GEO-ENVIRONMENTAL CONSULTING ENGINEERS

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PRELIMINARY RISK ASSESSMENT



58 KINGSTON ROAD, DIDSBURY, MANCHESTER

REPORT REF: BEK-17314-1 July 2017

REPORT PREPARED FOR

PAVILION
PROPERTY HOLDINGS

Project Quality Assurance Information Sheet

PRELIMINARY RISK ASSESSMENT

58 Kingston Road, Didsbury, Manchester

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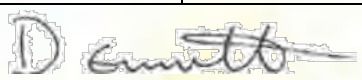
Date	July 2017
Prepared For	**PAVILION PROPERTY HOLDINGS** No. 3 Parkway Wilmslow Cheshire SK9 1LS
Prepared By	**BEK ENVIRO LIMITED** Suite One No 3 Mitton Road Business Park Mitton Road Whalley Lancashire BB7 9YE
	
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Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by BEK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

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1. INTRODUCTION

1.1 Appointment

1.1.1 BEK Enviro Limited (BEK) have been commissioned by Pavilion Property Holdings to prepare a Preliminary Risk Assessment for Kingston Road, Didsbury (hereafter referred to as 'the site') to assess potential risks associated with contamination with respect to development for residential use.

1.1.2 The existing site location is presented on BEK Drawing Ref: 17314-1, a copy of which is presented in Appendix E.

1.2 Proposed Development

1.2.1 The site has planning permission (subject to conditions) for the 'erection of a two-storey detached dwelling with living accommodation in the basement, including car parking and landscaping following the demolition of existing bungalow'.

1.2.2 The report has been prepared to satisfy the Preliminary Risk Assessment element of Part A of Condition No 10 of the planning permission. Part A of Condition No 10 is presented below:

Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).

In the event of the Preliminary Risk Assessment identifying risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority.

The measures for investigating the site identified in the Site Investigation Proposal shall be carried out, before the development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.

1.2.3 The existing site layout is presented on BEK Drawing Ref: 17314-2, a copy of which is presented in Appendix E.

1.3 Objective & Scope of Work

1.3.1 This report provides the details of the works undertaken by BEK to assess the potential risks from contamination considering the change of use to residential.

1.3.2 To achieve the objective BEK will undertake the following:

- Carry out a site inspection and take photographs
- Review the available relevant background information for the site, including:
  - Recent Ordnance Survey Map
  - BGS Web Page
  - Site Specific GroundSure Reports
  - Site Specific Historical Maps
- Develop a preliminary conceptual site model in accordance with guidance to identify potentially significant pollutant linkages specific to the proposed development
- Establish areas of potential concern based on identified risks and/or potential risks
- Identify any actions required to assess or reduce the risks identified

1.4 Limitations

1.4.1 The conclusions and recommendations presented in this report are the result of our professional interpretation of the information currently available. BEK reserves the right to amend the conclusions and recommendations if further information becomes available.

1.4.2 However, it should be noted that much of the information has been derived from reports written by others and BEK takes no responsibility for the accuracy of that information. Notwithstanding the above, the reports reviewed have all been written by professional environmental consultants with a duty of care to provide relevant and accurate information.

2. SITE DESCRIPTION

2.1 Site Location

2.1.1 The site is located to the west of Kingston Road, Didsbury approximately 7.8 km south of Manchester City centre and 4.3 km west of Stockport town centre.

2.1.2 The National Grid Reference for the centre of the site is 384916, 390033. The site location and current layout is shown on BEK Drawing No 17314-2 in Appendix E.

2.2 Site Layout & Description

2.2.1 An engineer from BEK visited the site on 20 June 2017 to carry out a site inspection. The general site layout is shown on BEK Drawing No 17314-2 (see Appendix E).

2.2.2 The site occupies a roughly triangular shaped plot of land of approximately 900 m^2. The site is comprised of an existing building, paved driveway area and a grassed garden area. The existing building is constructed from red brick with a concrete tiled roof.

2.2.3 The site is accessed from the east from Kingston Road which leads onto the paved driveway hardstanding. The east of the site is bound by a wooden and brick fence with trees surrounding the site boundary. There is a grassed garden area located towards the south and north of the site with the building located in the centre of the site. There are some semi-mature trees located within the garden areas of the site. A brick wall forms the western boundary of the site.

2.2.4 The topography of the site is generally flat.

2.2.5 A selection of photographs are provided within Appendix D. The general site layout is presented on BEK Drawing No 17314-2, a copy of which is presented in Appendix E.

2.3 Surrounding Land Use

2.3.1 The site is located in an area of Didsbury dominated by residential properties; residential dwellings located to the north, east, south and west of the site. A number of office buildings are located some 150 m north-east of the site and a large park known as Fletcher Moss Park is located some 100 m west of the site.

3. SITE HISTORY

3.1 The history of the site has been established using historical OS maps supplied by Groundsure. A selection of the maps reviewed is presented in Appendix A.

1881

3.2 The earliest available maps show the site is vacant. There is a greenhouse located immediately west of the site with an attached building located to the south-west of the site. Kingston Road marks the eastern site boundary. There are detached residential dwellings located to the north of the site within 100 m and there is a large building marked as 'The Towers' some 180 m north-east of the site.

1893-1894-1907-1910

3.3 The 1893-1894 map shows the site remains vacant. The surrounding area remains relatively unaltered.

1922

3.4 The 1922 map shows that the southern half of the site is occupied by trees with the north of the site remaining vacant. Fletcher Moss Playing Fields and tennis courts are located some 230 m north-west of the site.

1934

3.5 The 1934 map shows the site remains vacant (trees are absent) and some of the buildings adjacent to the south-western boundary of the site are absent. Residential development has occurred some 20 m east of the site beyond Kingston Road. New recreational facilities including tennis courts and a putting green have been developed some 110 m south of the site and 'The Towers' building is now labelled as 'Shirley Institute' with a number of associated buildings. It is understood the Shirley Institute was used as a research centre associated with cotton production.

1955-1958

3.6 The 1955-1958 map shows the site remains vacant and the buildings located immediately south and west of the site are marked as 'Rose Hill Cottage' and 'Rose Hill' respectively. The building associated with 'Shirley Institute' has been extended and there is a 'tank' some 90 m north-east of the site. A large number of residential dwellings have been constructed to the south-east of the site and the East Didsbury Methodist Church is now located some 80 m south of the site.

1974-1975

3.7 The 1974-1975 map shows the existing residential building located near the centre of the site. Residential buildings have been constructed to the north of the site. An electrical sub-station is located some 60 m west and a refuse tip is located some 110 m south-west of the site at its nearest point.

1988-1992

3.8 The 1988-1992 maps show the site remains unchanged. The refuse tip located some 110 m south-west of the site has been redeveloped for residential use.

2002-2010-2014

3.9 The 2002-2014 maps show that the site has remained unchanged. The Shirley Institute building has been converted into several office buildings.

4. ENVIRONMENTAL SETTING

4.0.1 GeoInsight and EnviroInsight Reports have been obtained from Groundsure and information provided in this report has been used within this section. Copies of these report are presented in Appendix B and C, respectively.

4.1 Geology

4.1.1 The site geology is illustrated in the GeoInsight Report which has sourced data from several sources including British Geological Society (BGS), BRITPITS database and the Coal Authority. A copy of the GeoInsight Report is presented in Appendix B.

4.1.2 In addition, BEK has sought site investigation information from the BGS website however there are no exploratory locations located within 250 m of the site.

Made Ground

4.1.3 According to the report there is no artificial ground (made ground) present beneath the site.

Superficial Geology

4.1.4 The GeoInsight Report states that the underlying superficial geology comprises River Terrace deposits, Glaciofluvial deposits and alluvium. These deposits generally consist of sand and gravels with clay and silt.

Bedrock

4.1.5 The underlying solid geology comprises the Wilmslow Sandstone Formation..

Faults

4.1.6 According to the GeoInsight Report there are no faults located in close proximity of the site.

4.2 Mining & Ground Stability

4.2.1 Information in the GeoInsight report indicates that the site is not located in an area that may have been affected by coal mining.

4.2.2 The GeoInsight report indicates that there is historical mining within 250 m of the site. The record indicates a slag heap was located some 55 m west of the site dated 1966. This is possibly associated with sandstone quarrying.

4.2.3 In addition to the above, the GeoInsight Report provides hazard ratings associated with ground subsidence at the site, as summarised below:

Shrink-Swell Clay:	Negligible
Landslides:	Very Low
Ground Dissolution of Soluble Rocks:	Negligible
Compressible Deposits:	Negligible
Collapsible Deposits:	Very Low
Running Sands:	Very Low

4.2.4 It can be seen from the above that the site is unlikely to be affected by ground instability.

4.3 Hydrogeology

4.3.1 The underlying superficial geology is classified by the Environment Agency as a 'Secondary A Aquifer'. These formations are 'permeable layers capable of supporting water supplies at a local rather than strategic scale'.

4.3.2 The underlying Wilmslow Sandstone Formation is classified by the Environment Agency as a 'Principal Aquifer'. This formation has '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'.

4.3.3 The EnviroInsight Report indicates the site is not located within a source protection zone.

4.3.4 There are no groundwater abstraction licenses within 250 m of the site.

4.4 Hydrology

4.4.1 The EnviroInsight Report indicates that the nearest surface water feature is a drain located some 100 m west of the site.

4.4.2 There are no licensed discharge consent within 250 m of the site and there are no surface water abstractions located within 250 m of the site.

4.4.3 According to Groundsure the site is not located in an area which may be affected by flooding from surface water.

4.5 Contaminated Land & Landfill Activities

4.5.1 The information presented in the EnviroInsight Report indicates that there are two records of Environment Agency historic landfill sites within 250 m of the site with one located some 125 m west of the site called Parrs Wood Road, Manchester with a waste type of commercial, household first recorded 30 November 1959 and last recorded 31 December 1976 and operated by Manchester Corporation Cleansing Department.

4.5.2 The second historical landfill was located some 208 m west of the site at Parrs Wood Road, Didsbury which had a waste license and accepted inert, industrial, commercial, household, special, liquid and sludge waste types. The license holder was Manchester City Council and was first recorded on 31 December 1947 and last recorded 31 August 1976.

4.5.3 There are no EA Records of pollution incidents within 250 m of the site.

4.5.4 There are no Part A(2), Part B or IPPC Authorised Activities within 250 m of the study site.

4.5.5 According to the EnviroInsight Report there are 9 potentially contaminative industrial sites located within 250 m of the site. The nearest of these relates to an electricity sub-station located some 56 m west of the site. The likelihood of these activities having impacted upon the site is considered to be low.

4.6 Sensitive Land Uses

4.6.1 The site is not affected by any of the ecological systems identified as a statutory receptor in the DETR Circular 01/2006.

4.7 Radon

4.7.1 Groundsure reports that 'less than 1% of homes are above the action trigger level' and that 'no radon protective measures are necessary in the construction of new dwellings or extensions'.

5. POTENTIAL POLLUTANT LINKAGES

5.1 General

5.1.1 This section identifies the potential contaminants of concern, sources, pathways and receptors that may be associated with the site based on its known history and the current condition and with respect to the development of the site for residential use.

5.1.2 This information is used to develop a conceptual model which is a qualitative description of potential sources of environmental pollutants, the pathways by which they are transported and the receptors:

i) Potential sources of contamination: these include any actual or potentially contaminating materials and activities, located either on or in the vicinity of the site

ii) Potential pathways for contamination migration: these comprise the routes or mechanisms by which contaminants may migrate from the source to the receptor including environmental migration pathways and human health exposure pathways

iii) Potential receptors of contamination: these include future land users, ecological systems, water resources and property.

5.2 Potential Contaminants of Concern

5.2.1 Based on the earliest available historical maps (circa 1881) the site has been vacant until 1974-1975 when a residential building was developed on the site which remains to present day.

5.2.2 The site walkover confirmed that the residential building is still present and there was no visual evidence of contamination at the site.

5.2.3 Based on the available information the likelihood of potentially significant contamination to be present is considered to be very low.

5.2.4 However, the EnviroInsight Report indicates that there are two landfill sites located with 250 m of the site, the closest of which is some 125 m west of the site. These sites represent a potential source of ground gas. However, considering the age of the tips (last waste accepted 1976) and the distance, the risks from gas from these sites is considered to be negligible. The existing building has never been affected by ground gas.

5.3 Potential Pathways

5.3.1 No potential pathways have been identified.

5.4 Receptors

5.4.1 No potential receptors have been identified.

6. RECOMMENDATIONS

6.1 Based on the findings of the preliminary risk assessment, no potential issues associated with contamination has been identified with respect to the demolition of the existing building and construction of a new residential property.

6.2 Notwithstanding the above, BEK recommends the following works are carried out:

- All buildings on site should be subjected to a pre-demolition asbestos survey and any asbestos containing materials identified should be removed by a specialist contractor prior to their re-development/demolition and disposed of in accordance with the Duty of Care Regulations.

- All contractors on site should remain vigilant during any ground works and if visual or olfactory evidence of contamination is encountered then works should cease and specialist advice sought.

- If it is necessary to import sub/topsoil for use in the garden areas of the site it will be necessary to assess suitability.

- Whilst risks to service pipes are considered to be negligible, we recommend that consideration is given to the requirements of the water supply service provider and the completion of the UKWIR risk assessment for water pipe selection

- Any soils removed as part of the redevelopment of the site should be done so in accordance with Duty of Care Regulations.

APPENDIX A

Historical OS Maps

CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

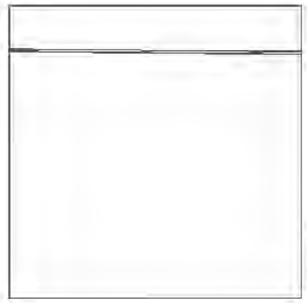
1881

1:2,500

1:2,500

N
W E
S

Surveyed 1881
Revised N/A
Edition 1881
Copyright N/A
Levelled N/A

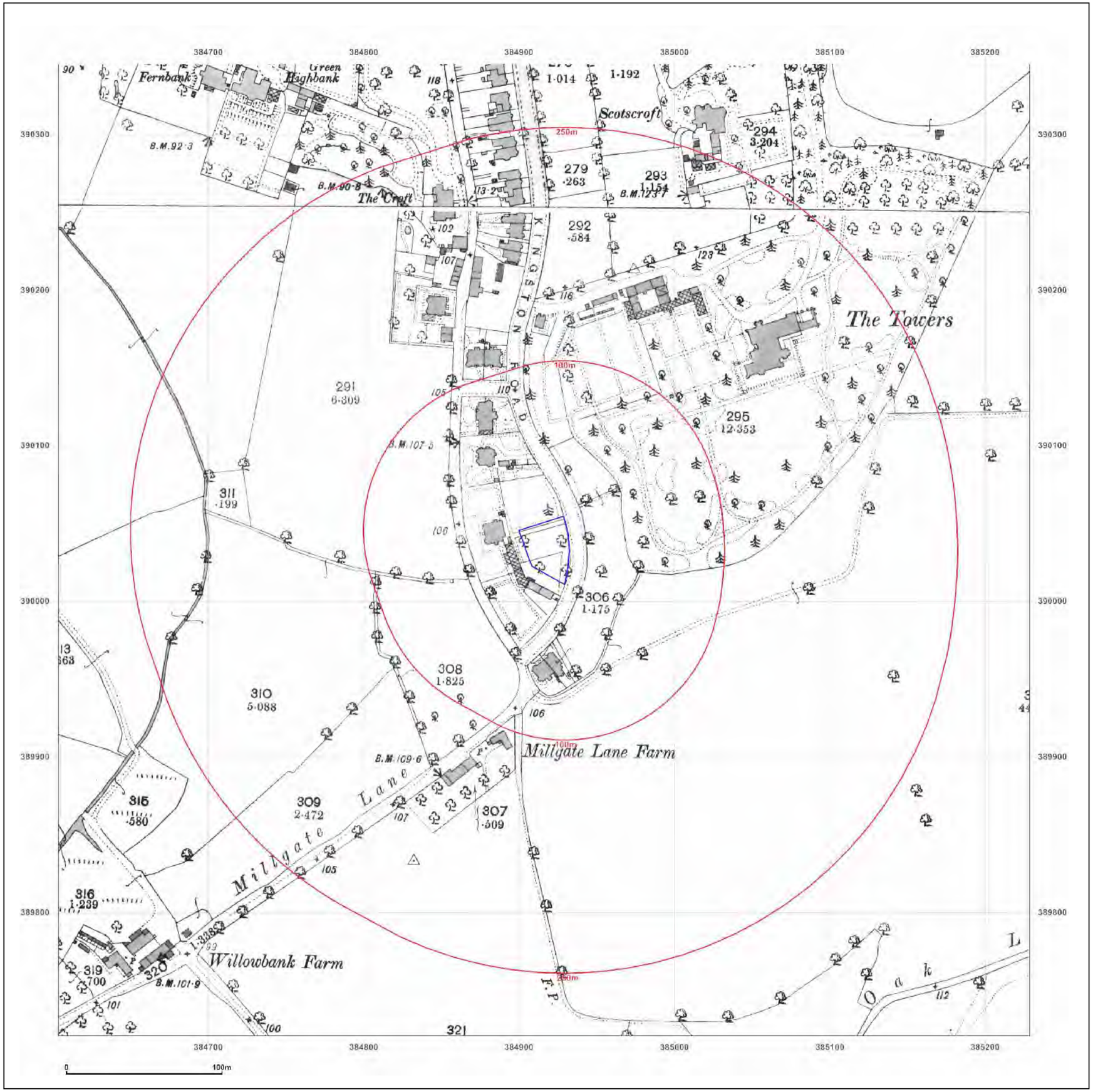


Surveyed 1881
Revised N/A
Edition 1881
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

Powered by OS

26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1893-1894

1:2,500

1:2,500

N
W E
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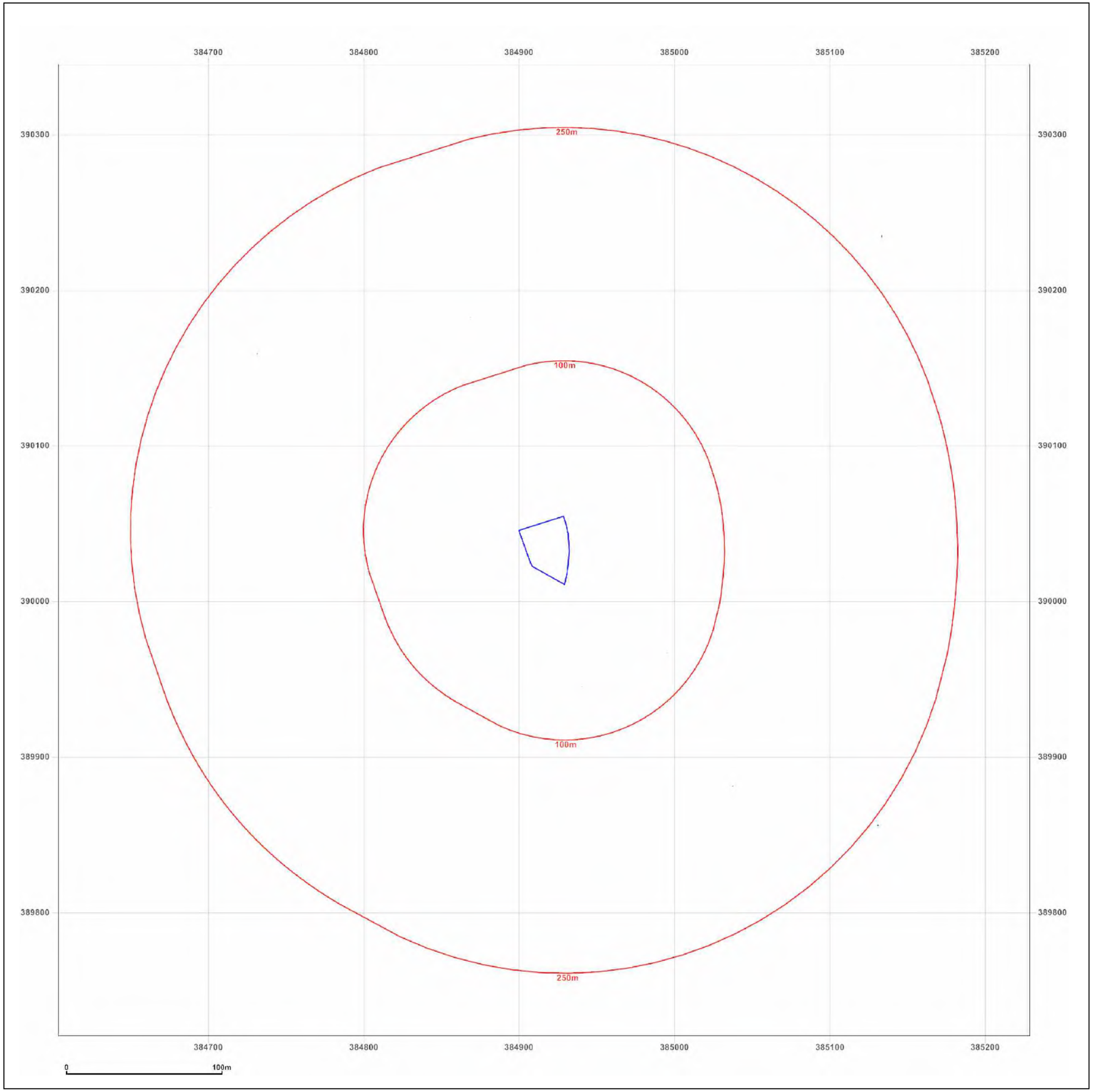
Surveyed 1894
Revised N/A
Edition 1894
Copyright N/A
Levelled N/A

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

Groundsure INSIGHTS

Powered by OS

26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1898

1:2,500

1:2,500

N
W E
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Surveyed 1877
Revised 1897
Edition 1898
Copyright N/A
Levelled N/A

Groundsure INSIGHTS

Powered by

26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1907

1:2,500

1:2,500

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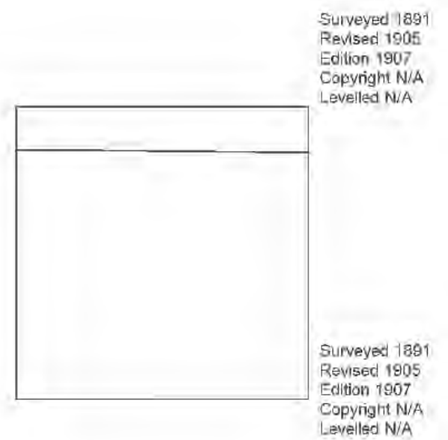
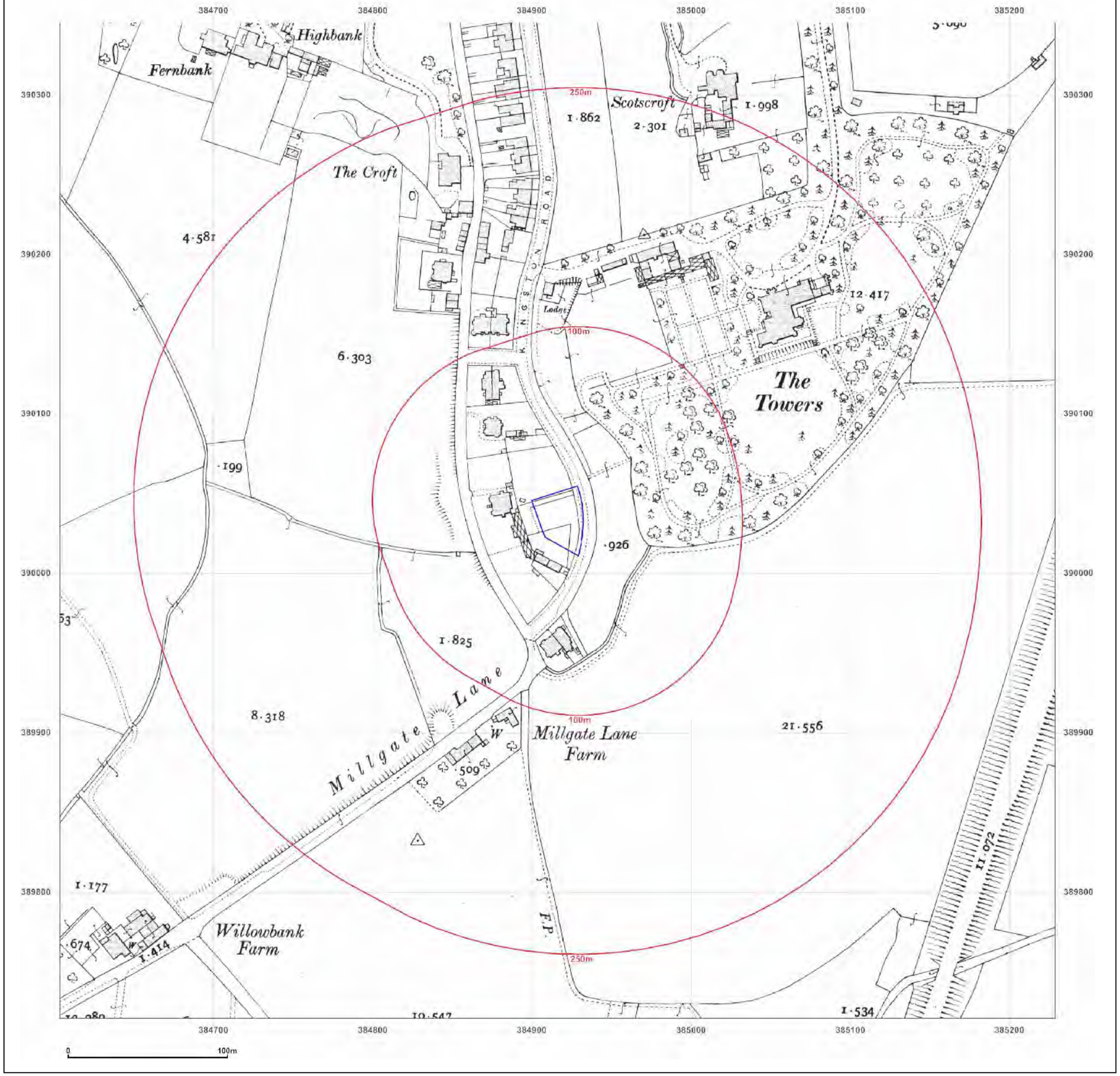


