant remains		
			1.60			
2 00-2 45 S 004	2 00m SPT N=16 (2 3 3 4 4 5)		2.0	Firm grey slightly sandy CLAY thinly laminated		
2 50-3 00 D 005						
3 00-3 45 S 006	3 00m SPT N=23 (3 4 5 6 6 6)		(2 40) 3.0			
			4.00 4.0	End of Window Sample at 4.00 m		
			5.0			
			6.0			
			7.0			
			8.0			
			9.0			
			10.0			

General Remarks:

The borehole was cased to 1.00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered
 Standpipe installed to

Water Strikes

Strike
 Level

Chiselling

From: To: Time:
 (m) (m) (hr's)

Borehole and Casing Details

Borehole

Depth Diam
 (m) (mm)

Casing

Depth Diam
 (m) (mm)

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201 RSK
 100827 P

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):

Record of : WS3
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
			0.0	Brown sandy TOPSOIL		
			0.40			
1 00-1 45 S 001	1 00m SPT N=14 (3 3 4 4 3 3)	(1 00)	1.0	Soft to firm grey, mottled orange slightly sandy thinly laminated CLAY		
1 50-2 00 D 002			1.40			
2 00-2 45 S 003	2 00m SPT N=19 (2 4 4 5 5 5)		2.0	Firm, becoming stiff at 3 00m, grey thinly laminated slightly sandy CLAY		
			2.60			
3 00-3 45 S 004	3 00m SPT N=22 (4 4 5 5 6 6)		3.0			
3 50-4 00 D 005			4.00	End of Window Sample at 4 00 m		
			4.00			
			5.0			
			6.0			
			7.0			
			8.0			
			9.0			
			10.0			

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered.
 Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes

Strike
 ▽

Chiselling

From: To: Time:
 (m) (m) (hr's)

