

FINAL

The Qube

Phase I Desk Study and Phase II

Site Investigation Report

Pike Fold Primary School

Old Market Street

Manchester

M9 8QP

Report No: 19-11-04

January 2020

DOCUMENT RECORD

Report Title Phase I Desk Study & Phase II Geotechnical and
Geo-Environmental Report

Project Address Pike Fold Primary School, Old Market St, Manchester, M9 8QP

Project Number 19-11-04

Client Name The Qube

Issue No Date	Status	Prepared by	Checked by
1 January 2020	Draft Report	Lee Ashworth B.Sc. M.Sc. F.G.S Engineering Geologist	Murray Bateman, M.Sc. DIC C.Geol Pg. Cert. Director
		SIGNATURE 	SIGNATURE 
2 January 2020		Lee Ashworth B.Sc. M.Sc. F.G.S Engineering Geologist	Murray Bateman, M.Sc. DIC C.Geol Pg. Cert. Director
		SIGNATURE 	SIGNATURE 

© This Report is the copyright of Geo-Integrity Ltd. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

CONTENTS

EXECUTIVE SUMMARY

1	GROUND INVESTIGATION REPORT.....	2
1.1	INTRODUCTION.....	2
1.2	SOURCES OF INFORMATION.....	3
1.3	DEVELOPMENT PROPOSALS.....	3
2	PHASE I DESK STUDY	4
2.1	PREVIOUS WORK.....	4
2.2	WALKOVER SURVEY	4
2.3	GEOLOGY.....	5
2.3.1	<i>Published Geology.....</i>	<i>5</i>
2.3.2	<i>Superficial Deposits</i>	<i>5</i>
2.3.3	<i>Bedrock.....</i>	<i>5</i>
2.4	HISTORY OF THE SITE	5
2.4.1	<i>Ordnance Survey.....</i>	<i>5</i>
2.5	UNEXPLODED ORDNANCE AND BOMB SITES	7
2.6	HYDROLOGY.....	7
2.7	HYDROGEOLOGY	7
2.8	WASTE TREATMENT AND LANDFILL SITES.....	8
2.8.1	<i>Landfills.....</i>	<i>8</i>
2.8.2	<i>Other Waste Treatment Sites</i>	<i>8</i>
2.9	INDUSTRIAL USAGE SITES	8
2.9.1	<i>Historical Site Usage</i>	<i>8</i>
2.10	WORKED OUT GROUND/MADE GROUND	9
2.11	GROUND GASES.....	9
2.11.1	<i>Radon</i>	<i>9</i>
2.11.2	<i>Landfill Gasses</i>	<i>10</i>
2.12	POTENTIALLY SENSITIVE LAND USES.....	10
3	INITIAL CONCEPTUAL SITE MODEL.....	10
4	PHASE II INTRUSIVE INVESTIGATION.....	12
4.1	SITE WORK AND SAMPLING STRATEGY	12
4.2	GROUND CONDITIONS.....	12
4.2.1	<i>Summary.....</i>	<i>12</i>
4.2.2	<i>Made Ground.....</i>	<i>12</i>
4.2.3	<i>Glaciofluvial Deposit</i>	<i>12</i>
4.2.4	<i>Groundwater.....</i>	<i>13</i>
4.2.5	<i>Evidence of Contamination.....</i>	<i>13</i>
5	GEOENVIRONMENTAL TESTING	13
6	GEO-ENVIRONMENTAL INTERPRETATION SECTION.....	13
6.1	RISKS TO HUMAN HEALTH.....	13
6.1.1	<i>Introduction</i>	<i>13</i>
6.2	RESULTS OF CHEMICAL TESTING.....	15
6.2.1	<i>Reducing the Risk to Construction Workers.....</i>	<i>15</i>
6.3	RISK TO CONTROLLED WATERS.....	16
6.4	RISKS TO UNDERGROUND WATER SUPPLY PIPES.....	16
7	RECOMMENDATIONS	16
8	REFERENCES	17

APPENDICES

APPENDIX A - PLANS

-  Site Location Plan
-  Exploratory Hole Location Plan
-  Photographs
-  Design Proposal Drawing

APPENDIX B – SITE INFORMATION

-  Continuous Tube Borehole Logs

APPENDIX C – LABORATORY TESTING

-  Geo-Environmental Testing

APPENDIX D - DESK STUDY INFORMATION

-  Groundsure Report – Enviro
-  Groundsure Report - Geo
-  Historical Maps

EXECUTIVE SUMMARY

Site Location	Pike Fold Primary School, Old Market St, Manchester
OS Grid Reference	SD 85246 02963
Development Proposals	The proposal is to redevelop the existing grassy verge with a single storey multipurpose annex building composed of a main area, kitchenette, ambulant WC and a child WC. It is proposed a gabion basket retaining wall will be included at the eastern side of the building. It is proposed that the building will be constructed on stilts or pads with a clear ventilated sub-floor void. The development proposal drawings are shown in the appendices.
Published Geology	Reference to the British Geological Survey website and Sheet 85; Manchester; 2010; indicates that the site is directly underlain by superficial Glacialfluvial Sheet Deposits, Devensian overlying Early Triassic bedrock known as the Chester Formation
Site History	Records show the site to have historically been a Wesleyan Chapel until 1891 when the site was redeveloped with the construction of terraced houses and two schools. At this time the surrounding area was predominantly industrial with numerous chemical, dye and steel works. By 1909 the site was redeveloped with the construction of Central Mill for paper staining. This mill was extended by 1915 with the construction of a large factory building. The surrounding area remains industrial along with the site itself until 1992 when Central Mill was demolished and the surrounding area records numerous missing buildings. These areas are redeveloped with the construction of residential estates. The site remains unused land until Pike Fold Primary School was constructed between 2010 and 2019.
Ground Conditions Encountered	The site and laboratory test work revealed that the general succession of strata can be represented in general by Made Ground down to a maximum depth of 2.00m bgl, overlying Glaciofluvial Deposit down to the base of the exploratory holes in excess of 4.80m bgl.
Groundwater Encountered	Groundwater was encountered in each of the exploratory holes ranging between 2.80m and 3.20m bgl.
Ground Contamination	Of the six soil samples screened as part of this investigation, against the relevant GAC for a 'commercial' land use scenario as described above no samples identified elevated levels of contaminants. When screened against the relevant GAC's for a 'residential with the consumption of home-grown produce' scenario the samples recorded some elevated levels of PAH's.
Risk to Underground Water Supply Pipes	Based upon the guidance document from the UK Water Industry Research (UK WIR), 'Contaminated Land Assessment Guidance', February 2014, and the results of the samples tested from the site, it is considered that conventional PE water pipes CANNOT be used across the site, as elevated hydrocarbons and BTEX were encountered across the site. This should be confirmed with the local water company as not all authorities use this guidance
Recommendations	We recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

This executive summary must be read in conjunction with this report.

1 GROUND INVESTIGATION REPORT

1.1 INTRODUCTION

Geo-Integrity Ltd were commissioned by The Qube to undertake a Phase I Desk Study Report and Phase II Factual and Interpretative Geo-Environmental Report at Pike Fold Primary School, Old Market St, Manchester in order to identify the potential risks regarding contamination on site and subsequent remedial strategies if contamination is found.

This report describes desk based searches of geological, environmental and historical information, the fieldwork and laboratory testing undertaken and provides an interpretative section of the geo-environmental data from this investigation to inform the proposed development.

The site is located at National Grid Reference SD 85246 02963.

The report is likely to be submitted as part of a planning application with the reference 124819/FO/2019 and to be reviewed by Manchester City with reference to the NPPF once the planning permission has been approved. Once the redevelopment is completed, and as a minimum, land must not be capable of being determined as 'contaminated land' under the terms of Part IIA of the Environmental Protection Act 1990. However, it also states that "Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner." As such the desk study in this report is the first stage in investigating whether the site is likely to be considered "contaminated", in accordance with clause 178.

The objectives of this phase I and phase II interpretative report are:-

-  To undertake a site walkover to identify any potential pollution sources or geotechnical hazards on the site.
-  To gather historical, geological and environmental information.
-  Briefly summarise the site development proposals and site setting.
-  To describe and report the fieldwork undertaken at the site.
-  To describe and report the chemical laboratory work undertaken on selected samples.
-  To provide an interpretation of the results of this investigation with regards to geo-environmental data.

The investigation was performed in accordance with the general requirements of BS 5930:2015, BS EN 1997-2 (2007), BS EN ISO 22475-1 (2006) and other relevant related standards identified below. The fieldwork took place on the 6th December 2019.

1.2 SOURCES OF INFORMATION

The following sources of information have been used to compile this report:-

-  Extracts of available historical Ordnance Survey (OS) maps covering the period from 1848 to 2019, which are presented in the Appendices.
-  Groundsure Report Ref GS-6494687 and GS-6494688 included in the Appendices.
-  Previous report undertaken by Sutcliffe Investigations 'Interim Geotechnical Investigations and Environmental Assessment (16/02/2011)
-  The British Geological Survey (BGS) and Environment Agency (EA) websites.
-  A site reconnaissance visit undertaken on 6th December 2019
-  Information from various internet sites on site history and environmental setting.

It should be noted that the information provided in the desk study is obtained from independent third party sources. It is provided in good faith, but no guarantee can be provided as to its accuracy. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources.

1.3 DEVELOPMENT PROPOSALS

The proposal is to redevelop the existing grassy verge with a single storey multipurpose annex building composed of a main area, kitchenette, ambulant WC and a child WC. It is proposed a gabion basket retaining wall will be included at the eastern side of the building. It is proposed that the building will be constructed on stilts or pads with a clear ventilated sub-floor void. The development proposal drawings are shown in the appendices.

2 PHASE I DESK STUDY

2.1 PREVIOUS WORK

A previous investigation was undertaken at the site of Pike Fold Primary School by Sutcliffe Investigations in February of 2011, ref. 25423LG for GB Solutions. This interim geotechnical investigations and environmental assessment report was undertaken during the design of the existing Pike Fold Primary School.

The report identified the following ground conditions: Made Ground from ground level down to a maximum depth of 5.40m bgl, overlying Alluvial Deposits to the base of the exploratory holes in excess of 8.45m bgl.

This site investigation undertook chemical analysis of selected samples taken during the site work. The results were compared to relevant GAC's for a commercial scenario and found two elevated levels of benzo(a)pyrene in the area of the playing fields. These elevated values were recorded at 18.9 mg/kg and 7.73 mg/kg when compared to the Atkins Atrisk (6%SOM) assessment value for benzo(a)pyrene is 6.94 mg/kg.

The report also mentions six gas monitoring well installations and a series of dates in which gas monitoring would take place. The gas monitoring results are not shown in this report however it is mentioned that at the time of writing the report gas protection measures should be allowed for due to the amount of Made Ground noted on site.

A remediation strategy is suggested with subsequent validation testing and sign off depending upon the final contamination results which have not been recorded in this previous investigation.

2.2 WALKOVER SURVEY

A site walkover survey was undertaken on the 6th December 2019. Site location and layout plans are included in the Appendices, along with a selection of photographs taken during the survey.

The site is located on Pike Fold Primary School along the eastern side of Chapel Lane in Blackley, Manchester. Access was gained via a private gated entrance belonging to Pike Fold Primary School.

The site itself is a grass verge located on a south facing slope. This area was surrounded by a metal gate and access could only be gained once the caretaker removed part of this gate. A storage container was situated at the north-western limit of the site. The slope becomes steep at

the northern boundary of the site and contains numerous immature trees and long grass. An electrical substation was observed on site on the western boundary along Chapel Lane.

The primary school building was located immediately south with a bridge leading from the school traversing over the site area towards a play area at the top of the slope to the north of the site. South-west of the site is the car park to the primary school.

The topography displays a prominent hill slope at the northern boundary of the site which is very steep. The majority of the site displays a gentle slope to the south.

2.3 GEOLOGY

2.3.1 *Published Geology*

Reference to the British Geological Survey website and Sheet 85; Manchester; 2010; indicates that the site is directly underlain by superficial Glaciofluvial Sheet Deposits, Devensian overlying Early Triassic bedrock known as the Chester Formation.

2.3.2 *Superficial Deposits*

The **Glaciofluvial Sheet Deposits** are generally described by the British Geological Survey as a “sand and gravel, locally with lenses of silt, clay or organic material.

2.3.3 *Bedrock*

The **Chester Formation** is generally described by the British Geological Survey as “a formation which progressively changes northwards from sandstone which is coarse grained, well cemented proximal facies to a fine grained less well-cemented distal facies. The lithology around Lancashire typically displays fewer pebbles and is generally cross-bedded with some parallel laminations.

2.4 HISTORY OF THE SITE

The history of the site has been established by the review of old Ordnance Survey (OS) maps going back to the 1840s. The maps and any other relevant information are included in the Appendices and indicated the following.

2.4.1 *Ordnance Survey*

The earliest maps dated 1848; record the site to be located in the industrial town of Blackley a suburban area of NE Manchester. The site is located on the northern fringe of Blackley along Chapel Lane.

The site at this time is labelled Wesleyan Chapel with a number of buildings located along Chapel Lane. The surrounding area at this time includes a national school, Sunday school, and a number of sand pits. Industrial uses surrounding the area at this time include Crumpsall Vale dye works (100m, S), Blackley Logwood Mill (250, W), a print works (300m E), and two bleach works (500m, E and 500m, W). Other land-uses nearby include a reservoir and the River Irk (50m, SW).

Between 1848 and 1891 the site undergoes extensive redevelopment with a number of residential terraced houses constructed and two schools. The surrounding area during this period reveals further industrial use including: the ivy dye works located immediately south of the site; chemical works (350m SW); Blackley steel works (350m, NW); Manchester workhouse (600m, SW); Prestwich Union workhouse (400m, SW). Other surrounding land-use at this time include the construction of a hospital 500m SW and the construction of Blackley New Rd immediately south of the site.

Between 1891 and 1893 the site remains residential terraced houses between Ward St and Exchange St. A chemical works is recorded (50m, SW).

Between 1893 and 1906 the Ivy works located immediately south and the chemical works (50m, SW) are not recorded in 1906. An engraving works is recorded adjacent to the steel works (350m, NE).

Between 1906 and 1909 the north-western area of the site is recorded as Central Mills (paper staining mill). The southern area of the site is still recorded as terraced houses. Changes to the surrounding area and further industrial use include the Blackley Vale Mill (electric cable) located 200m west and Blackley Mill (cotton) recorded 100m south-west.

Between 1909 and 1915 further development on site relating to the Central Mills includes the construction of a large factory building. The surrounding area has experienced minor changes with a match works recorded immediately south, a football pitch recorded 250m south, a tannery recorded 150m south and an electricity substation recorded >50m south-east.

The site remains unchanged until 1932. The site remains the same however the surrounding area records Heragon House Chemical Research Laboratories 100m south. Further residential development is also recorded 50m north-east.

The site and surrounding area remains unchanged until 1967 when another large residential estate is constructed 500m north-west and the reservoir located 200m north-east is no longer recorded.

Between 1967 and 1975 the industrial area located 250m west undergoes redevelopment with a factory extension. In addition, a small number of residential houses are constructed 100m north-west of the site.

Between 1975 and 1985 large areas surrounding the site undergo demolition as buildings previously recorded in 1975 do not appear in maps dated 1985.

Between 1985 and 1992 further demolition occurs on site relating to the factory buildings labelled Central Mill.

Between 1992 and 2001 the site remains unchanged as unused space. The area immediately west of the site is redeveloped with the construction of a residential estate.

Between 2010 and 2019 the site is redeveloped with the construction of a large building at the southern end of the site. This building relates to the present Pike Fold Primary School.

2.5 UNEXPLODED ORDNANCE AND BOMB SITES

Reference to the site specific unexploded bomb risk map (UXO) produced by Zetica indicates that the site is located in an area where there is a moderate risk of unexploded ordnance. Moderate-risk regions are those with a bombing density of 15 to 49 bombs per 1000 acres.

2.6 HYDROLOGY

The nearest surface watercourse is recorded as an inland river located 50m south-west of the site trending NW-SE, relating to the River Irk.

There is no surface water abstraction license located within 2000m of the site.

2.7 HYDROGEOLOGY

Reference to the Environment Agency website indicates that the site is located on the following Aquifers:

-  Secondary A Aquifer associated with the Glaciofluvial Deposits
-  Principal Aquifer associated with the Chester Formation

The aquifer designation data is based on geological mapping provided by the British Geological Survey. The maps are divided into two different types of aquifer designation:

Superficial (Drift) - permeable unconsolidated (loose) deposits. For example, sands and gravels.

Bedrock - solid permeable formations e.g. sandstone, chalk and limestone.

For each type there are four designations:-Principal, Secondary A, Secondary B and Unproductive Strata, ranked by importance.

The site is not recorded to be within a Source Protection Zone (SPZ)

There are eight historical groundwater abstraction licenses recorded south west of the site ranging between 233m and 600m from the site.

2.8 WASTE TREATMENT AND LANDFILL SITES

2.8.1 Landfills

There are ten historical records of landfill sites located within 1500m of the site. The nearest historic landfill recorded at Pike Fold Lane is located 84m north of the site. Two historic landfills are located within 500m of the site at Tweedle Hill located 452m north and Factory Lane located 490m south-east.

2.8.2 Other Waste Treatment Sites

There is one recorded licensed waste site situated 493m south-east of the site. The type of site is listed as refuse destructor.

2.9 INDUSTRIAL USAGE SITES

Records of past and present potentially contaminative activities have been identified within 500m of the site.

From historical maps the area in which the site is located was part of a large industrial town. The types of industries located in the surrounding area include chemical works, bleach works, dye works, chemical laboratories, steel works, timber yards, cotton mills, electrical cable factories, a tannery and a match works. The site was a paper staining mill labelled Central Mill until 1992.

Other industrial usage sites identified from the Groundsure desk study information include an electricity substation located on site, lubricant producer located 122m west, lampshade and lightning producer located 123m west and British Cables company producing cables, wire and fibre optics situated 193m west.

2.9.1 Historical Site Usage

Historical information records the site to be a Wesleyan Chapel until 1891 when the site was redeveloped with the construction of terraced houses and two schools. At this time the surrounding

area was predominantly industrial with numerous chemical, dye and steel works. By 1909 the site was redeveloped with the construction of Central Mill for paper staining. This mill was extended by 1915 with the construction of a large factory building. The surrounding area remains industrial along with the site itself until 1992 when Central Mill was demolished and the surrounding area records numerous missing buildings. These areas are redeveloped with the construction of residential estates. The site remains unused land until Pike Fold Primary School was constructed between 2010 and 2019.

Therefore, possible contaminative sources at the site or surrounding area may include;

-  Possible contaminants associated with the long human history of the site
-  Possible contaminants associated with the industrial site located on and surrounding the site
-  Possible contaminants associated with the demolition of the historic factory located on site

2.10 WORKED OUT GROUND/MADE GROUND

The industrial history of the site related to Central Mill and the subsequent demolition of its factory buildings may suggest relatively thick Made Ground. The previous investigation undertaken by Sutcliffe Investigations Ltd in 2011, ref. 25423LG identified a maximum thickness of 5.60m bgl for Made Ground.

2.11 GROUND GASES

2.11.1 Radon

Information obtained from the BGS and the National Geoscience Information Service indicates that the site lies within an area where less than 1% of homes exceed the action level of 200Bq/m³ for radon gas. Therefore, no radon protection measures are necessary in the construction of new dwellings or extensions, on this site.

2.11.2 Landfill Gasses

In accordance with BS8576:2013 the site has provisionally assessed for the risk of ground gases. This has been done with reference to “A pragmatic approach to ground gas risk assessment for the 21st Century” Card and Wilson, 2011.

- Credible sources or pathways for landfill gas migration from an off-site landfill have been identified.
- The site has not been a registered landfill.
- The site is located within 300m of a historic landfill
- The Made Ground is expected to be 5m deep or an average of 3m in thickness.
- The site is not directly located on a carbonate rich rock that can produce carbon dioxide.
- Radon protection measures are not recommended for this site.
- The site does lie on a potential naturally organic soil or humic or degradable Made Ground soil.

It is considered the risk of ground gas is moderate however due to the proposal of the building gas monitoring will not be required due to the elevated stance above ground level that the building exhibits. The proposed development drawings are shown in the appendices.

2.12 POTENTIALLY SENSITIVE LAND USES

The site is located within a Nitrate Vulnerable Zone.

3 INITIAL CONCEPTUAL SITE MODEL

In accord with the Environment Agency CLR11 “Model Procedures for the Management of Contaminated Land” 2004, this desk study and site reconnaissance report constitutes a preliminary risk assessment in order to establish the potential presence of pollutant linkages. The diagram below illustrates the potential linkages.

“Reference to the desk study and walkover survey indicates that records show the site to have historically been a Wesleyan Chapel until 1891 when the site was redeveloped with the construction of terraced houses and two schools. At this time the surrounding area was predominantly industrial with numerous chemical, dye and steel works. By 1909 the site was redeveloped with the construction of Central Mill for paper staining. This mill was extended by 1915 with the construction of a large factory building. The surrounding area remains industrial along with the site itself until 1992 when Central Mill was demolished and the surrounding area records

numerous missing buildings. These areas are redeveloped with the construction of residential estates. The site remains unused land until Pike Fold Primary School was constructed between 2010 and 2019.

Therefore, possible contaminative sources at the site or surrounding area may include;

- Possible contaminants associated with the long human history of the site
- Possible contaminants associated with the industrial site located on and surrounding the site
- Possible contaminants associated with the demolition of the historic factory located on site.”

Therefore currently it is considered that the following potential source/pathway/receptors may be present at and around the site;

Potential Source	Potential Pathway	Potential Receptor	Considered Risk
Historic contaminants associated with the long human history of the site	Ingestion, inhalation or absorption from direct contact with soil.	End Users	Low to moderate risk
	Leaching through the ground	Controlled Waters	Low risk
	Possible contact during work phase	Construction Workers	Moderate
Asbestos from long human history of the site	Ingestion, inhalation or absorption from direct contact with soil.	End Users	Low risk
	Possible contact during work phase	Construction Workers	Low risk
Surrounding land-use including the chemical works and match works	Leaching through the ground	Controlled Waters	Low risk
	Ingestion, inhalation or absorption from direct contact with soil	End User	Low to moderate risk
	Possible contact during work phase	Construction Workers	Low to moderate risk

4 PHASE II INTRUSIVE INVESTIGATION

4.1 SITE WORK AND SAMPLING STRATEGY

The fieldwork was undertaken in accordance with BS 5930:2015, BS EN 1997-2 (2007) and BS EN ISO 22475-1 (2006), with the exploratory locations being selected by Geo-Integrity Ltd. The exploratory hole locations can be seen in the Appendices.

The fieldwork was undertaken on the 6th December 2019 and consisted of, three windowless sample boreholes. The locations of the boreholes were chosen by Geo-Integrity at three areas below the proposed structure. Disturbed samples were taken at selected depths down to the base of the exploratory holes for subsequent laboratory testing and inspection. On completion, all the exploratory holes were carefully backfilled with arisings in thin layers, ensuring that excavated material was replaced in the same order as it had been removed.

4.2 GROUND CONDITIONS

4.2.1 Summary

The site and laboratory test work revealed that the general succession of strata can be represented in general by Made Ground, overlying Glaciofluvial Deposits. Descriptions of the strata encountered are given on the exploratory hole records, and are summarised below. Further information is provided on the exploratory hole logs within the appendices.

4.2.2 Made Ground

Encountered in each of the exploratory holes from ground level down to depths ranging from 1.50m to 2.00m bgl. The material encountered was loose dark brown, silty, clayey, sand and gravel. Gravels and cobbles were identified as brick, coal, slag, ceramic, slat, limestone and ash.

SPT 'N' values within this unit ranged from 4 – 25.

4.2.3 Glaciofluvial Deposit

Encountered in each of the exploratory hole locations, from depths ranging 1.50m and 2.00m bgl down to the base of the exploratory hole in excess of 4.80m bgl. The material generally consisted of medium dense to dense red brown slightly clayey sand and gravel with lenses of dark brown clay. Gravel was encountered as quartz and flint.

SPT 'N' values within this unit ranged from 14 to 40.

4.2.4 Groundwater

Groundwater was encountered in each of the exploratory holes with depths ranging between 2.80m and 3.20m bgl.

4.2.5 Evidence of Contamination

Made Ground soils have been identified across the site down to a maximum depth of 2.00m bgl. Generally no obvious or significant contamination was identified within the soils encountered.

5 GEOENVIRONMENTAL TESTING

Geo-environmental laboratory testing was scheduled by Geo-Integrity on six soil samples recovered during the fieldwork. The testing was carried out at a MCERTS and UKAS accredited laboratory. The results are presented in the Appendices.

The soil samples were tested for a varied suite containing the following

-  Metals and inorganic substances
-  Speciated Polyaromatic Hydrocarbons (PAH)
-  Benzene, Toluene, Ethylbenzene and Xylene (BTEX)
-  Total Petroleum Hydrocarbons (TPH), with eight band split
-  Asbestos Identification and Quantification
-  Waste Acceptance Criteria (WAC)

6 GEO-ENVIRONMENTAL INTERPRETATION SECTION

6.1 RISKS TO HUMAN HEALTH

6.1.1 Introduction

Environment Agency guidance CLR 11, *Model Procedures for the Management of Land Contamination*, (EA, 2004), states that human health risk assessment should be undertaken by a tiered approach using the source-pathway-receptor principle. A desk study constitutes the first tier and this has been undertaken as part of this investigation. The conclusions of this phase were that:-

“Reference to the desk study and walkover survey indicates that records show the site to have historically been a Wesleyan Chapel until 1891 when the site was redeveloped with the construction of terraced houses and two schools. At this time the surrounding area was predominantly industrial with numerous chemical, dye and steel works. By 1909 the site was redeveloped with the construction of Central Mill for paper staining. This mill was extended by 1915 with the construction of a large factory building. The surrounding area remains industrial along with the site itself until 1992 when Central Mill was demolished and the surrounding area records numerous missing buildings. These areas are redeveloped with the construction of residential estates. The site remains unused land until Pike Fold Primary School was constructed between 2010 and 2019.

Therefore, possible contaminative sources at the site or surrounding area may include;

-  Possible contaminants associated with the long human history of the site
-  Possible contaminants associated with the industrial site located on and surrounding the site
-  Possible contaminants associated with the demolition of the historic factory located on site.”

Therefore, it was considered that potential source/pathway/receptors may be present at and around the site, and as part of the investigation, confirmatory chemical testing was undertaken at the site.

Results are analysed under the second tier, known as a Generic Quantitative Risk Assessment (GQRA), which uses generic guideline values to compare site chemical data against, and the final tier would be a Detailed Quantitative Risk Assessment (DQRA), which use data derived from the ground investigation to assess risks to identified receptors.

The assessment included in this report comprises a GQRA, which is undertaken by comparing soil contaminant concentrations from this investigation with conservative Generic Assessment Criteria (GAC). GAC for various land use and exposure scenarios have been selected from the following sources:

-  CL:AIRE Category 4 Screening Levels (C4SL);
-  LQM Suitable for Use Levels (S4UL);
-  CL:AIRE/EIC/AGS GAC

The GAC have been derived using the Environment Agency Contaminated Land Exposure Assessment (CLEA) model, for a range of land uses and exposure scenarios, including:

- Residential with the consumption of home-grown produce;
- Residential without the consumption of home-grown produce;
- Commercial;
- Allotments;
- Public Open Space near residential housing (POS_{resi}); and
- Public Open Space public park scenario (POS_{park})

Given the current and proposed land use is annex building to a primary school 'Commercial' scenario has been selected, for this assessment.

6.2 RESULTS OF CHEMICAL TESTING

Of the six soil samples screened as part of this investigation, against the relevant GAC for a 'commercial' land use scenario as described above no samples identified elevated levels of contaminants. When screened against the relevant GAC's for a 'residential with the consumption of home-grown produce' scenario the samples recorded some elevated levels of PAH's.

The current proposal is for the construction of an annex building to Pike Fold Primary School, this enables the relevant GAC values for a commercial scenario. However, if the proposal changes with a differing land-use the relevant GAC will change.

6.2.1 Reducing the Risk to Construction Workers

To reduce the risk to as low as reasonably practicable for the construction workers it is recommended that, high standards of personal hygiene should be maintained amongst the site personnel at all times. All personnel coming into contact with the soil, ground workers in particular, should be instructed to use gloves when on site to avoid dermal contact and restrict inadvertent hand-to-mouth ingestion. Washing facilities should be provided for the site staff to use, and should be used prior to eating or smoking. Reference should be made to the HSE Document, "Protection of Workers and the General Public during Development of Contaminated Land".

It is also recommended that a watching brief for undiscovered contamination is included in the Works Method Statement. Given the long human history of the surrounding area, it is always possible that some previous undiscovered contamination maybe encountered. If this is the case,

the area should be isolated and contact be made to a suitably qualified professional for further advise. This is particularly important if the contamination is possibly ACM or liquid based.

6.3 RISK TO CONTROLLED WATERS

From information gathered during the desk study the site is located on a secondary A aquifer and a principle aquifer. The site is also located 50m north of the River Irk. The laboratory results also indicate elevated levels of PAH's. However, PAH's stick to soil particles and are unlikely to migrate from the Made Ground.

Therefore, it is considered highly unlikely that there is a significant risk of the proposed development providing an elevated risk to the Controlled Waters.

The Environment Agency is the regulatory body charged with protection of controlled waters and may be a consultee in the planning process. We recommend that the conclusions of this report are agreed with the relevant Local Authority at the earliest stage, to reduce potential delays to the development.

6.4 RISKS TO UNDERGROUND WATER SUPPLY PIPES

Based upon the guidance document from the UK Water Industry Research (UK WIR), 'Contaminated Land Assessment Guidance', February 2014, and the results of the samples tested from the site, it is considered that conventional PE water pipes **CANNOT** be used across the site, as elevated hydrocarbons and BTEX were encountered across the site. This should be confirmed with the local water company as not all authorities use this guidance.

7 RECOMMENDATIONS

We recommend a watching brief should be undertaken during the construction phase, and if during development any previously undiscovered contamination (including visual or olfactory evidence) is found then site management should be immediately informed and inspection by a suitably qualified person should be undertaken.

8 REFERENCES

Building Research Establishment (BRE) BR 211, Radon: guidance on protective measures for new buildings. 2007.

National House Building Council (NHBC) Standards, Chapter 4.1 Land Quality – Managing Ground Conditions. 2011.

Environment Agency, 'The Model Procedures for the Management of Land Contamination', CLR 11, 2004.

Health and Safety Executive (HSE), "Protection of Workers and the General Public during Development of Contaminated Land" HS(G) 66. HMSO London 1991.

Environment Agency, 'Human Health Toxicological Assessment of Contaminants in Soil', September 2008.

BGS Geology of Britain Viewer : 2016. www.bgs.ac.uk. British Geological Survey.

BRE Special Digest 1 : 2005 : Concrete in aggressive ground. Building Research Establishment.

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930 : 2015 : Code of practice for ground investigations. British Standards Institution.

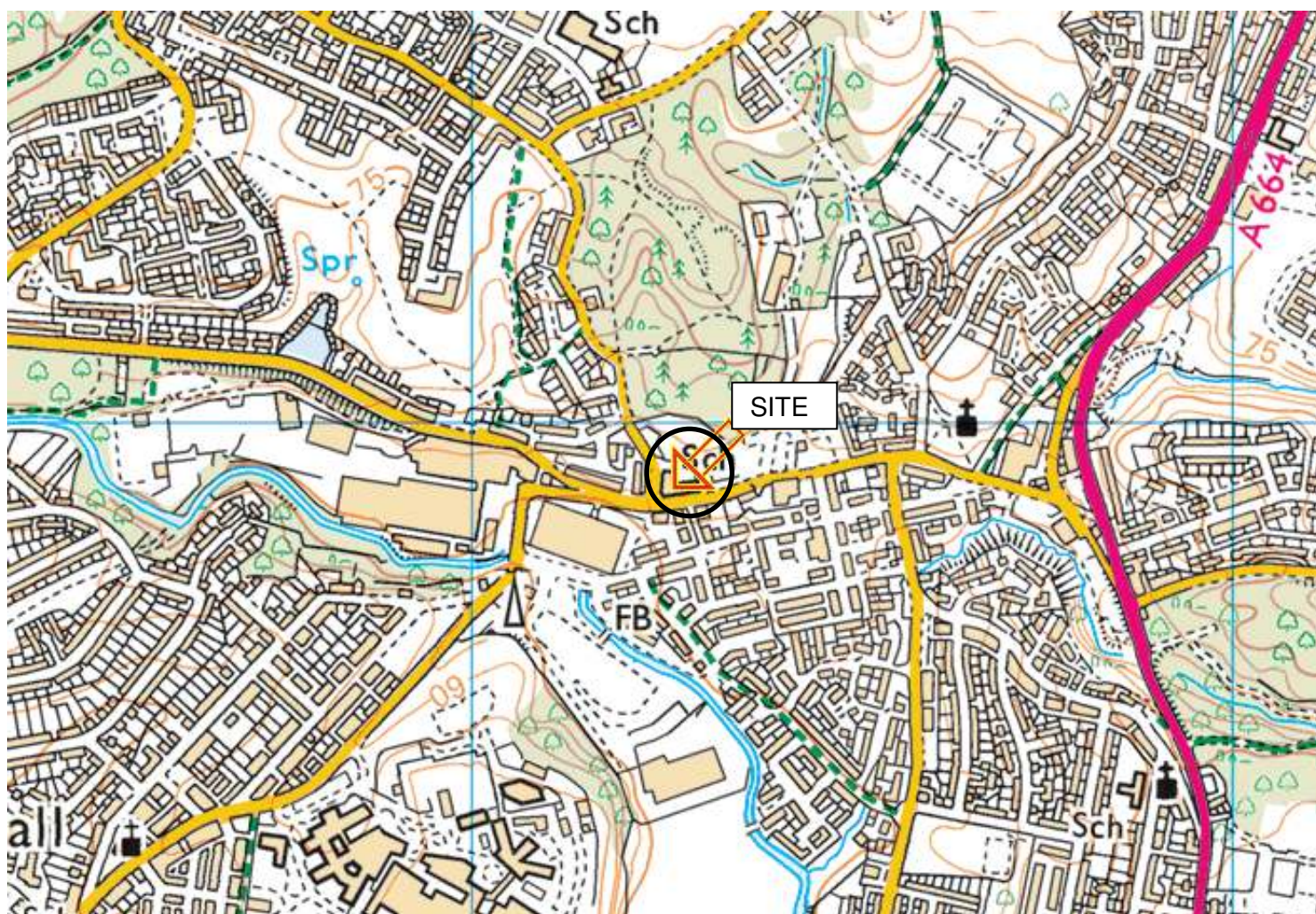
BS EN 1997-2 : 2007 : Eurocode 7 - Geotechnical design - Part 2 Ground investigation and testing. British Standards Institution.

BS EN ISO 14688-1:2002+A1 : 2013 : Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. British Standards Institution.

Environment Agency, "Waste Sampling and Testing for Disposal to Landfill" March 2013

G Card and S Wilson, An Alternative Approach for Ground Gas Risk Assessment, 2011.