Groundsure INSIGHTS

Powered by OS

26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1910

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1:2,500

N
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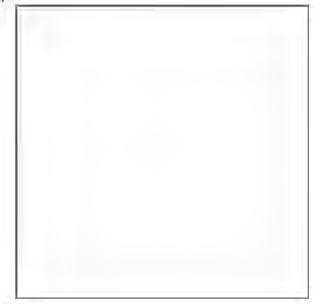
Surveyed 1910
Revised 1908
Edition 1910
Copyright N/A
Levelled N/A



Groundsure INSIGHTS

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26 June 2017

CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1922

1:2,500

1:2,500

N
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Surveyed 1922
Revised 1916
Edition 1922
Copyright N/A
Levelled 1915

Surveyed 1922
Revised 1916
Edition 1922
Copyright N/A
Levelled 1915

Groundsure INSIGHTS

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26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

County Series

1934

1:2,500

1:2,500

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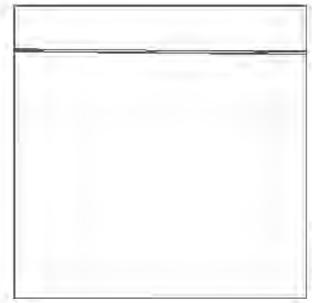

Surveyed 1873
Revised 1934
Edition N/A
Copyright N/A
Levelled 1927

Surveyed 1873
Revised 1934
Edition N/A
Copyright N/A
Levelled 1927

Groundsure INSIGHTS

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26 June 2017

CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1955-1958

1:1,250

1:2,000

N
W E
S



Surveyed 1955
Revised 1955
Edition N/A
Copyright 1955
Levelled 1949

Surveyed 1957
Revised 1957
Edition N/A
Copyright 1957
Levelled 1949

Surveyed 1956
Revised 1956
Edition N/A
Copyright 1956
Levelled 1949

Surveyed 1958
Revised 1958
Edition N/A
Copyright 1958
Levelled 1949

Groundsure INSIGHTS

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26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1956-1958

1:1,250

1:2,000

N
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S

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

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

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

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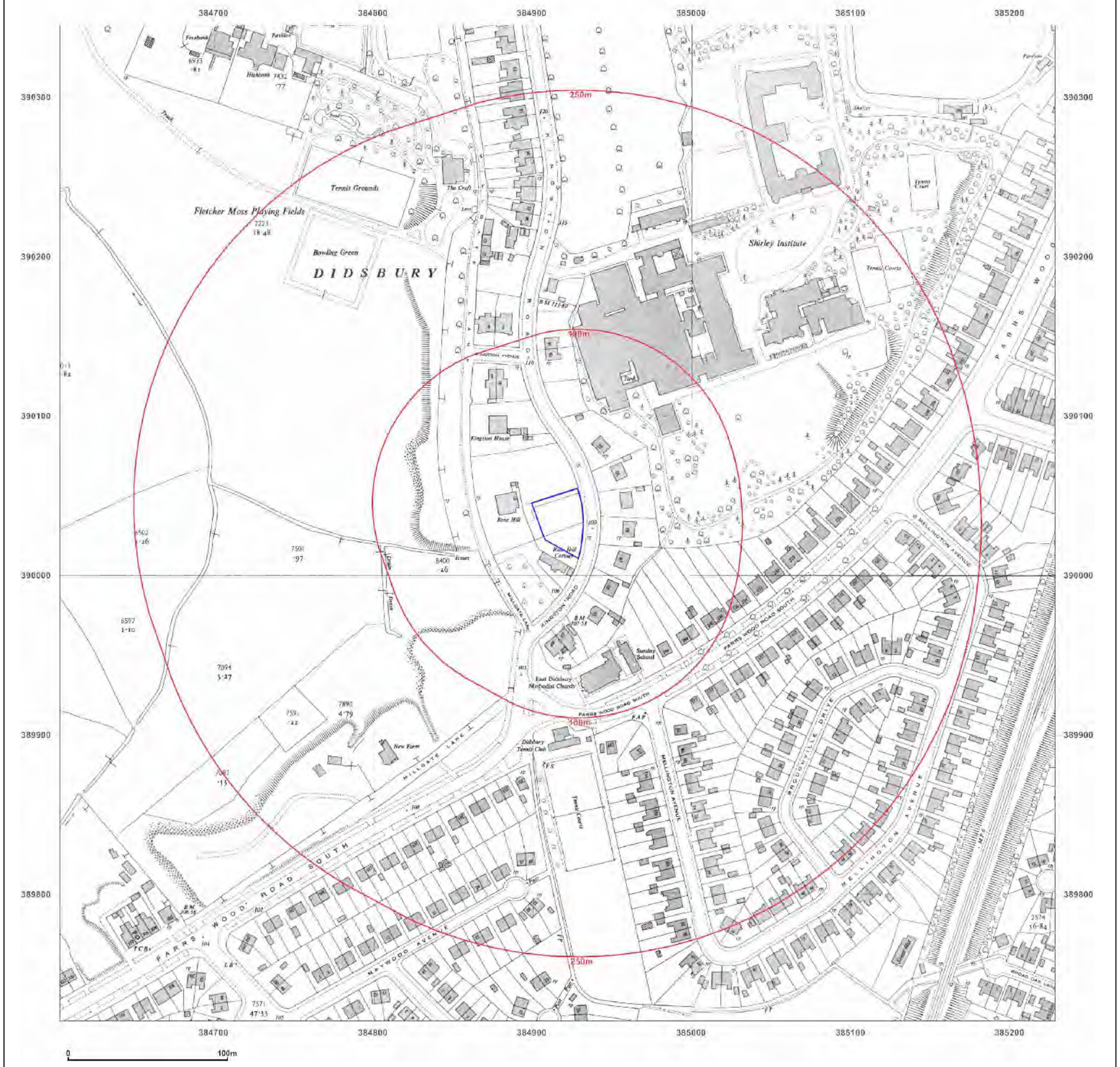
26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1955-1958

1:2,500

1:2,500

N
W E
S

Surveyed 1955
Revised 1955
Edition N/A
Copyright 1956
Levelled 1949

Surveyed 1957
Revised 1957
Edition N/A
Copyright 1959
Levelled 1949

Surveyed 1956
Revised 1956
Edition N/A
Copyright 1957
Levelled 1949

Surveyed 1958
Revised 1958
Edition N/A
Copyright 1959
Levelled 1949

Groundsure INSIGHTS

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CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1964-1966

1:1,250

1:2,000

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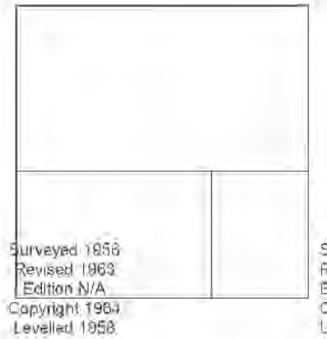

Groundsure INSIGHTS

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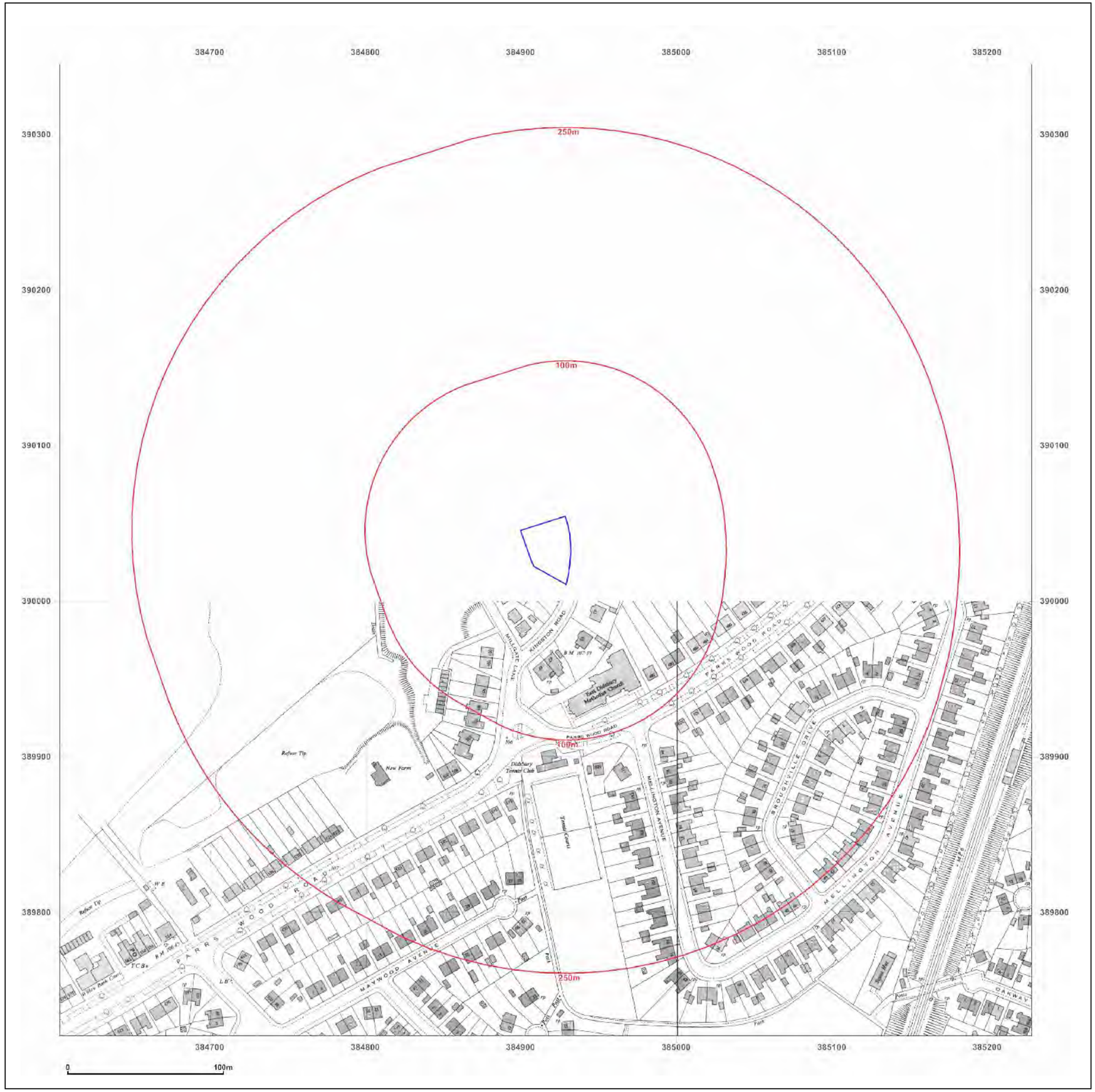
26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1966

1:2,500

1:2,500

N
W E
S

Surveyed 1966
Revised 1966
Edition N/A
Copyright 1967
Levelled 1958

Groundsure INSIGHTS

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26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1974-1975

1:1,250

1:2,000

N
W E
S

Surveyed 1955 Revised 1973 Edition N/A Copyright 1974 Levelled 1958	Surveyed 1957 Revised 1974 Edition N/A Copyright 1975 Levelled 1958
Surveyed N/A Revised N/A Edition N/A Copyright 1975 Levelled 1975	

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FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1982-1986

1:1,250

1:2,000

N
W E
S

Surveyed 1958
Revised 1982
Edition N/A
Copyright 1982
Levelled 1958

Surveyed 1956
Revised 1984
Edition N/A
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Levelled 1958

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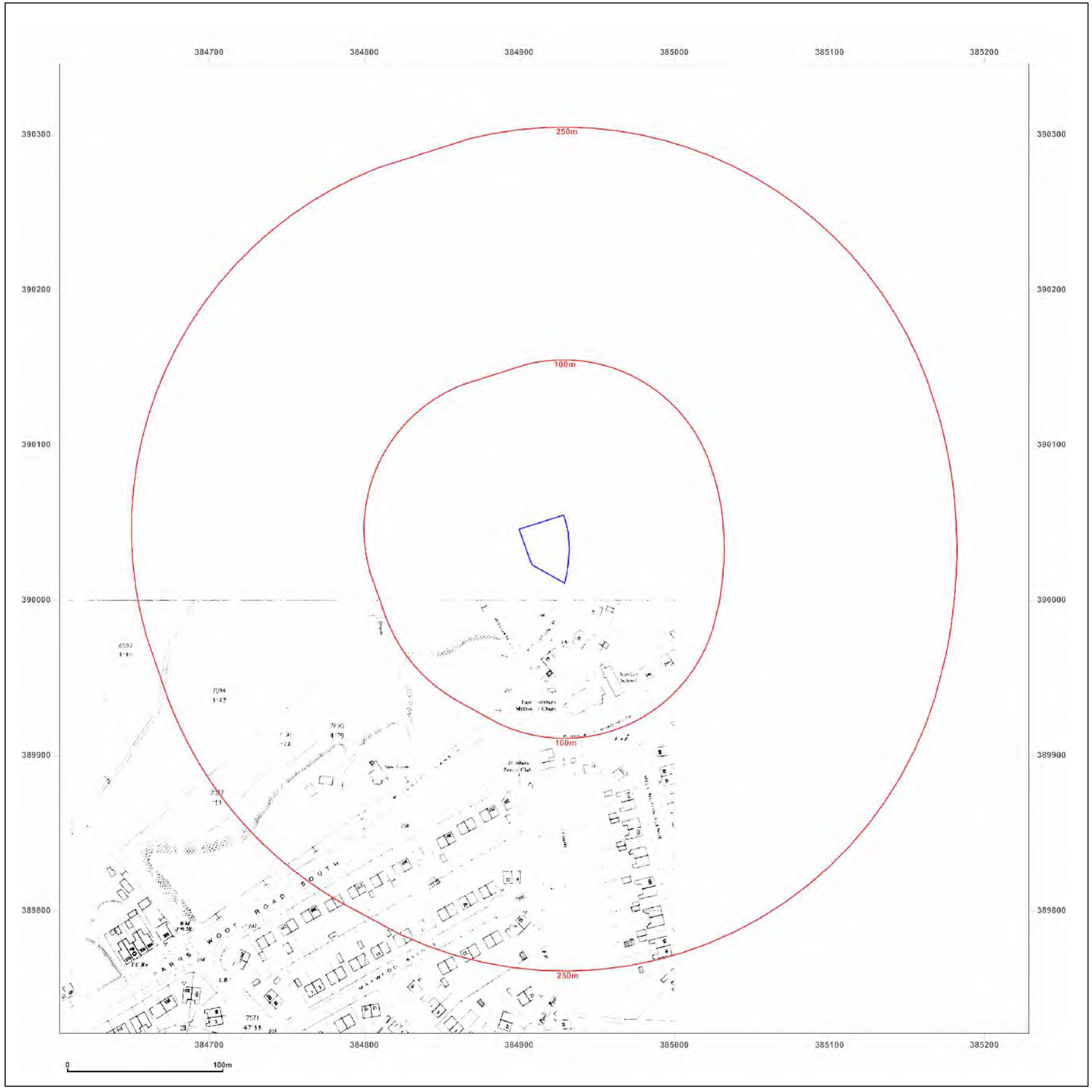

CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1987

1:2,500

1:2,500

N
W E
S

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

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Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1988-1992

1:1,250

1:2,000

N
W E
S

Surveyed 1955 Revised 1973 Edition N/A Copyright 1990 Levelled N/A	Surveyed 1956 Revised 1988 Edition N/A Copyright 1988 Levelled 1956
Surveyed 1992 Revised 1992 Edition N/A Copyright 1992 Levelled N/A	Surveyed 1956 Revised 1989 Edition N/A Copyright 1989 Levelled 1956

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FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1992

1:1,250

1:2,000

N
W E
S

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

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

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

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

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Kingston Road, Didsbury, M20
2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

1992

1:1,250

1:2,000

N
W E
S

Surveyed 1957
Revised 1974
Edition N/A
Copyright 1992
Levelled N/A

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26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

1:10,000 Raster

2002

1:10,000

1:10,000

N
W E
S

2002

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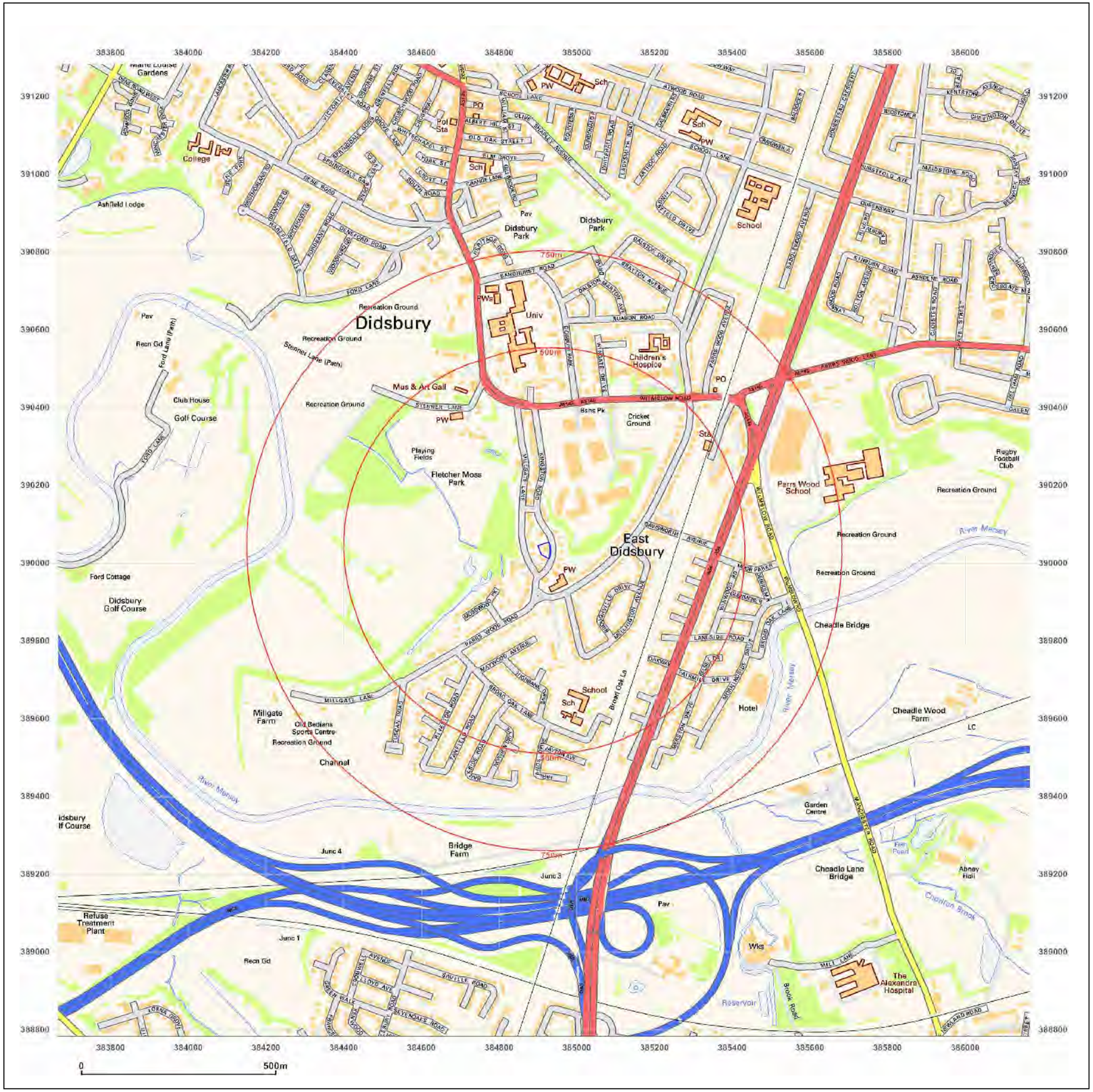
26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

2010

1:10,000

1:10,000

N
W E
S



Groundsure INSIGHTS

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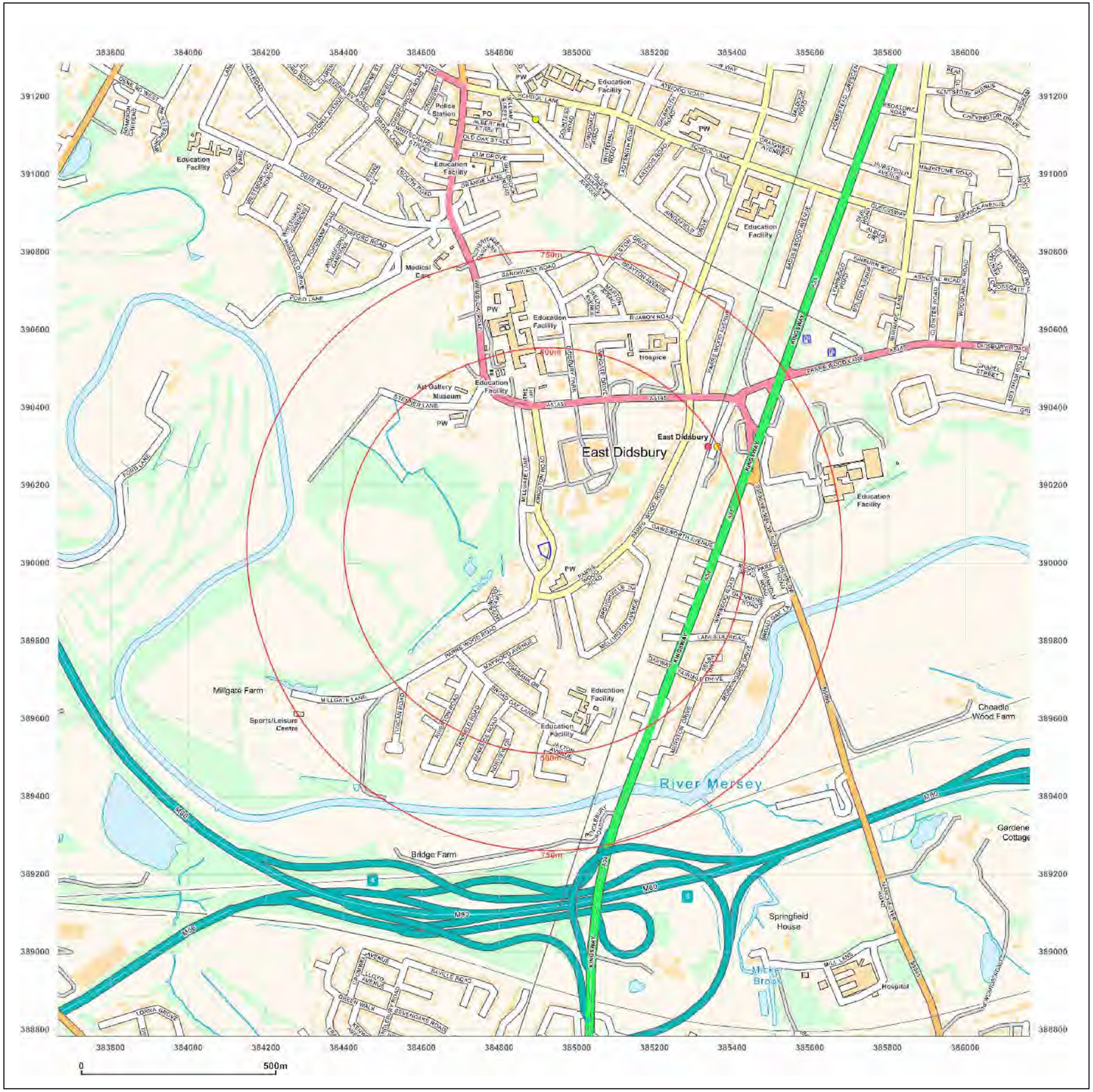
26 June 2017