Borehole and Casing Details

Borehole

Depth (m) Diam (mm)
 4 00 115

Casing

Depth (m) Diam (mm)
 1 00 -

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201

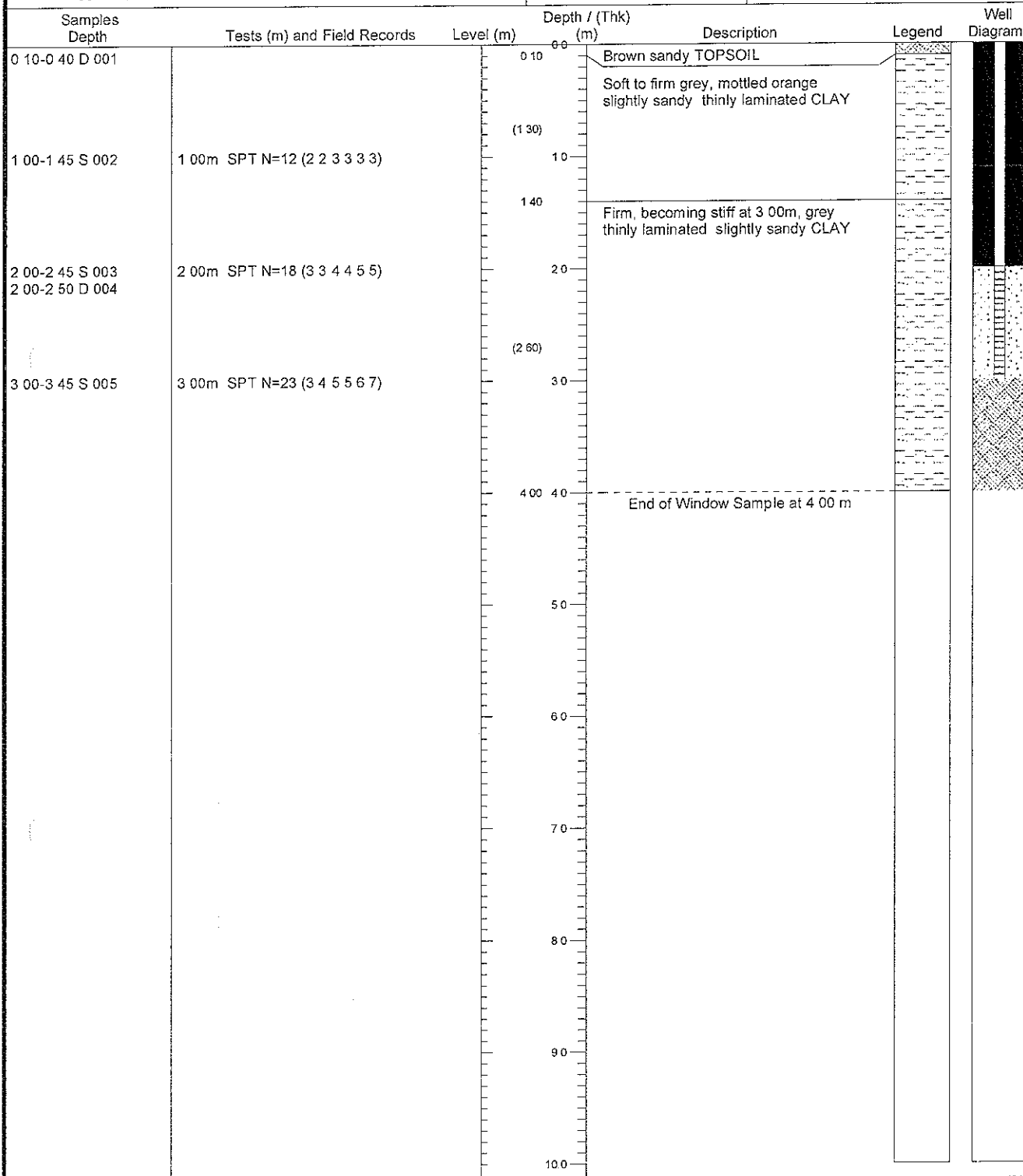


P

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):

Record of : WS4
 Sheet 1 of 1
 Scale 1:50



General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered.
 Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes

Strike Σ	Level ▼

Chiselling

From: (m)	To: (m)	Time: (hr's)

Borehole and Casing Details

Borehole		Casing	
Depth (m)	Diam (mm)	Depth (m)	Diam (mm)
4 00	115	1 00	-

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201 10837 P
RSK
 GROUP PLC

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : WS5
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 10-0 40 D 001			0.0	Brown sandy TOPSOIL		
			0.40			
1 00-1 50 D 002 1 00-1 45 S 003	1 00m SPT N=11 (1 2 2 3 3 3)		(1 00) 1.0	Soft to firm grey, mottled orange slightly sandy thinly laminated CLAY		
			1.40			
2 00-2 45 S 004	2 00m SPT N=15 (2 3 3 3 4 5)		2.0			
			(2 60)			
3 00-3 45 S 005	3 00m, SPT N=18 (3 3 4 4 4 6)		3.0	Firm grey thinly laminated slightly sandy CLAY		
			4.00 4.0	End of Window Sample at 4.00 m		
			5.0			
			6.0			
			7.0			
			8.0			
			9.0			
			10.0			

General Remarks:

The borehole was cased to 6.00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered.
 Standpipe installed to 3.00m: 2.00m plain 1.00m slotted

Water Strikes

Strike
 Level

Chiselling

From: To: Time:
 (m) (m) (hr's)

Borehole and Casing Details

Borehole

Depth (m) Diam (mm)

Casing

Depth (m) Diam (mm)

4.00 115 1.00 -

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201 RSK GROUP PLC 7 P

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):

Record of : WS6
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 50-0 80 D 001			0.0	Brown sandy TOPSOIL		
			0.40	Soft to firm brown slightly sandy CLAY		
			0.80	End of Window Sample at 0.80 m		
			1.0			
			2.0			
			3.0			
			4.0			
			5.0			
			6.0			
			7.0			
			8.0			
			9.0			
			10.0			

General Remarks:

The borehole was hand dug to the full depth
 Groundwater was not encountered
 Odours were not encountered
 No standpipe installed