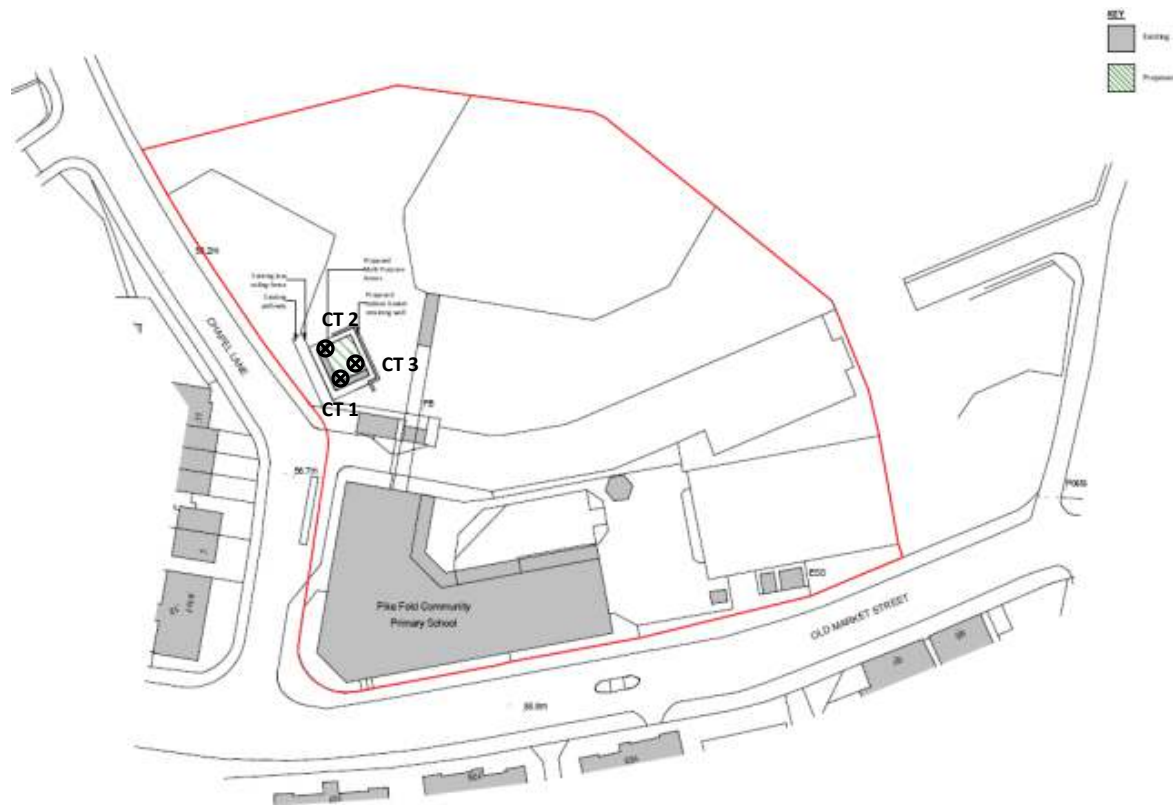
APPENDIX A



Nov. 2019

SITE LOCATION PLAN

Report No.:- 19-11-04



Key

⊗ Continuous
Tube Borehole



4 Church Street
Maids Moreton
MK18 1QE

Tel:- 01280 816409
Mob:- 07858 367 125
[www. geo-integrity.co.uk](http://www.geo-integrity.co.uk)

Exploratory Hole Location Plan

**SITE:- Pike Fold Primary
School, Old Market St,
Manchester M9 8QP**

JOB NO.:- 19-11-04

CLIENT:- The Qube

**Drawn
SB**

**Checked
LA**

**Scale: Not To Scale, for
indicative purposes only**



Photo showing the site area



Photo showing the access point

January 2019

SITE PHOTOGRAPHS

Report No.:- 19-11-04



Photo showing the site and CT3



Photo showing the Made Ground found on site

January 2019

SITE PHOTOGRAPHS

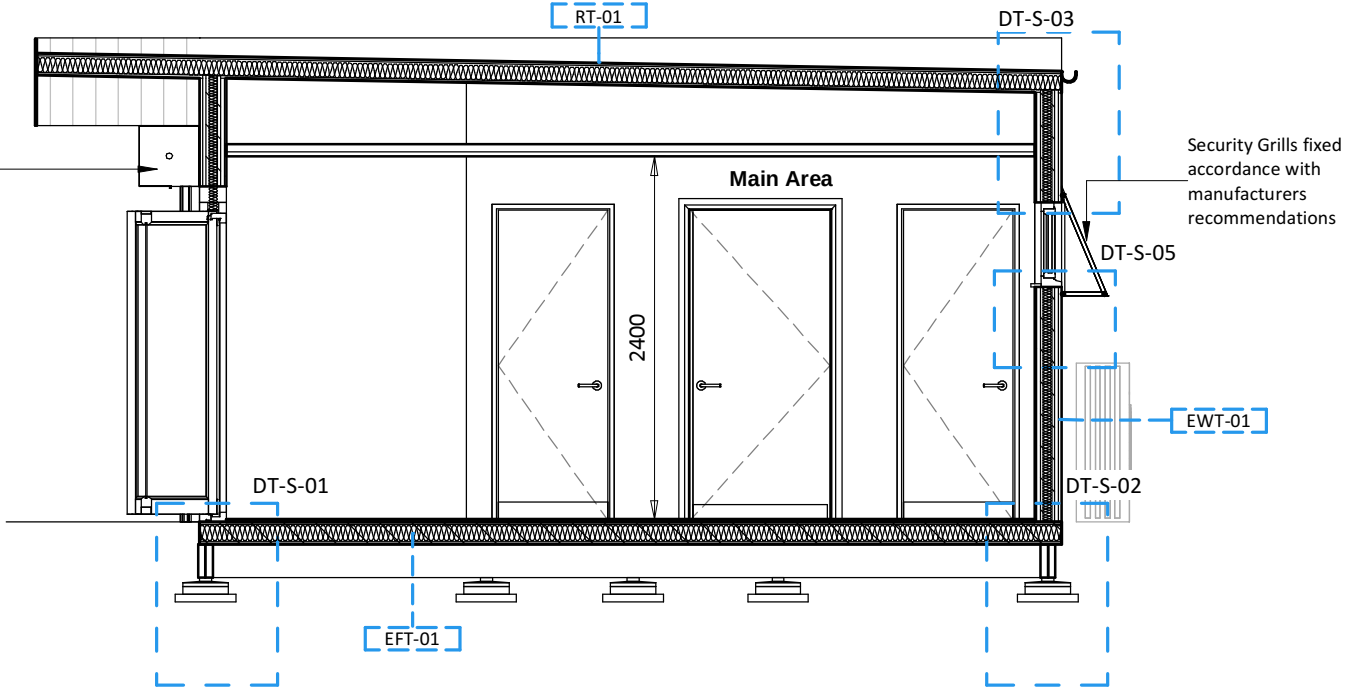
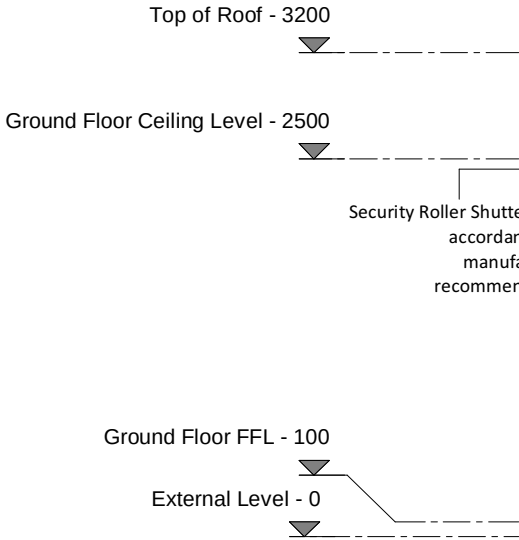
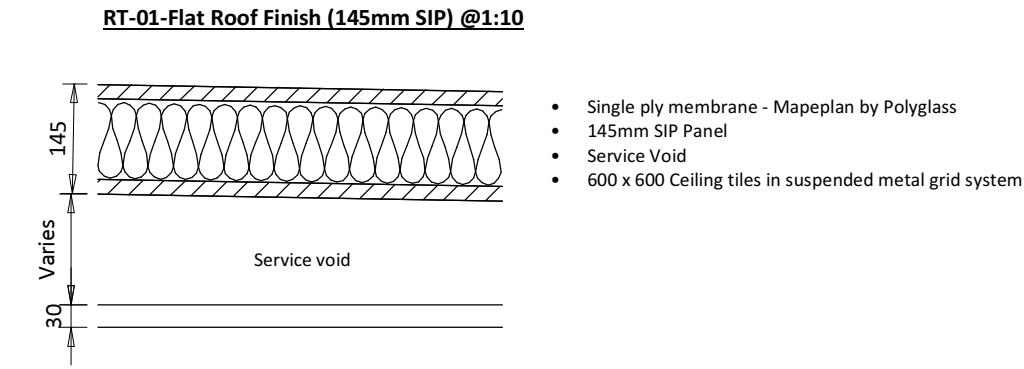
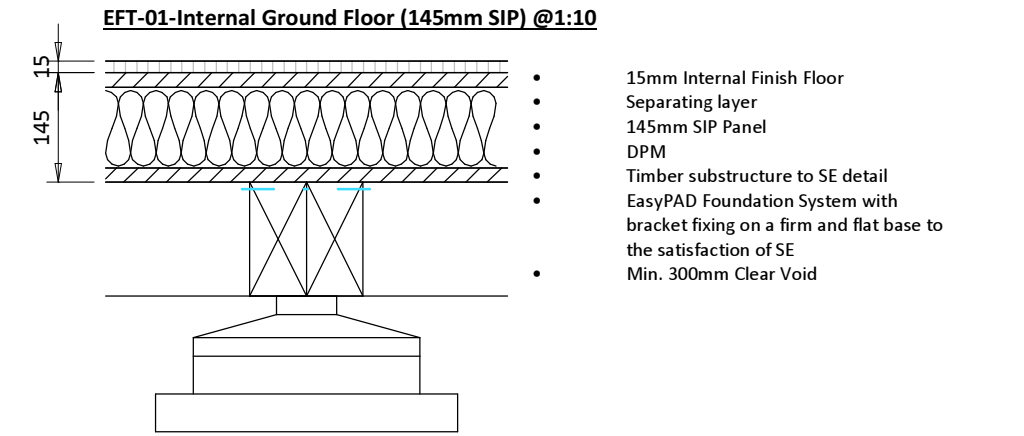
Report No.:- 19-11-04



Photo showing the Glaciofluvial Deposits found on site

Client Sign Off: Please sign to confirm you have no further comments with the drawings prior to manufacture. Signing the drawing commences the manufacture process and any changes to the scheme once the drawing has been signed off will be chargeable.			
Date	Print Name	Signature	Position

NOTES:
Drawings to be read in conjunction with structural calculations pack by JMS Engineers - any queries to voiced to mba* or JMS Engineers.



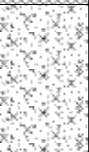
Rev.	Description	Date	Checked	Scale Bar
01	Issued for comments-Building Regulation issue	17 06 2019		0.5 1.0 2.0 3.0 4.0
02	Issued for comments-SE coordination information	02 07 2019		0.5 1.5 2.5 3.5 1:50
03	Issued for comments-Detail updated to clients comments	03 07 2019		



APPENDIX B

Trial Pit Log

Project Name: Manchester		Client: The Qube		Date: 06/12/2019	
Location: Pike Fold Primary School, Old Market St, Manchester M9 8QP		Contractor: Geo-Integrity		Co-ords: E385241.00 N402960.00	
Project No. : 19-11-04		Crew Name: AA Drilling		Equipment: Window Sample Rig	
Location Number CT 1	Location Type WS	Level	Logged By Lee Ashworth	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.50	D					MADE GROUND Loose brown grey silty clayey SAND AND GRAVEL. Gravel is brick, coal, ash, slag and ceramic.	1
		0.50 - 1.00	D		0.50			MADE GROUND Soft friable dark brown silty gravelly CLAY. Gravel is brick clay pipe, coal, ceramic with occasional roots.	
		1.00 - 1.30 1.00	D SPT	N=4 (1,1/1,1,1,1)	1.00			MADE GROUND Soft dark brown silty sandy gravelly CLAY. Gravel is brick, coal and ceramic.	
					1.30			MADE GROUND Loose brown silty slightly clayey SAND. Gravel is tarpaulin and brick	
					1.50			GLACIOFLUVIAL DEPOSITS Medium dense red silty gravelly SAND. Very thin bands of lignite.	2
		2.00 - 2.50 2.00	D SPT	N=19 (3,4/4,5,5,5)	2.00			GLACIOFLUVIAL DEPOSIT Medium dense red brown silty slightly clayey SAND. Thin black horizons	
		2.50 - 3.00	D						3
		3.00	SPT	N=14 (3,2/2,3,4,5)					
					3.80				4
								End of Borehole at 3.800m	

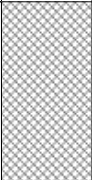
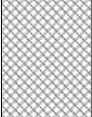
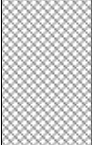
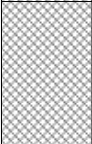
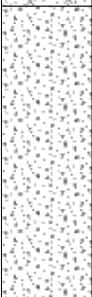
Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks

Remarks



Percussion Drilling Log

Project Name: Manchester		Client: The Qube		Date: 06/12/2019	
Location: Pike Fold Primary School, Old Market St, Manchester M9 8QP		Contractor: Geo-Integrity		Co-ords: E385244.00 N402964.00	
Project No. : 19-11-04		Crew Name: AA Drilling		Drilling Equipment: Window Sample Rig	
Borehole Number CT 2	Hole Type WS	Level	Logged By Lee Ashworth	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.60	D					MADE GROUND Loose dark brown red silty clayey SAND AND GRAVEL. Gravel is brick, coal and ceramic.	
					0.60				
		1.00	SPT	N=25 (14,13/7,7,6,5)	1.00			MADE GROUND Medium dense dark brown red silty clayey very gravelly SAND. Gravel is brick, coal, slag. Thin lenses of dark brown silty CLAY occur locally.	1
								MADE GROUND Medium dense light brown silty clayey gravelly SAND. Gravel is brick, coal and angular limestone.	
		1.50 - 2.00	D		1.50			MADE GROUND Medium dense dark brown silty clayey gravelly cobbly SAND. Gravel and cobbles are brick, coal, slag and angular limestone.	
		2.00 - 2.50 2.00	D SPT	N=40 (5,5/6,10,12,12)	2.00			GLACIOFLUVIAL DEPOSIT Dense red brown slightly clayey slightly gravelly SAND. Dark clay horizons.	2
		2.50 - 3.00	D						
		3.00	SPT	N=15 (3,2/3,4,4,4)	3.00			GLACIOFLUVIAL DEPOSITS Medium dense red brown SAND AND GRAVEL. Gravel is quartz and flint. Became coarse at 3.50m Collapse in at 3.20m	3
		3.50 - 4.00	D						
					4.00			End of Borehole at 4.000m	4
									5

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											



Percussion Drilling Log

Project Name: Manchester		Client: The Qube		Date: 06/12/2019	
Location: Pike Fold Primary School, Old Market St, Manchester M9 8QP		Contractor: Geo-Integrity		Co-ords: E385247.00 N402961.00	
Project No. : 19-11-04		Crew Name: AA Drilling		Drilling Equipment: Window Sample Rig	
Borehole Number CT 3	Hole Type WS	Level	Logged By Lee Ashworth	Scale 1:25	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.80	D	N=4 (2,1/2,1,0,1)	0.80			MADE GROUND Loose dark brown silty clayey SAND AND GRAVEL. Gravel is brick, coal and slag	1
		0.80 - 1.00	D					MADE GROUND Loose dark brown silty clayey cobbly SAND AND GRAVEL. Gravel and cobbles are brick, ceramic, coal and slate.	
		1.00	SPT						
		1.20 - 1.50	D					POSSIBLE MADE GROUND Loose light brown silty clayey slightly gravelly SAND. Occasional roots.	
		1.50 - 2.00	D	N=22 (4,4/4,6,6,6)	2.00			GLACIOFLUVIAL DEPOSIT Medium dense light brown red silty clayey gravelly SAND. Gravel is quartz, lignite and cobbles of flint.	2
		2.00 - 2.50	D						
		2.00	SPT						
		2.50 - 3.00	D						
		3.00 - 3.50	D	N=12 (3,3/3,3,3,3)	3.00			GLACIOFLUVIAL DEPOSITS Medium dense light brown silty clayey SAND AND GRAVEL. Gravel is quartz and lignite.	3
		3.00	SPT						
		3.80 - 4.00	D					GLACIOFLUVIAL DEPOSITS Loose light brown SAND AND GRAVEL. Gravel is rounded flint and quartz.	
		4.00	SPT					GLACIOFLUVIAL DEOSITS Loose light brown red silty clayey SAND AND GRAVEL. Gravel is quartz, lignite and cobbles of rounded flint. Thin layers of lignite.	
		4.20 - 4.50	D						4
					4.80			End of Borehole at 4.800m	
									5

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks



APPENDIX C



Final Report

Report No.: 19-41626-1

Initial Date of Issue: 20-Dec-2019

Client: Geo Integrity

Client Address: 4 Church Street
Maids Moreton
Bucks
MK18 1QE

Contact(s): Lee Ashworth

Project: 19-11-04 Pike Fold Primary School,
Blackley

Quotation No.: Q16-07998 **Date Received:** 13-Dec-2019

Order No.: **Date Instructed:** 13-Dec-2019

No. of Samples: 6

Turnaround (Wkdays): 5 **Results Due:** 19-Dec-2019

Date Approved: 20-Dec-2019

Approved By:


Details: Glynn Harvey, Laboratory Manager

Project: 19-11-04 Pike Fold Primary School, Blackley

Client: Geo Integrity	Chemtest Job No.:					19-41626	19-41626	19-41626	19-41626	19-41626	19-41626
Quotation No.: Q16-07998	Chemtest Sample ID.:					942524	942525	942526	942527	942528	942529
	Sample Location:					CT1	CT1	CT2	CT2	CT3	CT3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m) (\$):					0.5	1.3	0.0	3.0	0.0	0.8
	Bottom Depth (m) (\$):					1.0	1.5	0.6	3.5	0.8	1.2
	Date Sampled (\$):					06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019
	Asbestos Lab:					COVENTRY	COVENTRY	COVENTRY		COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192		N/A	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	9.4	10	11	11	8.1	8.1	8.1
Arsenic	U	2450	mg/kg	1.0	16	16	18	4.7	14	15	15
Cadmium	U	2450	mg/kg	0.10	0.19	0.16	0.38	0.13	0.28	0.36	0.36
Chromium	U	2450	mg/kg	1.0	14	9.4	16	9.0	21	15	15
Copper	U	2450	mg/kg	0.50	30	34	39	16	37	35	35
Mercury	U	2450	mg/kg	0.10	0.60	0.47	0.25	< 0.10	0.36	0.29	0.29
Nickel	U	2450	mg/kg	0.50	18	15	16	11	22	18	18
Lead	U	2450	mg/kg	0.50	100	87	100	46	90	150	150
Selenium	U	2450	mg/kg	0.20	0.47	0.47	< 0.20	0.21	0.33	0.25	0.25
Zinc	U	2450	mg/kg	0.50	33	31	81	27	76	79	79
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
TPH >C5-C6	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C6-C7	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C7-C8	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	14
TPH >C12-C16	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	75	75
TPH >C16-C21	N	2670	mg/kg	1.0	< 1.0	< 1.0	33	31	45	200	200
TPH >C21-C35	N	2670	mg/kg	1.0	< 1.0	< 1.0	130	13	110	410	410
Total TPH >C5-C35	N	2670	mg/kg	10	< 10	< 10	170	44	150	700	700
Naphthalene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.78	< 0.10	0.25	0.25
Acenaphthylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.74	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	3.1	< 0.10	0.50	0.50
Fluorene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	2.3	< 0.10	0.24	0.24
Phenanthrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	1.6	12	0.59	2.9	2.9
Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.55	4.4	0.15	0.61	0.61
Fluoranthene	U	2700	mg/kg	0.10	0.99	< 0.10	2.7	20	1.4	6.9	6.9
Pyrene	U	2700	mg/kg	0.10	0.89	< 0.10	2.8	20	1.4	7.5	7.5
Benzo[a]anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.84	8.5	0.80	3.0	3.0
Chrysene	U	2700	mg/kg	0.10	< 0.10	< 0.10	1.3	9.0	0.93	3.1	3.1
Benzo[b]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	1.6	9.6	< 0.10	3.9	3.9
Benzo[k]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.68	4.5	< 0.10	1.6	1.6
Benzo[a]pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	1.3	9.0	< 0.10	3.3	3.3

Results - Soil

Project: 19-11-04 Pike Fold Primary School, Blackley

Client: Geo Integrity	Chemtest Job No.:					19-41626	19-41626	19-41626	19-41626	19-41626	19-41626
Quotation No.: Q16-07998	Chemtest Sample ID.:					942524	942525	942526	942527	942528	942529
	Sample Location:					CT1	CT1	CT2	CT2	CT3	CT3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m) (\$):					0.5	1.3	0.0	3.0	0.0	0.8
	Bottom Depth (m) (\$):					1.0	1.5	0.6	3.5	0.8	1.2
	Date Sampled (\$):					06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019	06-Dec-2019
	Asbestos Lab:					COVENTRY	COVENTRY	COVENTRY		COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.65	5.4	< 0.10	1.8	
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.7	< 0.10	0.26	
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.78	5.3	< 0.10	2.0	
Total Of 16 PAH's	U	2700	mg/kg	2.0	< 2.0	< 2.0	15	120	5.3	38	
Benzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0	< 1.0	
Toluene	U	2760	µg/kg	1.0	5.7	< 1.0	< 1.0	2.0	1.2	< 1.0	
Ethylbenzene	U	2760	µg/kg	1.0	6.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
m & p-Xylene	U	2760	µg/kg	1.0	20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene	U	2760	µg/kg	1.0	15	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	

SOP	Title	Parameters included	Method summary
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"
- \$ This information has been supplied by the client and can affect the integrity of test data.

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

APPENDIX D



Geo-Integrity Ltd

4, CHURCH STREET,

BUCKINGHAM/MAIDS MORETON, MK18 1QE

Groundsure
Reference:

GS-6494687

Your Reference: 19-11-04

Report Date

2 Dec 2019

Report Delivery Method: Email - pdf

Enviro Insight

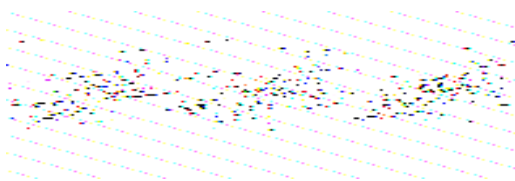
Address: PIKE FOLD COMMUNITY PRIMARY SCHOOL, PIKE FOLD COMMUNITY PRIMARY SCHOOL, OLD MARKET STREET, MANCHESTER, M9 8QP

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: PIKE FOLD COMMUNITY PRIMARY SCHOOL, PIKE FOLD COMMUNITY PRIMARY SCHOOL,
OLD MARKET STREET, MANCHESTER, M9 8QP

Date: 2 Dec 2019

Reference: GS-6494687

Client: Geo-Integrity Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 385278,402958

Site Size: 1.0362ha

Report Reference: GS-6494687

Client Reference: 19-11-04

Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information – Historical Tank Database	17
1.3 Additional Information – Historical Energy Features Database	22
1.4 Additional Information – Historical Petrol and Fuel Site Database	24
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	24
1.6 Historical military sites	24
1.7 Potentially Infilled Land	25
2. Environmental Permits, Incidents and Registers Map	29
2. Environmental Permits, Incidents and Registers	30
2.1 Industrial Sites Holding Licences and/or Authorisations	30
2.1.1 Records of historic IPC Authorisations within 500m of the study site	30
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	30
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	30
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	30
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	31
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	31
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	31
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	32
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	36
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	36
2.2 Dangerous or Hazardous Sites	36
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents	36
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	36
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	37
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	37
3. Landfill and Other Waste Sites Map	38
3. Landfill and Other Waste Sites	39
3.1 Landfill Sites	39
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site	39
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site	39
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	40
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	41
3.2 Other Waste Sites	42
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	42
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site	42
4. Current Land Use Map	43
4. Current Land Uses	44
4.1 Current Industrial Data	44
4.2 Petrol and Fuel Sites	45
4.3 National Grid High Voltage Underground Electricity Transmission Cables	45
4.4 National Grid High Pressure Gas Transmission Pipelines	45

5. Geology	46
5.1 Artificial Ground and Made Ground.....	46
5.2 Superficial Ground and Drift Geology	46
5.3 Bedrock and Solid Geology	46
6 Hydrogeology and Hydrology	47
6a. Aquifer Within Superficial Geology	47
6b. Aquifer Within Bedrock Geology and Abstraction Licences	48
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences	49
6d. Hydrogeology – Source Protection Zones within confined aquifer	50
6e. Hydrology – Watercourse Network and River Quality	51
6.Hydrogeology and Hydrology	52
6.1 Aquifer within Superficial Deposits.....	52
6.2 Aquifer within Bedrock Deposits.....	53
6.3 Groundwater Abstraction Licences.....	53
6.4 Surface Water Abstraction Licences.....	55
6.5 Potable Water Abstraction Licences.....	55
6.6 Source Protection Zones.....	55
6.7 Source Protection Zones within Confined Aquifer.....	55
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	56
6.9 River Quality.....	56
6.9.1 Biological Quality:.....	56
6.9.2 Chemical Quality:.....	57
6.10 Ordnance Survey MasterMap Water Network.....	57
6.11 Surface Water Features.....	62
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)	63
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS)	64
Map	64
7 Flooding	65
7.1 River and Coastal Zone 2 Flooding.....	65
7.2 River and Coastal Zone 3 Flooding.....	65
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	66
7.4 Flood Defences.....	66
7.5 Areas benefiting from Flood Defences.....	66
7.6 Areas benefiting from Flood Storage.....	66
7.7 Groundwater Flooding Susceptibility Areas.....	66
7.8 Groundwater Flooding Confidence Areas.....	67
8. Designated Environmentally Sensitive Sites Map	68
8. Designated Environmentally Sensitive Sites	69
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	69
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	69
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	69
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	69
8.5 Records of Ramsar sites within 2000m of the study site:.....	69
8.6 Records of Ancient Woodland within 2000m of the study site:	70
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	70
8.8 Records of World Heritage Sites within 2000m of the study site:.....	70
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:	70
8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	71
8.11 Records of National Parks (NP) within 2000m of the study site:	71
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	71
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	71

8.14 Records of Green Belt land within 2000m of the study site:.....	71
9. Natural Hazards Findings.....	72
9.1 Detailed BGS GeoSure Data.....	72
9.1.1 Shrink Swell.....	72
9.1.2 Landslides.....	72
9.1.3 Soluble Rocks.....	72
9.1.4 Compressible Ground.....	73
9.1.5 Collapsible Rocks.....	73
9.1.6 Running Sand.....	73
9.2 Radon.....	74
9.2.1 Radon Affected Areas.....	74
9.2.2 Radon Protection.....	74
10. Mining.....	75
10.1 Coal Mining.....	75
10.2 Non-Coal Mining.....	75
10.3 Brine Affected Areas	75
Contact Details.....	76
Standard Terms and Conditions.....	78

Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	10	4	77	120
1.2 Additional Information – Historical Tank Database	7	1	71	143
1.3 Additional Information – Historical Energy Features Database	0	3	25	33
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	2	3
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	1	2	43	90
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	1	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	1	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	1	6
2.1.8 Records of Licensed Discharge Consents	0	0	10	16
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	5
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	1	2	3	4
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	18	2
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	0	13	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	Identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site	Identified					
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site	Identified					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	2	2	4	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	2	0	0	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	6	18	30	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	High					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	2	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	2	2
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	2
8.14 Records of Green Belt land	0	0	0	0	0	2

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Very Low
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Very Low
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

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

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

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

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

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

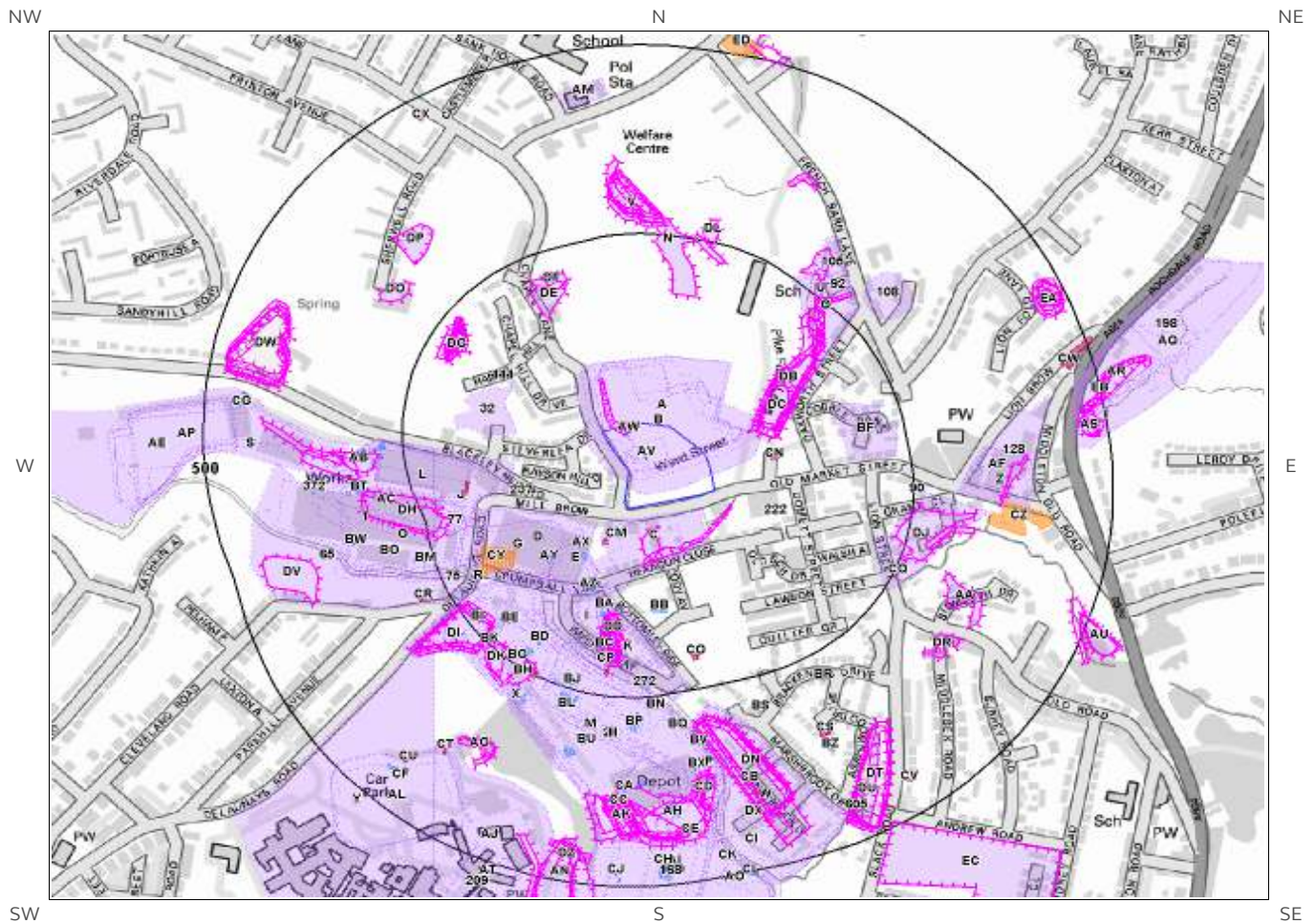
Note: Maps

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

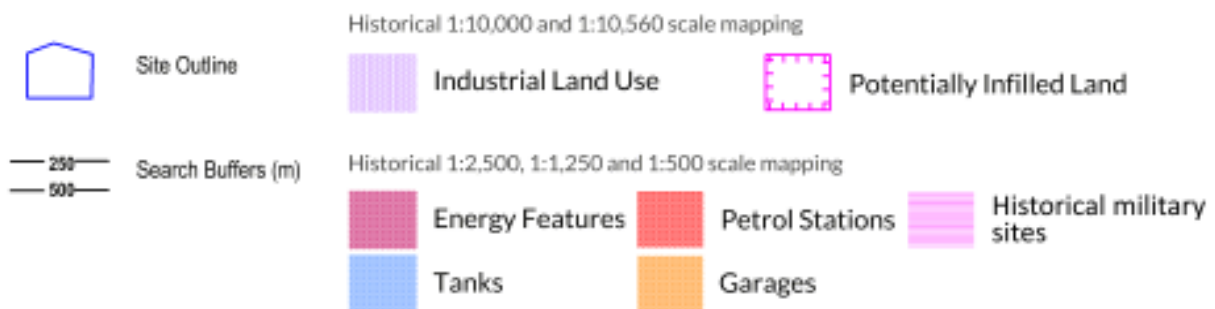
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 211

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Unspecified Works	1975
2DA	0	On Site	Refuse Heap	1956
3B	0	On Site	Unspecified Mills	1923
4A	0	On Site	Unspecified Mills	1956
5B	0	On Site	Unspecified Mills	1915
6A	0	On Site	Unspecified Works	1980
7A	0	On Site	Unspecified Mills	1933
8A	0	On Site	Unspecified Mill	1988
9A	0	On Site	Unspecified Works	1966
10B	0	On Site	Unspecified Mills	1938
11C	13	S	Unspecified Works	1975
12C	20	S	Chemical Works	1891
13C	31	S	Unspecified Heap	1975
14D	42	SW	Unspecified Commercial/Industrial	1980
15D	62	SW	Unspecified Mill	1933
16E	64	SW	Unspecified Works	1915
17E	69	SW	Match Works	1923
18I	75	SW	Dye Works	1851
19F	77	NE	Steel Works	1906
20F	77	NE	Engraving Works	1915
21D	83	W	Unspecified Mill	1906
22G	84	W	Unspecified Mill	1915
23G	87	W	Unspecified Mill	1938
24G	89	W	Unspecified Mill	1923
25H	101	S	Unspecified Commercial/Industrial	1975
26H	101	S	Unspecified Commercial/Industrial	1980
27H	101	S	Unspecified Commercial/Industrial	1966
28	105	S	Unspecified Commercial/Industrial	1956
29I	106	S	Unspecified Commercial/Industrial	1933
30I	106	S	Tannery	1915

31H	106	S	Unspecified Commercial/Industrial	1938
32	109	W	Unspecified Mill	1891
33BC	110	S	Unspecified Works	1891
34BA	113	S	Tannery	1923
35J	118	W	Unspecified Commercial/Industrial	1988
36J	118	W	Unspecified Commercial/Industrial	1980
37I	119	S	Dye Works	1923
38I	126	SW	Dye Works	1915
39I	126	SW	Unspecified Commercial/Industrial	1933
40P	133	SW	Railway Sidings	1966
41K	138	S	Dye Works	1915
42K	138	S	Unspecified Commercial/Industrial	1933
43L	145	SW	Unspecified Mill	1938
44K	146	S	Dye Works	1923
45L	148	SW	Unspecified Mills	1933
46M	151	SW	Chemical Works	1923
47M	152	SW	Unspecified Commercial/Industrial	1933
48M	152	SW	Chemical Works	1915
49BG	154	SW	Unspecified Commercial/Industrial	1851
50DE	165	NW	Unspecified Pit	1891
51L	168	W	Unspecified Mill	1906
52L	170	W	Unspecified Mill	1915
53BF	170	E	Unspecified Works	1975
54L	172	W	Unspecified Mill	1923
55N	175	N	Unspecified Ground Workings	1966
56N	175	N	Unspecified Ground Workings	1956
57N	175	N	Unspecified Ground Workings	1988
58N	175	N	Unspecified Ground Workings	1975
59N	175	N	Unspecified Ground Workings	1980
60O	176	W	Unspecified Mill	1906
61M	176	SW	Unspecified Works	1906
62O	180	W	Unspecified Mills	1891
63O	180	W	Unspecified Mill	1915
64L	182	W	Unspecified Mill	1891
65	184	W	Unspecified Mills	1906
66P	185	SW	Railway Sidings	1956
67Q	187	NE	Engraving Works	1923
68BL	187	SW	Chemical Works	1891

69U	191	NE	Unspecified Ground Workings	1956
70	191	SW	Railway Sidings	1938
71O	196	W	Unspecified Mills	1933
72DF	197	N	Old Sand Pit	1906
73P	197	SW	Railway Sidings	1933
74O	200	W	Logwood Mill	1851
75	200	SW	Railway Sidings	1988
76Q	201	NE	Unspecified Ground Workings	1906
77	202	W	Unspecified Mill	1923
78R	204	SW	Unspecified Tank	1906
79DJ	208	E	Print Works	1851
80R	209	SW	Unspecified Tank	1923
81S	210	W	Unspecified Works	1985
82S	210	W	Unspecified Works	1977
83AC	212	W	Unspecified Mill	1968
84DH	219	W	Mill Pond	1891
85T	224	W	Unspecified Works	1977
86T	224	W	Unspecified Works	1985
87U	226	NE	Engraving Works	1933
88BH	237	SW	Unspecified Heap	1891
89DK	240	SW	Unspecified Pit	1891
90	245	E	Smithy	1923
91DL	247	N	Sand Pit	1851
92	254	NE	Unspecified Mills	1891
93V	259	N	Unspecified Pit	1891
94BO	260	W	Unspecified Mills	1923
95V	265	N	Old Clay Pit	1923
96V	271	N	Unspecified Pit	1933
97V	271	N	Old Clay Pit	1915
98V	271	N	Old Clay Pit	1906
99BQ	271	S	Railway Sidings	1906
100V	271	N	Unspecified Pit	1938
101W	272	S	Unspecified Commercial/Industrial	1933
102W	272	S	Unspecified Commercial/Industrial	1915
103W	273	S	Unspecified Commercial/Industrial	1938
104DM	275	E	Unspecified Ground Workings	1906
105	277	NE	Steel Works	1891
106W	278	S	Unspecified Works	1923
107AD	280	S	Railway Sidings	1906
108	280	NE	Engraving Works	1906
109AB	281	W	Unspecified Heap	1915
110X	285	SW	Unspecified Tanks	1938

