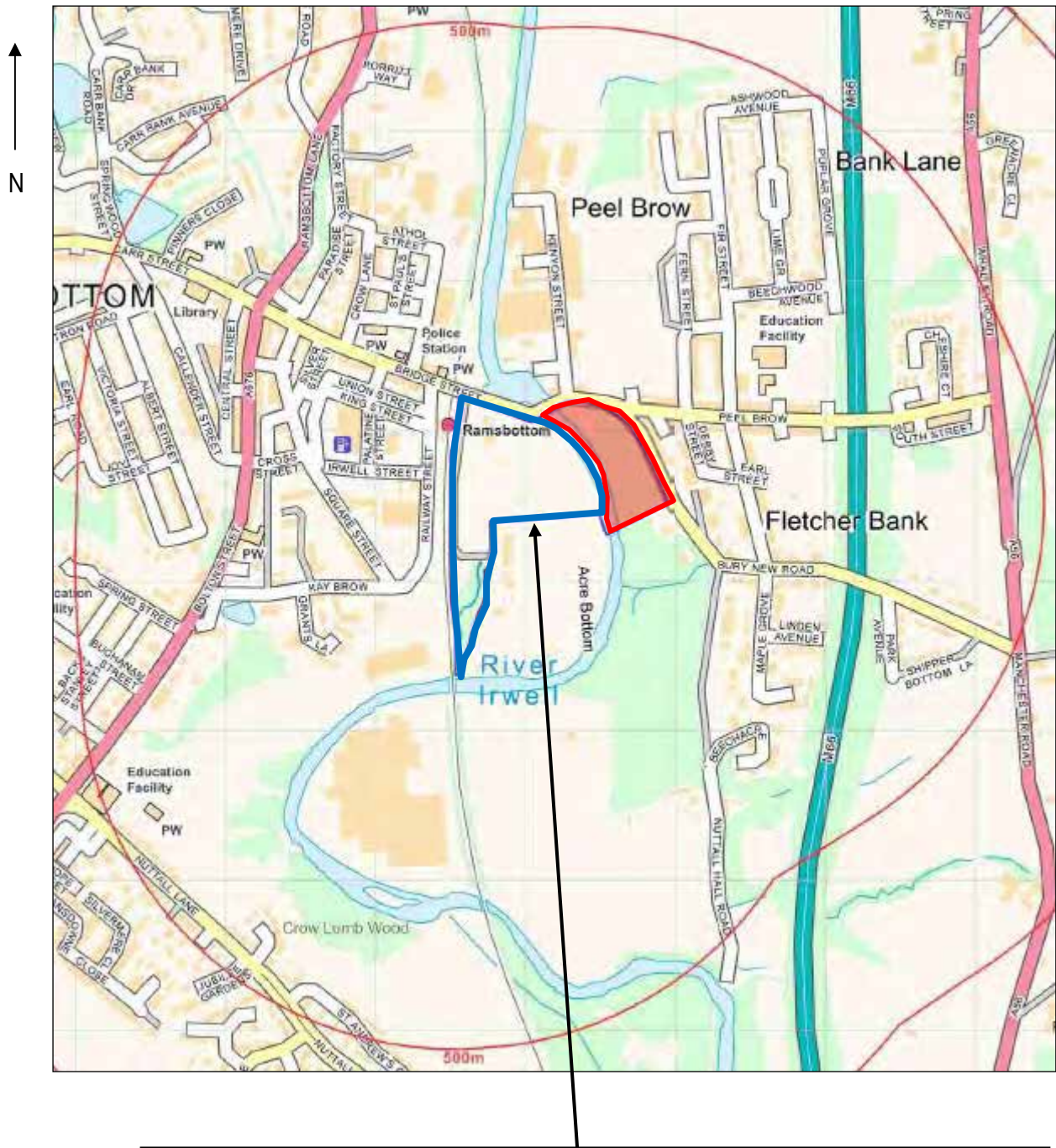


APPENDIX A

(i) Site Location Plan

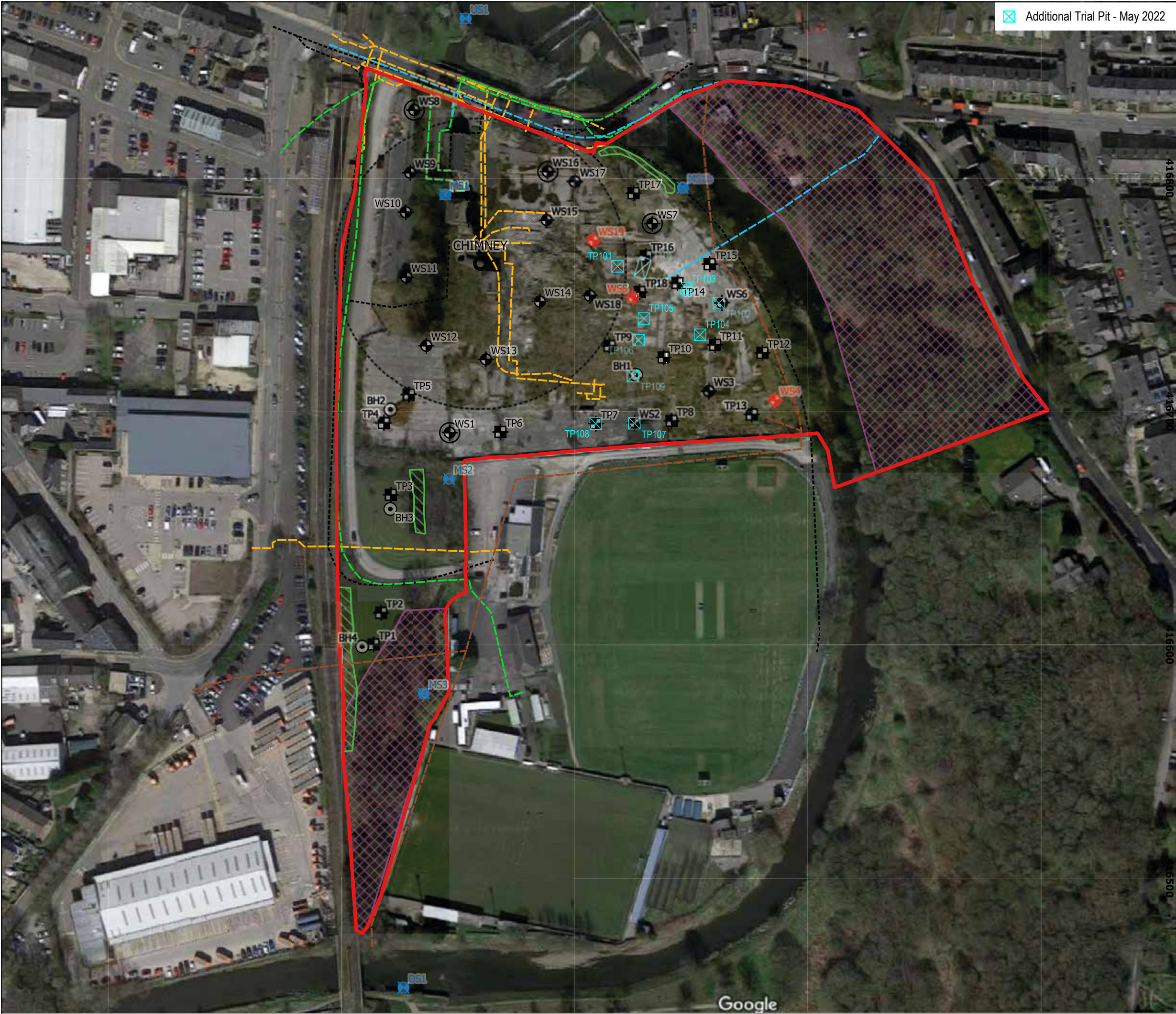


Site Location Plan

The site is located to the south of Bridge Street and north of Ramsbottom Cricket Club in Ramsbottom. The site has an approximate postcode of BL0 9AL, with coordinates on the British National Grid of 379433,416756. The proposed site is approximately 4.61 hectares in total.

APPENDIX B

(i) Exploratory Hole Location Plan



Additional Trial Pit - May 2022

NOTES
DO NOT SCALE
THIS SKETCH SHOWS LOCATIONS OF EXPLORATORY HOLES UNDERTAKEN BY BETTS GEO IN JUNE 2019 AND INDICATIVE LOCATIONS OF SERVICES DIGITISED FROM SERVICE PLANS AND 60m EXCLUSION ZONE AROUND THE EXISTING CHIMNEY ON SITE OVERLAIN AN AERIAL IMAGE TAKEN FROM GOOGLE MAPS (IMAGERY ©2019 Google, MAP DATA ©2019 Google, www.google.co.uk/maps).

- SITE BOUNDARY
- POSSIBLE INVASIVE SPECIES
- NO ACCESS
- CHIMNEY
- 60m EXCLUSION ZONE
- US1 WATER SAMPLE [6]
- EXPLORATORY HOLES
 - TP1 TRIAL PIT [18]
 - BH1 ROTARY BOREHOLE [4]
 - WS2 WINDOW SAMPLE [12]
 - WS4 WINDOW SAMPLE - ABANDONED [3]
 - WS1 WINDOW SAMPLE WITH GAS INSTALL [4]
- SERVICES
 - SEWAGE
 - WATER
 - GAS
 - ELECTRICITY
 - TELECOMMUNICATIONS

B	18/5/22	KR	New Locations Added	MJF
A	12/07/19	RD	WATER SAMPLING LOCS ADDED	KR

REV	DATE	BY	DESCRIPTION	CHK
-----	------	----	-------------	-----

DRAWING STATUS: **DRAFT**



BETTS GEO
CONSULTING ENGINEERS

Unit 6, Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire CH5 2LY
Tel: 01244 288178 enquiries@betts-associates.co.uk



PROJECT: **HOLCOMBE MILL
BRIDGE STREET
RAMSBOTTOM**

TITLE: **EXPLORATORY HOLE
LOCATION PLAN**

DATE: 12/07/19	SCALE @ SIZE: 1:1550 @ A3	DRAWN: RD	CHECKED: KR
PROJECT No: 19ECH016	DRAWING No: 1	REV: -	

APPENDIX C

(i) Historical Maps

Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BL0 0BS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1891

Scale: 1:2,500

Printed at: 1:2,500



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

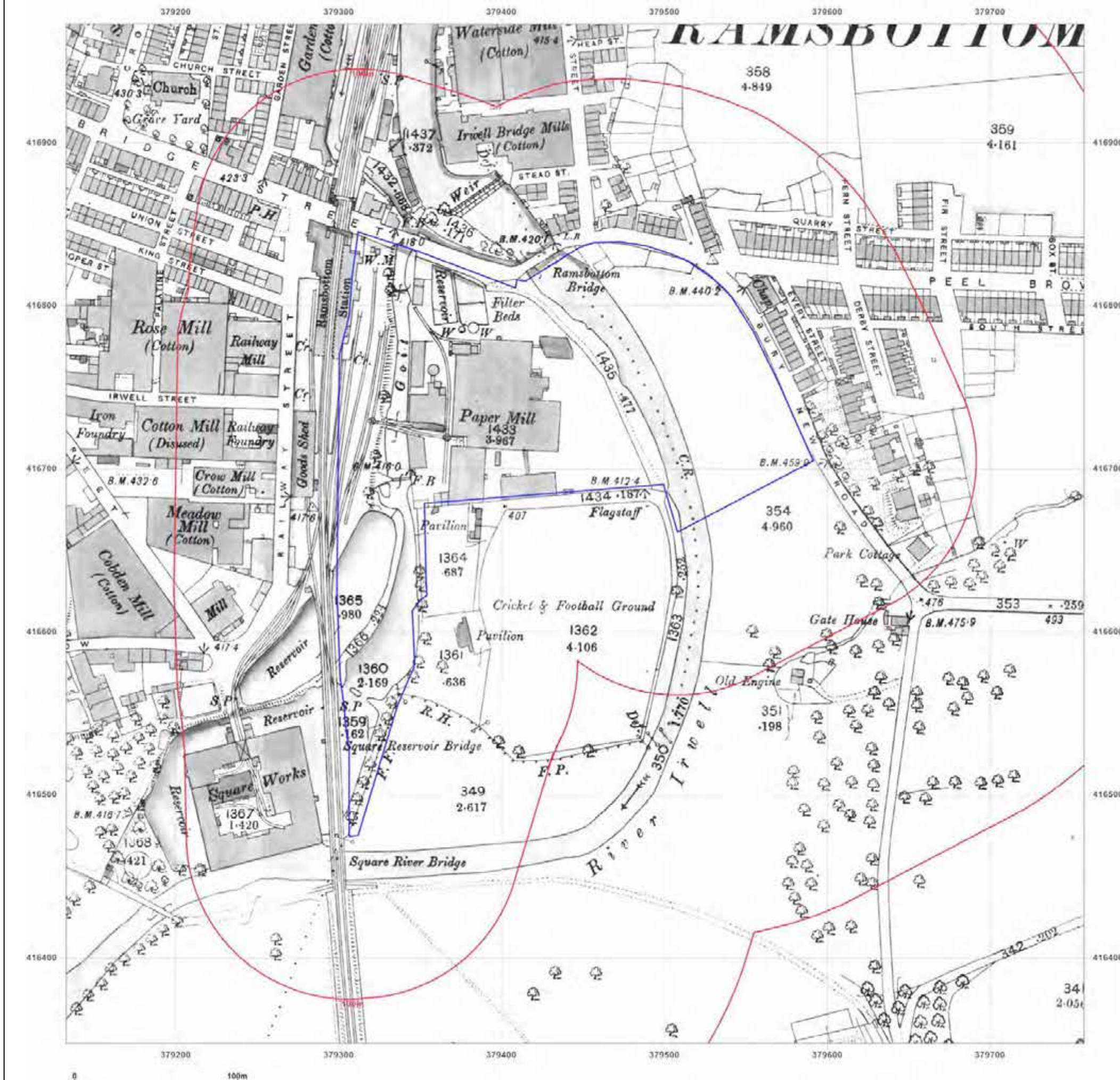


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Site Details:

HOLCOMBE MILL, BRIDGE
STREET, RAMSBOTTOM, BLO
OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series Town Plan

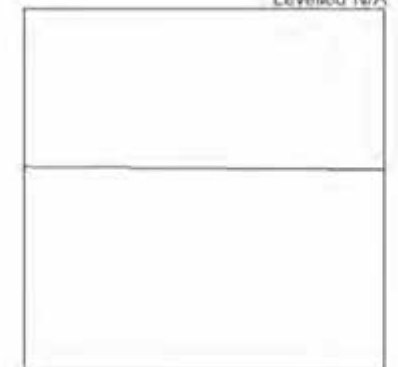
Map date: 1892

Scale: 1:500

Printed at: 1:1,000



Surveyed 1892
Revised N/A
Edition N/A
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Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



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

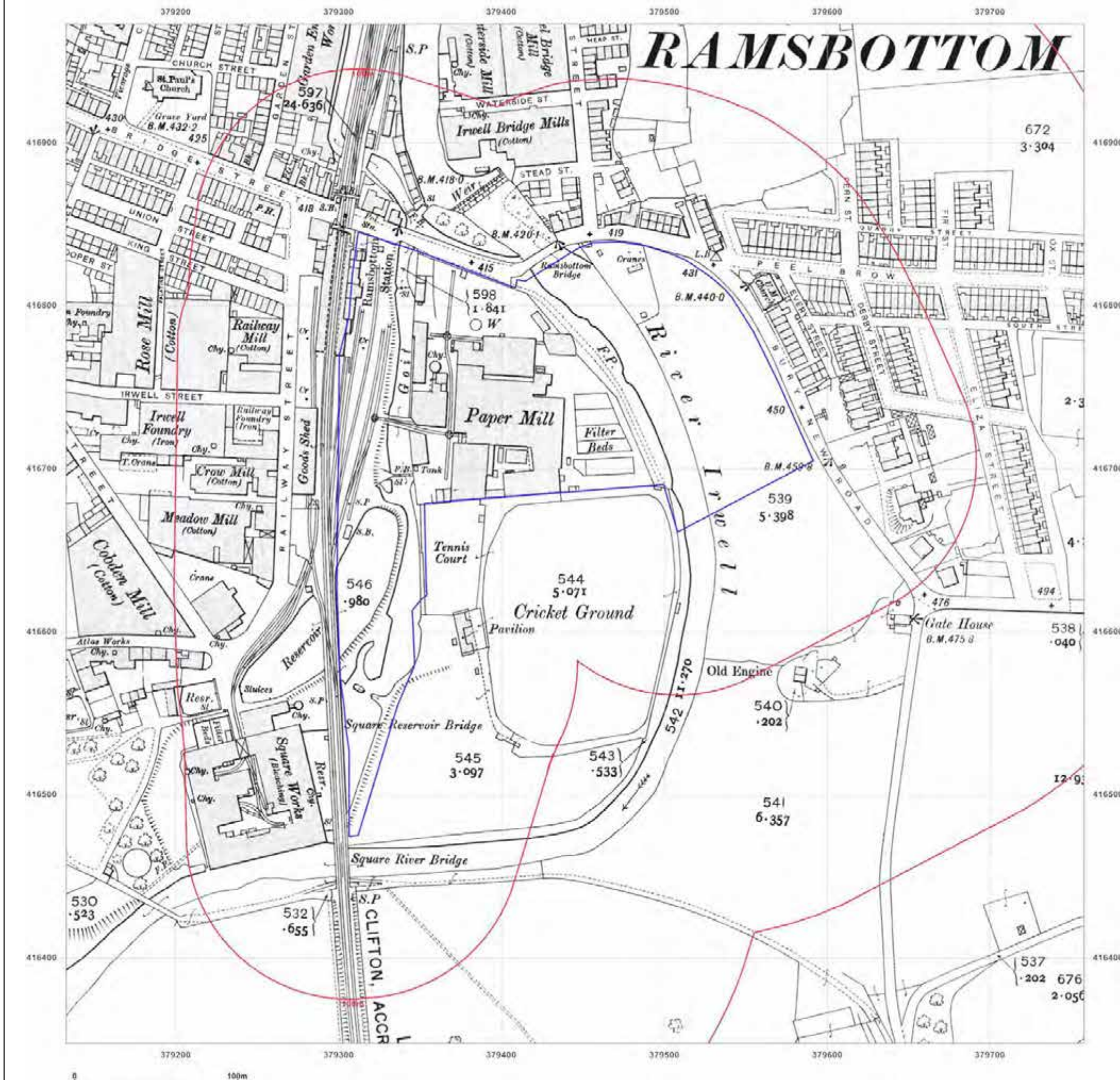


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Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1929

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1929
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

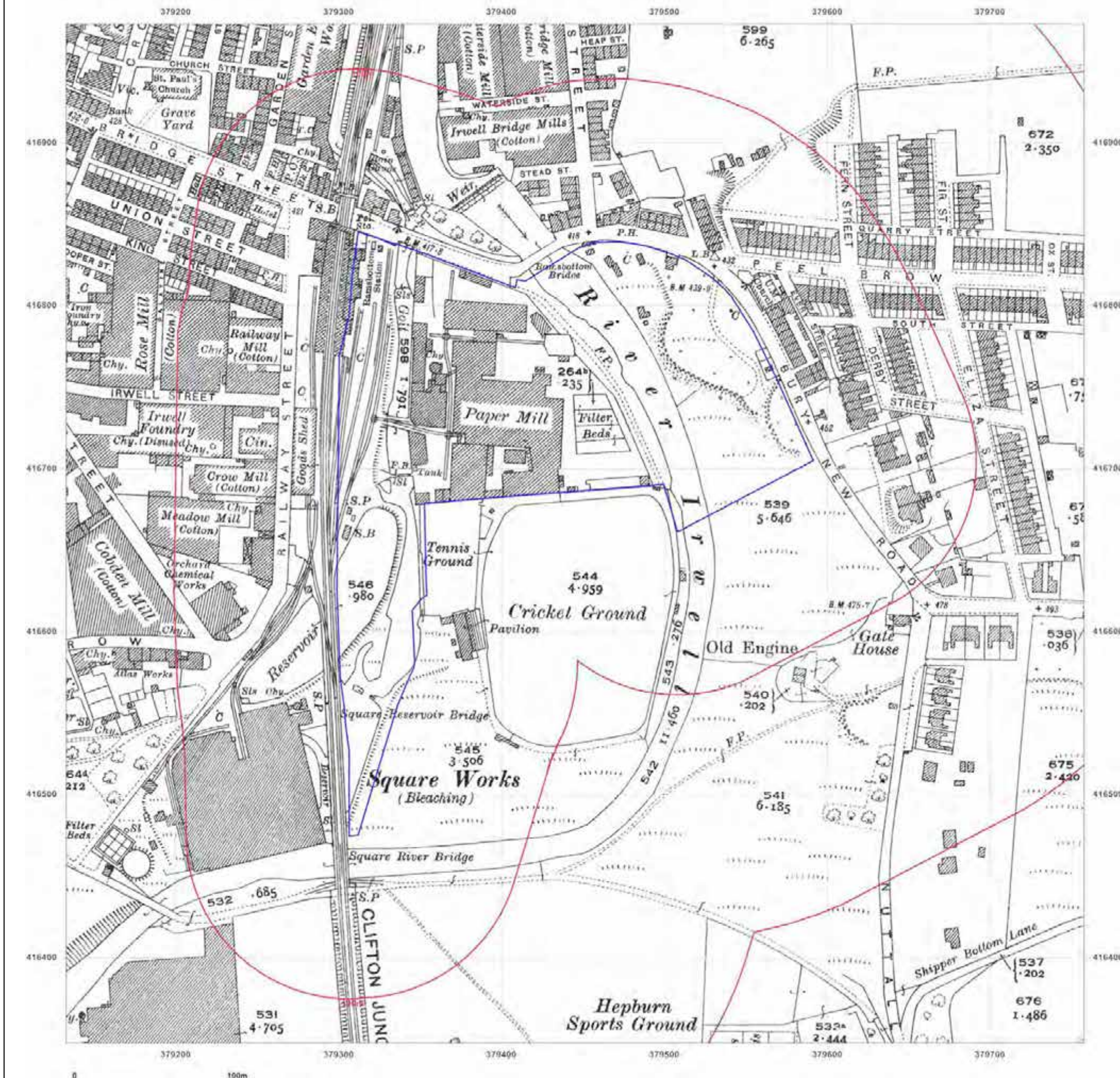


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Site Details:

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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1938

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1938
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

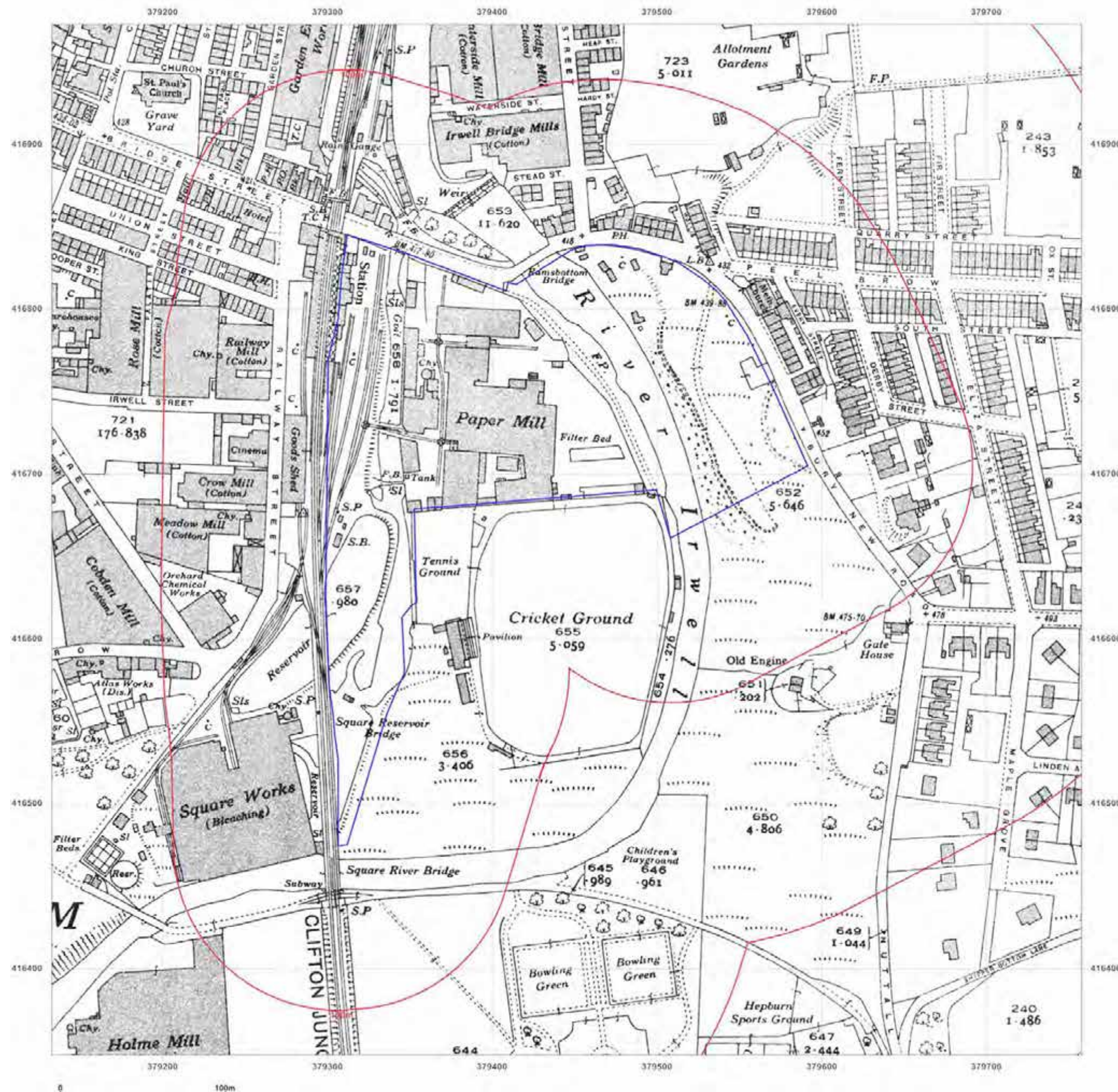


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Site Details:

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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1962

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1962
Revised 1962
Edition N/A
Copyright 1964
Levelling 1957

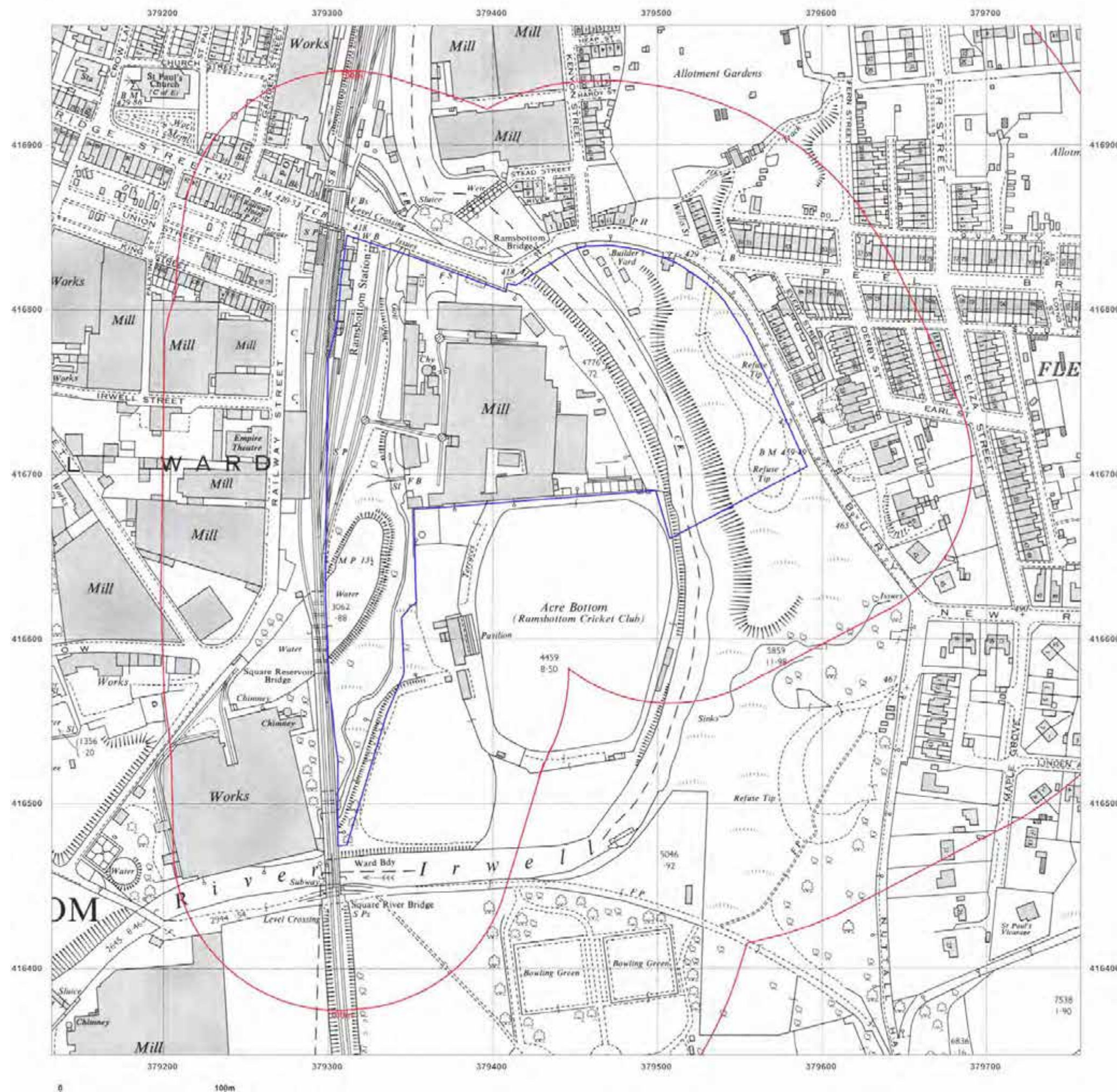


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Site Details:

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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1964

Scale: 1:2,500

Printed at: 1:2,500



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

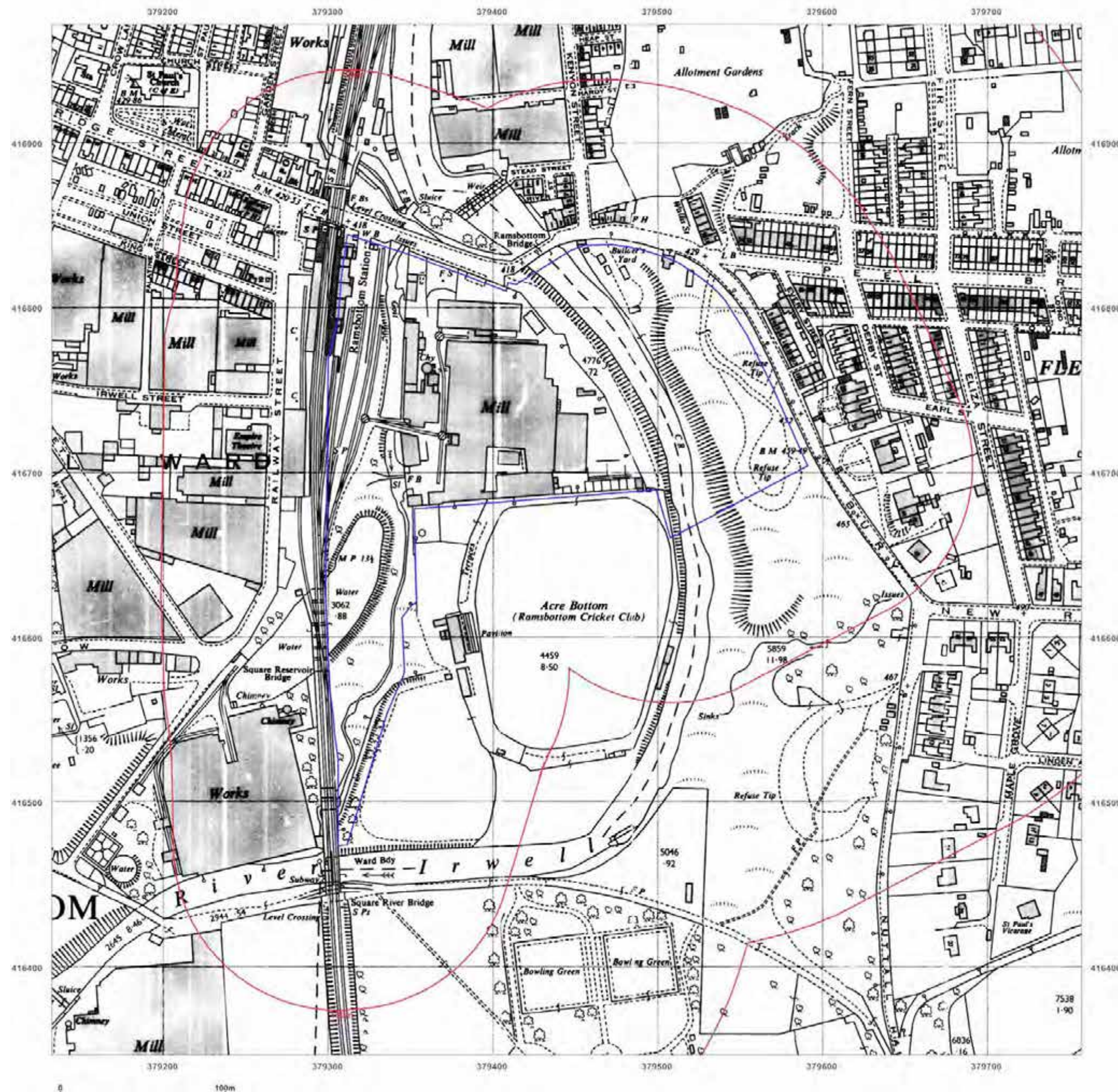


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Site Details:

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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1978

Scale: 1:1,250

Printed at: 1:2,000



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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1989-1992

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed 1960
Revised 1978
Edition N/A
Copyright 1989
Levelled 1960

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

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

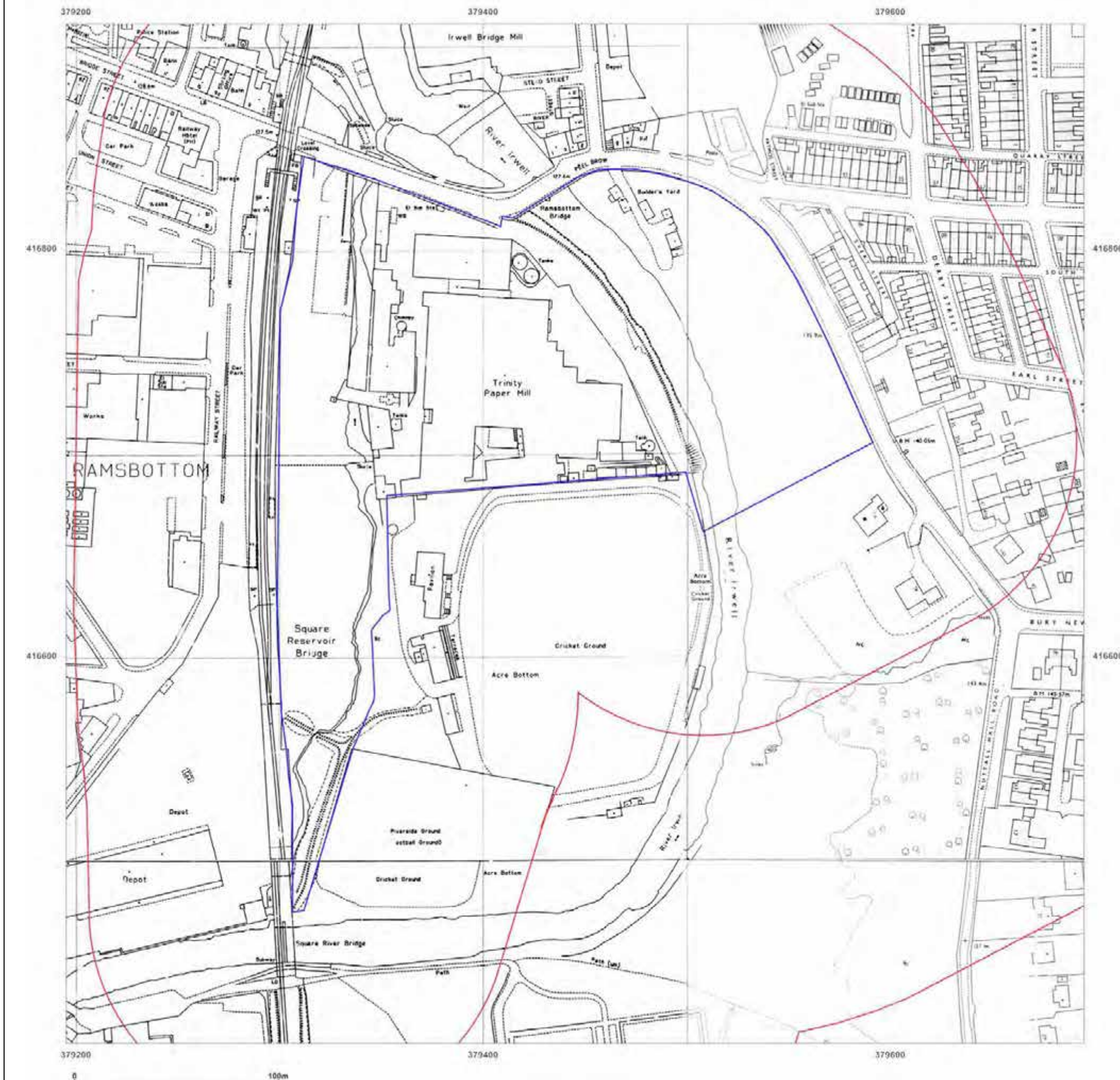


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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



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

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Revised 1992
Edition N/A
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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



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

Surveyed N/A
 Revised N/A
 Edition N/A
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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1994
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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1850-1851

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised N/A
Edition 1850
Copyright N/A
Levelled N/A

Surveyed 1848
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A

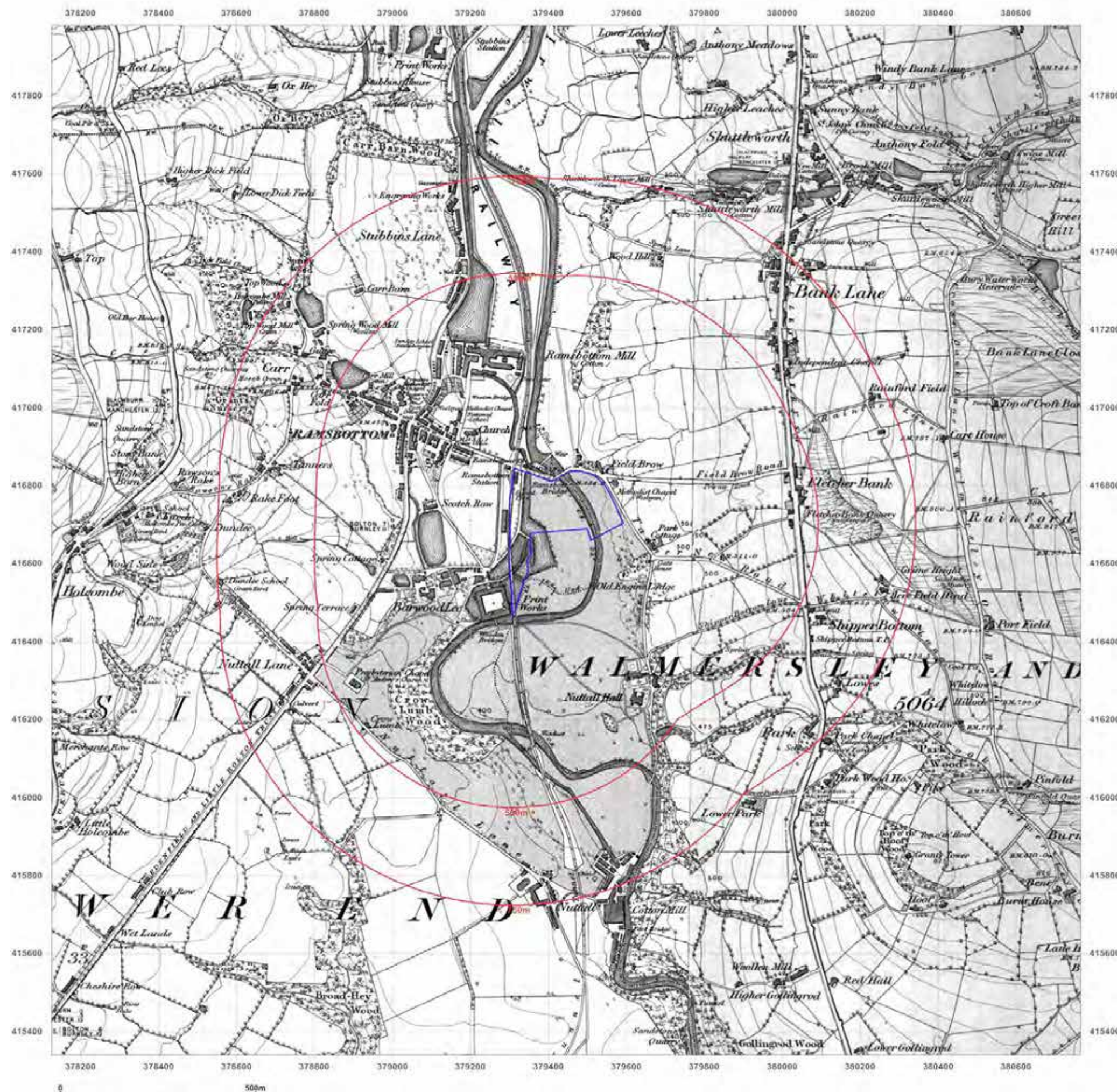


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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