CENTRE MAPS LIVE.
FOR A BETTER POINT OF VIEW

Kingston Road, Didsbury, M20 2SB

29721
CMAPS-CM-634707-29721-260617HIS
384916, 390033

National Grid

2014

1:10,000

1:10,000

N
W E
S

2014

Groundsure INSIGHTS

Powered by OS

26 June 2017

APPENDIX B

GeoInsight Report

Geo Insight

Address:	**Kingston Road, Didsbury, M20 2SB**
Date:	**26 Jun 2017**
Reference:	**CMAPS-CM-634707-29721-260617GEO**
Client:	**CENTREMAPS**

NW N NE

W E



SW S SE

Aerial Photograph Capture date:	11-Jun-2015
Grid Reference:	384916,390033
Site Size:	0.09ha

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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?	No
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 landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	No

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?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
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 landslip 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 Faults	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 faults within 500m of the study site boundary?	No

Section 3: Radon

3. Radon	3.1Is 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.
	3.2Radon 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	0	2	16	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	0	1	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	1	0	1
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	1	0	1	0	3
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 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

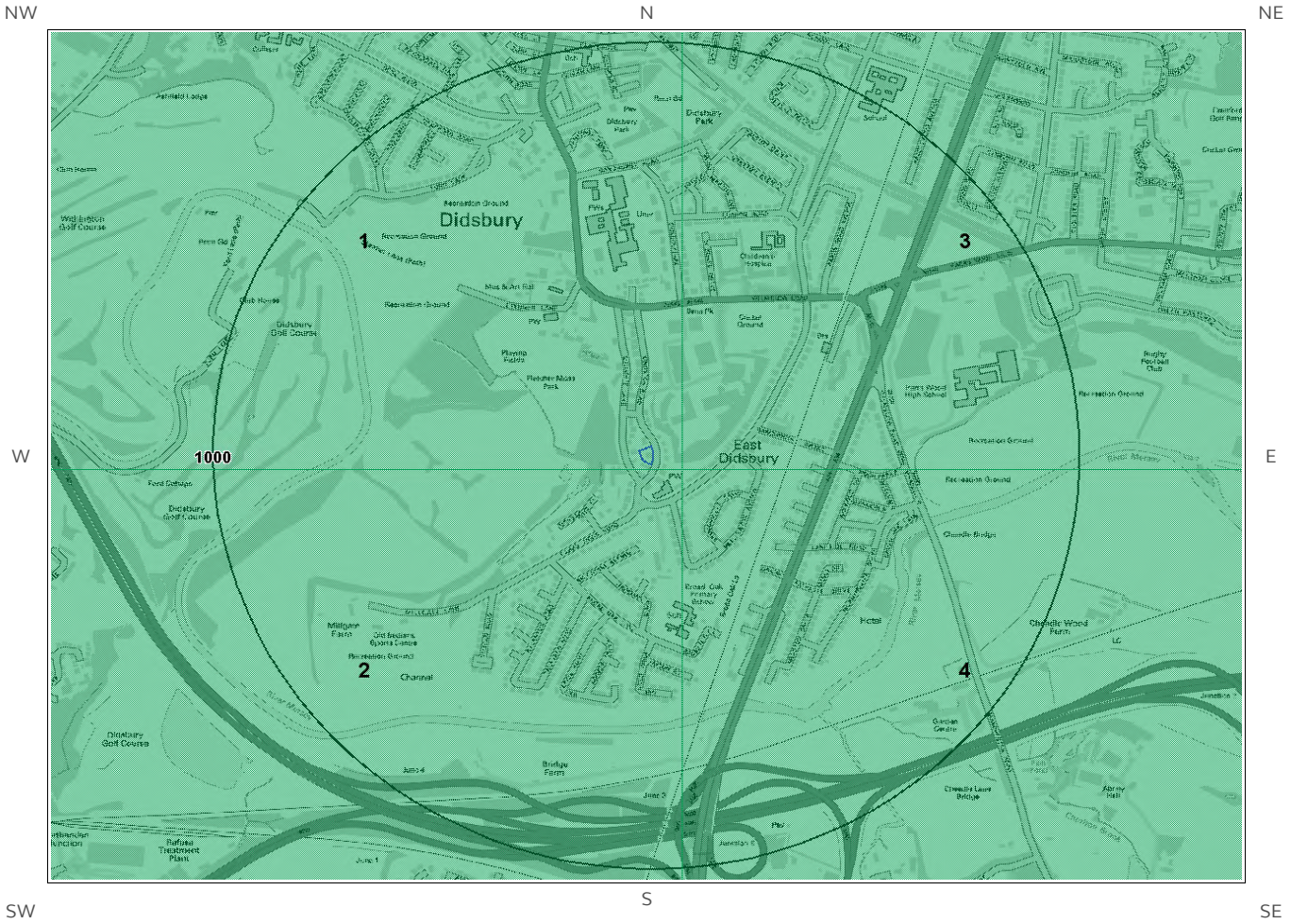
Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Very Low
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Moderate
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	0	0

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	1	4	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	0	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

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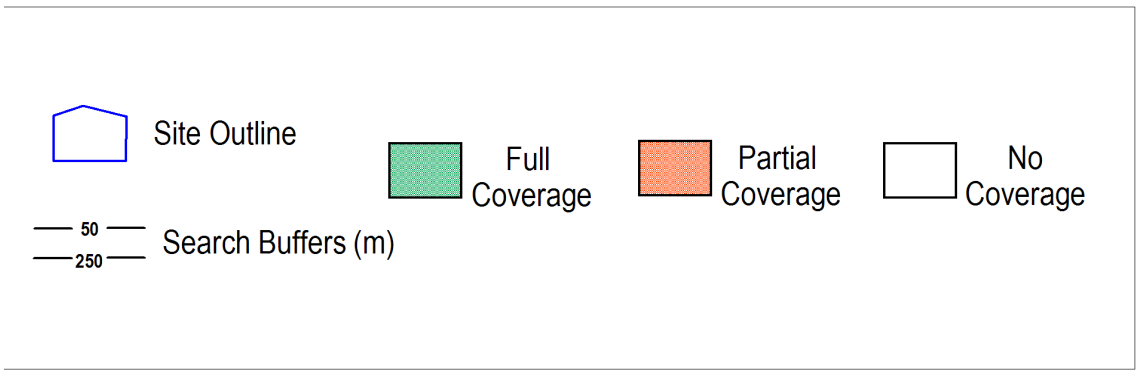


Availability of 1:10,000 Scale Geology Mapping

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	No coverage
2	11.0	No deposits are mapped	Full	Full	No coverage
3	68.0	Some deposits are mapped	Full	Full	No coverage
4	72.0	No deposits are mapped	Full	Full	No coverage

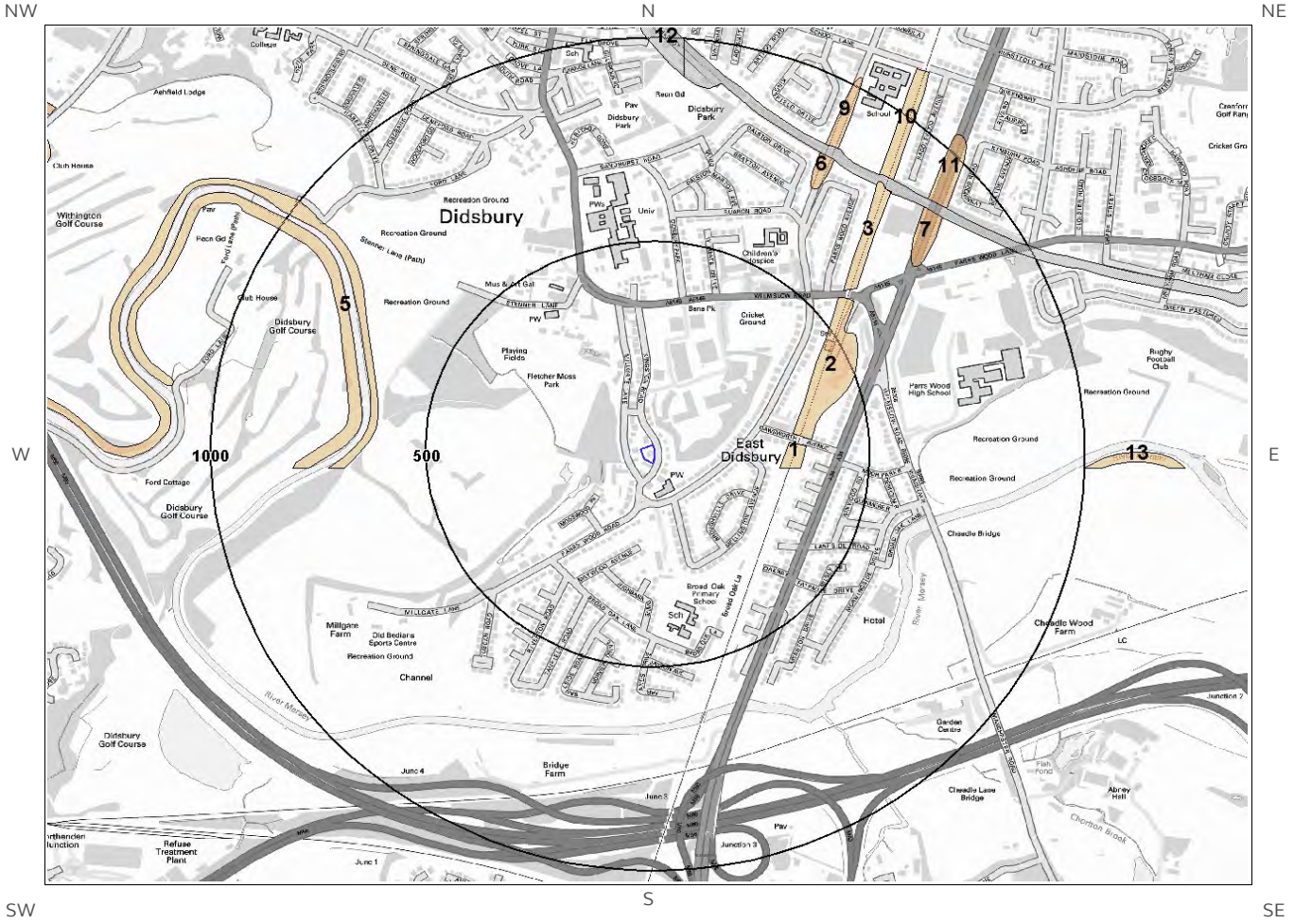
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not 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

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

1. Geology 1:10,000 scale

1.1 Artificial Ground

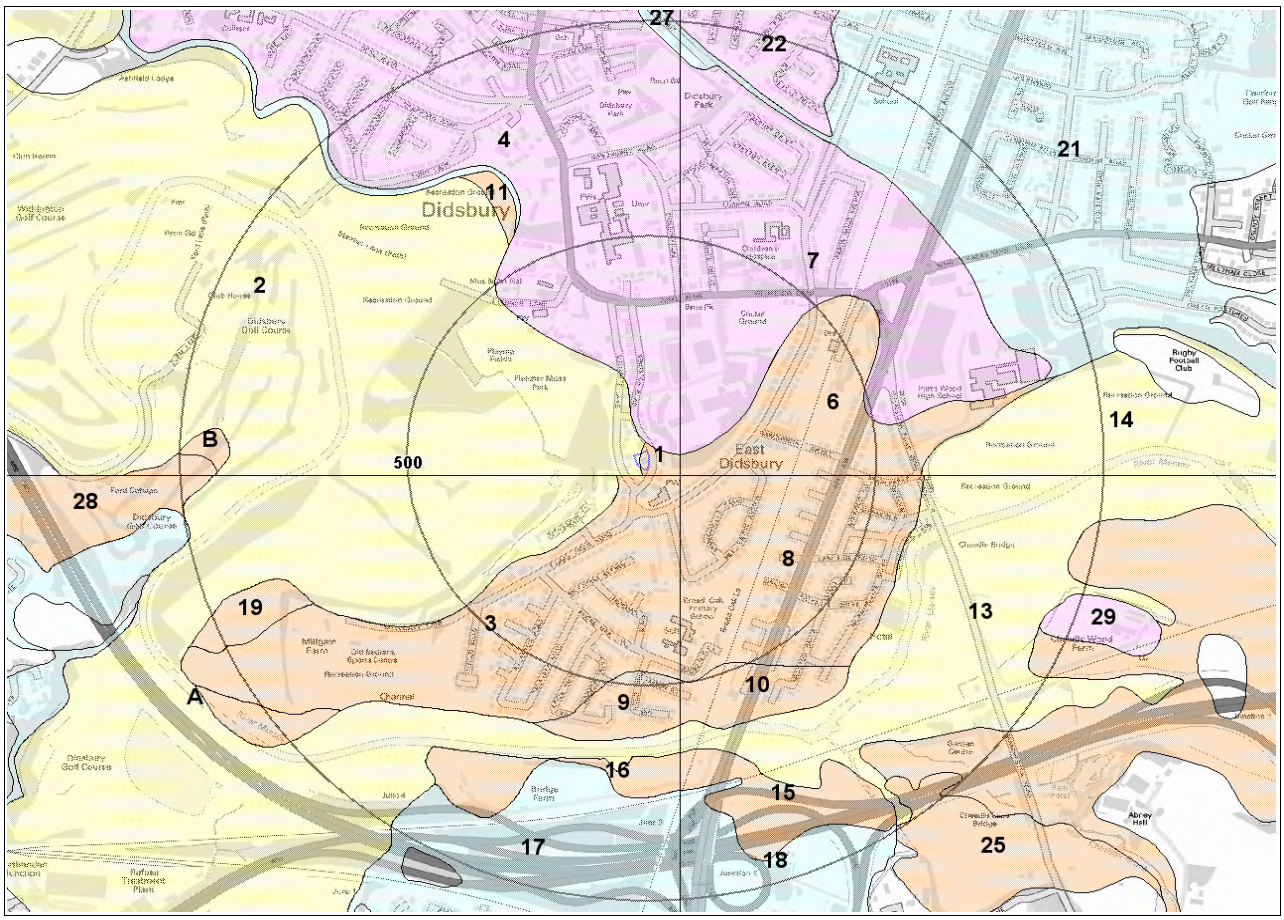
The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

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	292.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	324.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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

NW N NE



W E

SW S SE

Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

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	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
2	0.0	On Site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	11.0	S	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
4	15.0	NE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
5A	53.0	SW	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
6	68.0	E	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
7	69.0	E	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
8	72.0	E	RTD2-XSV	River Terrace Deposits, 2 - Sand And Gravel	Sand And Gravel
9	466.0	S	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel
10	479.0	S	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

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

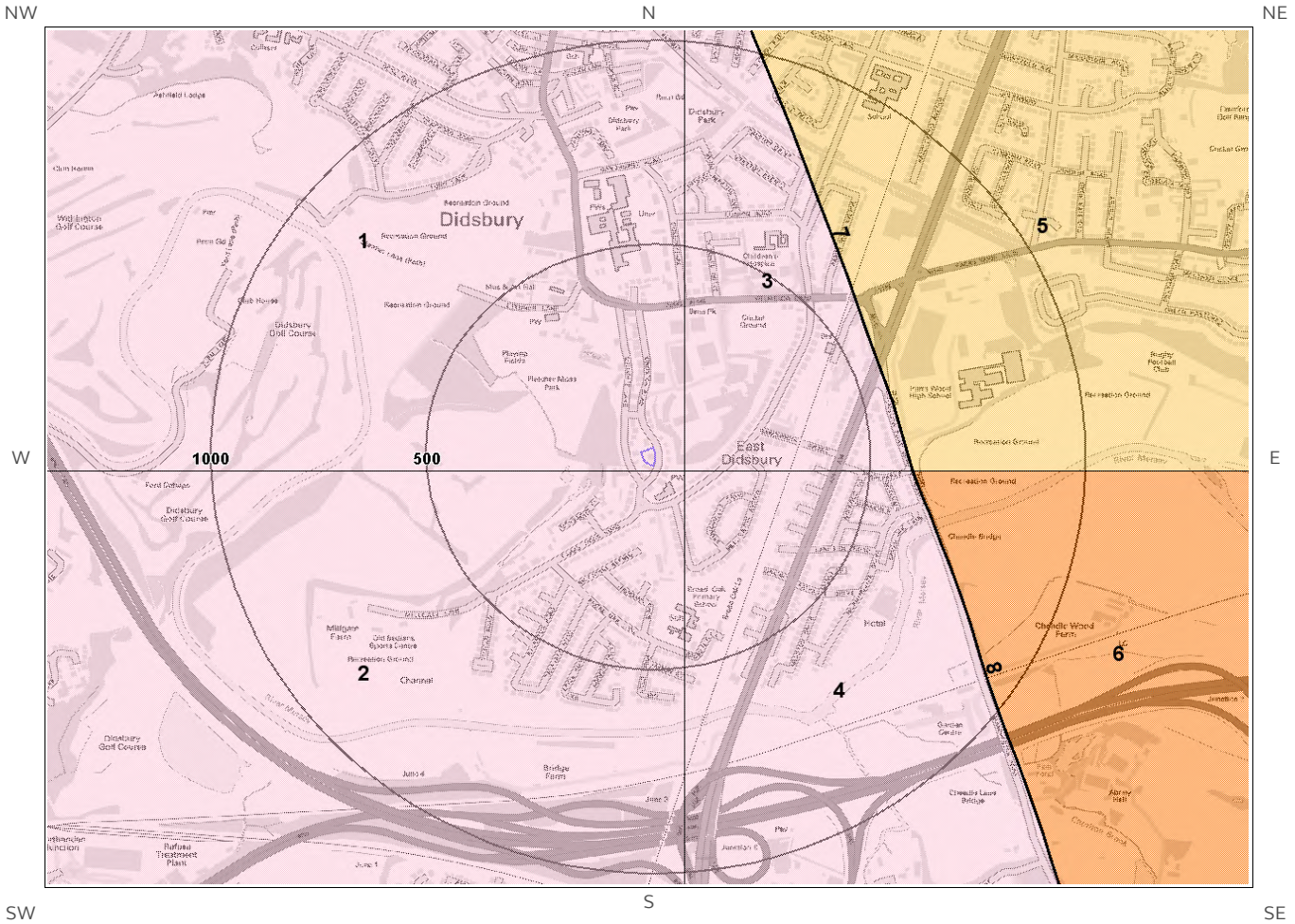
No

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 Faults Map (1:10,000 scale)



Bedrock and Faults Legend

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Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and Faults

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	WLSF-SDST	Wilmslow Sandstone Formation - Sandstone	Early Triassic Epoch
2	11.0	S	WLSF-SDST	Wilmslow Sandstone Formation - Sandstone	Early Triassic Epoch
3	68.0	E	WLSF-SDST	Wilmslow Sandstone Formation - Sandstone	Early Triassic Epoch
4	72.0	E	WLSF-SDST	Wilmslow Sandstone Formation - Sandstone	Early Triassic Epoch

1.3.2 Faults

Are there any records of Faults within 500m of the study site boundary at 1:10,000 scale? No

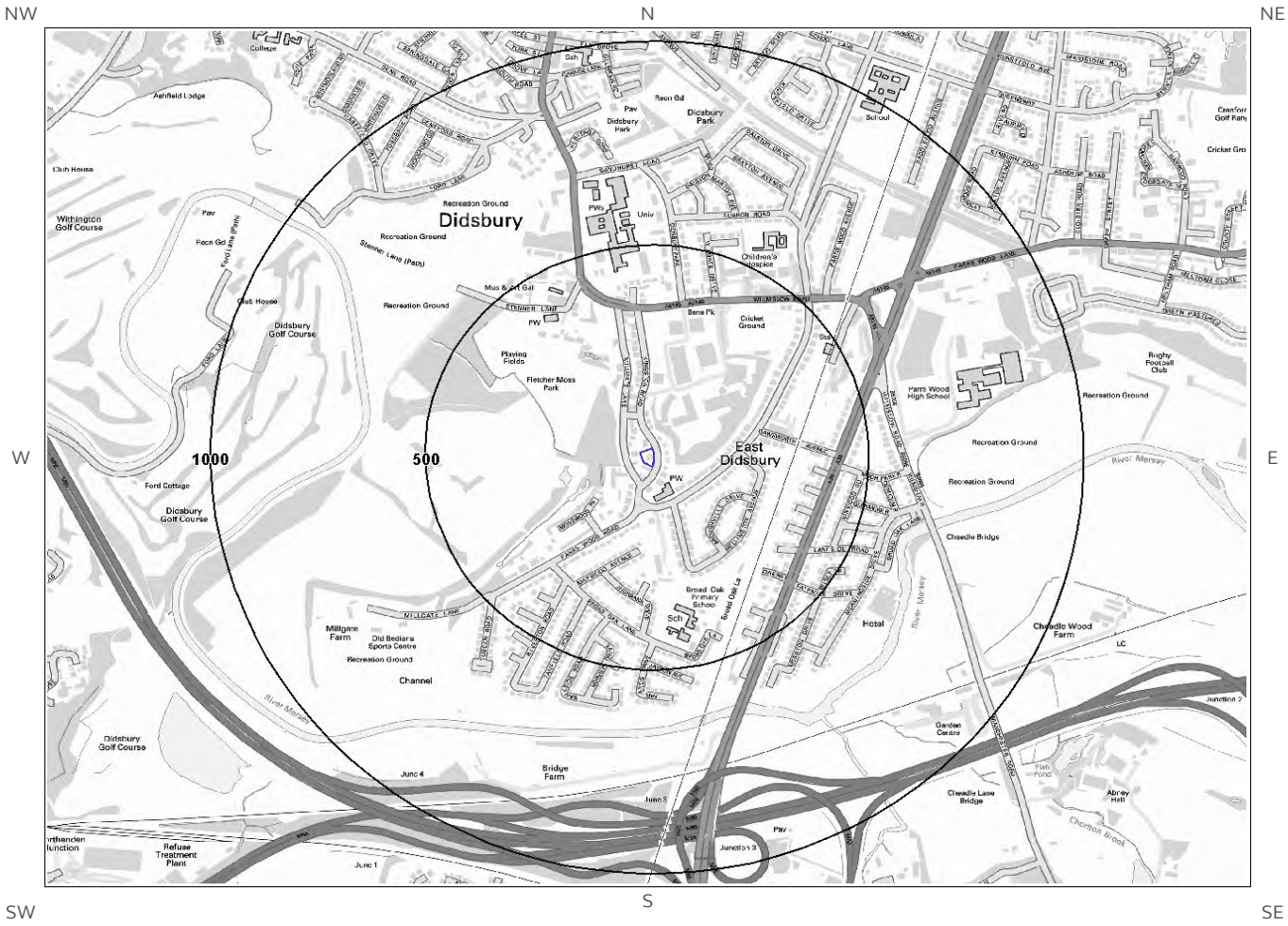
Database searched and no data found at this scale.

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



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

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: 098

2.1.1 Artificial/ Made Ground

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

Database searched and no data found.