111X	285	SW	Unspecified Tanks	1933
112Y	287	SW	Hospital	1956
113Y	287	SW	Hospital	1968
114Y	287	SW	Hospital	1985
115Y	287	SW	Hospital	1977
116X	292	SW	Unspecified Tanks	1938
117DX	295	S	Unspecified Works	1891
118Z	303	E	Unspecified Mills	1891
119DO	305	NW	Unspecified Pit	1956
120Z	309	E	Unspecified Mills	1923
121Z	309	E	Unspecified Mills	1915
122AA	309	E	Unspecified Ground Workings	1956
123AA	309	E	Unspecified Ground Workings	1966
124AB	311	W	Sand Pit	1851
125AC	311	W	Chimney	1968
126AF	316	E	Unspecified Works	1980
127AD	316	S	Railway Sidings	1915
128	319	E	Unspecified Works	1988
129AE	319	W	Dyeing Works	1956
130AE	319	W	Dye Works	1968
131T	322	W	Unspecified Tank	1891
132DP	323	NW	Sand Pit	1956
133DQ	324	W	Unspecified Ground Workings	1933
134BY	325	S	Railway Sidings	1923
135AF	330	E	Unspecified Tank	1891
136DR	337	SE	Unspecified Ground Workings	1906
137DS	351	NE	Unspecified Ground Workings	1956
138AG	354	SW	Refuse Heap	1956
139AG	354	SW	Refuse Heap	1966
140AG	355	SW	Refuse Heap	1975
141AH	357	S	Refuse Heap	1915
142CD	362	S	Unspecified Heap	1906
143AH	365	S	Refuse Heap	1923
144AH	366	S	Unspecified Heap	1906
145AP	372	W	Unspecified Works	1933
146AJ	374	SW	Hospital	1988
147AI	375	S	Railway Sidings	1975
148AI	375	S	Railway Sidings	1980
149AJ	378	SW	Hospital	1975
150AJ	378	SW	Hospital	1980
151DU	379	SE	Mill Pond	1891
152AH	380	S	Refuse Heap	1933

153AK	381	S	Filter Beds	1906
154AH	382	S	Refuse Heap	1938
155AK	382	S	Refuse Heap	1915
156AK	383	S	Filter Beds	1906
157AK	385	S	Filter Bed	1915
158AL	391	SW	Unspecified Workhouse	1906
159AL	391	SW	Hospital	1938
160AL	392	SW	Hospital	1933
161AK	394	S	Filter Bed	1923
162DV	396	W	Unspecified Ground Workings	1906
163AL	409	SW	Unspecified Workhouse	1891
164AM	423	N	Police Station	1975
165AM	423	N	Police Station	1988
166AM	423	N	Police Station	1980
167CI	426	S	Bleach Works	1851
168	438	S	Unspecified Commercial/Industrial	1933
169	440	S	Unspecified Commercial/Industrial	1956
170AE	442	W	Unspecified Works	1938
171AN	443	S	Unspecified Heap	1915
172AN	443	S	Unspecified Heap	1933
173AN	447	S	Unspecified Ground Workings	1923
174AN	448	S	Unspecified Ground Workings	1975
175AN	448	S	Unspecified Ground Workings	1956
176AN	448	S	Unspecified Ground Workings	1980
177AN	448	S	Unspecified Ground Workings	1966
178AO	450	S	Unspecified Works	1975
179AO	450	S	Unspecified Works	1980
180AO	450	S	Unspecified Works	1966
181DY	451	S	Unspecified Ground Workings	1956
182CF	452	SW	Chimney	1968
183DZ	453	S	Filter Beds	1906
184AR	454	E	Field Works	1891
185AQ	456	E	Field Works	1938
186AP	457	W	Unspecified Disused Works	1906
187AQ	458	E	Field Works	1933
188AP	458	W	Unspecified Works	1891
189AR	458	E	Unspecified Disused Works	1923
190AP	459	W	Unspecified Works	1923
191AQ	460	E	Disused Field Works	1915

192AP	461	W	Unspecified Works	1915
193AR	461	E	Bleach Works	1851
194AS	465	E	Unspecified Ground Workings	1906
195AR	465	E	Unspecified Works	1975
196AS	467	E	Unspecified Pit	1933
197AS	467	E	Unspecified Pit	1915
198	468	E	Unspecified Disused Works	1906
199AS	470	E	Refuse Heap	1956
200AR	470	E	Unspecified Ground Workings	1975
201AR	470	E	Unspecified Ground Workings	1966
202AR	471	E	Unspecified Pit	1988
203AR	471	E	Unspecified Pit	1980
204EB	471	E	Unspecified Ground Workings	1956
205AT	481	SW	Hospital	1915
206AT	484	SW	Hospital	1906
207AU	487	E	Unspecified Heap	1980
208AU	489	E	Unspecified Heap	1988
209	490	SW	Hospital	1923
210EC	493	SE	Refuse Destructor	1938
211AT	496	SW	Hospital	1891

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

222

ID	Distance (m)	Direction	Use	Date
212AV	0	On Site	Unspecified Tank	1951
213AV	0	On Site	Unspecified Tank	1968
214AW	0	On Site	Unspecified Tank	1955
215AV	0	On Site	Unspecified Tank	1951
216AW	0	On Site	Unspecified Tank	1951
217AW	0	On Site	Unspecified Tank	1951
218AW	0	On Site	Unspecified Tank	1951
219CM	39	S	Unspecified Tank	1893
220AX	75	SW	Unspecified Tank	1922
221AX	75	SW	Unspecified Tank	1932
222	79	E	Unspecified Tank	1989

223E	79	SW	Tanks	1968
224E	84	SW	Tanks	1951
225E	84	SW	Tanks	1951
226E	88	SW	Tanks	1951
227E	88	SW	Tanks	1951
228AZ	111	SW	Tanks	1968
229D	112	W	Unspecified Tank	1932
230AY	114	SW	Unspecified Tank	1932
231AY	114	SW	Unspecified Tank	1922
232AZ	116	S	Tanks	1951
233AZ	116	S	Tanks	1968
234AZ	117	SW	Tanks	1951
235BA	119	S	Tanks	1951
236AZ	121	SW	Unspecified Tank	1951
237	127	SW	Unspecified Tank	1951
238BB	130	S	Tanks	1992
239BB	130	S	Tanks	1996
240BB	130	S	Tanks	1989
241I	139	S	Tanks	1951
242I	139	S	Tanks	1968
243I	142	S	Tanks	1951
244BC	176	S	Tanks	1968
245BC	176	S	Tanks	1951
246BC	179	S	Tanks	1981
247BC	179	S	Tanks	1951
248BC	182	S	Tanks	1951
249BC	185	S	Tanks	1951
250BC	185	S	Unspecified Tank	1968
251BC	185	S	Unspecified Tank	1951
252BC	188	S	Unspecified Tank	1981
253BC	188	S	Unspecified Tank	1951
254BC	193	S	Tanks	1909
255BC	193	S	Tanks	1932
256BC	193	S	Tanks	1922
257BC	201	S	Unspecified Tank	1951
258BC	201	S	Unspecified Tank	1968
259CP	203	S	Unspecified Tank	1981
260BD	204	SW	Unspecified Tank	1951
261BD	204	SW	Unspecified Tank	1968
262K	204	S	Unspecified Tank	1951
263BD	207	SW	Unspecified Tank	1951
264BE	208	SW	Unspecified Tank	1951
265BE	208	SW	Unspecified Tank	1951
266BF	211	E	Unspecified Tank	1951
267BF	211	E	Unspecified Tank	1951
268BG	221	SW	Tanks	1968

269BD	221	SW	Tanks	1951
270BD	224	SW	Tanks	1951
271BD	225	SW	Tanks	1951
272	228	S	Unspecified Tank	1909
273BG	232	SW	Unspecified Tank	1968
274BG	232	SW	Unspecified Tank	1951
275BH	235	SW	Unspecified Tank	1951
276BI	238	SW	Unspecified Tank	1951
277BI	238	SW	Unspecified Tank	1968
278BJ	239	S	Unspecified Tank	1951
279BJ	239	S	Unspecified Tank	1968
280BI	241	SW	Unspecified Tank	1951
281BJ	243	S	Unspecified Tank	1951
282BJ	244	S	Tanks	1968
283BJ	244	S	Tanks	1951
284BK	247	SW	Unspecified Tank	1968
285BK	247	SW	Unspecified Tank	1951
286BJ	248	S	Tanks	1951
287BJ	248	S	Unspecified Tank	1951
288BJ	248	S	Unspecified Tank	1968
289BJ	249	S	Tanks	1951
290BK	250	SW	Unspecified Tank	1951
291BJ	251	S	Unspecified Tank	1951
292BL	256	S	Tanks	1951
293BJ	256	S	Tanks	1968
294BL	257	S	Unspecified Tank	1968
295BL	257	S	Unspecified Tank	1951
296BL	259	S	Tanks	1951
297BM	260	W	Unspecified Tank	1973
298BL	260	S	Unspecified Tank	1951
299BM	260	W	Unspecified Tank	1984
300BM	261	W	Unspecified Tank	1993
301BN	262	S	Tanks	1932
302BK	263	SW	Tanks	1932
303BK	263	SW	Tanks	1932
304BL	267	S	Tanks	1932
305BH	270	SW	Tanks	1968
306BH	270	SW	Tanks	1951
307BN	270	S	Tanks	1951
308BN	270	S	Tanks	1968
309BO	272	W	Unspecified Tank	1973
310BM	272	W	Unspecified Tank	1993
311BM	272	W	Unspecified Tank	1984
312AB	272	W	Tanks	1968
313AB	272	W	Tanks	1951
314DI	273	SW	Tanks	1932

315X	273	SW	Tanks	1951
316BN	274	S	Tanks	1951
317AB	276	W	Tanks	1951
318AB	276	W	Tanks	1968
319BP	276	S	Tanks	1951
320BP	276	S	Tanks	1968
321X	277	SW	Tanks	1951
322X	278	SW	Tanks	1951
323X	280	SW	Tanks	1932
324BQ	281	S	Tanks	1951
325BN	281	S	Tanks	1968
326BR	282	SE	Unspecified Tank	1968
327BR	282	SE	Unspecified Tank	1951
328BP	282	S	Tanks	1951
329AB	283	W	Tanks	1968
330X	283	SW	Tanks	1968
331X	283	SW	Tanks	1951
332BR	284	SE	Unspecified Tank	1951
333BN	284	S	Tanks	1951
334AB	284	W	Tanks	1932
335X	287	SW	Tanks	1951
336X	287	SW	Tanks	1951
337AB	289	W	Tanks	1968
338BQ	290	S	Tanks	1951
339BS	292	S	Unspecified Tank	1951
340BS	292	S	Unspecified Tank	1968
341BS	295	S	Unspecified Tank	1951
342AB	302	W	Tanks	1951
343BT	309	W	Tanks	1951
344BT	309	W	Tanks	1968
345BU	312	S	Unspecified Tank	1968
346BU	316	S	Unspecified Tank	1951
347BU	316	S	Unspecified Tank	1951
348BV	318	S	Tanks	1968
349BV	318	S	Tanks	1951
350BV	321	S	Tanks	1951
351BT	324	W	Tanks	1951
352BT	324	W	Tanks	1968
353BU	325	S	Tanks	1968
354BU	325	S	Tanks	1951
355BU	328	S	Tanks	1951
356BU	329	S	Tanks	1951
357BU	329	S	Tanks	1951
358AF	332	E	Unspecified Tank	1893
359BU	335	S	Tanks	1951
360BW	340	W	Tanks	1973

361BW	341	W	Tanks	1993
362BW	341	W	Tanks	1984
363BX	349	S	Tanks	1968
364BX	349	S	Tanks	1951
365BX	351	S	Tanks	1951
366AD	357	S	Tanks	1968
367AD	364	S	Tanks	1951
368AD	364	S	Tanks	1951
369BY	366	S	Tanks	1968
370BZ	366	SE	Unspecified Tank	1968
371BZ	366	SE	Unspecified Tank	1951
372	367	W	Unspecified Tank	1932
373AD	367	S	Tanks	1951
374AD	368	S	Tanks	1951
375BZ	369	SE	Unspecified Tank	1951
376CA	369	S	Unspecified Tank	1968
377CA	369	S	Unspecified Tank	1951
378CA	373	S	Unspecified Tank	1951
379BY	375	S	Unspecified Tank	1922
380CA	380	S	Tanks	1968
381CB	382	S	Unspecified Tank	1968
382CB	382	S	Unspecified Tank	1951
383CA	384	S	Tanks	1951
384CA	384	S	Tanks	1951
385CB	385	S	Unspecified Tank	1951
386CC	389	S	Tanks	1951
387CC	389	S	Tanks	1968
388AH	389	S	Tanks	1968
389AH	393	S	Tanks	1951
390AH	393	S	Tanks	1951
391CD	393	S	Tanks	1951
392AH	397	S	Tanks	1951
393AH	397	S	Tanks	1951
394AH	399	S	Tanks	1981
395AH	400	S	Tanks	1951
396AH	401	S	Tanks	1951
397AK	401	S	Unspecified Tank	1968
398AK	401	S	Unspecified Tank	1951
399AH	401	S	Tanks	1951
400AH	402	S	Tanks	1951
401AH	403	S	Tanks	1951
402AH	404	S	Tanks	1951
403AK	405	S	Unspecified Tank	1951
404AH	408	S	Unspecified Tank	1968
405AH	411	S	Unspecified Tank	1951
406CE	434	S	Tanks	1968

407CE	434	S	Tanks	1951
408CE	437	S	Tanks	1951
409CF	448	SW	Tanks	1984
410CG	449	W	Unspecified Tank	1955
411CG	449	W	Unspecified Tank	1951
412CG	450	W	Unspecified Tank	1955
413CG	450	W	Unspecified Tank	1951
414CF	451	SW	Tanks	1973
415CF	451	SW	Tanks	1984
416CF	452	SW	Tanks	1973
417CH	465	S	Tanks	1951
418CH	465	S	Tanks	1968
419CH	469	S	Tanks	1951
420CI	470	S	Tanks	1968
421CI	470	S	Tanks	1951
422CK	476	S	Tanks	1951
423CH	477	S	Tanks	1932
424CJ	477	S	Tanks	1968
425CJ	477	S	Tanks	1951
426CH	478	S	Tanks	1951
427CH	478	S	Tanks	1968
428CH	481	S	Tanks	1951
429CJ	483	S	Tanks	1951
430CJ	489	S	Unspecified Tank	1932
431CK	496	S	Tanks	1968
432CL	499	S	Tanks	1951
433CL	499	S	Tanks	1951

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

61

ID	Distance (m)	Direction	Use	Date
434CM	47	SW	Electricity Substation	1951
435AX	47	SW	Electricity Substation	1968
436AX	50	SW	Electricity Substation	1951
437CN	77	E	Electricity Substation	1981
438CN	78	E	Electricity Substation	1992
439CN	78	E	Electricity Substation	1996
440CN	79	E	Electricity Substation	1951
441CN	79	E	Electricity Substation	1989

442CN	81	E	Electricity Substation	1951
443CN	81	E	Electricity Substation	1968
444	141	NW	Electricity Substation	1980
445J	179	W	Electricity Substation	1951
446J	179	W	Electricity Substation	1968
447J	181	SW	Electricity Substation	1951
448CO	198	S	Electricity Substation	1951
449CO	198	S	Electricity Substation	1968
450CO	200	S	Electricity Sub-Station	1981
451CO	201	S	Electricity Substation	1951
452CO	201	S	Electricity Substation	1989
453CO	201	S	Electricity Substation	1992
454CO	201	S	Electricity Substation	1996
455CP	214	S	Electricity Substation	1951
456CP	214	S	Electricity Substation	1968
457CP	217	S	Electricity Substation	1951
458BG	242	SW	Electricity Substation	1951
459BG	242	SW	Electricity Substation	1968
460BH	245	SW	Electricity Substation	1951
461CQ	250	SE	Electricity Substation	1980
462CQ	252	SE	Electricity Substation	1989
463CR	278	SW	Electricity Substation	1973
464CR	279	SW	Electricity Substation	1984
465CR	282	SW	Electricity Substation	1993
466CS	343	SE	Electricity Substation	1951
467CS	343	SE	Electricity Substation	1968
468CS	345	S	Electricity Substation	1992
469CS	345	S	Electricity Substation	1996
470BZ	345	S	Electricity Sub-Station	1981
471BZ	346	S	Electricity Substation	1951
472BZ	346	S	Electricity Substation	1989
473CT	389	SW	Electricity Substation	1951
474CT	389	SW	Electricity Substation	1968
475CT	392	SW	Electricity Substation	1951
476CT	396	SW	Electricity Substation	1989
477CT	396	SW	Electricity Substation	1981
478CU	424	SW	Electricity Substation	1951
479CU	429	SW	Electricity Substation	1968
480CE	432	S	Electricity Substation	1951
481CE	432	S	Electricity Substation	1968
482CU	432	SW	Electricity Substation	1984
483CU	433	SW	Electricity Substation	1973
484CE	436	S	Electricity Substation	1951
485CE	436	S	Electricity Substation	1983
486CV	451	SE	Electricity Substation	1989
487CV	451	SE	Electricity Substation	1980

488CW	459	E	Electricity Substation	1995
489CW	459	E	Electricity Substation	1981
490CW	459	E	Electricity Substation	1988
491CW	460	E	Electricity Substation	1951
492CW	460	E	Electricity Substation	1951
493CX	470	NW	Electricity Substation	1955
494CX	471	NW	Electricity Substation	1955

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 5

ID	Distance (m)	Direction	Use	Date
495CY	149	SW	Garage	1968
496CY	152	SW	Garage	1951
497CZ	347	E	Garage	1968
498CZ	362	E	Garage	1959
499ED	497	N	Garage	1951

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 136

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

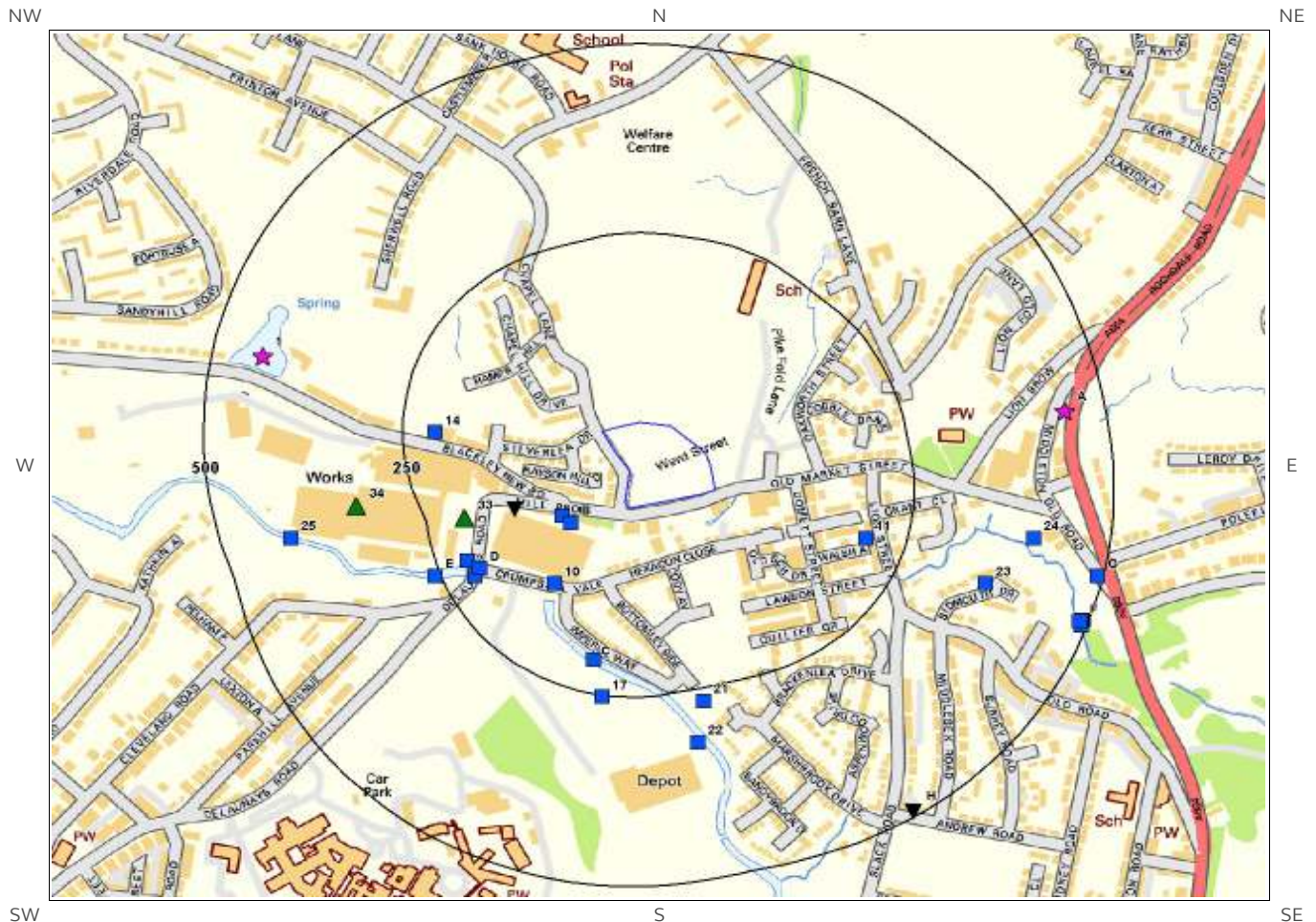
ID	Distance(m)	Direction	Use	Date
500DA	0	On Site	Refuse Heap	1956
501	28	SE	Pond	1891
502C	31	S	Unspecified Heap	1975
503DB	66	NE	Pond	1851
504DC	71	NE	Reservoir	1923
505DB	72	NE	Reservoir	1891
506DB	77	NE	Reservoir	1906
507DB	77	NE	Reservoir	1915
508DC	78	NE	Reservoir	1933
509DC	79	NE	Reservoir	1938
510DB	83	NE	Reservoir	1956
511DD	140	S	Pond	1966
512DD	141	S	Reservoir	1975
513DD	148	S	Reservoirs	1915
514DD	149	S	Ponds	1933
515DD	150	S	Ponds	1938
516DD	155	S	Reservoirs	1923
517BC	160	S	Ponds	1891
518DE	165	NW	Unspecified Pit	1891
519N	175	N	Unspecified Ground Workings	1966
520N	175	N	Unspecified Ground Workings	1980
521N	175	N	Unspecified Ground Workings	1988
522N	175	N	Unspecified Ground Workings	1956
523N	175	N	Unspecified Ground Workings	1975
524U	191	NE	Unspecified Ground Workings	1956
525DF	197	N	Old Sand Pit	1906
526DG	201	NW	Pond	1891
527Q	201	NE	Unspecified Ground Workings	1906
528DG	204	NW	Reservoir	1923
529DG	207	NW	Pond	1906
530DG	207	NW	Pond	1915

531DG	208	NW	Reservoir	1938
532DG	211	NW	Reservoir	1933
533DG	211	NW	Reservoir	1956
534DG	213	NW	Pond	1851
535DH	219	W	Mill Pond	1891
536DI	221	SW	Reservoir	1915
537DI	221	SW	Reservoir	1906
538DI	227	SW	Reservoir	1923
539DH	228	W	Pond	1851
540DI	231	SW	Ponds	1851
541DI	231	SW	Reservoir	1891
542DJ	235	E	Ponds	1851
543BH	237	SW	Unspecified Heap	1891
544DK	240	SW	Unspecified Pit	1891
545DL	247	N	Sand Pit	1851
546V	259	N	Unspecified Pit	1891
547V	265	N	Old Clay Pit	1923
548V	271	N	Old Clay Pit	1906
549V	271	N	Old Clay Pit	1915
550V	271	N	Unspecified Pit	1933
551V	271	N	Unspecified Pit	1938
552DM	275	E	Unspecified Ground Workings	1906
553AB	281	W	Unspecified Heap	1915
554DN	288	S	Reservoir	1938
555CB	288	S	Ponds	1851
556DN	289	S	Reservoir	1915
557DN	289	S	Reservoir	1933
558DN	289	S	Reservoir	1906
559CB	292	S	Reservoir	1923
560CB	295	S	Reservoir	1891
561DO	305	NW	Unspecified Pit	1956
562AA	309	E	Unspecified Ground Workings	1966
563AA	309	E	Unspecified Ground Workings	1956
564AB	311	W	Sand Pit	1851
565DP	323	NW	Sand Pit	1956
566DQ	324	W	Unspecified Ground Workings	1933
567DR	337	SE	Unspecified Ground Workings	1906
568DS	351	NE	Unspecified Ground Workings	1956
569AG	354	SW	Refuse Heap	1956
570AG	354	SW	Refuse Heap	1966
571AG	355	SW	Refuse Heap	1975
572AH	357	S	Refuse Heap	1915

573Z	359	E	Pond	1891
574CD	362	S	Unspecified Heap	1906
575CE	365	S	Refuse Heap	1923
576AH	366	S	Unspecified Heap	1906
577DT	368	SE	Reservoir	1915
578DT	368	SE	Reservoir	1906
579DT	368	SE	Reservoir	1933
580DU	369	SE	Reservoir	1938
581DT	370	SE	Reservoir	1923
582CD	372	S	Ponds	1923
583DU	379	SE	Mill Pond	1891
584AH	380	S	Refuse Heap	1933
585AK	381	S	Filter Beds	1906
586AH	382	S	Refuse Heap	1938
587AK	382	S	Refuse Heap	1915
588AK	383	S	Filter Beds	1906
589AK	385	S	Pond	1933
590AK	385	S	Filter Bed	1915
591AK	388	S	Pond	1938
592AK	394	S	Filter Bed	1923
593DV	396	W	Unspecified Ground Workings	1906
594DW	401	W	Reservoir	1915
595DW	401	W	Reservoir	1933
596DW	401	W	Reservoir	1906
597DW	403	W	Reservoir	1938
598DW	404	W	Reservoir	1923
599DW	404	W	Reservoir	1891
600DW	407	W	Pond	1977
601DW	407	W	Reservoir	1968
602DW	407	W	Reservoir	1956
603DW	407	W	Pond	1985
604DX	431	S	Pond	1891
605	433	SE	Pond	1851
606AN	443	S	Unspecified Heap	1933
607AN	443	S	Unspecified Heap	1915
608AN	447	S	Unspecified Ground Workings	1923
609AN	448	S	Unspecified Ground Workings	1956
610AN	448	S	Unspecified Ground Workings	1975
611AN	448	S	Unspecified Ground Workings	1980
612AN	448	S	Unspecified Ground Workings	1966
613DY	451	S	Unspecified Ground Workings	1956

614DZ	453	S	Filter Beds	1906
615EA	459	NE	Pond	1923
616EA	462	NE	Pond	1915
617EA	462	NE	Pond	1891
618AS	465	E	Unspecified Ground Workings	1906
619EA	465	NE	Pond	1975
620EA	465	NE	Pond	1966
621EA	465	NE	Pond	1956
622AS	467	E	Unspecified Pit	1933
623AS	467	E	Unspecified Pit	1915
624EA	468	NE	Pond	1906
625AS	470	E	Refuse Heap	1956
626AU	470	E	Pond	1851
627AR	470	E	Unspecified Ground Workings	1975
628AR	470	E	Unspecified Ground Workings	1966
629AR	471	E	Unspecified Pit	1980
630AR	471	E	Unspecified Pit	1988
631EB	471	E	Unspecified Ground Workings	1956
632AU	487	E	Unspecified Heap	1980
633AU	489	E	Unspecified Heap	1988
634EC	493	SE	Refuse Destructor	1938
635ED	499	N	Ponds	1891

2. Environmental Permits, Incidents and Registers Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

1

The following Red List Discharge Consent records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
6C	206	S	385199 402699	Address: QDS ENVIRONMENTAL LIMITED, HEXAGON TOWER MAIN CAR PARK, CRUMPSALL VALE, BLACKLEY, MANCHESTER, M9 8EP Permit Number: NPSWQD002604 Permit Version: 1 Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Discharge Type: Mobile Plant Effluent Type: TRADE DISCHARGES - UNSPECIFIED Catchment: RIVER IRK Approval Date: 21-May-2008

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

2

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
33	203	W	385037 402884	Address: Belden Communications Division, Delaunays Road, Blackley, M9 8FP Process: Coating Processes Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
34	325	W	384901 402900	Address: Bicc Cables Ltd, Delaunays Rd, M9 8FP Process: Coating Processes Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

7

The following RAS Licence (3 or 4) records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
42I	139	W	385100 402900	Zeneca Specialities, Hexagon Site, Blackley, Manchester, M9 3DA	Zeneca Specialities	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	AV2269	Date of Approval: 21/1/1997 Effective from: 21/1/1997 Last date of update: 2015-01-01	Revoked/cancelled
43H	492	SE	385600 402500	PO Box 42, Hexagon House, Manchester, M9 8ZS	ITS Testing Services (UK) Limited	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BZ1846	Date of Approval: 21/7/2005 Effective from: - Last date of update: 2018-11-01	Surrendered

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
44H	492	SE	385600 402500	Avecia Ltd, Po Box 42, Hexagon House, Manchester, M9 8ZS	Avecia Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BG4399	Date of Approval:15/7/1999 Effective from:22/7/1999 Last date of update:2015-01-01	Superseded By Variation
45H	492	SE	385600 402500	PO Box 42, Hexagon House, Manchester, M9 8ZS	ITS Testing Services (UK) Limited	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BZ1820	Date of Approval:21/7/2005 Effective from:- Last date of update:2018-11-01	Surrendered
46H	492	SE	385600 402500	Zeneca Specialities, Po Box 42, Hexagon House, Manchester, M9 8ZS	Zeneca Specialities	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AQ7437	Date of Approval:16/3/1995 Effective from:31/3/1995 Last date of update:2015-01-01	Revoked/cancelled
47H	492	SE	385600 402500	Avecia Ltd, Po Box 42, Hexagon House, Manchester, M9 8ZS	Avecia Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	BW6116	Date of Approval:1/12/2003 Effective from:1/1/2004 Last date of update:2015-01-01	Revoked/cancelled
48H	492	SE	385600 402500	Avecia Ltd, Po Box 42, Hexagon House, Manchester, M9 8ZS	Avecia Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	BG4372	Date of Approval:15/7/1999 Effective from:22/7/1999 Last date of update:2015-01-01	Revoked/cancelled

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

26

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
7B	74	W	385170 402880	Address: MILL BROW/BLACKLEY NEW RD CSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0112 Permit Version: 1 Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Jan-1995 Revocation Date: 25/01/2005

ID	Distance (m)	Direction	NGR	Details	
8B	81	W	385160 402890	Address: MILL BROW/BLACKLEY NEW RD CSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982717 Permit Version: 1	Receiving Water: RIVER IRK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: Effective Date: 30-Sep-1994 Revocation Date:
9B	81	W	385160 402890	Address: MILL BROW/BLACKLEY NEW RD CSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0269 Permit Version: 1	Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: Effective Date: 01-Jan-1995 Revocation Date: 01/01/1995
10	136	SW	385150 402800	Address: MILL BROW/BLACKLEY NEW RD CSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0112 Permit Version: 2	Receiving Water: RIVER IRK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: Effective Date: 26-Jan-2005 Revocation Date:
11	199	E	385540 402860	Address: LION ST/GRANT ST, SSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 01MAN0154 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 15-Sep-1993 Revocation Date: 15/09/1993
12D	202	SW	385056 402820	Address: CLEVELAND RD DELAUNAY RD CSO 288NJ, DELAUNAYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0078 Permit Version: 3	Receiving Water: RIVER IRK Status: VARIED UNDER EPR 2010 Issue date: 25/06/2018 Effective Date: 25-Jun-2018 Revocation Date:
13C	206	S	385199 402699	Address: HEXAGON TOWER MAIN CAR PARK, CRUMPSALL VALE, BLACKLEY, MANCHESTER, M9 8EP Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: NPSWQD002604 Permit Version: 1	Receiving Water: RIVER IRK Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/05/2008 Effective Date: 21-May-2008 Revocation Date: 30/11/2008
14	210	W	385000 403000	Address: FRENCH BARN LANE ALLOTMENTS, FRENCH BARN LANE, BLACKLEY Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991084 Permit Version: 1	Receiving Water: RIVER IRK Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: Effective Date: 25-Feb-1986 Revocation Date: 01/07/1991
15D	212	SW	385050 402810	Address: CLEVELAND RD DELAUNEYS RD CSO 281KK, DELAUNEYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0078 Permit Version: 2	Receiving Water: RIVER IRK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 26/11/2004 Effective Date: 26-Nov-2004 Revocation Date: 24/06/2018
16D	213	W	385040 402830	Address: CLEVELAND RD DELAUNEYS RD CSO 281KK, DELAUNEYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY	Receiving Water: RIVER IRK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Jan-1995 Revocation Date: 25/11/2004

ID	Distance (m)	Direction	NGR	Details	
Permit Number: 01MAN0078 Permit Version: 1					
17	252	S	385210 402650	Address: HEXAGON TOWER MAIN CAR PARK, CRUMPSALL VALE, BLACKLEY, MANCHESTER, M9 8EP Effluent Type: GROUNDWATER - BOREHOLE Permit Number: NPSWQD000920 Permit Version: 1	Receiving Water: GROUNDWATERS Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/05/2008 Effective Date: 21-May-2008 Revocation Date: 30/11/2008
18E	258	W	385000 402810	Address: CLEVELAND RD DELAUNEYS RD CSO 281KK, DELAUNEYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993738 Permit Version: 1	Receiving Water: THE RIVER IRK Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 24/05/2005 Effective Date: 24-May-2005 Revocation Date: 01/07/2018
19E	258	W	385000 402810	Address: CLEVELAND RD DELAUNEYS RD CSO 281KK, DELAUNEYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0117 Permit Version: 1	Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 01/01/1995 Effective Date: 01-Jan-1995 Revocation Date: 23/05/2005
20E	258	W	385000 402810	Address: CLEVELAND RD DELAUNEYS RD CSO 281KK, DELAUNEYS ROAD, MANCHESTER, M9 8GQ Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993738 Permit Version: 2	Receiving Water: RIVER IRK Status: VARIED UNDER EPR 2010 Issue date: 02/07/2018 Effective Date: 02-Jul-2018 Revocation Date:
21	267	S	385337 402645	Address: OLD HOUSES AT HOME, BOTTOMLY SIDE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 01M/957 Permit Version: 1	Receiving Water: UNKNOWN Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 26/10/1963 Effective Date: 26-Oct-1963 Revocation Date:
22	320	S	385330 402590	Address: ICI WORKS SWO, CRUMPSALL Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991421 Permit Version: 1	Receiving Water: RIVER IRK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 01-Apr-1992 Revocation Date: 01/04/1992
23	361	E	385690 402800	Address: BLACKLEY SSO, MIDDLETON OLD ROAD/ROCHDALE ROAD, BLACKLEY Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982716 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 28-Nov-1994 Revocation Date: 16/06/1995
24	404	E	385750 402860	Address: MIDDLETON OLD RD/MARKET S, MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0267 Permit Version: 1	Receiving Water: BOGGARTS HOLE BROOK Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: Effective Date: 01-Jan-1995 Revocation Date:
25	415	W	384820 402860	Address: PREMISES, DELAUNAYS ROAD, BLACKLEY Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 016993100	Receiving Water: RIVER IRK Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/07/2002

ID	Distance (m)	Direction	NGR	Details	
				Permit Version: 2	Effective Date: 07-Jul-2002 Revocation Date:
26F	488	E	385807 402750	Address: CHARLESTOWN ROAD CSO, 114 CHARLESTOWN ROAD, MANCHESTER, M9 7BR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: NPSWQD006371 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 29/04/2009 Effective Date: 29-Apr-2009 Revocation Date: 31/03/2018
27F	491	E	385810 402750	Address: OUTSIDE 130&132 CHARLESTOWN RD CSO, CHARLESTOWN ROAD Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993793 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK TRIB OF IRK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/06/2005 Effective Date: 21-Jun-2005 Revocation Date: 26/06/2009
28F	491	E	385811 402751	Address: OUTSIDE 167 CHARLESTOWN ROAD CSO, CHARLESTOWN ROAD Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993782 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK TRIB IRK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/06/2005 Effective Date: 21-Jun-2005 Revocation Date: 26/06/2009
29F	492	E	385812 402752	Address: BOOTH HALL ROAD Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993772 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/06/2005 Effective Date: 21-Jun-2005 Revocation Date: 26/06/2009
30G	492	E	385830 402810	Address: BOOTH HALL ROAD, SSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 01MAN0120 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 15-Sep-1993 Revocation Date: 15/09/1993
31G	492	E	385830 402810	Address: BOOTH HALL ROAD, SSO, MANCHESTER Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 01MAN0121 Permit Version: 1	Receiving Water: BOGGART HOLE BROOK Status: REVOKED - UNSPECIFIED Issue date: Effective Date: 15-Sep-1993 Revocation Date: 15/09/1993
32F	493	E	385810 402745	Address: CHARLESTOWN ROAD CSO, 114 CHARLESTOWN ROAD, MANCHESTER, M9 7BR Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: NPSWQD006371 Permit Version: 2	Receiving Water: BOGGART HOLE BROOK Status: VARIED UNDER EPR 2010 Issue date: 12/03/2018 Effective Date: 01-Apr-2018 Revocation Date:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