Water Strikes		Chiselling			Borehole and Casing Details			
Strike ▽	Level ▼	From: (m)	To: (m)	Time: (hr's)	Borehole		Casing	
					Depth (m)	Diam (mm)	Depth (m)	Diam (mm)
					0.80	-		

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

32011 B&S P
 GROUP PLC

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : WS7
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 50-1 00 D 001			0 00	MADE GROUND (brown sandy medium to coarse subangular gravel of brick within clay matrix with some poorly decomposed plant remains)		
1 00-1 50 D 002 1 00-1 45 S 003	1 00m SPT N=10 (1 2 2 2 3 3)		1 00 1 0	Soft brown pseudo-fibrous PEAT		
			1 50	Soft to firm grey mottled orange thinly laminated slightly sandy CLAY		
2 00-2 45 S 004	2 00m SPT N=11 (2 2 2 3 3 3)		2 00 2 10	Firm grey thinly laminated slightly sandy CLAY		
3 00-3 45 S 005	3 00m SPT N=15 (3 3 3 4 4 4)		3 00 (1 90)			
			4 00 4 0	End of Window Sample at 4 00 m		
			5 0			
			6 0			
			7 0			
			8 0			
			9 0			
			10 0			

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered.
 Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes

Strike Σ	Level ▼

Chiselling

From: (m)	To: (m)	Time: (hr's)

Borehole and Casing Details

Borehole		Casing	
Depth (m)	Diam. (mm)	Depth (m)	Diam. (mm)
4 00	115	1 00	-

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

32011 RSK
 11837 P

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : WS8
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 10-0 40 D 001			0 0	MADE GROUND (brown sandy medium to coarse subangular gravel of brick within clay matrix)		
1 00-1 45 S 002	1 00m SPT N=10 (2 2 2 2 3 3)		0 80 1 0	Soft to firm grey, mottled orange slightly sandy thinly laminated CLAY		
1 50-2 00 D 003			1 80			
2 00-2 45 S 004	2 00m SPT N=14 (2 3 3 3 4 4)		2 0	Firm grey thinly laminated slightly sandy CLAY		
3 00-3 45 S 005	3 00m SPT N=19 (3 3 4 5 5 5)		(2 20) 3 0			
			4 00 4 0	End of Window Sample at 4 00 m		
			5 0			
			6 0			
			7 0			
			8 0			
			9 0			
			10 0			

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered
 Standpipe installed to

Water Strikes

Strike
 Level

Chiselling

From: To: Time:
 (m) (m) (hr's)

Borehole and Casing Details

Borehole

Depth (m) Diam (mm)
 4 00 115

Casing

Depth (m) Diam (mm)
 1 00 -

3201 RSG 7P

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

GROUP PLC

Boring Method: Competitor Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : WS9
 Sheet 1 of 1
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 50-0 80 D 001			0 00	MADE GROUND (subangular to angular brick gravel)		
1 00-1 45 S 002	1 00m SPT N=15 (2 2 3 4 4 4)		0 80 (0 80)	Soft to firm grey, mottled orange slightly sandy thinly laminated CLAY		
2 00-2 50 D 003 2 00-2 45 S 004	2 00m SPT N=20 (3 3 4 5 5 6)		1 40 (0 80)	Firm to stiff grey thinly laminated slightly sandy CLAY		
3 00-3 45 S 005	3 00m SPT N=23 (6 6 6 5 6 6)		2 00 (2 60)			
			3 00			
			4 00	End of Window Sample at 4 00 m		
			4 00			
			5 00			
			6 00			
			7 00			
			8 00			
			9 00			
			10 00			

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during
 drilling.
 Groundwater was not encountered
 Odours were not encountered.
 Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes

Strike
 ▽

Level
 ▽

Chiselling

From:
(m)

To:
(m)

Time:
(hr's)

Borehole and Casing Details

Borehole

Depth
(m)

Diam
(mm)

Casing

Depth
(m)

Diam
(mm)