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

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

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

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

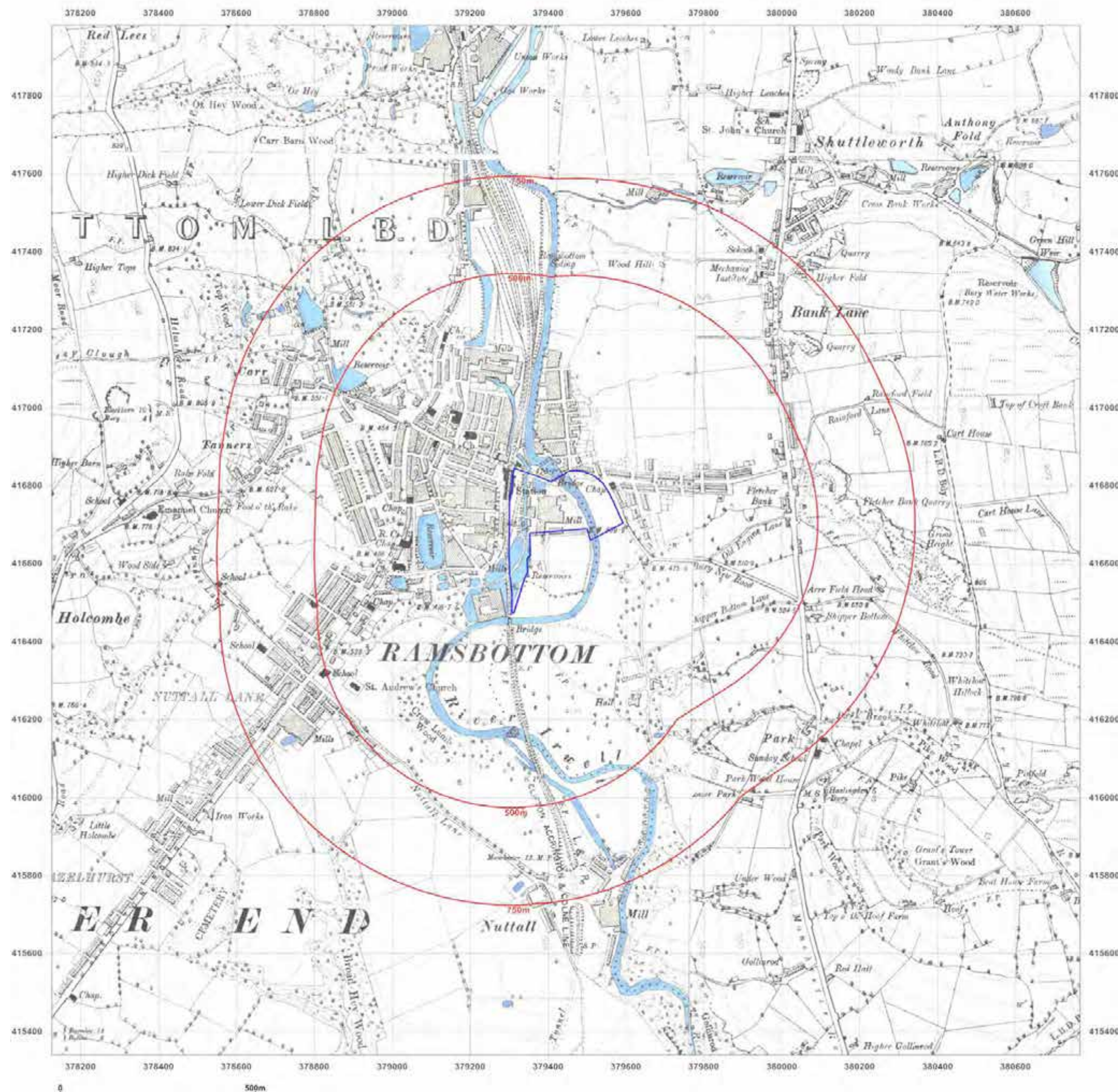


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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1908

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1908
Edition N/A
Copyright N/A
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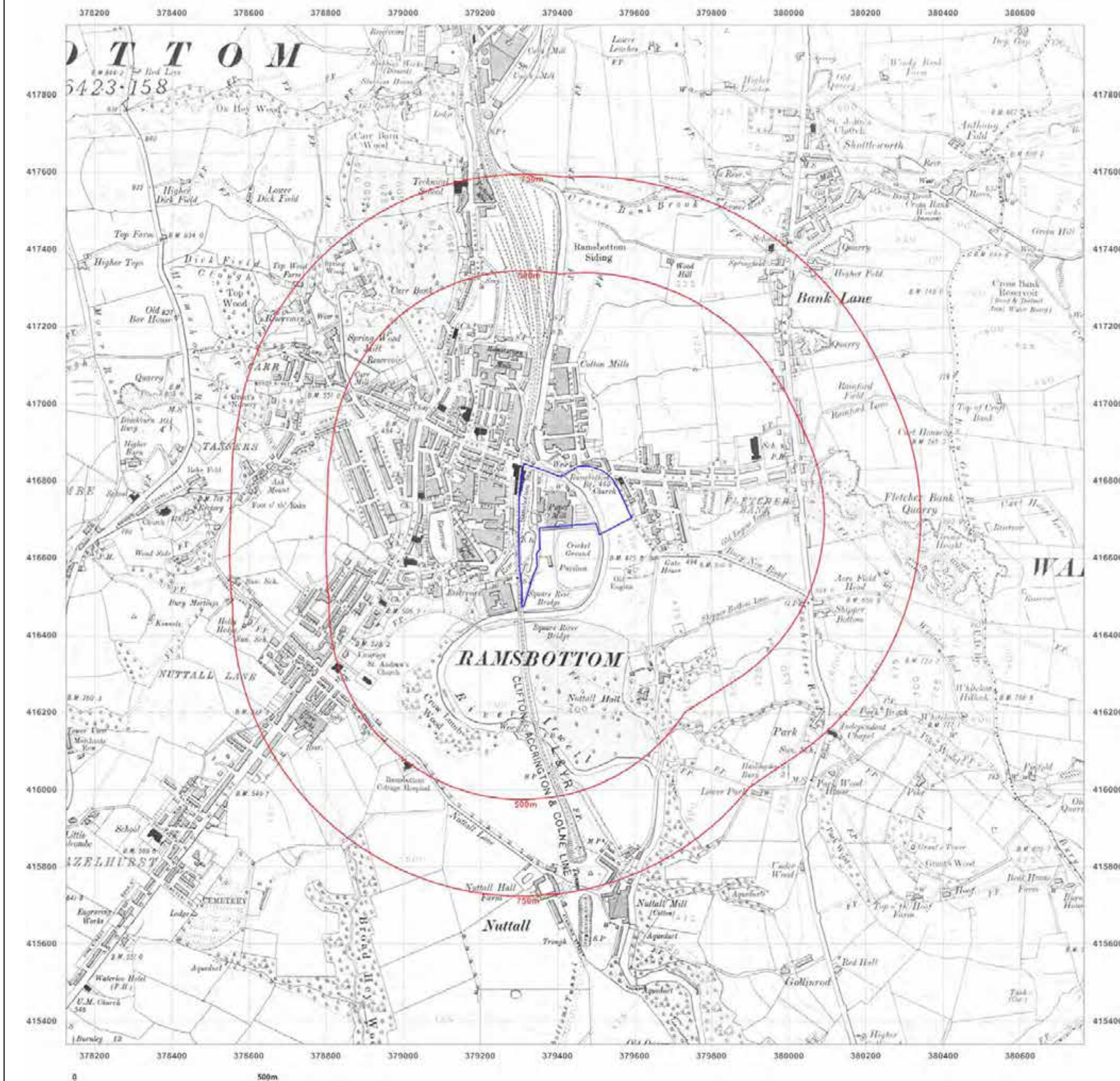


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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1927-1928

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1927
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

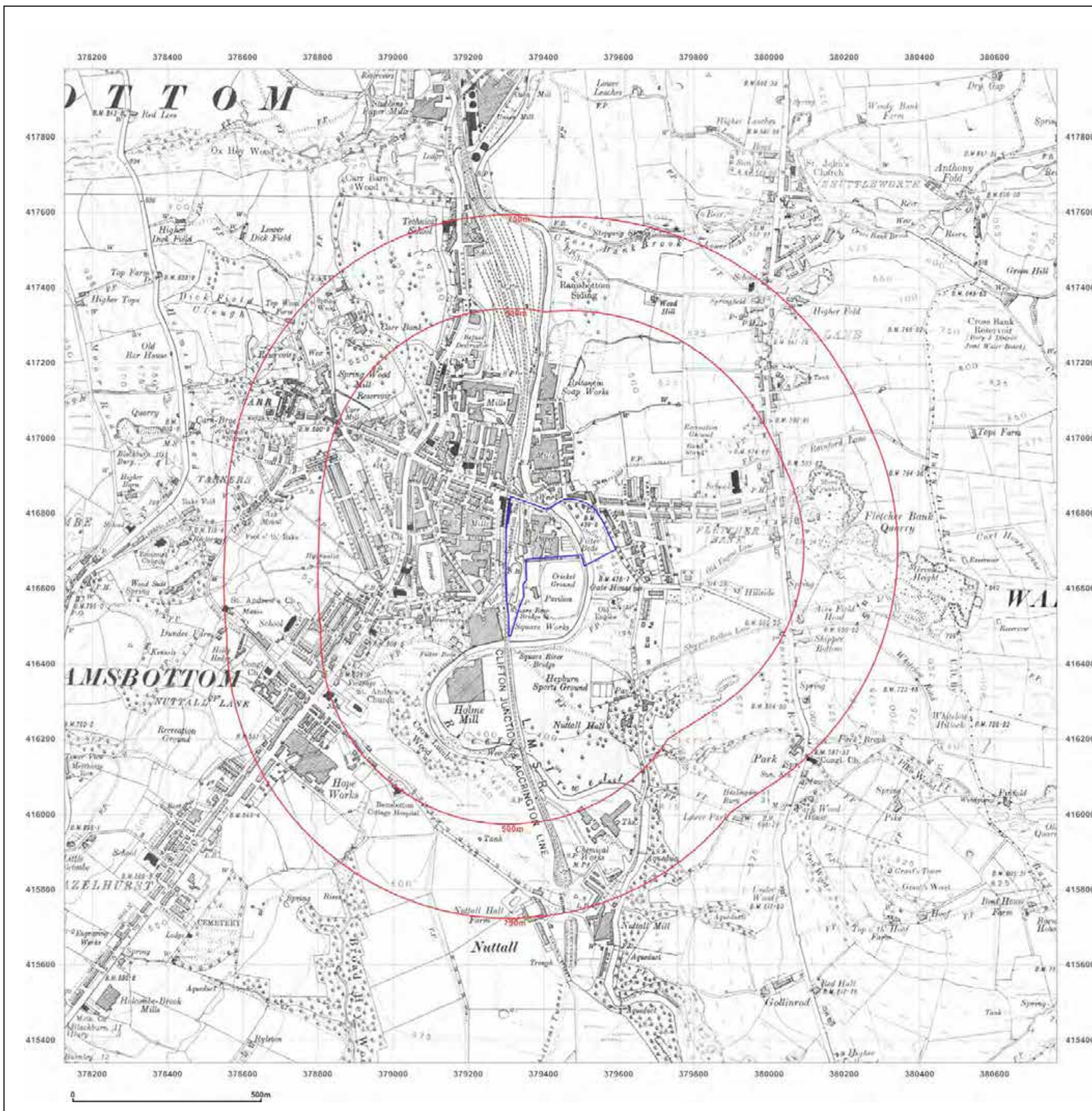


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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1847
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1848
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

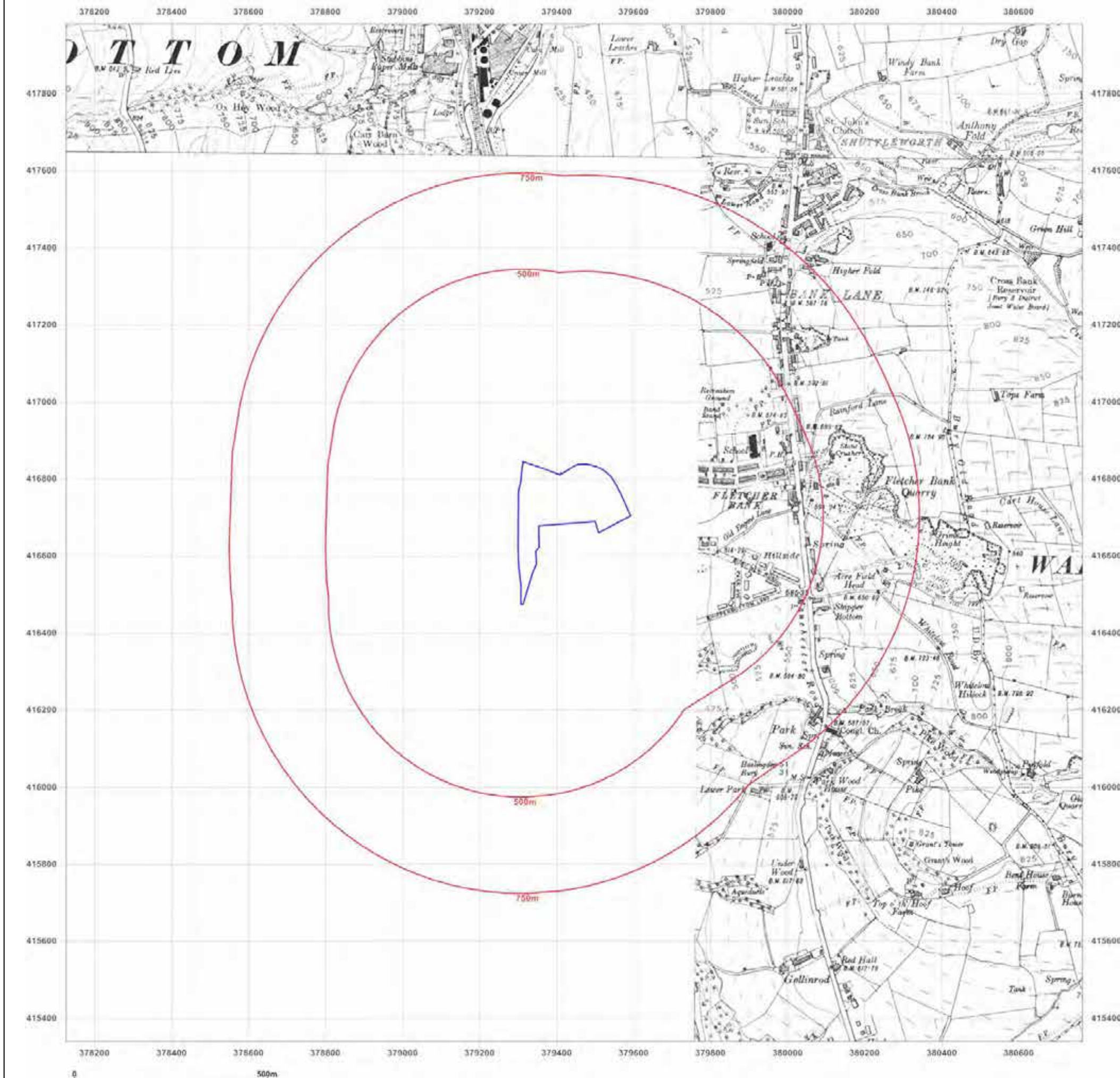


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Site Details:

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STREET, RAMSBOTTOM, BLO
OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



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

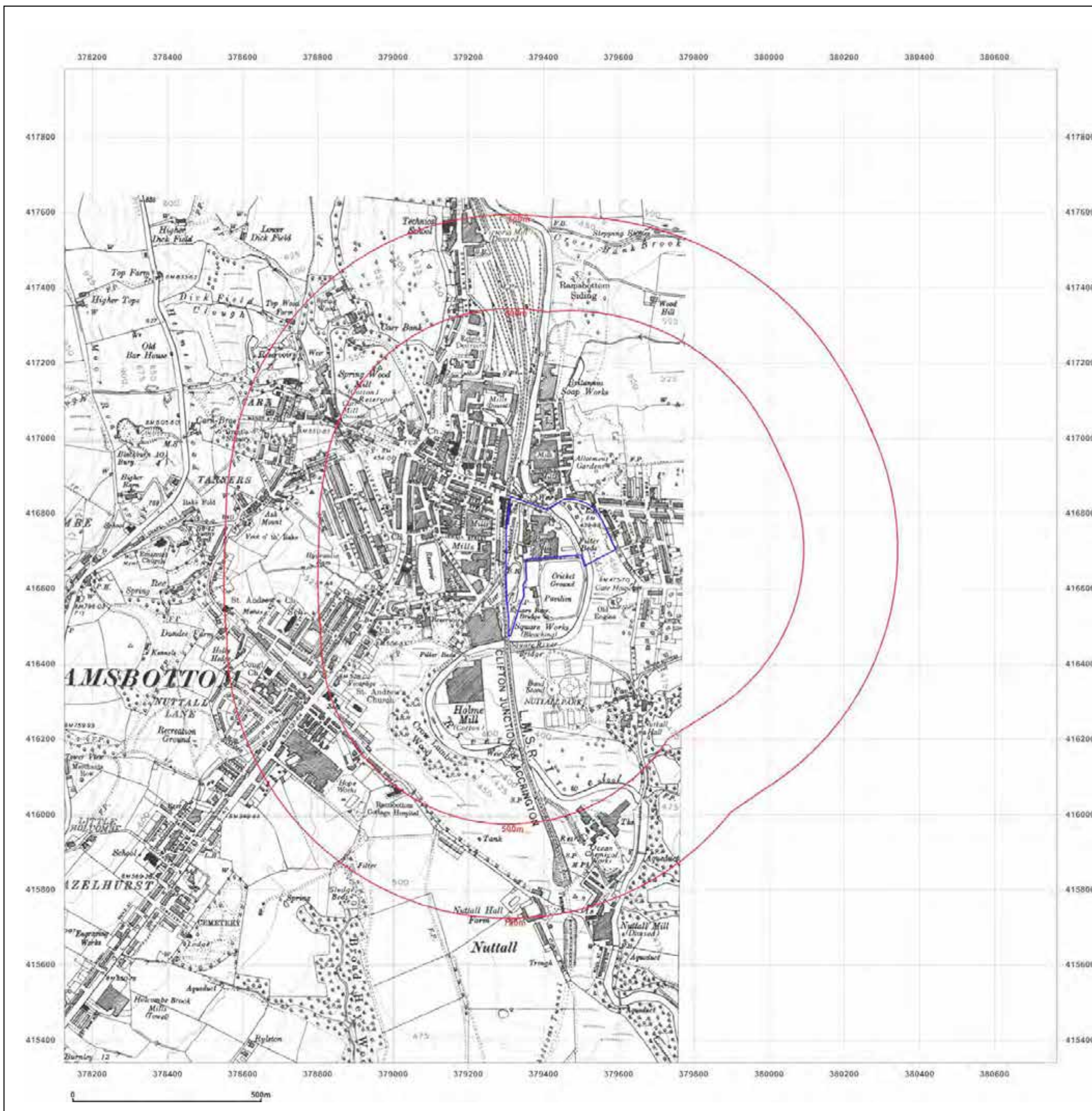


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Site Details:

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STREET, RAMSBOTTOM, BLO
OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: Provisional

Map date: 1949

Scale: 1:10,560

Printed at: 1:10,560



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

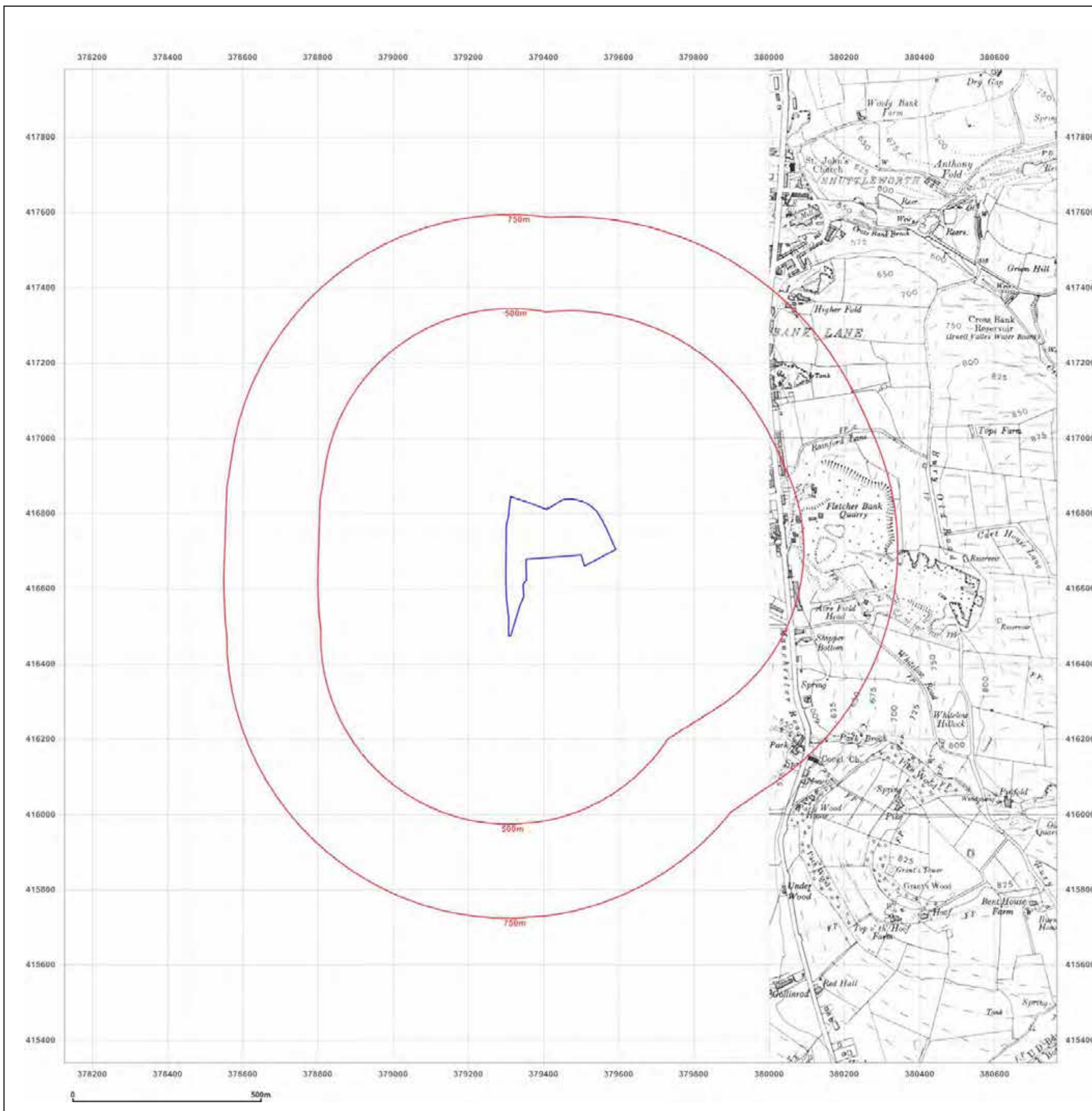


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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: Provisional

Map date: 1955

Scale: 1:10,560

Printed at: 1:10,560



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

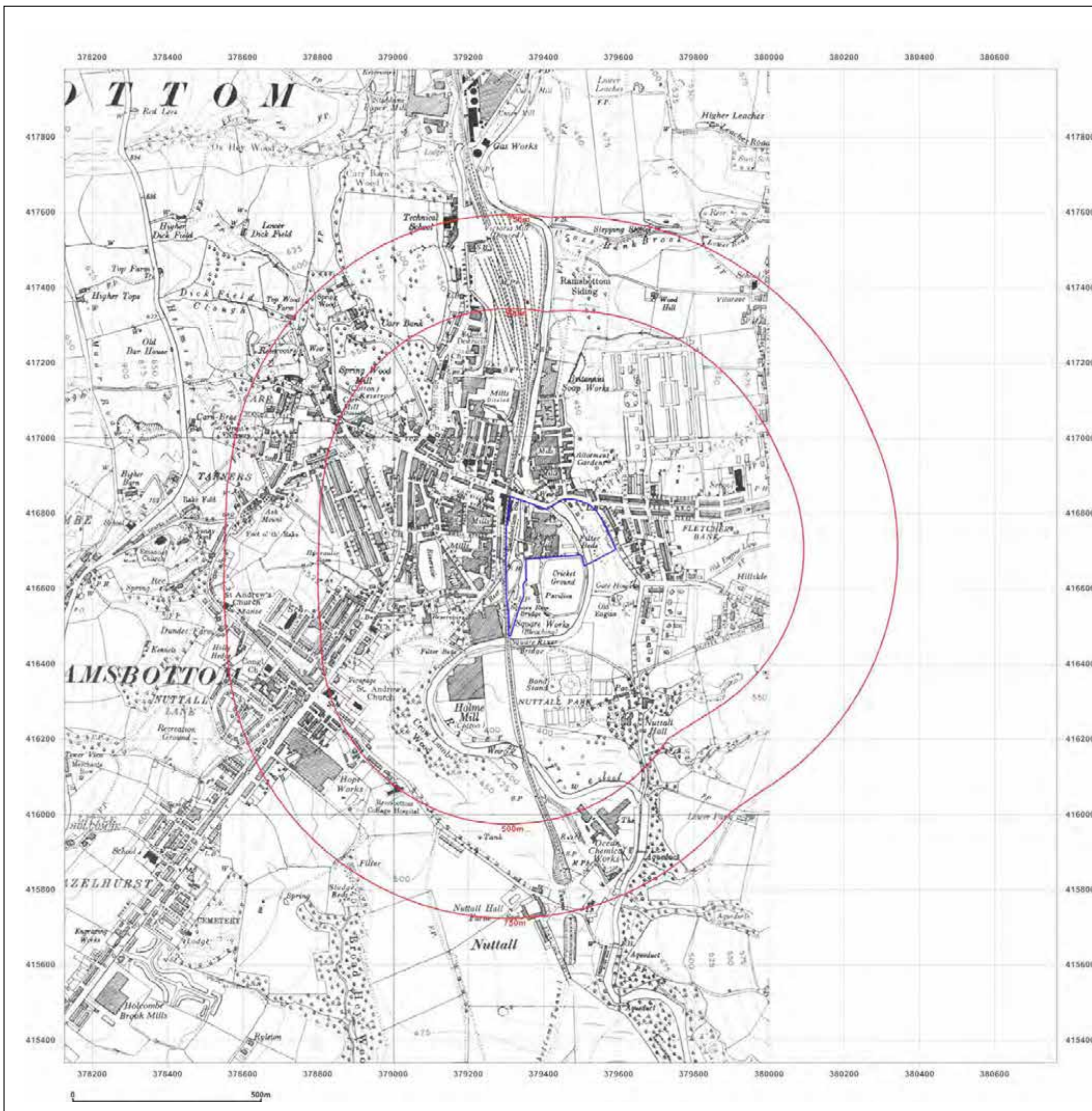


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Site Details:

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OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: Provisional

Map date: 1967-1968

Scale: 1:10,560

Printed at: 1:10,560



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

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

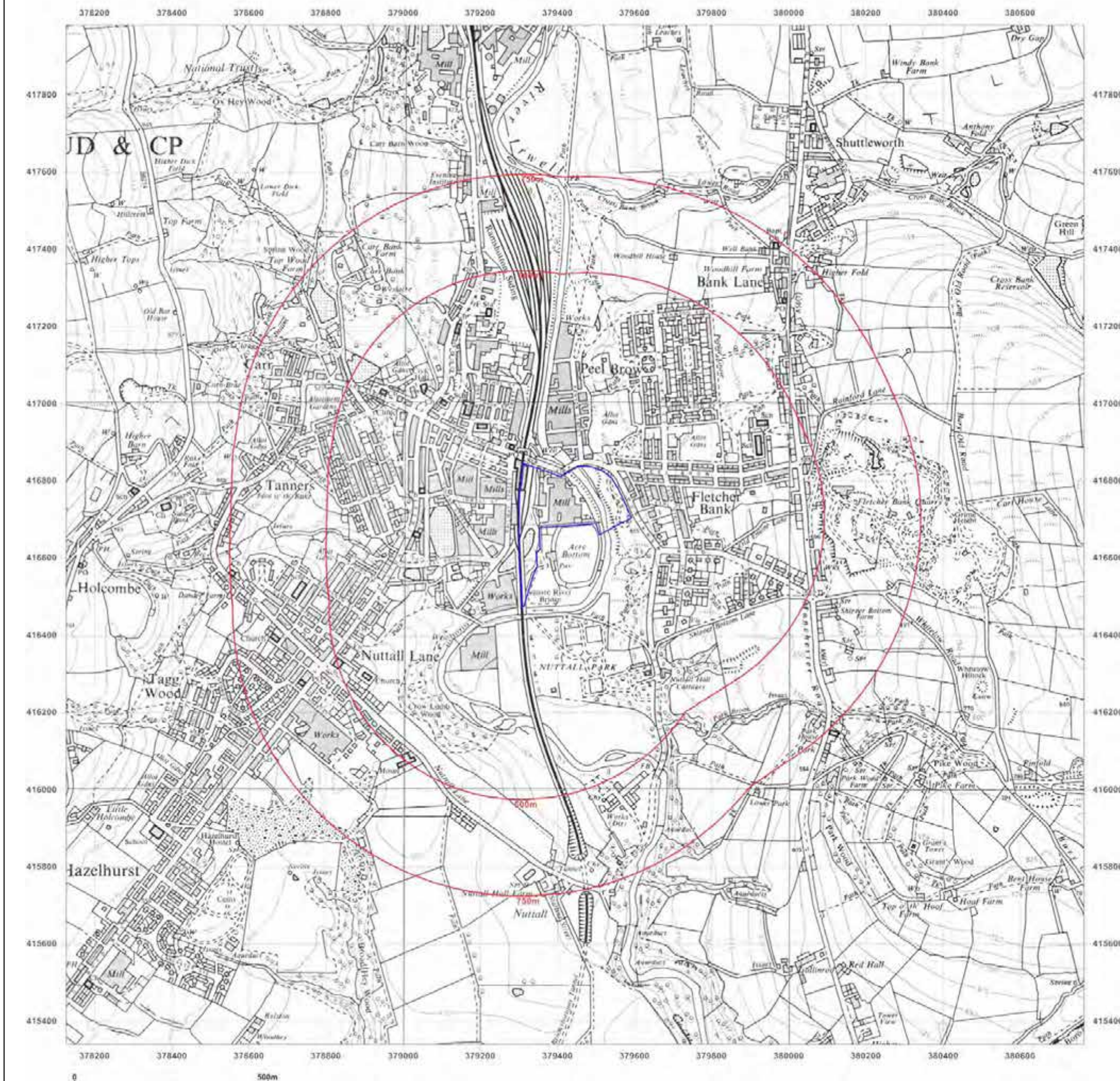


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Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1980

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1978
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

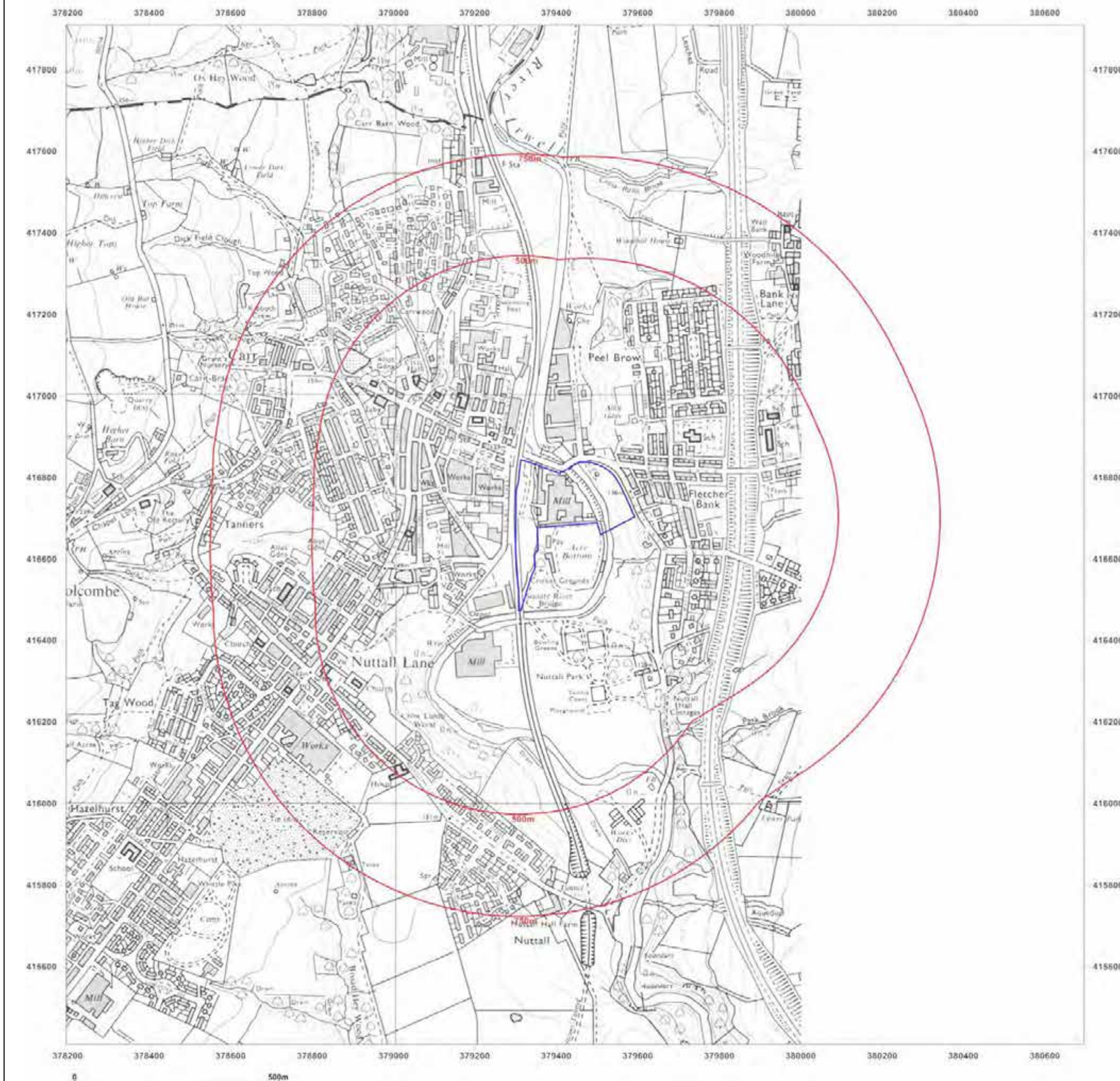


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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1987

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1962
 Revised 1987
 Edition N/A
 Copyright N/A
 Levelled N/A

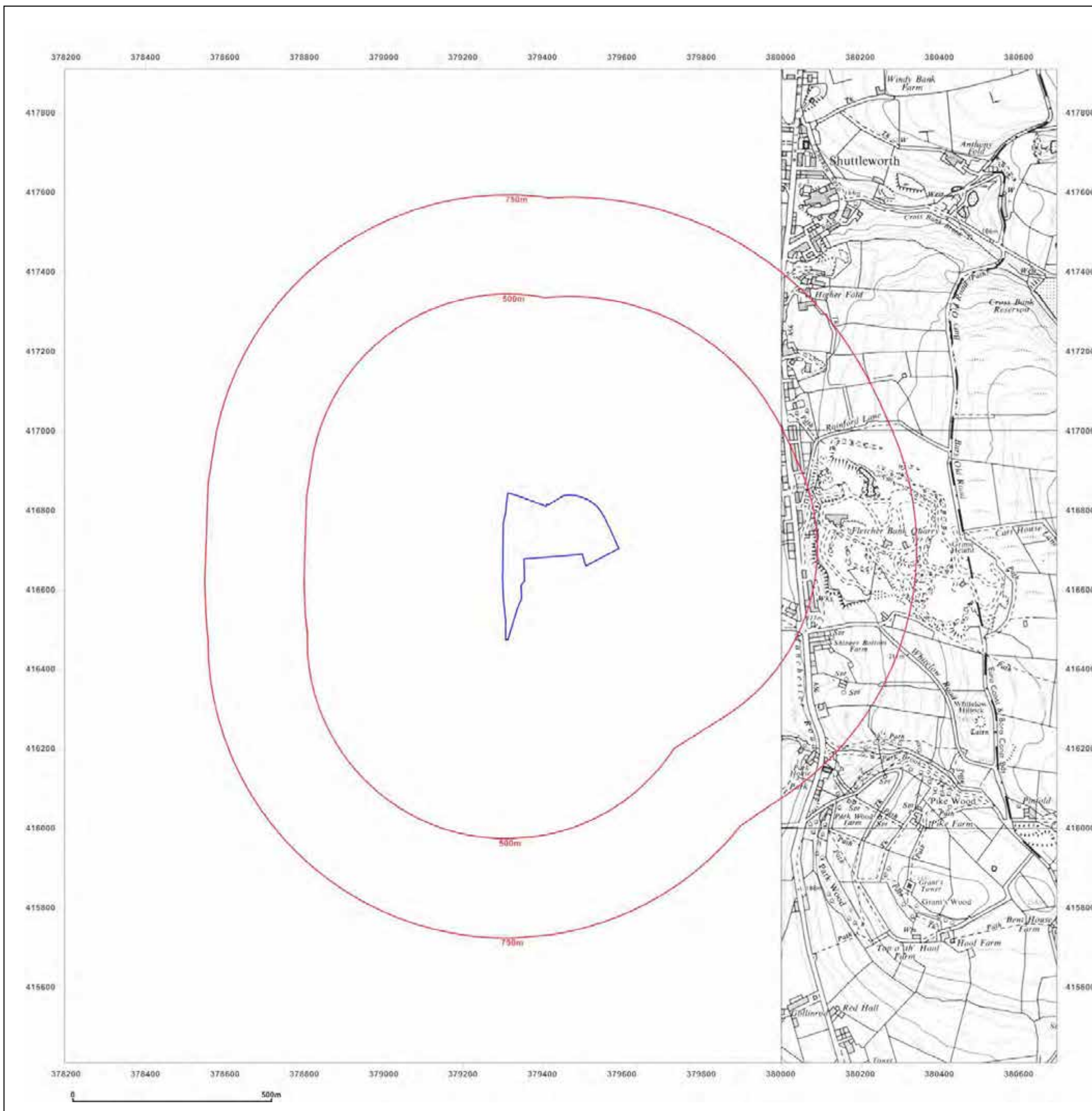


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HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO
OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1962
Revised 1992
Edition N/A
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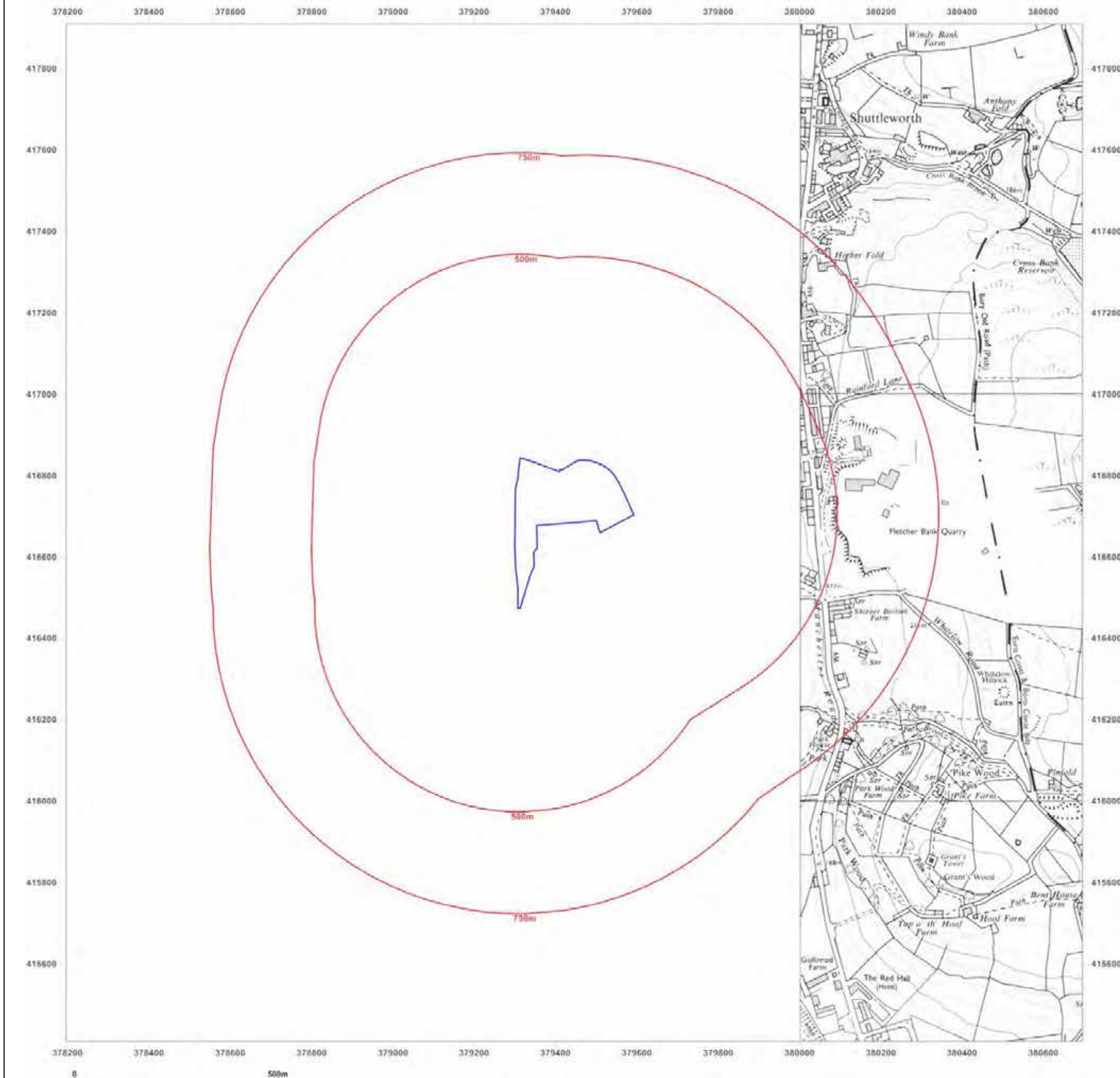


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Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

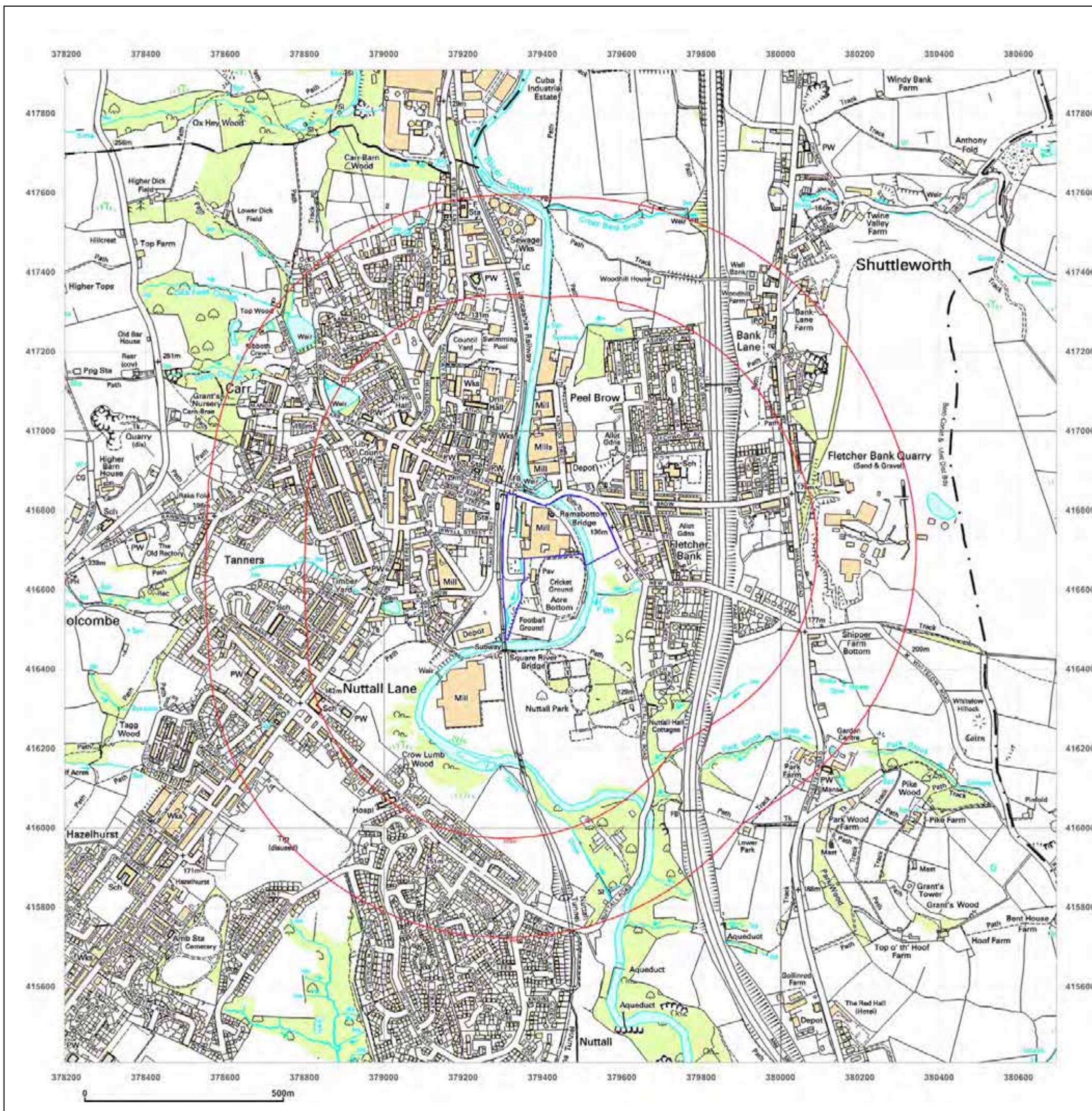


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Site Details:

HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BLO OBS

Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

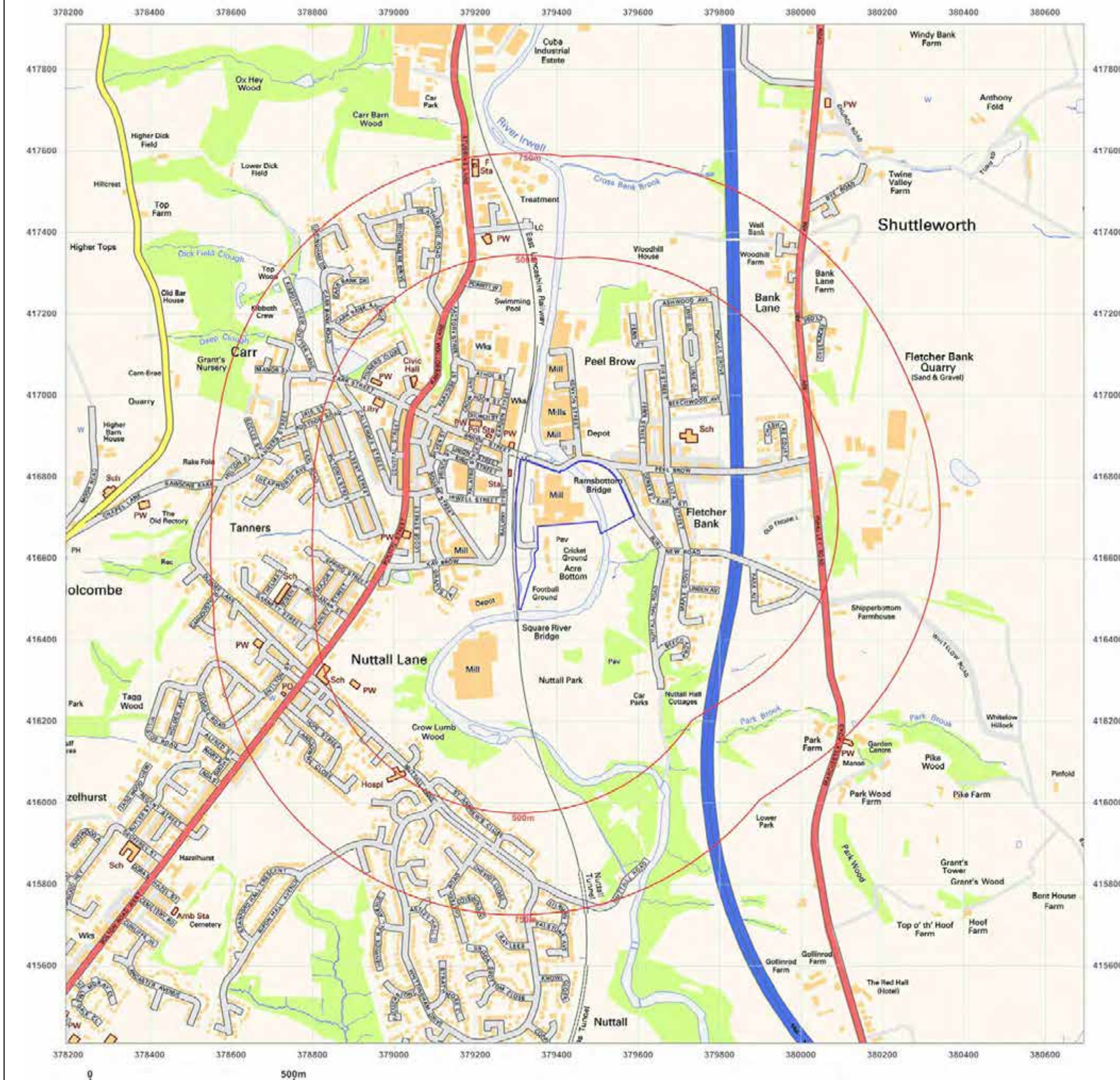


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Site Details:

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Client Ref: BG3315
Report Ref: GS-6015652
Grid Ref: 379445, 416660

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000

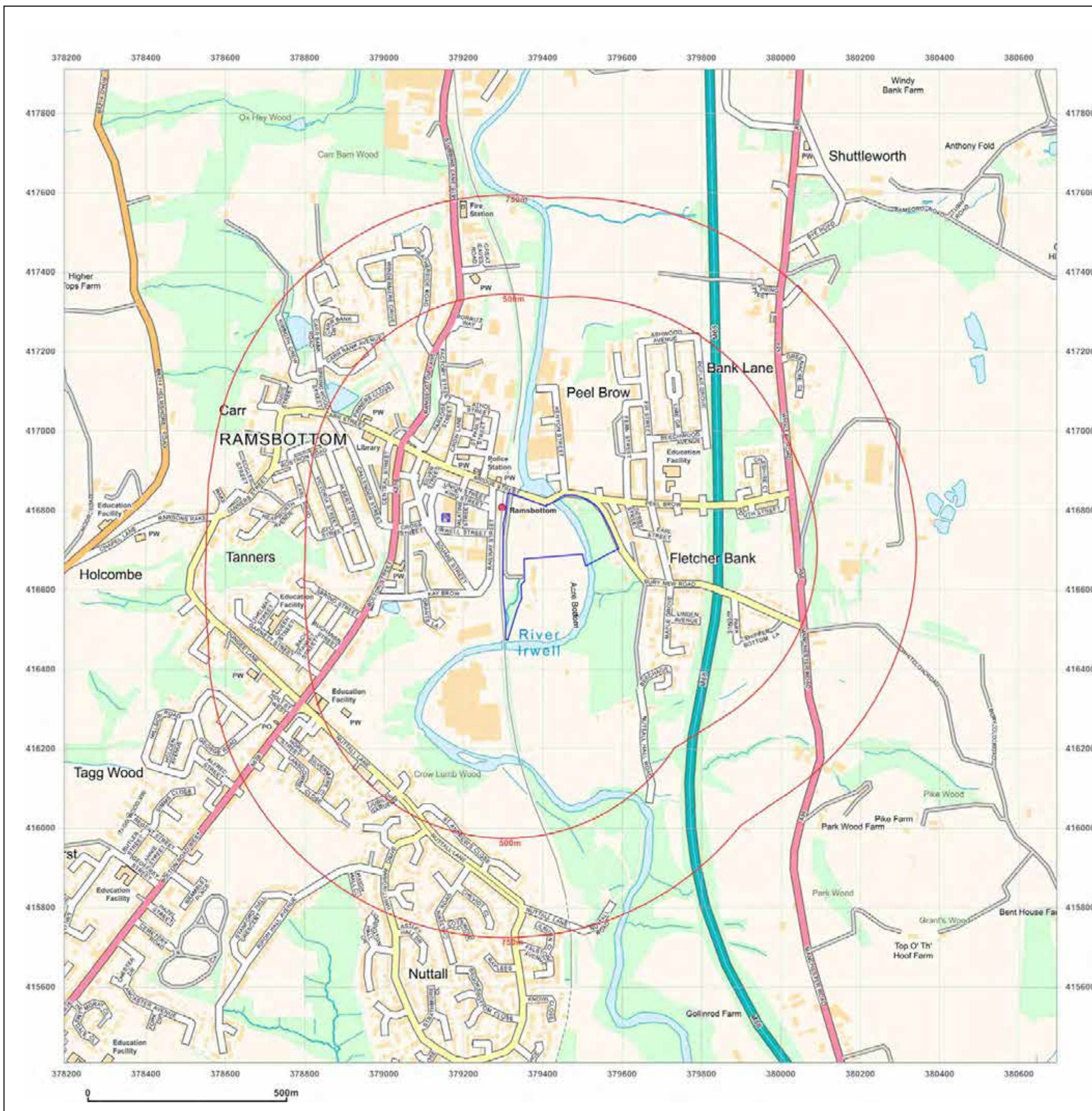


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APPENDIX D

- (i) GroundSure Report
- (ii) Coal Authority Report



Betts Geo Ltd

BETTS GEO ENVIRONMENTAL, 4 OLD MARSH
FARM BARN, MARSH FARM ROAD,
SEALAND, CH5 2LY

Groundsure
Reference:

GS-6015650

Your Reference:

BG3315

Report Date

9 May 2019

Report Delivery
Method:

Email - pdf

Enviro Insight

Address: HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BL0 0BS

Dear Sir/ Madam,

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

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

Yours faithfully,

A handwritten signature in black ink, appearing to be "Andy O.", written in a cursive style.

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BL0 0BS

Date: 9 May 2019

Reference: GS-6015650

Client: Betts Geo Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 26-Mar-2012

Grid Reference: 379433,416756

Site Size: 4.6144ha

Report Reference: GS-6015650

Client Reference: BG3315

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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	32	25	64	75
1.2 Additional Information – Historical Tank Database	15	0	8	2
1.3 Additional Information – Historical Energy Features Database	3	2	13	20
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	4	3	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	19	10	30	55
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	2	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	2	1	0	3
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	1	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	1	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	1	1	1
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	3	2	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	4	2
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	2	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	1	0	0	2	5	4
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	2	0	2	2	29	7
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	5	7	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	6	4	10	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	5	34	Not searched
4.2 Records of Petrol and Fuel Sites	0	1	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

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

Section 6: Hydrogeology and Hydrology				0-500m		
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	2	0	0	0	2	18
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	6	0	8	3	21
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	3
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	1	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	16	20	20	58	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

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

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	2
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	3	6
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
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	2	2	1

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

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

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

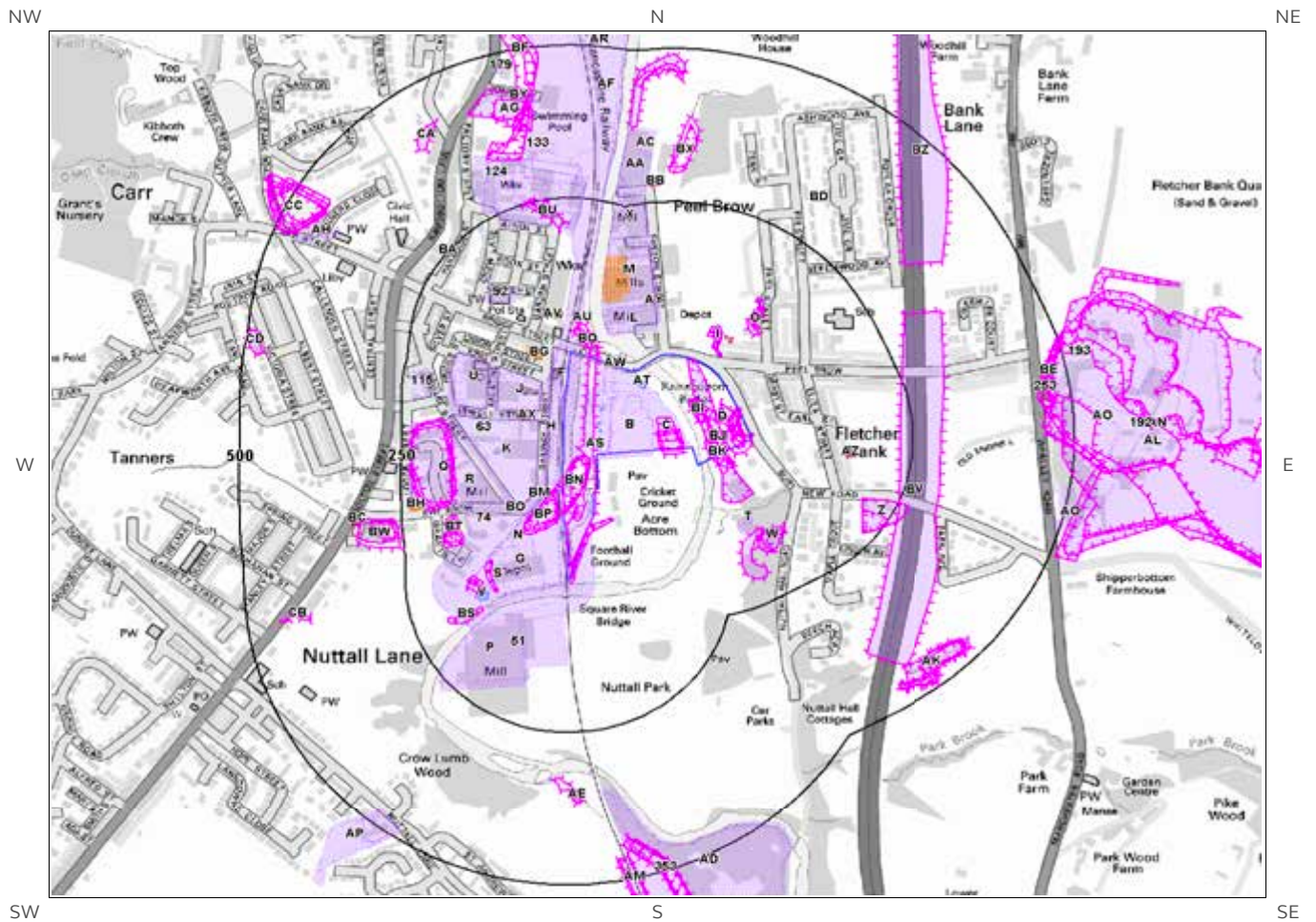
Note: Maps

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

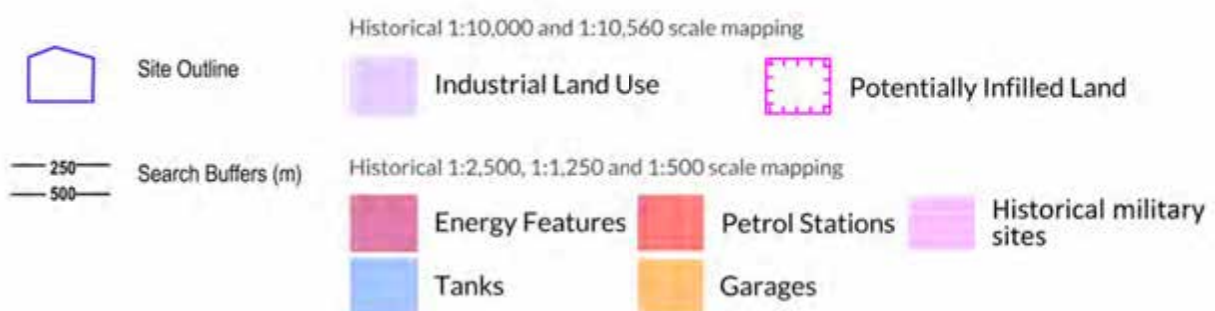
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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

1. Historical Land Use



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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: 196

ID	Distance [m]	Direction	Use	Date
1D	0	On Site	Refuse Heap	1927
2BK	0	On Site	Refuse Heap	1948
3A	0	On Site	Refuse Heap	1968
4A	0	On Site	Refuse Heap	1948
5A	0	On Site	Refuse Heap	1955
6B	0	On Site	Paper Mill	1908
7B	0	On Site	Paper Mill	1948
8	0	On Site	Railway Sidings	1955
9BL	0	On Site	Unspecified Ground Workings	1908
10B	0	On Site	Paper Mill	1927
11B	0	On Site	Unspecified Mill	1891
12B	0	On Site	Paper Mill	1955
13B	0	On Site	Unspecified Mill	1968
14B	0	On Site	Unspecified Mill	1980
15C	0	On Site	Filter Beds	1927
16C	0	On Site	Filter Beds	1948
17C	0	On Site	Filter Beds	1955
18BJ	0	On Site	Unspecified Ground Workings	1968
19BI	0	On Site	Refuse Heap	1948
20D	0	On Site	Refuse Heap	1955
21AB	0	On Site	Railway Sidings	1968
22E	0	On Site	Railway Sidings	1948
23E	0	On Site	Railway Sidings	1927
24E	0	On Site	Railway Sidings	1891
25E	0	On Site	Railway Sidings	1908
26F	0	On Site	Railway Station	1927
27F	0	On Site	Railway Station	1908
28F	0	On Site	Railway Station	1891
29F	0	On Site	Railway Station	1948
30F	0	On Site	Railway Station	1955
31F	0	On Site	Railway Station	1968
32G	0	On Site	Bleaching Works	1955
33BM	6	W	Railway Sidings	1908

34G	8	W	Unspecified Depot	1980
35G	8	W	Unspecified Works	1968
36H	9	W	Railway Sidings	1948
37H	9	W	Railway Sidings	1927
38G	11	W	Bleaching Works	1948
39G	11	W	Unspecified Works	1927
40H	13	W	Railway Building	1955
41H	14	W	Railway Building	1908
42I	23	NE	Unspecified Ground Workings	1955
43I	28	NE	Unspecified Ground Workings	1948
44I	28	NE	Unspecified Ground Workings	1927
45J	32	W	Unspecified Works	1980
46J	34	W	Unspecified Mills	1955
47J	34	W	Unspecified Mills	1968
48K	36	W	Unspecified Mills	1955
49K	36	W	Unspecified Commercial/Industrial	1980
50K	36	W	Unspecified Mills	1968
51	36	S	Unspecified Mill	1980
52K	36	W	Unspecified Mills	1891
53J	38	W	Unspecified Mills	1927
54J	38	W	Unspecified Mills	1948
55M	44	N	Cotton Mills	1908
56L	44	N	Unspecified Mills	1948
57L	44	N	Unspecified Mills	1927
58L	51	N	Unspecified Commercial/Industrial	1980
59L	51	N	Unspecified Mills	1955
60M	54	N	Unspecified Mills	1968
61N	55	W	Railway Sidings	1948
62N	55	W	Railway Sidings	1927
63	75	W	Unspecified Mills	1948
64M	85	N	Unspecified Mills	1927
65M	85	N	Unspecified Mills	1948
66P	85	SW	Unspecified Mill	1968
67O	85	NE	Unspecified Ground Workings	1927
68O	85	NE	Unspecified Ground Workings	1948
69P	89	SW	Cotton Mill	1955
70Q	93	W	Unspecified Mill	1955
71Q	93	W	Unspecified Commercial/Industrial	1980
72Q	93	W	Unspecified Commercial/Industrial	1968
73O	93	NE	Unspecified Ground	1955

Workings				
74	93	W	Unspecified Works	1980
75M	94	N	Unspecified Commercial/Industrial	1980
76M	94	N	Unspecified Mills	1955
77R	95	W	Unspecified Mill	1908
78R	95	W	Unspecified Mill	1948
79R	95	W	Unspecified Mill	1927
80P	97	SW	Cotton Mill	1948
81P	97	SW	Unspecified Mill	1927
82S	98	W	Railway Sidings	1927
83S	98	W	Railway Sidings	1948
84T	108	SE	Old Engine	1955
85U	109	W	Unspecified Works	1980
86S	109	W	Unspecified Ground Workings	1908
87T	110	SE	Old Engine	1948
88T	110	SE	Old Engine	1908
89T	110	SE	Old Engine	1927
90U	117	W	Unspecified Mill	1955
91U	117	W	Unspecified Mill	1968
92	118	NW	Police Station	1980
93U	120	W	Unspecified Mill	1927
94U	120	W	Unspecified Mill	1948
95S	121	W	Unspecified Tank	1968
96S	122	W	Unspecified Tank	1955
97V	126	W	Unspecified Tank	1908
98V	126	W	Unspecified Tank	1927
99V	126	W	Unspecified Tank	1948
100V	130	W	Filter Beds	1955
101V	133	W	Filter Beds	1948
102V	133	W	Filter Beds	1927
103BR	137	SE	Refuse Heap	1968
104BS	139	W	Unspecified Ground Workings	1908
105W	141	SE	Refuse Heap	1955
106W	147	SE	Refuse Heap	1948
107W	147	SE	Refuse Heap	1927
108X	186	N	Unspecified Mill	1955
109X	186	N	Unspecified Commercial/Industrial	1980
110X	186	N	Unspecified Mill	1927
111X	186	N	Unspecified Mill	1948
112Y	186	N	Unspecified Mills	1891
113Y	186	N	Unspecified Disused Mills	1948
114Y	197	N	Unspecified Disused Mills	1955
115	197	W	Unspecified Works	1980

116Y	197	N	Unspecified Commercial/Industrial	1968
117Z	198	SE	Refuse Heap	1928
118Z	209	SE	Refuse Heap	1938
119Y	213	N	Unspecified Mills	1908
120Y	224	N	Unspecified Mills	1927
121BV	230	E	Cuttings	1980
122AA	264	N	Soap Works	1948
123AA	264	N	Soap Works	1927
124	265	NW	Unspecified Works	1980
125AF	267	N	Railway Sidings	1908
126AA	276	N	Unspecified Works	1968
127AA	276	N	Unspecified Works	1980
128AA	276	N	Soap Works	1955
129AB	312	N	Railway Sidings	1927
130AB	312	N	Railway Sidings	1948
131AB	312	N	Railway Sidings	1908
132AB	312	N	Railway Sidings	1891
133	326	N	Railway Building	1955
134BZ	338	NE	Cuttings	1980
135AC	342	N	Unspecified Tank	1955
136AC	342	N	Chimney	1968
137AC	342	N	Chimney	1980
138AD	345	S	Chemical Works	1955
139AD	345	S	Unspecified Disused Works	1968
140AE	346	S	Unspecified Pit	1948
141AE	346	S	Unspecified Pit	1927
142AD	346	S	Unspecified Disused Works	1980
143AF	347	N	Railway Sidings	1927
144AF	347	N	Railway Sidings	1948
145AF	347	N	Railway Sidings	1891
146AE	349	S	Unspecified Ground Workings	1908
147AD	350	S	Chemical Works	1948
148AD	350	S	Chemical Works	1927
149AG	375	N	Refuse Destructor	1927
150AG	375	N	Refuse Destructor	1948
151AJ	375	N	Unspecified Ground Workings	1955
152AG	386	N	Refuse Destructor	1955
153AG	387	N	Fire Station	1968
154CA	398	NW	Unspecified Ground Workings	1891
155CB	401	W	Unspecified Ground Workings	1955
156AH	407	NW	Unspecified Mill	1908

157AH	412	NW	Unspecified Disused Mill	1948
158AH	412	NW	Unspecified Mill	1927
159AI	434	S	Unspecified Pit	1908
160AI	437	S	Cuttings	1948
161AI	437	S	Cuttings	1927
162AK	439	SE	Unspecified Pit	1968
163AJ	440	N	Unspecified Ground Workings	1948
164AJ	440	N	Unspecified Ground Workings	1927
165AK	447	SE	Unspecified Pit	1928
166AK	447	SE	Unspecified Pit	1938
167AL	449	E	Unspecified Quarry	1891
168AL	449	E	Unspecified Quarry	1938
169AK	454	SE	Unspecified Pit	1955
170AO	460	E	Sandstone Quarry	1851
171AM	462	S	Cuttings	1955
172AM	462	S	Cuttings	1927
173AM	462	S	Cuttings	1948
174AM	462	S	Cuttings	1908
175AM	462	S	Cuttings	1891
176AL	464	E	Unspecified Quarry	1908
177AL	464	E	Unspecified Quarry	1928
178AN	464	E	Unspecified Quarry	1949
179	464	N	Smithy	1908
180CD	470	W	Refuse Heap	1891
181AP	471	SW	Hospital	1980
182AN	475	E	Unspecified Quarry	1967
183AN	475	E	Unspecified Quarry	1987
184AO	476	E	Railway Sidings	1938
185AP	478	SW	Hospital	1968
186AP	478	SW	Hospital	1955
187AP	482	SW	Hospital	1908
188AQ	482	E	Unspecified Works	1967
189AQ	482	E	Unspecified Works	1987
190AP	485	SW	Hospital	1948
191AP	485	SW	Hospital	1927
192	491	E	Railway Sidings	1928
193	494	E	Railway Sidings	1928
194AR	500	N	Railway Building	1948
195AR	500	N	Railway Building	1908
196AR	500	N	Railway Building	1927

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:

25

ID	Distance (m)	Direction	Use	Date
197C	0	On Site	Unspecified Tank	1978
198C	0	On Site	Unspecified Tank	1992
199E	0	On Site	Unspecified Tank	1891
200E	0	On Site	Tanks	1992
201AS	0	On Site	Unspecified Tank	1938
202AS	0	On Site	Unspecified Tank	1910
203AS	0	On Site	Unspecified Tank	1929
204E	0	On Site	Tanks	1992
205E	0	On Site	Tanks	1978
206AT	0	On Site	Tanks	1992
207AT	0	On Site	Tanks	1978
208E	0	On Site	Tanks	1994
209E	0	On Site	Tanks	1994
210AT	0	On Site	Tanks	1994
211C	0	On Site	Unspecified Tank	1994
212AU	53	N	Unspecified Tank	1962
213AU	63	NW	Unspecified Tank	1978
214AV	63	NW	Unspecified Tank	1992
215AV	63	NW	Unspecified Tank	1994
216BO	73	W	Unspecified Tank	1891
217K	97	W	Tanks	1992
218V	123	W	Unspecified Tank	1910
219V	124	W	Unspecified Tank	1929
220Y	284	N	Unspecified Tank	1891
221AG	387	N	Unspecified Tank	1962

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:

38

ID	Distance (m)	Direction	Use	Date
222AW	0	On Site	Electricity Substation	1992

223AW	0	On Site	Electricity Substation	1978
224AW	0	On Site	Electricity Substation	1994
225I	49	NE	Electricity Substation	1978
226I	49	NE	Electricity Substation	1989
227I	51	NE	Electricity Substation	1992
228AX	52	W	Electricity Substation	1978
229AX	53	W	Electricity Substation	1992
230AX	53	W	Electricity Substation	1994
231AY	84	N	Electricity Substation	1992
232AY	86	N	Electricity Substation	1994
233AY	87	N	Electricity Substation	1978
234AZ	148	E	Electricity Substation	1989
235AZ	149	E	Electricity Substation	1992
236AZ	149	E	Electricity Substation	1978
237BA	244	NW	Electricity Substation	1994
238BA	244	NW	Electricity Substation	1996
239BA	244	NW	Electricity Substation	1992
240BA	254	NW	Electricity Substation	1981
241BA	254	NW	Electricity Substation	1978
242BB	277	N	Electricity Substation	1978
243BB	277	N	Electricity Substation	1994
244BB	277	N	Electricity Substation	1992
245BB	277	N	Electricity Substation	1996
246BB	277	N	Electricity Substation	1981
247BC	314	W	Electricity Substation	1978
248BC	314	W	Electricity Substation	1992
249BC	315	W	Electricity Substation	1989
250BD	317	NE	Electricity Substation	1992
251BD	318	NE	Electricity Substation	1978
252BD	318	NE	Electricity Substation	1981
253	455	E	Electricity Substation	1993
254BE	468	E	Electricity Substation	1979
255BE	468	E	Electricity Substation	1987
256BE	469	E	Electricity Substation	1987
257BE	469	E	Electricity Substation	1993
258BF	493	N	Electricity Substation	1978
259BF	493	N	Electricity Substation	1981

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: 7

ID	Distance (m)	Direction	Use	Date
260BG	41	W	Garage	1962
261BG	42	W	Garage	1992
262BG	42	W	Garage	1994
263BG	43	W	Garage	1978
264M	92	N	Depot and Destructor Works	1978
265BH	218	W	Garage	1992
266BH	218	W	Garage	1978

1.6 Historical military sites

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

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 114

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

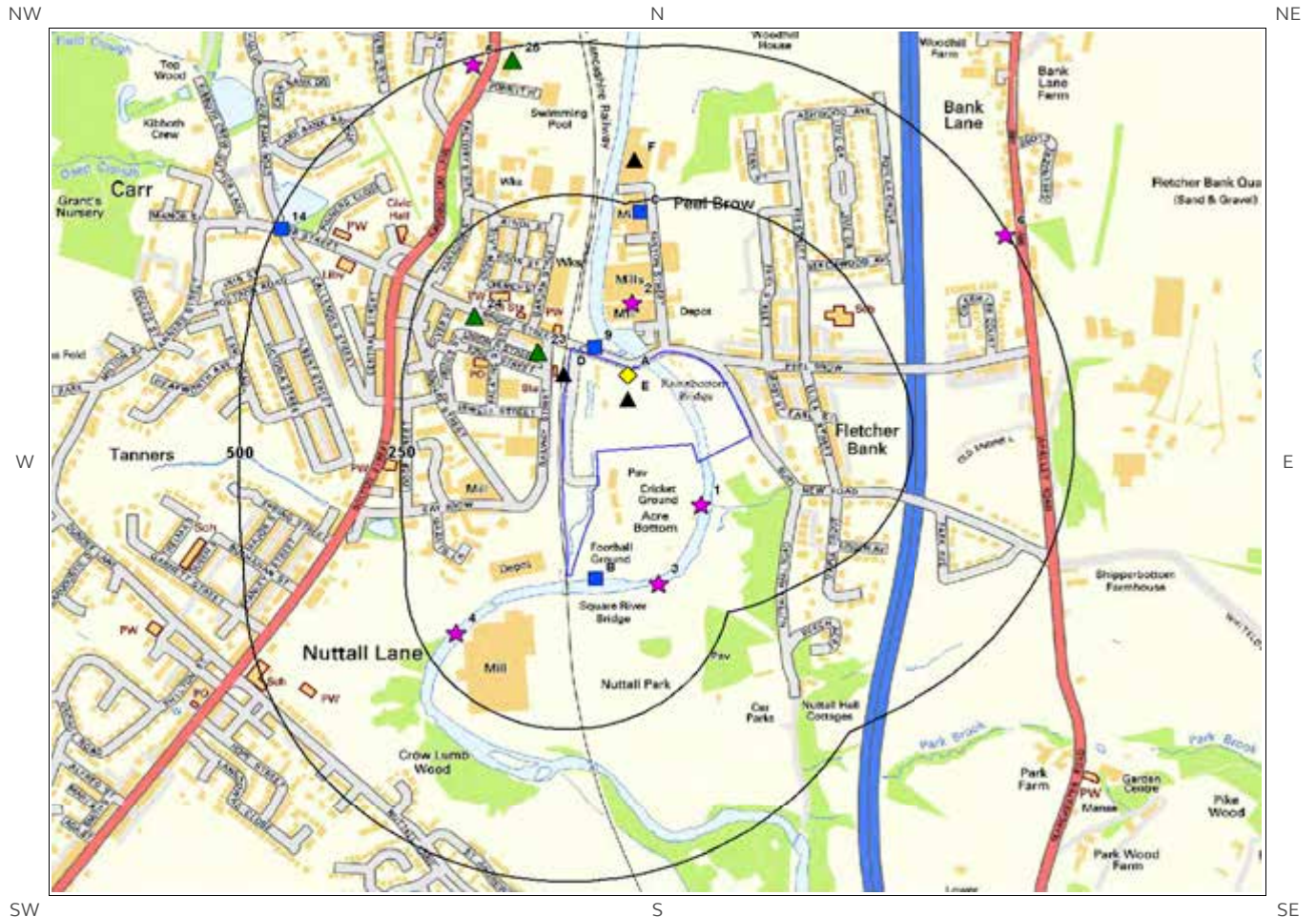
ID	Distance(m)	Direction	Use	Date
267BI	0	On Site	Refuse Heap	1948
268A	0	On Site	Refuse Heap	1927
269BJ	0	On Site	Refuse Heap	1955
270A	0	On Site	Unspecified Ground Workings	1968
271A	0	On Site	Refuse Heap	1955
272A	0	On Site	Refuse Heap	1948
273A	0	On Site	Refuse Heap	1968

274BK	0	On Site	Refuse Heap	1948
275BL	0	On Site	Unspecified Ground Workings	1908
276BM	0	On Site	Reservoir	1955
277BN	0	On Site	Reservoirs	1891
278BN	0	On Site	Reservoir	1948
279BN	0	On Site	Pond	1908
280BN	0	On Site	Reservoir	1927
281BN	0	On Site	Pond	1968
282C	0	On Site	Filter Beds	1955
283C	0	On Site	Filter Beds	1927
284AS	0	On Site	Ponds	1955
285C	0	On Site	Filter Beds	1948
286BQ	3	N	Pond	1891
287BO	8	W	Pond	1968
288BP	11	W	Reservoir	1927
289BP	11	W	Reservoir	1908
290BP	11	W	Reservoir	1948
291BQ	14	N	Pond	1948
292BQ	14	N	Pond	1927
293I	23	NE	Unspecified Ground Workings	1955
294I	28	NE	Unspecified Ground Workings	1927
295I	28	NE	Unspecified Ground Workings	1948
296O	85	NE	Unspecified Ground Workings	1948
297O	85	NE	Unspecified Ground Workings	1927
298O	93	NE	Unspecified Ground Workings	1955
299S	109	W	Unspecified Ground Workings	1908
300V	130	W	Filter Beds	1955
301V	133	W	Filter Beds	1948
302V	133	W	Filter Beds	1927
303BR	137	SE	Refuse Heap	1968
304BS	139	W	Unspecified Ground Workings	1908
305W	141	SE	Refuse Heap	1955
306W	147	SE	Refuse Heap	1927
307W	147	SE	Refuse Heap	1948
308BT	156	W	Reservoirs	1955
309BT	156	W	Ponds	1968
310BT	159	W	Reservoirs	1948
311BT	159	W	Reservoirs	1927
312BT	159	W	Reservoirs	1908
313BT	164	W	Reservoirs	1948

314BT	164	W	Reservoirs	1908
315Q	164	W	Pond	1968
316Q	169	W	Reservoir	1955
317Q	171	W	Reservoir	1908
318Q	171	W	Reservoir	1891
319Q	171	W	Reservoir	1948
320Q	171	W	Reservoir	1927
321Z	198	SE	Refuse Heap	1928
322BU	202	N	Pond	1955
323Z	209	SE	Refuse Heap	1938
324BU	224	N	Pond	1968
325BV	230	E	Cuttings	1980
326BW	256	W	Reservoir	1927
327BW	256	W	Reservoir	1948
328BW	256	W	Reservoir	1908
329BW	256	W	Pond	1891
330BW	257	W	Pond	1980
331BW	257	W	Pond	1968
332BW	262	W	Reservoir	1955
333BX	296	N	Pond	1948
334BX	296	N	Pond	1927
335BX	306	N	Pond	1955
336BY	322	N	Pond	1891
337AE	324	S	Pond	1908
338BY	330	N	Pond	1955
339BZ	338	NE	Cuttings	1980
340AE	346	S	Unspecified Pit	1927
341AE	346	S	Unspecified Pit	1948
342AE	349	S	Unspecified Ground Workings	1908
343AG	363	N	Pool	1980
344AG	375	N	Refuse Destructor	1927
345AG	375	N	Refuse Destructor	1948
346AJ	375	N	Unspecified Ground Workings	1955
347BY	386	N	Refuse Destructor	1955
348CA	398	NW	Unspecified Ground Workings	1891
349CB	401	W	Unspecified Ground Workings	1955
350AI	434	S	Unspecified Pit	1908
351AI	437	S	Cuttings	1948
352AI	437	S	Cuttings	1927
353	437	S	Reservoir	1955
354AK	439	SE	Unspecified Pit	1968
355AJ	440	N	Unspecified Ground Workings	1927

356AJ	440	N	Unspecified Ground Workings	1948
357CC	441	NW	Reservoir	1908
358CC	441	NW	Reservoir	1927
359CC	441	NW	Reservoir	1948
360CC	443	NW	Reservoir	1891
361CC	443	NW	Pond	1968
362CC	443	NW	Pond	1980
363CC	444	NW	Reservoir	1955
364AK	447	SE	Unspecified Pit	1928
365AK	447	SE	Unspecified Pit	1938
366AL	449	E	Unspecified Quarry	1891
367AL	449	E	Unspecified Quarry	1938
368AK	454	SE	Unspecified Pit	1955
369AO	460	E	Sandstone Quarry	1851
370AM	462	S	Cuttings	1955
371AM	462	S	Cuttings	1948
372AM	462	S	Cuttings	1891
373AM	462	S	Cuttings	1908
374AM	462	S	Cuttings	1927
375AL	464	E	Unspecified Quarry	1908
376AL	464	E	Unspecified Quarry	1928
377AN	464	E	Unspecified Quarry	1949
378CD	470	W	Refuse Heap	1891
379AN	475	E	Unspecified Quarry	1987
380AN	475	E	Unspecified Quarry	1967

2. Environmental Permits, Incidents and Registers Map



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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:

2

The following IPC Authorisations are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
32D	7	W	379300 416800	Operator: Mondi Packaging Holcombe Ltd Address: Holcombe Mill, Bridge Street, Ramsbottom, Bury, Lancashire, BL0 0BS Process: Paper And Pulp Manufacturing Processes Permit Number: AU7451 Original Permit Number: IPCAPP Date Approved: 27-1-1997 Effective Date: 29-1-1997 Status: Superseded By Variation
33D	7	W	379300 416800	Operator: Mondi Packaging Holcombe Ltd Address: Holcombe Mill, Bridge Street, Ramsbottom, Bury, Lancashire, BL0 0BS Process: Paper And Pulp Manufacturing Processes Permit Number: BD4546 Original Permit Number: IPCMINVAR Date Approved: 24-11-1998 Effective Date: 30-11-1998 Status: Revoked - Now Ippc

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

6

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
26E	0	On Site	379400 416760	Operator: MONDI HOLCOMBE LTD Installation Name: DANISCO PAPER MILL EAEPBJ6542IQS002 Process: PAPER, PULP AND BOARD; PRODUCING PAPER/BOARD >20T/D Permit Number: BJ6542IQ Original Permit Number: BJ6542IQ EPR Reference: - Issue Date: 09/01/2002 Effective Date: 09/01/2002 Last date noted as effective: 2019-01-31 Status: SUPERCEDED
27E	0	On Site	379400 416760	Operator: MONDI HOLCOMBE LTD Installation Name: DANISCO PAPER LIMITED Process: PAPER, PULP AND BOARD; PRODUCING PAPER/BOARD >20T/D Permit Number: KP3530KN Original Permit Number: BJ6542IQ EPR Reference: - Issue Date: - Effective Date: 25/06/2010

ID	Distance (m)	Direction	NGR	Details	
				Last date noted as effective: 2019-01-31 Status: SURRENDER EFFECTIVE	
28D	7	W	379300 416800	Operator: MONDI PAPER LTD Installation Name: - Process: PAPER, PULP & BOARD; PRODUCING PAPER/BOARD >20T/D	Permit Number: BJ6542 Original Permit Number: BJ6542 EPR Reference: - Issue Date: 09/01/2002 Effective Date: 09/01/2002 Last date noted as effective: 2004-10-01 Status: SUPERSEDED BY PAS
29F	315	N	379410 417150	Operator: KAYS LTD Installation Name: RAMSBOTTOM SOAP WORKS Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: XP3131YF Original Permit Number: WP3339LW EPR Reference: - Issue Date: - Effective Date: 22/08/2017 Last date noted as effective: 2019-01-31 Status: SURRENDER EFFECTIVE
30F	315	N	379410 417150	Operator: KAYS LTD Installation Name: RAMSBOTTOM SOAP WORKS Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: WP3339LW Original Permit Number: WP3339LW EPR Reference: - Issue Date: 14/06/2007 Effective Date: 14/06/2007 Last date noted as effective: 2019-01-31 Status: SUPERCEDED
31F	315	N	379410 417150	Operator: KAYS LTD Installation Name: RAMSBOTTOM SOAP WORKS Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: VP3435XJ Original Permit Number: WP3339LW EPR Reference: - Issue Date: 14/02/2008 Effective Date: 14/02/2008 Last date noted as effective: 2019-01-31 Status: SUPERCEDED

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:

1

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
7A	0	On Site	379400 416800	Name: Danisco Paper, Holcombe Mill Status: Active Receiving Water: Stw Partcons	Authorised Substances: Mercury (other), Hexachlorocyclohexane, Pentachlorophenol, Hexachlorobutadiene

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

1

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
8A	0	On Site	379400 416800	Name: Danisco Paper, Holcombe Mill Status: Not Active Receiving Water: - Authorised Substances: Atrazine & Simazine

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

3

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
23	49	W	379261 416836	Address: Station Garage, Railway Street, BL0 9AL Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
24	157	W	379163 416894	Address: First Impression, 44 Bridge Street, Ramsbottom, Bury, BL0 9AQ Process: Dry Cleaning Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
25	476	N	379221 417313	Address: Ramsbottom Service Station, Stubbins Road, Ramsbottom, BL0 0PU Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

6

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

ID	Distance (m)	Direction	NGR	Details
9	13	N	379348 416847	Address: CARR STREET CSO 099BP, 82 CARR STREET, RAMSBOTTOM, BURY, LANCASHIRE, BL0 9EG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BRY0001 Permit Version: 4 Receiving Water: RIVER IRWELL Status: VARIED UNDER EPR 2010 Issue date: 11/04/2018 Effective Date: 11-Apr-2018 Revocation Date: -
10B	38	E	379350 416470	Address: CARR STREET CSO 099BP, 82 CARR STREET, RAMSBOTTOM, BURY, LANCASHIRE, BL0 9EG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BRY0001 Permit Version: 2 Receiving Water: RIVER IRWELL Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 04/02/2016
11B	38	E	379350 416470	Address: CARR STREET CSO 099BP, 82 CARR STREET, RAMSBOTTOM, BURY, LANCASHIRE, BL0 9EG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BRY0001 Permit Version: 1 Receiving Water: RIVER IRWELL Status: VARIED UNDER EPR 2010 Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 02/09/2010
12C	232	N	379419 417068	Address: BRITANNIA WORKS, KENYON ST, RAMSBOTTOM, BURY, LANCASHIRE Effluent Type: TRADE DISCHARGES - COOLING WATER Permit Number: 0165/76 Permit Version: 2 Receiving Water: RIVER IRWELL Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 15/08/2017
13C	232	N	379419 417068	Address: BRITANNIA WORKS, KENYON ST, RAMSBOTTOM, BURY, LANCASHIRE Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0165/76 Permit Version: 1 Receiving Water: RIVER IRWELL Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Apr-1991 Revocation Date: 31/12/1994
14	488	NW	378864 417040	Address: CARR STREET CSO 099BP, 82 CARR STREET, RAMSBOTTOM, BURY, LANCASHIRE, BL0 9EG Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01BRY0001 Permit Version: 3 Receiving Water: RIVER IRWELL Status: VARIED UNDER EPR 2010 Issue date: 05/02/2016 Effective Date: 05-Feb-2016 Revocation Date: 10/04/2018

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:

6

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

ID	Distance (m)	Direction	NGR	Details
1	69	S	379512.0 416592.0	Incident Date: 17-Apr-2002 Incident Identification: 72361.0 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	94	NW	379405.0 416919.0	Incident Date: 22-Jun-2014 Incident Identification: 1247989.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 2 (Significant)
3	132	E	379446.0 416462.0	Incident Date: 15-Apr-2002 Incident Identification: 71682.0 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	197	SW	379133.0 416382.0	Incident Date: 13-Jun-2001 Incident Identification: 9000.0 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	487	N	379159.0	Incident Date: 25-Mar-2005 Water Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details
6	495	NE	417308.0	Incident Identification: 301340.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Chemical Odour Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
			379984.0 417030.0	Incident Date: 25-Sep-2002 Incident Identification: 110419.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

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

0

Database searched and no data found.