5

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	438	W	384784.0 403100.0	Incident Date: 05-Sep-2003 Incident Identification: 187747.0 Pollutant: Other Pollutant Pollutant Description: Natural Ochre Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	449	E	385789.0 403028.0	Incident Date: 08-Jun-2001 Incident Identification: 8230.0 Pollutant: Specific Waste Materials Pollutant Description: Tyres Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	449	E	385789.0 403028.0	Incident Date: 08-Jun-2001 Incident Identification: 8230.0 Pollutant: General Biodegradable Materials and Wastes:Specific Waste Materials:Specific Waste Materials Pollutant Description: Other General Biodegradable Material or Waste:Commercial Waste:Tyres Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	449	E	385789.0 403028.0	Incident Date: 08-Jun-2001 Incident Identification: 8230.0 Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor)

ID	Distance (m)	Direction	NGR	Details	
5A	449	E	385789.0 403028.0	Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Other General Biodegradable Material or Waste	Air Impact: Category 4 (No Impact)
				Incident Date: 08-Jun-2001 Incident Identification: 8230.0 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

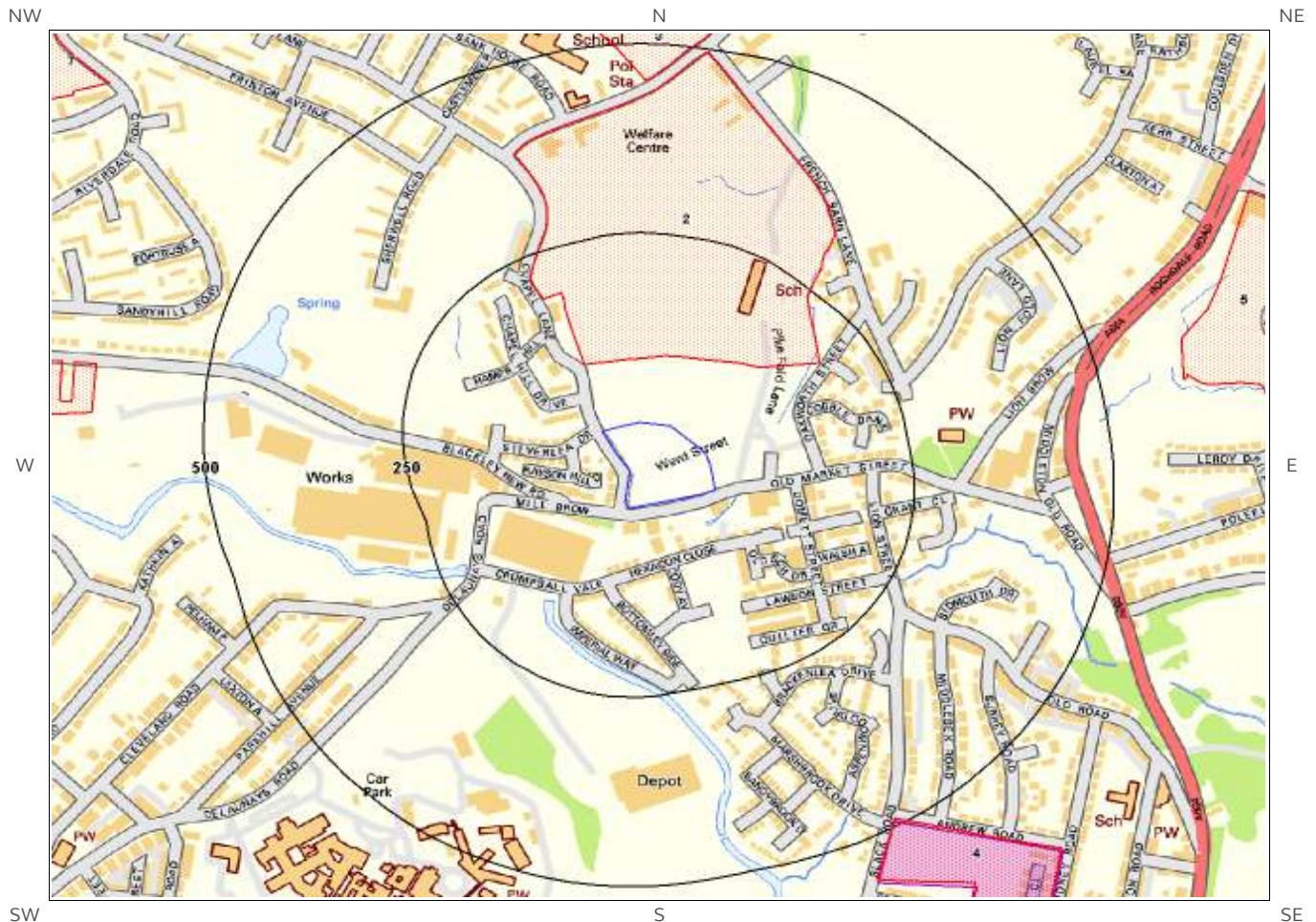
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site

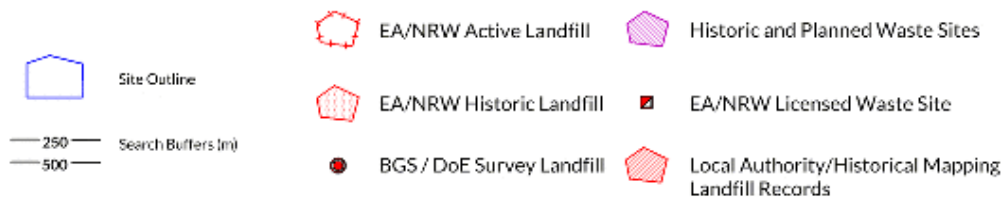
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

10

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

ID	Distance (m)	Direction	NGR	Details
2	84	N		Site Address: Land at Pike Fold Lane, Higher Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F043 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
3	452	N		Site Address: Land at Tweedle Hill, Plant Hill Road, Higher Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F002 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
4	490	SE		Site Address: Land at Factory Lane, Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F018 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
5	605	E		Site Address: Land off White Moss Road, White Moss Road, Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F003 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details
6	639	W		Site Address: South of Blackley New Road, Blackley New Road, Crumpsall, Manchester, Greater Manchester Waste Licence: - Site Reference: F017 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: Earl of Wilton First Recorded: - Last Recorded: -
7	770	NW		Site Address: Land at Riverdale Road, Riverdale Road, Crumpsall, Manchester, Greater Manchester Waste Licence: - Site Reference: F033 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1028	SE		Site Address: Land at Bankfield Street, Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F028 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1137	S		Site Address: Land off Harpurhey Road, Harpurhey, Manchester, Greater Manchester Waste Licence: Yes Site Reference: F040,RD/LIC/672/90 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 17-May-1991 Licence Surrendered: - Licence Holder Address: Off Kingsbridge Road, Collyhurst, Manchester Operator: - Licence Holder: Manchester City Council Planning Department First Recorded: - Last Recorded: -
Not shown	1170	S		Site Address: Abraham Moss Centre, Crescent Road, Crumpsall, Manchester, Greater Manchester Waste Licence: - Site Reference: F016 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1464	NE		Site Address: Land to the rear of Symond Road, Symond Road, Blackley, Manchester, Greater Manchester Waste Licence: - Site Reference: F026 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

20

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	558	N	385207 403641	Refuse Tip	1962 mapping	Polygon
Not shown	558	N	385208 403641	Refuse Tip	1964 mapping	Polygon
Not shown	630	N	385162 403660	Refuse Tip	1962 mapping	Polygon
Not shown	630	N	385161 403660	Refuse Tip	1964 mapping	Polygon
Not shown	699	N	385221 403756	Refuse Tip	1962 mapping	Polygon
Not shown	700	N	385221 403757	Refuse Tip	1964 mapping	Polygon
Not shown	706	N	385248 403794	Refuse Tip	1962 mapping	Polygon
Not shown	707	N	385249 403795	Refuse Tip	1964 mapping	Polygon
Not shown	725	W	384361 403060	Refuse Tip	1964 mapping	Polygon
Not shown	725	W	384361 403060	Refuse Tip	1964 mapping	Polygon
Not shown	737	NE	385774 403578	Refuse Tips	1964 mapping	Polygon
Not shown	737	NE	385774 403578	Refuse Tips	1962 mapping	Polygon
Not shown	754	NE	385793 403592	Refuse Tips	1962 mapping	Polygon
Not shown	754	NE	385793 403592	Refuse Tips	1964 mapping	Polygon
Not shown	754	N	385295 403786	Refuse Tip	1962 mapping	Polygon
Not shown	754	N	385297 403787	Refuse Tip	1964 mapping	Polygon
Not shown	795	NE	385805 403624	Refuse Tips	1964 mapping	Polygon
Not shown	795	NE	385805 403623	Refuse Tips	1962 mapping	Polygon
Not shown	1410	SW	384631 401577	Refuse Tip	1967 mapping	Polygon
Not shown	1410	SW	384631 401577	Refuse Tip	1967 mapping	Polygon

3.2 Other Waste Sites

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

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
1	493	SE	385672 402318	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1938	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

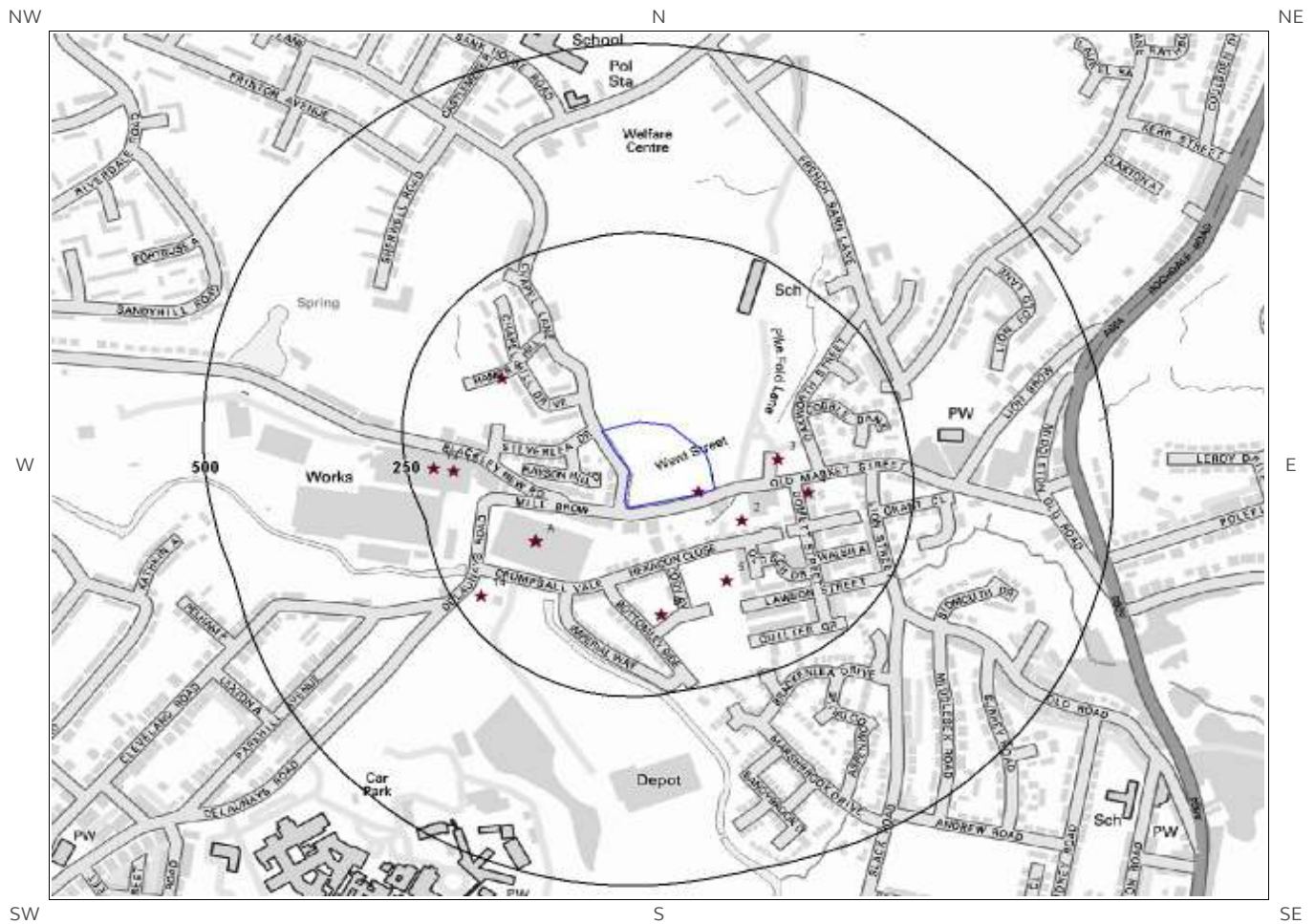
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
Not shown	1497	S	385372 401408	Site Address: Vale Park Ind Est, Unit 6-7, Hazelbottom Road, Crumpsall, Manchester, M8 0GF Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAI011 EPR reference: EA/EPR/CB3100XM/A001 Operator: Wai Sang (Europe) Recycle Ltd Waste Management licence No: 401815 Annual Tonnage: 74900.0	Issue Date: 06/11/2014 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued	Site Name: Wai Sang (Europe) Recycle Ltd Correspondence Address: -

4. Current Land Use Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



4. Current Land Uses

4.1 Current Industrial Data

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

14

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Electricity Sub Station	385331 402922	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
2	53	SE	Electricity Sub Station	385385 402884	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
3	86	E	Electricity Sub Station	385431 402965	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
4	117	E	Vision Signs	385468 402921	67, Old Market Street, Manchester, Greater Manchester, M9 8DX	Signs	Industrial Products
5	118	S	Electricity Sub Station	385366 402804	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
6A	122	W	Process Treatments Ltd	385127 402855	Hexagon Tower, Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ	Lubricants and Lubricating Equipment	Industrial Products
7A	123	W	Randox Testing Services	385127 402856	Hexagon Tower, Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ	Dental and Medical Laboratories	Health Practitioners and Establishments
8A	123	W	Siteco UK Ltd	385126 402856	Hexagon Tower, Crumpsall Vale, Manchester, Greater Manchester, M9 8GQ	Lampshades and Lighting	Consumer Products
9	144	NW	Electricity Sub Station	385085 403072	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities
10B	145	S	Tanks	385284 402759	Greater Manchester, M9	Tanks (Generic)	Industrial Features
11B	145	S	Tank	385284 402759	Greater Manchester, M9	Tanks (Generic)	Industrial Features
12	193	W	British Cables Company	385024 402948	Delaunays Road, Manchester, Greater Manchester, M9 8FP	Cable, Wire and Fibre Optics	Industrial Products
13	217	W	Works	384999 402952	Greater Manchester, M9	Unspecified Works Or Factories	Industrial Features
14	217	SW	Electricity Sub Station	385058 402784	Greater Manchester, M9	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
GFSD-DSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

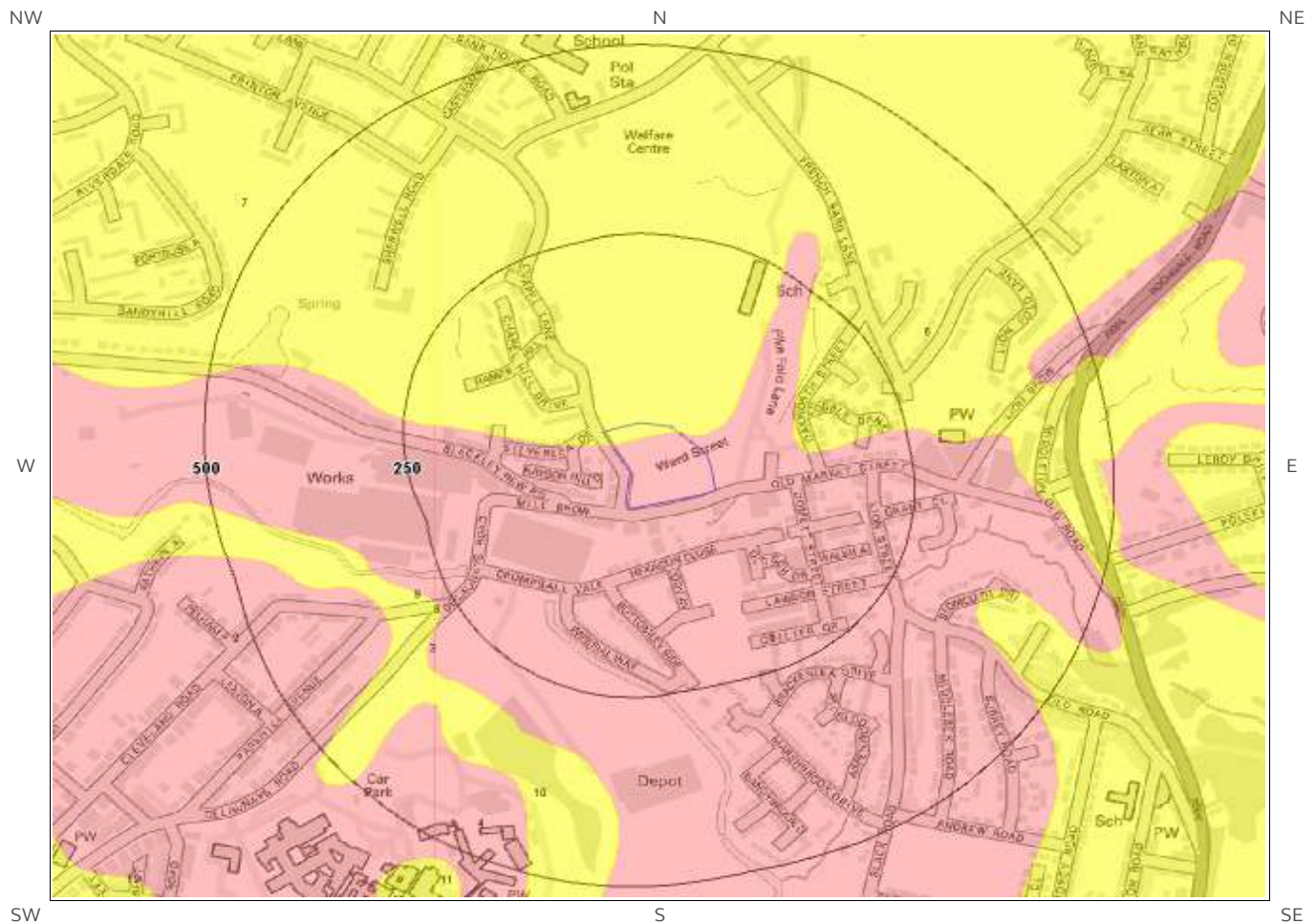
5.3 Bedrock and Solid Geology

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

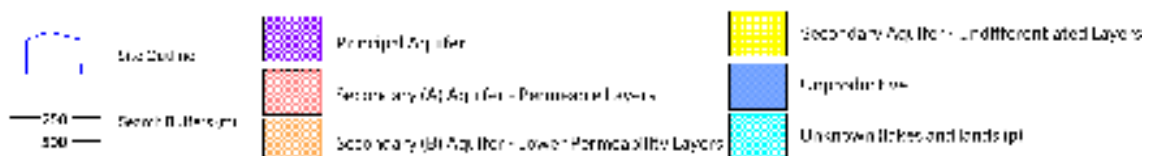
Lex Code	Description	Rock Type
CHES-SDST	CHESTER FORMATION	SANDSTONE
MM-MDST	MANCHESTER MARLS FORMATION	MUDSTONE

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

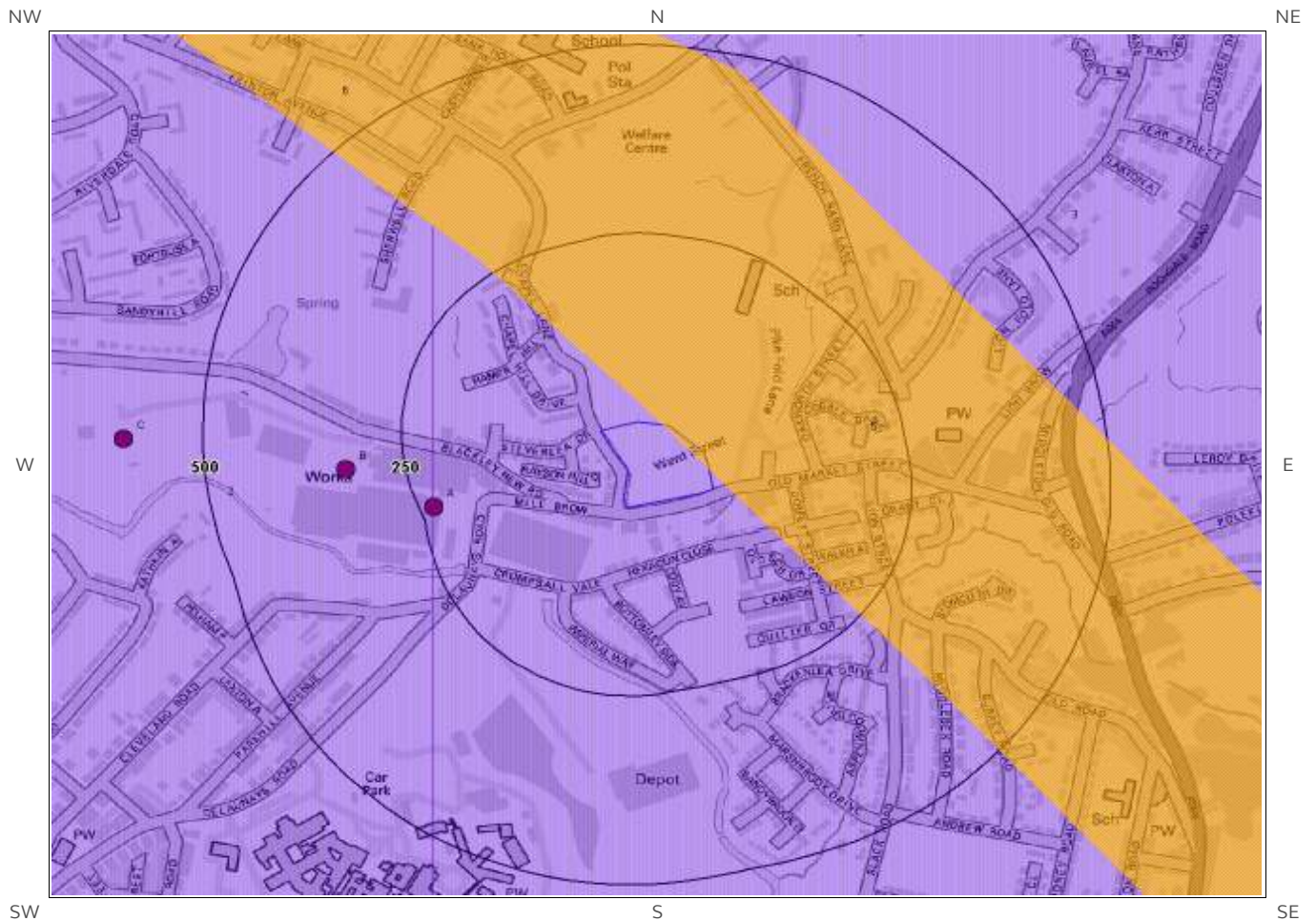
6a. Aquifer Within Superficial Geology



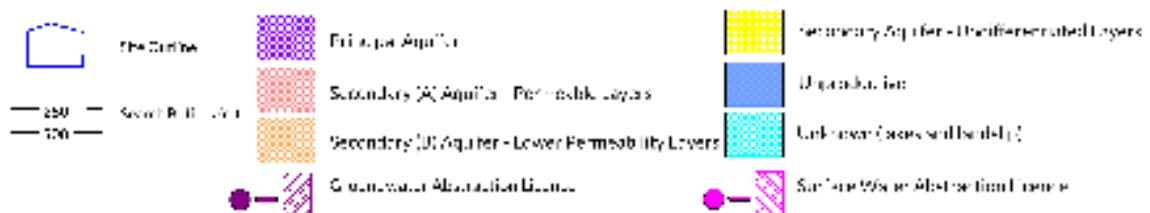
© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.



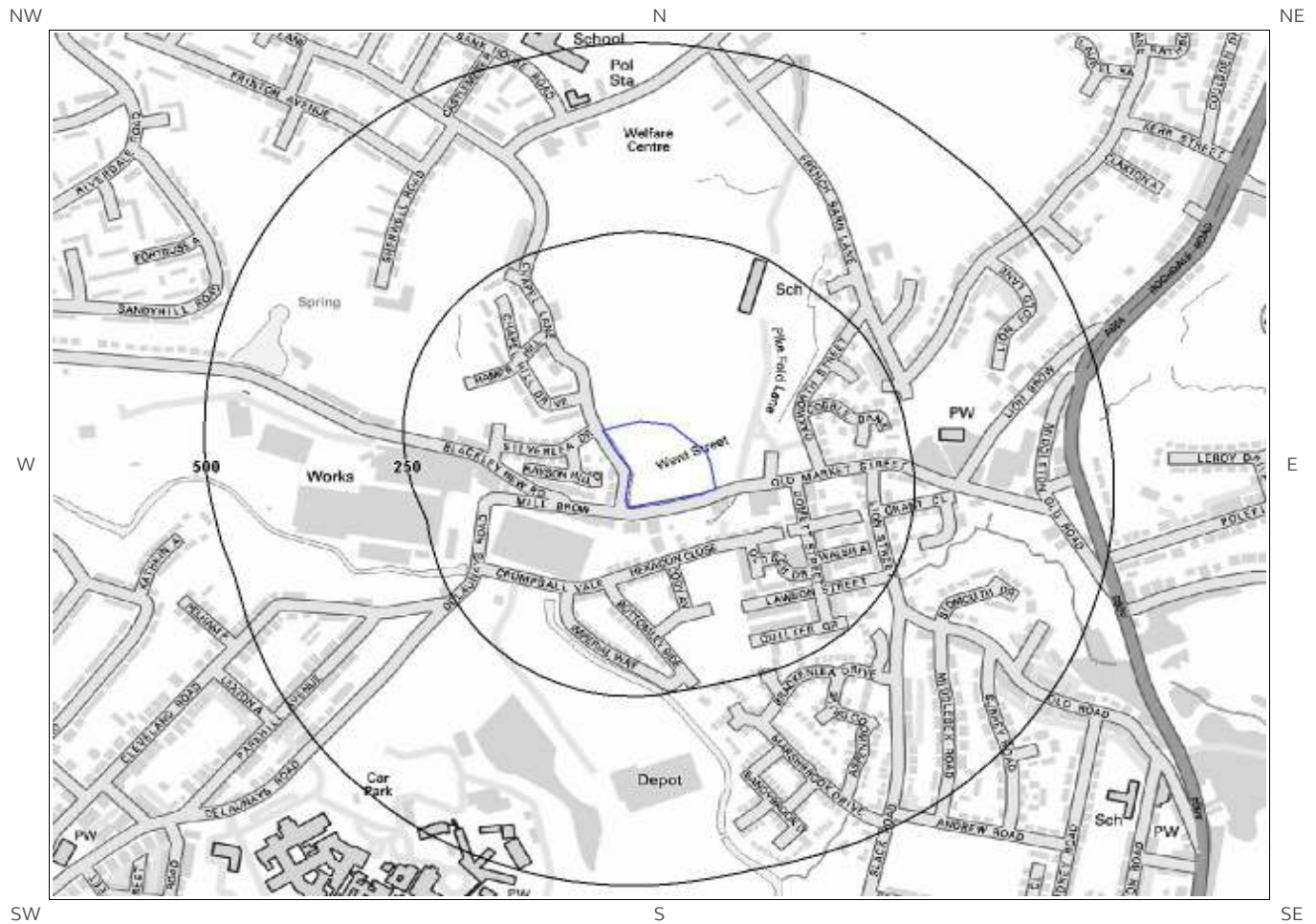
6b. Aquifer Within Bedrock Geology and Abstraction Licences



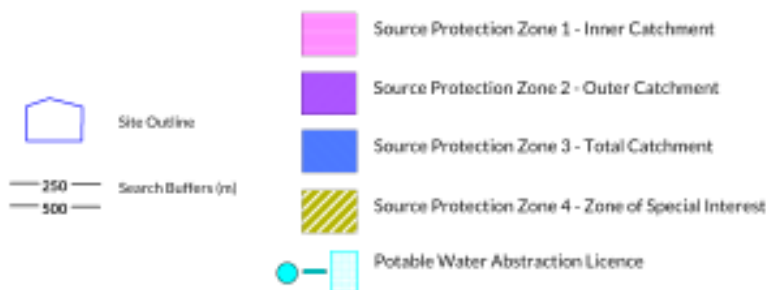
© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.



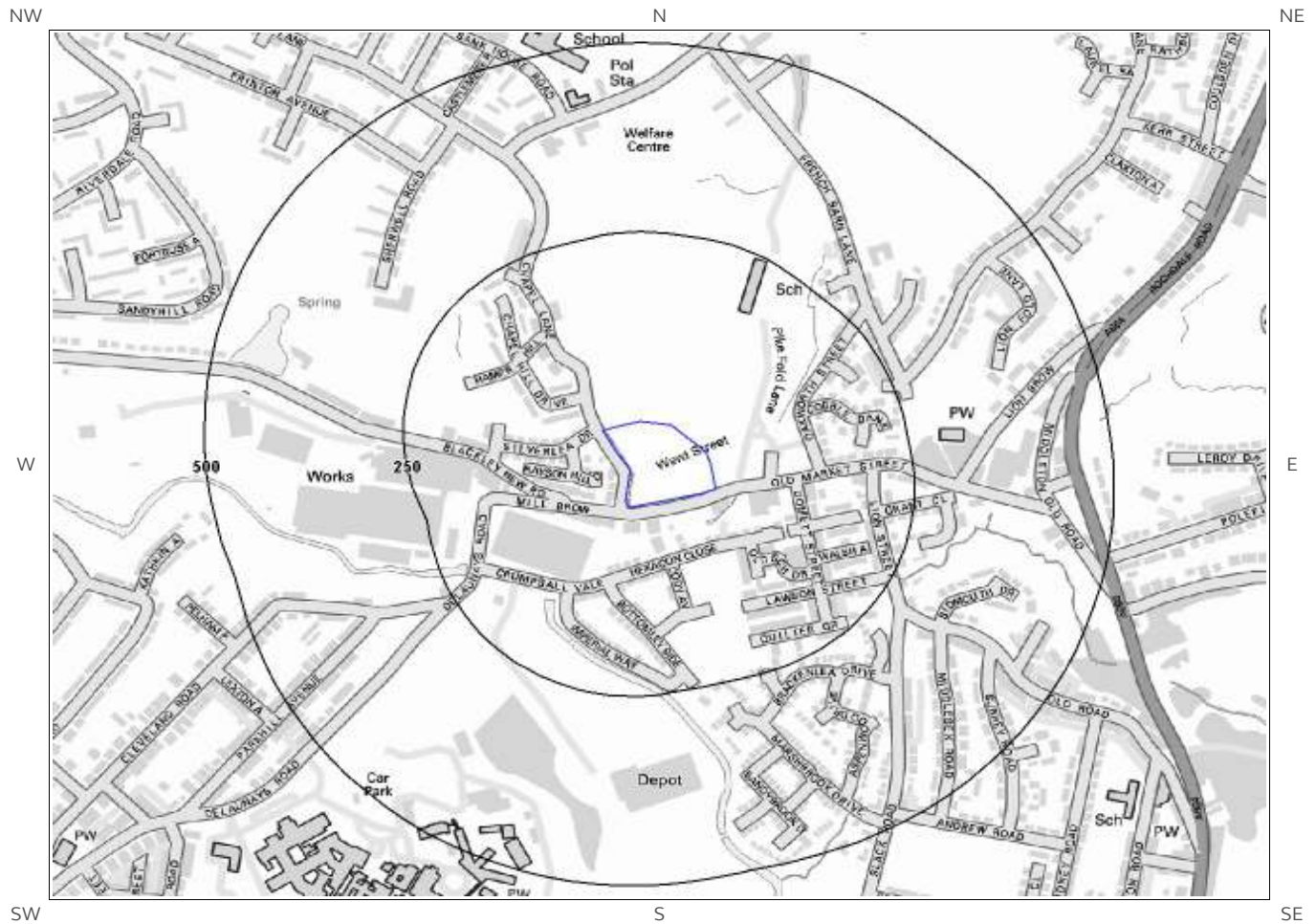
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



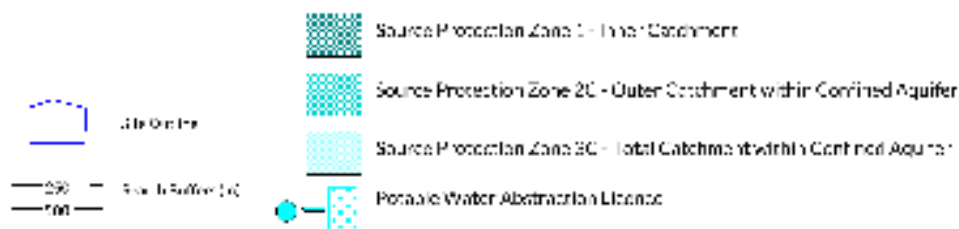
© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.



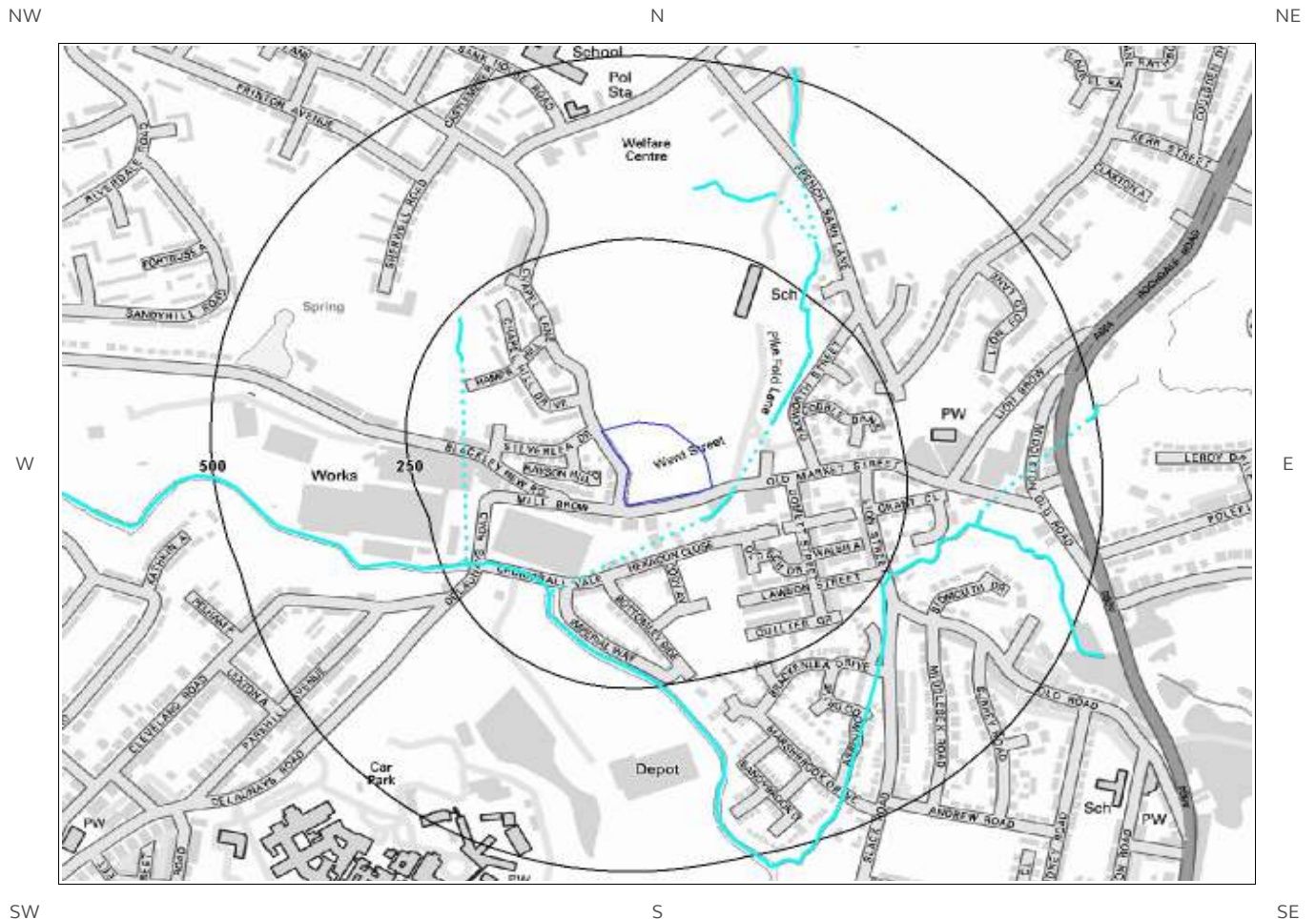
6d. Hydrogeology – Source Protection Zones within confined aquifer



© Crown copyright and database rights 2019
Ordnance Survey licence 100035207.