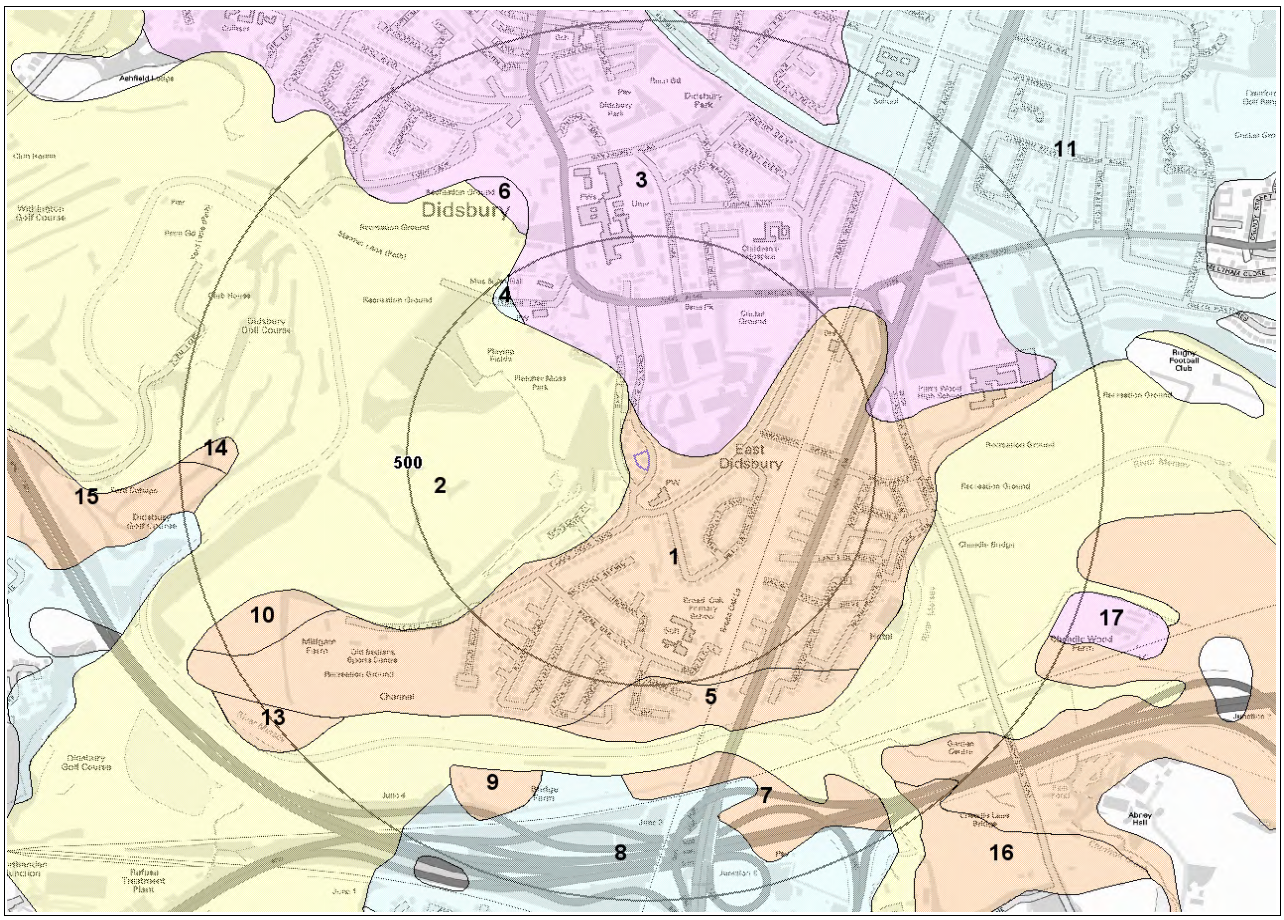
2.1.2 Permeability of Artificial Ground

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

Database searched and no data found.

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

NW N NE



W E

SW S SE

Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

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	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
2	22.0	W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	32.0	NE	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	389.0	NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
5	479.0	S	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL

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
11.0	S	Intergranular	Very High	High
22.0	W	Intergranular	High	Very Low
30.0	SW	Intergranular	High	Very Low
32.0	NE	Intergranular	Very High	High

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.

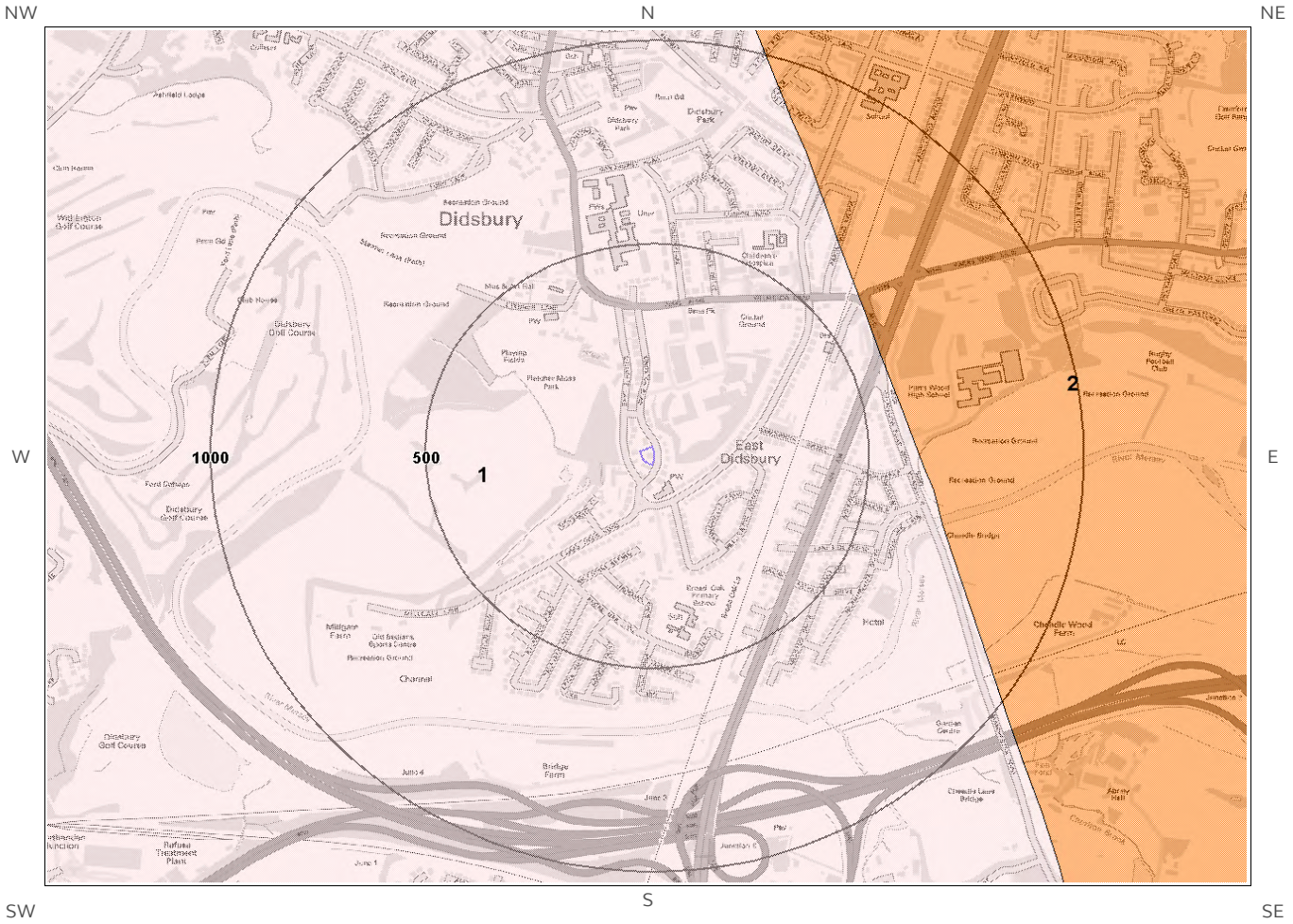
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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 Faults Map (1:50,000 scale)



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 098

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	WLSF-SDST	WILMSLOW 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	Intergranular	High	High
11.0	S	Intergranular	High	High

2.3.3 Faults

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

Database searched and no data found.

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

This Geology shows the main components as discrete layers, these are: 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

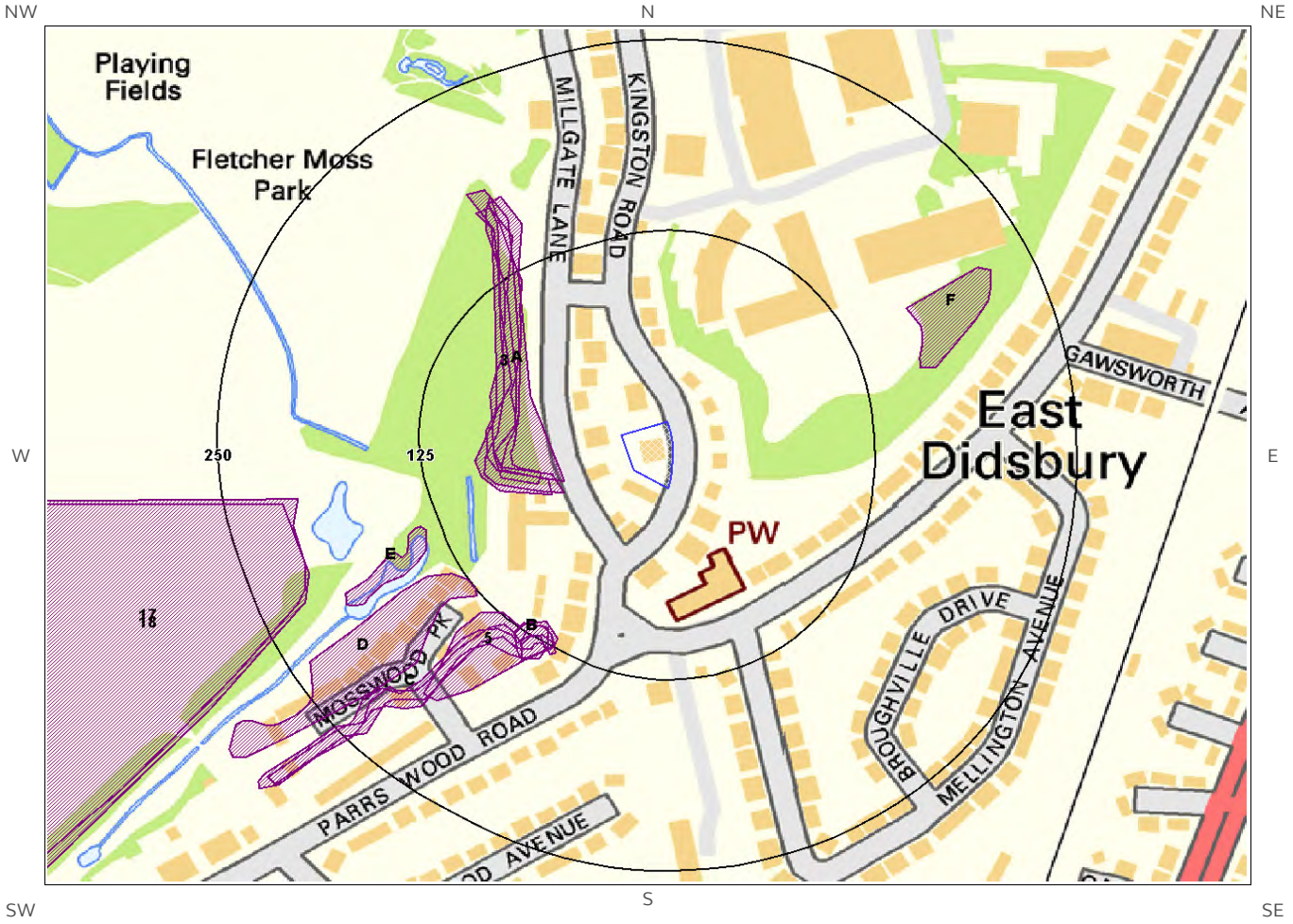
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

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Site Outline

125
250
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
1A	43.0	W	384834 390109	Unspecified Heap	1923
2A	46.0	W	384834 390105	Unspecified Ground Workings	1934
3	52.0	W	384828 390101	Unspecified Ground Workings	1923
4A	55.0	W	384833 390108	Slag Heap	1966
5	113.0	SW	384819 389901	Unspecified Heaps	1923
6B	116.0	SW	384844 389911	Unspecified Heap	1938
7B	116.0	SW	384848 389911	Unspecified Heap	1904
8C	122.0	SW	384748 389870	Unspecified Ground Workings	1949
9C	123.0	SW	384743 389867	Unspecified Ground Workings	1934
10D	125.0	SW	384734 389895	Refuse Heap	1967
11D	125.0	SW	384734 389895	Refuse Heap	1975
12E	134.0	W	384754 389960	Pond	1995
13E	134.0	W	384754 389960	Pond	1989
14F	161.0	E	385103 390123	Unspecified Heap	1983
15F	161.0	E	385103 390123	Unspecified Heap	1989
16F	161.0	E	385103 390123	Unspecified Heap	1974
17	204.0	W	384602 389887	Refuse Heap	1967
18	212.0	W	384446 389880	Refuse Heap	1975

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

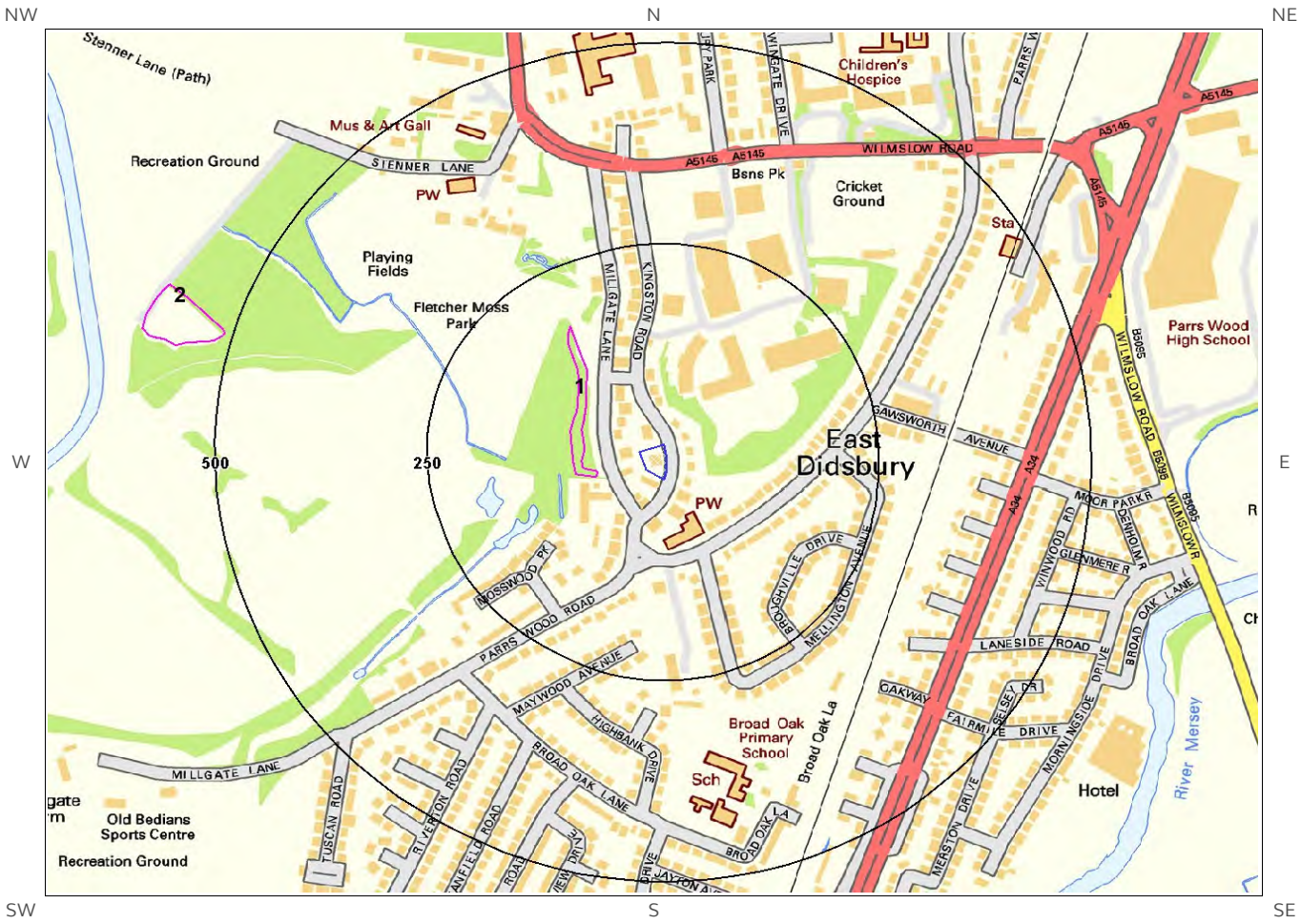
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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
Not shown	480.0	NE	385270 390392	Sand & Gravel	Parrs Wood Gravel 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

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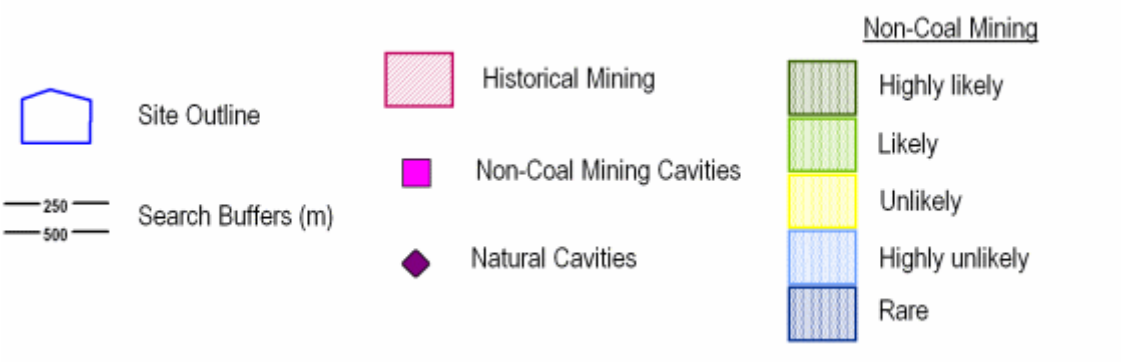


5 Mining, Extraction & Natural Cavities

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? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
1	55.0	W	384833 390108	Slag Heap	1966
2	511.0	W	384363 390216	Slag Heap	1988

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? No

Database searched and no data found.

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? Yes

The following information provided by JPB is not represented on mapping: Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

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 Peter Brett Associates natural cavities database.

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

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of 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 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin 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.

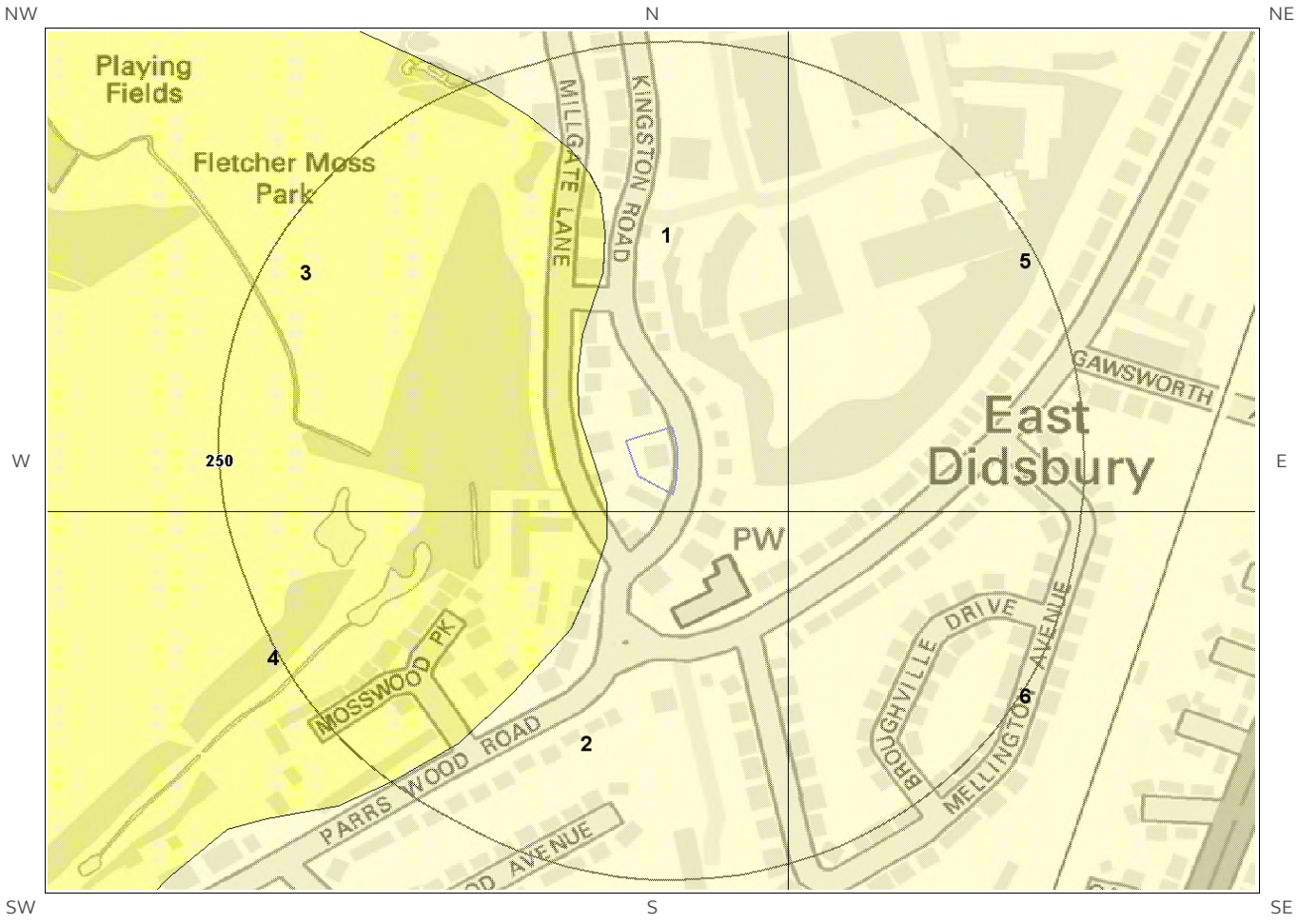
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map



Shrink Swell Clay Legend

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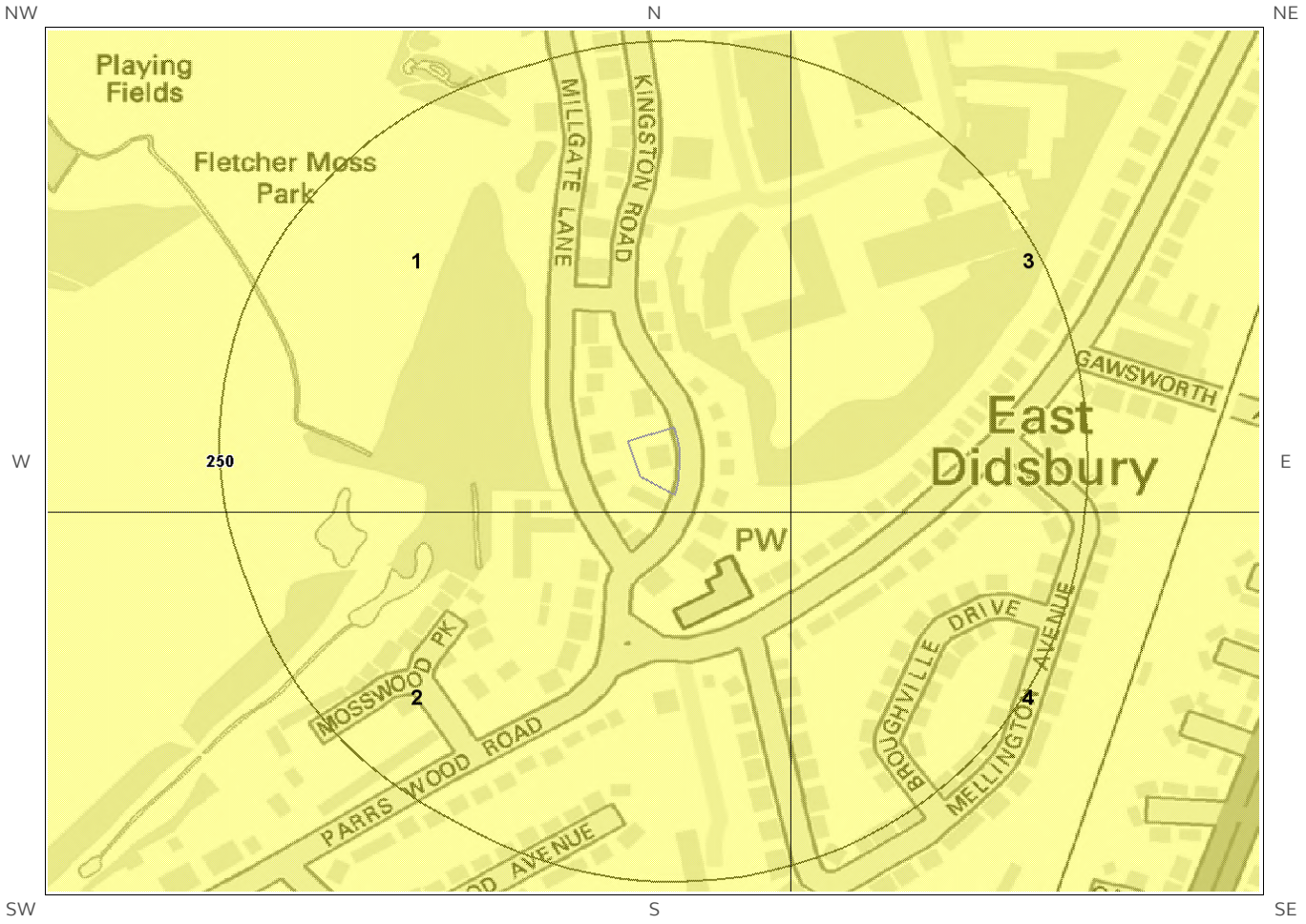
6.2 Landslides Map