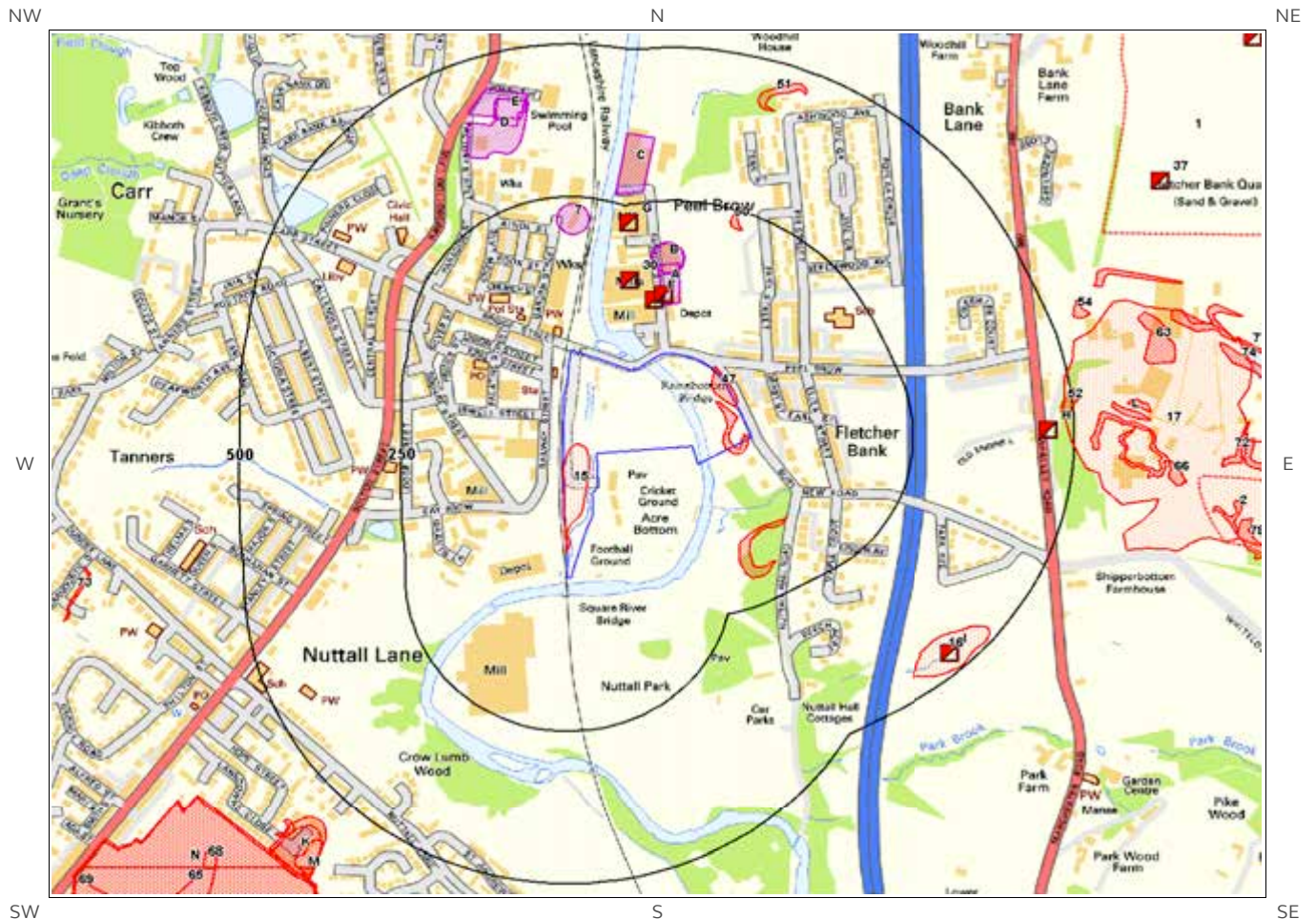
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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

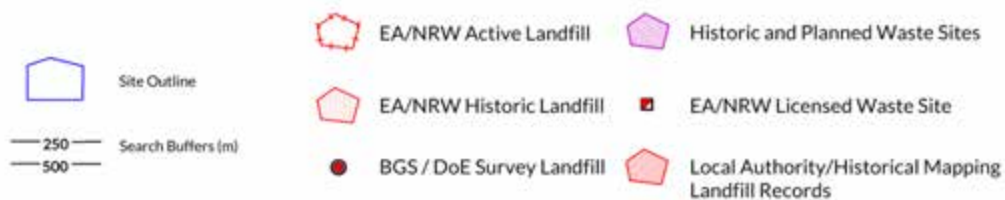
0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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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:

2

The following Environment Agency/Natural Resources Wales landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	632	NE	380170 416650	Address: Fletcher Bank Quarry, Fletcher Bank, Ramsbottom, Lancashire, BL0 0DD Landfill Reference: 0.0 Environmental Permitting Regulations (Waste) Reference: - Landfill Type: WASTE LANDFILLING; ANY OTHER LANDFILL TO WHICH THE 2002 LANDFILL REGULATIONS APPLY Operator: Churchill Enviro Ltd Status: Transfer Effective IPPC Reference: EPR Reference:
2	694	E	380521 416530	Address: Land/premises At, Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0DD Landfill Reference: 53693.0 Environmental Permitting Regulations (Waste) Reference: MML001 Landfill Type: A07: Industrial Waste Landfill (Factory curtilage) Operator: Marshalls Mono Ltd Status: Closure IPPC Reference: EPR Reference:

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

12

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
15	0	On Site		Site Address: Mill Lodge, Railway Street/Kenyon Street, Ramsbottom, Bury, Greater Manchester Waste Licence: Yes Site Reference: C013, RD/LIC/009/76 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 13-Dec-1977 Licence Surrendered: 08-May-1990 Licence Holder Address: Irwell Street, Ramsbottom Operator: - Licence Holder: Irwell Street Metal Company Limited First Recorded: 31-Dec-1977 Last Recorded: 31-Jul-1979
16	437	SE		Site Address: Park Farm, Off Manchester Road, Ramsbottom, Greater Manchester Licence Issue: 15-Jun-1979 Licence Surrendered: 01-Jul-2004

ID	Distance (m)	Direction	NGR	Details
				Waste Licence: Yes Site Reference: C003, RD/LIC/130/77 Waste Type: Inert, Household, Special Environmental Permitting Regulations (Waste) Reference: NR1/L/JCL001 Licence Holder Address: - Operator: J C Lees Esquire Licence Holder: J C Lees Esquire First Recorded: 30-Apr-1978 Last Recorded: -
17	485	E		Site Address: Fletcher Bank Quarry, Off Whitelow Road, Fletcher Bank, Ramsbottom, Bury, Greater Manchester Waste Licence: Yes Site Reference: RD/LIC/285/83, C097 Waste Type: Industrial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 31-Oct-1983 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Marshals Mono Limited First Recorded: 31-Dec-1948 Last Recorded: -
18K	565	SW		Site Address: Carrington Novare, Off Hope Street, Ramsbottom, Greater Manchester Waste Licence: Yes Site Reference: C083 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: Bury Metropolitan Borough Council First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1984
19N	638	SW		Site Address: Land off Bolton Road West, Off Bolton Road West, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C059 Waste Type: Industrial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: 31-Dec-1975
Not shown	732	SW		Site Address: Carrington Novare, Off Hope Street, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C069 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	864	NE		Site Address: Top Mill, Off Bye Road, Shuttleworth, Bury, Greater Manchester Waste Licence: Yes Site Reference: RD/LIC/675/90,L19A,C094 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 10-Jul-1991 Licence Surrendered: Licence Holder Address: Craig House, 5 Bank Street, Bury Operator: - Licence Holder: Bury Metropolitan Borough Council First Recorded: 31-Dec-1991 Last Recorded: -
Not shown	880	NE		Site Address: Land off Whalley Road, Off Whalley Road, Shuttleworth, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C073 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1001	W		Site Address: Higher Barn Farm, Off Helmshore Road, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C120 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1983 Last Recorded: -
Not	1161	NE		Site Address: Land off Bamford Road, Off Licence Issue:

ID	Distance (m)	Direction	NGR	Details
shown				Bamford Road, Shuttleworth, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C063 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1983 Last Recorded: -
Not shown	1333	N		Site Address: Rose Bank Mill, Off Bolton Road North, Stubbins, Edenfield, Lancashire Waste Licence: - Site Reference: R016, K1/14/016 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Peel Holdings First Recorded: - Last Recorded: -
Not shown	1362	NE		Site Address: Top of the Lea, Off Bury Old Road, Shuttleworth, Ramsbottom, Greater Manchester Waste Licence: - Site Reference: C072 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

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

0

Database searched and no data found.

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

42

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
47	0	On Site	379550 416786	Refuse Tip	1962 mapping	Polygon
48	0	On Site	379557 416719	Refuse Tip	1962 mapping	Polygon
49	136	SE	379581 416524	Refuse Tip	1962 mapping	Polygon
50	221	N	379565 417057	Refuse Tip	1962 mapping	Polygon
51	420	N	379611 417258	Refuse Tip	1962 mapping	Polygon
52	482	E	380085 416758	Refuse Tip	1962 mapping	Polygon
53	526	E	380125 416692	Refuse Tip	1962 mapping	Polygon

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
54	536	E	380103 416912	Refuse Tip	1962 mapping	Polygon
55K	551	SW	378890 416033	Unknown	Bury Metropolitan Borough Council	Polygon
56L	560	E	380179 416746	Refuse Tip	1962 mapping	Polygon
57K	576	SW	378907 416023	Refuse Tip	1962 mapping	Polygon
58L	583	E	380191 416754	Refuse Tip	1962 mapping	Polygon
59	585	NE	380190 416964	Refuse Tip	1962 mapping	Polygon
60	585	SW	378879 416065	Refuse Tip	1962 mapping	Polygon
61M	615	SW	378903 415994	Refuse Tip	1970 mapping	Polygon
62M	615	SW	378903 415994	Refuse Tip	1962 mapping	Polygon
63	620	E	380218 416866	Refuse Tip	1962 mapping	Polygon
64N	635	SW	378709 415970	Bolton Road West	Bury Metropolitan Borough Council	Polygon
65	640	SW	378720 415909	Refuse Tip	1970 mapping	Polygon
66	647	E	380251 416645	Refuse Tip	1962 mapping	Polygon
67	678	E	380274 416889	Refuse Tip	1962 mapping	Polygon
68	708	SW	378754 416014	Refuse Tip	1962 mapping	Polygon
69	722	SW	378696 415909	Refuse Tip	1962 mapping	Polygon
70	724	E	380328 416574	Refuse Tip	1962 mapping	Polygon
Not shown	729	SW	378887 415787	Carrington Novare Sludge Lagoon or Broad Hey Woods	Bury Metropolitan Borough Council	Polygon
72	729	E	380348 416692	Refuse Tip	1962 mapping	Polygon
73	736	W	378548 416448	Refuse Tip	1962 mapping	Polygon
74	740	E	380353 416829	Refuse Tip	1962 mapping	Polygon
Not shown	741	SW	378866 415793	Refuse Tip	1962 mapping	Polygon
76	764	E	380359 416669	Refuse Tip	1962 mapping	Polygon
77	768	E	380410 416804	Refuse Tip	1962 mapping	Polygon
78	769	E	380360 416536	Refuse Tip	1962 mapping	Polygon
Not shown	840	E	380453 416704	Refuse Tip	1962 mapping	Polygon
Not	924	E	380518	Refuse Tip	1962 mapping	Polygon

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
shown			416519			
Not shown	994	N	379283 417866	Refuse Tip	1962 mapping	Polygon
Not shown	1318	NE	380569 417658	Refuse Tip	1962 mapping	Polygon
Not shown	1391	N	379970 418166	Refuse Tip	1962 mapping	Polygon
Not shown	1391	SW	378626 415243	Refuse Tip	1962 mapping	Polygon
Not shown	1406	NE	380642 417712	Refuse Tip	1962 mapping	Polygon
Not shown	1408	N	378936 418219	Refuse Tip	1962 mapping	Polygon
Not shown	1408	N	378936 418219	Refuse Tip	1982 mapping	Polygon
Not shown	1436	N	380014 418183	Refuse Tip	1962 mapping	Polygon

3.2 Other Waste Sites

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

12

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

ID	Distance (m)	Direction	NGR	Details		
3A	79	N	379463 416958	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1992	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	79	N	379463 416958	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1994	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
5B	131	N	379462 416995	Type of Site: Waste Transfer Building Site Address: Kenyon Street, Ramsbottom, BURY, Greater Manchester, BL0 0A	Planning Application Reference: 36598 Date: 19/03/2001	Further Details: Scheme comprises a waste transfer station building with open ended front elevation and mezzanine floor, two roller shutter doors. This will also involve demolition. Construction - pitched roof; facing brick, metal cladding walls; metal cladding roof; rflight windows; roller shutter doors; portal frame. An application (ref: 36598) for Detailed Planning permission was granted, subject to conditions, by Bury M.B.C. on 28th September 2000. Contract awarded to Leach Construction Ltd.

ID	Distance (m)	Direction	NGR	Details		
				Data Source: Historic Planning Application Data Type: Point		
6B	132	N	379461 416996	Type of Site: Waste Transfer Station Site Address: Waterside Mill&PeelBridge Mill, Kenyon Street, ,Ramsbottom, BURY, Greater Manchester, BL0 OAB	Planning Application Reference: 50696 Date: 01/10/2009	Further Details: Scheme comprises change of use from haulage firm to waste transfer station. An application (ref: 50696) for detailed planning permission was submitted to Bury M.B.C. Data Source: Historic Planning Application Data Type: Point
7	189	N	379315 417059	Type of Site: Waste Recycling Centre Site Address: M A Excavations Ltd, Garden Street, Ramsbottom, BURY, Greater Manchester, BL0 9BG	Planning Application Reference: 52446 Date: -	Further Details: Scheme comprises change of use of site to waste recycling centre. An application (ref: 52446) for detailed planning permission was refused by Bury M.B.C. A detailed planning application has been refused. Data Source: Historic Planning Application Data Type: Point
8C	264	N	379411 417149	Type of Site: Scrap Works Site Address: N/A	Planning Application Reference: N/A Date: 1938	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
9C	264	N	379411 417149	Type of Site: Scrap Works Site Address: N/A	Planning Application Reference: N/A Date: 1929	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
10D	335	N	379198 417207	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1929	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
11D	335	N	379198 417207	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1938	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
12E	375	N	379218 417233	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1927	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
13E	375	N	379218 417233	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1848	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
14E	386	N	379199 417248	Type of Site: Refuse Destructor Site Address: N/A	Planning Application Reference: N/A Date: 1949	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

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

20

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

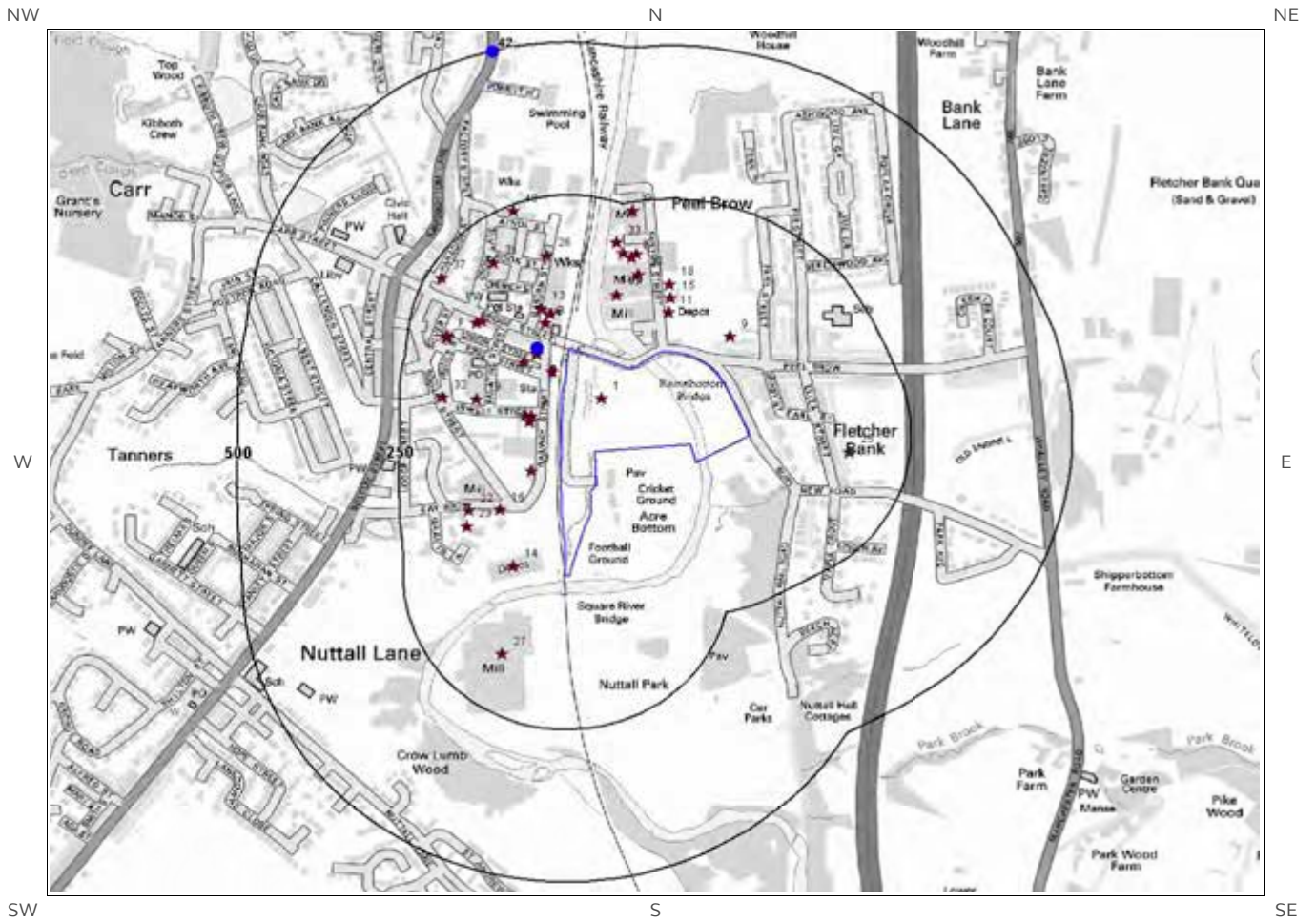
ID	Distance (m)	Direction	NGR	Details
27F	91	N	379441 416928	Site Address: Waterside Mill & Peel Bridge Mill, Kenyon Street, Ramsbottom, Lancs, BL0 0AB Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AWR003 EPR reference: CP3897ES/A001 Operator: A W R Rent A Skip Ltd Waste Management licence No: 100969 Annual Tonnage: 0.0 Issue Date: 04/08/2009 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: A W R Rent A Skip Correspondence Address: -
28F	91	N	379441 416928	Site Address: Waterside Mill, Kenyon Street, Ramsbottom, Lancashire, BL0 0AB Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WHE032 EPR reference: EA/EPR/QP3092EN/T001 Operator: Wheeldon Brothers Waste Ltd Waste Management licence No: 100969 Annual Tonnage: 74999.0 Issue Date: 04/08/2009 Effective Date: 22/11/2010 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Waterside Mill & Peel Bridge Mill Correspondence Address: -
29F	98	N	379455 416937	Site Address: Land/premises At, Kenyon Street, Ramsbottom, Bury, Lancashire, BL0 0AB Type: Special Waste Transfer Station Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ISM001 EPR reference: EA/EPR/MP3496CP/V002 Operator: Irwell Street Metal Co Ltd Waste Management licence No: 53695 Annual Tonnage: 6250.0 Issue Date: 05/01/1994 Effective Date: - Modified: 21/11/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Irwell Street Metal Co Ltd Correspondence Address: -
30	132	N	379403 416960	Site Address: Waterside Mill, Kenyon Street, Ramsbottom, Lancs, BL0 0AB Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ROG033 EPR reference: EP3694EA/T001 Operator: Rogers David Waste Management licence No: 100969 Annual Tonnage: 0.0 Issue Date: 04/08/2009 Effective Date: 13/10/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Waterside Mill Correspondence Address: -
31G	222	N	379401 417054	Site Address: Field Mill, Unit 4, Harrison Street, Ramsbottom, Bury, Lancashire, BL0 0AH Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: POR001 EPR reference: EA/EPR/EP3994CJ/V002 Operator: 9 Apart Limited Waste Management licence No: 50393 Annual Tonnage: 2500.0 Issue Date: 18/07/2005 Effective Date: - Modified: 14/08/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: 9 Apart Limited Correspondence Address: -
32G	222	N	379401 417054	Site Address: Field Mill, Unit 4, Harrison Street, Ramsbottom, Bury, Lancashire, Issue Date: 18/07/2005 Effective Date: -

ID	Distance (m)	Direction	NGR	Details
				BLO 0AH Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: POR001 EPR reference: EA/EPR/EP3994CJ/A001 Operator: Porsch- Apart Ltd Waste Management licence No: 50393 Annual Tonnage: 2500.0 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Porsch- Apart Ltd Correspondence Address: -
33H	459	E	380050 416715	Site Address: Fletcher Bank, Manchester Road, Shuttleworth, Ramsbottom, BLO 0DD Type: Management of inert or extractive waste at mine Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAR237 EPR reference: EA/EPR/YP3490VR/A001 Operator: Marshalls Mono Limited Waste Management licence No: 102818 Annual Tonnage: 0.0 Issue Date: 21/06/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fletcher Bank Quarry Correspondence Address: -
34H	459	E	380050 416715	Site Address: Fletcher Bank, Manchester Road, Shuttleworth, Ramsbottom, Lancashire, BLO 0DD Type: Management of inert or extractive waste at mine Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MAR237 EPR reference: EA/EPR/YP3490VR/A001 Operator: Marshalls Mono Ltd Waste Management licence No: 102818 Annual Tonnage: 0.0 Issue Date: 21/06/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fletcher Bank Quarry Correspondence Address: -
35I	468	SE	379898 416352	Site Address: Manchester Road, Ramsbottom, Bury, BLO Type: Landfill taking Non-Biodegradable Wastes Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: JCL001 EPR reference: - Operator: Lees Mr J C Waste Management licence No: 53922 Annual Tonnage: 0.0 Issue Date: 15/06/1979 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Park Farm Landfill Site Correspondence Address: Park Farm, Manchester Road, Ramsbottom, Bury, BLO
36I	468	SE	379898 416352	Site Address: Manchester Road, Ramsbottom, Bury, Lancashire, BLO Type: Other Landfill Site taking Special Waste Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: JCL001 EPR reference: EA/EPR/BP3491CL/S002 Operator: Lees Mr J C Waste Management licence No: 53922 Annual Tonnage: 150000.0 Issue Date: 15/06/1979 Effective Date: - Modified: - Surrendered Date: Jul 1 2004 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Park Farm Landfill Site Correspondence Address: -
37	750	NE	380224 417123	Site Address: Fletcher Bank Quarry, Manchester Road, Ramsbottom, Bury, Lancashire, BLO 0DH Type: Treatment of waste to produce soil <75,000 tpy Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CHE136 EPR reference: EA/EPR/GB3930RY/A001 Operator: Churchill Enviro Ltd Waste Management licence No: 104214 Issue Date: 15/05/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fletcher Bank Quarry Correspondence Address: -

ID	Distance (m)	Direction	NGR	Details	
Annual Tonnage: 74999.0					
Not shown	927	NE	380437 417085	Site Address: Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0HD Type: Use of waste in construction <100,000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CHU071 EPR reference: EA/EPR/RP3098VD/A001 Operator: Churchill Enviro Ltd Waste Management licence No: 102210 Annual Tonnage: 99999.0	Issue Date: 02/02/2011 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued Site Name: Fletcher Bank Quarry Correspondence Address: -
Not shown	927	NE	380437 417085	Site Address: Fletcher Bank Quarry, Ramsbottom, Bury, Lancashire, BL0 0HD Type: Deposit of waste to land as a recovery operation Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CHU071 EPR reference: EA/EPR/RP3098VD/S003 Operator: Churchill Enviro Ltd Waste Management licence No: 102210 Annual Tonnage: 0.0	Issue Date: 02/02/2011 Effective Date: - Modified: 02/06/2017 Surrendered Date: Feb 20 2018 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Fletcher Bank Correspondence Address: -
Not shown	946	E	380521 416530	Site Address: Land/premises At, Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0DD Type: Industrial Waste Landfill (Factory curtilage) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MML001 EPR reference: EA/EPR/MP3596CS/V006 Operator: Marshalls Mono Ltd Waste Management licence No: 53693 Annual Tonnage: 0.0	Issue Date: 05/01/1995 Effective Date: - Modified: 02/12/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Fletcher Bank Quarry Landfill Correspondence Address: -
Not shown	946	E	380521 416530	Site Address: Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0DD Type: Industrial Waste Landfill (Factory curtilage) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FBQ001 EPR reference: - Operator: Marshalls Mono Limited Waste Management licence No: 50506 Annual Tonnage: 0.0	Issue Date: 08/03/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Fletcher Bank Quarry Landfill Site Correspondence Address: Fletcher Bank Quarry Landfill Site, Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0DD
Not shown	946	E	380521 416530	Site Address: Fletcher Bank, Ramsbottom, Bury, Lancashire, BL0 0DD Type: Industrial Waste Landfill (Factory curtilage) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: FBQ001 EPR reference: EA/EPR/PP3692CQ/A001 Operator: Marshalls Mono Ltd Waste Management licence No: 50506 Annual Tonnage: 150000.0	Issue Date: 08/03/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Fletcher Bank Quarry Landfill Site Correspondence Address: -
Not shown	992	SW	378445 415982	Site Address: Tagg Wood Works, Regent Street, Ramsbottom, Bury, Lancashire, BL0 9PL Type: Mobile Plant Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ENC003	Issue Date: 08/04/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

ID	Distance (m)	Direction	NGR	Details	
				EPR reference: - Operator: Encia Group Ltd Waste Management licence No: 54433 Annual Tonnage: 0.0	Site Name: Tagwood Works Mobile Plant Correspondence Address: Stone Cross Place, Stone Cross Lane North, Lowton, Warrington, WA3 2SH
Not shown	992	SW	378445 415982	Site Address: Tagg Wood Works, Regent Street, Ramsbottom, Bury, Lancashire, BL0 9PL Type: Mobile Plant Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ENC003 EPR reference: EA/EPR/QP3397CM/S002 Operator: Encia Group Ltd Waste Management licence No: 54433 Annual Tonnage: 74999.0	Issue Date: 08/04/2005 Effective Date: - Modified: - Surrendered Date: Nov 29 2006 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Tagwood Works Mobile Plant Correspondence Address: -
45J	993	NE	380367 417357	Site Address: Fletcher Bank Quarry, Ramsbottom, Bury, BL0 0HD Type: Use of waste in construction <100,000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CHU102 EPR reference: EA/EPR/BB3501MS/A001 Operator: Churchill Enviro Limited Waste Management licence No: 401512 Annual Tonnage: 99999.0	Issue Date: 17/07/2014 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued Site Name: Fletcher Bank Recovery Site Correspondence Address: -
46J	993	NE	380367 417357	Site Address: Fletcher Bank Quarry, Ramsbottom, Bury, Lancashire, BL0 0HD Type: Deposit of waste to land as a recovery operation Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CHU102 EPR reference: EA/EPR/BB3501MS/S003 Operator: Churchill Enviro Ltd Waste Management licence No: 401512 Annual Tonnage: 0.0	Issue Date: 17/07/2014 Effective Date: - Modified: 02/06/2017 Surrendered Date: Mar 29 2018 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Fletcher Bank Recovery Site Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

40

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Chimney	379361 416764	Greater Manchester, BL0	Chimneys	Industrial Features
2	21	W	East Lancashire Railway (Ramsbottom Station)	379286 416809	Greater Manchester, BL0	Railways (Heritage, Steam and Miniature)	Tourism
3	46	W	TNT Express	379253 416647	Railway Street, Ramsbottom, Bury, Greater Manchester, BL0 9AL	Distribution and Haulage	Transport, Storage and Delivery
4A	47	W	Ramsbottom Metalwork	379253 416735	Empire Works, Railway Street, Ramsbottom, Bury, Greater Manchester, BL0 9AL	Metalworkers Including Blacksmiths	Construction Services
5C	48	W	Station Garage	379262 416837	Railway Street, Ramsbottom, Bury, Greater Manchester, BL0 9AL	Vehicle Repair, Testing and Servicing	Repair and Servicing
6A	50	W	Works	379250 416726	Greater Manchester, BL0	Unspecified Works Or Factories	Industrial Features
7A	56	W	Electricity Sub Station	379244 416737	Greater Manchester, BL0	Electrical Features	Infrastructure and Facilities
8B	56	NW	Booth King Partnership Ltd	379274 416887	Tollgate House 9c, Bridge Street, Ramsbottom, Bury, Greater Manchester, BL0 9AB	Civil Engineers	Engineering Services
9	57	NE	Electricity Sub Station	379560 416865	Greater Manchester, BL0	Electrical Features	Infrastructure and Facilities
10B	64	NW	Tank	379283 416902	Greater Manchester, BL0	Tanks (Generic)	Industrial Features
11	66	N	Depot	379465 416905	Greater Manchester, BL0	Container and Storage	Transport, Storage and Delivery
12C	67	W	Works	379241 416823	Greater Manchester, BL0	Unspecified Works Or Factories	Industrial Features
13	79	NW	Formulated Polymer Products Ltd	379267 416911	8, Garden Street, Ramsbottom, Bury, Greater Manchester, BL0 9BQ	Adhesives and Sealants	Industrial Products
14	81	W	Depot	379225 416492	Greater Manchester, BL0	Container and Storage	Transport, Storage and Delivery
15	89	N	I S M Waste &	379468	Kenyon Street,	Waste Storage, Processing	Infrastructure and

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
			Recycling	416928	Ramsbottom, Bury, Greater Manchester, BL0 0AB	and Disposal	Facilities
16	95	W	Ramsbottom Paint & Bodyshop	379205 416584	Kay Brow Yard, Kay Brow, Ramsbottom, Bury, Greater Manchester, BL0 9AY	Vehicle Repair, Testing and Servicing	Repair and Servicing
17	106	N	Depot	379385 416933	Greater Manchester, BL0	Container and Storage	Transport, Storage and Delivery
18	112	N	Depot	379467 416951	Greater Manchester, BL0	Container and Storage	Transport, Storage and Delivery
19	131	W	Electricity Sub Station	379169 416763	Greater Manchester, BL0	Electrical Features	Infrastructure and Facilities
20	133	N	Cadden Car & Commercial	379418 416966	Peel Bridge Mill, Kenyon Street, Ramsbottom, Bury, Greater Manchester, BL0 0AB	New Vehicles	Motoring
21D	142	W	Ramsbottom Flooring Ltd	379177 416889	38, Bridge Street, Ramsbottom, Bury, Greater Manchester, BL0 9AQ	Construction Completion Services	Construction Services
22	143	W	Rammy Tyres & Exhausts	379157 416583	Unit 1 Kay Brow Complex, Kay Brow, Ramsbottom, Greater Manchester, BL0 9AY	Vehicle Parts and Accessories	Motoring
23	148	W	M C Motor Repairs Ltd	379153 416557	Kay Brow Yard, Kay Brow, Ramsbottom, Bury, Greater Manchester, BL0 9AY	Vehicle Repair, Testing and Servicing	Repair and Servicing
24D	149	W	Woodholme Supplies	379168 416888	40-42, Bridge Street, Ramsbottom, Bury, Greater Manchester, BL0 9AQ	General Construction Supplies	Industrial Products
25	156	E	Electricity Sub Station	379745 416679	Greater Manchester, BL0	Electrical Features	Infrastructure and Facilities
26	156	N	Joshua Greaves & Sons Ltd	379276 416997	Garden Street, Ramsbottom, Bury, Greater Manchester, BL0 9BG	Special Purpose Machinery and Equipment	Industrial Products
27	159	SW	Cormar Carpets	379208 416348	Holme Mill, Railway Street, Ramsbottom, Bury, Greater Manchester, BL0 9AU	Carpets, Flooring, Rugs and Soft Furnishings	Consumer Products
28E	163	N	Works	379408 416994	Greater Manchester, BL0	Unspecified Works Or Factories	Industrial Features
29E	167	N	Works	379415 417001	Greater Manchester, BL0	Unspecified Works Or Factories	Industrial Features
30E	174	N	C & G Wholesale Foods Ltd	379395 417001	3 Waterside Park, Harrison Street, Ramsbottom, Bury, Greater Manchester, BL0 0AD	Fish, Meat and Poultry Products	Foodstuffs
31	183	NW	G Hodgson Electrical	379195 416986	16, Crow Lane, Ramsbottom, Bury, Greater Manchester, BL0 9BR	Tools Including Machine Shops	Industrial Products
32	184	W	Works	379116 416766	Greater Manchester, BL0	Unspecified Works Or Factories	Industrial Features
33	188	N	Works	379385	Greater Manchester, BL0	Unspecified Works Or	Industrial Features

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
				417019		Factories	
34F	189	W	Stitch	379123 416866	2 Princes Court, Silver Street, Ramsbottom, Bury, Greater Manchester, BL0 9BJ	Textiles, Fabrics, Silk and Machinery	Industrial Products
35F	190	W	Orbital Design	379123 416863	3 Princes Court, Silver Street, Ramsbottom, Bury, Greater Manchester, BL0 9BJ	Published Goods	Industrial Products
36F	190	W	printing.com	379123 416864	Princes Court, Totally Wicked, 3a, Silver Street, Ramsbottom, Bury, Greater Manchester, BL0 9BJ	Published Goods	Industrial Products
37	229	NW	Canopy Products Ltd	379114 416961	The Warehouse 2-4, Paradise Street, Ramsbottom, Bury, Greater Manchester, BL0 9BS	General Construction Supplies	Industrial Products
38G	236	N	9 Apart	379410 417070	Unit 3-4 Field Mill, Harrison Street, Ramsbottom, Bury, Greater Manchester, BL0 0AH	Vehicle Parts and Accessories	Motoring
39G	236	N	Kays Ramsbottom Ltd	379410 417070	Britannia Works, Kenyon Street, Ramsbottom, Bury, Greater Manchester, BL0 0AE	Cosmetics, Toiletries and Perfumes	Consumer Products
40	241	N	Cadet County Training Centre	379225 417070	Crow Lane, Ramsbottom, Greater Manchester, BL0 9BR	Armed Services	Central and Local Government

4.2 Petrol and Fuel Sites

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

2

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

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
41B	49	W	379260 416837	UNBRANDED	Railway Street, Ramsbottom, Bury, Greater Manchester, BL0 9AL	No	Closed
42	498	N	379193 417329	ESSO	Stubbins Lane, Ramsbottom, Bury, Greater Manchester, BL0 0PU	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

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

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

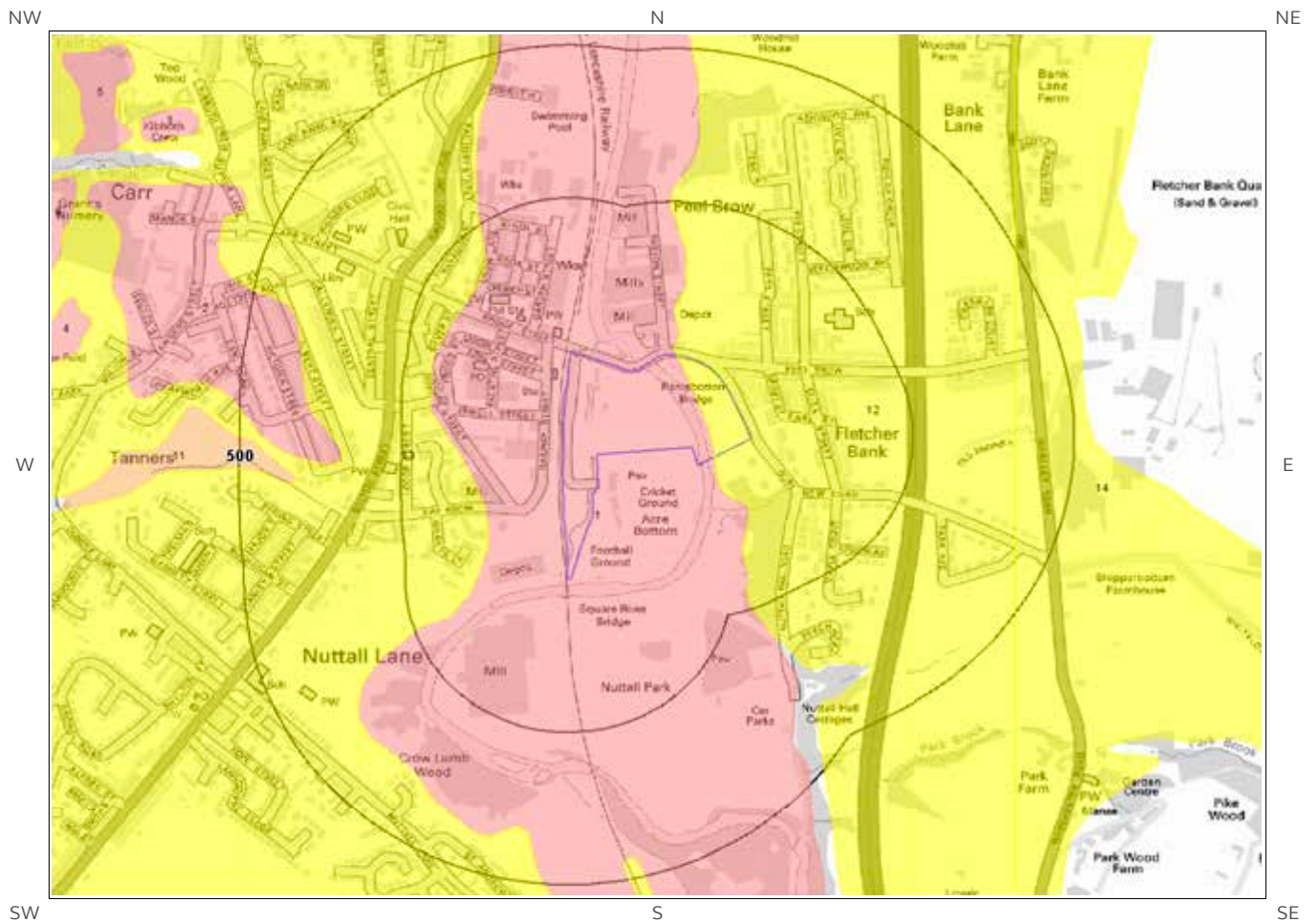
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
MARSD-MDSI	MARSDEN FORMATION	MUDSTONE AND SILTSTONE
MARSD-MDSI	MARSDEN FORMATION	MUDSTONE AND SILTSTONE
GSYG-SDST	GUISELEY GRIT	SANDSTONE
MARSD-MDSI	MARSDEN FORMATION	MUDSTONE AND SILTSTONE
BBS-SDST	BROOKSBOTTOMS GRIT	SANDSTONE

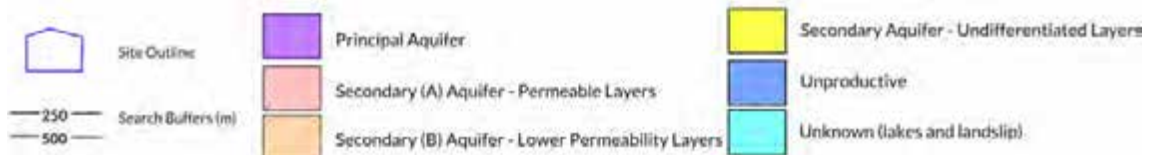
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