6e. Hydrology – Watercourse Network and River Quality



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

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

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	210	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	210	W	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
8	269	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
9	272	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
3	287	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
10	308	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	354	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	417	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

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

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
5	0	On Site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	210	W	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
6	344	NW	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
3	378	NE	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
9A	233	SW	385000 402900	Status: Historical Licence No: 2569005012 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT BLACKLEY, MANCHESTER Data Type: Point Name: AVECIA LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 23/05/1994 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1999 Version End Date:
10A	233	SW	385000 402900	Status: Historical Licence No: 2569005012 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT BLACKLEY, MANCHESTER" Data Type: Point Name: AVECIA LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 23/05/1994 Expiry Date: - Issue No: 101 Version Start Date: 01/07/1999 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
11B	324	W	384890 402950	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "2 BOREHOLES AT BLACKLEY, MANCHESTER" Data Type: Point Name: BELDEN (UK) LTD	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 16/11/2001 Version End Date:
12B	324	W	384890 402950	Status: Active Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT BLACKLEY, MANCHESTER Data Type: Point Name: British Cables Company Limited	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 106 Version Start Date: 11/10/2018 Version End Date:
13C	600	W	384610 402990	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "2 BOREHOLES AT BLACKLEY, MANCHESTER \$121" Data Type: Point Name: BELDEN (UK) LTD	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 16/11/2001 Version End Date:
14C	600	W	384610 402990	Status: Active Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLES X 2 AT BLACKLEY MANCHESTER Data Type: Point Name: British Cables Company Limited	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 106 Version Start Date: 11/10/2018 Version End Date:
15C	600	W	384610 402990	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT BLACKLEY, MANCHESTER \$121 Data Type: Point Name: BELDEN (UK) LTD	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 16/11/2001 Version End Date:
16C	600	W	384610 402990	Status: Historical Licence No: 2569005044 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT BLACKLEY, MANCHESTER 121 Data Type: Point Name: BELDEN (UK) LTD	Annual Volume (m³): 477,271 Max Daily Volume (m³): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 03/04/2000 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
0	On Site	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
398	NE	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site Identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1028	E	386293 403356	River Name: Whitsundale Beck Reach: Hoods Bottom Beck River Swale End/Start of Stretch: Start of Stretch NGR	A	A	A	A	A
Not shown	1028	E	386293 403356	River Name: Whitsundale Beck Reach: White Mossy Hill Hoods Bottom Beck End/Start of Stretch: End of Stretch NGR	A	A	A	A	A

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/Direction	Name	Type of Watercourse	Additional Details
1	26 SE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
2	26 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	26 SE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
18	26 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
3	38 S	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	38 S	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	99 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
20	99 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	151 SW	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	151 SW	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	156 SW	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.8
22	156 SW	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.8
7	176 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	176 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	204 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
24	204 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
9	216 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	216 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	218 W	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.5
11	218 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.5
26	218 W	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.5
27	218 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.5
12	220 W	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.4
28	220 W	River Irk Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.4
13	258 SE	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	258 SE	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
29	258 SE	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
30	258 SE	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
15	301	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NE			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
31	301 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	313 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	313 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
32	313 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	313 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	322 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	322 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	342 E	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
20	342 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
35	342 E	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
36	342 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	346 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
37	346 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
22	410 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	410 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	417 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	417 NE	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
24	458 S	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
Not shown	458 S	Boggart Hole Brook Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
25	490 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	490 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
26	496 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	496 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	499 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.3

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not shown	499 E	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.3

6.11 Surface Water Features

Surface water features within 250m of the study site

Identified

The following surface water records are not represented on mapping:

Distance (m)	Direction
99	NE
153	SW
204	NW
216	W

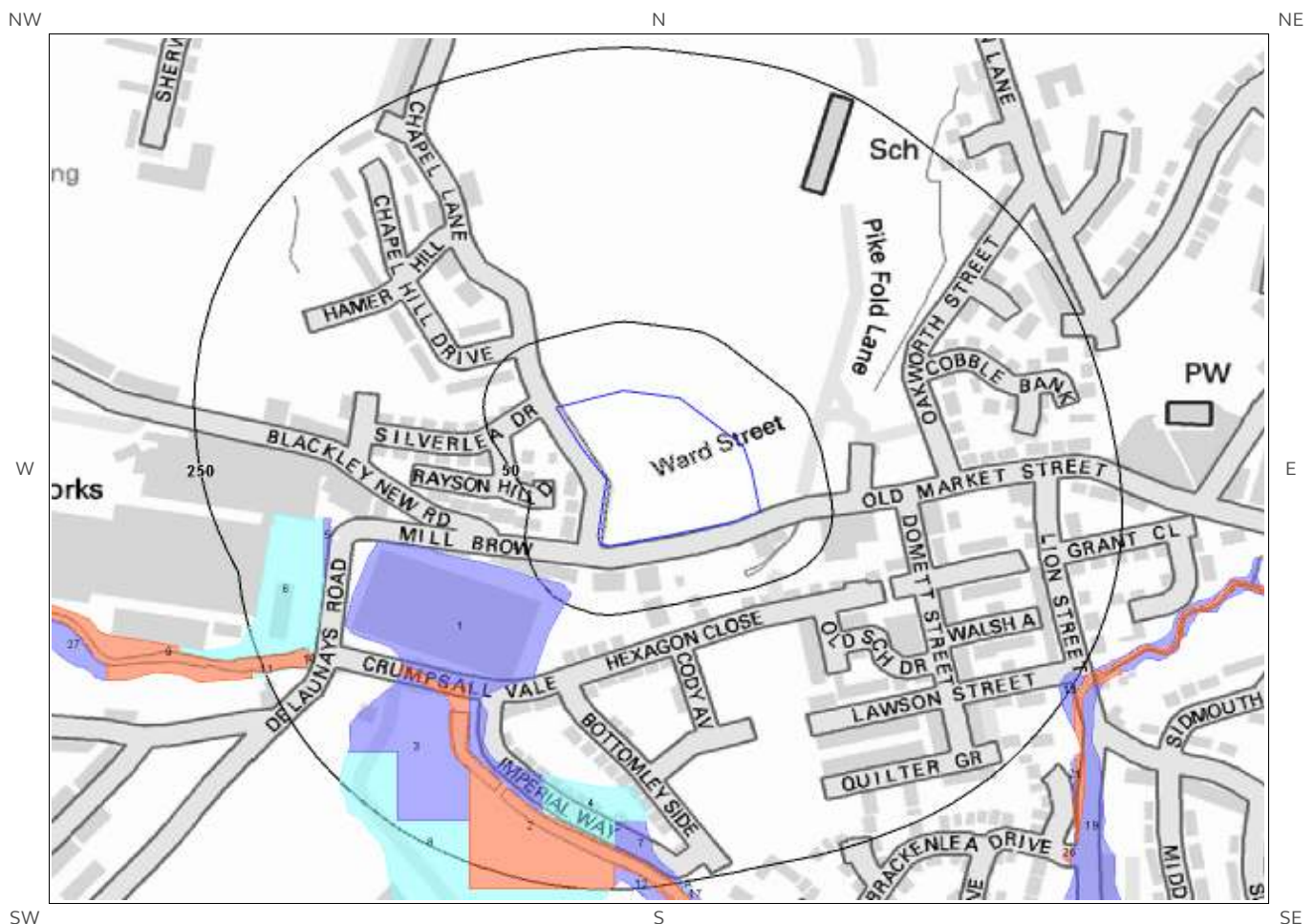
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



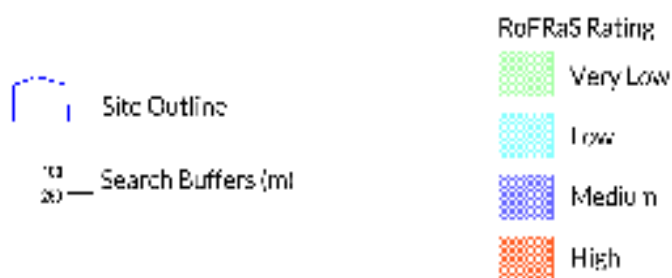
© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	39	SW	19-Nov-2019	Zone 2 - (Fluvial /Tidal Models)
2	175	SW	19-Nov-2019	Zone 2 - (Fluvial /Tidal Models)
3A	241	SE	19-Nov-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	39	SW	19-Nov-2019	Zone 3 - (Fluvial Models)
2	151	SW	19-Nov-2019	Zone 3 - (Fluvial Models)
3A	241	SE	19-Nov-2019	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite

Very Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	39.0	SW	Medium

7.4 Flood Defences

Flood Defences within 250m of the study site

None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site

None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site

None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

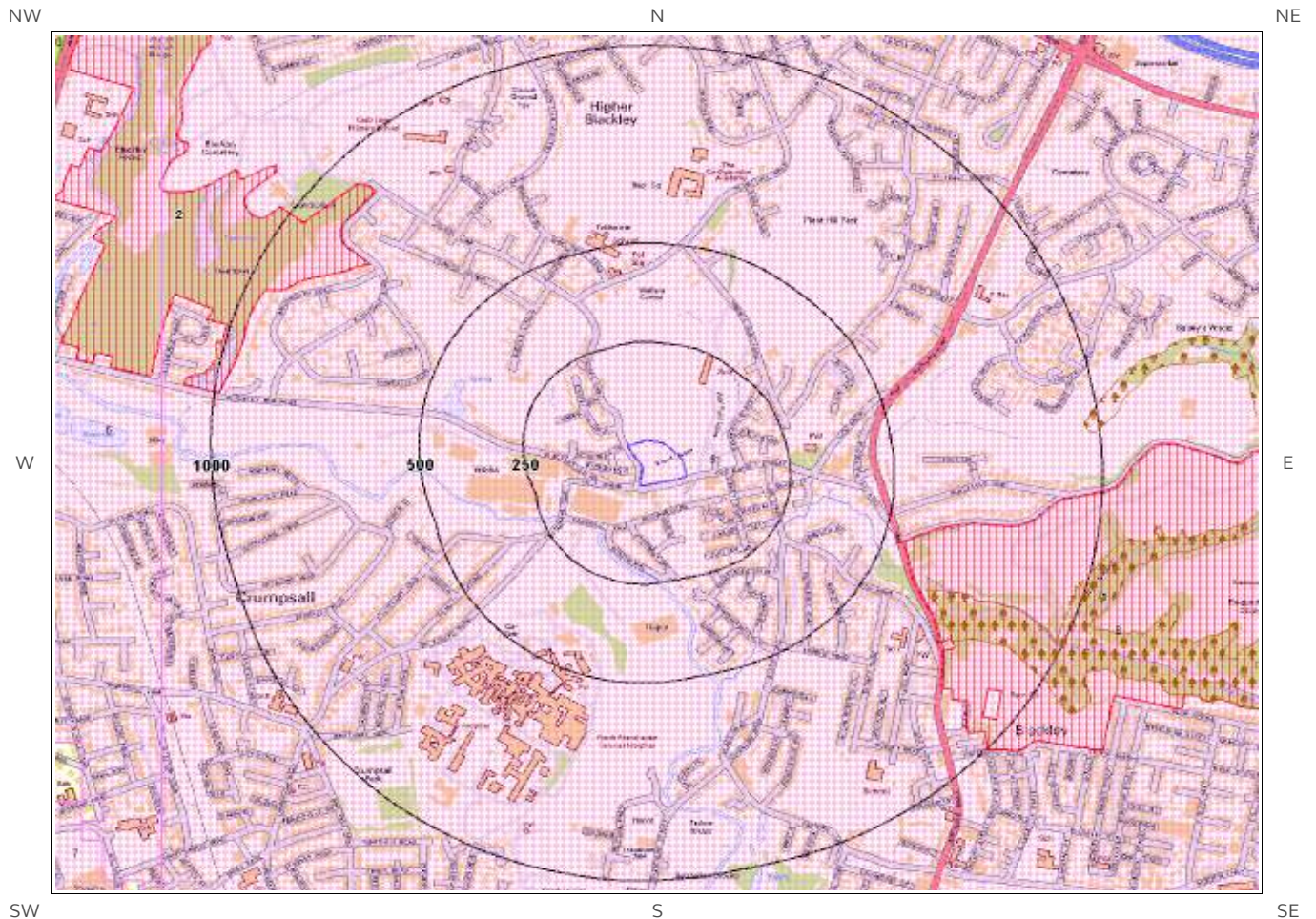
British Geological Survey confidence rating in this result

High

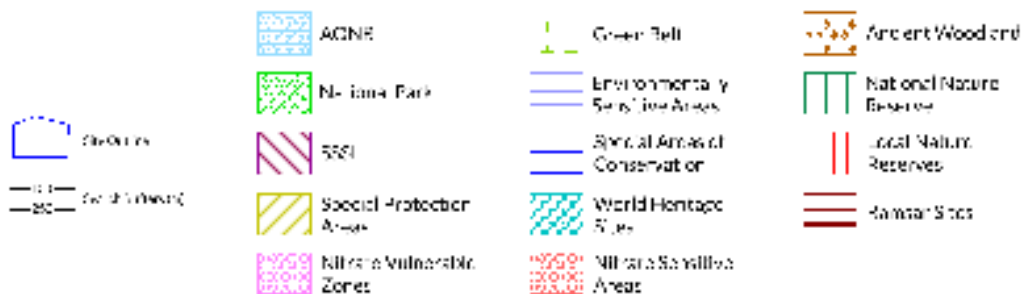
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

2

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
8	645	SE	BOGGART HOLE CLOUGH	Ancient & Semi-Natural Woodland
9	963	E	Unknown	Ancient & Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

4

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	548	E	Boggart Hole Clough	Natural England
2	770	NW	Blackley Forest	Natural England
Not shown	1571	NW	Blackley Forest	Natural England
Not shown	1855	NE	Alkington Woods	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

3

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
5	0	On Site	Existing	DEFRA
6	1118	W	Existing	DEFRA
7	1562	SW	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

2

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
10	1605	NW	Liverpool, Manchester and West Yorks Greenbelt	Manchester District (B)
Not shown	1980	NW	Liverpool, Manchester and West Yorks Greenbelt	Bury District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

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

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

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Very Low

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

Hazard
Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

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

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

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Very Low

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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



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



Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority
Authority: Manchester City Council
Phone: 0161 234 5000
Web: <http://www.manchester.gov.uk/>
Address: , Manchester, M60 2LA

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



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].

This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:

<https://www.groundsure.com/terms-and-conditions-feb11-2019>

Geo-Integrity Ltd	Groundsure Reference:	GS-6494688
4, CHURCH STREET, BUCKINGHAM/MAIDS MORETON, MK18 1QE	Your Reference:	19-11-04
	Report Date	2 Dec 2019
	Report Delivery Method:	Email - pdf

Geo Insight

Address: PIKE FOLD COMMUNITY PRIMARY SCHOOL, PIKE FOLD COMMUNITY PRIMARY SCHOOL, OLD MARKET STREET, MANCHESTER, M9 8QP

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

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

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: PIKE FOLD COMMUNITY PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY SCHOOL, OLD MARKET STREET,
MANCHESTER, M9 8QP

Date: 2 Dec 2019

Reference: GS-6494688

Client: Geo-Integrity Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 11-Jun-2015

Grid Reference: 385278,402958

Site Size: 1.0362ha

Contents Page

Contents Page.....	4
Overview of Findings.....	6
1:10,000 Scale Availability.....	9
Availability of 1:10,000 Scale Geology Mapping.....	10
1 Geology (1:10,000 scale).....	11
1.1 Artificial Ground map (1:10,000 scale).....	11
1. Geology 1:10,000 scale.....	12
1.1 Artificial Ground.....	12
1.2 Superficial Deposits and Landslips map (1:10,000 scale).....	13
1.2 Superficial Deposits and Landslips.....	14
1.2.1 Superficial Deposits/ Drift Geology.....	14
1.2.2 Landslip.....	14
1.3 Bedrock and linear features map (1:10,000 scale).....	15
1.3 Bedrock and linear features.....	16
1.3.1 Bedrock/ Solid Geology.....	16
1.3.2 Linear features.....	16
2 Geology 1:50,000 Scale.....	17
2.1 Artificial Ground map.....	17
2. Geology 1:50,000 scale.....	18
2.1 Artificial Ground.....	18
2.1.1 Artificial/ Made Ground	18
2.1.2 Permeability of Artificial Ground.....	18
2.2 Superficial Deposits and Landslips map (1:50,000 scale).....	19
2.2 Superficial Deposits and Landslips.....	20
2.2.1 Superficial Deposits/ Drift Geology.....	20
2.2.2 Permeability of Superficial Ground	20
2.2.3 Landslip.....	20
2.2.4 Landslip Permeability.....	21
2.3 Bedrock and linear features map (1:50,000 scale).....	22
2.3 Bedrock, Solid Geology & linear features.....	23
2.3.1 Bedrock/Solid Geology.....	23
2.3.2 Permeability of Bedrock Ground.....	23
2.3.3 Linear features.....	23
3 Radon Data.....	24
3.1 Radon Affected Areas.....	24
3.2 Radon Protection.....	24
4 Ground Workings map.....	25
4 Ground Workings.....	26
4.1 Historical Surface Ground Working Features derived from Historical Mapping.....	26
4.2 Historical Underground Working Features derived from Historical Mapping.....	28
4.3 Current Ground Workings.....	28
5 Mining, Extraction & Natural Cavities.....	30
5.1 Historical Mining.....	30
5.2 Coal Mining.....	30
5.3 Johnson Poole and Bloomer.....	30
5.4 Non-Coal Mining.....	30
5.5 Non-Coal Mining Cavities.....	31
5.6 Natural Cavities.....	31
5.7 Brine Extraction.....	31
5.8 Gypsum Extraction.....	31
5.9 Cornwall and Devon Metalliferous Mining.....	31
5.10 Clay Mining.....	32
6 Natural Ground Subsidence.....	33
6.1 Shrink-Swell Clay map.....	33
6.2 Landslides map.....	34
6.3 Ground Dissolution of Soluble Rocks map.....	35
6.4 Compressible Deposits map.....	36
6.5 Collapsible Deposits map.....	37
6.6 Running Sand map.....	38

6 Natural Ground Subsidence.....	39
6.1 Shrink-Swell Clays.....	39
6.2 Landslides.....	39
6.3 Ground Dissolution of Soluble Rocks.....	40
6.4 Compressible Deposits.....	40
6.5 Collapsible Deposits.....	40
6.6 Running Sands.....	40
7 Borehole Records.....	42
8 Estimated Background Soil Chemistry.....	45
9 Railways and Tunnels map.....	46
9 Railways and Tunnels.....	47
9.1 Tunnels	47
9.2 Historical Railway and Tunnel Features	47
9.3 Historical Railways.....	48
9.4 Active Railways.....	48
9.5 Railway Projects.....	48

Overview of Findings

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

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

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

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

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

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

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

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	1	2	43	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	1	3	4

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

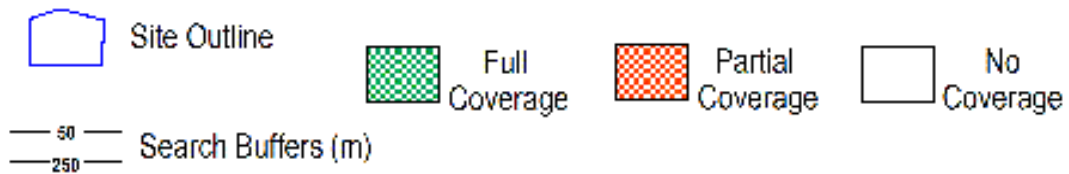
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Very Low				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	3	38		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	7	2	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	8	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	210.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1986.0	Some deposits are mapped	Full	Full	Some deposits are mapped

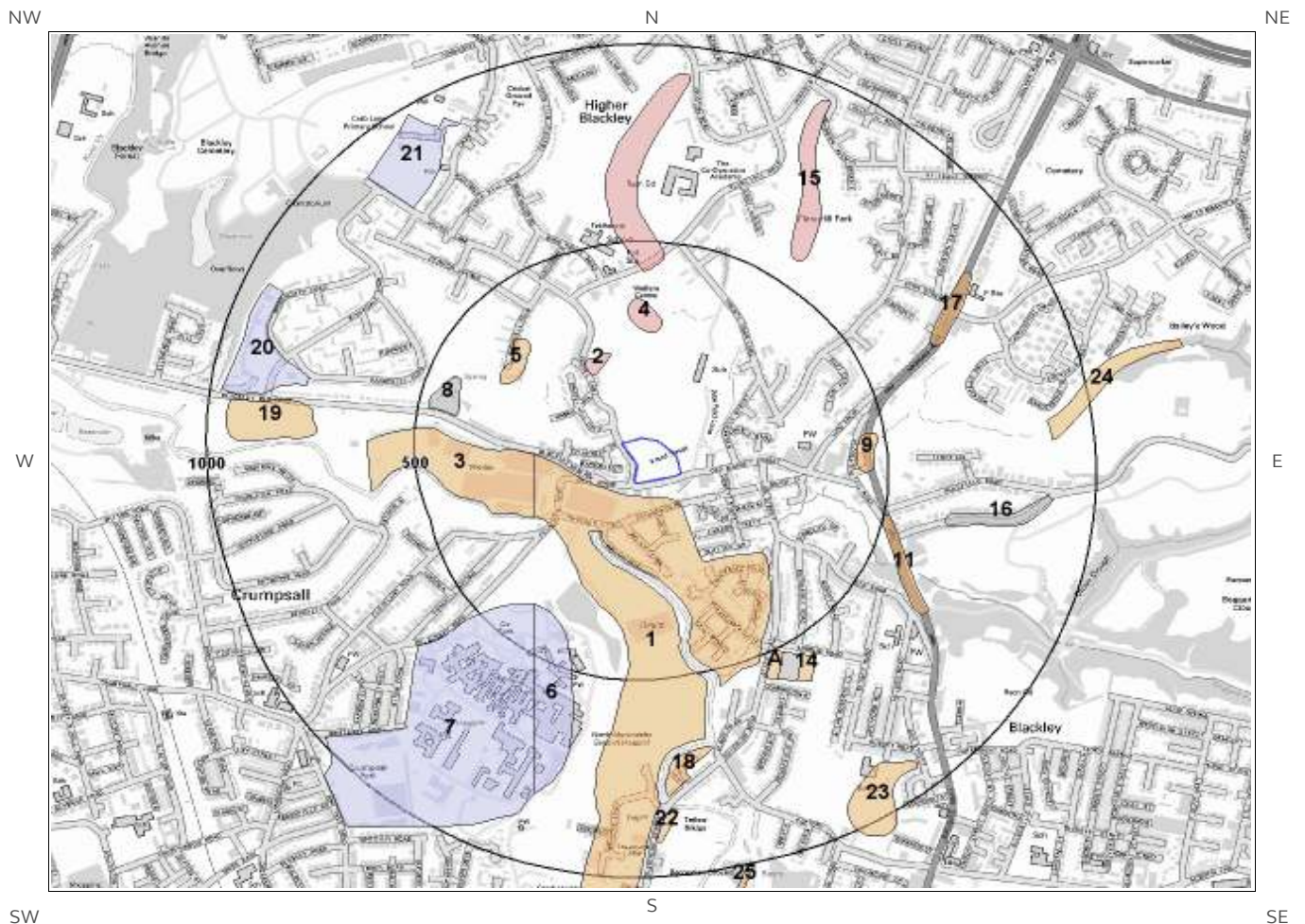
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



1. Geology 1:10,000 scale

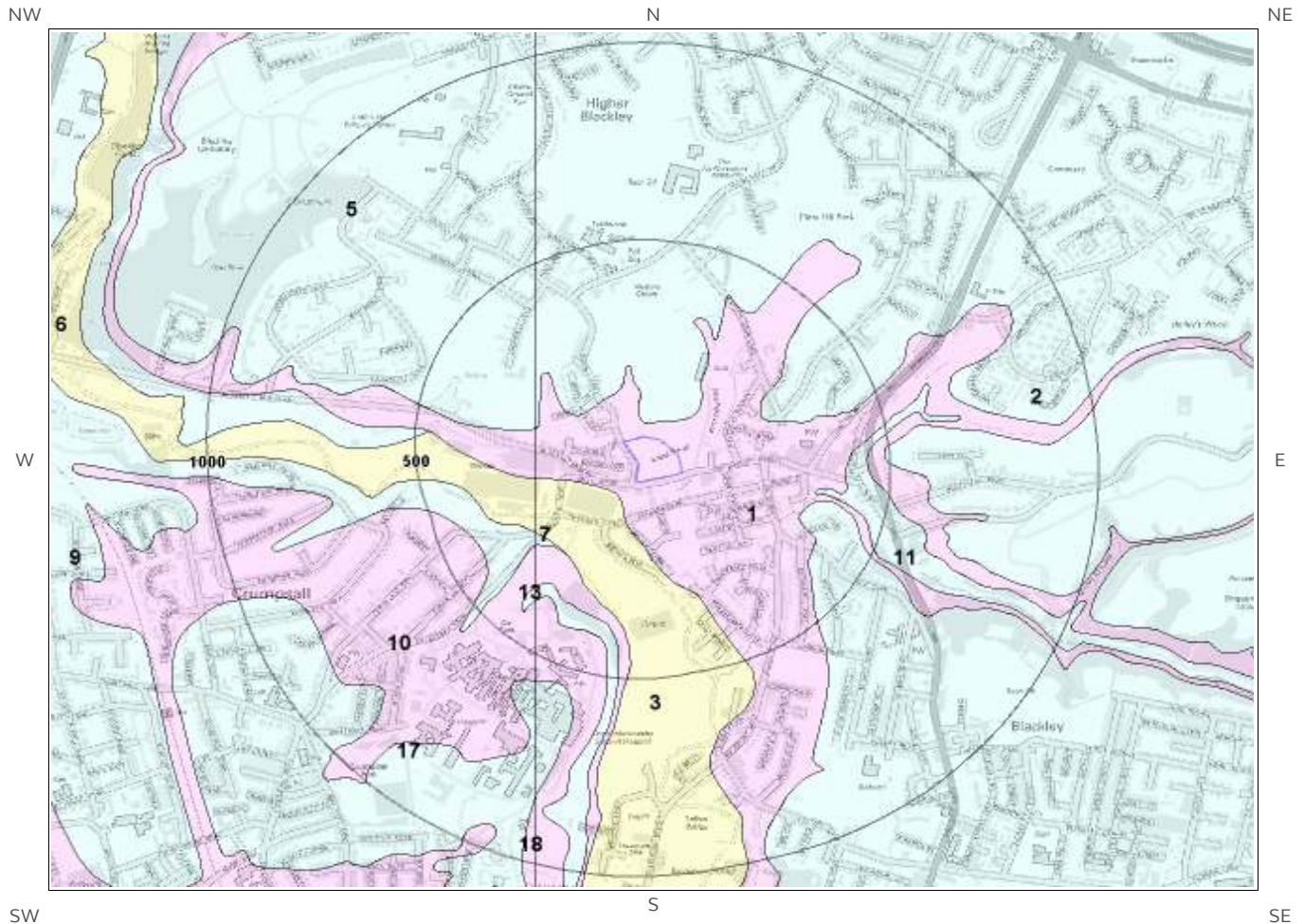
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

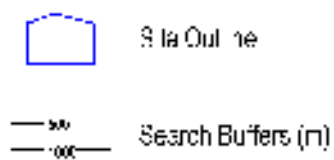
ID	Distance	Direction	LEX Code	Description	Rock Description
1	34.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	187.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	212.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	270.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	300.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	385.0	SW	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit
7	391.0	SW	LSGR-ARTDP	Landscaped Ground (Undivided)	Artificial Deposit
8	402.0	W	WGR-VOID	Worked Ground (Undivided)	Void
9	424.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	426.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
11	500.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	36.0	N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	56.0	SW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
4	210.0	W	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
5	213.0	W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
6	229.0	SW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
7	249.0	SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
8	251.0	SW	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
9	274.0	SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
10	289.0	SW	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
11	325.0	E	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
12	329.0	SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
13	359.0	SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
14A	360.0	SW	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
15	464.0	W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

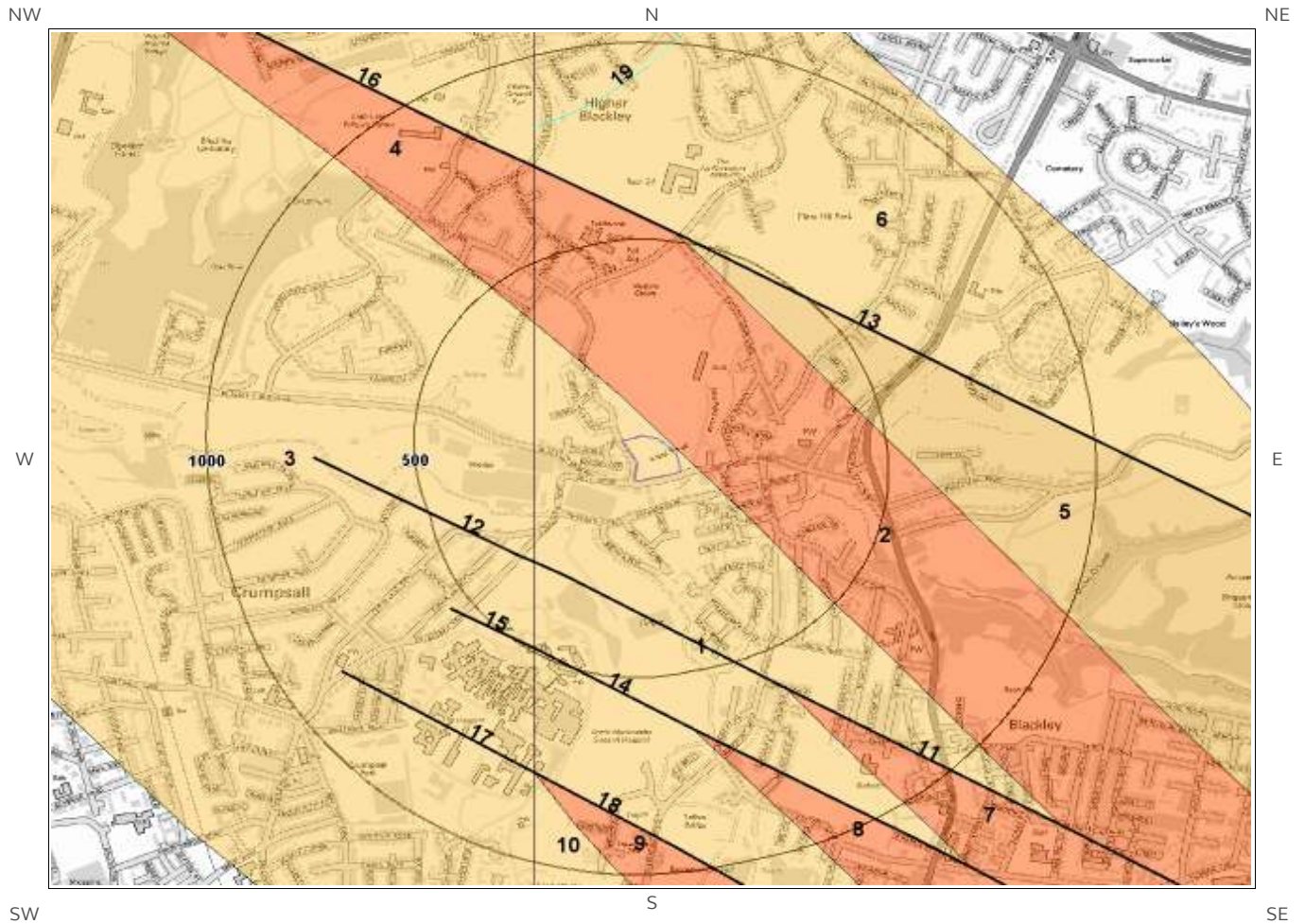
No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

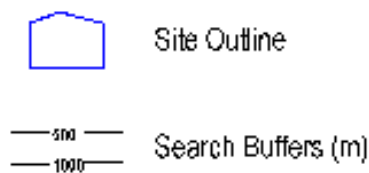
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	8.0	NE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
3	210.0	W	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
4	366.0	NW	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]
5	389.0	NE	CS-SDST	Collyhurst Sandstone Formation - Sandstone	Cisuralian Epoch
6	483.0	NE	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

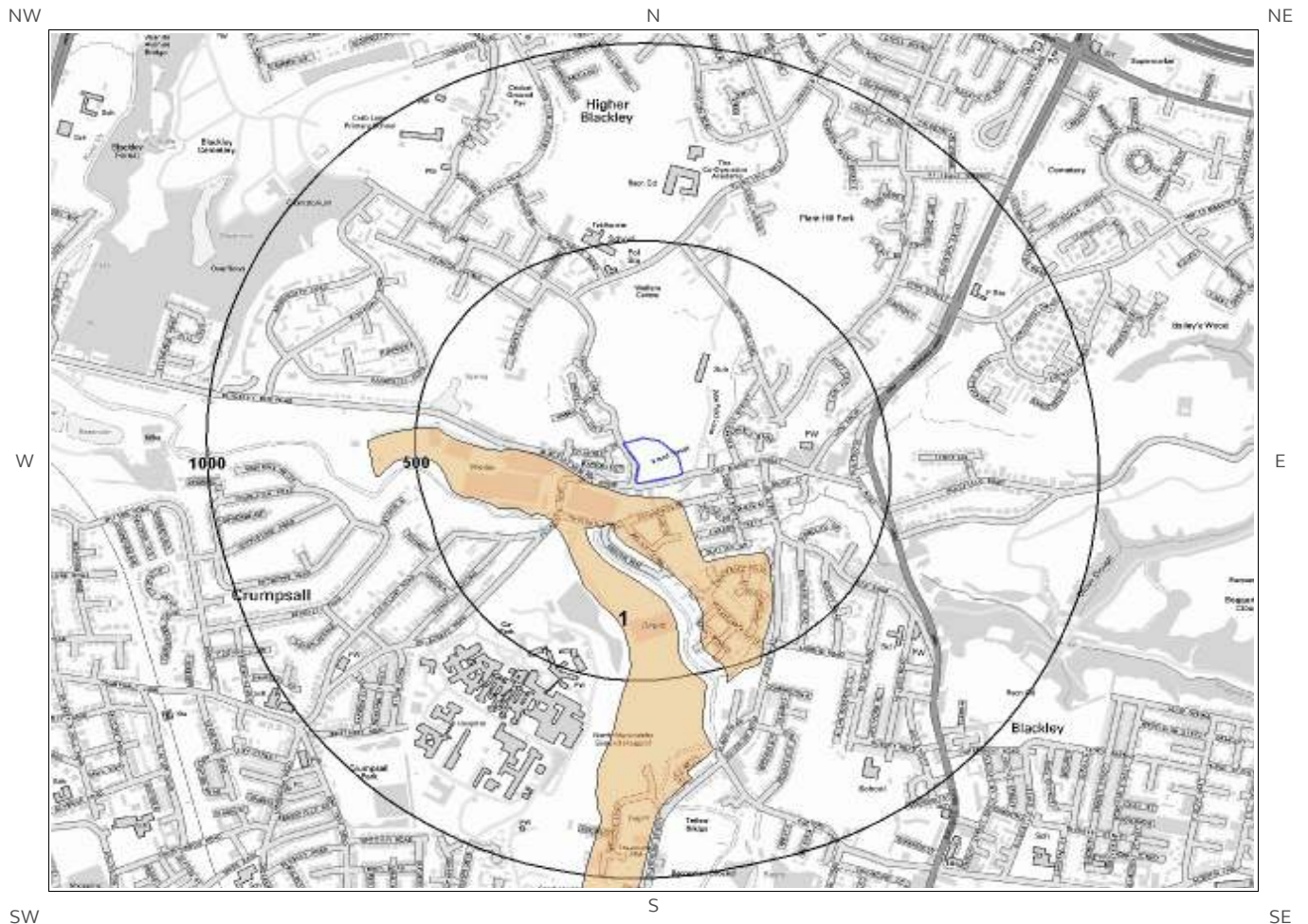
ID	Distance (m)	Direction	Category Description	Feature Description
11	292.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
12	318.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
13	483.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
14	491.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
15	491.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale.