Landslides Legend

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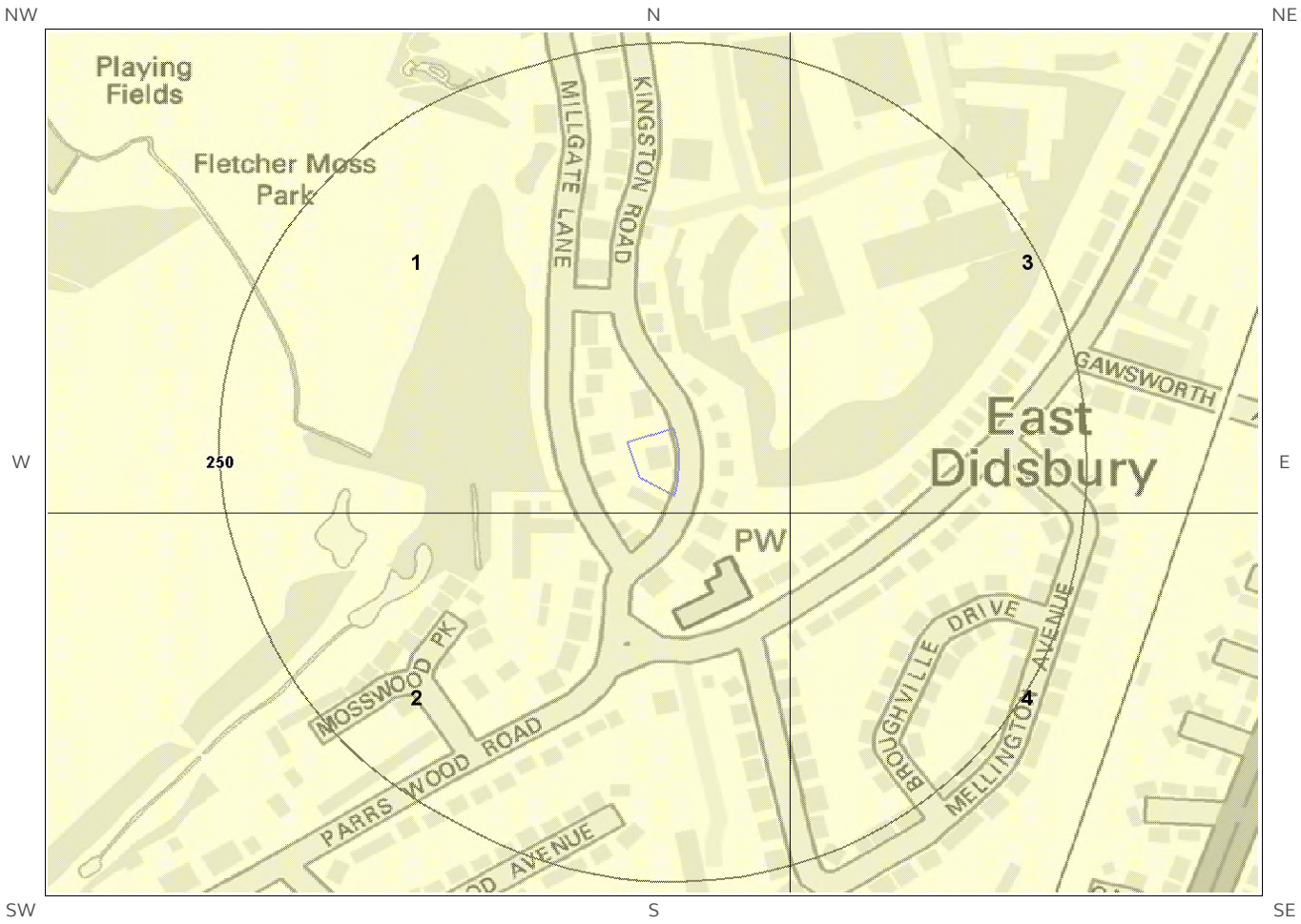
6.3 Ground Dissolution of Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend

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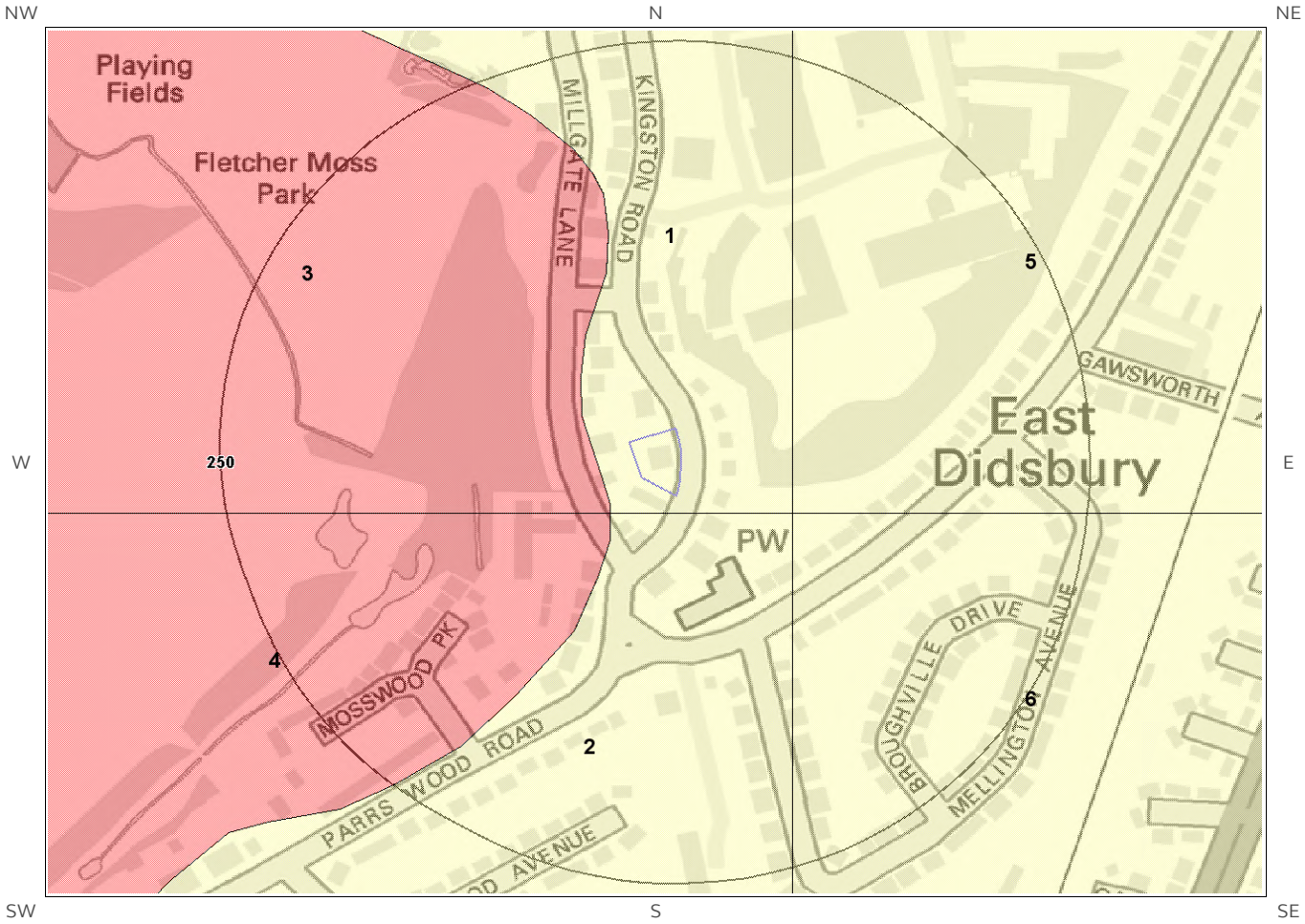
6.4 Compressible Deposits Map



Compressible Deposits Legend

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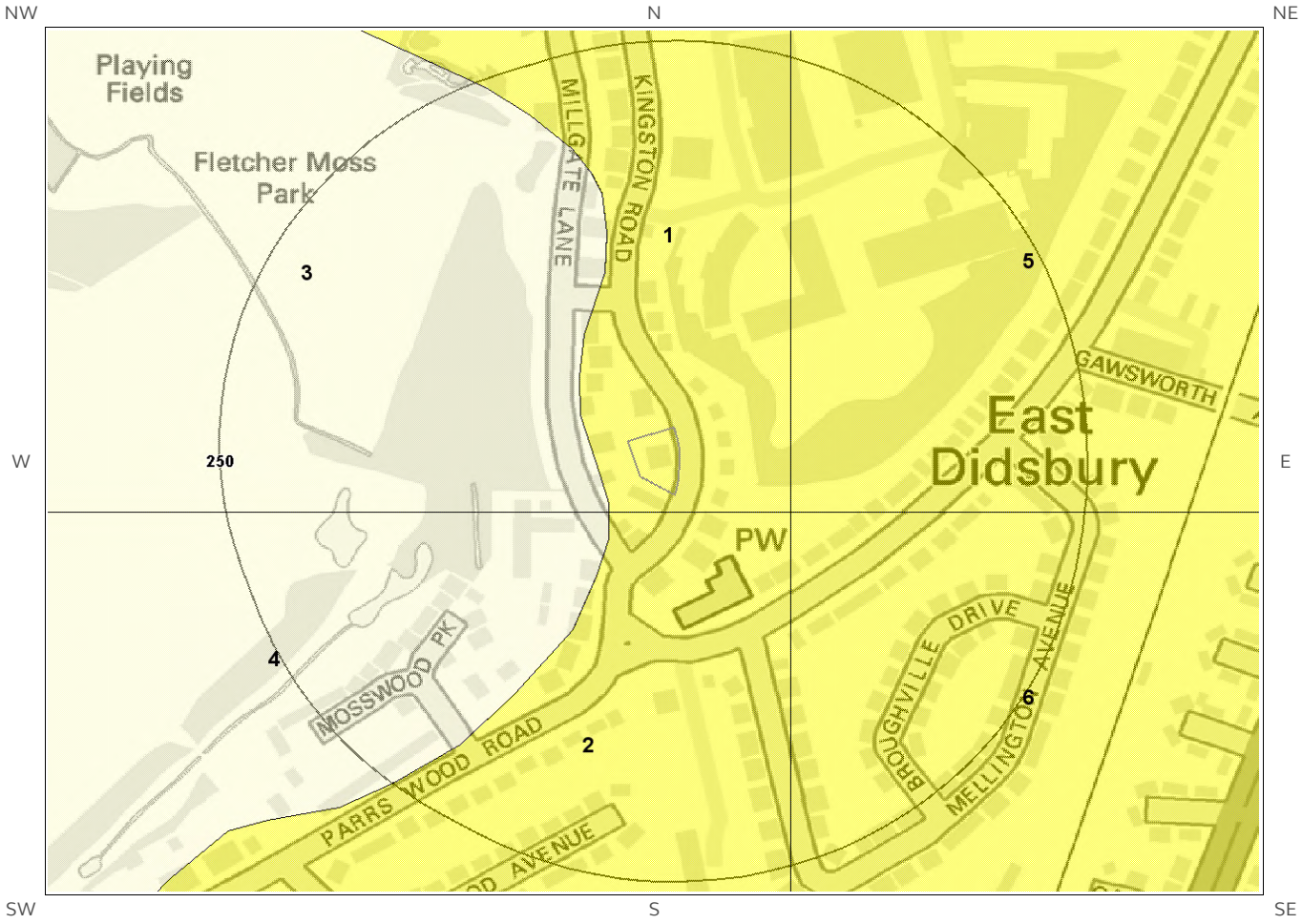
6.5 Collapsible Deposits Map



Collapsible Deposits Legend

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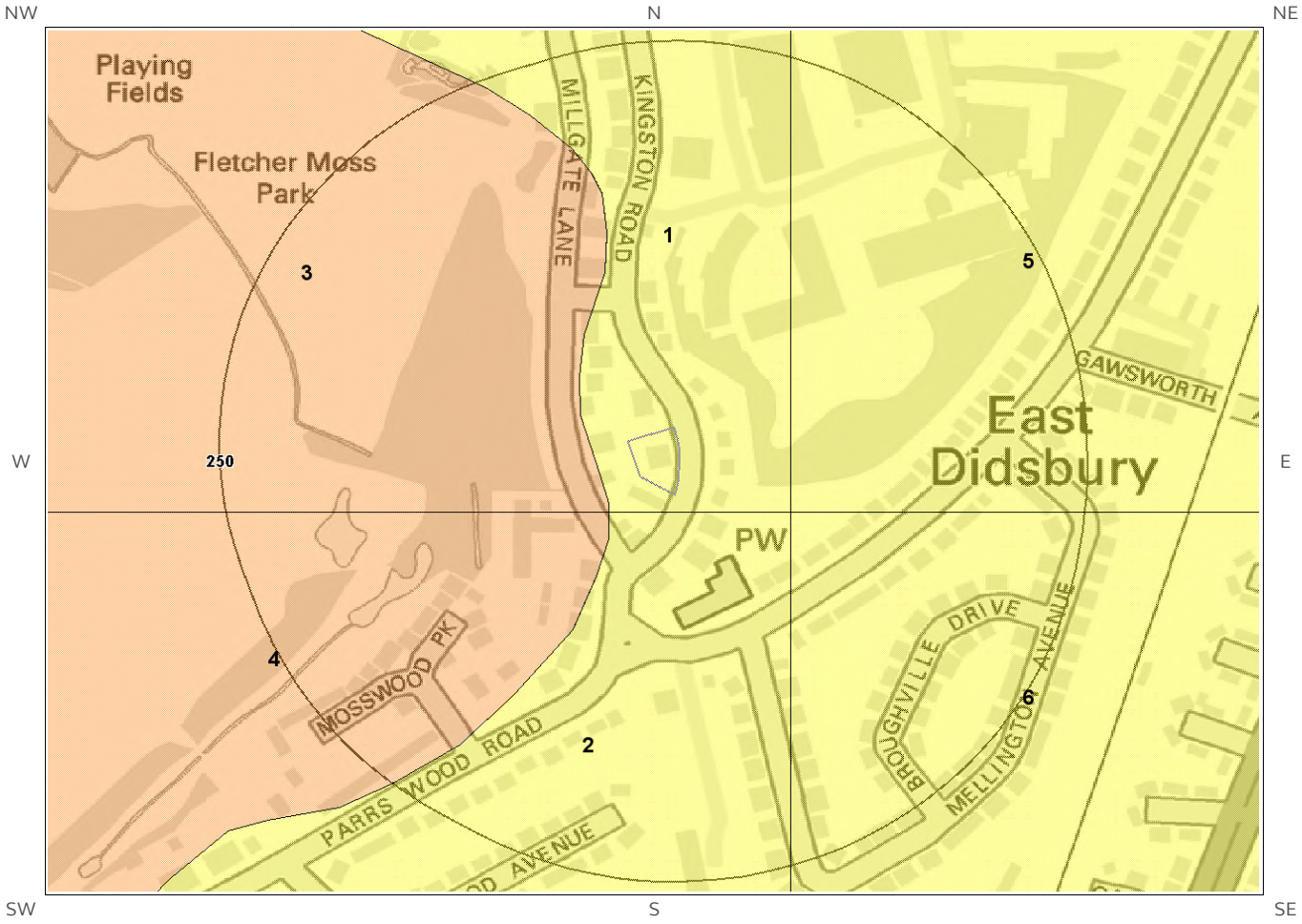
6.6 Running Sand Map



Running Sand Legend

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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? Moderate

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	11.0	S	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.
3	22.0	W	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
4	30.0	SW	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

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

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.
2	11.0	S	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.

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.
2	11.0	S	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	11.0	S	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.

ID	Distance (m)	Direction	Hazard Rating	Details
3	22.0	W	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
4	30.0	SW	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

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.
2	11.0	S	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.
3	22.0	W	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
4	30.0	SW	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

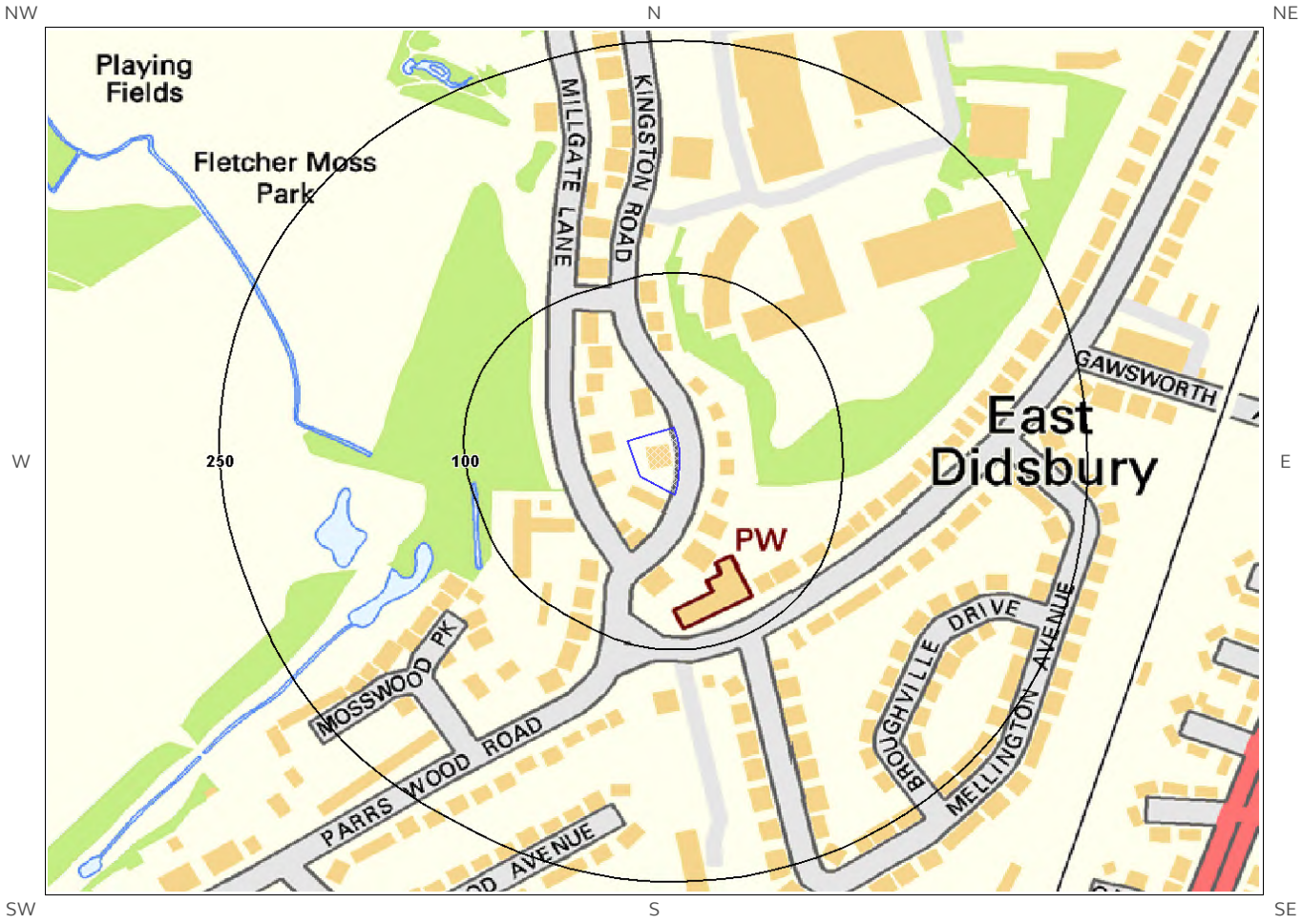
6.6 Running Sands

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.
2	11.0	S	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.

ID	Distance (m)	Direction	Hazard Rating	Details
3	22.0	W	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.
4	30.0	SW	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records Map



Borehole Records Legend

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Site Outline

Borehole Locations

125
250
Search Buffers (m)

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: 0

Database searched and no data found.

8 Estimated Background Soil Chemistry

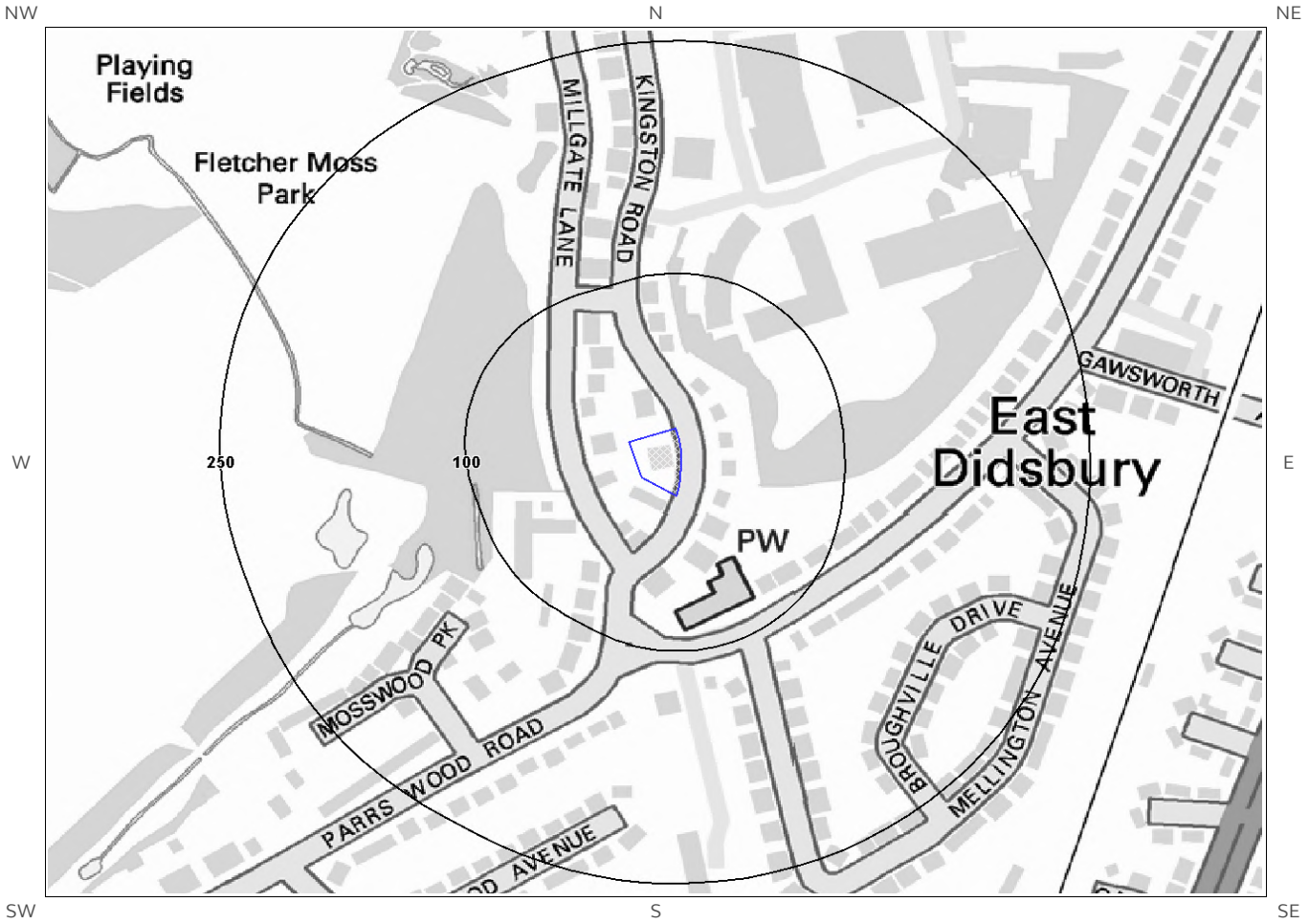
Records of background estimated soil chemistry within 250m of the study site boundary: 5

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	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
11.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
22.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
30.0	SW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
32.0	NE	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 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

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- Site Outline
- 250 / 500 Search Buffers (m)
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- High Speed 2 Revised Proposed Route
- Crossrail 1
- Railway and/or Tunnel Feature from Historical Mapping

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?	No

Database searched and no data found.

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? No

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.