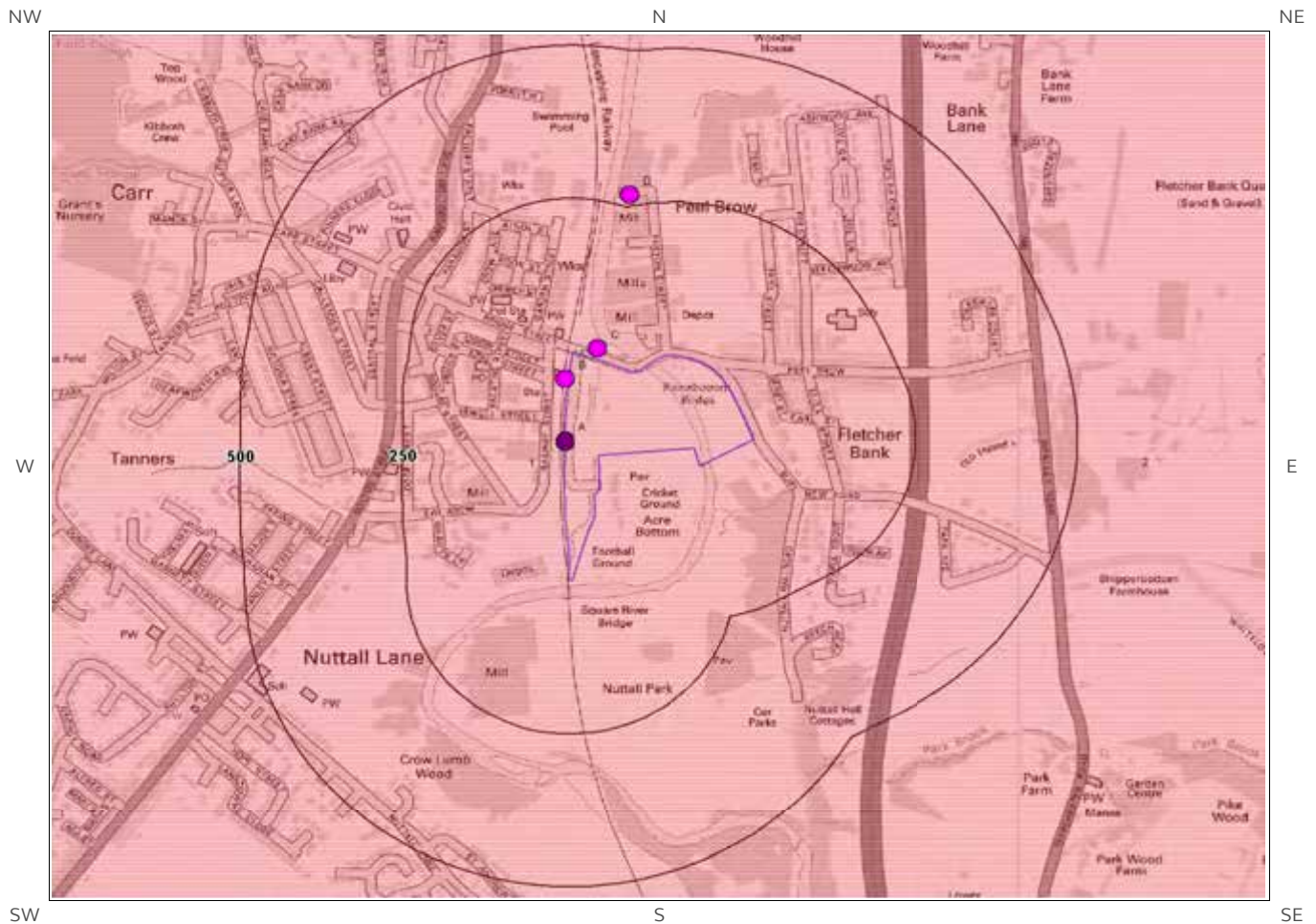
6a. Aquifer Within Superficial Geology



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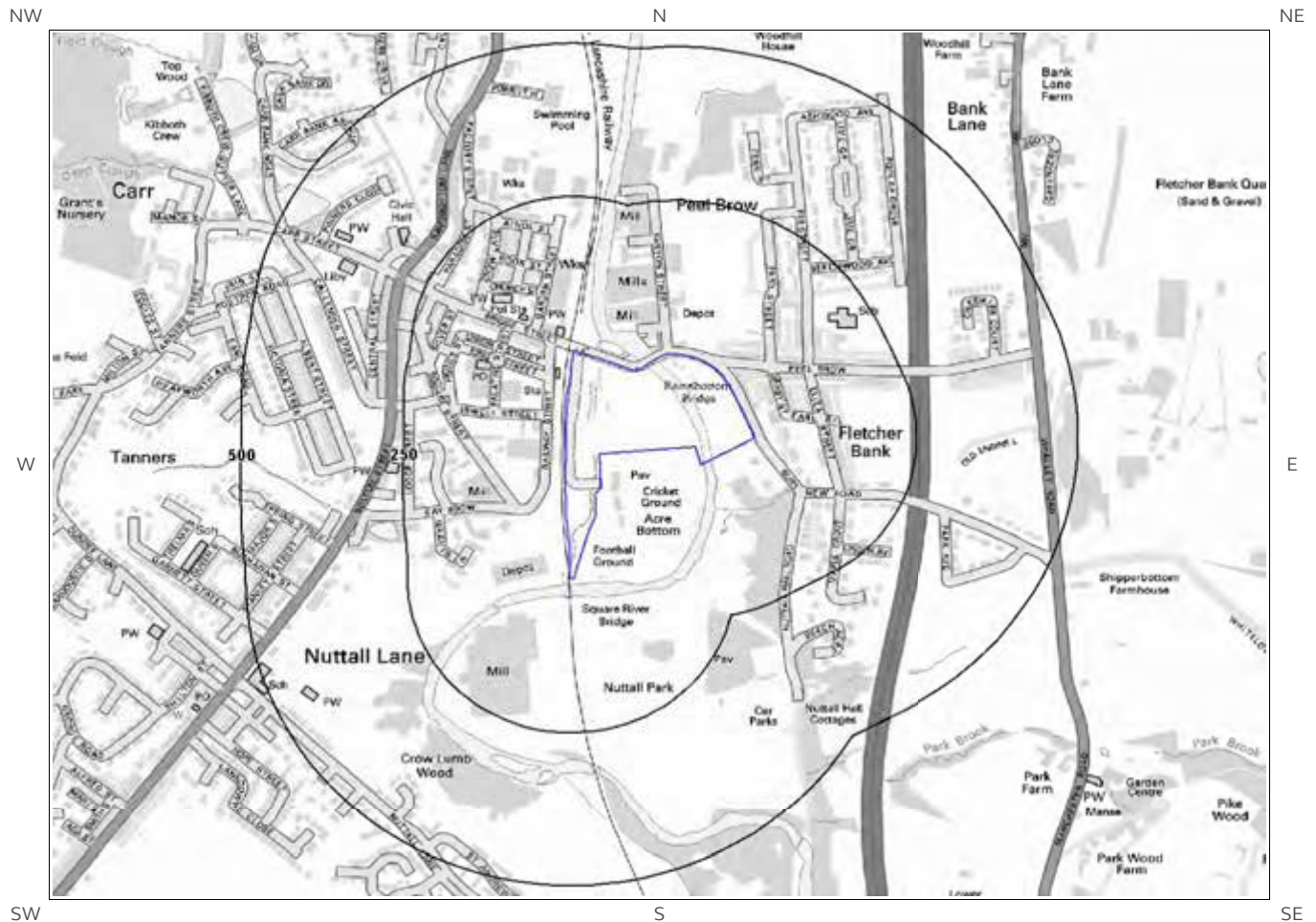
6b. Aquifer Within Bedrock Geology and Abstraction Licences



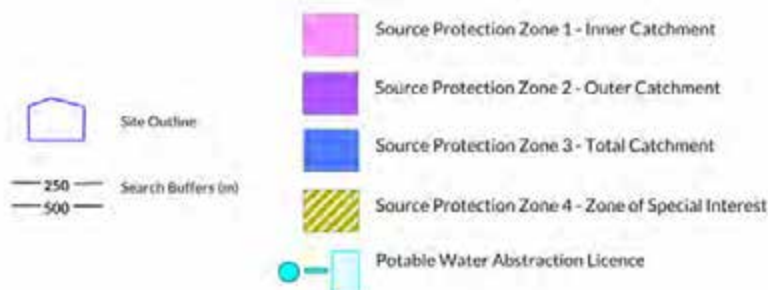
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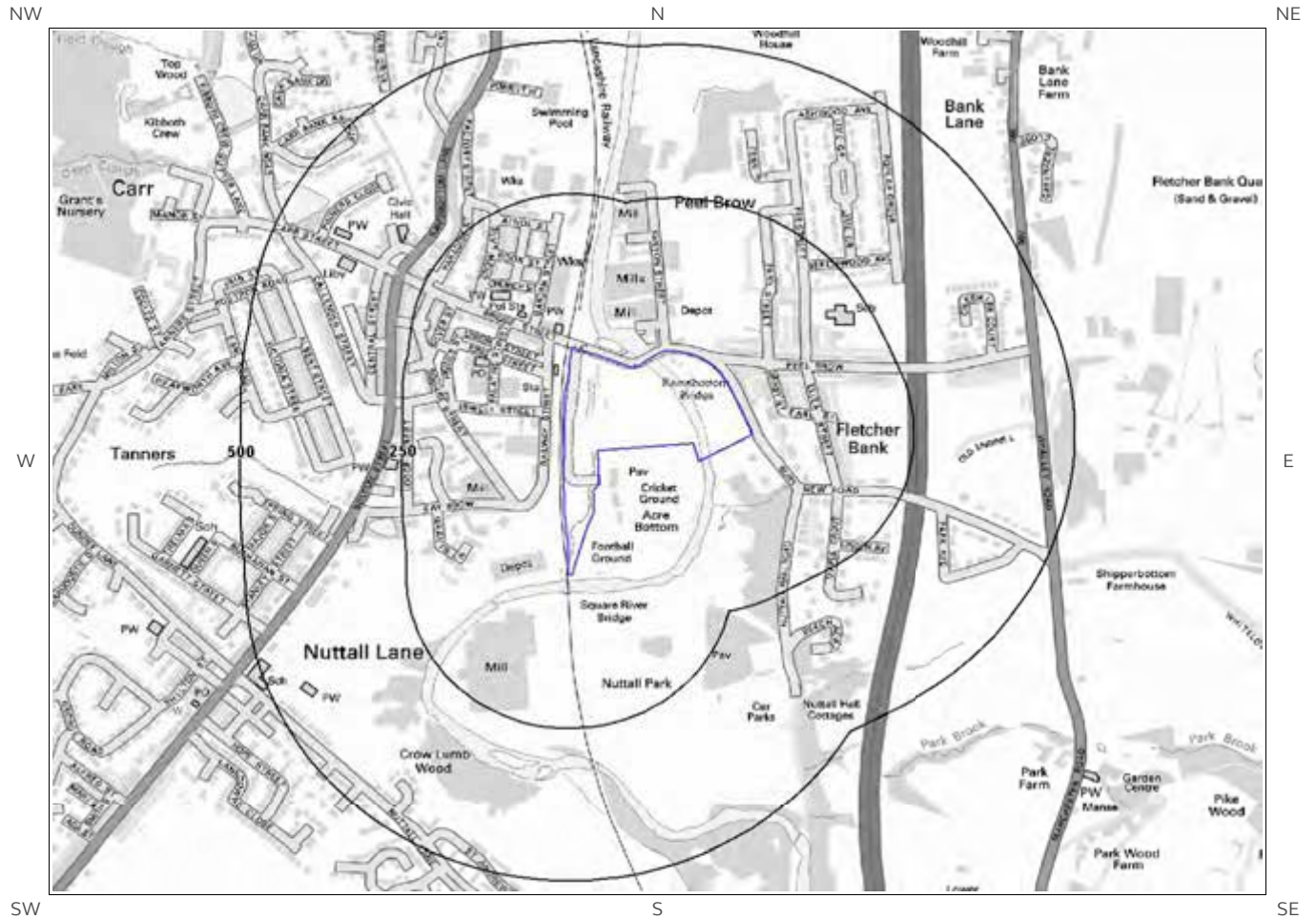
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



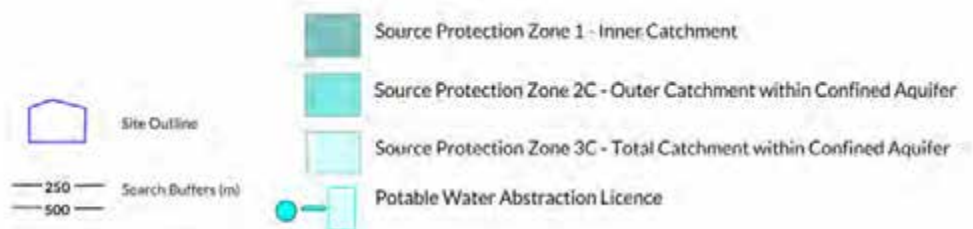
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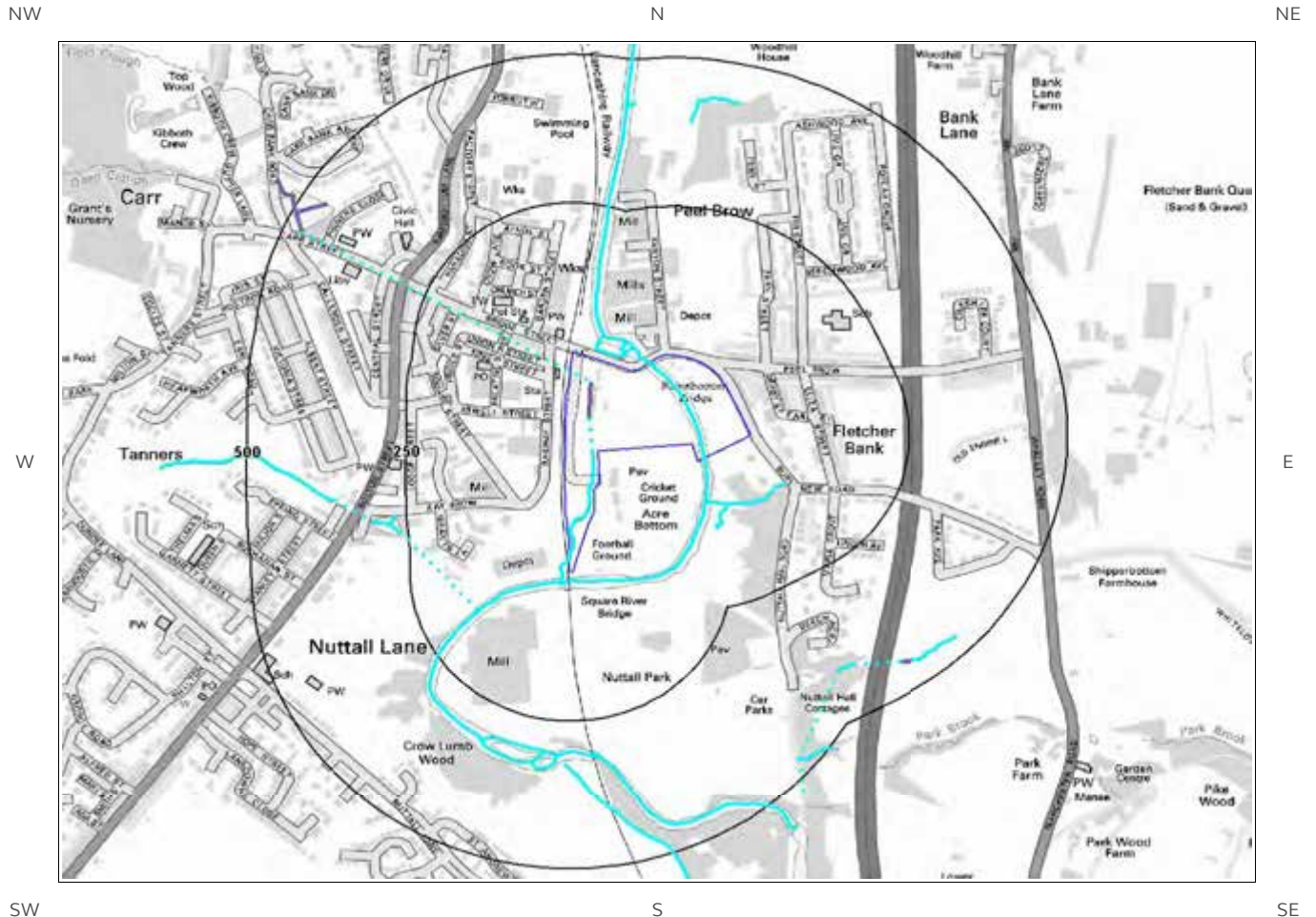
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
12	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
13	119	W	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	342	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
14	409	E	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
11	413	W	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	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	409	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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

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

ID	Distance (m)	Direction	NGR	Details
3A	0	On Site	379300 416700	Status: Historical Licence No: 2569001030 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PEEL BRIDGE MILLS, RAMSBOTTOM" Data Type: Point Name: DANISCO PAPER LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/08/1999 Version End Date:
4A	0	On Site	379300 416700	Status: Historical Licence No: 2569001030 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PEEL BRIDGE MILLS, RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED Annual Volume (m³): 359149 Max Daily Volume (m³): 1637 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: 31/03/2015 Issue No: 105 Version Start Date: 11/08/2008 Version End Date:
Not shown	775	S	379300 415700	Status: Historical Licence No: 2569001101 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED CATCHPIT AT NUTTAL HALL FARM, RAMSBOTTOM" Data Type: Point Name: WHITTAKER Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	775	S	379300 415700	Status: Historical Licence No: 2569001101 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED CATCHPIT AT NUTTAL HALL FARM, RAMSBOTTOM Data Type: Point Name: WHITTAKER Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 20/01/1966 Version End Date:
Not shown	1089	N	379012 417892	Status: Active Licence No: 2569001129 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE A' AT STUBBINS PAPER MILL, RAMSBOTTOM. Data Type: Point Name: Essity UK Limited Annual Volume (m³): 772760 Max Daily Volume (m³): 4914 Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 105 Version Start Date: 19/03/2018 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1100	N	379000 417900	Status: Historical Licence No: 2569001129 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT STUBBINS PAPER MILL, RAMSBOTTOM Data Type: Point Name: SCA Hygiene Products Tissue Limited	Annual Volume (m³): 545520 Max Daily Volume (m³): 2727.6 Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/08/2012 Version End Date:
Not shown	1100	N	379000 417900	Status: Historical Licence No: 2569001129 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT STUBBINS PAPER MILL, RAMSBOTTOM" Data Type: Point Name: GEORGIA-PACIFIC GB LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 16/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 02/04/2001 Version End Date:
Not shown	1158	N	379400 418000	Status: Historical Licence No: 2569001086 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, ROSEBANK PRINTWORKS, RAMSBOTTOM," Data Type: Point Name: EDWARD TURNBULL & CO LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1981 Version End Date:
Not shown	1158	N	379400 418000	Status: Historical Licence No: 2569001086 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, ROSEBANK PRINTWORKS, RAMSBOTTOM, Data Type: Point Name: EDWARD TURNBULL & CO LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 22/01/2004 Version End Date:
Not shown	1158	N	379400 418000	Status: Historical Licence No: 2569001086 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES ROSEBANK PRINTWORKS RAMSBOTTOM Data Type: Point Name: EDWARD TURNBULL & CO LTD	Annual Volume (m³): 13638 Max Daily Volume (m³): 1091.04 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 22/01/2004 Version End Date:
Not shown	1579	W	377800 417300	Status: Historical Licence No: 2569001125 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: "WELL AT RAMSBOTTOM, KNOWN AS SOLDIERS WELL" Data Type: Point Name: PLATT	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/05/1971 Version End Date:
Not shown	1579	W	377800 417300	Status: Historical Licence No: 2569001125 Details: General Farming & Domestic Direct Source: Ground Water - North West Region Point: WELL AT RAMSBOTTOM, KNOWN AS SOLDIERS WELL Data Type: Point Name: PLATT	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/05/1971 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1638	SE	380800 415600	Status: Historical Licence No: 2569001190 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED COLLECTING CHAMBER AT WALMERSLEY Data Type: Point Name: MOSLEY AND THWAITES	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 08/05/1972 Expiry Date: - Issue No: 100 Version Start Date: 08/05/1972 Version End Date:
Not shown	1650	SW	377800 415800	Status: Active Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM	Annual Volume (m³): 22730 Max Daily Volume (m³): 90.92 Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date:
Not shown	1650	SW	377800 415800	Status: Historical Licence No: 2569001228 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS" Data Type: Point Name: DARUL ULOOM	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date:
Not shown	1650	SW	377800 415800	Status: Historical Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 20/06/1990 Version End Date:
Not shown	1661	NE	381100 417400	Status: Historical Licence No: 2569001100 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED CATCHPIT AT GREEN HILL FARM, SHUTTLEWORTH, RAMS Data Type: Point Name: OVENDEN	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 19/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/01/1966 Version End Date:
Not shown	1661	NE	381100 417400	Status: Historical Licence No: 2569001100 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED CATCHPIT AT GREEN HILL FARM, SHUTTLEWORTH, RAMS" Data Type: Point Name: OVENDEN	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 19/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/01/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1835	W	377600 415800	Status: Historical Licence No: 2569001204 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, BURY" Data Type: Point Name: DAVENPORT	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 30/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/07/1979 Version End Date:
Not shown	1835	W	377600 415800	Status: Historical Licence No: 2569001204 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, BURY Data Type: Point Name: DAVENPORT	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 30/07/1979 Expiry Date: - Issue No: 100 Version Start Date: 30/07/1979 Version End Date:
Not shown	1950	NE	381000 418100	Status: Historical Licence No: 2569001099 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "SPRING FED CATCHPIT AT TOP O'TH' LEE AND DRY GAP FARMS, S" Data Type: Point Name: OVENDEN	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 19/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/01/1966 Version End Date:
Not shown	1950	NE	381000 418100	Status: Historical Licence No: 2569001099 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: SPRING FED CATCHPIT AT TOP O'TH' LEE AND DRY GAP FARMS, S Data Type: Point Name: OVENDEN	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 19/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 19/01/1966 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

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	
25B	7	W	379300 416800	Status: Historical Licence No: 2569001029 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: R.IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI PAPER LIMITED	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 11/09/2001 Version End Date:
26B	7	W	379300 416800	Status: Historical Licence No: 2569001224 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region	Annual Volume (m³): 90920 Max Daily Volume (m³): 1091.04 Application No: - Original Start Date: 12/04/1988 Expiry Date: -

ID	Distance (m)	Direction	NGR	Details	
				Point: R.IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED	Issue No: 103 Version Start Date: 11/08/2008 Version End Date:
27B	7	W	379300 416800	Status: Historical Licence No: 2569001029 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: GOIT FED BY SURFACE DRAINAGE AND RIVER IRWELL AT RAMSBOTTOM Data Type: Point Name: MONDI HOLCOMBE LIMITED	Annual Volume (m³): 322766 Max Daily Volume (m³): 1637 Application No: - Original Start Date: 14/02/1966 Expiry Date: 31/03/2015 Issue No: 105 Version Start Date: 11/08/2008 Version End Date:
28C	16	N	379350 416850	Status: Historical Licence No: 2569001246 Details: Supply to a Leat for Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRIDGE STREET , RAMSBOTTOM Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date:
29C	16	N	379350 416850	Status: Historical Licence No: 2569001246 Details: Supply to a Leat for Throughflow Direct Source: "Surface, Non-Tidal - North West Region" Point: "RIVER IRWELL AT BRIDGE STREET , RAMSBOTTOM" Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date:
30C	16	N	379350 416850	Status: Active Licence No: 2569001246 Details: Supply To A Leat For Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRIDGE STREET RAMSBOTTOM Data Type: Point Name: BURY METROPOLITAN BOROUGH COUNCIL	Annual Volume (m³): 6.31152e+007 Max Daily Volume (m³): 172920 Application No: - Original Start Date: 19/01/1994 Expiry Date: - Issue No: 100 Version Start Date: 11/08/2000 Version End Date:
31D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRITANNIA WORKS KENYON STREET RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): 159111 Max Daily Volume (m³): 636.44 Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
32D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
33D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100

ID	Distance (m)	Direction	NGR	Details	
				Point: R IRWELL AT, BRITANNIA WORKS, KENYON STREET, RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD	Version Start Date: 27/09/1995 Version End Date:
34D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT BRITANNIA WORKS KENYON STREET RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): 159111 Max Daily Volume (m³): 636.44 Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
35D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT, BRITANNIA WORKS, KENYON STREET, RAMSBOTTOM Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
36D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA" Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
37D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
38D	267	N	379400 417100	Status: Historical Licence No: 2569001047 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT PREMISES, BRITANNIA WORKS, KENYON STREET, RA" Data Type: Point Name: KAYS RAMSBOTTOM LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/09/1995 Version End Date:
Not shown	925	N	379246 417768	Status: Active Licence No: 2569001201 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL AT 'A' AT STUBBINS, RAMSBOTTOM, BURY. Data Type: Point Name: Essity UK Limited	Annual Volume (m³): 3.1e+006 Max Daily Volume (m³): 9090 Application No: - Original Start Date: 07/11/1977 Expiry Date: - Issue No: 105 Version Start Date: 19/03/2018 Version End Date:
Not shown	961	N	379200 417800	Status: Historical Licence No: 2569001201 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region	Annual Volume (m³): 4.15968e+006 Max Daily Volume (m³): 11365 Application No: - Original Start Date: 07/11/1977 Expiry Date: -

ID	Distance (m)	Direction	NGR	Details	
				Point: R IRWELL AT RAMSBOTTOM, BURY Data Type: Point Name: SCA Hygiene Products Tissue Limited	Issue No: 102 Version Start Date: 13/08/2012 Version End Date:
Not shown	961	N	379200 417800	Status: Historical Licence No: 2569001201 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT RAMSBOTTOM, BURY" Data Type: Point Name: GEORGIA-PACIFIC GB LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 07/11/1977 Expiry Date: - Issue No: 101 Version Start Date: 02/04/2001 Version End Date:
Not shown	1065	NW	378785 417771	Status: Historical Licence No: 2569001128 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS 'A' AT STUBBINS, RAMSBOTTOM, BURY Data Type: Point Name: SCA Hygiene Products Tissue Limited	Annual Volume (m³): 1.45e+006 Max Daily Volume (m³): 4543 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/11/2013 Version End Date:
Not shown	1083	NW	378800 417800	Status: Historical Licence No: 2569001128 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS (2) FED BY SURFACE DRAINAGE AT STUBBINS PAP Data Type: Point Name: GEORGIA-PACIFIC GB LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 02/04/2001 Version End Date:
Not shown	1083	NW	378800 417800	Status: Historical Licence No: 2569001128 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS X 2 FED BY SURFACE DRAINAGE AT STUBBINS Data Type: Point Name: SCA Hygiene Products Tissue Limited	Annual Volume (m³): 1.70475e+006 Max Daily Volume (m³): 5682.5 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/08/2012 Version End Date:
Not shown	1105	NE	380400 417500	Status: Historical Licence No: 2569001199 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: CROSS BANK BRK AT RAMSBOTTOM, BURY Data Type: Point Name: MARSHALLS MONO LTD	Annual Volume (m³): 34096 Max Daily Volume (m³): 136 Application No: - Original Start Date: 22/09/1975 Expiry Date: - Issue No: 101 Version Start Date: 28/08/2014 Version End Date:
Not shown	1105	NE	380400 417500	Status: Historical Licence No: 2569001199 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "CROSS BANK BRK AT RAMSBOTTOM, BURY" Data Type: Point Name: MARSHALLS MONO LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 22/09/1975 Expiry Date: - Issue No: 100 Version Start Date: 18/02/1987 Version End Date:
Not shown	1105	N	378930 417882	Status: Active Licence No: 2569001128 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR 'B' AT SUBBINS, RAMSBOTTOM, BURY. Data Type: Point Name: Essity UK Limited	Annual Volume (m³): 1.45e+006 Max Daily Volume (m³): 4543 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 106 Version Start Date: 19/03/2018 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1160	N	378938 417943	Status: Active Licence No: 2569001128 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR 'C' AT SUBBINS, RAMSBOTTOM, BURY. Data Type: Point Name: Essity UK Limited Annual Volume (m³): 1.45e+006 Max Daily Volume (m³): 4543 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 106 Version Start Date: 19/03/2018 Version End Date:
Not shown	1196	N	379000 418000	Status: Historical Licence No: 2569001128 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS (2) FED BY SURFACE DRAINAGE AT STUBBIN Data Type: Point Name: GEORGIA-PACIFIC GB LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 02/04/2001 Version End Date:
Not shown	1196	N	379000 418000	Status: Historical Licence No: 2569001128 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS X 2 FED BY SURFACE DRAINAGE AT STUBBINS Data Type: Point Name: SCA Hygiene Products Tissue Limited Annual Volume (m³): 1.70475e+006 Max Daily Volume (m³): 5682.5 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 13/08/2012 Version End Date:
Not shown	1196	N	379000 418000	Status: Historical Licence No: 2569001128 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS (2) FED BY SURFACE DRAINAGE AT STUBBIN85 Data Type: Point Name: FORT JAMES UK LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1998 Version End Date:
Not shown	1196	N	379000 418000	Status: Historical Licence No: 2569001128 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS (2) FED BY SURFACE DRAINAGE AT STUBBIN\$85 Data Type: Point Name: GEORGIA-PACIFIC GB LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 02/04/2001 Version End Date:
Not shown	1361	N	379500 418200	Status: Historical Licence No: 2569001180 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR AT ROSEBANK PRINTWORKS, RAMSBOTTOM, NEAR BURY Data Type: Point Name: EDWARD TURNBULL & CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 01/06/1969 Expiry Date: - Issue No: 101 Version Start Date: 22/01/2004 Version End Date:
Not shown	1361	N	379500 418200	Status: Historical Licence No: 2569001180 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR AT ROSEBANK PRINTWORKS, RAMSBOTTOM, NEAR BURY" Data Type: Point Name: EDWARD TURNBULL & CO LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 01/06/1969 Expiry Date: - Issue No: 100 Version Start Date: 01/04/1993 Version End Date:
Not shown	1361	N	379500 418200	Status: Historical Licence No: 2569001180 Details: Process water Annual Volume (m³): 547793 Max Daily Volume (m³): 1963.872 Application No: -

ID	Distance (m)	Direction	NGR	Details	
				Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR AT ROSEBANK PRINTWORKS RAMSBOTTOM NEAR BURY Data Type: Point Name: EDWARD TURNBULL & CO LTD	Original Start Date: 01/06/1969 Expiry Date: - Issue No: 101 Version Start Date: 22/01/2004 Version End Date:
Not shown	1692	N	379800 418500	Status: Historical Licence No: 2569001179 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR AT PREMISES, EDENWOOD MILL, RAMSBOTTOM" Data Type: Point Name: TURNBULL & STOCKDALE LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 24/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 22/01/1999 Version End Date:
Not shown	1692	N	379800 418500	Status: Historical Licence No: 2569001179 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR AT PREMISES, EDENWOOD MILL, RAMSBOTTOM Data Type: Point Name: TURNBULL & STOCKDALE LTD	Annual Volume (m³): 218208 Max Daily Volume (m³): 1091.06 Application No: - Original Start Date: 24/04/1969 Expiry Date: - Issue No: 100 Version Start Date: 22/01/1999 Version End Date:
Not shown	1732	N	378800 418500	Status: Historical Licence No: 2569001110 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY UNNAMED TRIBUTARY RIVER IRWELL STUBBINS Data Type: Point Name: VOITH FABRICS STUBBINS LTD	Annual Volume (m³): 272765.7 Max Daily Volume (m³): 1136.5 Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 27/09/1999 Version End Date:
Not shown	1732	N	378800 418500	Status: Historical Licence No: 2569001110 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY UNNAMED TRIB OF R IRWELL AT STUBBINS VAL Data Type: Point Name: VOITH FABRICS STUBBINS LTD	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 27/09/1999 Version End Date:
Not shown	1761	S	378950 414750	Status: Historical Licence No: 2569001038 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RIVER IRWELL IN RAMSBOTTOM Data Type: Point Name: GREENLEAF ENTERPRISES LTD	Annual Volume (m³): 23639.7 Max Daily Volume (m³): 90.92 Application No: - Original Start Date: 25/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/03/2003 Version End Date:
Not shown	1830	N	378730 418580	Status: Historical Licence No: 2569001110 Details: Lake & Pond Throughflow Direct Source: Surface, Non-Tidal - North West Region Point: UN-NAMED TRIBUTARY RIVER IRWELL AT LH PREMISES STUBBINS VALE Data Type: Point Name: VOITH PAPER FABRICS STUBBINS LTD	Annual Volume (m³): 272766 Max Daily Volume (m³): 1136.5 Application No: - Original Start Date: 01/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 17/02/2006 Version End Date:
Not shown	1987	NE	381200 417900	Status: Historical Licence No: 2569001012 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY NEW GATE BRK AND FIELD DRAINAGE, ADJACENT	Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/01/1991

ID	Distance (m)	Direction	NGR	Details
				Data Type: Point Name: TOMASZEWSKI
				Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

Identified

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
Not shown	1650	SW	377800 415800	Status: Historical Licence No: 2569001228 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS" Data Type: Point Name: DARUL ULOOM Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1650	SW	377800 415800	Status: Historical Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1650	SW	377800 415800	Status: Active Licence No: 2569001228 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOLCOMBE, NEAR BURY, LANCS Data Type: Point Name: DARUL ULOOM Annual Volume (m³): 22730 Max Daily Volume (m³): 90.92 Original Application No: - Original Start Date: 20/06/1990 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
15	E	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
409	E	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

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

6.9.1 Biological Quality:

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	1258	N	379400 418100	River Name: Dearden Bk Reach: Qsl At Scout Moor Resvr. To Irwell End/Start of Stretch: End of Stretch NGR	B	C	C	C	C

6.9.2 Chemical Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1218	N	379401 418060	River Name: Dearden Bk. Reach: Qsl At Scout Moor Resvr. To Irwell End/Start of Stretch: Sample Point NGR	B	B	B	A	A
Not shown	1253	N	379361 418097	River Name: Irwell Reach: Rossendale Stw To Chest Wheel Bridge End/Start of Stretch: Sample Point NGR	B	A	A	B	B
Not shown	1258	N	379400 418100	River Name: Dearden Bk. Reach: Qsl At Scout Moor Resvr. To Irwell End/Start of Stretch: End of Stretch NGR	B	B	B	A	A

6.10 Ordnance Survey MasterMap Water Network

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

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

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

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.4
2	0 On Site	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.4
3	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
5	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	0 On Site	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.0
7	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
34	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.4
35	0 On Site	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.4
36	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 1.6
38	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
39	0 On Site	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.0
40	0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
41	0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	10 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
42	10 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	11 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
43	11 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
11	12 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.3
44	12 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.3
12	15 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6
45	15 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.6

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
13	21 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.5
46	21 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 12.5
14	24 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.6
15	24 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
47	24 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.6
48	24 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.5
16	35 NW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
49	35 NW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
17	40 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.8
50	40 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.8
18	41 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
51	41 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
19	69	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
52	69 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.5
20	72 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
53	72 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	86 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
22	86 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
54	86 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
55	86 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	111 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
56	111 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
24	112 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.3
25	112 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
57	112 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): 0.3
58	112 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 0.8
26	113 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
59	113 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	157 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.0
28	157 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
60	157 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.0
61	157 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
29	263 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 10.7
62	263 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 10.7
30	269 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.4
63	269 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.4
31	277 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.7

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
64	277 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 16.7
32	300 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	300 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
33	302 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
Not shown	302 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
34	304 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
67	304 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
35	305 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
36	305 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
37	305 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
Not shown	305 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	305 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	305	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	S			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
38	308 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	308 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
39	311 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	311 S	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
40	314 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
Not shown	314 SW	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 15.1
41	322 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	322 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
42	363 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
75	363 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.8
43	392 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	392 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
44	414 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
45	414 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
77	414 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
78	414 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
46	417 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
79	417 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
47	424 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	424 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
48	425 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
Not shown	425 N	River Irwell	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 14.7
49	449 SE	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2
82	449 SE	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.2

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
50	456 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
83	456 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
51	459 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 54.8
84	459 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 54.8
52	472 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 23.8
85	472 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 23.8
53	475 SE	Park Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
54	475 SE	Park Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	475 SE	Park Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	475 SE	Park Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
55	478 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	478 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
56	480	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	W			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
Not shown	480 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 1.6
57	494 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.0
90	494 NW	-	Lake, loch or reservoir.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 7.0

6.11 Surface Water Features

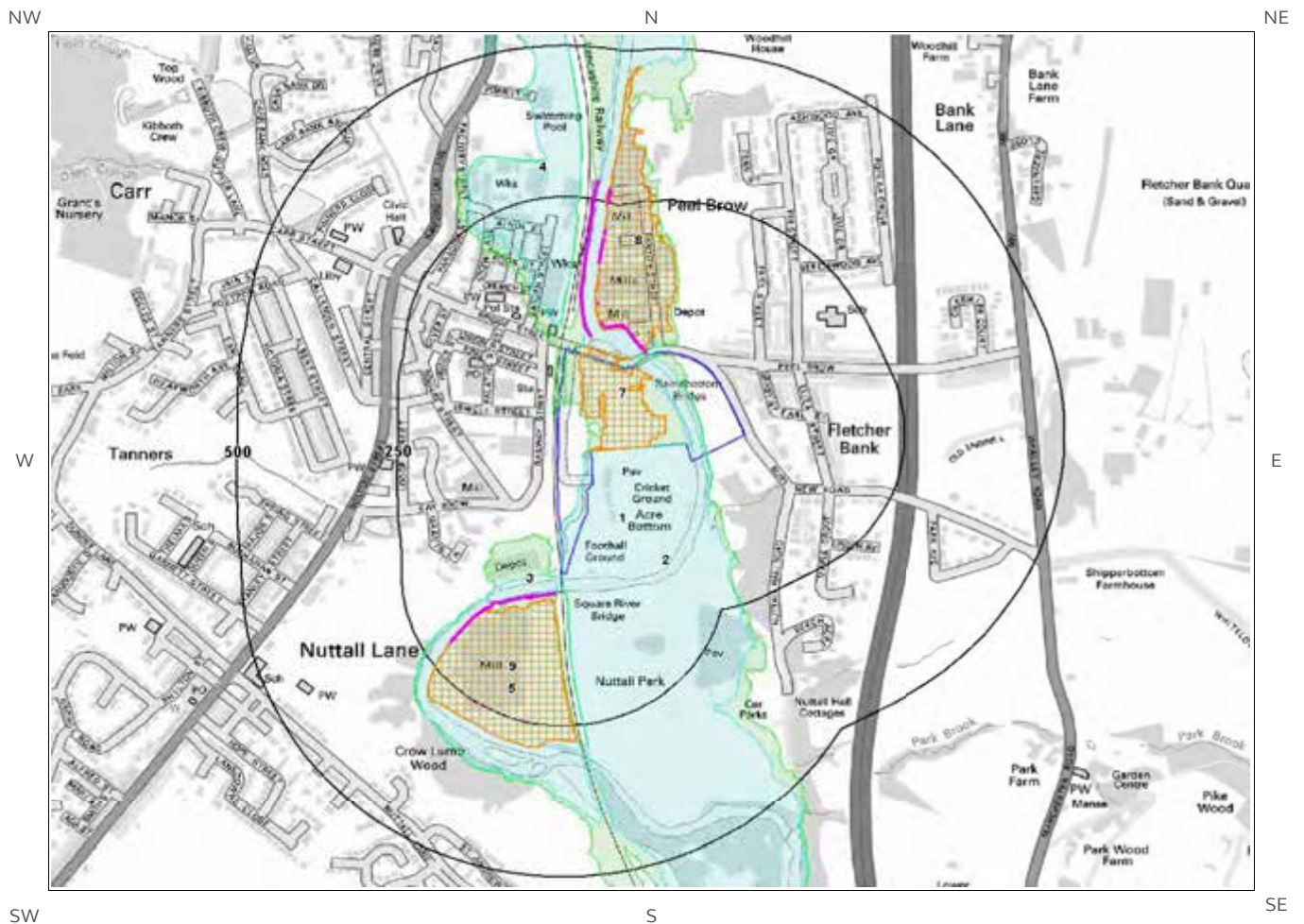
Surface water features within 250m of the study site

Identified

The following surface water records are not represented on mapping:

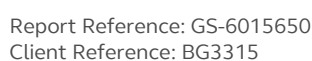
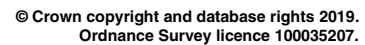
Distance (m)	Direction
0	On Site
0	On Site
10	SW
10	W
11	NW
72	S
86	SE
86	SE
119	SW

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



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

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

Identified

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

ID	Distance (m)	Direction	Update	Type
1	0	On Site	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

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

Identified

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

ID	Distance (m)	Direction	Update	Type
1	0	On Site	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
	10	W	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
	40	N	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
	44	S	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)

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

Highest risk of flooding onsite

High

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 High (1 in 30 or greater) 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	0.0	On Site	Low
2	0.0	On Site	Low
3	0.0	On Site	Medium
4	0.0	On Site	Medium
5	0.0	On Site	Medium
6A	0.0	On Site	Very Low
7	0.0	On Site	Very Low
8	0.0	On Site	Very Low
9	0.0	On Site	Very Low
10	0.0	On Site	Low
11	0.0	On Site	Low
12	0.0	On Site	High
13A	0.0	On Site	Very Low
14B	0.0	W	Very Low
15	0.0	W	Very Low
16B	1.0	W	Very Low
17	5.0	N	Medium
18	8.0	NW	Low
19	9.0	W	High
20C	9.0	N	Medium
21C	10.0	N	Medium
22	11.0	N	Medium
23	14.0	W	Low
24	26.0	S	Medium
25	28.0	S	Low

7.4 Flood Defences

Flood Defences within 250m of the study site

Identified

The following flood defence records are represented as lines on the Flood Map:

ID	Distance (m)	Direction	Update
10	5	NW	21-Feb-2019
11	30	N	21-Feb-2019
12	33	S	21-Feb-2019
13	55	SW	21-Feb-2019
14	56	SW	21-Feb-2019
15	56	SW	21-Feb-2019
16	56	SW	21-Feb-2019
17	84	N	21-Feb-2019
18	148	N	21-Feb-2019
19	197	N	21-Feb-2019
20	245	N	21-Feb-2019

7.5 Areas benefiting from Flood Defences

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

Identified

7.6 Areas benefiting from Flood Storage

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

None identified

7.7 Groundwater Flooding Susceptibility Areas

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

Identified

Clearwater Flooding or Superficial Deposits Flooding

Clearwater Flooding

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

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

Potential at Surface

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

7.8 Groundwater Flooding Confidence Areas

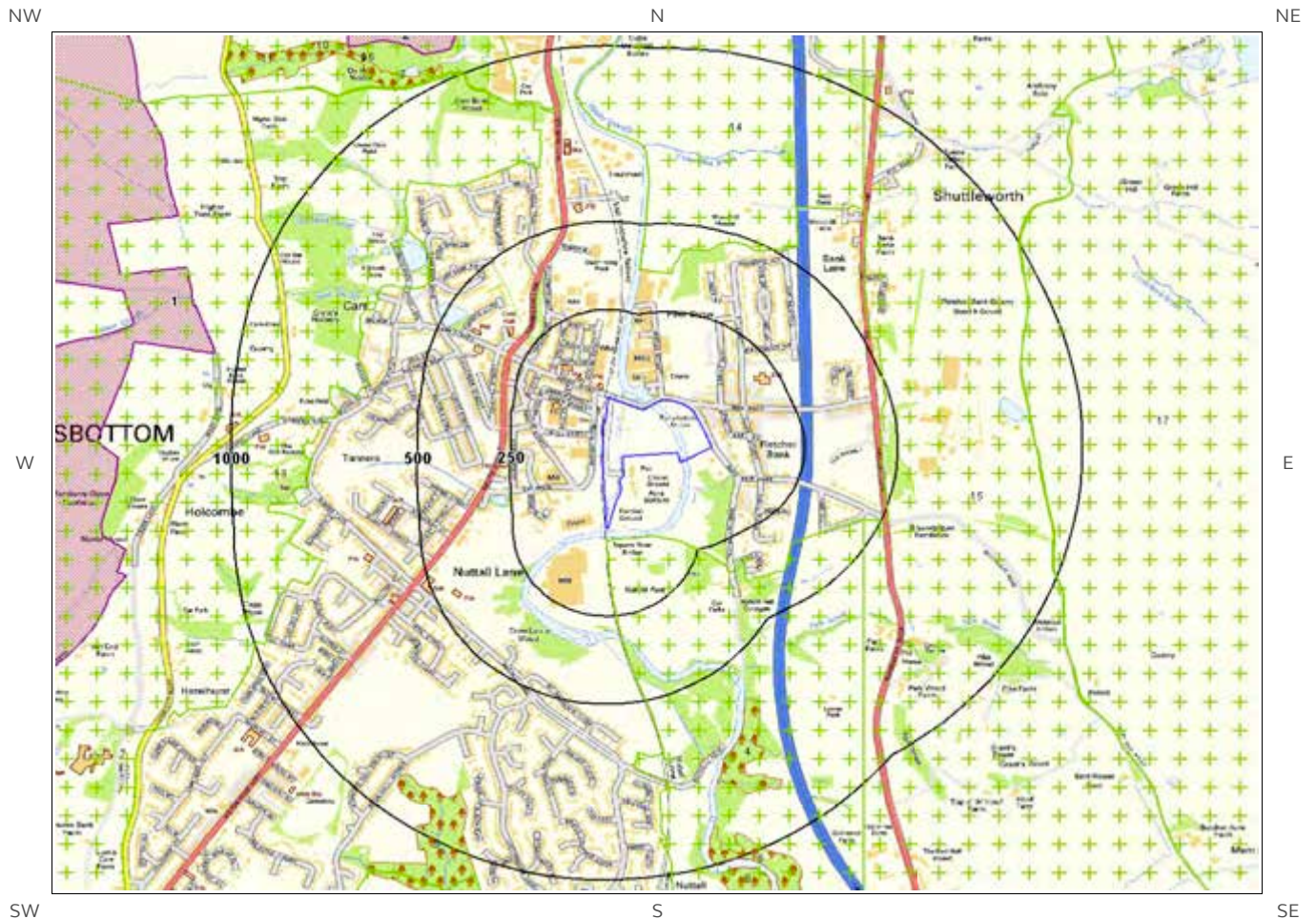
British Geological Survey confidence rating in this result

High

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

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

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

2

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
1	1064	W	West Pennine Moors	Natural England
2	1079	NW	Lower Red Lees Pasture	Natural England

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:

9

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
4	611	SE	NUTTALL WOOD	Ancient and Semi-Natural Woodland
5	844	SW	BROAD HEY WOOD	Ancient and Semi-Natural Woodland
6	896	S	GOLLINROD WOOD	Ancient and Semi-Natural Woodland
7	1012	NW	UNKNOWN	Ancient Replanted Woodland
8	1022	S	GOLLINROD WOOD	Ancient and Semi-Natural Woodland
9	1134	NW	UNKNOWN	Ancient and Semi-Natural Woodland
10	1184	NW	UNKNOWN	Ancient and Semi-Natural Woodland
11	1224	NW	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1693	SW	DAWES BANK WOOD	Ancient and Semi-Natural Woodland

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

1

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
Not shown	1768	SW	Redisher Wood	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:

6

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

ID	Distance	Direction	Green Belt Name	Local Authority Name
----	----------	-----------	-----------------	----------------------

13	35	S	Liverpool, Manchester and West Yorks Greenbelt	Bury District (B)
14	358	N	Liverpool, Manchester and West Yorks Greenbelt	Bury District (B)
15	455	E	Liverpool, Manchester and West Yorks Greenbelt	Bury District (B)
16	824	N	Liverpool, Manchester and West Yorks Greenbelt	Rossendale District (B)
17	860	E	Liverpool, Manchester and West Yorks Greenbelt	Rossendale District (B)
Not shown	1871	N	Liverpool, Manchester and West Yorks Greenbelt	Rossendale District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Moderate

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

Hazard
Significant potential for slope instability with relatively small changes in ground conditions. Avoid large amounts of water entering the ground through pipe leakage or soak-aways. Do not undercut or place large amounts of material on slopes without technical advice. For new build consider the potential and consequences of ground movement during excavations, or consequence of changes to loading or drainage. For existing property probable increase in insurance risk is likely due to potential natural slope instability after changes to ground conditions such as a very long, excessively wet winter.