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

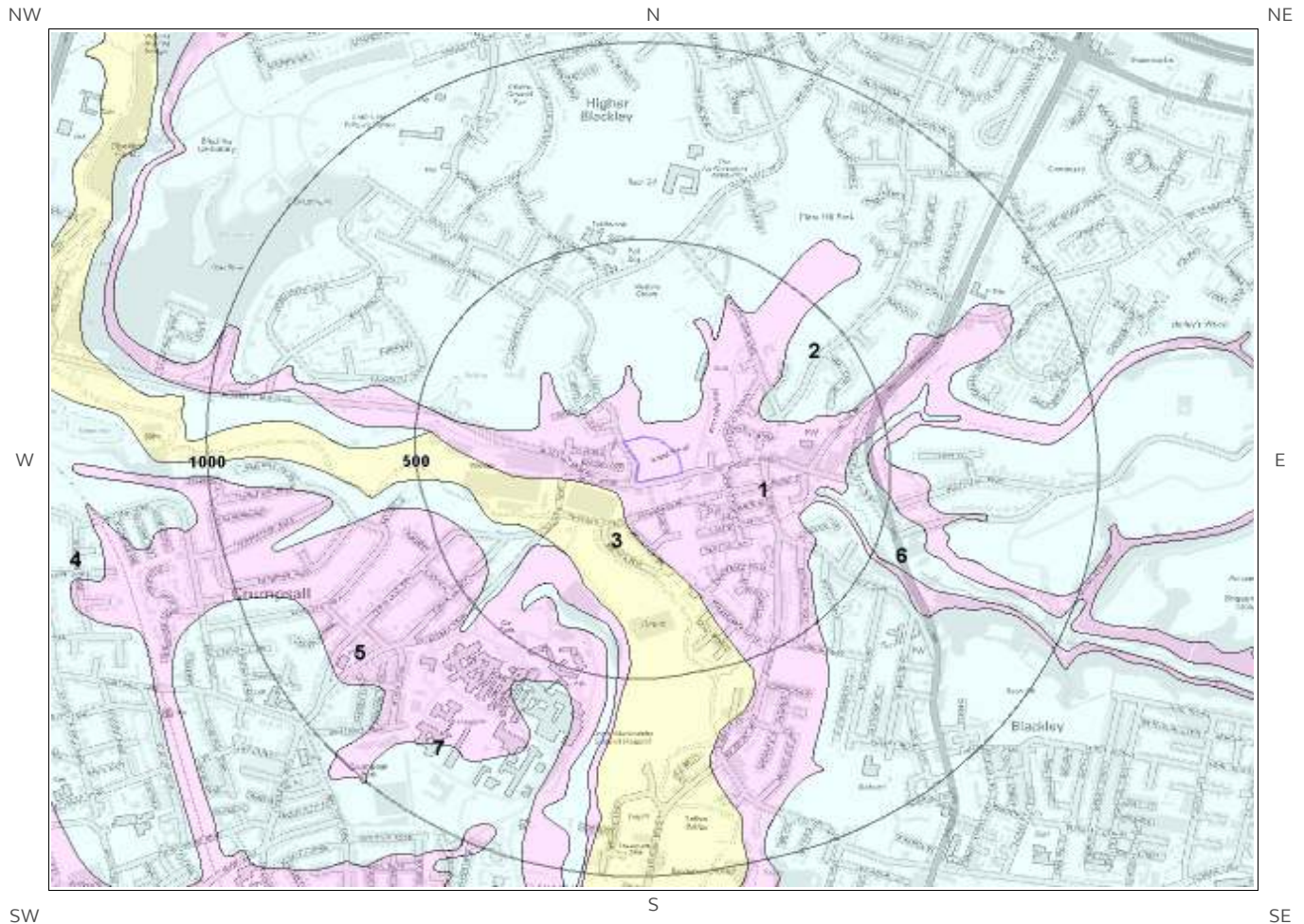
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	33.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

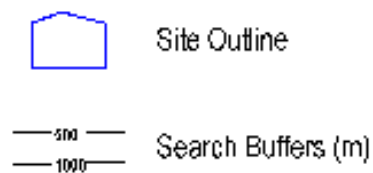
Are there any records relating to permeability of artificial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
33.0	S	Mixed	Very High	Low

2.2 Superficial Deposits and Landslips map (1:50,000 scale)



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	36.0	N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	57.0	SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
4	249.0	SW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
5	250.0	SW	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
6	325.0	E	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	329.0	SW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
8	464.0	W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

2.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	High
36.0	N	Mixed	High	Low

2.2.3 Landslip

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

Database searched and no data found.

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

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

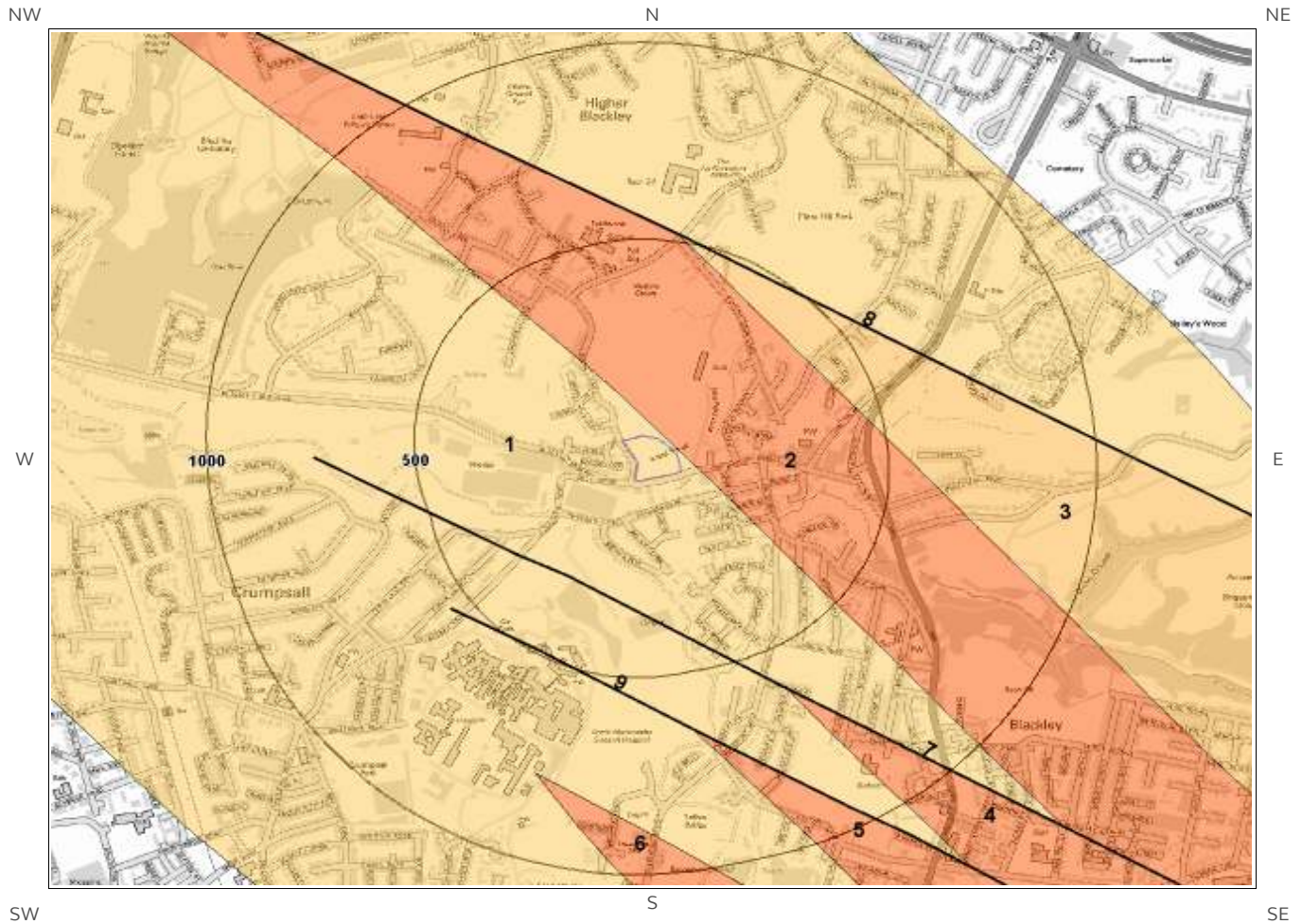
2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

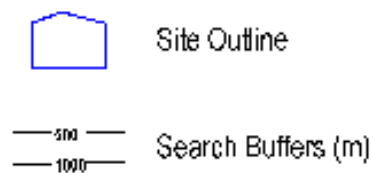
No

Database searched and no data found.

2.3 Bedrock and linear features map (1:50,000 scale)



© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	8.0	NE	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-
3	389.0	NE	CS-SDST	COLLYHURST SANDSTONE FORMATION - SANDSTONE	-

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Moderate
8.0	NE	Fracture	Low	Low

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
7	292.0	SW	FAULT	Fault, inferred
8	483.0	NE	FAULT	Fault, inferred
9	491.0	SW	FAULT	Fault, inferred

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

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

3 Radon Data

3.1 Radon Affected Areas

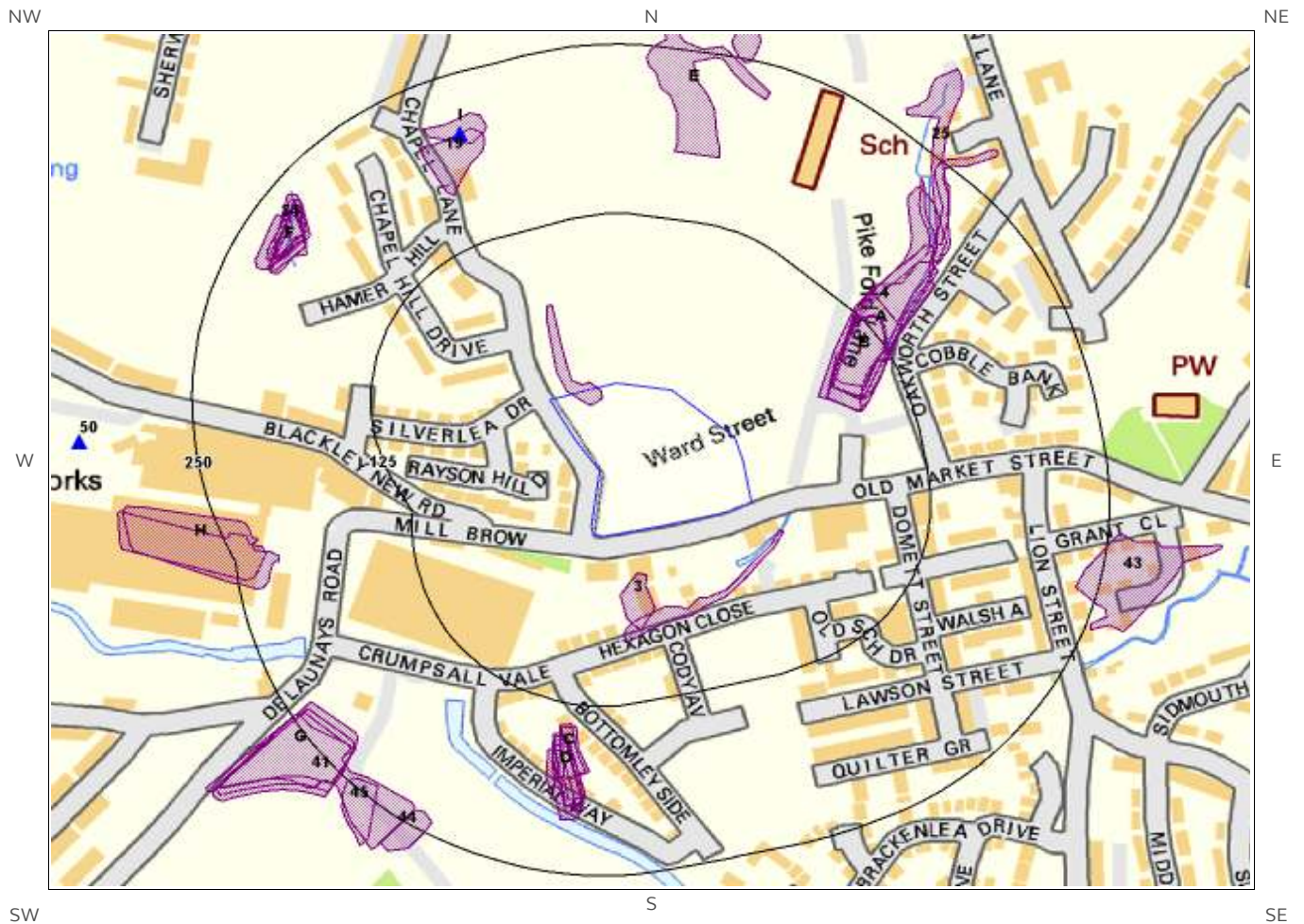
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

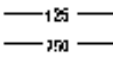
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.

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

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	385217 403034	Refuse Heap	1956
2	28.0	SE	385339 402863	Pond	1891
3	31.0	S	385271 402852	Unspecified Heap	1975
4	66.0	NE	385443 403075	Pond	1851
5B	71.0	NE	385430 403035	Reservoir	1923
6A	72.0	NE	385442 403079	Reservoir	1891
7A	77.0	NE	385442 403057	Reservoir	1915
8A	77.0	NE	385442 403057	Reservoir	1906
9B	78.0	NE	385426 403034	Reservoir	1933
10B	79.0	NE	385427 403033	Reservoir	1938
11A	83.0	NE	385442 403056	Reservoir	1956
12C	140.0	S	385226 402742	Pond	1966
13C	141.0	S	385228 402741	Reservoir	1975
14C	148.0	S	385224 402730	Reservoirs	1915
15D	149.0	S	385223 402727	Ponds	1933
16D	150.0	S	385224 402726	Ponds	1938
17D	155.0	S	385223 402722	Reservoirs	1923
18D	160.0	S	385219 402717	Ponds	1891
19	165.0	NW	385142 403176	Unspecified Pit	1891
20E	175.0	N	385296 403272	Unspecified Ground Workings	1956
21E	175.0	N	385296 403272	Unspecified Ground Workings	1980

ID	Distance (m)	Direction	NGR	Use	Date
22E	175.0	N	385296 403272	Unspecified Ground Workings	1988
23E	175.0	N	385296 403272	Unspecified Ground Workings	1975
24E	175.0	N	385296 403272	Unspecified Ground Workings	1966
25	191.0	NE	385479 403174	Unspecified Ground Workings	1956
26I	197.0	N	385144 403201	Old Sand Pit	1906
27F	201.0	NW	385027 403116	Pond	1891
28	201.0	NE	385487 403151	Unspecified Ground Workings	1906
29F	204.0	NW	385027 403120	Reservoir	1923
30F	207.0	NW	385030 403126	Pond	1915
31F	207.0	NW	385030 403126	Pond	1906
32F	208.0	NW	385027 403124	Reservoir	1938
33F	211.0	NW	385025 403127	Reservoir	1933
34	211.0	NW	385029 403130	Reservoir	1956
35F	213.0	NW	385017 403117	Pond	1851
36H	219.0	W	384967 402892	Mill Pond	1891
37G	221.0	SW	385028 402746	Reservoir	1915
38G	221.0	SW	385028 402746	Reservoir	1906
39G	227.0	SW	385025 402741	Reservoir	1923
40H	228.0	W	384960 402893	Pond	1851
41	231.0	SW	385043 402719	Ponds	1851
42G	231.0	SW	385024 402737	Reservoir	1891
43	235.0	E	385629 402866	Ponds	1851
44	237.0	SW	385110 402683	Unspecified Heap	1891
45	240.0	SW	385077 402697	Unspecified Pit	1891
46	247.0	N	385348 403266	Sand Pit	1851

4.2 Historical Underground Working Features derived from Historical Mapping

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

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

Database searched and no data found.

4.3 Current Ground Workings

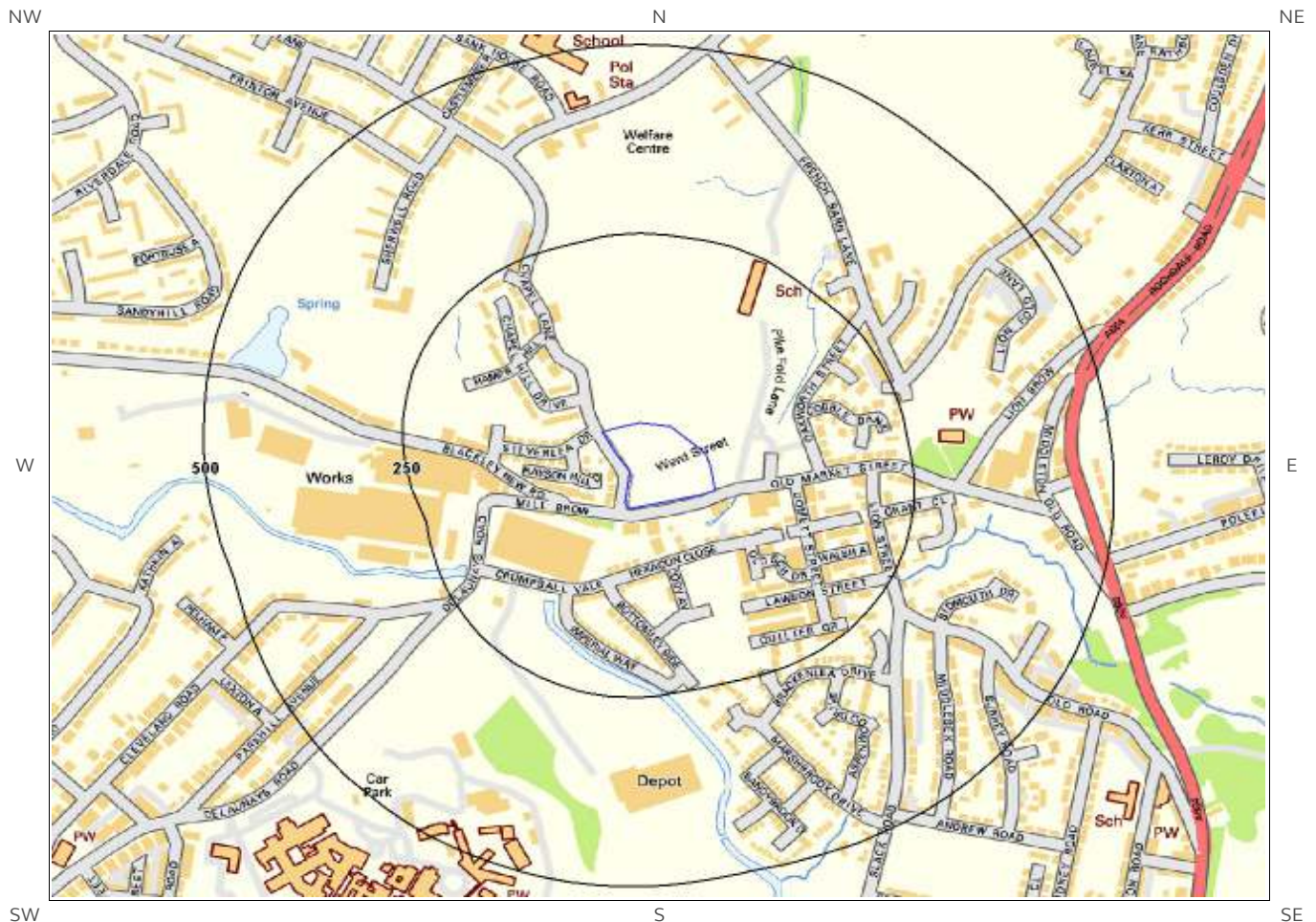
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
471	206.0	N	385147 403197	Sand	Pike Fold Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	274.0	N	385363 403274	Sand	Pike Fold Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	317.0	N	385243 403330	Clay & Shale	Pike Fold Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
50	331.0	W	384881 402970	Sand	Blackley Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	639.0	E	385966 403106	Silica Sand	Blackley Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	704.0	NE	385751 403545	Sand	Haze Bottom Top Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	790.0	E	386090 403220	Sand	Blackley Parsonage Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	790.0	E	386090 403220	Silica Sand	Blackley Parsonage Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

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

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

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

5.3 Johnson Poole and Bloomer

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

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

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

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

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

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

This dataset provides information on metalliferous mining areas in Cornwall/Devon and is derived from records held by Mining Searches UK.

Are there any Cornwall and Devon Metalliferous Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

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

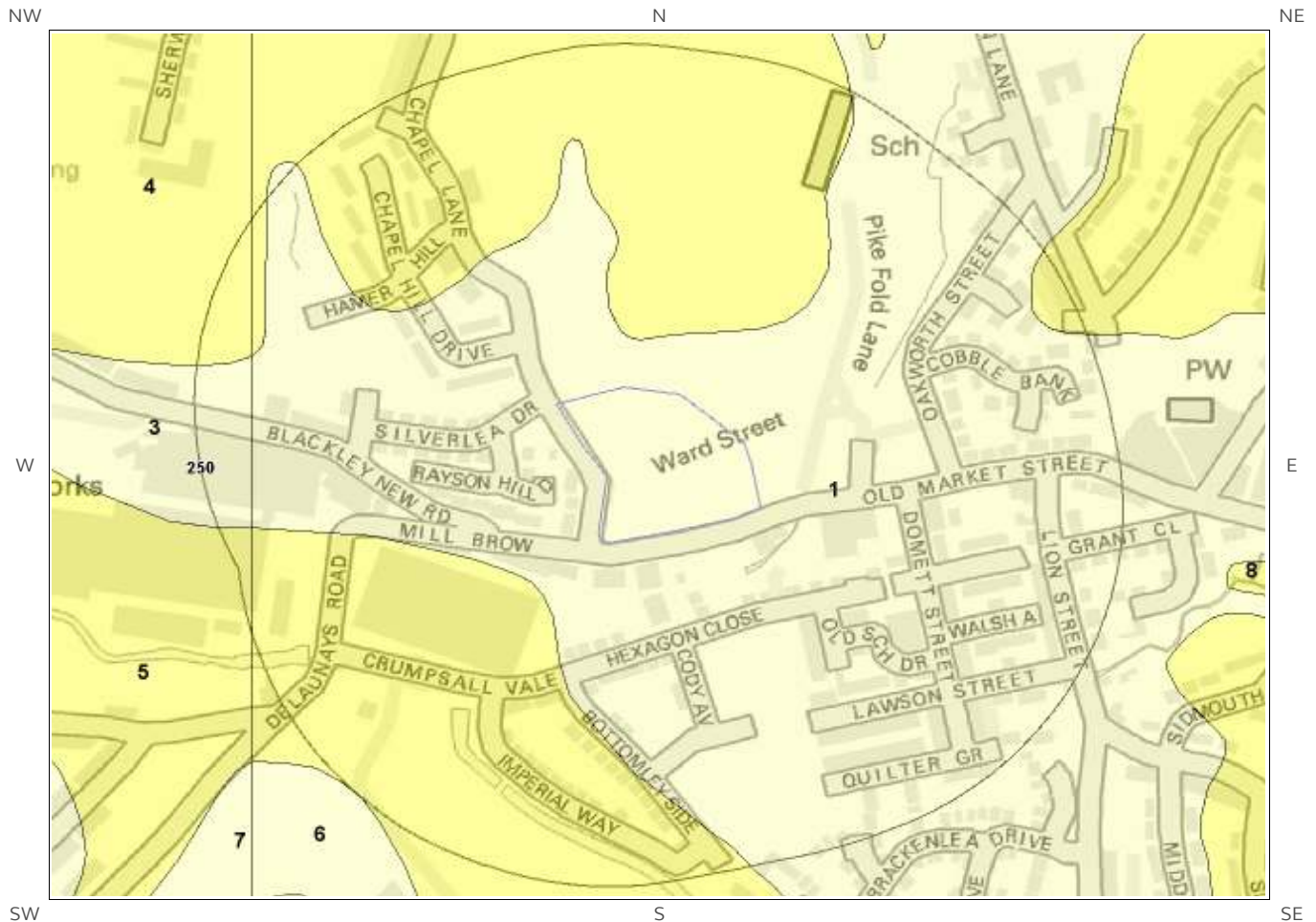
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map



Shrink Swell Clay Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.2 Landslides map



Landslides Legend

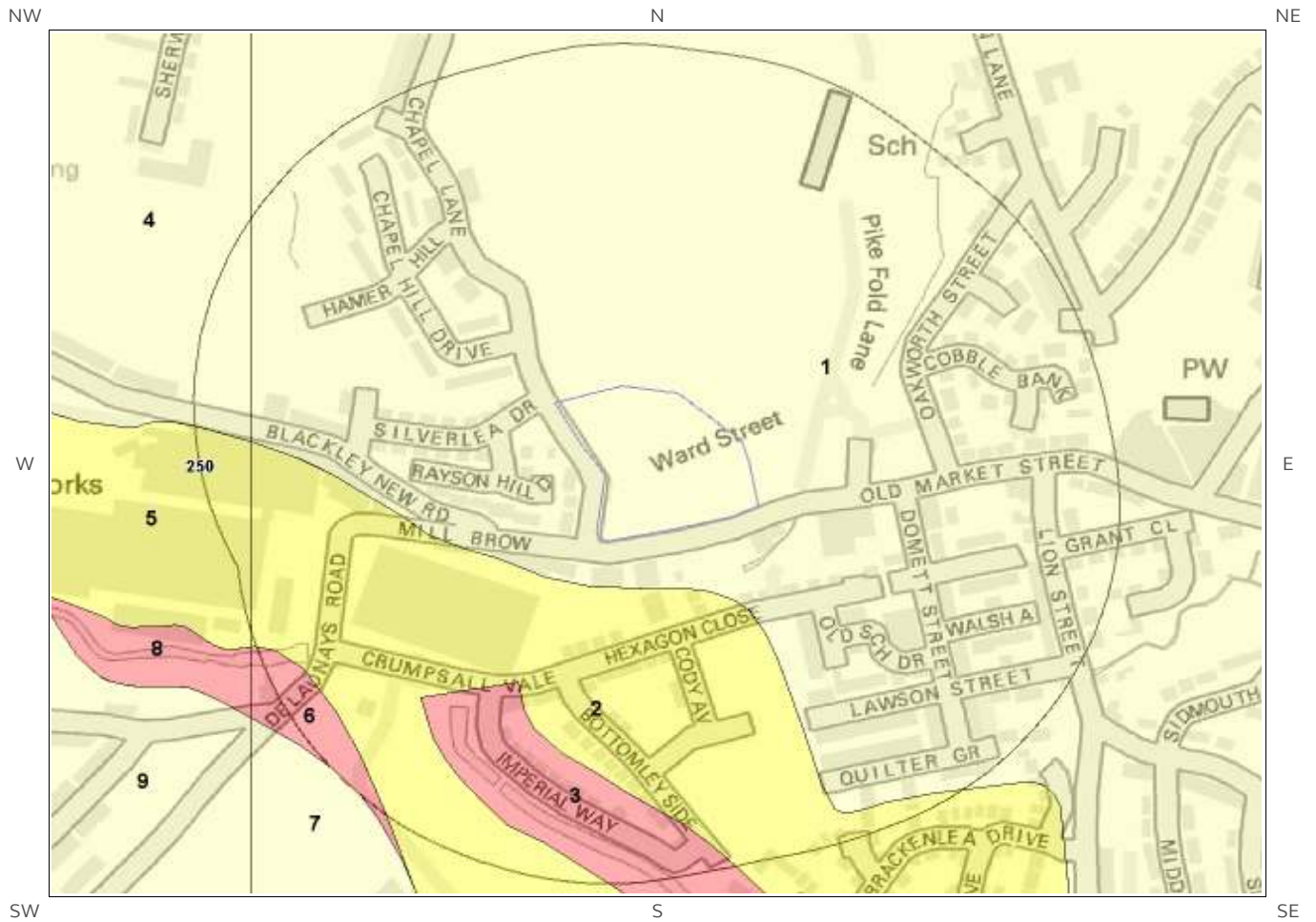
© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map

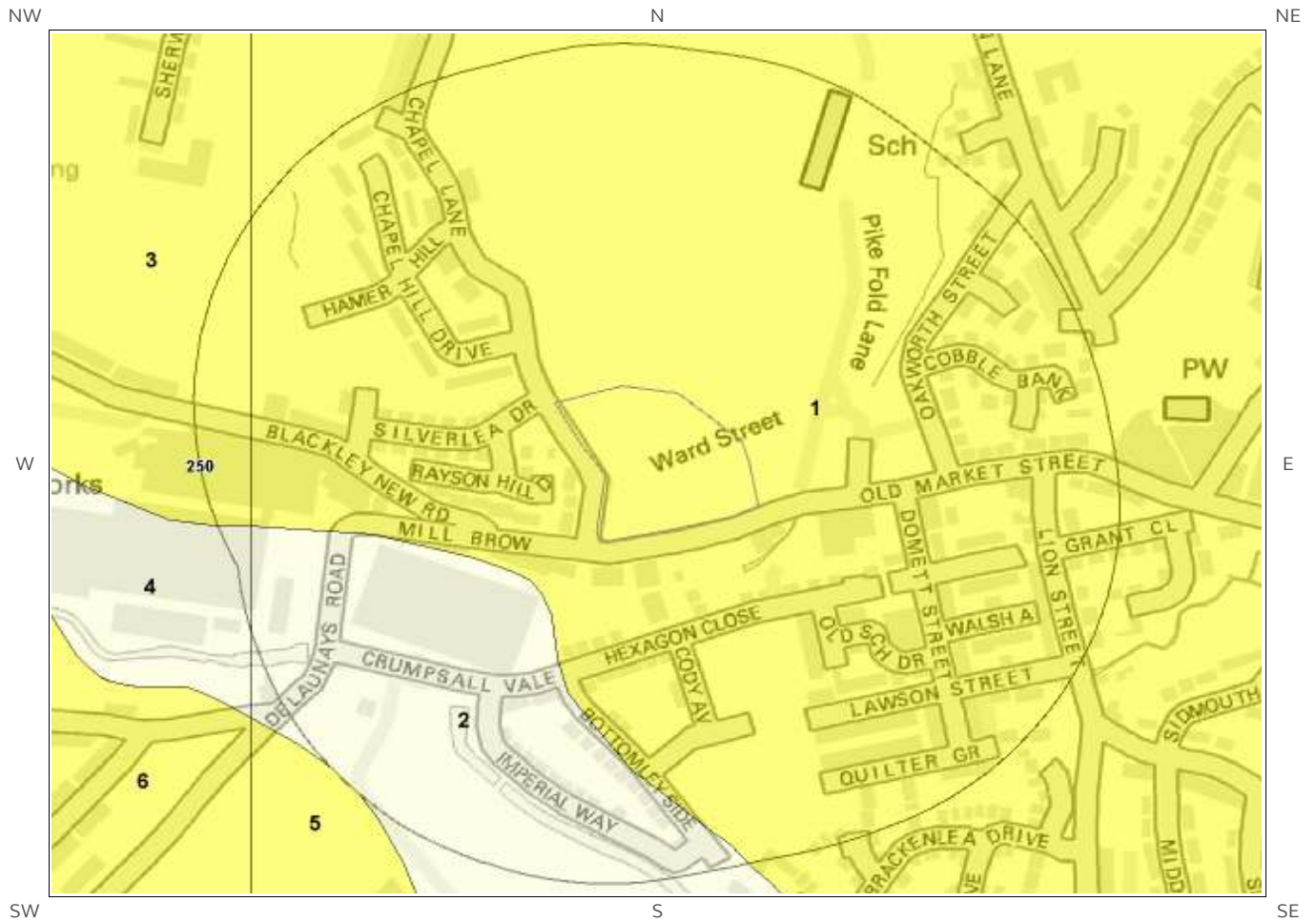


Compressible Deposits Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.5 Collapsible Deposits map

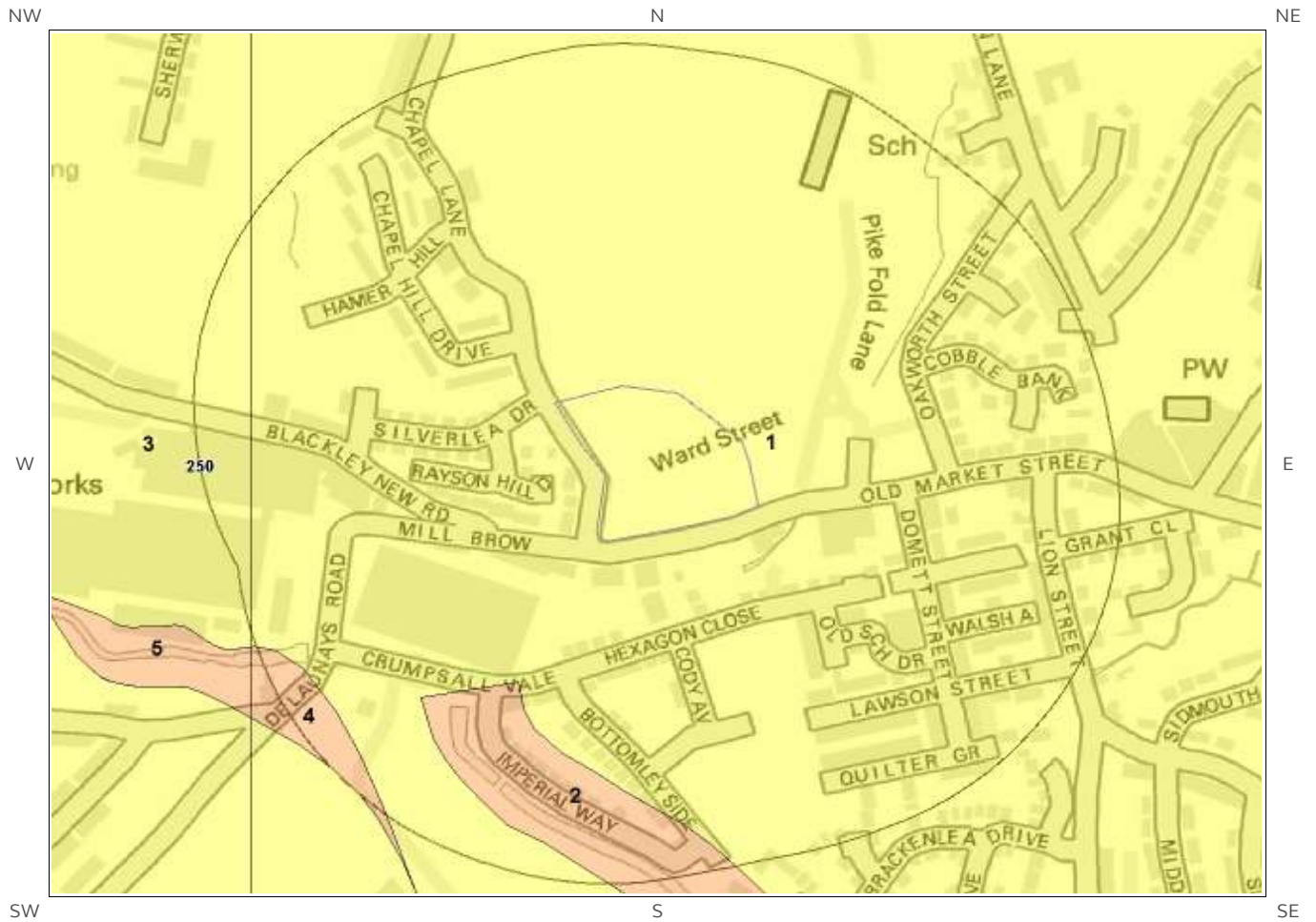


Collapsible Deposits Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6.6 Running Sand map



Running Sand Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	36.0	N	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

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

6.3 Ground Dissolution of Soluble Rocks

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

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

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	33.0	S	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

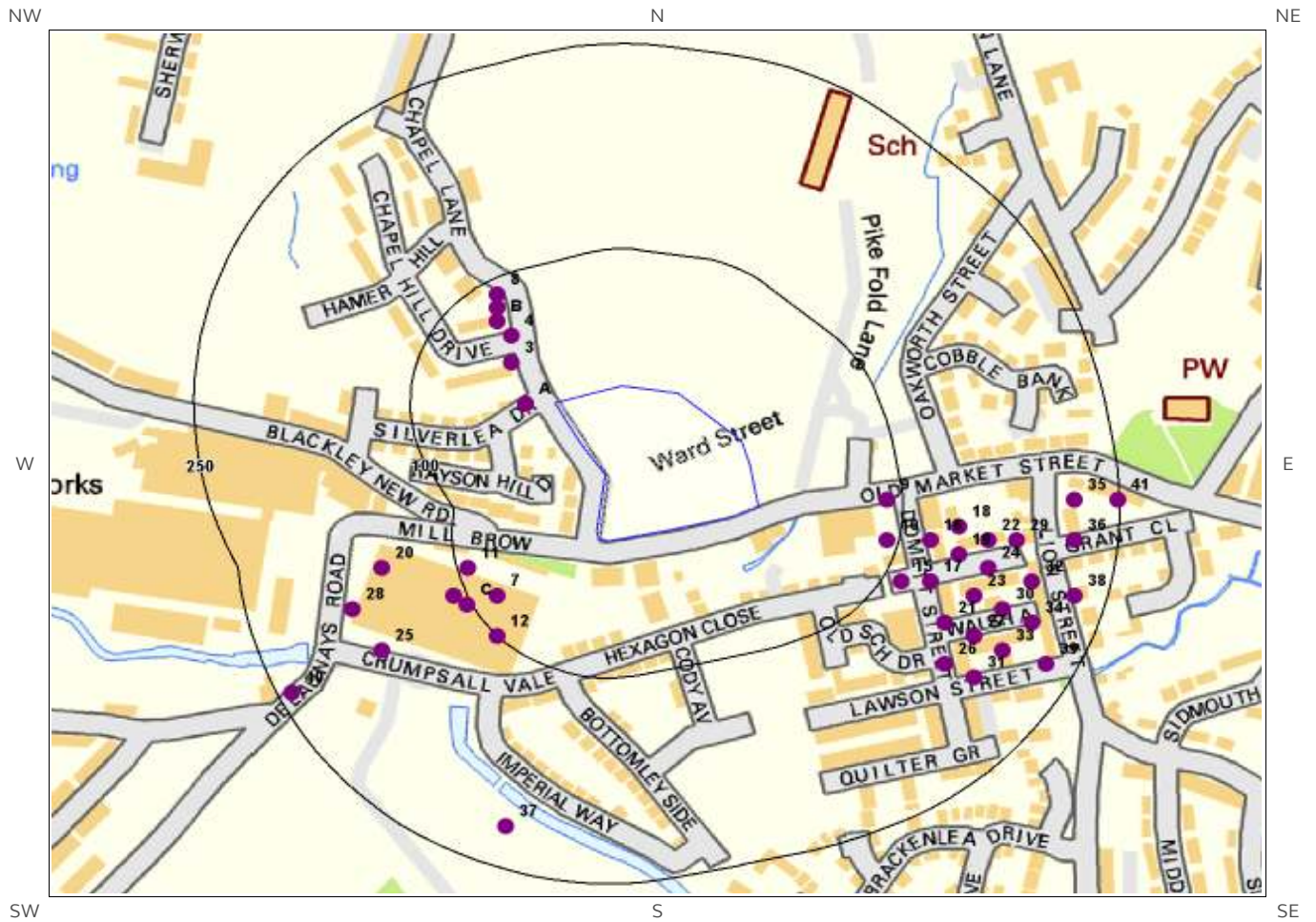
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

6.6 Running Sands

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

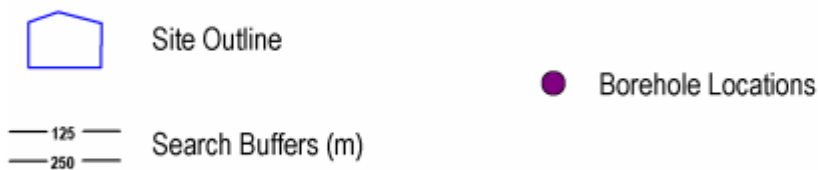
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased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

7 Borehole Records map



Borehole Records Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.