4 00 115

1 00

-

320110837P

APPENDIX F

Borehole Records

320 RSK 1008 37P
GROUP PLC

Client: TAYLOR WIMPEY MANCHESTER
Site: CALDERSTONES PARK, WHALLEY
Project No: 16372

Boring Method: Cable Percussive Rig
Date: 25/02/2010-25/02/2010
Driller: Ian Taylor Drilling Services
Logged By: SR

Ground Level:
NOT DETERMINED
Top of Casing Elevation (m):
-

Record of : BH1
Sheet 1 of 2
Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
0 20 D 001			0.0	Brown sandy clayey TOPSOIL		
0 80-1 20 D 002			0.40	Soft to firm grey mottled orange slightly sandy CLAY		
1 00-1 45 U 003			1.0			
1 50 D 004			(2 10)			
1 50-2 00 B 005			2.0			
2 50-3 00 D 006			2.50	Soft, firm in places, grey slightly sandy thinly laminated CLAY		
3 00-3 50 S 007			3.0			
	3 50m SPT N=6 (1 1 1 1 3 1)		4.0			
			5.0			
5 00-5 45 B 008			(8 50)			
5 00-5 50 D 009			6.0			
5 00-5 50 B 010			7.0			
	5 45m SPT N=11 (1 2 2 3 3 3)		8.0			
7 45 S 011			9.00	Firm to stiff grey slightly sandy thinly laminated CLAY		
	7 45m SPT N=4 (1 1 1 1 1 1)		10.0			
8 50 D 012						
8 50-9 00 D 013						
9 00-9 45 S 014						
	9 45m SPT N=36 (1 1 4 10 12 10)					
			(1 80)	Continued next sheet		

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
Groundwater was not encountered.
Odours were not encountered
Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes

Strike
▽

Level
▼

Chiselling

From:
(m)

To:
(m)

Time:
(hr's)

Borehole and Casing Details

Borehole

Depth
(m)

Diam
(mm)

Casing

Depth
(m)

Diam
(mm)

10 80 150 6 00 -

Client: TAYLOR WIMPEY MANCHESTER
 Site: CALDERSTONES PARK, WHALLEY
 Project No: 16372

3201



10037P

Boring Method: Cable Percussive Rig
 Date: 25/02/2010-25/02/2010
 Driller: Ian Taylor Drilling Services
 Logged By: SR

Ground Level:
 NOT DETERMINED
 Top of Casing Elevation (m):
 -

Record of : BH1
 Sheet 2 of 2
 Scale 1:50

Samples Depth	Tests (m) and Field Records	Level (m)	Depth / (Thk) (m)	Description	Legend	Well Diagram
10 50-10 80 S 015	10 8m SPT N=>50 (7 10 17 30 3 for 2mm -)		10 0	Firm to stiff grey slightly sandy thinly laminated CLAY		
			10 80	End of Borehole at 10 80 m		
			11 0			
			12 0			
			13 0			
			14 0			
			15 0			
			16 0			
			17 0			
			18 0			
			19 0			
			20 0			

General Remarks:

The borehole was cased to 6 00m and remained stable below this depth during drilling.
 Groundwater was not encountered
 Odours were not encountered
 Standpipe installed to 3 00m: 2 00m plain 1 00m slotted

Water Strikes		Chiselling			Borehole and Casing Details			
Strike Σ	Level ▼	From: (m)	To: (m)	Time: (hr's)	Borehole		Casing	
					Depth (m)	Diam (mm)	Depth (m)	Diam (mm)
		10 10	10 50	0 5	10 80	150	6 00	-

320110837P

APPENDIX G

Ground Gas Monitoring Data

320110837P

APPENDIX H

Laboratory Certificates for Soil Analysis



320110837P
Reported on:
11-Mar-2010

Results
Envirolab
Units 7 & 8
Sandpits Business Park
Mottram Road
Hyde
Cheshire
SK14 3AR

Dear Results

Please find attached the results for the batch of samples described below

Samples Taken on:	03-Mar-2010
Samples Registered on:	04-Mar-2010
Results for Batch Number	20019200
Your Purchase Order Number:	P0722550

You will be invoiced shortly by our accounts department

If we can be of further assistance then please do not hesitate to contact us

Yours sincerely

William Fardon
Customer Services Team Leader
Tel: (0113) 231 2177
nls@environment-agency.gov.uk

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation. Details of analytical procedures and performance data are available on request. The date of sample analysis is available on request.