9.1.3 Soluble Rocks

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

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

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

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

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

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

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

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

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

9.1.6 Running Sand

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

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.

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

9.2 Radon

9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

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

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

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

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

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

Identified

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

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

Past underground mine workings are uncommon, localised and of limited area. The rock types present in this area are such that minor mineral veins may be present within them on which it is possible that there have been attempts to work these by underground methods and/or it is possible that small scale underground extraction of other materials may have occurred. All such occurrences are likely to be restricted in size and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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

British Geological Survey Enquiries
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Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

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

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

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

Ordnance Survey
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SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Bury Metropolitan Borough Council
Phone: 01612 535 000
Web: <http://www.bury.gov.uk/>
Address: Town Hall, Knowsley Street, Bury, Lancashire, BL9 OSW

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



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



Betts Geo Ltd

BETTS GEO ENVIRONMENTAL, 4 OLD MARSH
FARM BARN, MARSH FARM ROAD,
SEALAND, CH5 2LY

Groundsure
Reference:

GS-6015651

Your Reference: BG3315

Report Date 9 May 2019

Report Delivery Method: Email - pdf

Geo Insight

Address: HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BL0 0BS

Dear Sir/ Madam,

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

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

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM, BL0 0BS

Date: 9 May 2019

Reference: GS-6015651

Client: Betts Geo Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 26-Mar-2012

Grid Reference: 379433,416756

Site Size: 4.6144ha

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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?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	Yes
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

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

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

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

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

Yes

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

Yes

Section 3: Radon

3. Radon

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

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

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	19	10	30	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	14
4.3 Current Ground Workings	0	0	0	0	11

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	1	0	0	1	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	Moderate
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	8	5	25

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

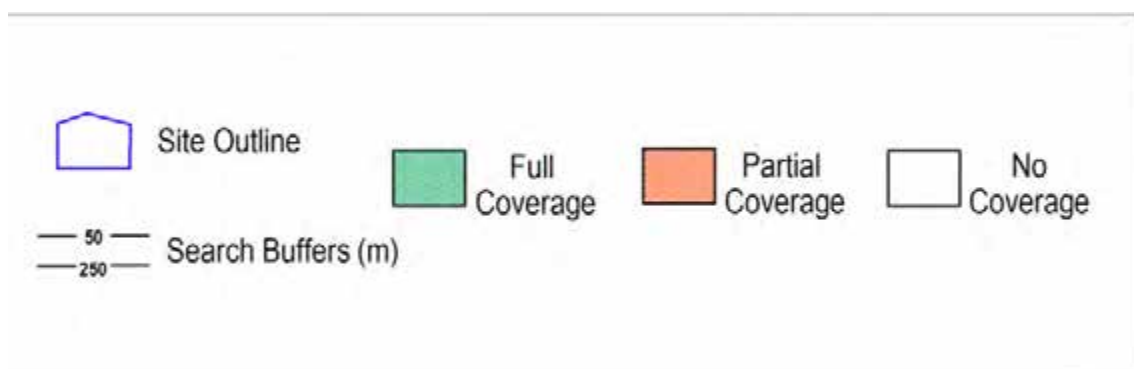
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	12	7	14	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	10	12	Not Searched
9.5 Railway Projects	0	0	0	0

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	Some deposits are mapped
2	409.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N3	1475.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1628.0	Some deposits are mapped	Full	Full	Some deposits are mapped

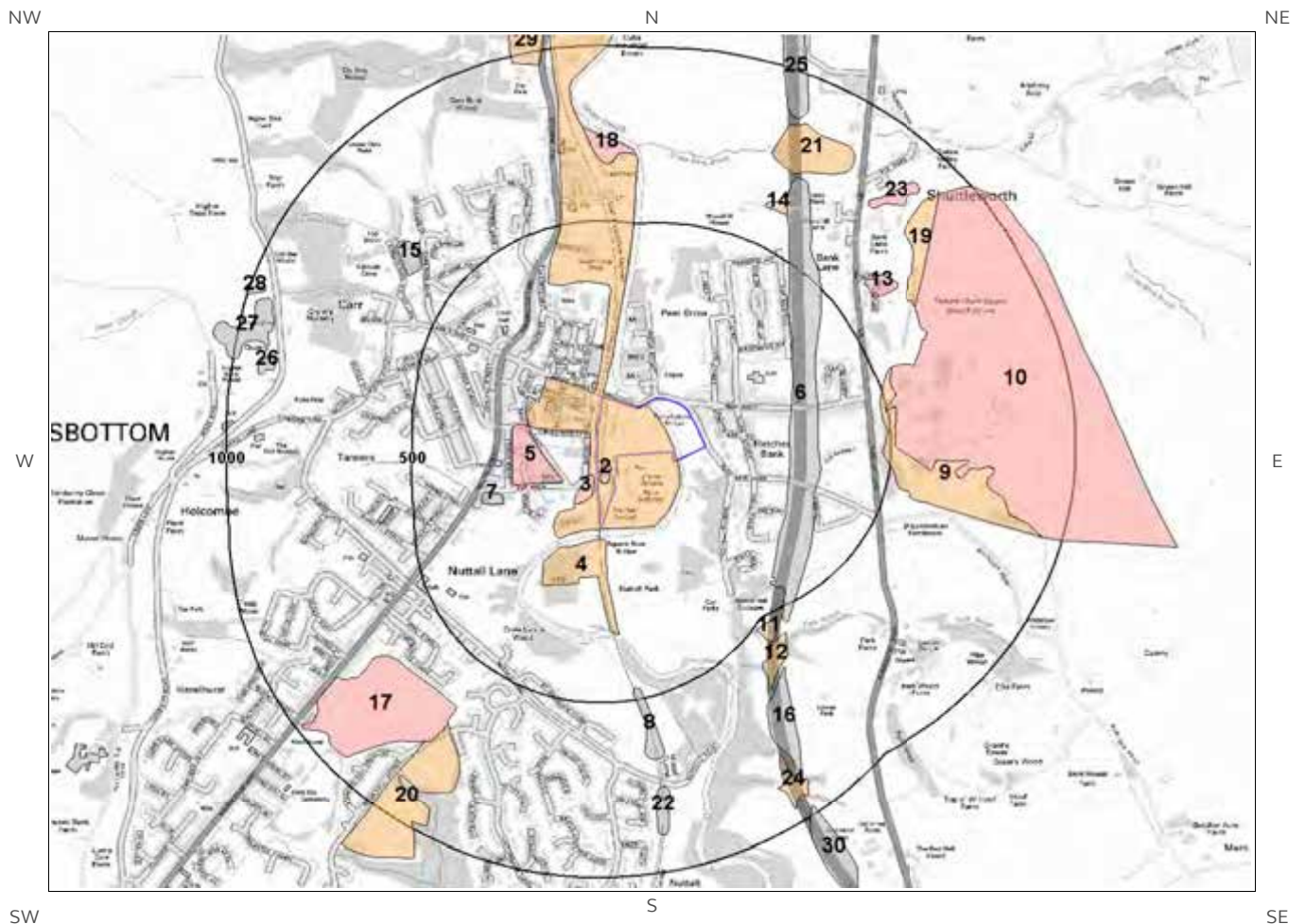
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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1. Geology 1:10,000 scale

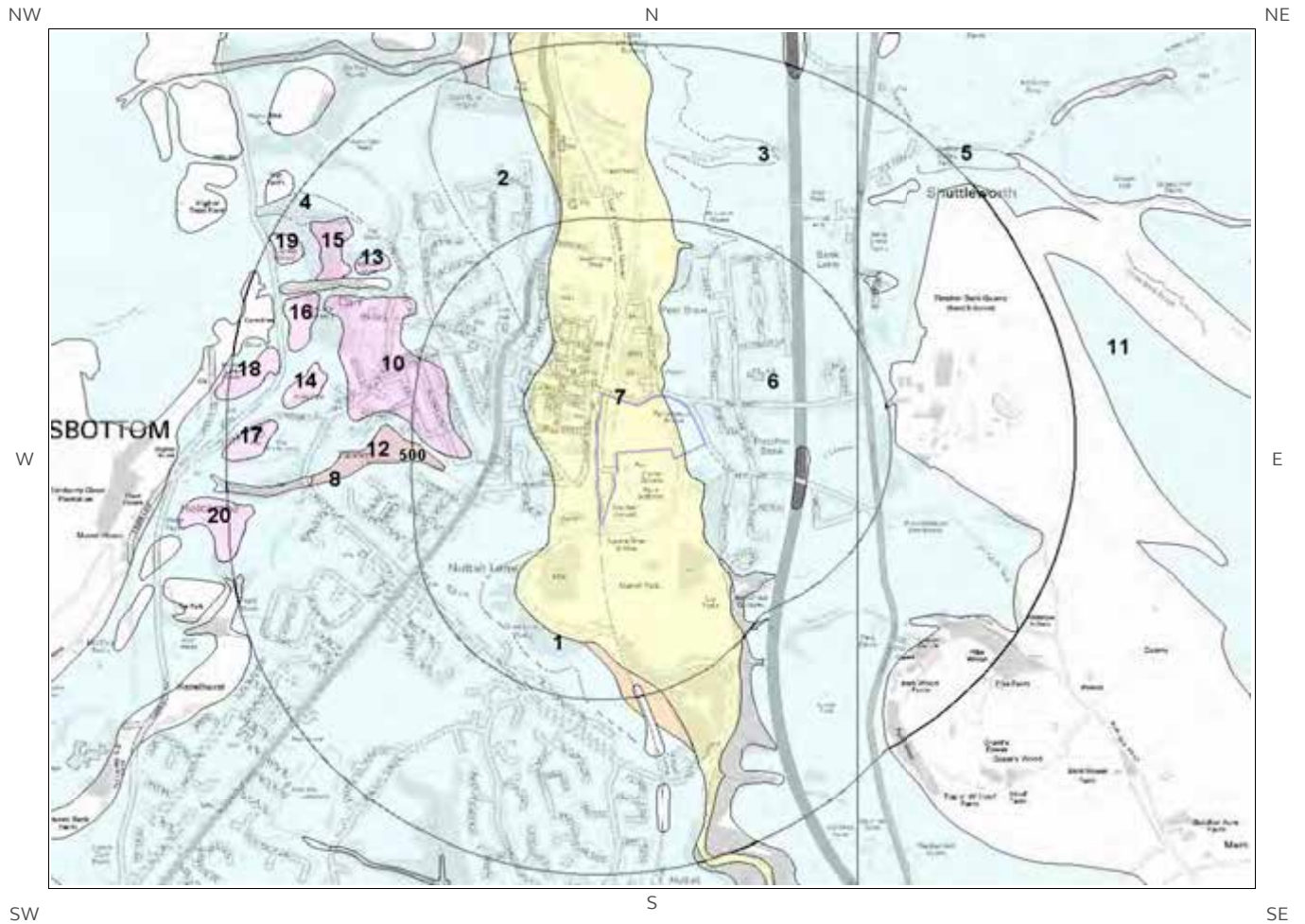
1.1 Artificial Ground

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	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	11.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	33.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	95.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	226.0	E	WGR-VOID	Worked Ground (Undivided)	Void
7	257.0	W	WGR-VOID	Worked Ground (Undivided)	Void
8	467.0	S	WGR-VOID	Worked Ground (Undivided)	Void
9	478.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	495.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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



Artificial Ground Legend

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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
6	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
7	0.0	On Site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
8	118.0	W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
9	334.0	S	RTD1-XSV	River Terrace Deposits, 1 - Sand And Gravel	Sand And Gravel
10	342.0	W	GFDUD-XSV	Glaciofluvial Deposits, Devensian - Sand And Gravel	Sand And Gravel
11	409.0	E	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
12	413.0	W	HEAD-DMTN	Head - Diamicton	Diamicton

1.2.2 Landslip

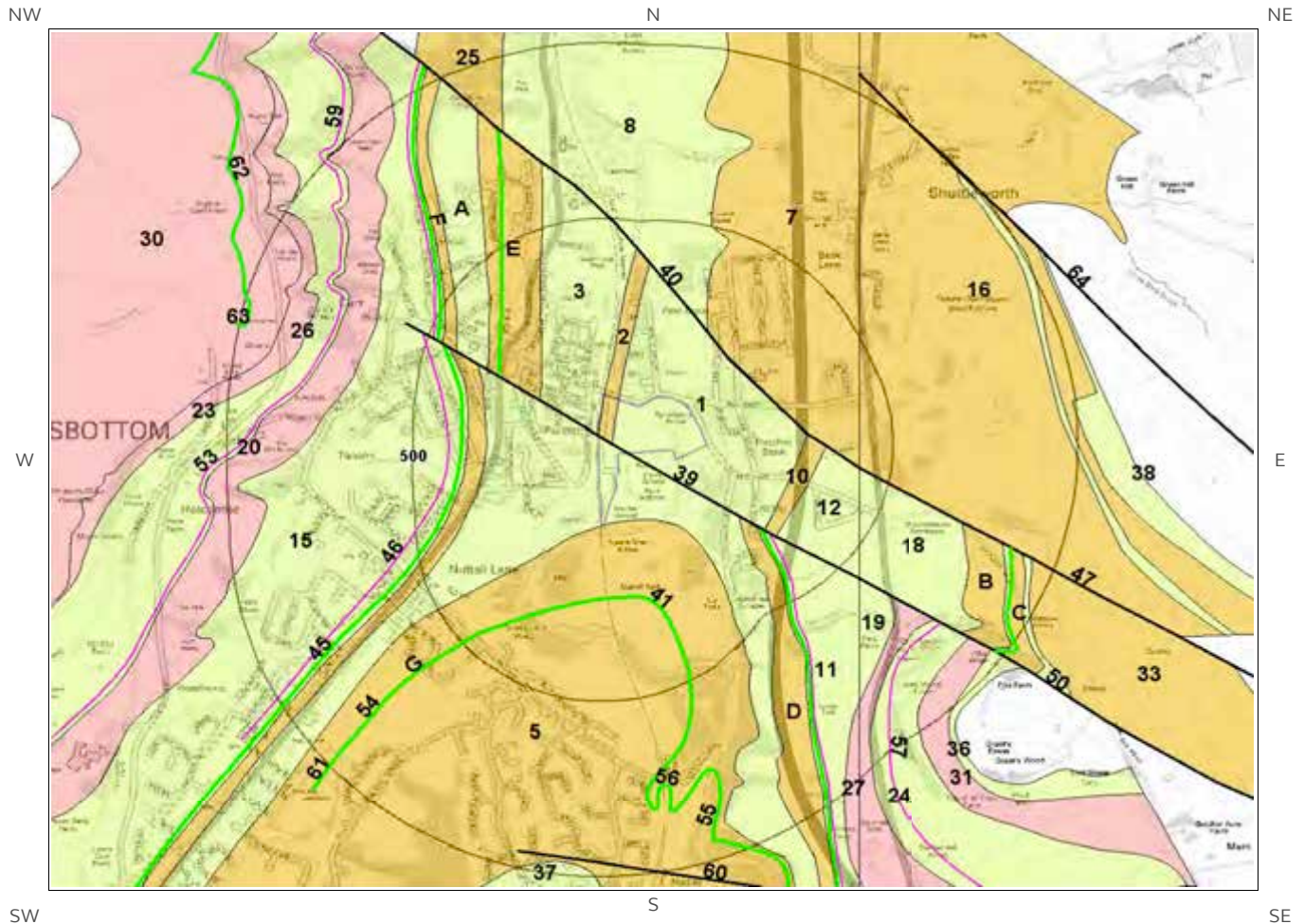
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	164.0	SW	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
2	247.0	NW	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry
3	298.0	N	SLIP-UNKNOWN	Landslide Deposits	Unknown/unclassified Entry

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

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

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



Bedrock and linear features Legend

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1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
2	0.0	On Site	HZG-SDST	Hazel Greave Grit - Sandstone	Marsdenian Sub-age
3	0.0	On Site	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
4	0.0	On Site	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
5	0.0	S	BBS-SDST	Brooksbottoms Grit - Sandstone	Marsdenian Sub-age
6E	165.0	W	BBS-SDST	Brooksbottoms Grit - Sandstone	Marsdenian Sub-age
7	176.0	NE	FLB-SDST	Fletcher Bank Grit - Sandstone	Marsdenian Sub-age
8	209.0	NE	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
9D	219.0	SE	HLBG-SDST	Holcombe Brook Grit - Sandstone	Marsdenian Sub-age
10	242.0	SE	HZG-SDST	Hazel Greave Grit - Sandstone	Marsdenian Sub-age
11	260.0	SE	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
12	291.0	SE	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
13	301.0	W	HLBG-SDST	Holcombe Brook Grit - Sandstone	Marsdenian Sub-age
14A	318.0	W	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
15	352.0	W	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age
16	409.0	E	FLB-SDST	Fletcher Bank Grit - Sandstone	Marsdenian Sub-age
17A	413.0	W	HLBG-SDST	Holcombe Brook Grit - Sandstone	Marsdenian Sub-age
18	414.0	E	MG-MDSI	Millstone Grit Group [see Also Migr] - Mudstone And Siltstone	Namurian Age

1.3.2 Linear features

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

ID	Distance (m)	Direction	Category Description	Feature Description
39	0.0	On Site	FAULT	Normal fault, inferred
40	176.0	NE	FAULT	Normal fault, inferred
41	207.0	S	ROCK	Coal seam, inferred

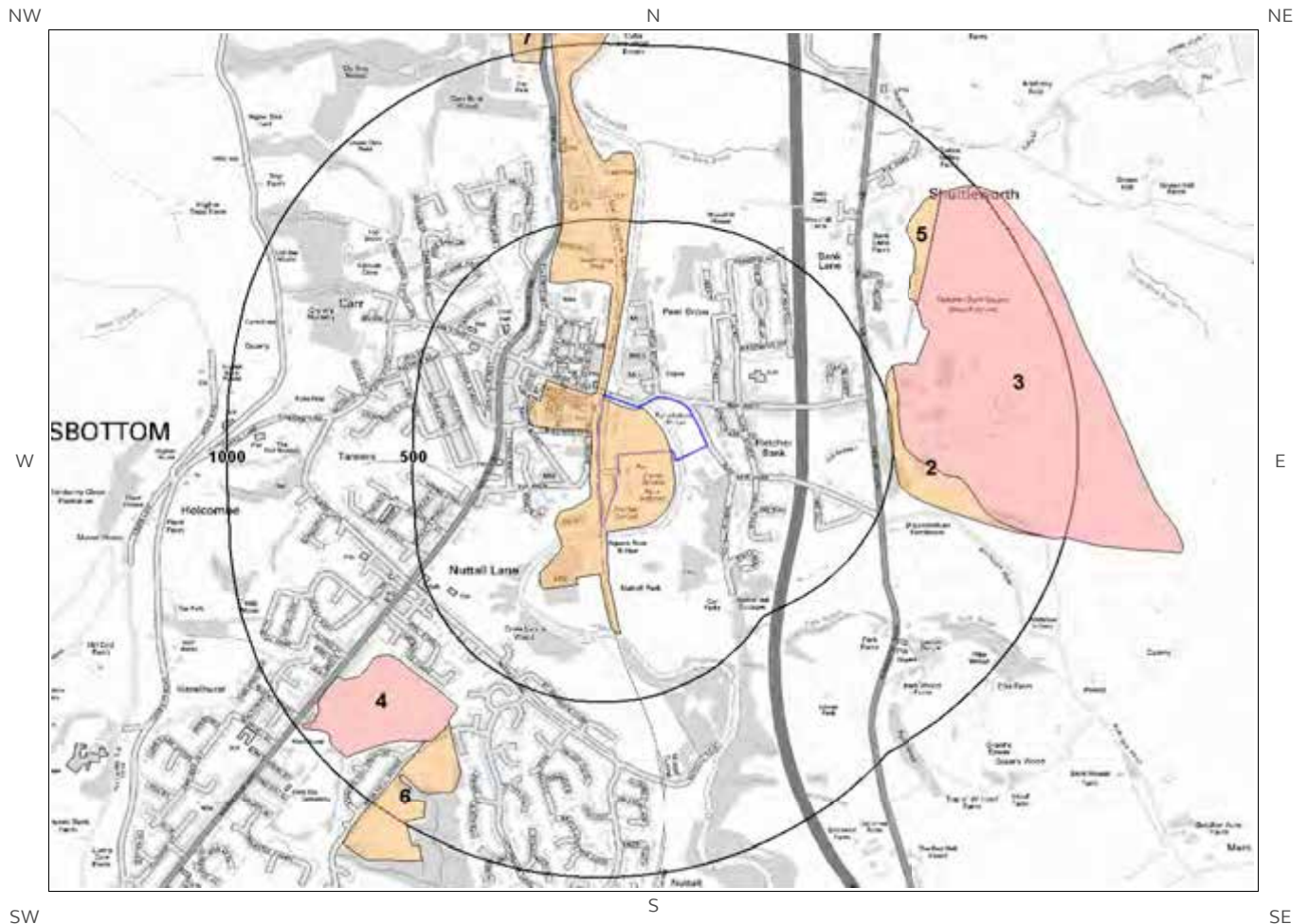
ID	Distance (m)	Direction	Category Description	Feature Description
42D	279.0	SE	ROCK	Coal seam, inferred
43E	285.0	W	ROCK	Coal seam, inferred
44D	300.0	SE	FOSSIL_HORIZON	Fossil horizon, marine band
45	367.0	W	ROCK	Coal seam, inferred
46	402.0	W	FOSSIL_HORIZON	Fossil horizon, marine band
47	414.0	E	FAULT	Normal fault, inferred
48F	470.0	W	ROCK	Coal seam, inferred
49F	484.0	W	FOSSIL_HORIZON	Fossil horizon, marine band

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.

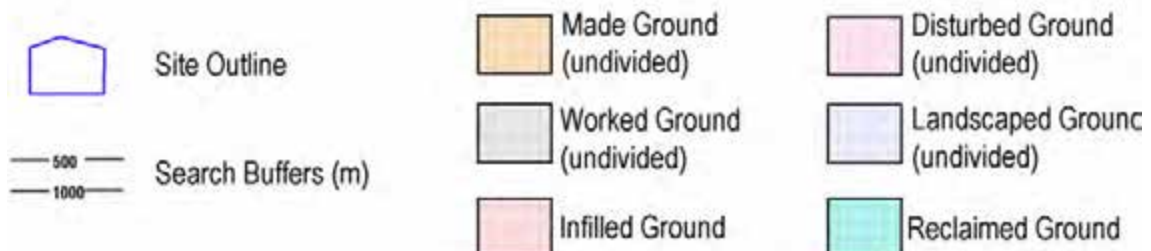
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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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: 076

2.1.1 Artificial/ Made Ground

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

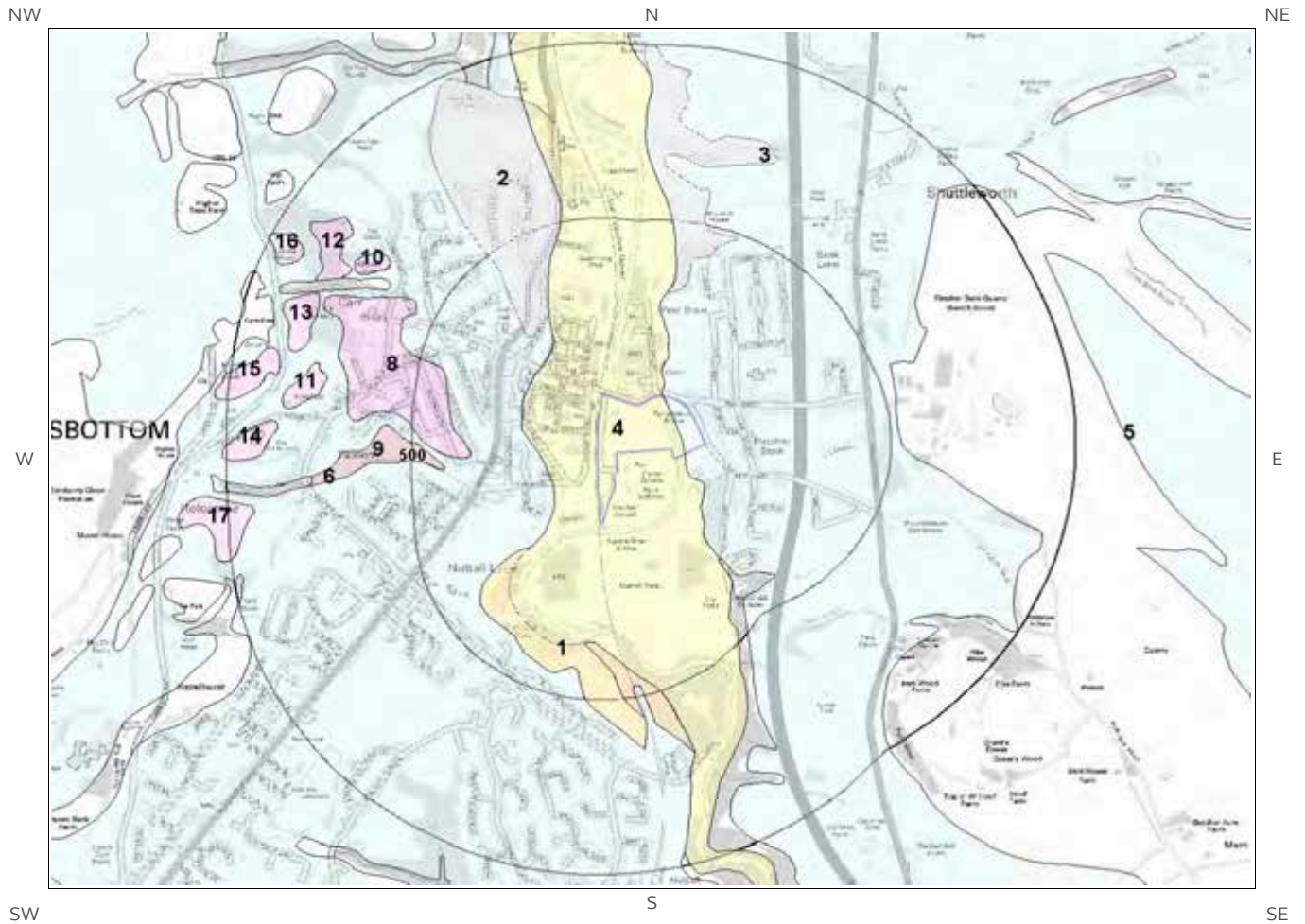
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	490.0	E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

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

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

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



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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
4	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	119.0	W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	335.0	S	RTD1-XSV	RIVER TERRACE DEPOSITS, 1	SAND AND GRAVEL
8	342.0	W	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
9	413.0	W	HEAD-DMTN	HEAD	DIAMICTON

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	191.0	W	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
2	247.0	NW	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY
3	298.0	N	SLIP-UNKNOWN	LANDSLIDE DEPOSITS	UNKNOWN/UNCLASSIFIED ENTRY

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

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

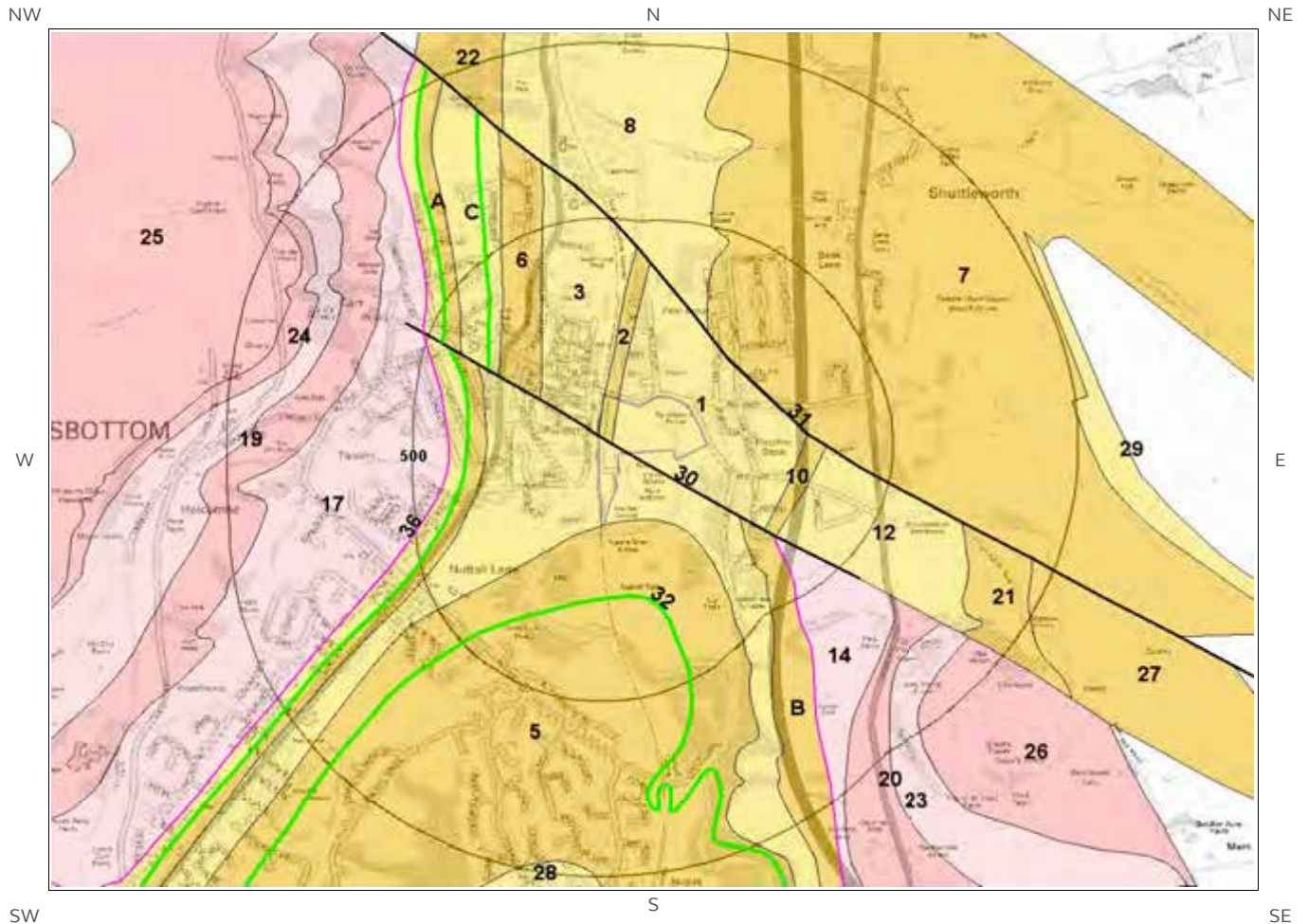
2.2.4 Landslip Permeability

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

No

Database searched and no data found.

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



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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 076

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	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
2	0.0	On Site	GSYG-SDST	GUISELEY GRIT - SANDSTONE	NAMURIAN
3	0.0	On Site	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
4	0.0	On Site	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
5	0.0	S	BBS-SDST	BROOKSBOTTOMS GRIT - SANDSTONE	NAMURIAN
6	165.0	W	BBS-SDST	BROOKSBOTTOMS GRIT - SANDSTONE	NAMURIAN
7	175.0	NE	FLB-SDST	FLETCHER BANK GRIT - SANDSTONE	NAMURIAN
8	209.0	NE	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
9B	220.0	SE	HLBG-SDST	HOLCOMBE BROOK GRIT - SANDSTONE	NAMURIAN
10	243.0	E	GSYG-SDST	GUISELEY GRIT - SANDSTONE	NAMURIAN
11C	286.0	W	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
12	291.0	SE	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
13	301.0	W	HLBG-SDST	HOLCOMBE BROOK GRIT - SANDSTONE	NAMURIAN
14	307.0	SE	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
15D	352.0	W	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
16A	402.0	W	HLBG-SDST	HOLCOMBE BROOK GRIT - SANDSTONE	NAMURIAN
17	403.0	W	ROSSE-MDSI	ROSSENDALE FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN
18A	459.0	W	MARSD-MDSI	MARSDEN FORMATION - MUDSTONE AND SILTSTONE	NAMURIAN

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	Fracture	Low	Low

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	High	Moderate
0.0	S	Fracture	High	Moderate

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
30	0.0	On Site	FAULT	Fault, inferred
31	175.0	NE	FAULT	Fault, inferred, displacement unknown
32	207.0	S	ROCK	Coal seam, inferred
33B	307.0	SE	FOSSIL_HORIZON	Marine band
34C	319.0	W	ROCK	Coal seam, inferred
35D	352.0	W	ROCK	Coal seam, inferred
36	403.0	W	FOSSIL_HORIZON	Marine band
37A	459.0	W	ROCK	Coal seam, inferred

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

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

3 Radon Data

3.1 Radon Affected Areas

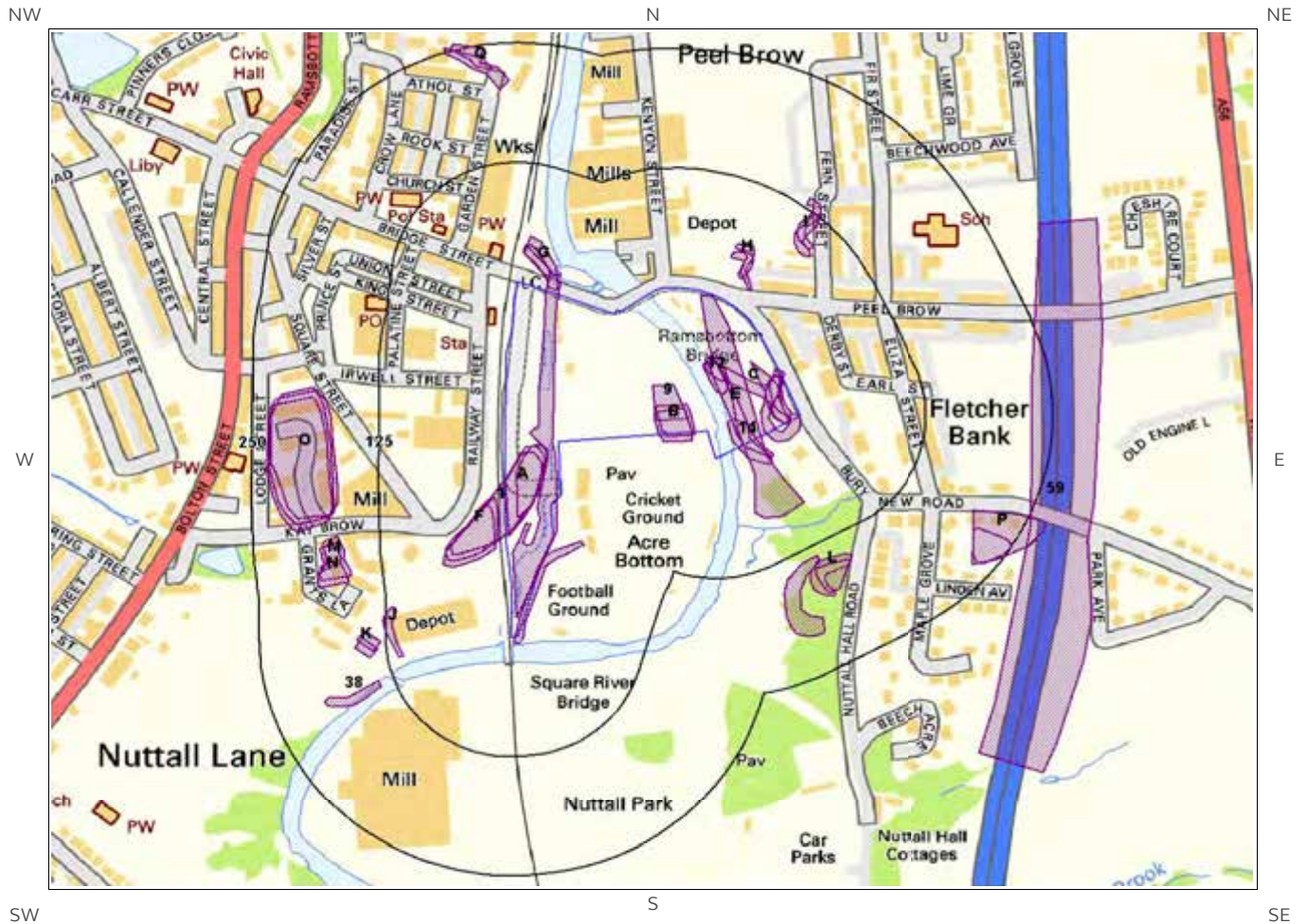
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

3.2 Radon Protection

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

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	379290 416615	Reservoir	1955
2	0.0	On Site	379339 416694	Ponds	1955
3A	0.0	On Site	379318 416624	Reservoir	1948
4A	0.0	On Site	379318 416624	Reservoirs	1891
5A	0.0	On Site	379318 416624	Pond	1908
6A	0.0	On Site	379318 416624	Reservoir	1927
7A	0.0	On Site	379326 416638	Pond	1968
8	0.0	On Site	379327 416522	Unspecified Ground Workings	1908
9	0.0	On Site	379463 416719	Filter Beds	1927
10B	0.0	On Site	379466 416696	Filter Beds	1948
11B	0.0	On Site	379468 416701	Filter Beds	1955
12	0.0	On Site	379507 416745	Refuse Heap	1948
13C	0.0	On Site	379559 416729	Refuse Heap	1927
14	0.0	On Site	379542 416679	Refuse Heap	1948
15D	0.0	On Site	379561 416721	Refuse Heap	1968
16C	0.0	On Site	379568 416722	Refuse Heap	1948
17D	0.0	On Site	379572 416729	Refuse Heap	1955
18E	0.0	On Site	379531 416715	Refuse Heap	1955
19E	0.0	On Site	379544 416715	Unspecified Ground Workings	1968
20G	3.0	N	379336 416861	Pond	1891
21F	8.0	W	379269 416591	Pond	1968

ID	Distance (m)	Direction	NGR	Use	Date
22F	11.0	W	379264 416581	Reservoir	1927
23F	11.0	W	379264 416581	Reservoir	1948
24F	11.0	W	379264 416581	Reservoir	1908
25G	14.0	N	379331 416868	Pond	1927
26G	14.0	N	379331 416868	Pond	1948
27H	23.0	NE	379537 416861	Unspecified Ground Workings	1955
28H	28.0	NE	379540 416863	Unspecified Ground Workings	1948
29H	28.0	NE	379540 416863	Unspecified Ground Workings	1927
30I	85.0	NE	379591 416894	Unspecified Ground Workings	1927
31I	85.0	NE	379591 416894	Unspecified Ground Workings	1948
32I	93.0	NE	379600 416906	Unspecified Ground Workings	1955
33J	109.0	W	379189 416480	Unspecified Ground Workings	1908
34J	130.0	W	379165 416470	Filter Beds	1955
35K	133.0	W	379162 416463	Filter Beds	1927
36K	133.0	W	379162 416463	Filter Beds	1948
37	137.0	SE	379584 416518	Refuse Heap	1968
38	139.0	W	379159 416416	Unspecified Ground Workings	1908
39L	141.0	SE	379625 416542	Refuse Heap	1955
40L	147.0	SE	379609 416538	Refuse Heap	1927
41L	147.0	SE	379609 416538	Refuse Heap	1948
42M	156.0	W	379132 416557	Ponds	1968
43M	156.0	W	379132 416557	Reservoirs	1955
44N	159.0	W	379130 416539	Reservoirs	1908
45N	159.0	W	379130 416539	Reservoirs	1948
46M	159.0	W	379130 416539	Reservoirs	1927
47M	164.0	W	379127 416562	Reservoirs	1948
48M	164.0	W	379127 416562	Reservoirs	1908
49O	164.0	W	379101 416667	Pond	1968
50O	169.0	W	379098 416662	Reservoir	1955

ID	Distance (m)	Direction	NGR	Use	Date
51O	171.0	W	379096 416655	Reservoir	1908
52O	171.0	W	379096 416655	Reservoir	1927
53O	171.0	W	379096 416655	Reservoir	1948
54O	171.0	W	379096 416655	Reservoir	1891
55P	198.0	SE	379798 416578	Refuse Heap	1928
56Q	202.0	N	379271 417068	Pond	1955
57P	209.0	SE	379782 416569	Refuse Heap	1938
58Q	224.0	N	379266 417081	Pond	1968
59	230.0	E	379830 416622	Cuttings	1980

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? ☒ Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	678.0	S	379466 415772	Tunnel	1949
Not shown	678.0	S	379466 415772	Tunnel	1980
Not shown	678.0	S	379466 415772	Tunnel	1968
Not shown	681.0	S	379465 415768	Tunnel	1908
Not shown	681.0	S	379465 415768	Tunnel	1927
Not shown	681.0	S	379465 415768	Tunnel	1891
Not shown	681.0	S	379465 415768	Tunnel	1848
Not shown	888.0	S	379433 415419	Tunnel	1968
Not shown	888.0	S	379433 415419	Tunnel	1949
Not shown	891.0	S	379439 415419	Tunnel	1980
Not shown	894.0	S	379433 415414	Tunnel	1908

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	894.0	S	379433 415414	Tunnel	1891
Not shown	894.0	S	379433 415414	Tunnel	1848
Not shown	894.0	S	379433 415414	Tunnel	1927

4.3 Current Ground Workings

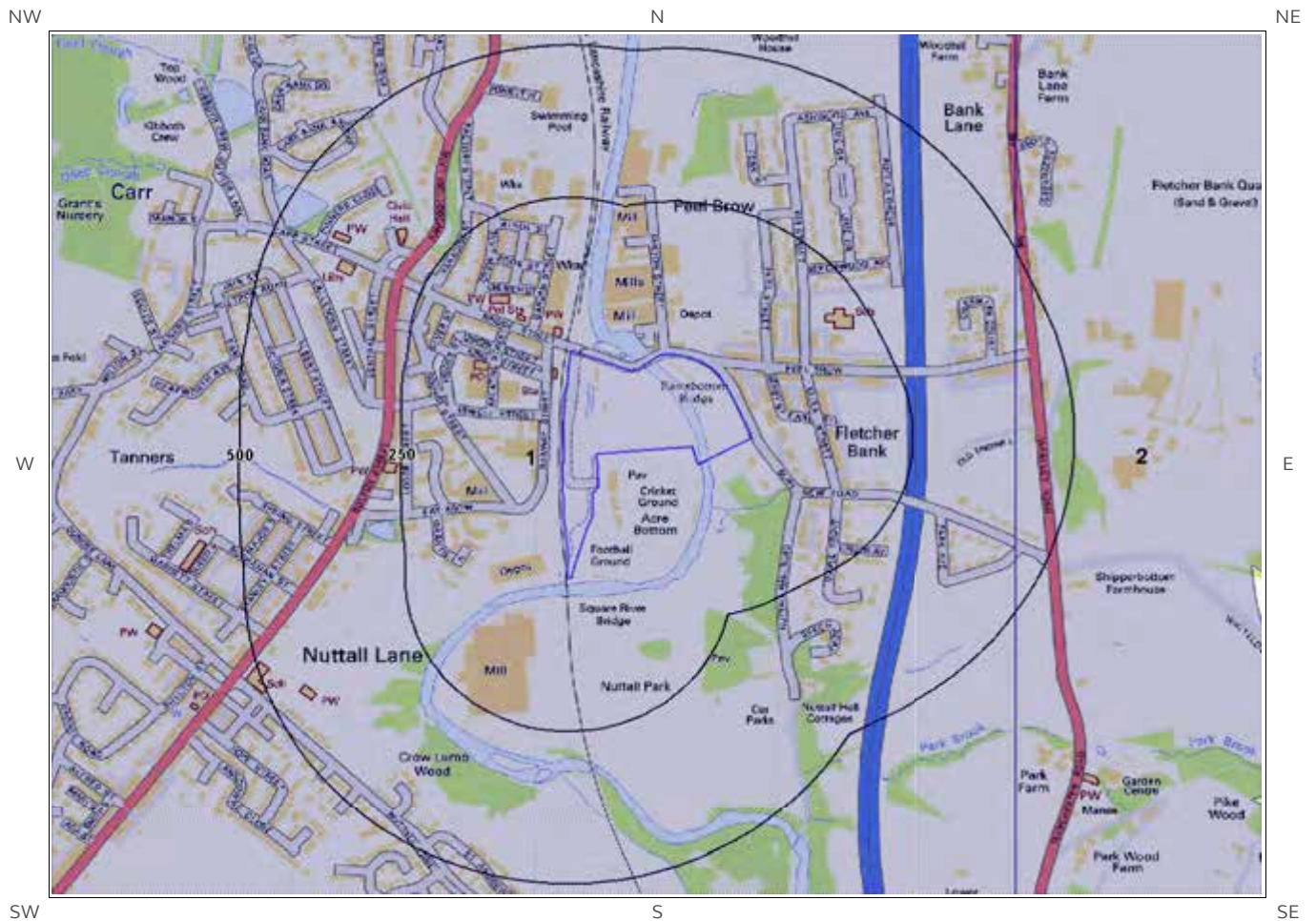
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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	578.0	E	380169 416697	Sandstone	Fletcher Bank Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	630.0	NE	380055 417170	Sandstone	Fletcher Bank Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	715.0	E	380300 416800	Sandstone	Fletcher Bank Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Inactive
Not shown	715.0	E	380300 416800	Sandstone	Fletcher Bank Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Inactive
Not shown	806.0	W	378540 417079	Sandstone	Carr	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	837.0	NE	380110 417420	Sandstone	Bank Lane Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	853.0	W	378507 417128	Sandstone	Carr	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	881.0	W	378431 416915	Sandstone	Stony Bank	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	882.0	E	380460 416555	Sandstone	Grime Height Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	964.0	E	380515 416980	Sandstone	Fletcher Bank Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Inactive
Not shown	967.0	NE	380350 417335	Sandstone	Fletcher Bank Quarry	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? No

Database searched and no data found.