7 Borehole Records

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

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

41

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	20.0	W	385190 403000	SD80SE1258	11.98	BLACKLEY CHAPEL LANE 7
2A	20.0	W	385190 403000	SD80SE1252	6.55	BLACKLEY CHAPEL LANE 1
3	42.0	NW	385180 403030	SD80SE1253	6.17	BLACKLEY CHAPEL LANE 2
4	58.0	NW	385180 403050	SD80SE1254	6.09	BLACKLEY CHAPEL LANE 3
5B	71.0	NW	385170 403060	SD80SE1255	5.79	BLACKLEY CHAPEL LANE 4
6B	80.0	NW	385170 403070	SD80SE1256	6.55	BLACKLEY CHAPEL LANE 5
7	82.0	SW	385170 402860	SD80SE324	24.38	BLACKLEY NR MANCHESTER 5
8	89.0	NW	385170 403080	SD80SE1257	7.54	BLACKLEY CHAPEL LANE 6
9	89.0	E	385440 402930	SD80SE927	4.1	OLD MARKET STREET CHARLESTOWN 1
10	92.0	E	385440 402900	SD80SE928	5.1	OLD MARKET STREET CHARLESTOWN 2
11	93.0	W	385150 402880	SD80SE326	6.1	BLACKLEY NR MANCHESTER 7
12	101.0	SW	385170 402830	SD80SE325	6.1	BLACKLEY NR MANCHESTER 6
13C	104.0	SW	385149 402853	SD80SE50	41.15	BLACKLY MILL CRUMPSALL
14C	109.0	SW	385140 402860	SD80SE323	12.19	BLACKLEY NR MANCHESTER 4
15	113.0	SE	385450 402870	SD80SE929	4.1	OLD MARKET STREET CHARLESTOWN 3
16	121.0	E	385470 402900	SD80SE930	3.1	OLD MARKET STREET CHARLESTOWN 4
17	131.0	SE	385470 402870	SD80SE935	4.1	OLD MARKET STREET CHARLESTOWN 9
18	139.0	E	385490 402910	SD80SE931	3.1	OLD MARKET STREET CHARLESTOWN 5
19	143.0	E	385490 402890	SD80SE932	1.6	OLD MARKET STREET CHARLESTOWN 6
20	151.0	W	385090 402880	SD80SE321	24.38	BLACKLEY NR MANCHESTER 2
21	154.0	SE	385480 402840	SD80SE939	3.1	OLD MARKET STREET CHARLESTOWN 13
22	161.0	E	385510 402900	SD80SE933	3.1	OLD MARKET STREET CHARLESTOWN 7

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23	162.0	SE	385500 402860	SD80SE936	6.1	OLD MARKET STREET CHARLESTOWN 10
24	165.0	E	385510 402880	SD80SE937	3.1	OLD MARKET STREET CHARLESTOWN 11
25	171.0	SW	385090 402820	SD80SE322	12.19	BLACKLEY NR MANCHESTER 3
26	172.0	SE	385480 402810	SD80SE943	3.1	OLD MARKET STREET CHARLESTOWN 17
27	176.0	SE	385500 402830	SD80SE941	3.1	OLD MARKET STREET CHARLESTOWN 15
28	178.0	W	385070 402850	SD80SE320	22.25	BLACKLEY NR MANCHESTER 1
29	180.0	E	385530 402900	SD80SE934	4.1	OLD MARKET STREET CHARLESTOWN 8
30	184.0	SE	385520 402850	SD80SE940	3.1	OLD MARKET STREET CHARLESTOWN 14
31	194.0	SE	385500 402800	SD80SE945	3.1	OLD MARKET STREET CHARLESTOWN 19
32	196.0	E	385540 402870	SD80SE938	4.1	OLD MARKET STREET CHARLESTOWN 12
33	198.0	SE	385520 402820	SD80SE944	4.1	OLD MARKET STREET CHARLESTOWN 18
34	207.0	SE	385540 402840	SD80SE942	4.1	OLD MARKET STREET CHARLESTOWN 16
35	219.0	E	385570 402930	SD80SE966	No details	OLD MARKET STREET LION STREET TP 1
36	220.0	E	385570 402900	SD80SE967	No details	OLD MARKET STREET LION STREET TP 2
37	221.0	S	385176 402691	SD80SE51	98.76	ICI FORMALDEHYDE 2
38	228.0	E	385570 402860	SD80SE968	No details	OLD MARKET STREET LION STREET TP 3
39	229.0	SE	385550 402810	SD80SE946	5.1	OLD MARKET STREET CHARLESTOWN 20
40	241.0	SW	385028 402789	SD80SE1407	10	DELAUNAYS ROAD SEWER RENEWAL SCHEME 10
41	249.0	E	385600 402930	SD80SE970	No details	OLD MARKET STREET LION STREET TP 5

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1A: scans.bgs.ac.uk/sobi_scans/boreholes/719870
#2A: scans.bgs.ac.uk/sobi_scans/boreholes/719864
#3: scans.bgs.ac.uk/sobi_scans/boreholes/719865
#4: scans.bgs.ac.uk/sobi_scans/boreholes/719866
#5B: scans.bgs.ac.uk/sobi_scans/boreholes/719867
#6B: scans.bgs.ac.uk/sobi_scans/boreholes/719868
#7: scans.bgs.ac.uk/sobi_scans/boreholes/27931
#8: scans.bgs.ac.uk/sobi_scans/boreholes/719869
#9: scans.bgs.ac.uk/sobi_scans/boreholes/28534
#10: scans.bgs.ac.uk/sobi_scans/boreholes/28535
#11: scans.bgs.ac.uk/sobi_scans/boreholes/27933
#12: scans.bgs.ac.uk/sobi_scans/boreholes/27932
#13C: scans.bgs.ac.uk/sobi_scans/boreholes/27635
#14C: scans.bgs.ac.uk/sobi_scans/boreholes/27930
#15: scans.bgs.ac.uk/sobi_scans/boreholes/28536
#16: scans.bgs.ac.uk/sobi_scans/boreholes/28537
#17: scans.bgs.ac.uk/sobi_scans/boreholes/28542
#18: scans.bgs.ac.uk/sobi_scans/boreholes/28538
#19: scans.bgs.ac.uk/sobi_scans/boreholes/28539
#20: scans.bgs.ac.uk/sobi_scans/boreholes/27928
#21: scans.bgs.ac.uk/sobi_scans/boreholes/28546
#22: scans.bgs.ac.uk/sobi_scans/boreholes/28540
#23: scans.bgs.ac.uk/sobi_scans/boreholes/28543
#24: scans.bgs.ac.uk/sobi_scans/boreholes/28544
#25: scans.bgs.ac.uk/sobi_scans/boreholes/27929
#26: scans.bgs.ac.uk/sobi_scans/boreholes/28550
#27: scans.bgs.ac.uk/sobi_scans/boreholes/28548
#28: scans.bgs.ac.uk/sobi_scans/boreholes/27927
#29: scans.bgs.ac.uk/sobi_scans/boreholes/28541
#30: scans.bgs.ac.uk/sobi_scans/boreholes/28547
#31: scans.bgs.ac.uk/sobi_scans/boreholes/28552
#32: scans.bgs.ac.uk/sobi_scans/boreholes/28545
#33: scans.bgs.ac.uk/sobi_scans/boreholes/28551
#34: scans.bgs.ac.uk/sobi_scans/boreholes/28549
#37: scans.bgs.ac.uk/sobi_scans/boreholes/27636
#39: scans.bgs.ac.uk/sobi_scans/boreholes/28553
#40: scans.bgs.ac.uk/sobi_scans/boreholes/15637586

8 Estimated Background Soil Chemistry

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

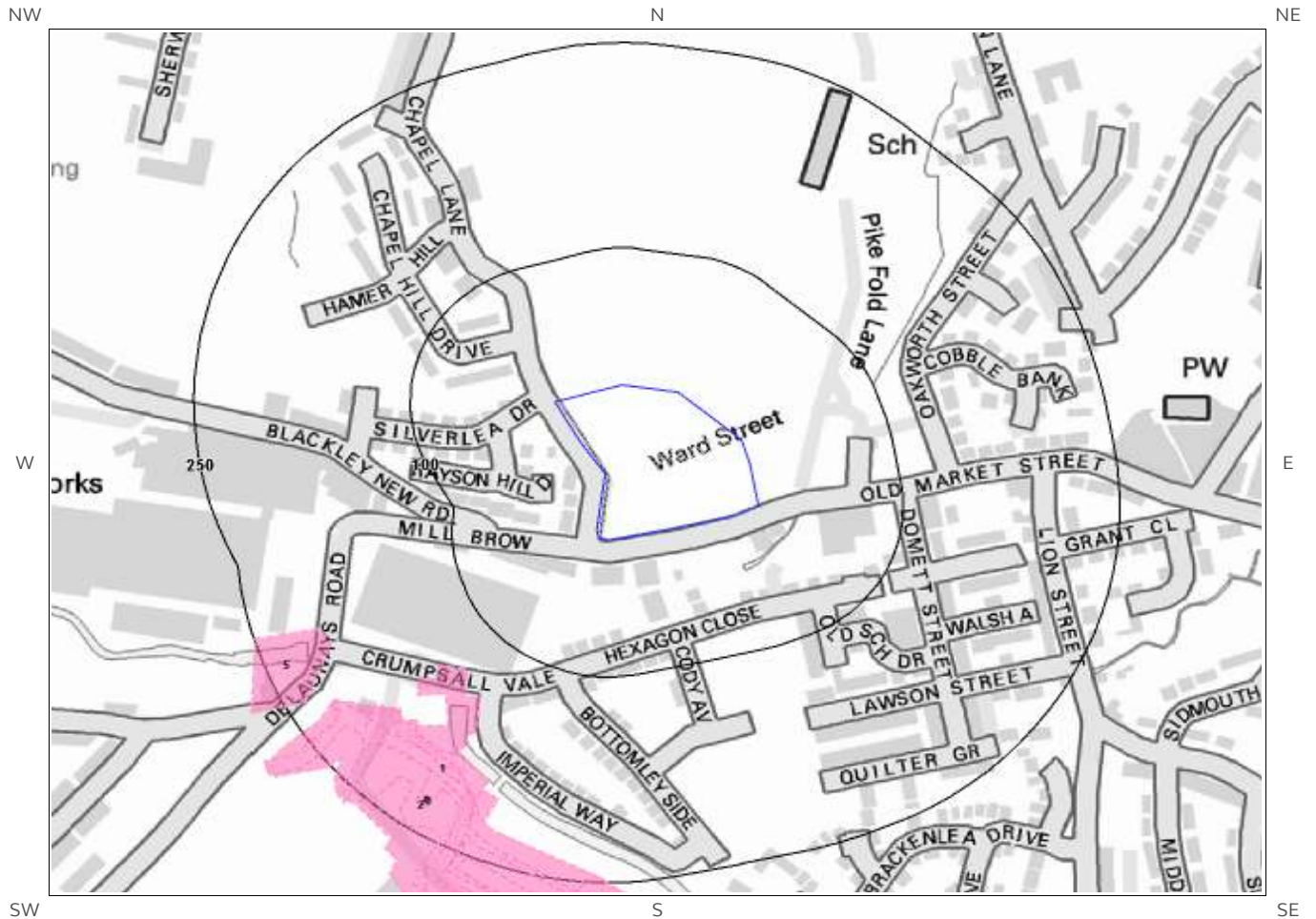
9

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	RuSoilExAs	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
4.0	NE	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
23.0	NE	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

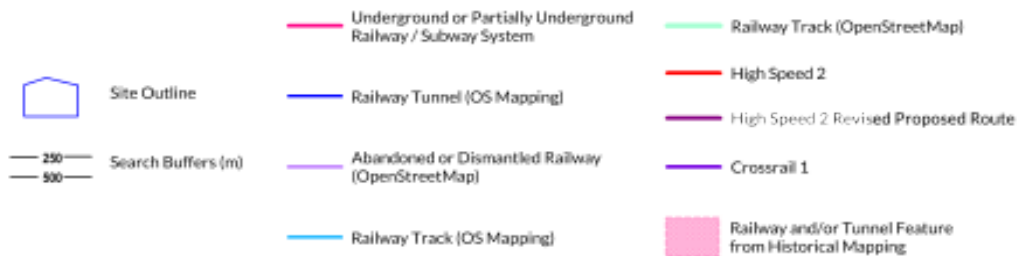
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

© Crown copyright and database rights 2019.
Ordnance Survey licence 100035207.
© OpenStreetMapContributors



9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	133	SW	385283 402327	Railway Sidings	1966
2	185	SW	385302 402305	Railway Sidings	1956
6A	189	SW	385159 402637	Railway Sidings	1951
7A	189	SW	385130 402656	Railway Sidings	1951
3	191	SW	385313 402309	Railway Sidings	1938
4	197	SW	385319 402311	Railway Sidings	1933

ID	Distance (m)	Direction	NGR	Details	Date
8	199	SW	385233 402316	Mineral Railway Sidings	1932
5	200	SW	385028 402804	Railway Sidings	1988

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX



The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettell Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505
Website: <http://www.ordnancesurvey.co.uk/>



Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website: <http://www1.getmapping.com/>



Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN

Tel: +44 (0)118 950 0761 E-mail: reading@pba.co.uk
Website: <http://www.peterbrett.com/home>



Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-feb11-2019>

Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

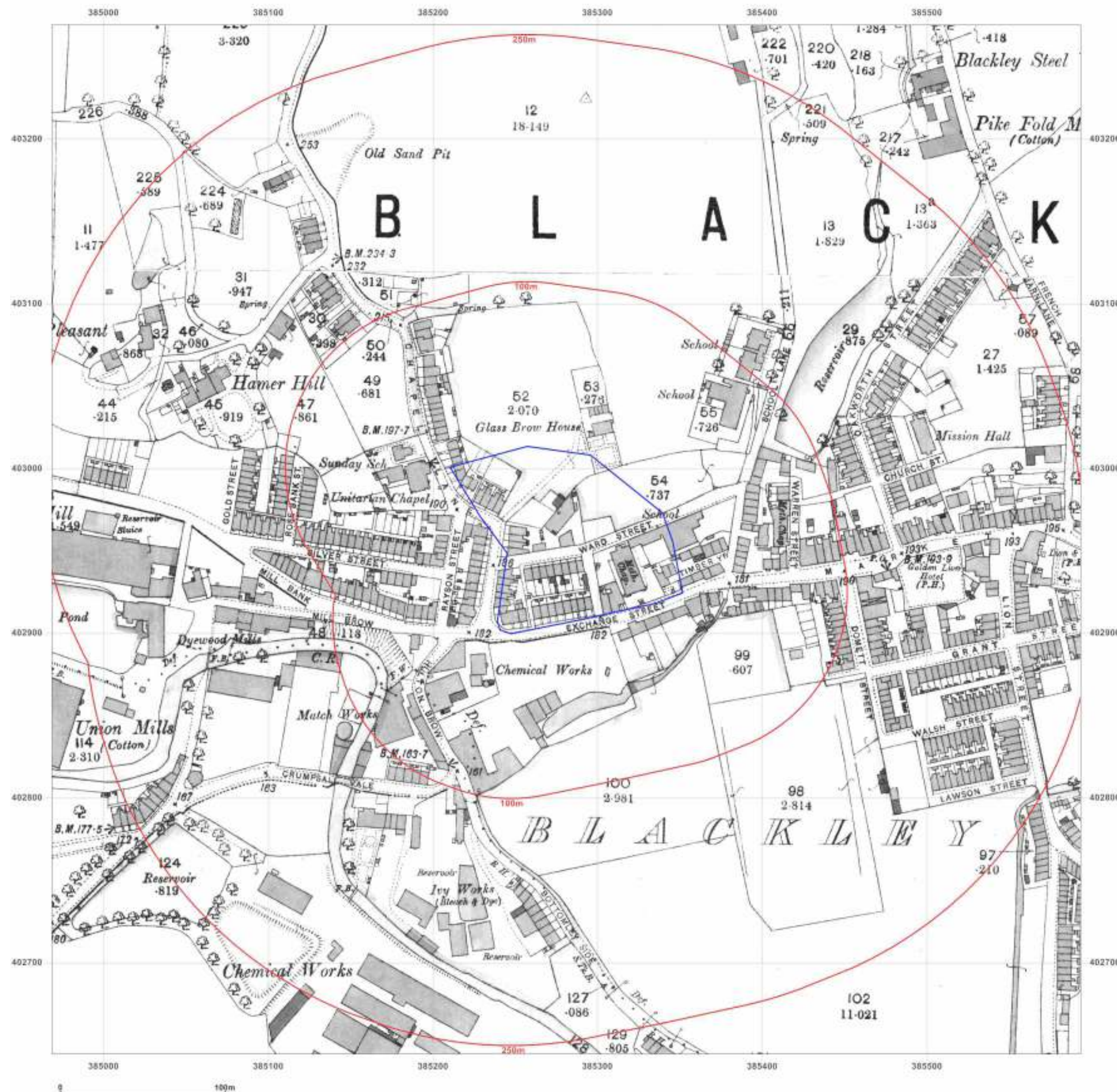


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1909
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1922
Revised 1922
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1932

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1932
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

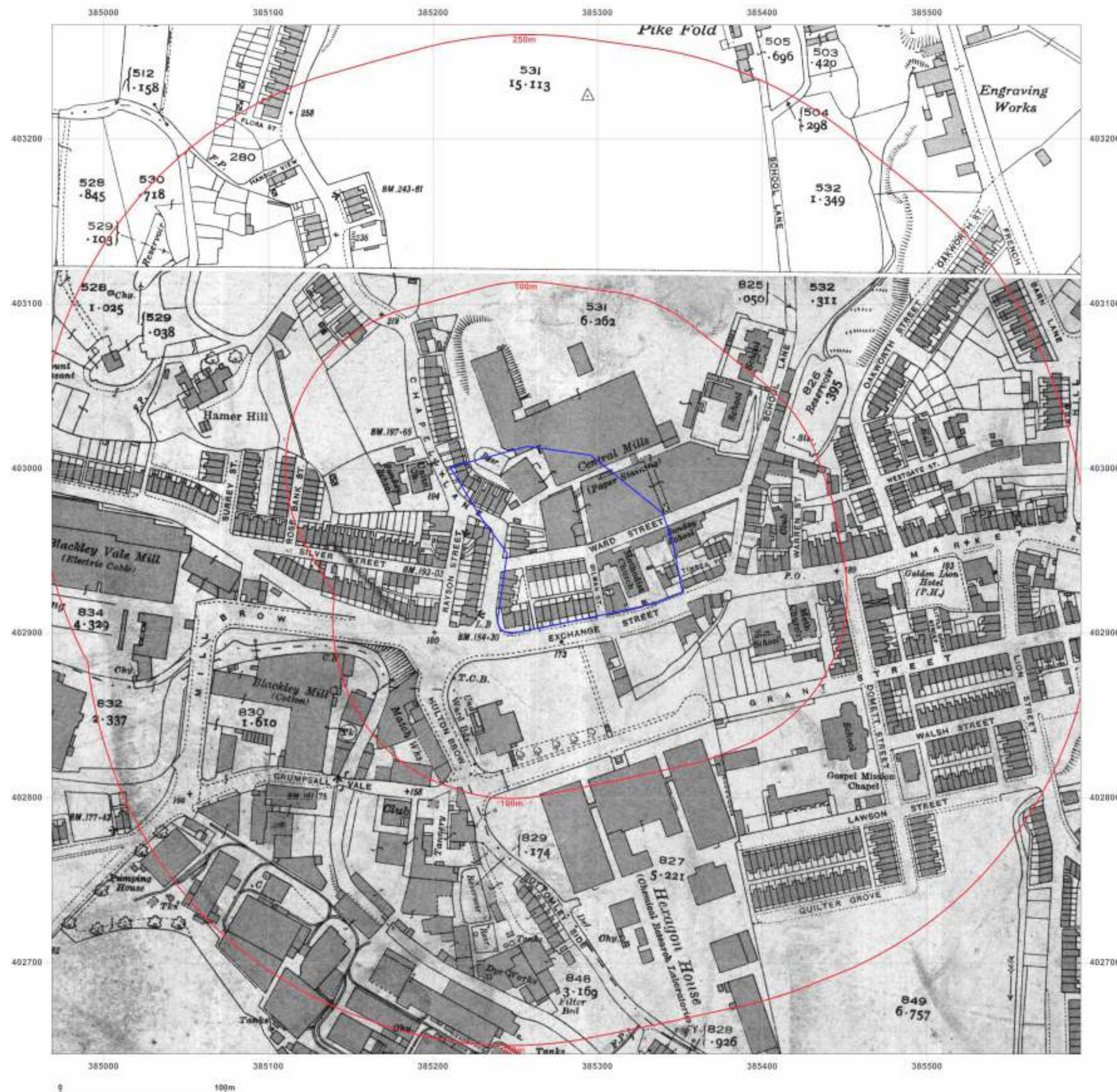


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1951

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised N/A
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

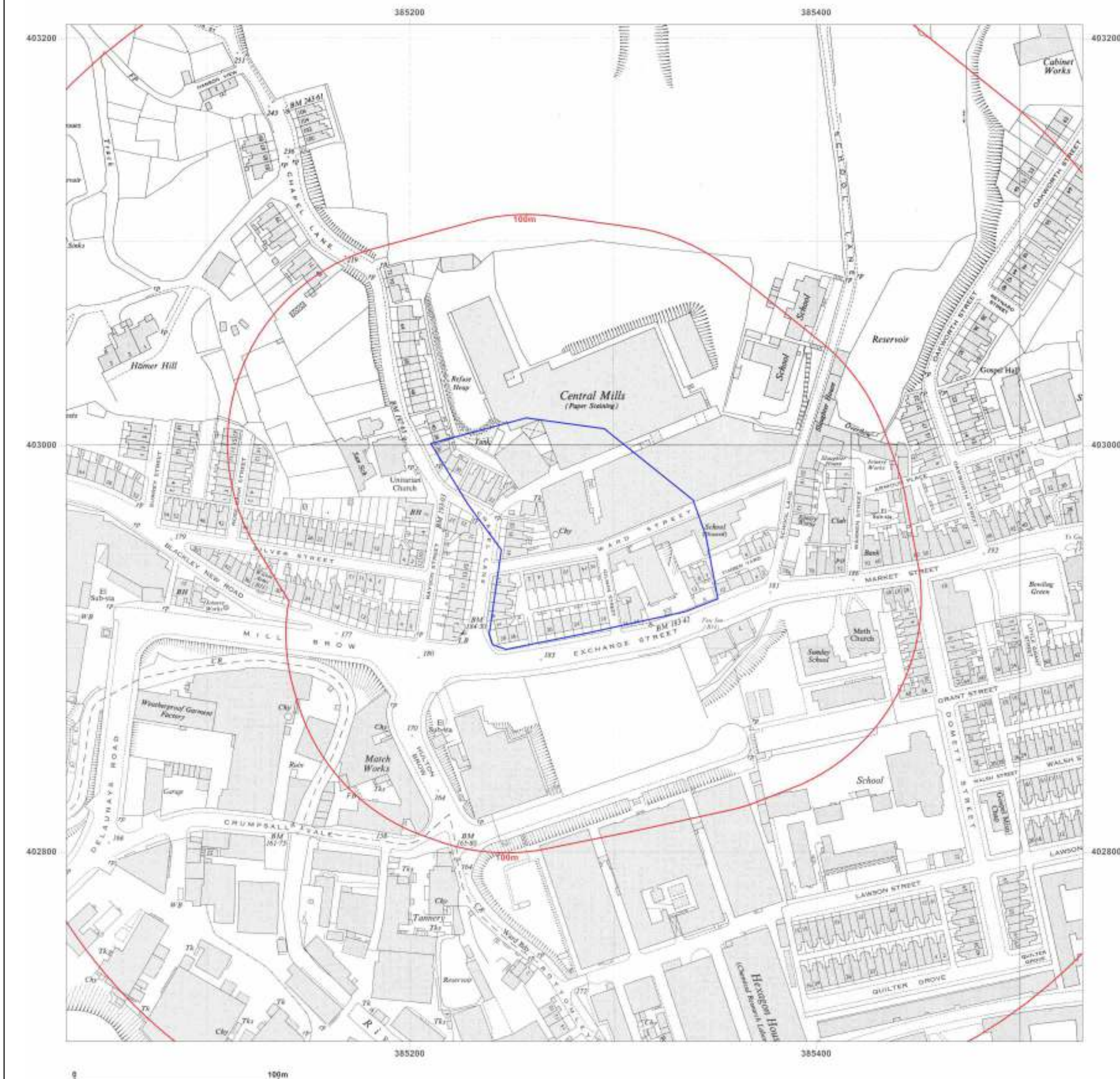


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1951

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled 1948



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

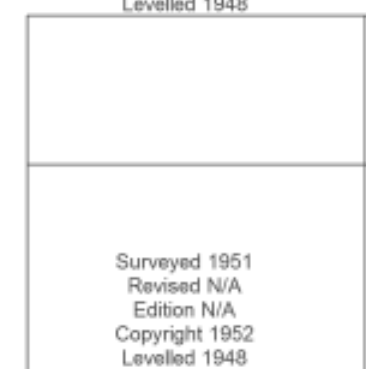
Map date: 1952-1955

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1951
Revised 1955
Edition N/A
Copyright N/A
Levelled 1948



Surveyed 1951
Revised N/A
Edition N/A
Copyright 1952
Levelled 1948

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

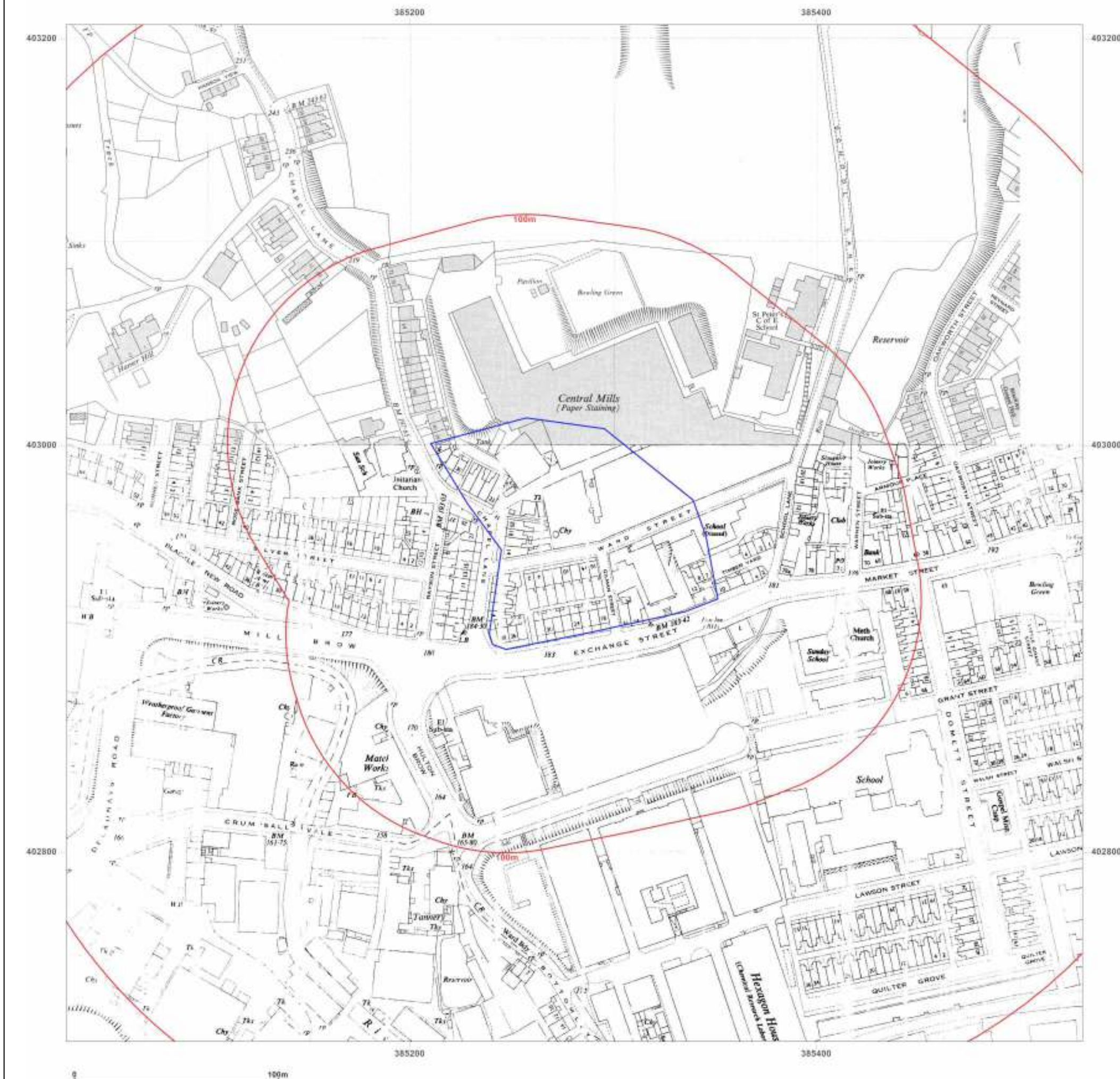


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1959-1964

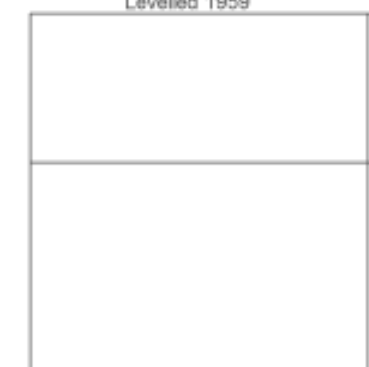
Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1951
Revised 1962
Edition N/A
Copyright 1963
Levelled 1959

Surveyed 1951
Revised 1963
Edition N/A
Copyright 1964
Levelled 1958



Surveyed 1959
Revised 1959
Edition N/A
Copyright 1959
Levelled 1948



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1967-1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1964
Revised 1964
Edition N/A
Copyright 1967
Levelled 1964

Surveyed 1968
Revised 1968
Edition N/A
Copyright 1970
Levelled 1964



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1980-1981

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1980
Levelled 1950

Surveyed 1958
Revised 1981
Edition N/A
Copyright 1981
Levelled 1958

Surveyed 1964
Revised 1981
Edition N/A
Copyright 1981
Levelled 1964

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1980
Levelled 1964

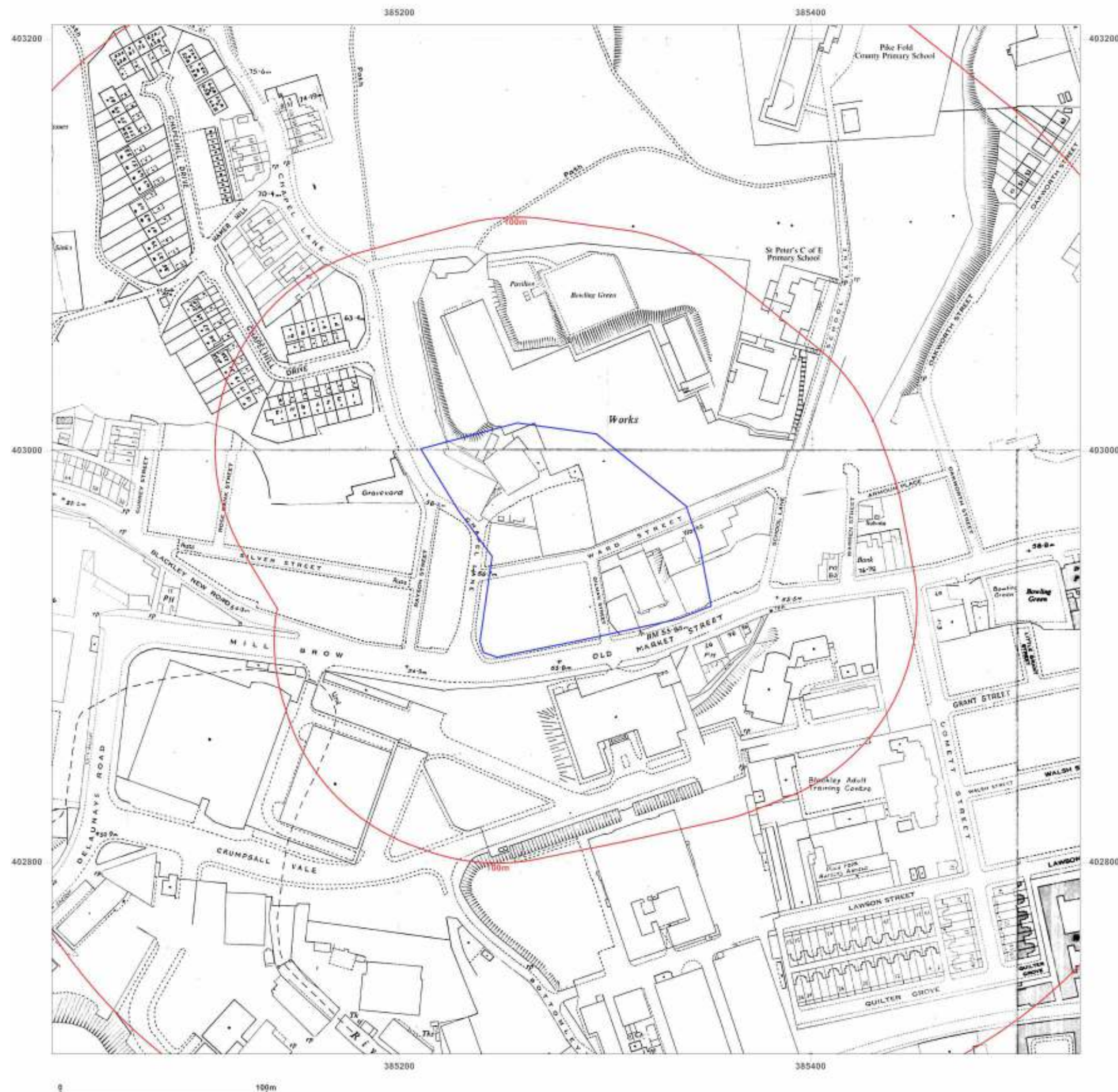


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1992
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1992-1995