APPENDIX C

EnviroInsight Report

Enviro Insight

Address:	**Kingston Road, Didsbury, M20 2SB**
Date:	**26 Jun 2017**
Reference:	**CMAPS-CM-634707-29721-260617EDR**
Client:	**CENTREMAPS**

NW N NE



W E

SW S SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 384916,390033
Site Size: 0.09ha

Report Reference: CMAPS-CM-634707-29721-260617EDR
Client Reference: 29721

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Overview of Findings

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

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	0	3	18	38
1.2 Additional Information – Historical Tank Database	0	0	6	5
1.3 Additional Information – Historical Energy Features Database	0	0	8	13
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	0	0
1.6 Potentially Infilled Land	0	3	23	10

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	0	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	0	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	1
2.1.8 Records of Licensed Discharge Consents	0	0	0	1
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	0
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	2	0	1	3
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	1	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	4	2	2	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	0

Section 4: Current Land Use

	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	0	9	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 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
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 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	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	0	0	0	9
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
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)	1	1	0	0	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 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	Yes	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	7	3	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 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	Yes
7.6 Are there any areas used for Flood Storage within 250m of the study site?	Yes
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

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	0	0
8.7 Records of Local Nature Reserves (LNR)	0	0	1	0	0	5
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	0	0	0	0	0	0
8.14 Records of Green Belt land	0	1	0	0	2	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Moderate
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Moderate
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	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 property 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 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	No
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

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

1. 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 licenses, 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.

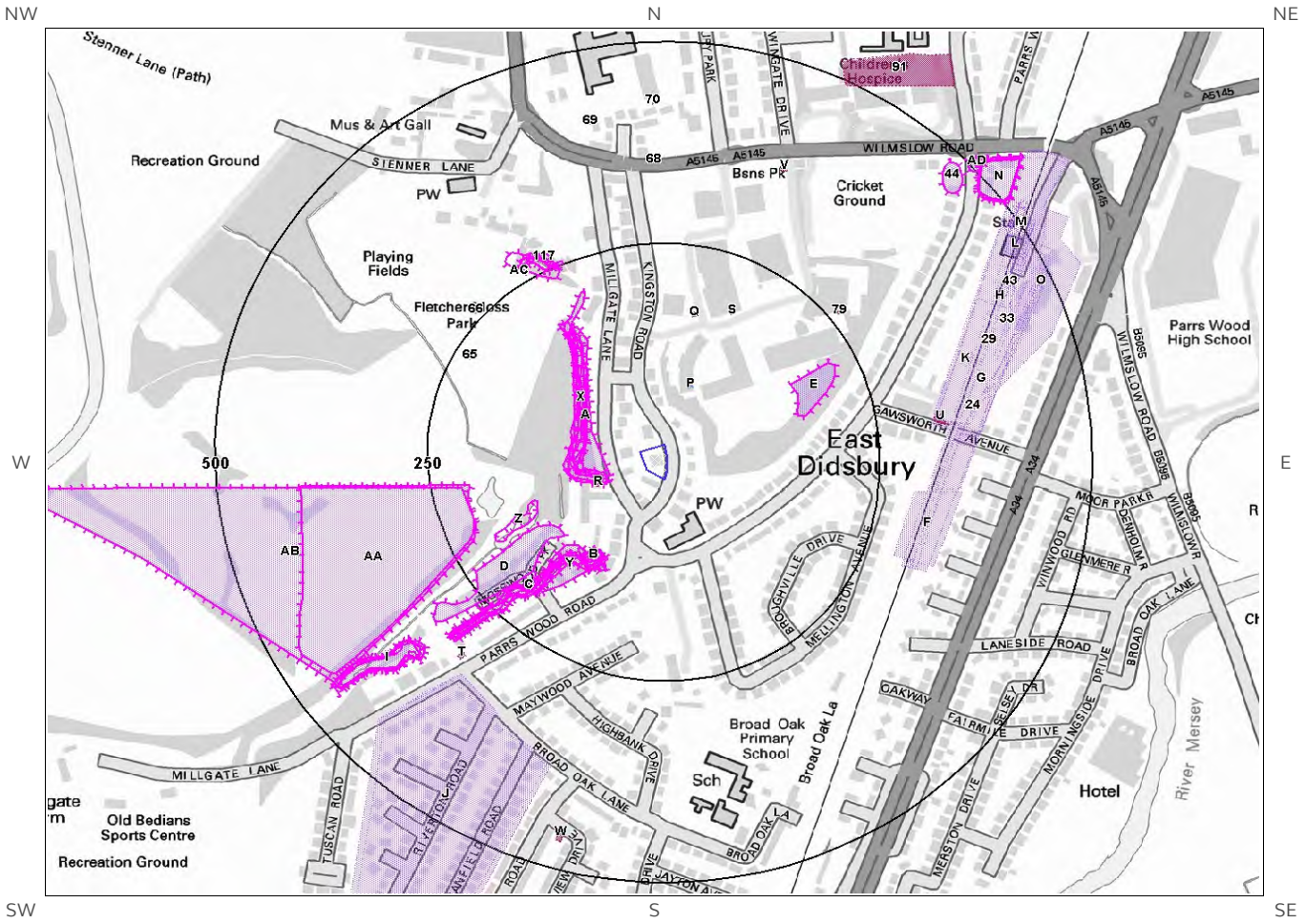
Note: Maps

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



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Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

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: 59

ID	Distance [m]	Direction	Use	Date
1A	43	W	Unspecified Heap	1923
2A	46	W	Unspecified Ground Workings	1934
3X	47	W	Unspecified Ground Workings	1938
4A	52	W	Unspecified Ground Workings	1923
5A	55	W	Slag Heap	1966
6Y	113	SW	Unspecified Heaps	1923
7B	114	SW	Unspecified Heap	1911
8B	114	SW	Unspecified Heap	1911
9B	116	SW	Unspecified Heap	1938
10B	116	SW	Unspecified Heap	1911
11C	122	SW	Unspecified Ground Workings	1954
12C	123	SW	Unspecified Ground Workings	1934
13C	125	SW	Unspecified Ground Workings	1938
14D	125	SW	Refuse Heap	1967
15D	125	SW	Refuse Heap	1975
16C	134	SW	Unspecified Ground Workings	1938
17E	161	E	Unspecified Heap	1974
18E	161	E	Unspecified Heap	1983
19E	161	E	Unspecified Heap	1989
20AA	204	W	Refuse Heap	1967
21AB	212	W	Refuse Heap	1975
22F	285	E	Railway Sidings	1966
23F	285	E	Railway Sidings	1955
24	298	E	Railway Sidings	1934
25G	303	E	Railway Sidings	1938
26G	308	E	Railway Sidings	1938
27H	313	E	Railway Sidings	1923
28G	317	E	Railway Sidings	1955
29	320	E	Railway Sidings	1923
30H	322	E	Railway Sidings	1974

31J	335	SW	Nursery	1923
32I	340	SW	Refuse Heap	1954
33	342	E	Railway Sidings	1965
34I	343	SW	Refuse Heap	1938
35I	346	SW	Refuse Heap	1938
36J	348	SW	Nursery	1934
37I	349	SW	Refuse Heap	1934
38K	363	E	Railway Building	1923
39K	372	E	Railway Building	1923
40M	412	NE	Railway Sidings	1983
41L	439	NE	Railway Station	1938
42H	440	NE	Railway Building	1923
43	449	NE	Railway Building	1923
44	458	NE	Gravel Pit	1851
45L	465	NE	Railway Station	1989
46L	465	NE	Railway Station	1983
47M	467	NE	Railway Station	1923
48L	468	NE	Railway Station	1938
49M	470	NE	Railway Station	1934
50O	470	NE	Railway Buildings	1974
51M	476	NE	Railway Station	1955
52M	476	NE	Railway Station	1923
53M	482	NE	Railway Station	1974
54M	482	NE	Railway Station	1965
55N	485	NE	Unspecified Pit	1938
56N	485	NE	Unspecified Pit	1938
57N	486	NE	Unspecified Pit	1934
58O	488	NE	Railway Building	1983
59AD	495	NE	Unspecified Heap	1923

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: 11

ID	Distance (m)	Direction	Use	Date
60P	75	N	Unspecified Tank	1955
61P	75	N	Unspecified Tank	1974
62P	75	N	Unspecified Tank	1955
63Q	162	N	Unspecified Tank	1990
64Q	162	N	Unspecified Tank	1974
65	230	NW	Unspecified Tank	1922

66	258	NW	Unspecified Tank	1881
67AC	262	NW	Pump and Tank	1881
68	350	N	Unspecified Tank	1881
69	407	N	Unspecified Tank	1881
70	423	N	Pump and Tank	1881

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: 21

ID	Distance (m)	Direction	Use	Date
71R	57	W	Electricity Substation	1974
72R	57	W	Electricity Substation	1997
73R	58	W	Electricity Substation	1990
74Q	163	N	Electricity Substation	1997
75S	179	NE	Electricity Substation	1982
76S	179	NE	Electricity Substation	1988
77S	179	NE	Electricity Substation	1992
78S	179	NE	Electricity Substation	1975
79	260	NE	Electricity Substation	1992
80T	312	SW	Electricity Substation	1992
81T	312	SW	Electricity Substation	1986
82U	317	E	Electricity Substation	1975
83U	317	E	Electricity Substation	1982
84U	317	E	Electricity Substation	1988
85U	317	E	Electricity Substation	1992
86V	366	N	Electricity Substation	1988
87V	366	N	Electricity Substation	1982
88V	366	N	Electricity Substation	1992
89W	450	S	Electricity Substation	1986
90W	452	S	Electricity Substation	1992
91	495	NE	Electricity House	1975

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: 0

Database searched and no data found.

1.6 Potentially Infilled Land

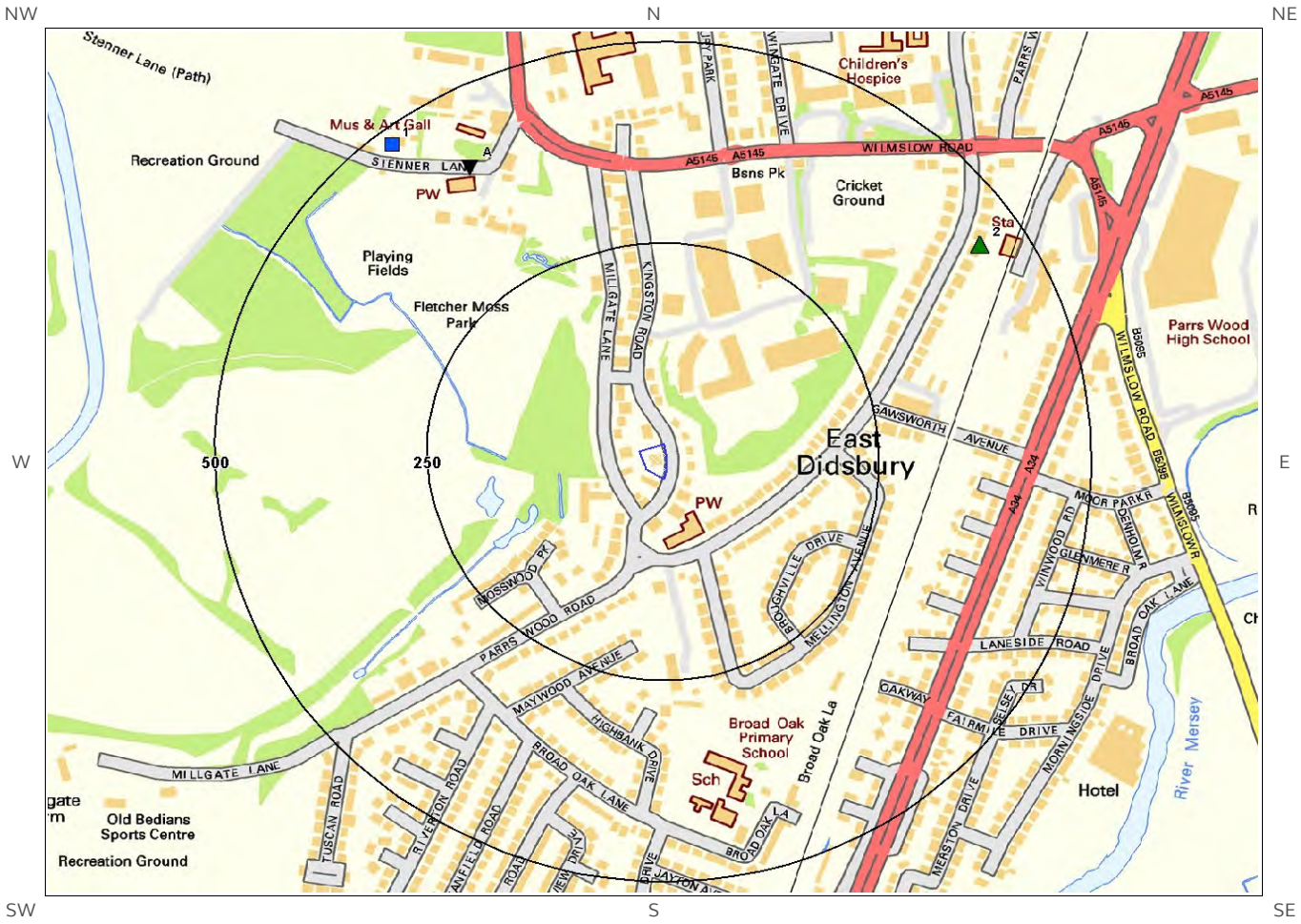
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 36

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

ID	Distance(m)	Direction	Use	Date
92A	43	W	Unspecified Heap	1923
93A	46	W	Unspecified Ground Workings	1934
94X	47	W	Unspecified Ground Workings	1938
95A	52	W	Unspecified Ground Workings	1923
96X	55	W	Slag Heap	1966
97Y	113	SW	Unspecified Heaps	1923
98B	114	SW	Unspecified Heap	1911
99B	114	SW	Unspecified Heap	1911
100B	116	SW	Unspecified Heap	1938
101B	116	SW	Unspecified Heap	1911
102C	122	SW	Unspecified Ground Workings	1954
103C	123	SW	Unspecified Ground Workings	1934
104C	125	SW	Unspecified Ground Workings	1938
105D	125	SW	Refuse Heap	1975
106D	125	SW	Refuse Heap	1967
107C	134	SW	Unspecified Ground Workings	1938
108Z	134	W	Pond	1989
109Z	134	W	Pond	1995
110E	161	E	Unspecified Heap	1989
111E	161	E	Unspecified Heap	1974
112E	161	E	Unspecified Heap	1983
113AA	204	W	Refuse Heap	1967
114AB	212	W	Refuse Heap	1975

115AC	237	NW	Pond	1851
116AC	247	NW	Pond	1938
117	250	N	Pond	1955
118AC	251	NW	Pond	1934
119I	340	SW	Refuse Heap	1954
120I	343	SW	Refuse Heap	1938
121I	346	SW	Refuse Heap	1938
122I	349	SW	Refuse Heap	1934
123AD	458	NE	Gravel Pit	1851
124N	485	NE	Unspecified Pit	1938
125N	485	NE	Unspecified Pit	1938
126N	486	NE	Unspecified Pit	1934
127AD	495	NE	Unspecified Heap	1923

2. Environmental Permits, Incidents and Registers Map



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

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:

0

Database searched and no data found.

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:

1

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	
2	445	NE	385300 390300	Address: Parrswood Serv Stn, Wilmslow Rd, M20 5WP Process: Petrol Vapour Recovery Process 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:

1

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
4A	407	NW	384700 390400	British Textile Technology Group, Shirley Towers, Wilmslow Road, Didsbury, Manchester, M20 2RB	British Textile Technology Group	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AQ7445	Date of Approval:16/3/1995 Effective from:31/3/1995 Last date of update:2015-01-01	Revoked/cancelled

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

1

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

ID	Distance (m)	Direction	NGR	Details	
1	480	NW	384608 390427	Address: FERNBANK, STENNER LA, DIDSBURY, MANCHESTER, M20 2RQ Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 01M/390 Permit Version: 1	Receiving Water: TRIB OF RIVER MERSEY Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: 07/06/1962 Effective Date: 07-Jun-1962 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:

0

Database searched and no data found.

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

0

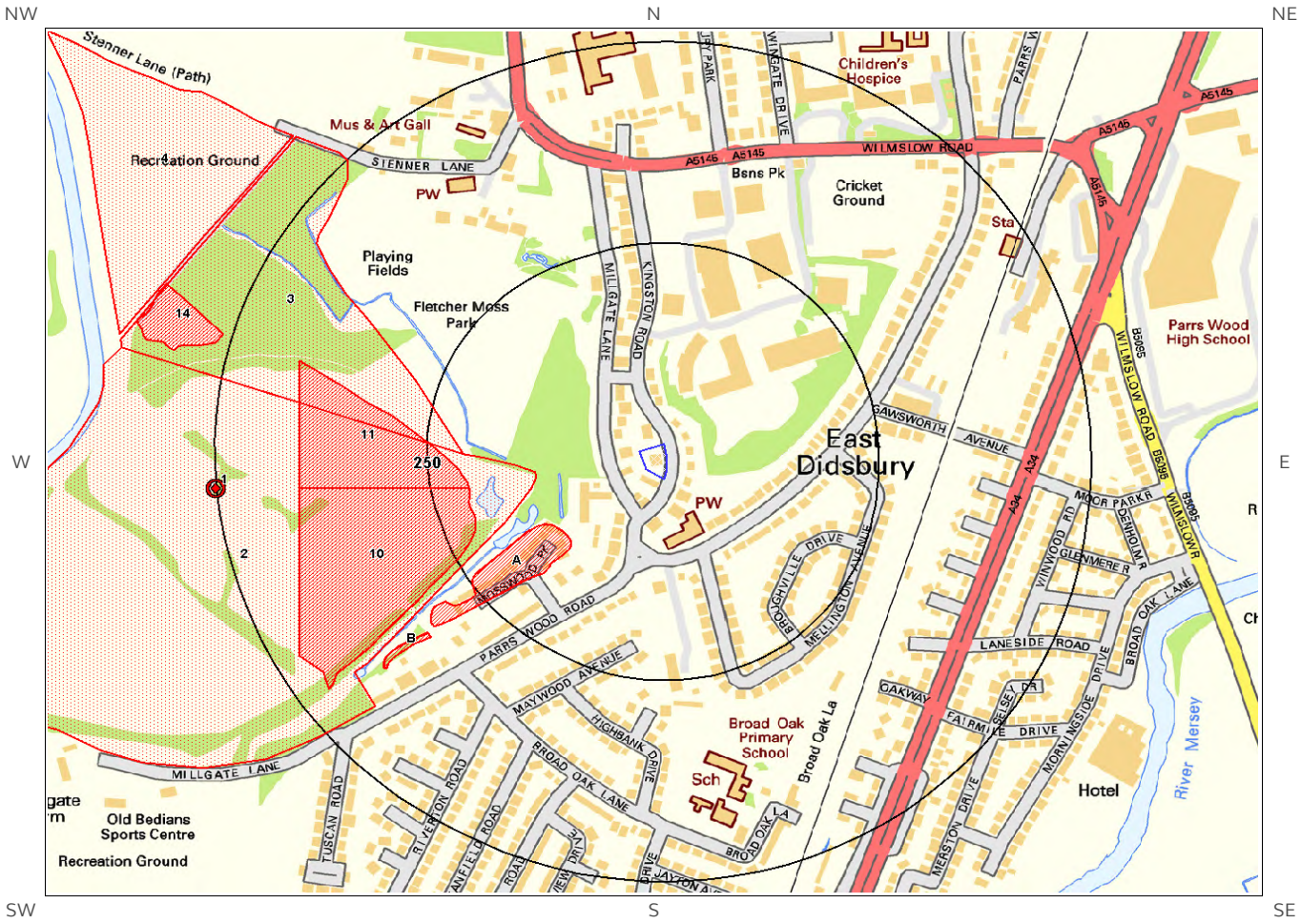
Database searched and no data found.

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

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

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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Site Outline

250 Search Buffers (m)
500

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

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:

6

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	125	W	384200 389800	Site Address: Parrs Wood Road, Manchester Waste Licence: - Site Reference: F014 Waste Type: Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Manchester Corporation Cleansing Department Licence Holder: - First Recorded: 30-Nov-1959 Last Recorded: 31-Dec-1976
3	208	W	384400 390200	Site Address: Parrs Wood Road, Didsbury, Manchester Waste Licence: Yes Site Reference: F014 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid, sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 01-Jan-1974 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Manchester City Council First Recorded: 31-Dec-1947 Last Recorded: 31-Aug-1976
4	564	NW	384300 390300	Site Address: Parrs Wood Road, Manchester, Greater Manchester Waste Licence: Yes Site Reference: F014 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid, sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 01-Jan-1974 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Manchester City Council First Recorded: 31-Dec-1947 Last Recorded: 31-Aug-1976
Not shown	1123	SW	384100 388900	Site Address: Brookside Road, Gatley, Greater Manchester Waste Licence: - Site Reference: J045 Waste Type: Household 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	
Not shown	1272	E	386400 389900	Site Address: Melland And Coward Tip, Heaton Mersey, Manchester Waste Licence: - Site Reference: JO89 Waste Type: Liquid, sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1409	NE	386300 390900	Site Address: Heaton Mersey Common, Greater Manchester Waste Licence: - Site Reference: J052 Waste Type: Household 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:

1

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

ID	Distance (m)	Direction	NGR	Details	
1	502	W	384400.0 390000.0	Address: Parkwood Rd Tip, Parkwood Rd, Dewsbury, Manchester BGS Number: 847.0	Risk: No risk to aquifer Waste Type: N/A

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

8

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
8A	124	SW	384737 389892	Refuse Tip	1966 mapping	Polygon
9A	124	SW	384737 389892	Refuse Tip	1963 mapping	Polygon
10	205	W	384603 389875	Refuse Tip	1963 mapping	Polygon
11	205	W	384599 390079	Refuse Tip	1973 mapping	Polygon
12B	328	SW	384616 389799	Refuse Tip	1963 mapping	Polygon
13B	328	SW	384615 389798	Refuse Tip	1966 mapping	Polygon
14	512	W	384358 390213	Refuse Tip	1988 mapping	Polygon
Not shown	932	SW	384084 389436	Refuse Tip	1976 mapping	Polygon

3.2 Other Waste Sites

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

0

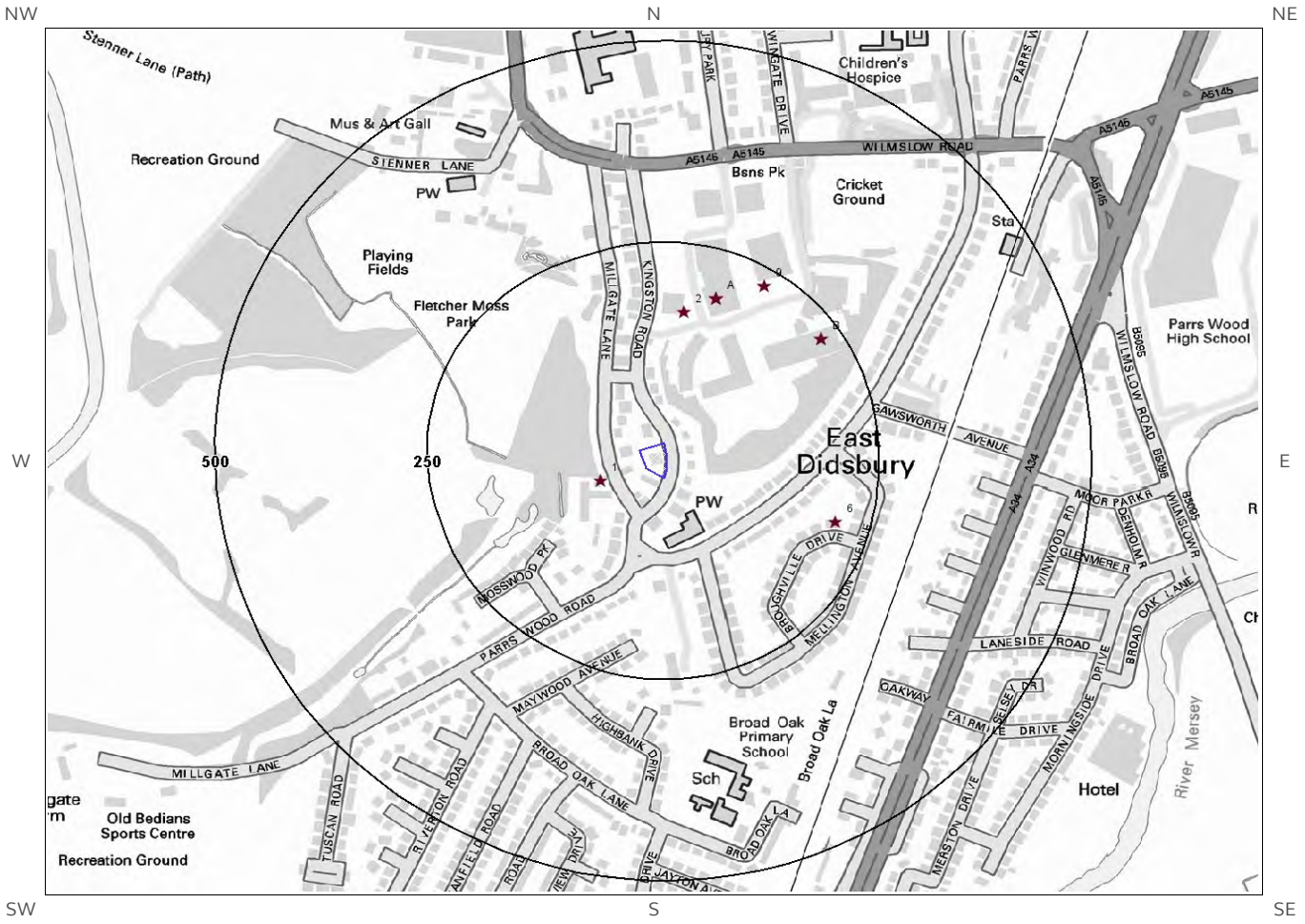
Database searched and no data found.