5.2 Coal Mining

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

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

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

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

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

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
2	409.0	E	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

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

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

Database searched and no data found.

5.6 Natural Cavities

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

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

Database searched and no data found.

5.7 Brine Extraction

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

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 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

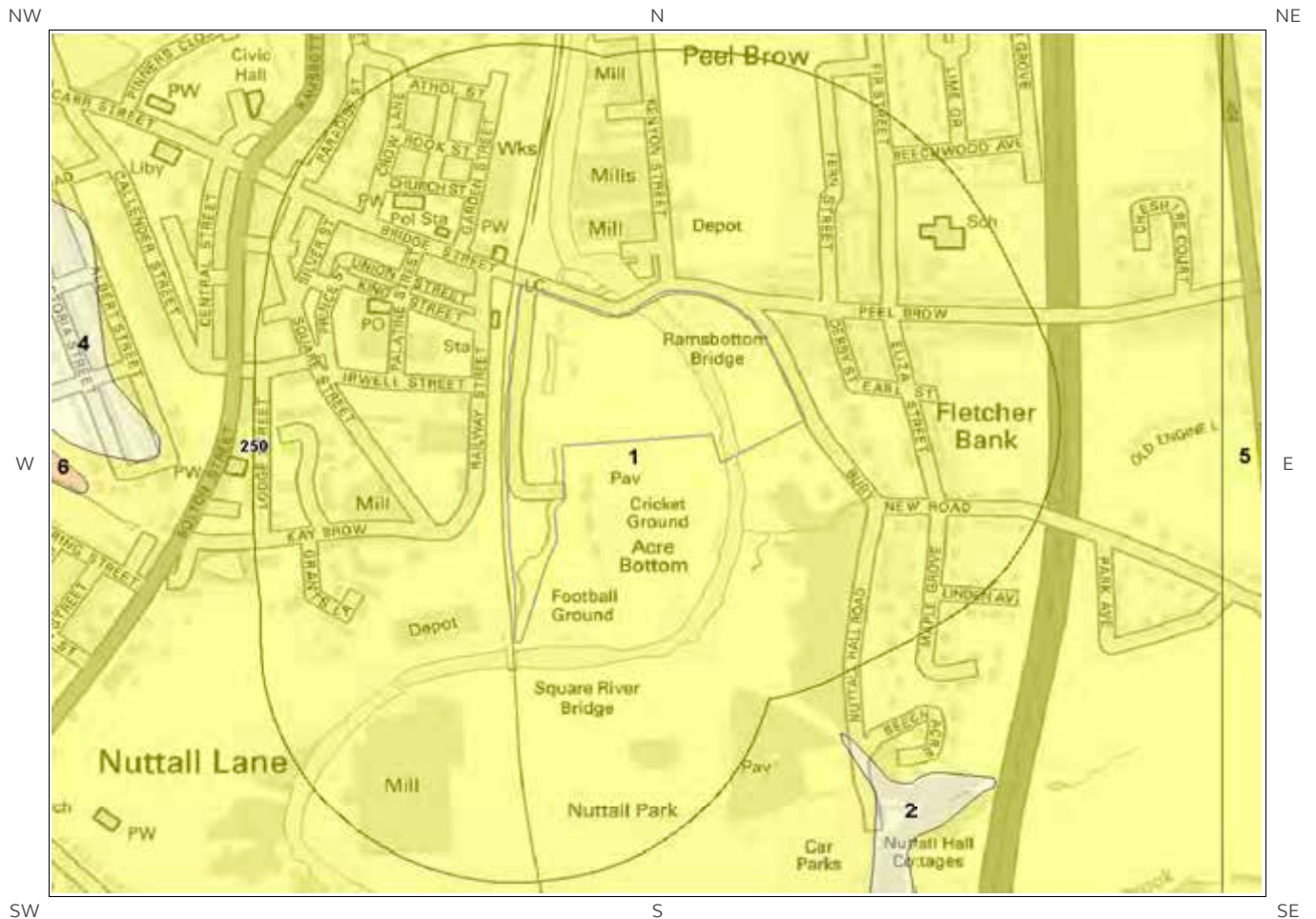
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

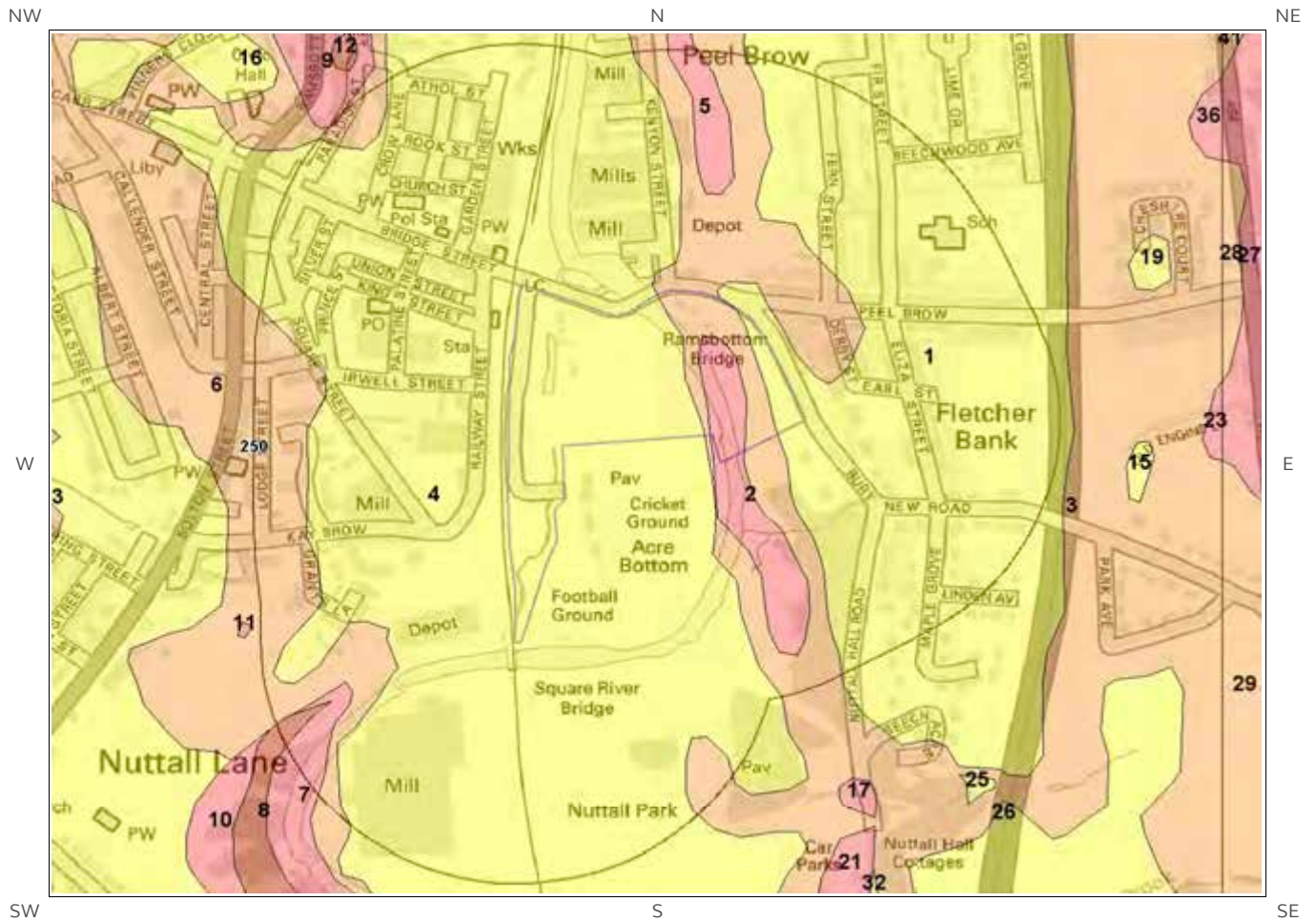


Shrink Swell Clay Legend

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6.2 Landslides map

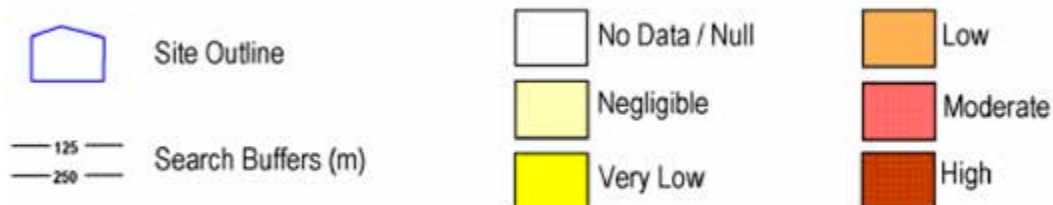
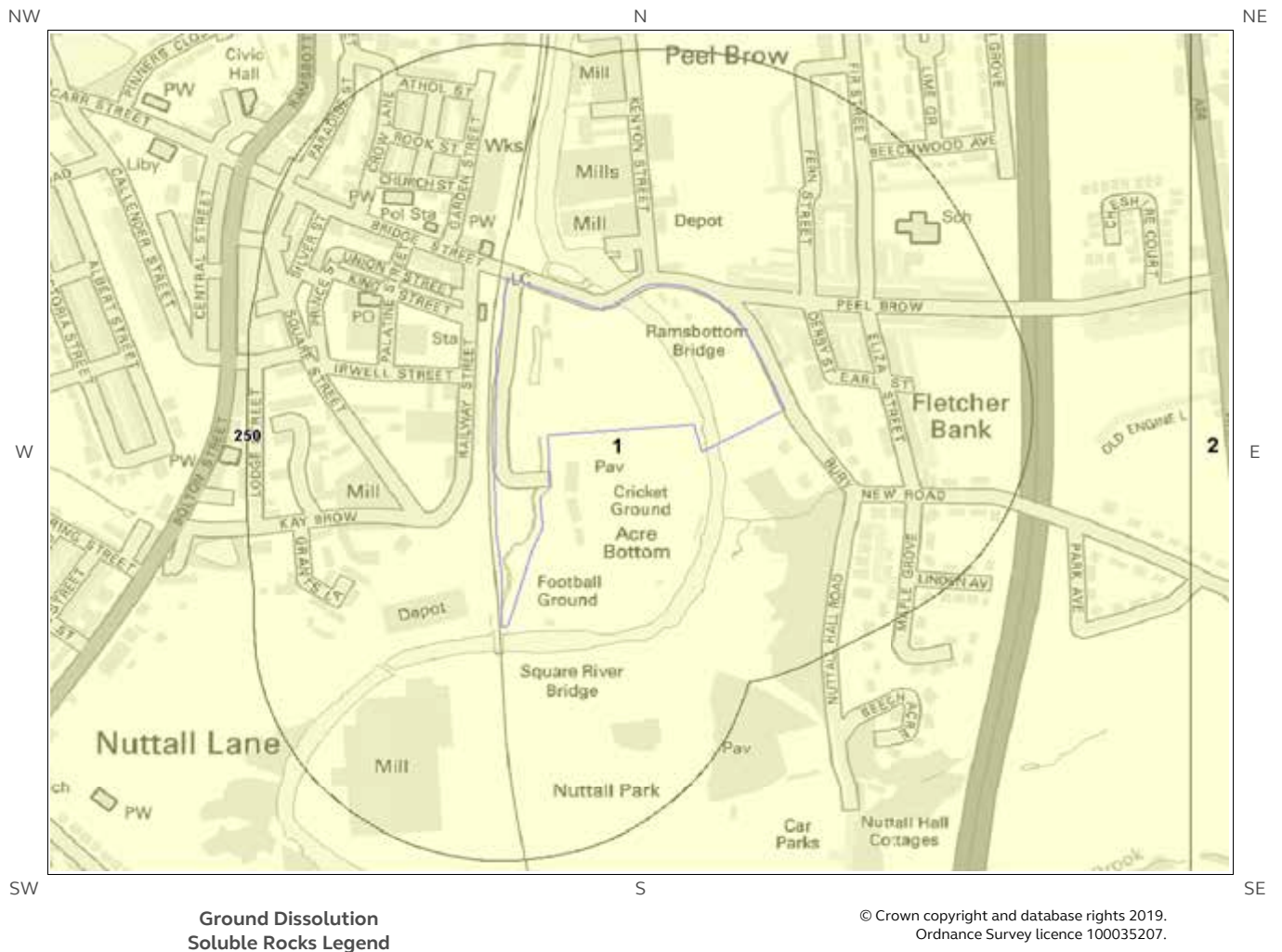


Landslides Legend

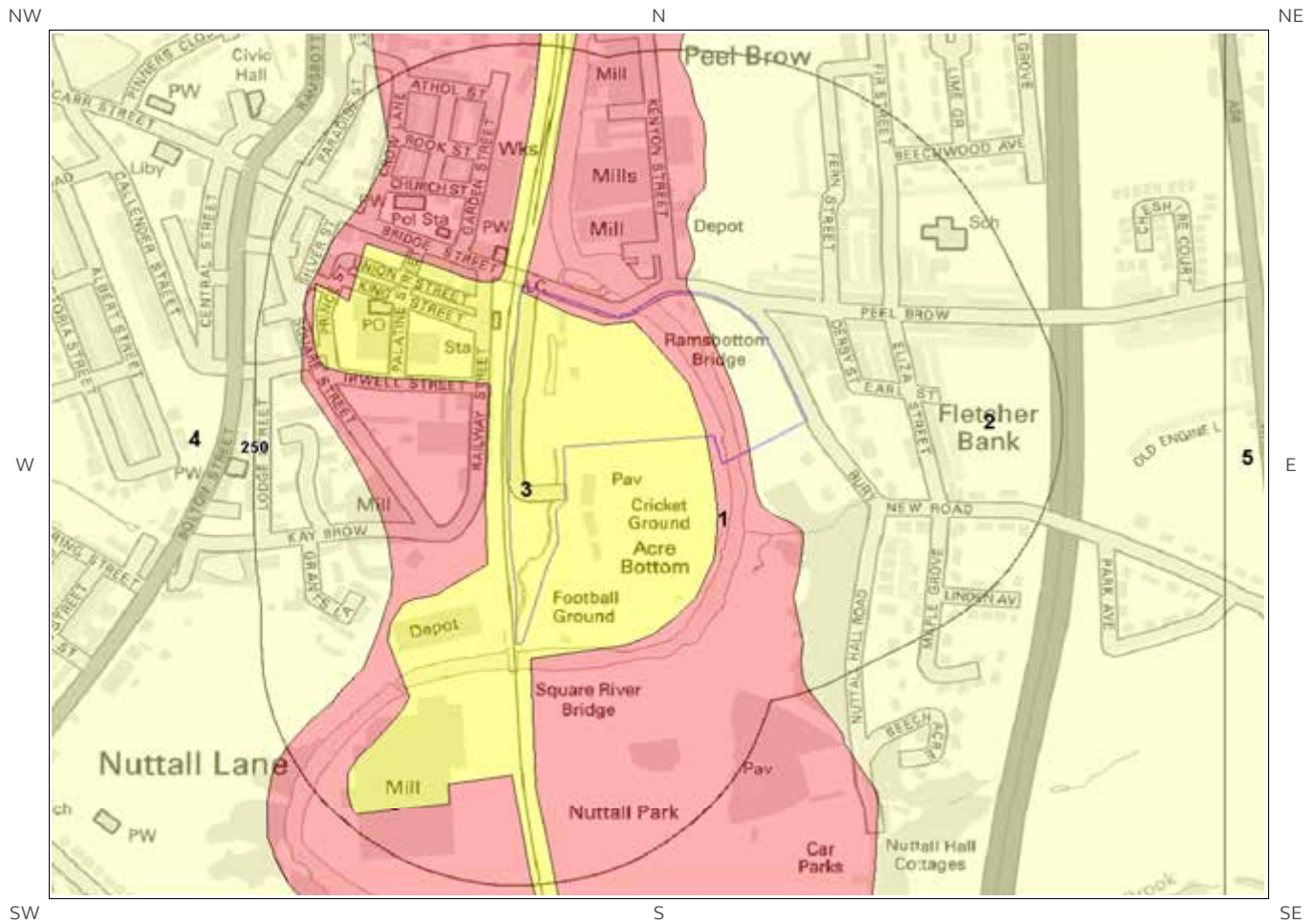
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6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map

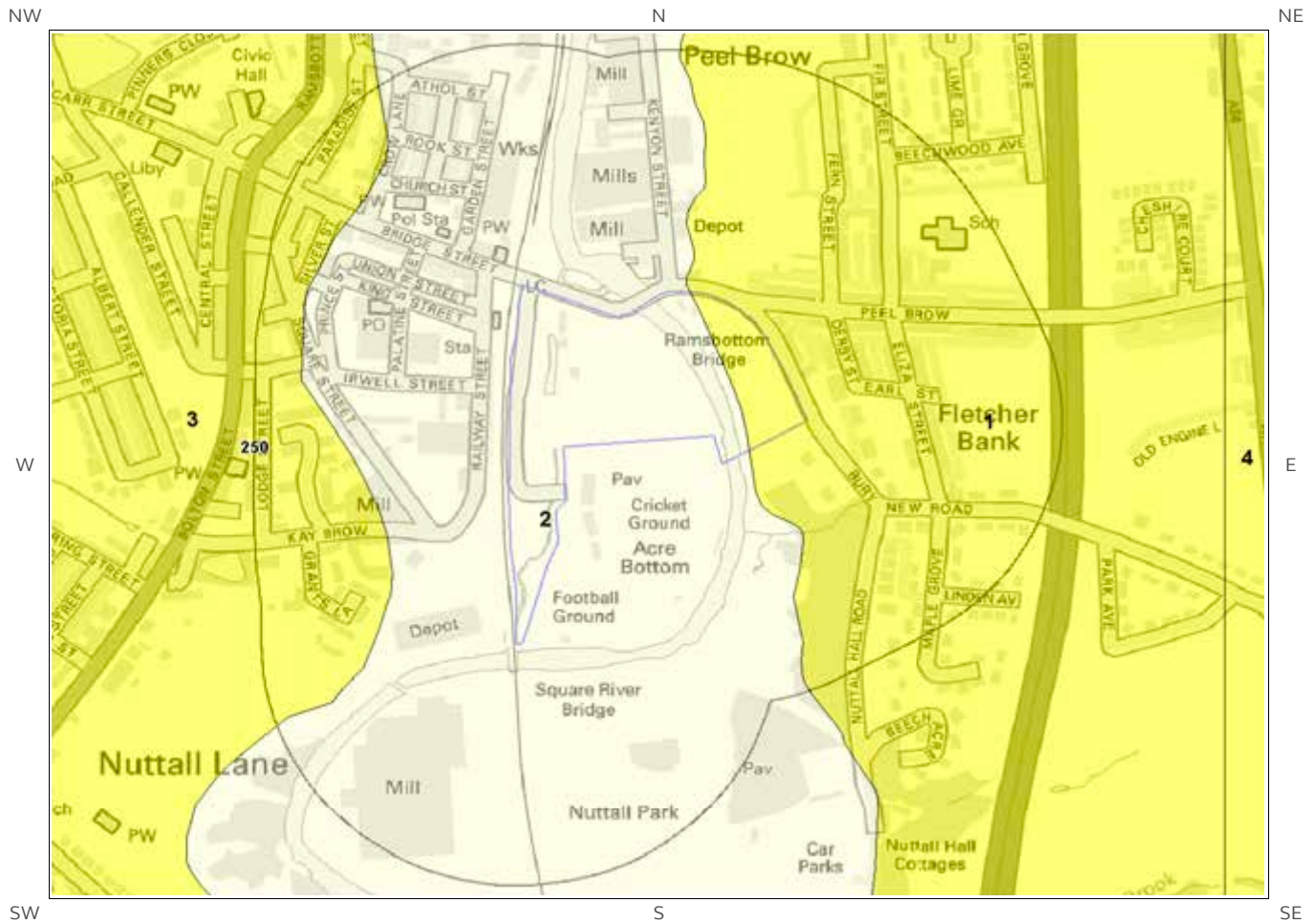


Compressible Deposits Legend

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6.5 Collapsible Deposits map

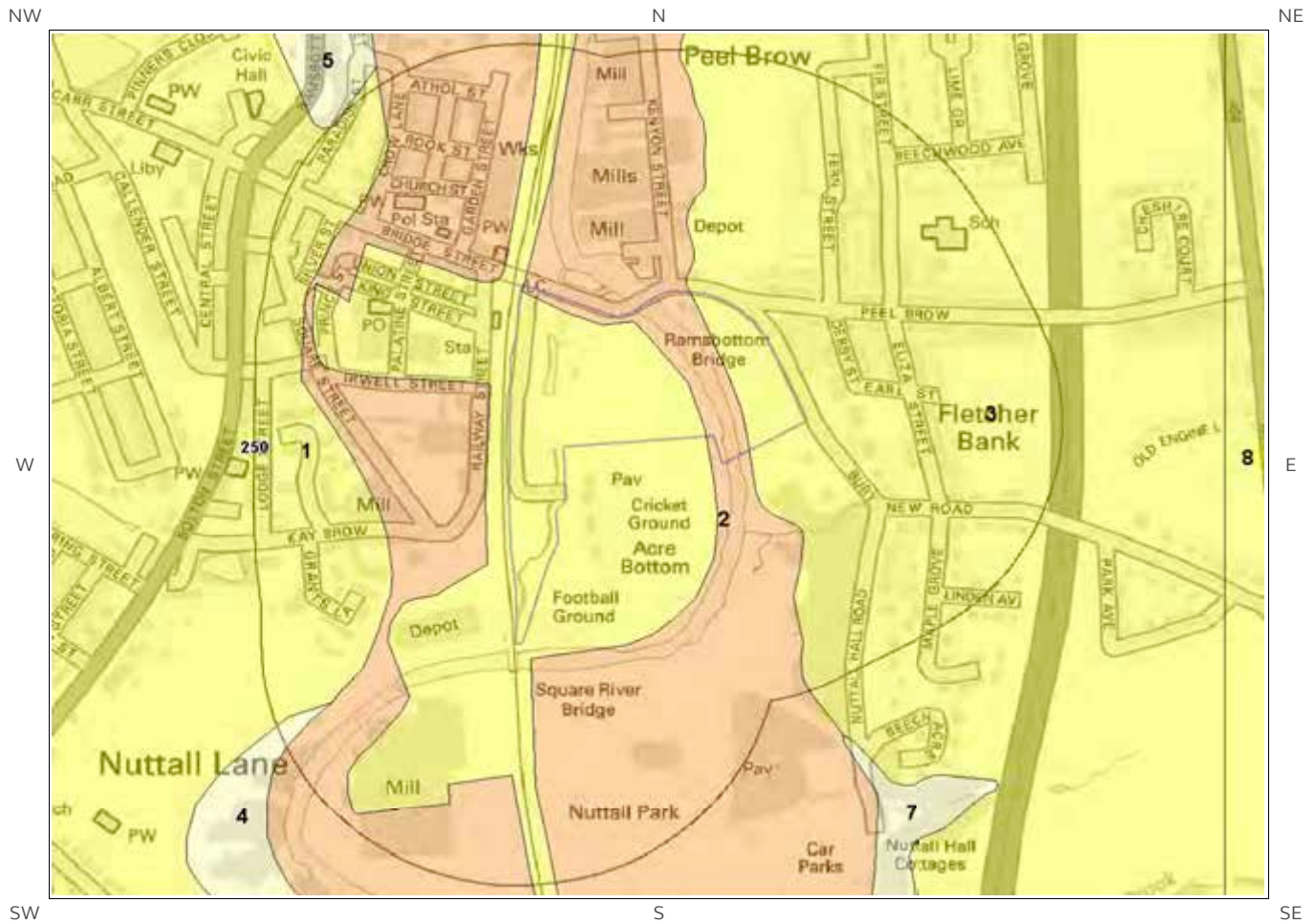


Collapsible Deposits Legend

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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	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.

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	0.0	On Site	Moderate	Significant potential for slope instability with relatively small changes in ground conditions. Avoid large amounts of water entering the ground through pipe leakage or soak-aways. Do not undercut or place large amounts of material on slopes without technical advice. For new build - consider the potential and consequences of ground movement during excavations, or consequence of changes to loading or drainage. For existing property - probable increase in insurance risk is likely due to potential natural slope instability after changes to ground conditions such as a very long, excessively wet winter.

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

ID	Distance (m)	Direction	Hazard Rating	Details
3	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
4	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.

6.3 Ground Dissolution of Soluble Rocks

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

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

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	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.
2	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.
3	0.0	On Site	Very Low	Very low potential for compressible deposits to be present. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

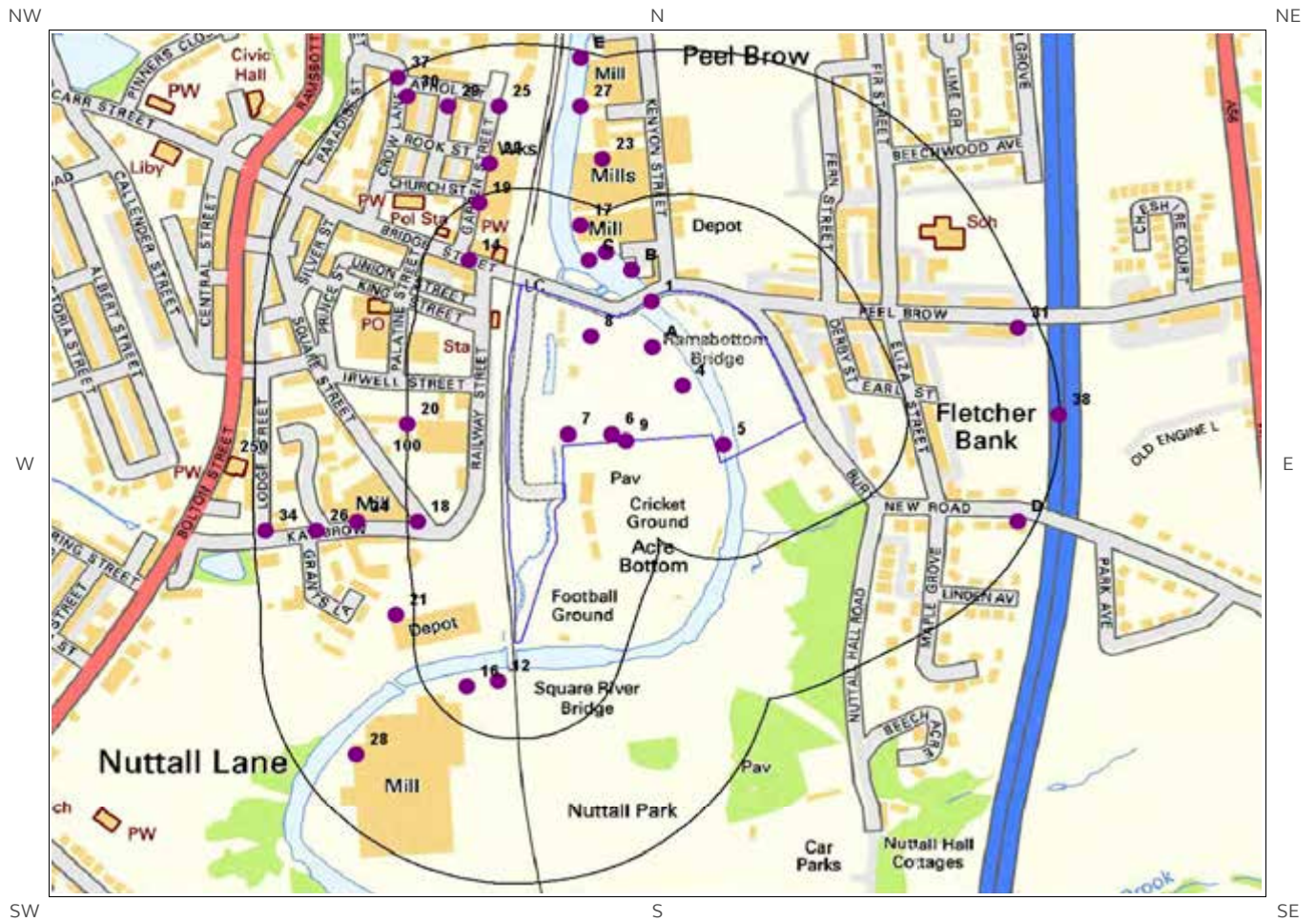
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	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	0.0	On Site	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.
3	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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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:

38

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	On Site	379439 416827	SD71NE153	Not available	RIVER IRWELL RAMSBOTTOM TP F
2A	0.0	On Site	379440 416780	SD71NE172	Not available	RIVER IRWELL RAMSBOTTOM TP4
3A	0.0	On Site	379440 416780	SD71NE173	Not available	RIVER IRWELL RAMSBOTTOM TP4A
4	0.0	On Site	379470 416740	SD71NE168	Not available	RIVER IRWELL RAMSBOTTOM BH3
5	0.0	On Site	379510 416680	SD71NE174	Not available	RIVER IRWELL RAMSBOTTOM TP5
6	0.0	On Site	379400 416690	SD71NE187	66	RAMSBOTTOM PAPER MILLS
7	0.0	On Site	379358 416690	SD71NE7	66	RAMSBOTTOM PAPER MILLS
8	0.0	On Site	379380 416791	SD71NE8	Not available	RAMSBOTTOM PAPER MILLS
9	1.0	S	379414 416683	SD71NE6	108	RAMSBOTTOM PAPER MILLS
10B	35.0	NW	379420 416860	SD71NE167	Not available	RIVER IRWELL RAMSBOTTOM BH2
11B	35.0	NW	379420 416860	SD71NE171	Not available	RIVER IRWELL RAMSBOTTOM TP3
12	44.0	SW	379289 416434	SD71NE154	Not available	RIVER IRWELL RAMSBOTTOM TP G
13C	45.0	N	379378 416870	SD71NE151	Not available	RIVER IRWELL RAMSBOTTOM TP D
14	57.0	NW	379260 416870	SD71NE117	7	STUBBINS LANE BURY 1
15C	58.0	N	379395 416878	SD71NE152	Not available	RIVER IRWELL RAMSBOTTOM TP E
16	66.0	SW	379258 416429	SD71NE155	Not available	RIVER IRWELL RAMSBOTTOM TP H
17	76.0	N	379370 416906	SD71NE150	Not available	RIVER IRWELL RAMSBOTTOM TP C
18	90.0	W	379210 416600	SD71NE81	Not available	BOLTON ST/KAY BROW RAMSBOT BH1
19	94.0	NW	379270 416930	SD71NE118	6	STUBBINS LANE BURY 2
20	99.0	W	379200 416700	SD71NE192	Not available	RAMSBOTTOM
21	118.0	W	379188 416503	SD71NE5	142	HEPBURNS BLEACH WORKS
22	129.0	N	379280 416970	SD71NE119	4	STUBBINS LANE BURY 3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23	148.0	N	379391 416975	SD71NE149	Not available	RIVER IRWELL RAMSBOTTOM TP B
24	150.0	W	379150 416600	SD71NE82	Not available	BOLTON ST/KAY BROW RAMSBOT BH2
25	186.0	N	379290 417030	SD71NE120	5	STUBBINS LANE BURY 4
26	190.0	W	379110 416590	SD71NE83	Not available	BOLTON ST/KAY BROW RAMSBOT BH3
27	194.0	N	379370 417030	SD71NE170	Not available	RIVER IRWELL RAMSBOTTOM TP2
28	196.0	SW	379149 416358	SD71NE156	Not available	RIVER IRWELL RAMSBOTTOM TP J
29	198.0	N	379240 417030	SD71NE121	5	STUBBINS LANE BURY 5
30	225.0	NW	379200 417040	SD71NE122	4	STUBBINS LANE BURY 6
31	229.0	NE	379800 416800	SD71NE47	Not available	M66 BURY EASTERLY BY- PASS. 5882/1-4
32D	234.0	SE	379800 416600	SD71NE45	Not available	M66 BURY EASTERLY BY- PASS. 152E-W
33D	234.0	SE	379800 416600	SD71NE44	Not available	M66 BURY EASTERLY BY- PASS. 5881/1-4A
34	240.0	W	379060 416590	SD71NE84	Not available	BOLTON ST/KAY BROW RAMSBOT BH4
35E	242.0	N	379370 417080	SD71NE169	Not available	RIVER IRWELL RAMSBOTTOM TP1
36E	242.0	N	379370 417080	SD71NE166	Not available	RIVER IRWELL RAMSBOTTOM BH1
37	247.0	NW	379190 417060	SD71NE123	4	STUBBINS LANE BURY 7
38	249.0	E	379840 416710	SD71NE46	Not available	M66 BURY EASTERLY BY- PASS. 153

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

#6: scans.bgs.ac.uk/sobi_scans/boreholes/22663
#7: scans.bgs.ac.uk/sobi_scans/boreholes/22483
#8: scans.bgs.ac.uk/sobi_scans/boreholes/22484
#9: scans.bgs.ac.uk/sobi_scans/boreholes/22482
#14: scans.bgs.ac.uk/sobi_scans/boreholes/22593
#19: scans.bgs.ac.uk/sobi_scans/boreholes/22594
#20: scans.bgs.ac.uk/sobi_scans/boreholes/22668
#21: scans.bgs.ac.uk/sobi_scans/boreholes/22481
#22: scans.bgs.ac.uk/sobi_scans/boreholes/22595
#25: scans.bgs.ac.uk/sobi_scans/boreholes/22596
#29: scans.bgs.ac.uk/sobi_scans/boreholes/22597
#30: scans.bgs.ac.uk/sobi_scans/boreholes/22598
#31: scans.bgs.ac.uk/sobi_scans/boreholes/22523
#32D: scans.bgs.ac.uk/sobi_scans/boreholes/22521
#33D: scans.bgs.ac.uk/sobi_scans/boreholes/22520
#37: scans.bgs.ac.uk/sobi_scans/boreholes/22599
#38: scans.bgs.ac.uk/sobi_scans/boreholes/22522

8 Estimated Background Soil Chemistry

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

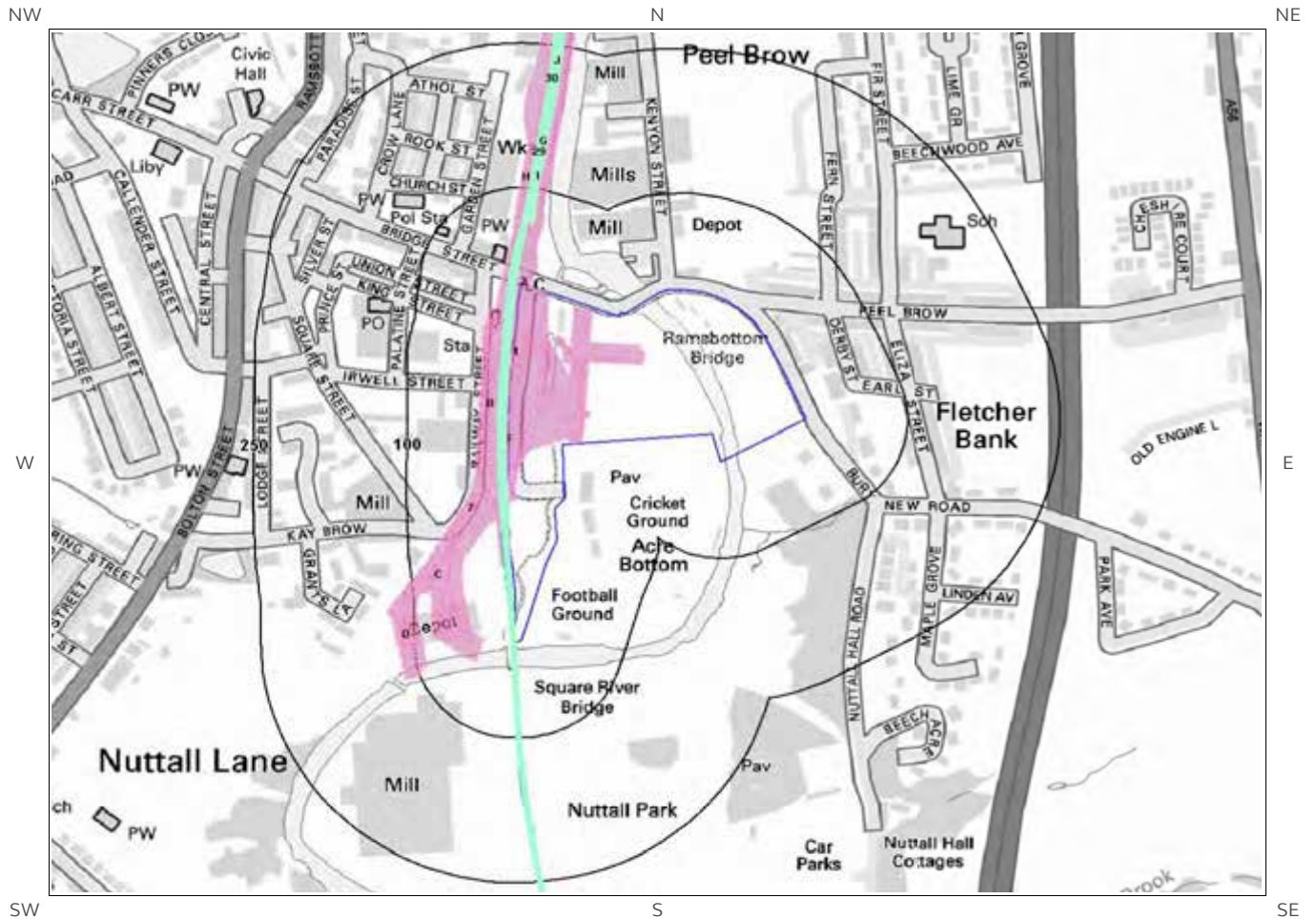
4

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	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

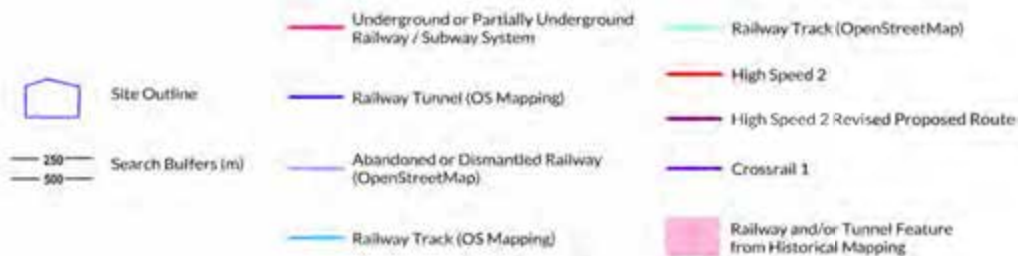
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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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? Yes

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

ID	Distance (m)	Direction	NGR	Details	Date
1	0	On Site	379295 417181	Railway Sidings	1955
2	0	On Site	379295 417181	Railway Sidings	1968
3A	0	On Site	379360 416722	Railway Sidings	1927
4A	0	On Site	379360 416722	Railway Sidings	1908
5A	0	On Site	379360 416722	Railway Sidings	1948
6A	0	On Site	379360 416722	Railway Sidings	1891

ID	Distance (m)	Direction	NGR	Details	Date
14E	0	On Site	379283 416687	Railway Sidings	1962
15	0	On Site	379339 416731	Railway Sidings	1962
16E	0	On Site	379290 416640	Railway Sidings	1891
17F	0	On Site	379291 416643	Railway Sidings	1910
18F	0	On Site	379291 416643	Railway Sidings	1929
19F	0	On Site	379291 416643	Railway Sidings	1938
7	6	W	379277 416629	Railway Sidings	1908
8B	9	W	379281 416719	Railway Sidings	1927
9B	9	W	379281 416719	Railway Sidings	1948
20G	11	N	379300 417247	Railway Sidings	1938
21G	13	N	379267 417247	Railway Sidings	1891
22G	13	N	379299 417248	Railway Sidings	1910
23G	13	N	379299 417248	Railway Sidings	1929
24	52	W	379194 416519	Railway Sidings	1962
10C	55	W	379236 416546	Railway Sidings	1948
11C	55	W	379236 416546	Railway Sidings	1927
25H	57	N	379316 416951	Railway Sidings	1962
26H	58	N	379328 416952	Railway Sidings	1962
27I	64	N	379328 416954	Railway Sidings	1992
28I	64	N	379328 416954	Railway Sidings	1994
12D	98	W	379199 416481	Railway Sidings	1927
13D	98	W	379199 416481	Railway Sidings	1948
29	111	N	379330 416978	Railway Sidings	1978
30	155	N	379282 417397	Railway Sidings	1962
31J	191	N	379347 417079	Railway Sidings	1994
32J	191	N	379347 417079	Railway Sidings	1992
33J	191	N	379347 417079	Railway Sidings	1996

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? Yes

Distance (m)	Direction	Name	Type
2	W	Not given	Preserved
2	W	Not given	Preserved
2	W	Not given	Preserved
2	W	Not given	Preserved
2	W	Not given	Preserved
2	W	Not given	Preserved
3	W	Not given	Multi Track
3	W	Not given	Multi Track
32	S	Not given	Preserved
32	S	Not given	Preserved
62	N	Not given	Preserved
62	N	Not given	Preserved
64	N	Not given	Multi Track
64	N	Not given	Multi Track
126	N	Not given	Multi Track
126	N	Not given	Multi Track
126	N	Not given	Multi Track
126	N	Not given	Multi Track
140	N	Not given	Preserved
140	N	Not given	Preserved
192	N	Not given	Multi Track
192	N	Not given	Multi Track

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.