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1995
Revised 1995
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1848

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

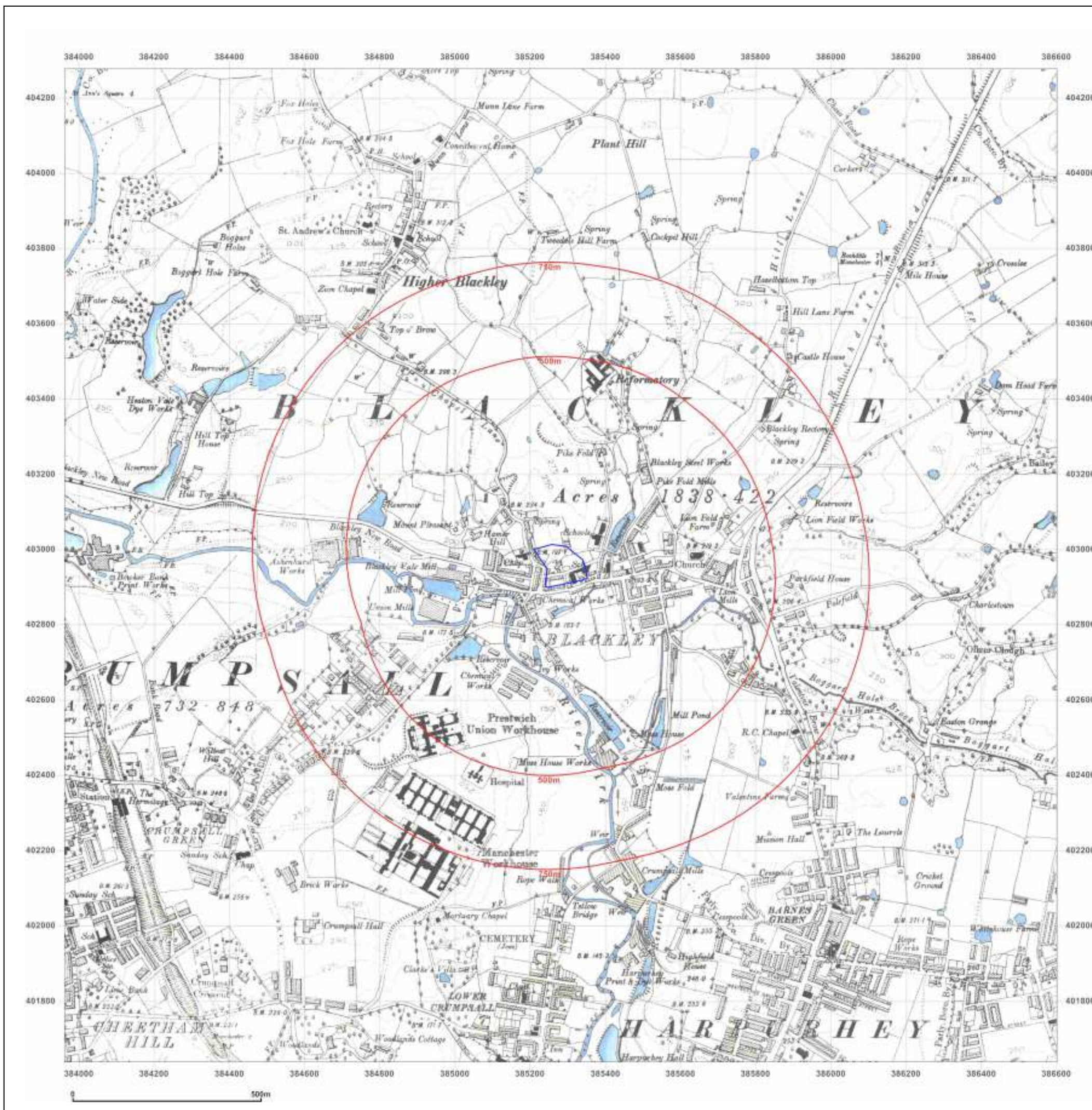


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1906-1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

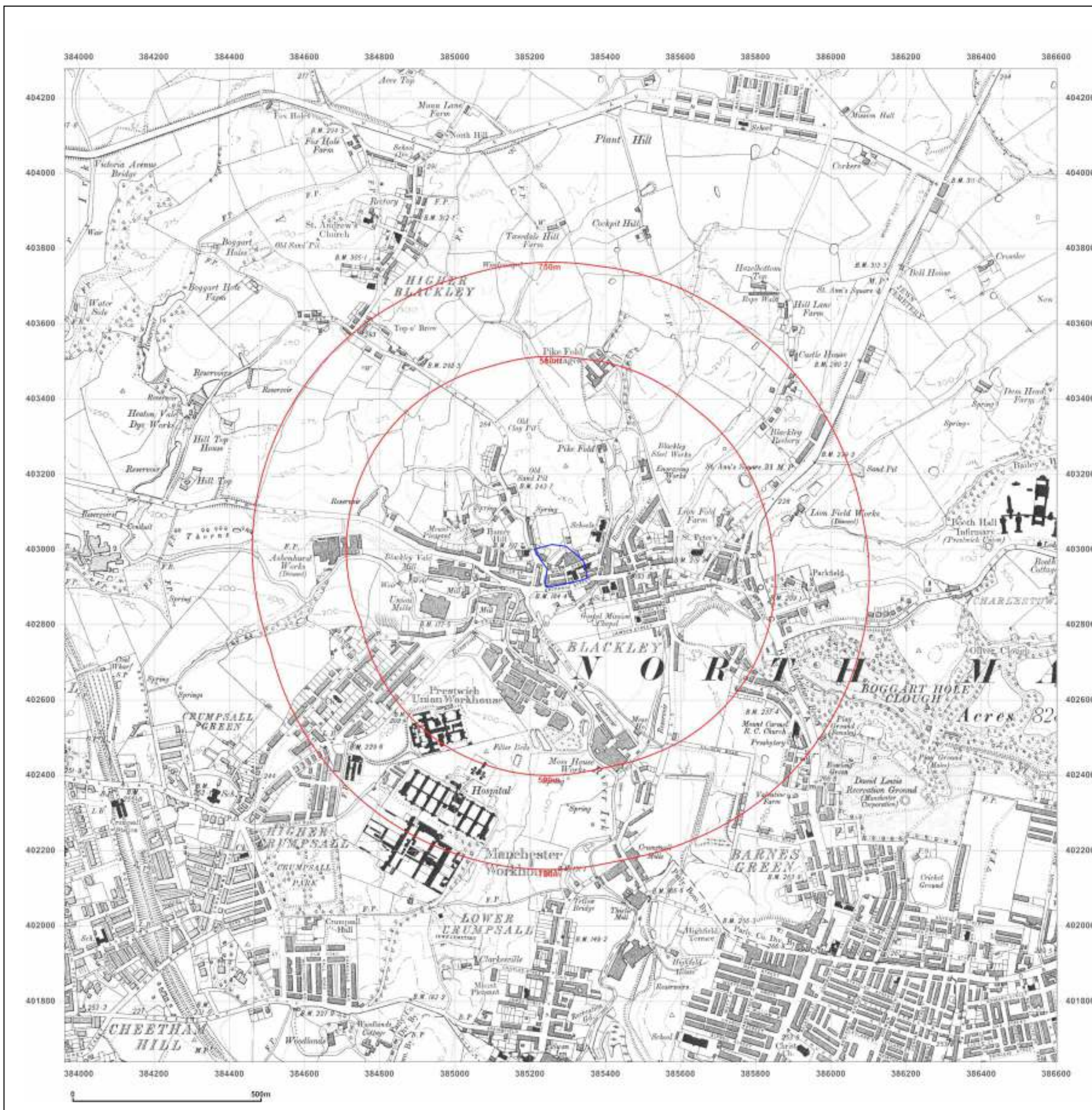


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1915

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A

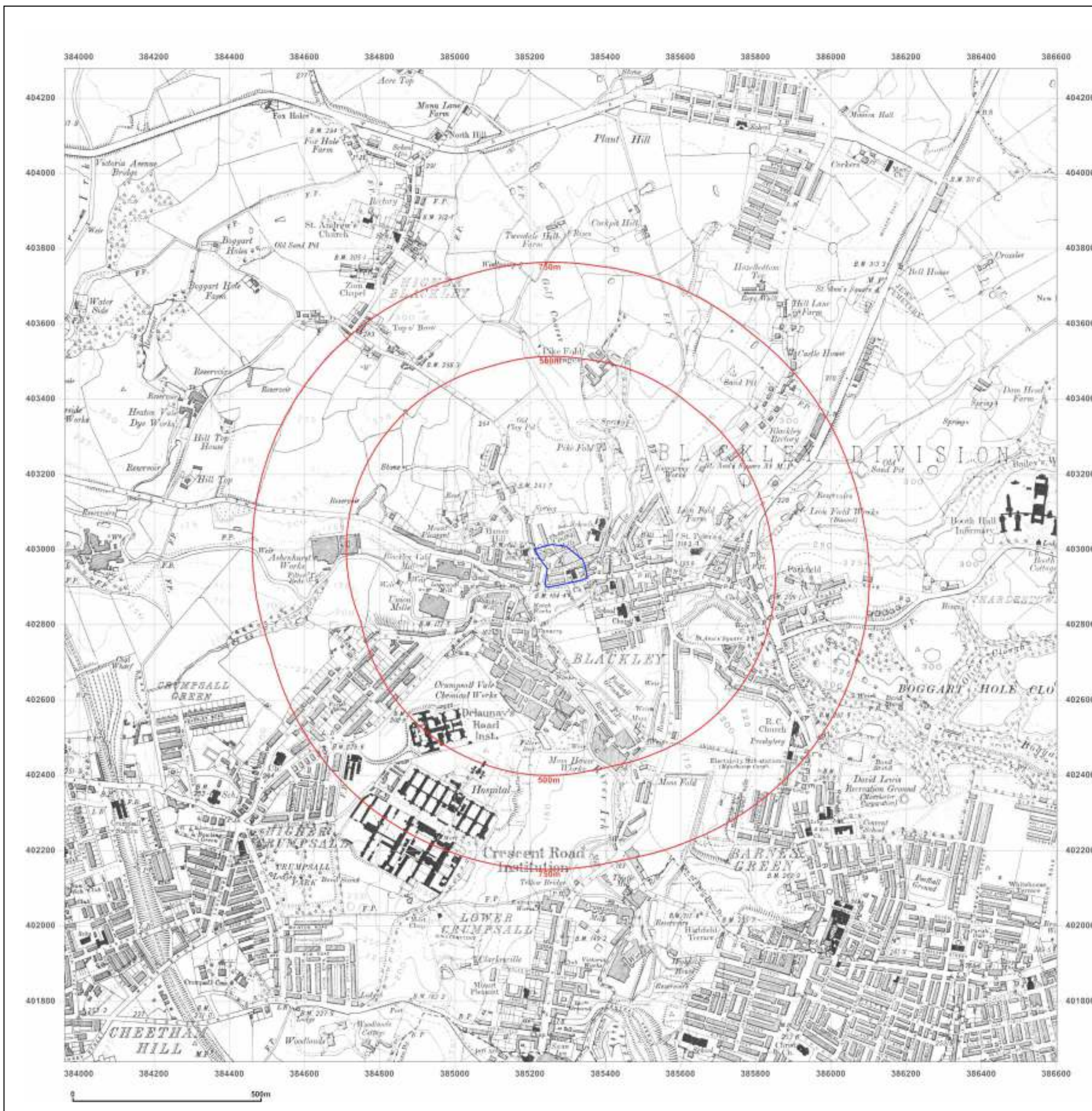


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

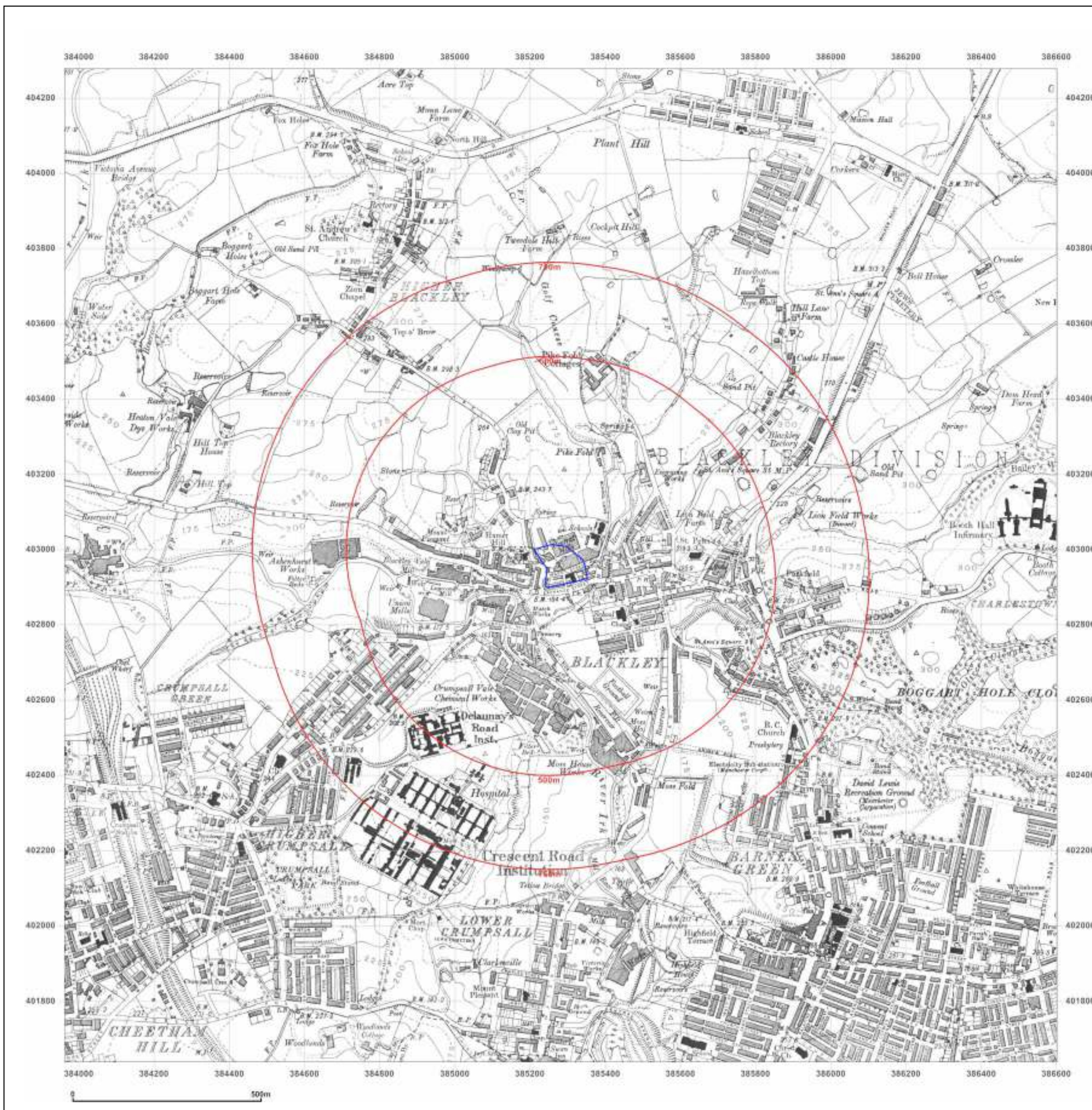


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: County Series

Map date: 1932-1933

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

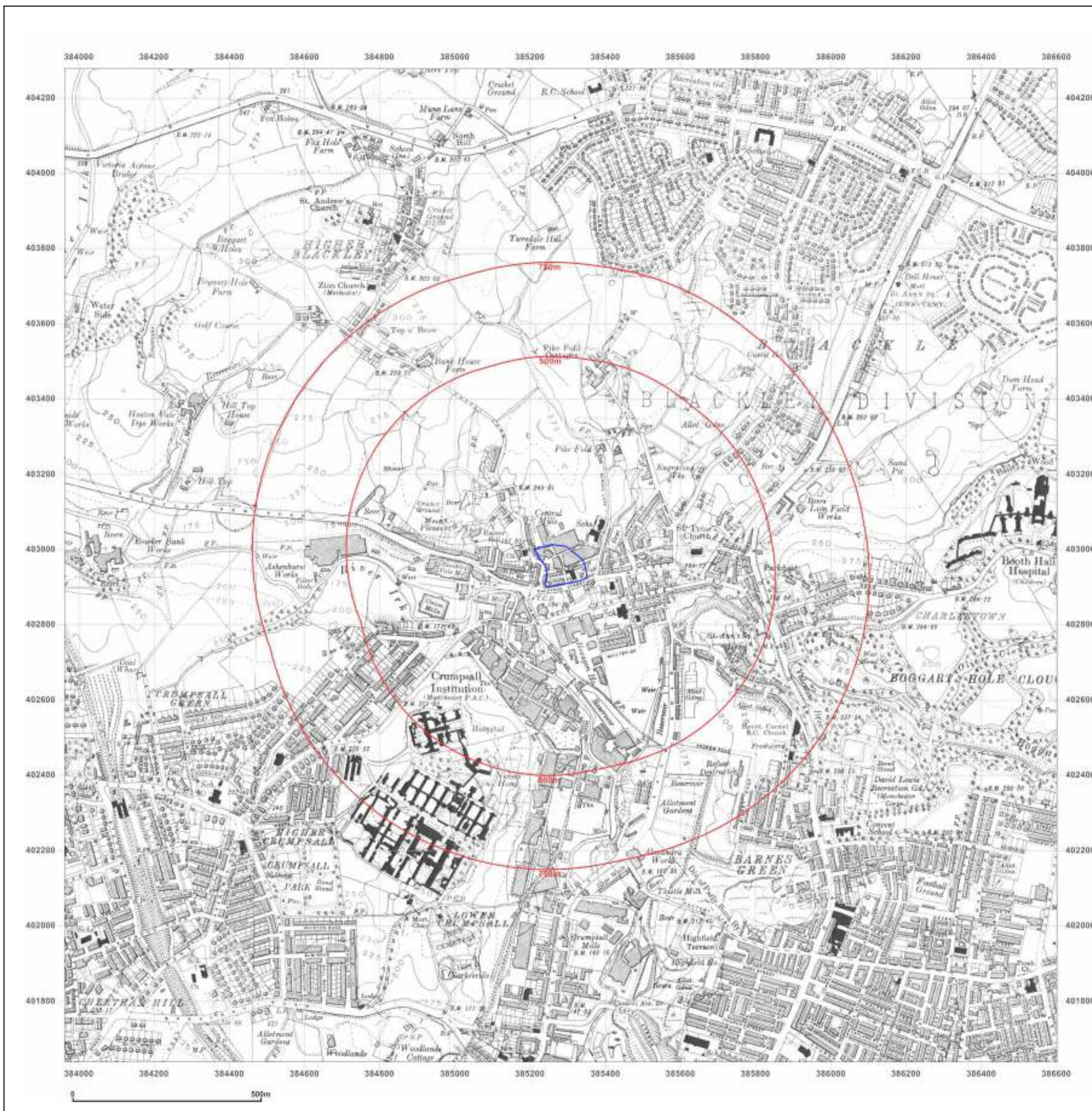


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: Provisional

Map date: 1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1956
Revised 1956
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1956
Revised 1956
Edition N/A
Copyright N/A
Levelled N/A

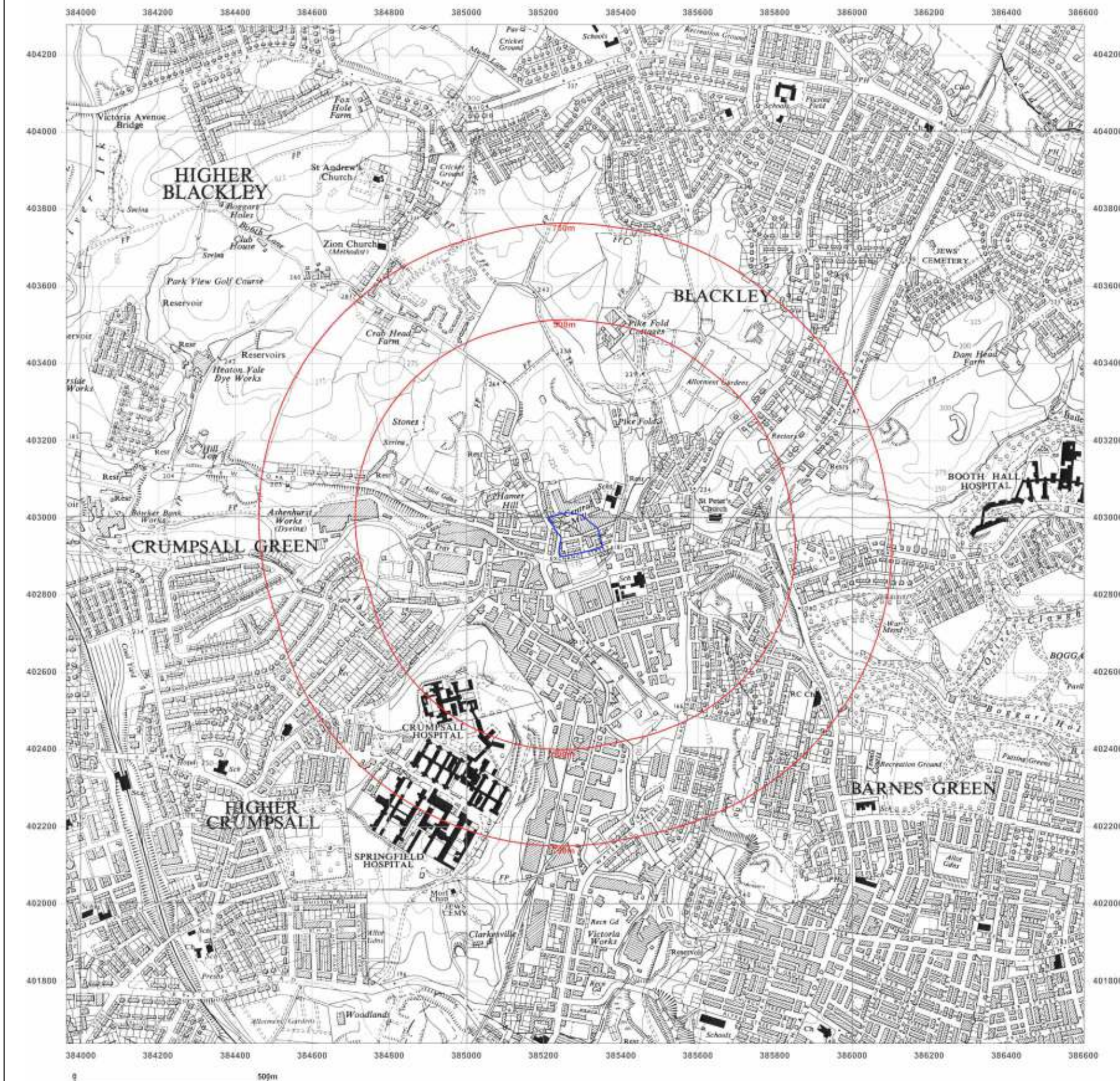


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: Provisional

Map date: 1966-1968

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

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



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1975-1977

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1977
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1980-1985

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1985
Revised 1985
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1987
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

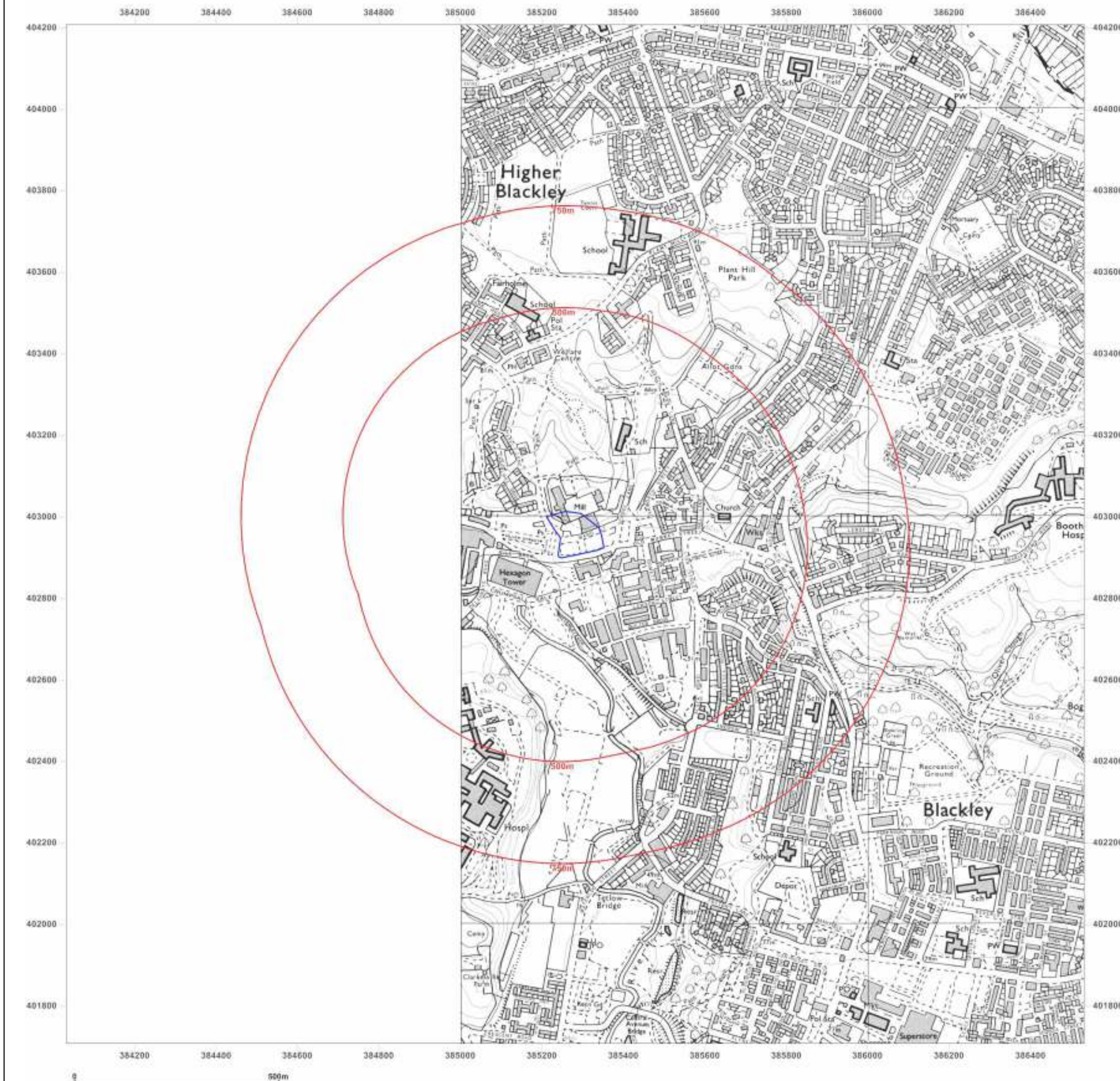


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

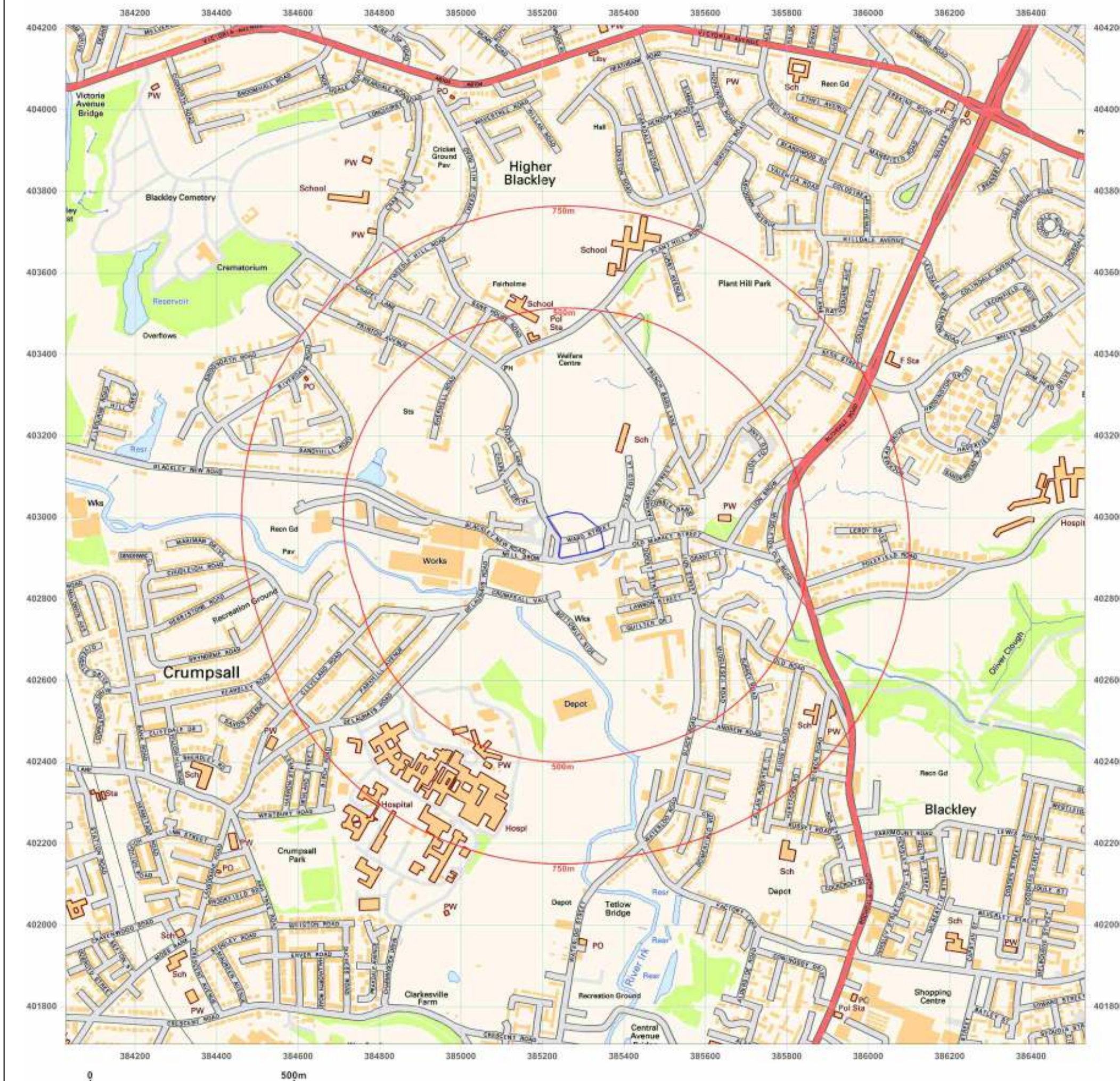


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

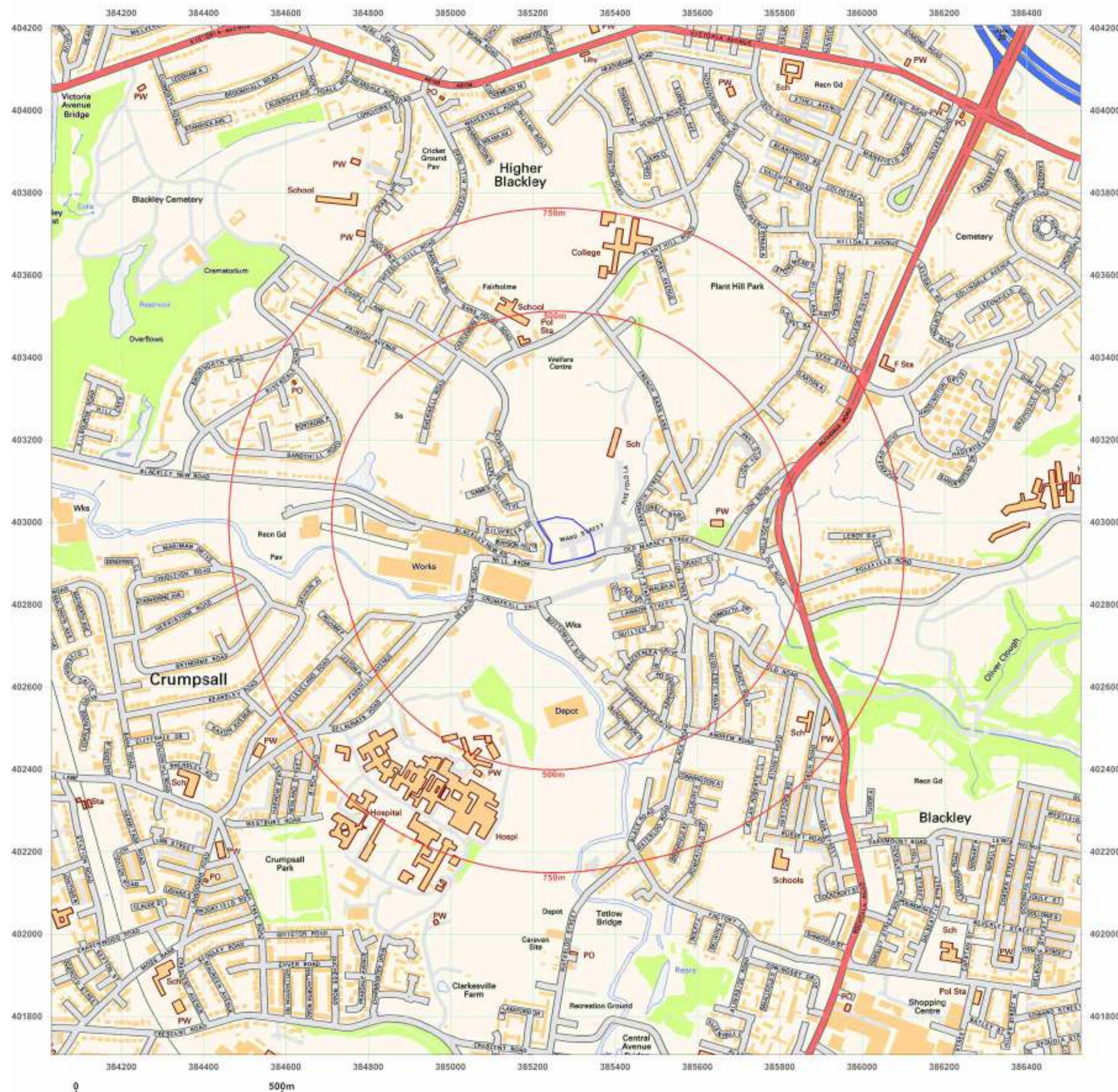


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

PIKE FOLD COMMUNITY
PRIMARY SCHOOL, PIKE FOLD
COMMUNITY PRIMARY
SCHOOL, OLD MARKET
STREET, MANCHESTER, M9
8QP

Client Ref: 19-11-04
Report Ref: GS-6494689
Grid Ref: 385281, 402957

Map Name: National Grid

Map date: 2019

Scale: 1:10,000

Printed at: 1:10,000



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 02 December 2019

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