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

0

Database searched and no data found.

4. Current Land Use Map



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Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 9

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	56	W	Electricity Sub Station	384853 390009	Electricity Sub Station, M20	Electrical Features	Infrastructure and Facilities
2	166	N	Electricity Sub Station	384951 390219	Electricity Sub Station, M20	Electrical Features	Infrastructure and Facilities
3A	191	N	Gallus Group	384989 390235	Gallus Group, Adamson House Towers Business Park, Wilmslow Road, Manchester, M20 2YY	Printing Related Machinery	Industrial Products
4A	191	N	I T S Communications	384989 390235	I T S Communications, Adamson House Towers Business Park, Wilmslow Road, Manchester, M20 2YY	Radar and Telecommunications Equipment	Industrial Products
5A	191	N	Beat My Waste Quote	384989 390235	Beat My Waste Quote, Adamson House Towers Business Park, Wilmslow Road, Manchester, M20 2YY	Recycling, Reclamation and Disposal	Recycling Services
6	208	E	S T E Waste	385130 389957	S T E Waste, 2, Broughville Drive, Manchester, M20 5WH	Recycling, Reclamation and Disposal	Recycling Services
7B	226	NE	Greenergy	385113 390185	Greenergy, Egerton House Towers Business Park, Wilmslow Road, Manchester, M20 2DX	Fuel Distributors and Suppliers	Household, Office, Leisure and Garden
8B	226	NE	Nordex UK	385113 390185	Nordex UK, Egerton House Towers Business Park, Wilmslow Road, Manchester, M20 2DX	Electrical Production and Manipulation Equipment	Industrial Products
9	229	NE	Electricity Sub Station	385046 390251	Electricity Sub Station, M20	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

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

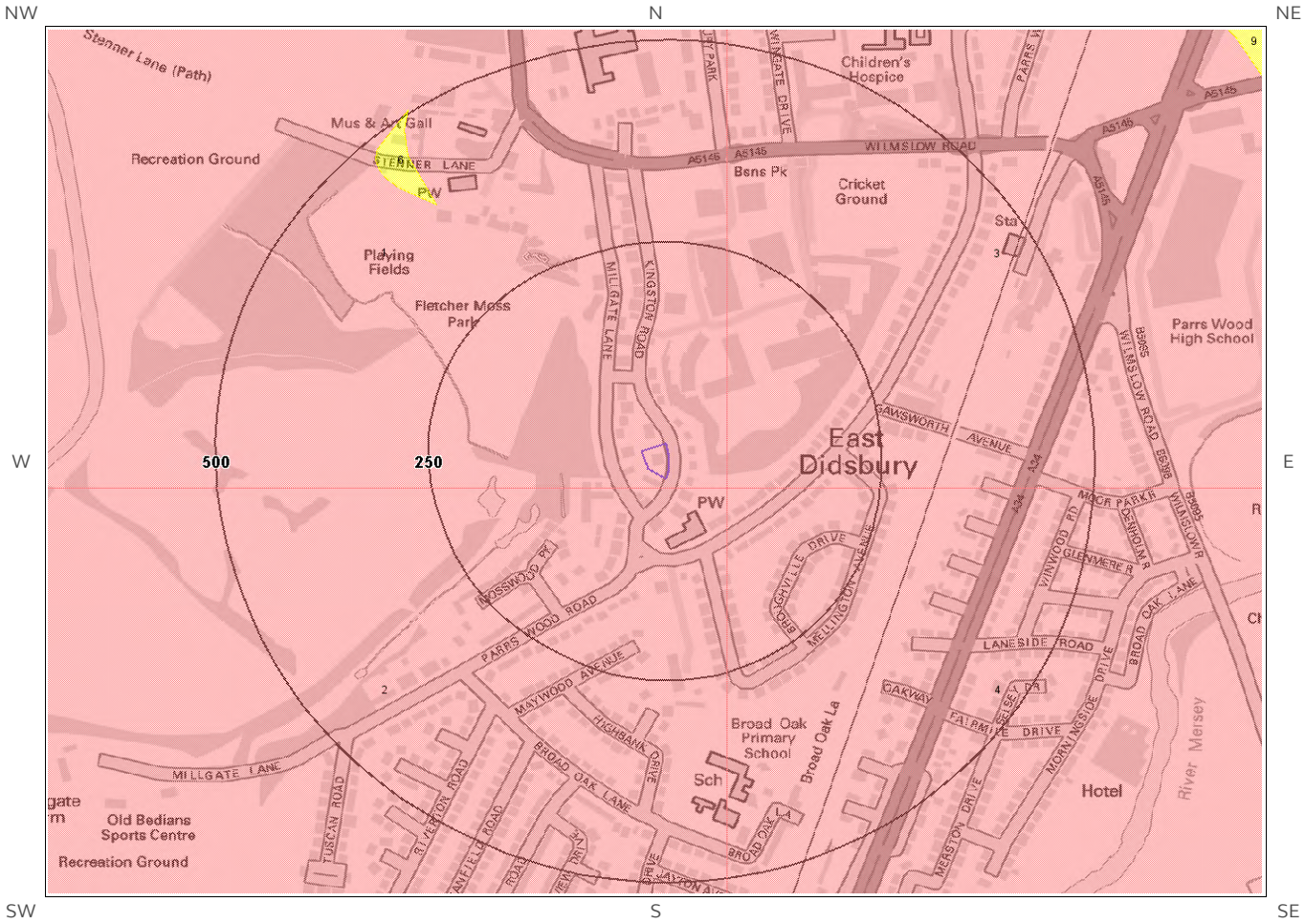
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
WLSF-SDST	WILMSLOW SANDSTONE FORMATION	SANDSTONE

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

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

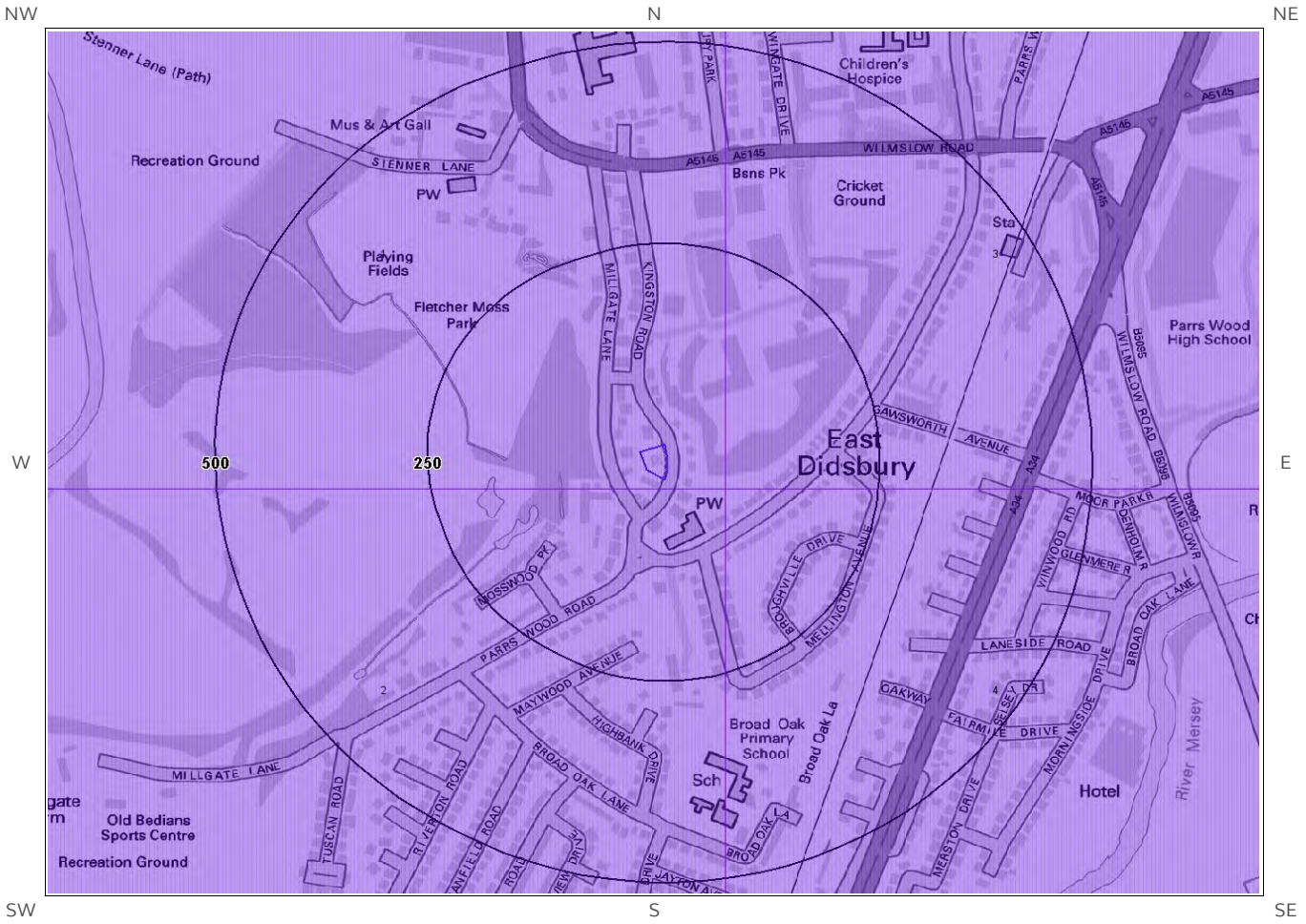
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

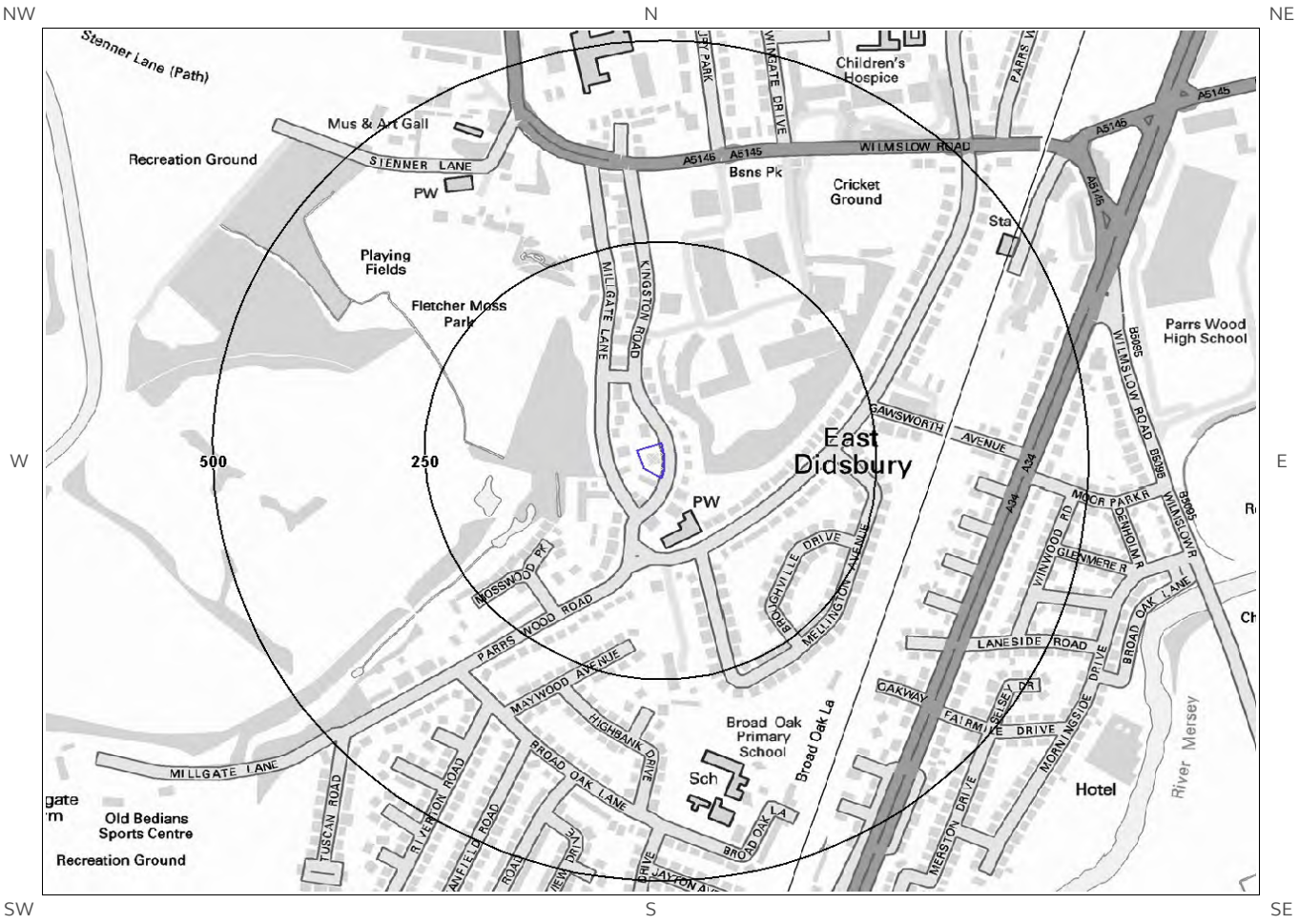
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



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Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

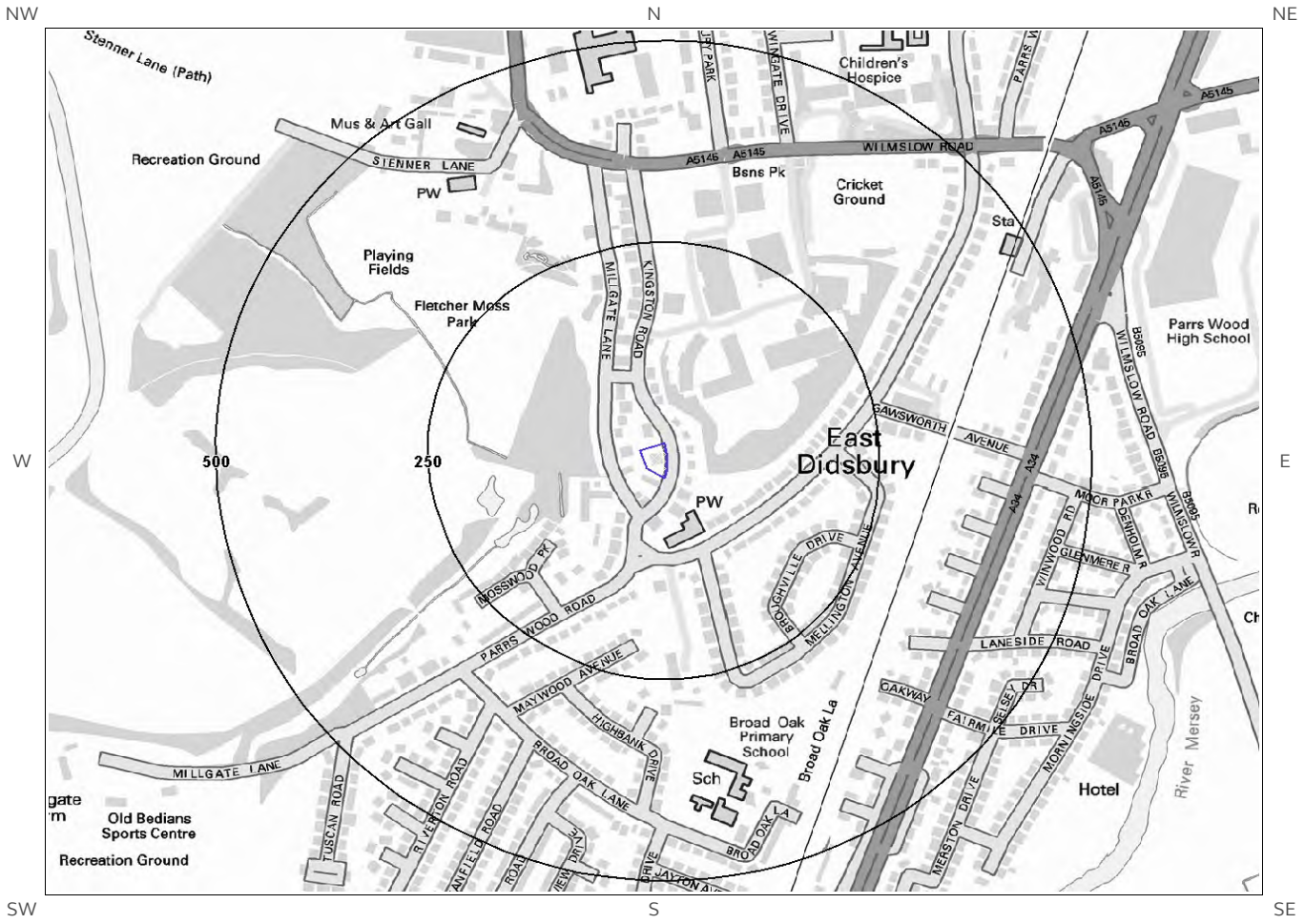
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

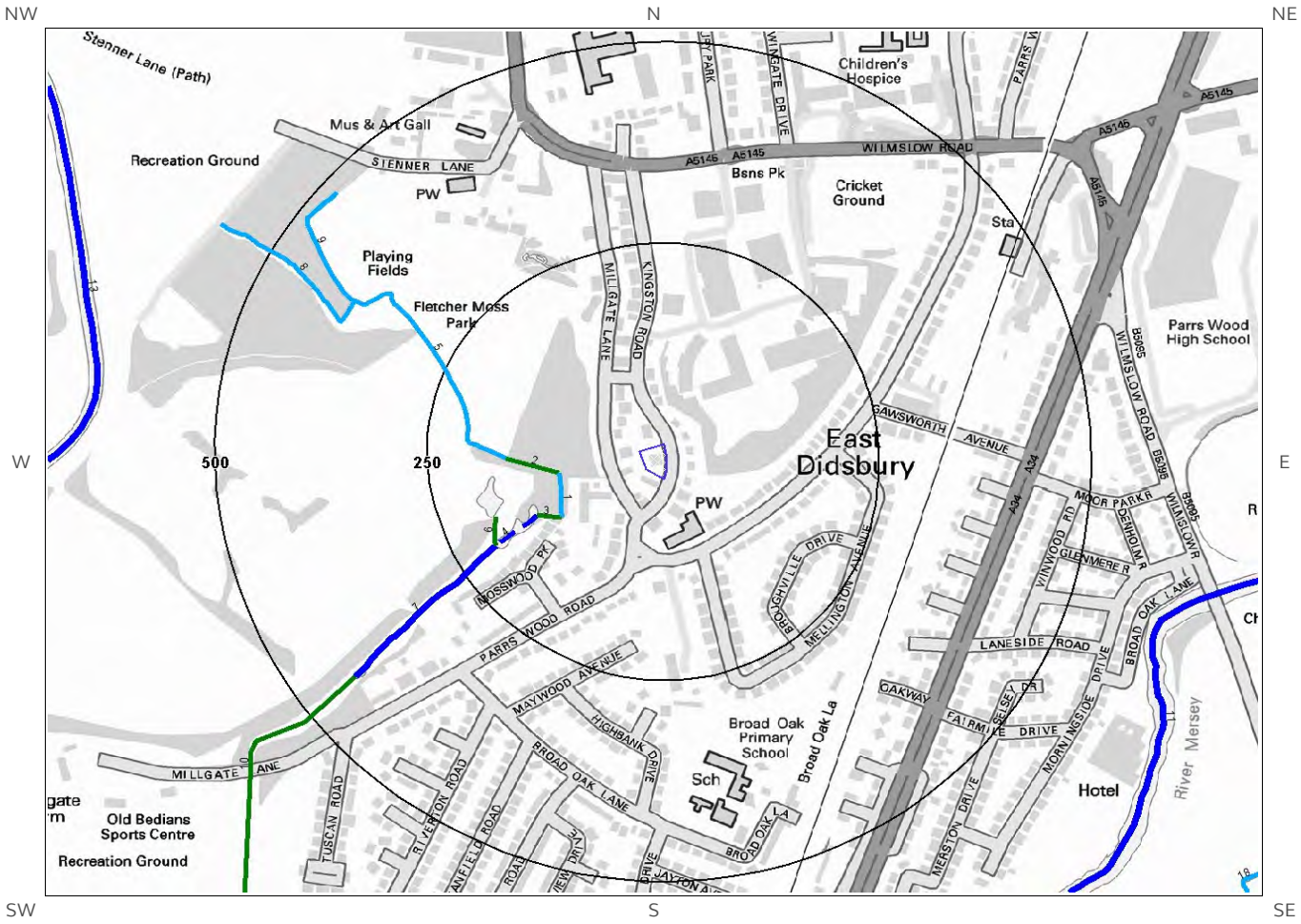
Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

Site Outline

250
500
Search Buffers (m)

6e. Hydrology – Detailed River Network and River Quality



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Site Outline

250
500
Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there 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
2	11	S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	68	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
4	72	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	389	NW	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

6.2 Aquifer within Bedrock Deposits

Are there 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
2	11	S	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
3	68	E	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

ID	Distance (m)	Direction	Designation	Description
4	72	E	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

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

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	
Not shown	1040	NW	383950 390470	Status: Historical Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "borehole At Didsbury Golf Club, Northenden, Wythenshawe," Data Type: Point Name: DIDSBURY GOLF CLUB LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 1053 Original Start Date: 22/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/12/1992 Version End Date:
Not shown	1040	NW	383950 390470	Status: Historical Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: Borehole At Didsbury Golf Club, Northenden, Wythenshawe, Data Type: Point Name: DIDSBURY GOLF CLUB LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 1053 Original Start Date: 22/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 24/12/1992 Version End Date:
Not shown	1040	NW	383950 390470	Status: Active Licence No: 2569015006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: Borehole At Didsbury Golf Club Northenden Wythenshawe Data Type: Point Name: DIDSBURY GOLF CLUB LTD	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 68.19 Original Application No: 1053 Original Start Date: 22/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2008 Version End Date:
Not shown	1414	S	384400 388700	Status: Historical Licence No: 2569014022 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: Well At Premises, Gatley, Cheshire Data Type: Point Name: JEFFERIES	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: CW2424 Original Start Date: 3/9/1974 Expiry Date: - Issue No: 101 Version Start Date: 31/1/1997 Version End Date:
Not shown	1414	S	384400 388700	Status: Historical Licence No: 2569014022 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "well At Premises, Gatley, Cheshire" Data Type: Point Name: JEFFERIES	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: CW2424 Original Start Date: 3/9/1974 Expiry Date: - Issue No: 101 Version Start Date: 31/1/1997 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1743	SW	383610 388860	Status: Historical Licence No: 2569014037 Details: Laundry Use Direct Source: Ground Water - North West Region Point: Underground Strata: Borehole At Sharston, Manchester Data Type: Point Name: MR KHALID SALEEM	Annual Volume (m^3): 20975 Max Daily Volume (m^3): 80.67 Original Application No: S7517 Original Start Date: 15/11/2002 Expiry Date: 31/3/2018 Issue No: 1 Version Start Date: 15/11/2002 Version End Date:
Not shown	1743	SW	383610 388860	Status: Historical Licence No: 2569014037 Details: Laundry Use Direct Source: Ground Water - North West Region Point: "underground Strata: Borehole At Sharston, Manchester" Data Type: Point Name: MR KHALID SALEEM	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: S7517 Original Start Date: 15/11/2002 Expiry Date: 31/3/2018 Issue No: 1 Version Start Date: 15/11/2002 Version End Date:
Not shown	1951	E	386880 390150	Status: Historical Licence No: 2569013019 Details: Lake & Pond Throughflow Direct Source: Ground Water - North West Region Point: "a Borehole At Heaton Mersey Lodge,vale Road, Stockport" Data Type: Point Name: SHAW	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 7365 Original Start Date: 24/12/1996 Expiry Date: - Issue No: 100 Version Start Date: 24/12/1996 Version End Date:
Not shown	1951	E	386880 390150	Status: Historical Licence No: 2569013019 Details: Lake & Pond Throughflow Direct Source: Ground Water - North West Region Point: A Borehole At Heaton Mersey Lodge,vale Road, Stockport Data Type: Point Name: SHAW	Annual Volume (m^3): 4860 Max Daily Volume (m^3): 18 Original Application No: 7365 Original Start Date: 24/12/1996 Expiry Date: - Issue No: 100 Version Start Date: 24/12/1996 Version End Date:

6.4 Surface Water Abstraction Licences

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

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1540	SE	386093 389002	Status: Active Licence No: 2569014038 Details: Lake & Pond Throughflow Direct Source: Surface, Non-tidal - North West Region Point: Abney Hall Pond Chorlton Brook Cheadle Stockport Cheshire Data Type: Point Name: STOCKPORT METROPOLITAN BOROUGH COUNCIL	Annual Volume (m^3): 355192.45 Max Daily Volume (m^3): 1946.26 Application No: 7567 Original Start Date: 17/12/2006 Expiry Date: 31/3/2018 Issue No: 1 Version Start Date: 17/12/2006 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

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

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
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.
11	S	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

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	715	SE	385300 389400	River Name: Micker Bk Reach: Poynton Bk. To Mersey End/Start of Stretch: End of Stretch NGR	C	C	B	B	B

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). 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	715	SE	385300 389400	River Name: Micker Bk. Reach: Poynton Bk. To Mersey End/Start of Stretch: End of Stretch NGR	B	B	B	B	B
Not shown	809	SE	385379 389339	River Name: Micker Bk. Reach: Poynton Bk. To Mersey End/Start of Stretch: Sample Point NGR	B	B	B	B	B
Not shown	1185	SW	383900 389400	River Name: Gatley Bk. Reach: Qsl At Heald Green Station To Mersey End/Start of Stretch: End of Stretch NGR	B	B	B	B	B
Not shown	1452	SW	384363 388674	River Name: Gatley Bk. Reach: Qsl At Heald Green Station To Mersey End/Start of Stretch: Sample Point NGR	B	B	B	B	B

6.10 Detailed River Network

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

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	98	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
2	98	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
3	115	SW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
4	141	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
5	157	W	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
6	187	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
7	200	SW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
8	384	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	384	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
10	428	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

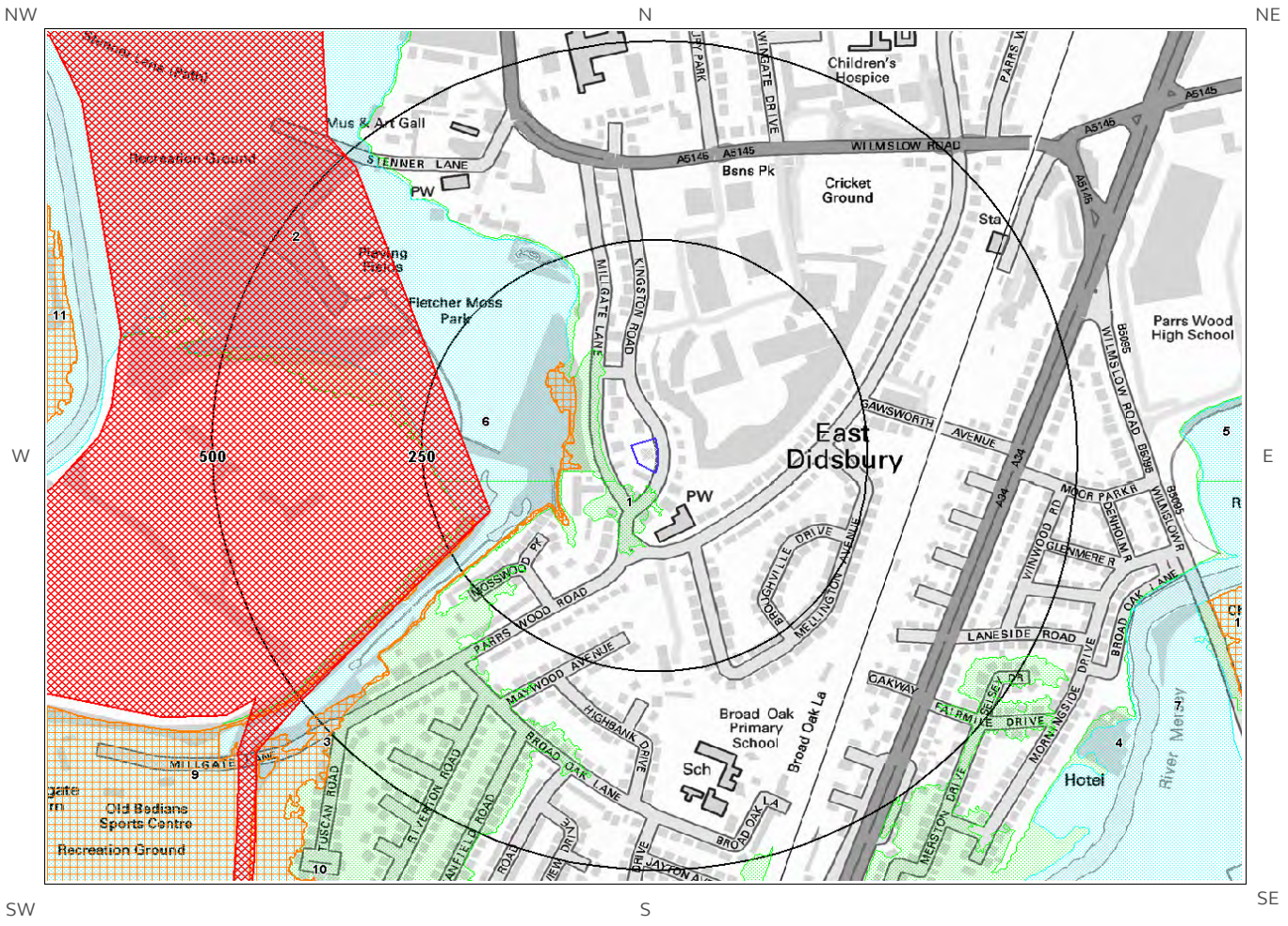
6.11 Surface Water Features

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

The following surface water records are not represented on mapping:

Distance (m)	Direction
97	W
136	W
170	W
194	W

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



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Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

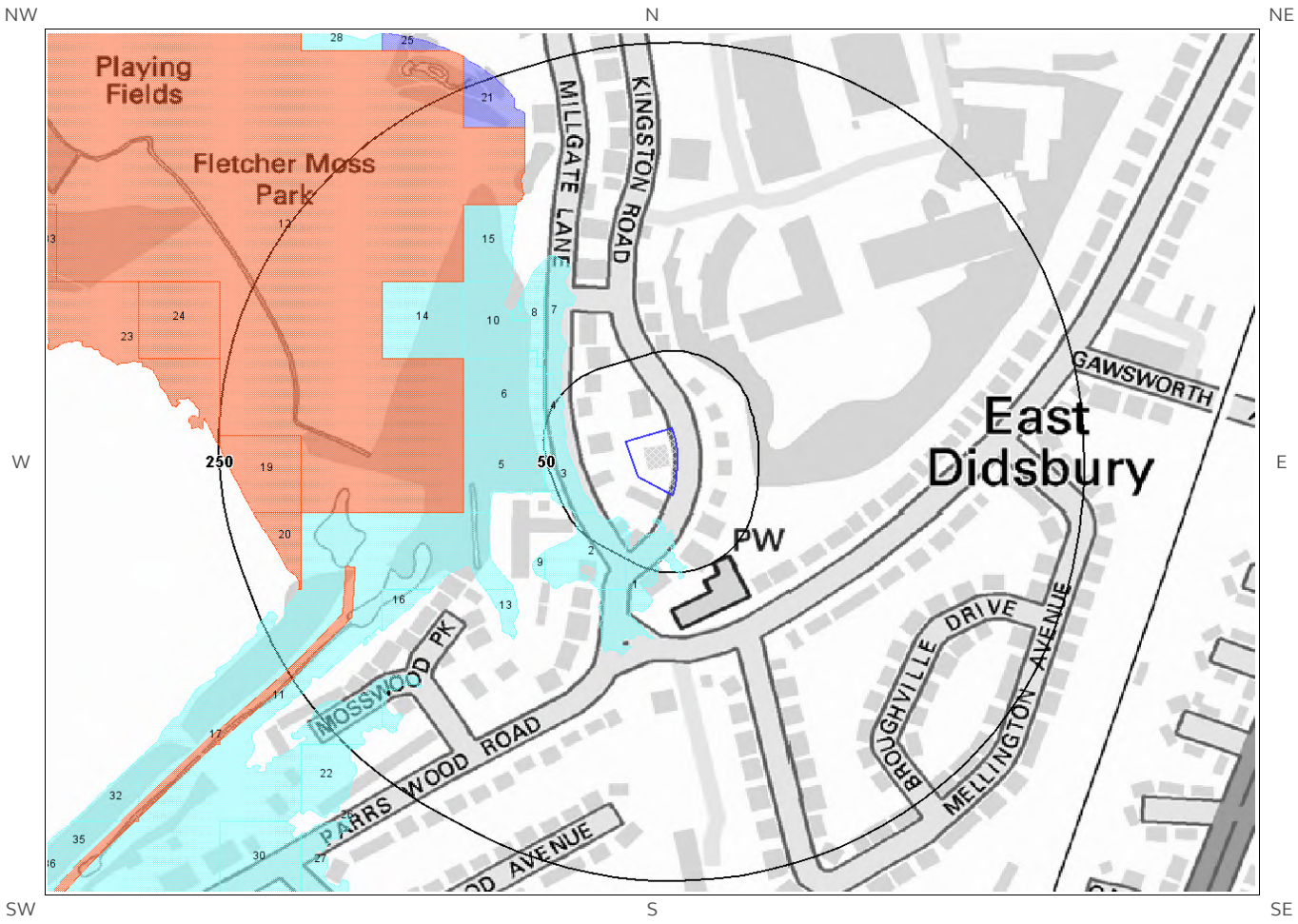
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



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Site Outline

100
250
Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? Yes

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	18	SW	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
2	33	SW	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)
3	93	W	19-Jun-2017	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? Yes

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	66	W	19-Jun-2017	Zone 3 - (Fluvial Models)

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

What is the 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	18.0	SW	Low
2	28.0	SW	Low
3	33.0	SW	Low
4	37.0	W	Low
5	50.0	W	Low
6	50.0	W	Low

7.4 Flood Defences

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

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? Yes

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? Yes

7.7 Groundwater Flooding Susceptibility Areas

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

Does this relate to 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 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

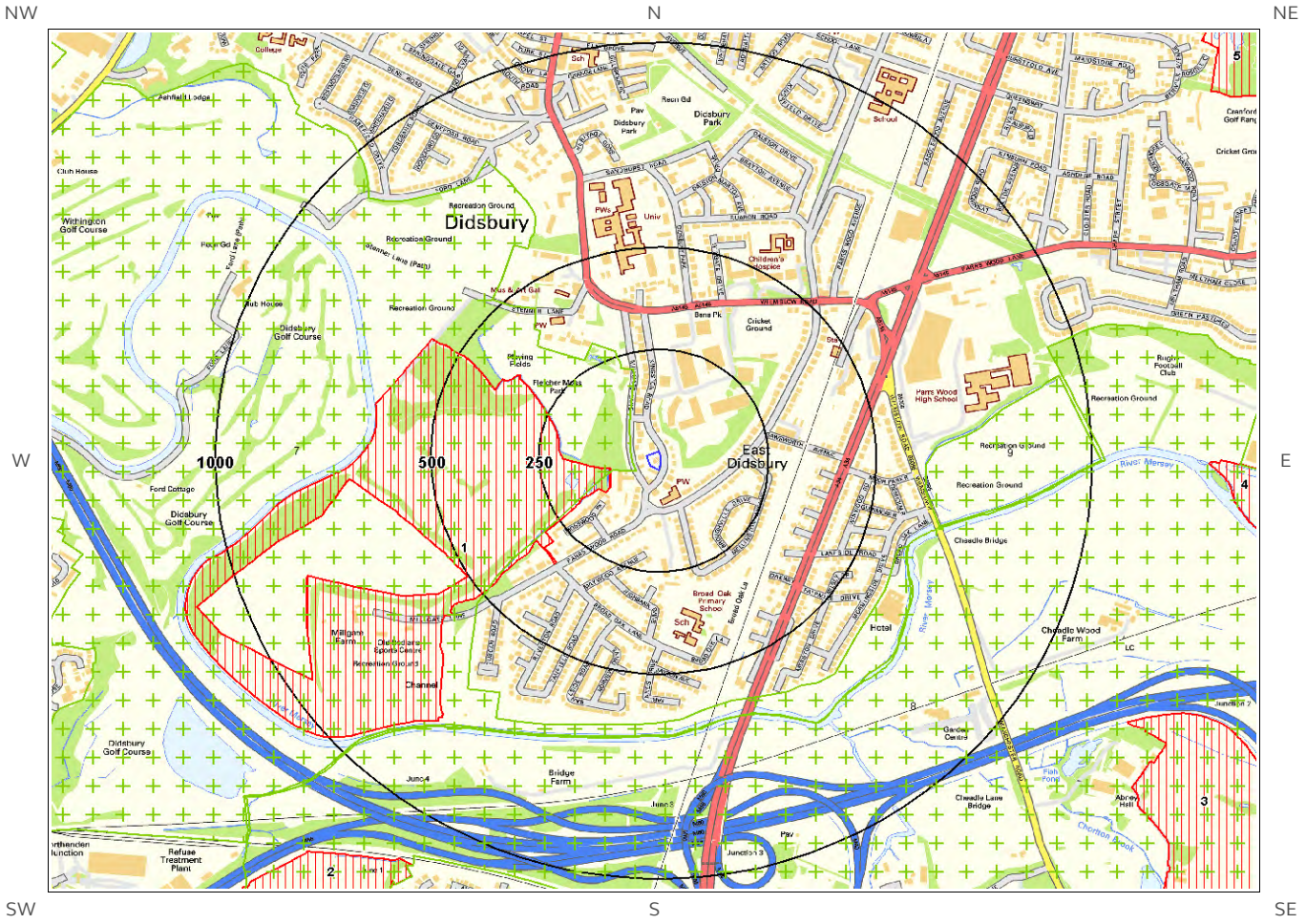
7.8 Groundwater Flooding Confidence Areas

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

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



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Site Outline

100
250
Search Buffers (m)

AONB
National Park
SSSI
Special Protection Areas
Nitrate Vulnerable Zones
Green Belt
Environmentally Sensitive Areas
Special Areas of Conservation
World Heritage Sites
Nitrate Sensitive Areas
Ancient Woodland
National Nature Reserve
Local Nature Reserves
Ramsar Sites

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?	Yes

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:

0

Database searched and no data found.

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

6

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	89	W	Stenner Woods and Milgate Fields, Didsbury	Natural England
2	1123	SW	Gatley Carrs	Natural England
3	1249	SE	Abney Hall	Natural England
4	1272	E	Mersey Vale Nature Park	Natural England
5	1554	NE	Heaton Mersey Common	Natural England
Not shown	1775	E	Mersey Vale Nature Park	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:

0

Database searched and no data found.

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

3

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

ID	Distance	Direction	Green Belt Name	Local Authority Name
7	35	W	Liverpool, Manchester and West Yorks Greenbelt	Manchester District (B)
8	608	E	Liverpool, Manchester and West Yorks Greenbelt	Stockport District (B)
9	615	E	Liverpool, Manchester and West Yorks Greenbelt	Manchester 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

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Very Low

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

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

9.1.2 Landslides

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

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

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

9.1.3 Soluble Rocks

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

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

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

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

9.1.4 Compressible Ground

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

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

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

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

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

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

9.1.6 Running Sand

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

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

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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

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

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

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? No

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

APPENDIX D

Photographs



Entrance to site from Kingston Road and existing building on site

Photograph 1



North of the site

Photograph 2



Existing building on site

Photograph 3



Southern part of the site

Photograph 4



Garden area in south of the site

Photograph 5



Garden area in the south of the site

Photograph 6



Southern face of existing building

Photograph 7



Western façade of building and western area of garden

Photograph 8

APPENDIX E

Drawings



LEGEND

SITE FOOTPRINT

REV	DESCRIPTION	DATE	BY

GEO-ENVIRONMENTAL CONSULTING ENGINEERS
Suite One, No 3 Mitton Road Business Park, Mitton Road,
Whalley, Lancashire BB7 9YE
Tel: 01254 377622 Mob: 07906753583
Email: mbuckley@bekenviro.co.uk
Web: www.bekenviro.co.uk

CLIENT.

CALDERPEEL ARCHITECTS

JOB TITLE.

58 KINGSTON ROAD,
DIDSBURY

DRAWING TITLE.

SITE LOCATION PLAN

SCALE @ A3.	DRAWN BY.	APPROVED BY.	DATE.
NTS	D.E.	M.B.	06/07/17

DRAWING No.	REV.
17314-1	-



LEGEND

SITE FOOTPRINT

REV	DESCRIPTION	DATE	BY

GEO-ENVIRONMENTAL CONSULTING ENGINEERS
Suite One, No 3 Mitton Road Business Park, Mitton Road,
Whalley, Lancashire BB7 9YE
Tel: 01254 377622 Mob: 07906753583
Email: mbuckley@bekenviro.co.uk
Web: www.bekenviro.co.uk

CLIENT.
CALDERPEEL ARCHITECTS

JOB TITLE.
58 KINGSTON ROAD, DIDSBURY

DRAWING TITLE.
SITE LAYOUT PLAN

SCALE @ A3.	DRAWN BY.	APPROVED BY.	DATE.
NTS	D.E.	M.B.	06/07/17

DRAWING No.	REV.
17314-2	-

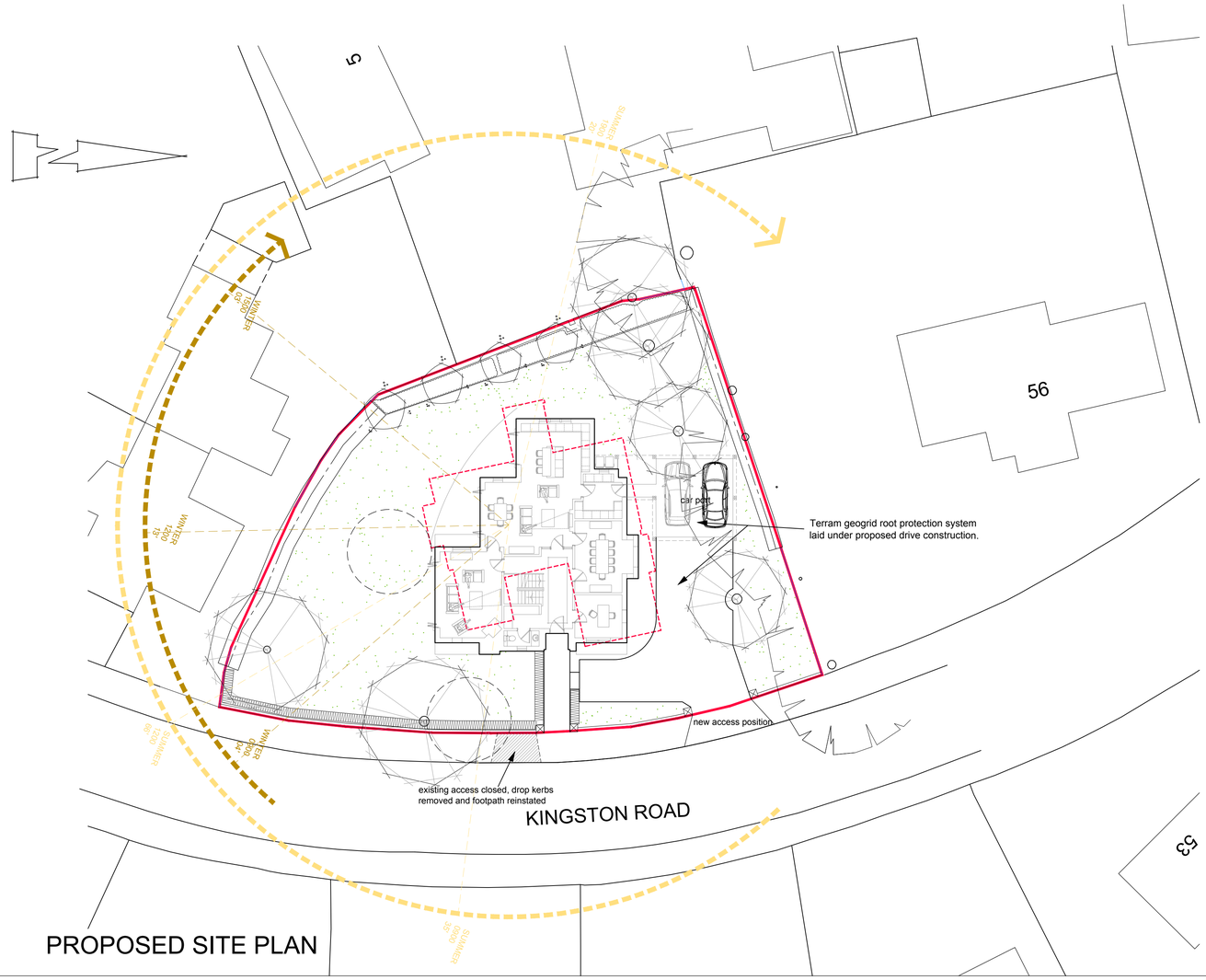
© CALDERPEEL PARTNERSHIP LTD

NOTE: DO NOT SCALE FROM THIS DRAWING

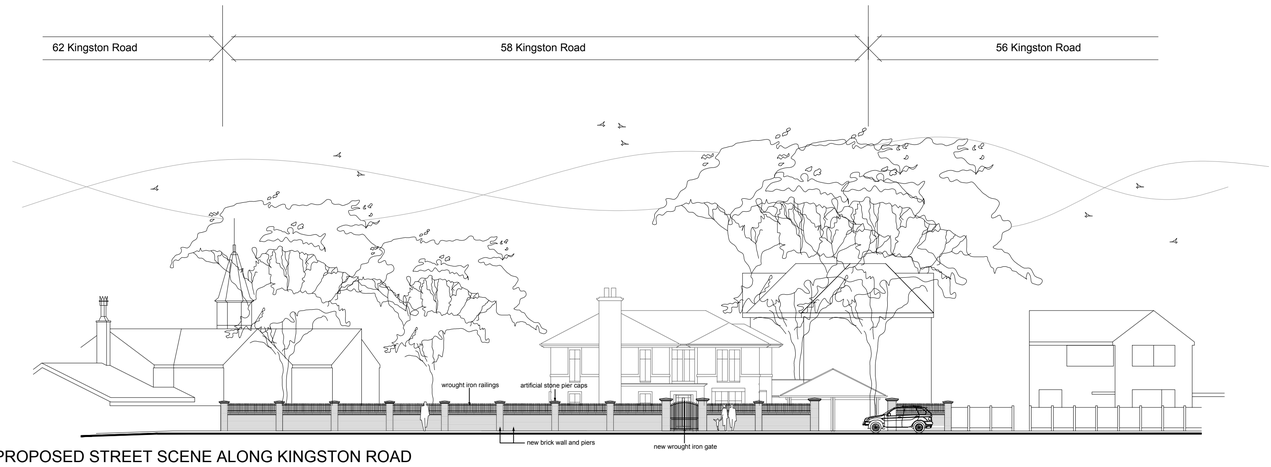
REV.	DESCRIPTION	DATE	DRAWN
A	House design revised at clients request	00-00-00	--

Scale Bar 1:200

0m 5 10 20 30m



PROPOSED SITE PLAN



PROPOSED STREET SCENE ALONG KINGSTON ROAD

CHESHIRE
Market Court
20-24 Church St
Altrincham
WA14 4DW
0161 929 7622

SURREY
100 High St
Esher
Surrey
KT10 9QJ
01372 203 335

58 KINGSTON ROAD, DIDSBURY

MR S. MOKHTASSI

SITE PLAN AND STREET SCENE
DWG: 13055 (PL) 002 A
DATE: 12.11.16
SCALE: 1:200 @ A1 DRAWN: CS

CALDERPEEL ARCHITECTS

GEO-ENVIRONMENTAL CONSULTING ENGINEERS

Suite One | No 3 Mitton Road Business Park | Mitton Road | Whalley | Lancashire | BB7 9YE
Office: 01254 377622 Mobile: 07906 753583 mbuckley@bekenviro.co.uk www.bekenviro.co.uk