The Environment Agency carries out analytical work to high standards and within the scope of its UKAS accreditation, but has no knowledge of whether the circumstances or the validity of the procedures used to obtain the samples provided to the laboratory were representative of the need for which the information was required.

The Environment Agency and/or its staff does not therefore accept any liability for the consequences of any acts or omissions made on the basis of the analysis or advice or interpretation provided.



32011



0754



Reported on:
11-Mar-2010

Bis(2-chloroisopropyl) ether : Dry Wt	<60 0	ug/kg	60	UKAS	LE	922
Bis(2-ethylhexyl)adipate : Dry Wt	<70 0	ug/kg	70	UKAS	LE	922
Bis(2-ethylhexyl)phthalate : Dry Wt	<70 0	ug/kg	70	MCertS	LE	922
Carbazole : Dry Wt	<40 0	ug/kg	40	UKAS	LE	922
Chrysene : Dry Wt	700	ug/kg	80	UKAS	LE	922
Dibenzo(ah)anthracene : Dry Wt	200	ug/kg	100	UKAS	LE	922
Dibenzofuran : Dry Wt	400	ug/kg	50	UKAS	LE	922
Diethylphthalate : Dry Wt	<20 0	ug/kg	20	MCertS	LE	922
Dimethylphthalate : Dry Wt	<30 0	ug/kg	30	MCertS	LE	922
Di-n-butylphthalate : Dry Wt	200	ug/kg	90	MCertS	LE	922
Di-n-octylphthalate : Dry Wt	<70 0	ug/kg	70	MCertS	LE	922
Diphenylamine : Dry Wt	<20 0	ug/kg	20	UKAS	LE	922
Fluoranthene : Dry Wt	2000	ug/kg	80	UKAS	LE	922
Fluorene : Dry Wt	80 0	ug/kg	60	UKAS	LE	922
Hexachlorobenzene : Dry Wt	<20 0	ug/kg	20	UKAS	LE	922
Hexachloroethane : Dry Wt	<60 0	ug/kg	60	UKAS	LE	922
Hexachloro13butadiene : Dry Wt	<20 0	ug/kg	20	MCertS	LE	922
Hexachlorocyclopentadiene : Dry Wt	<30 0	ug/kg	30	UKAS	LE	922
Indeno(1,2,3cd)pyrene : Dry Wt	400	ug/kg	50	UKAS	LE	922
Isophorone : Dry Wt	<30 0	ug/kg	30	UKAS	LE	922
Naphthalene : Dry Wt	700	ug/kg	50	UKAS	LE	922
Nitrobenzene : Dry Wt	<50 0	ug/kg	50	MCertS	LE	922
nNitrosodi-n-propylamine : Dry Wt	<60 0	ug/kg	60	UKAS	LE	922
Phenanthrene : Dry Wt	1000	ug/kg	50	UKAS	LE	922
Phenol : Dry Wt	200	ug/kg	30	UKAS	LE	922
Pyrene : Dry Wt	2000	ug/kg	70	UKAS	LE	922
Dry Solids @ 30°C	69.4	%	0.5	None	LE	1130
Accreditation Assessment	3	No	1	None	LE	924
Sample Preparation	Report	Text		None	LE	924

Folder Number: 1265268

The sample was received in a 60ml glass jar and a 250ml glass jar weighing approx 483g in total

The sample appeared to be black, very gritty, sand with stones present

62.88g of the sample was taken for drying at <30degC which gave 45.32g of dried sample(weights include tray weight)

The sample was sieved to <10mm before being crushed using a jaw crusher

No waste was discarded after sieving at 10mm

The sample was received unpreserved

All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used

Dry Weight (DW) results are reported as determined at <30degC