Contact Details

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Telephone: 08444 159 000
info@groundsure.com



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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk



BGS Geological Hazards Reports and general geological enquiries

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Standard Terms and Conditions

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



The Coal
Authority

Consultants Coal Mining Report

379433, 416756
Greater Manchester

Date of enquiry:	9 May 2019
Date enquiry received:	9 May 2019
Issue date:	9 May 2019

Our reference:	51002107805001
Your reference:	GS-6015653



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

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GROUNDSURE LIMITED

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Greater Manchester

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NG18 4RG

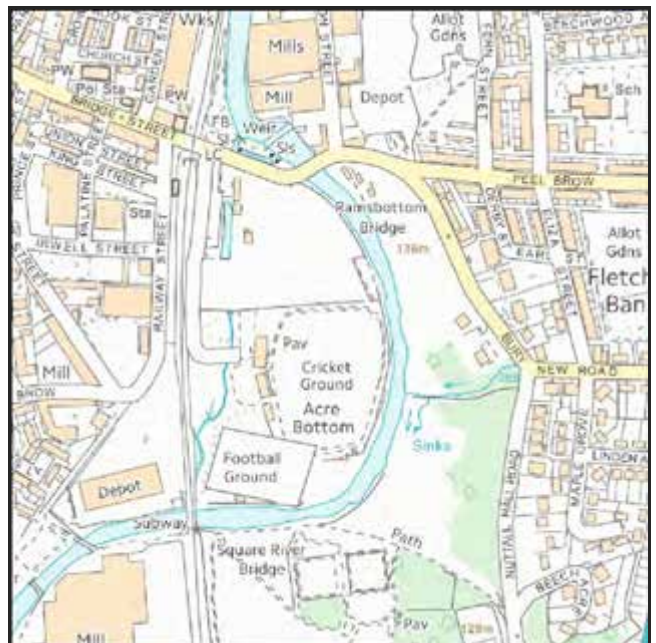
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

No past mining recorded.

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

None available.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
LOWER HOLCOMBE BROOK	Coal	Yes	Within	N/A	100

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

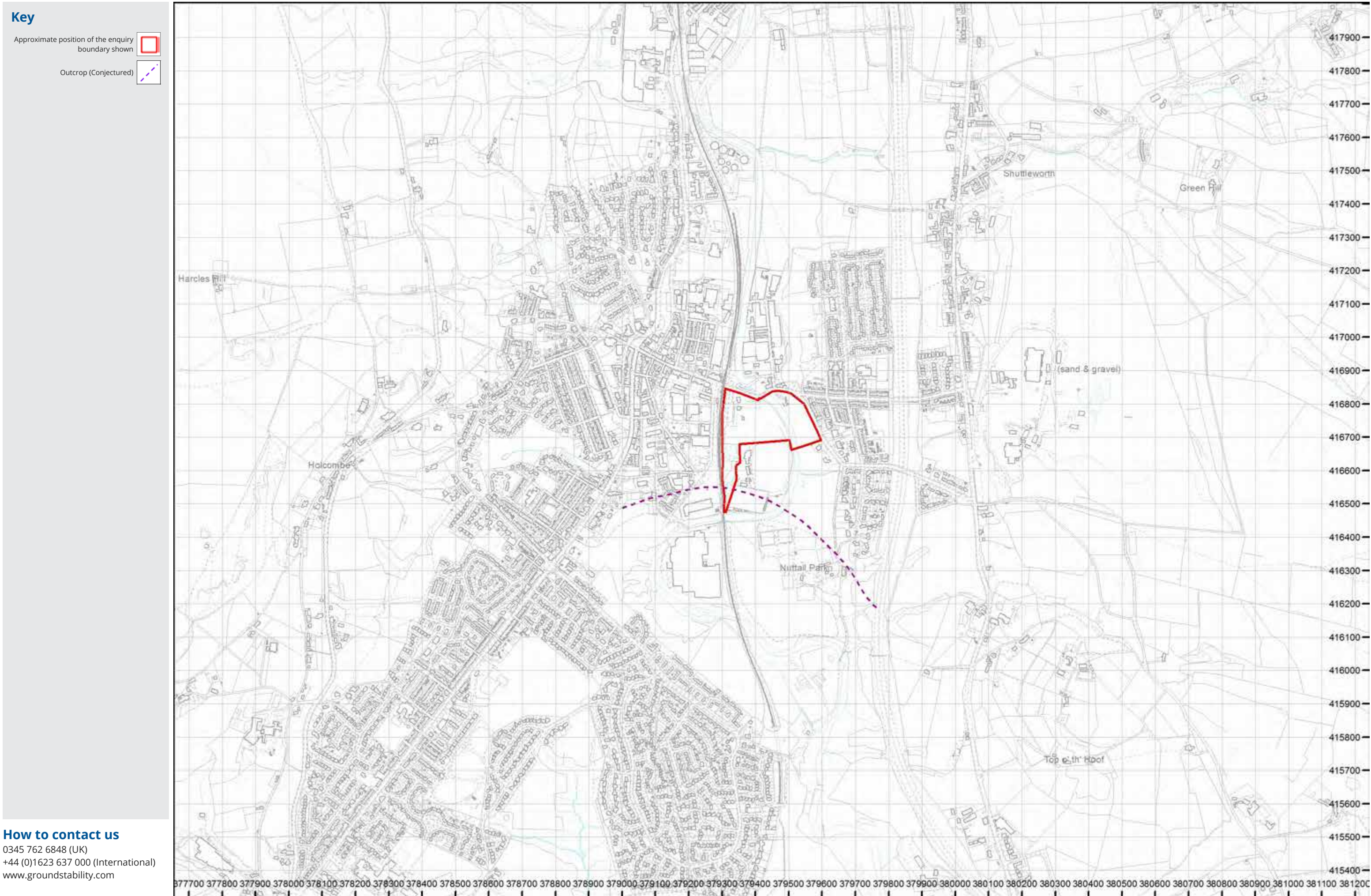
Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

The map highlights any specific surface or subsurface features within or near to the boundary of the site.



How to contact us

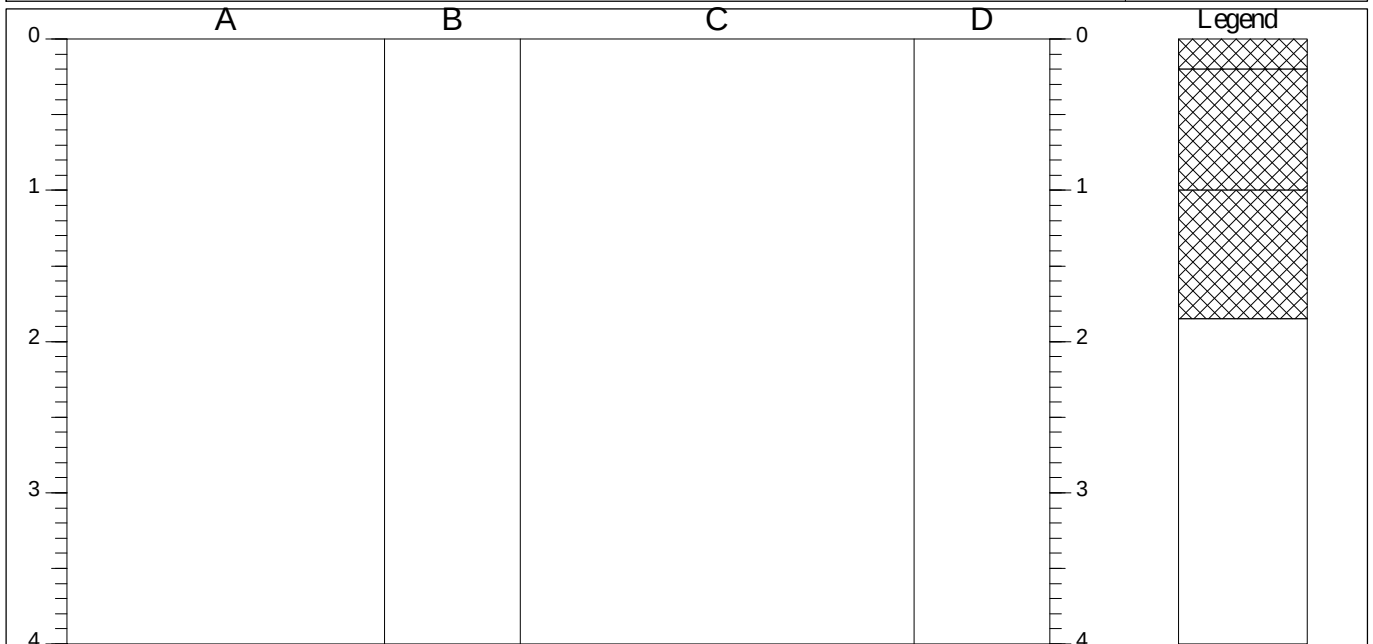
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX E

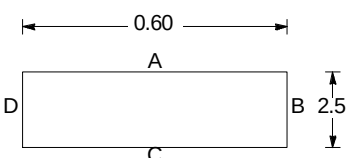
(i) Exploratory Hole Logs

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP1
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

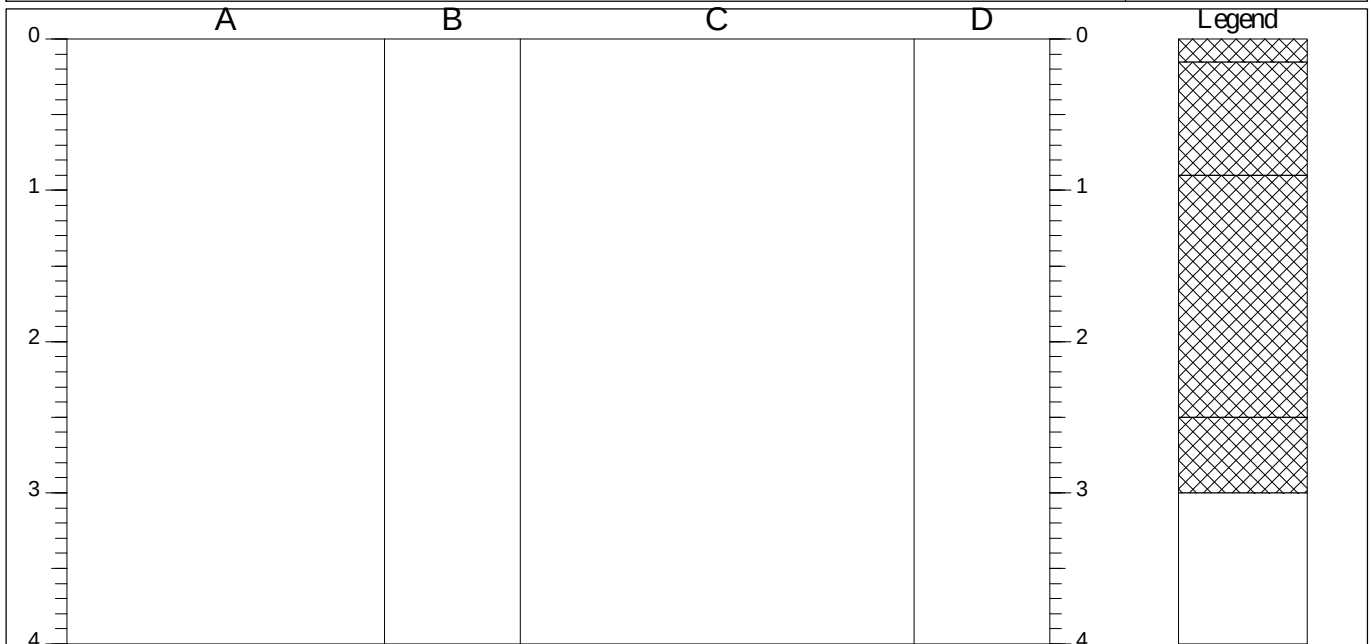


STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Maintained grass over brown slightly clayey gravelly occasionally cobbley fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of rootlets, brick, concrete, metal, timber, paper and textiles.	0.10	ES	
0.20-1.00		TOPSOIL			
1.00-1.85		MADE GROUND: Loose brown slightly clayey very gravelly occasionally cobbley fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of brick, concrete, metal, timber, paper and textiles. Occasional sandstone boulders noted.	1.00	ES	
		MADE GROUND: Soft bluish brown very sandy silty gravelly cobbley CLAY with common boulders of concrete and sandstone. Gravel and cobbles are fine to coarse angular to subangular of brick, concrete, metal, timber, paper and textiles. Occasional sandstone b			

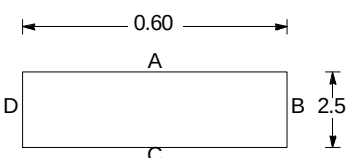
Shoring/Support: Stability: Collapse noted within Made Ground below topsoil. pit widening.			GENERAL REMARKS Hydrocarbon / organic odour from 1.00mbgl. Concrete boulders noted 1.85mbgl.
			
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP2
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

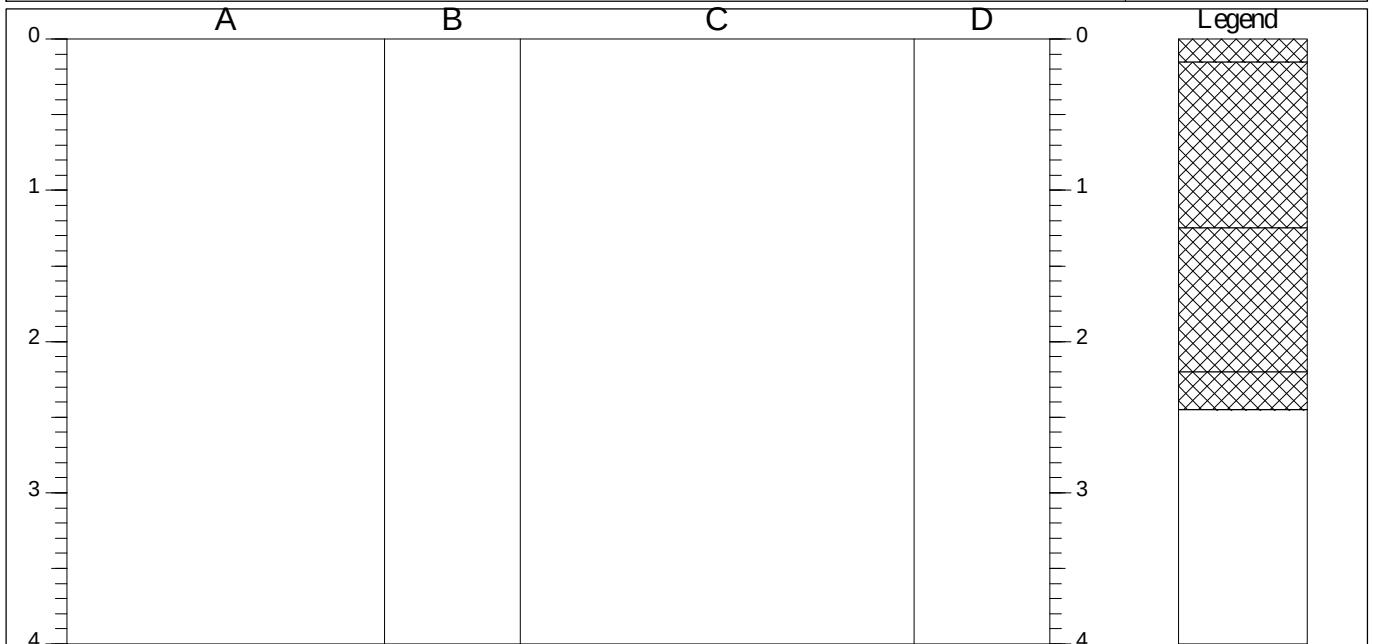


STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.15		MADE GROUND: Maintained grass over brown slightly clayey gravelly occasionally cobbly fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of rootlets, brick, concrete, metal, timber, paper and textiles.	0.50	ES	
0.15-0.90		TOPSOIL			
0.90-2.50		MADE GROUND: Loose brown slightly clayey very gravelly occasionally cobbly fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of brick, concrete, glass, plastic, metal, timber, paper and textiles. Occasional sandstone boulders noted.			
		MADE GROUND: Soft bluish brown very sandy silty gravelly cobbly CLAY with common boulders of concrete and sandstone. Gravel and cobbles are fine to coarse angular to subangular of brick, plastic, glass, concrete, metal, timber, paper and textiles. Occasional sandstone boulders. Seepage at 1.70mbgl.			
2.50-3.00		MADE GROUND: Soft grey very sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded of paper pulp, glass, metal, plastic and rare ash.			

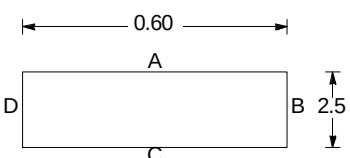
Shoring/Support: Stability: Collapse noted within Made Ground below topsoil. pit widening.			GENERAL REMARKS Hydrocarbon / organic odour from 1.00mbgl. Concrete boulders noted 0.90mbgl.
			
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP3
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



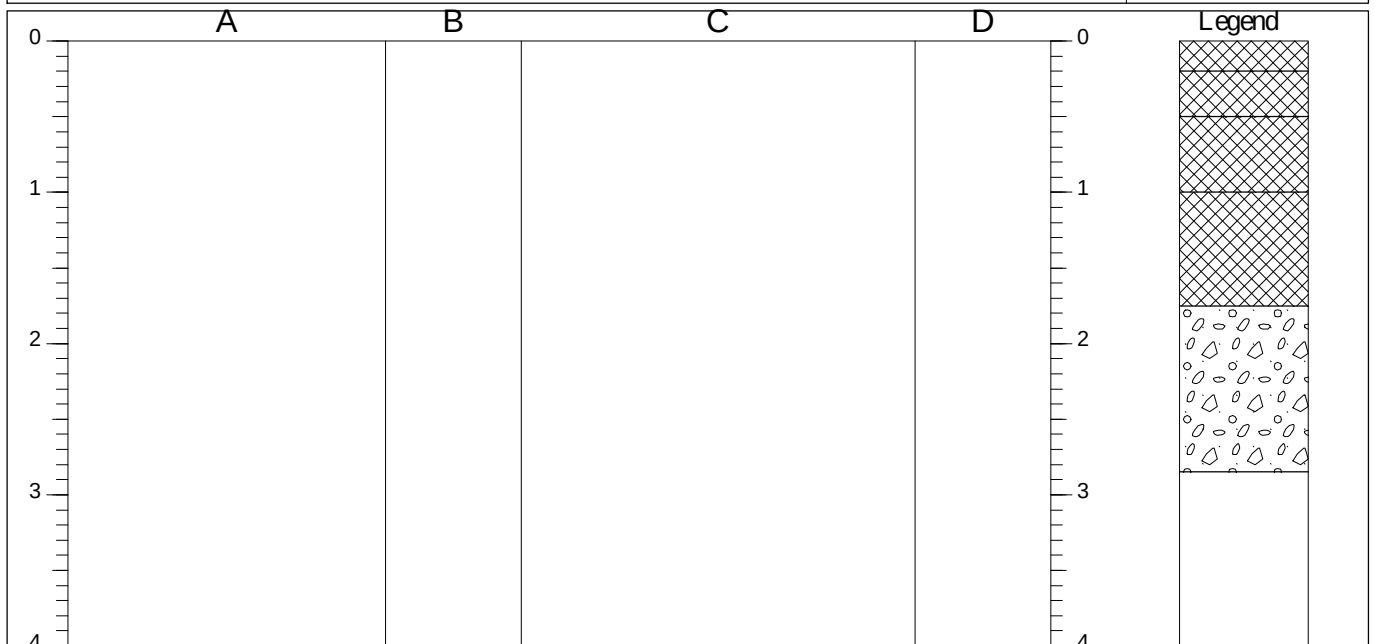
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.15		MADE GROUND: Maintained grass over brown slightly clayey gravelly occasionally cobbly fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of rootlets, brick, concrete, metal, timber, paper and textiles.	0.15	ES	
0.15-1.25		TOPSOIL			
1.25-2.20		MADE GROUND: Loose brown slightly clayey very gravelly occasionally cobbly fine to coarse SAND. Gravel and cobbles are fine to coarse angular to subangular of brick, concrete, glass, asphalt, plastic, metal, timber, paper and textiles. Occasional sandstone boulders noted.	1.50	ES	
2.20-2.45		MADE GROUND: Soft bluish brown very sandy silty gravelly cobbly CLAY with common boulders of concrete and sandstone. Gravel and cobbles are fine to coarse angular to subangular of brick, plastic, glass, concrete, metal, timber, paper and textiles. Occasional sandstone boulders.			
		MADE GROUND: Brown very sandy clayey GRAVEL. Gravel is fine to coarse angular to subagular of ash, pulp and brick.			

Shoring/Support: Stability: Hole terminated due to collapse.	GENERAL REMARKS Dry
	

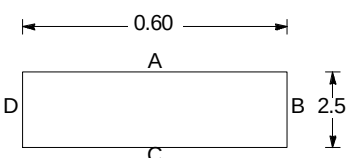
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP4
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

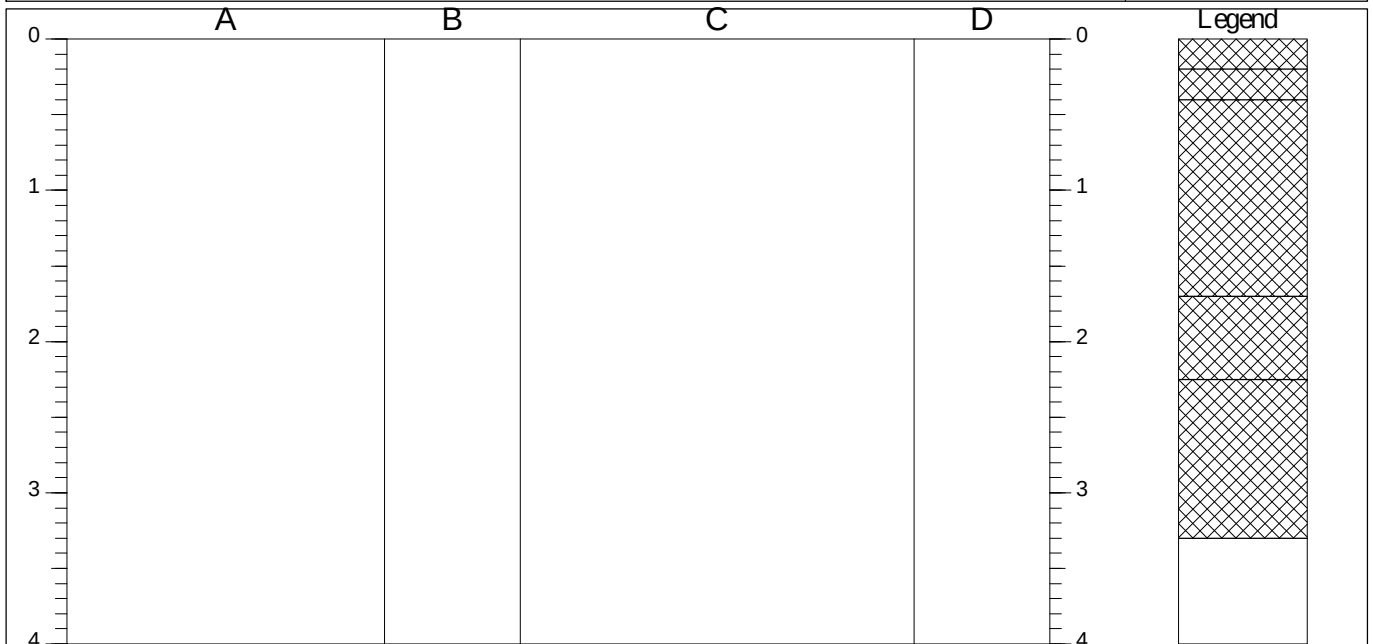


STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.50	ES	
0.20-0.50		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.50-1.00		MADE GROUND: Loose to medium dense brown and black very sandy GRAVEL. Gravel is fine to medium angular to subrounded of sandstone and ash.			
1.00-1.75		MADE GROUND: Interbedded loose to medium dense dark brown, brown and black fine to coarse fine to coarse SAND & GRAVEL. Gravel is fine to coarse angular to subrounded of brick, sandstone and ash.	1.00	ES	
1.75-2.85		Medium dense brownish orange slightly clayey very sandy GRAVEL. Gravel is fine to coarse angular to subrounded of sandstone. Water strike at 2.65mbgl. Cobbles present with depth.			

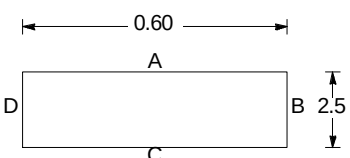
Shoring/Support: Stability: Stable		GENERAL REMARKS Location adjacent to formerly leaking IBC. Brown 'rubbery' substance noted around pit at surface. Water strike at 2.65mbgl.
		
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX
		Logged By KR

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP5
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



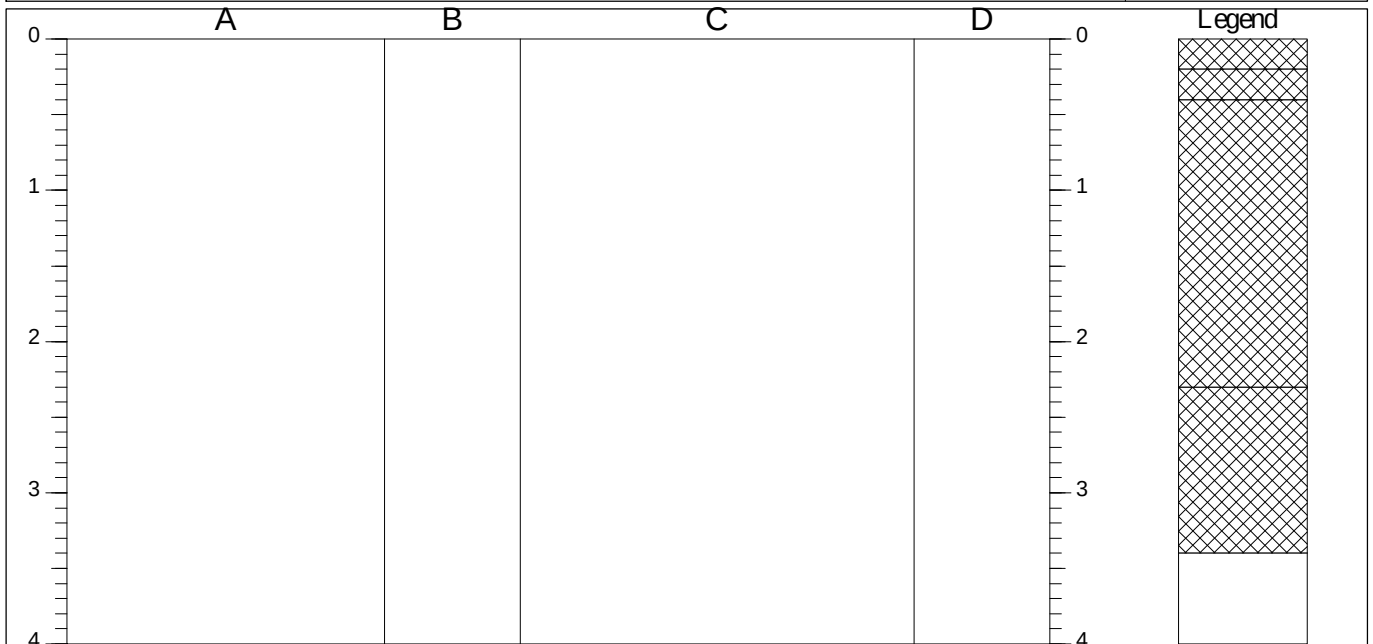
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.40	ES	
0.20-0.40		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.40-1.70		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone. 'Geogrid' at 0.60mbgl.			
1.70-2.25		MADE GROUND: Loose to medium dense black fine to coarse very gravelly occasionally cobbley SAND. Gravel is fine to coarse angular to subrounded of of ash, clinker, brick and occasional clinker. Water strike at base.	1.70	ES	
2.25-3.30		Possible MADE GROUND: Soft greyish brown and black very sandy slightly clayey SILT. Slight organic odour noted.	2.25 2.25	D ES	

Shoring/Support: Stability: Stable 	GENERAL REMARKS Water strike at 2.25mbgl. Slight organic odour from 2.25mbgl.
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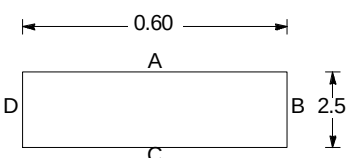
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP6
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



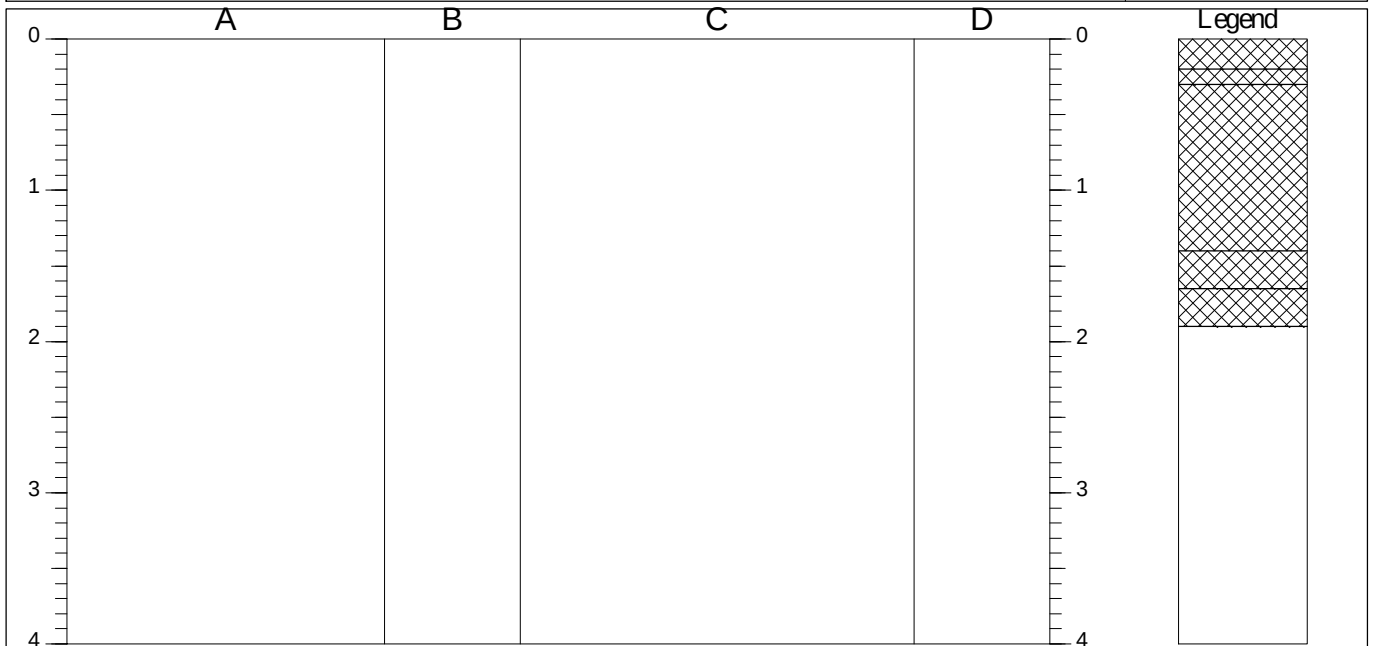
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.50	ES	
0.20-0.40		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.40-2.30		MADE GROUND: Loose to medium dense black fine to coarse very gravelly occasionally cobbly SAND. Gravel is fine to coarse angular to subrounded of of ash, clinker, brick and occasional clinker. Occasional orange brown sand laminations.			
2.30-3.40		Possible MADE GROUND: Soft greyish brown and black very sandy slightly clayey SILT.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Dry
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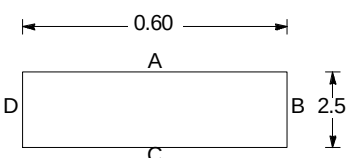
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP7
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



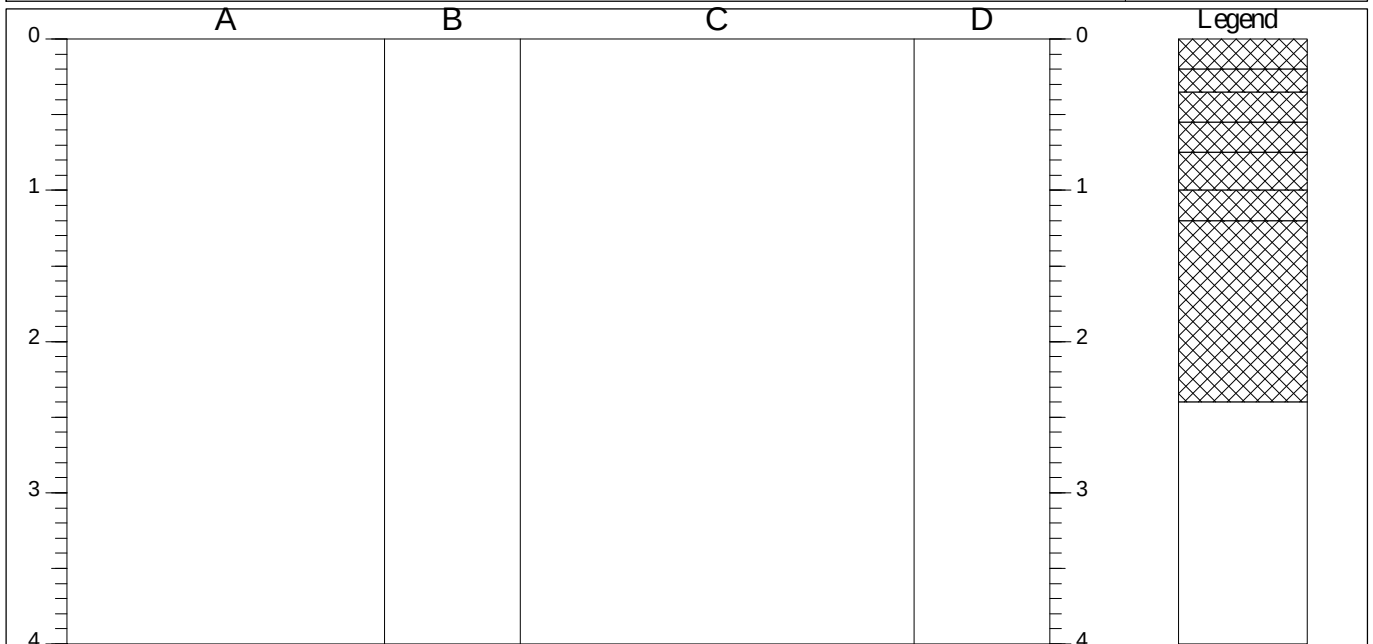
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.50	ES	
0.20-0.30		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.30-1.40		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
1.40-1.65		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.			
1.65-1.90		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone. Large concrete pad or slab in half of pit.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Concrete pad / slab covering half of pit at 1.90mbgl.
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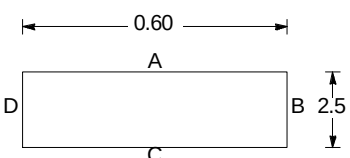
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP8
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

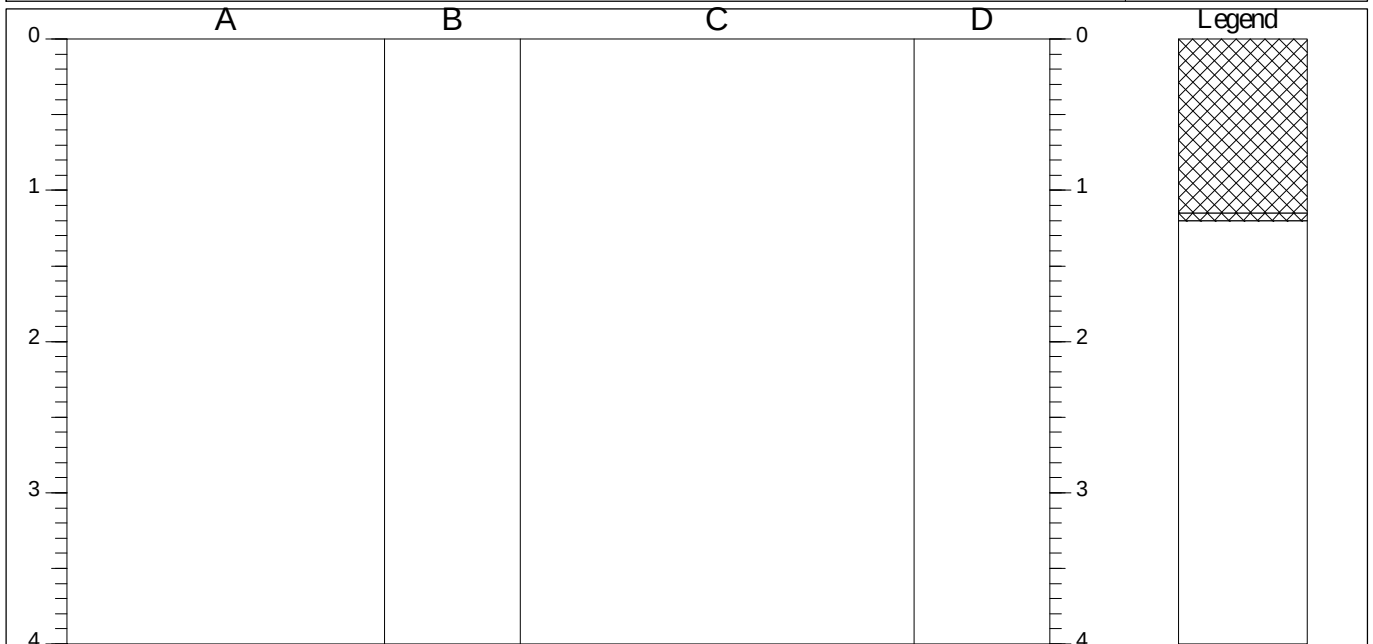


STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	1.00	ES	
0.20-0.35		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.35-0.55					
0.55-0.75		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
0.75-1.00		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.			
1.00-1.20		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone. Occasional sections of sandstone flags.			
1.20-2.40		MADE GROUND: Loose to medium dense black fine to coarse very gravelly cobbley SAND. Gravel is fine to coarse angular to subrounded of ash, clinker, brick and occasional clinker. Sections of footings noted. Cobbles of brick.			
		MADE GROUND: Loose sandy gravelly COBBLES with occasional footing / wall sections. Gravel and cobbles are fine to coarse of brick. Hole appears to be within a round structure, possibly former chimney base, curved walls noted. Water strike at 2.10mbgl, water noted as black with hydrocarbon odour and sheen.			

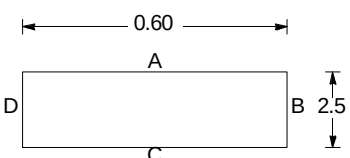
Shoring/Support: Stability: Stable		GENERAL REMARKS Possible chimney base at 1.20mbgl. Water strike at 2.10mbgl, black water strong hydrocarbon odour and sheen. Hole aborted due to risk from water.
		
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX
		Logged By KR

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP9
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



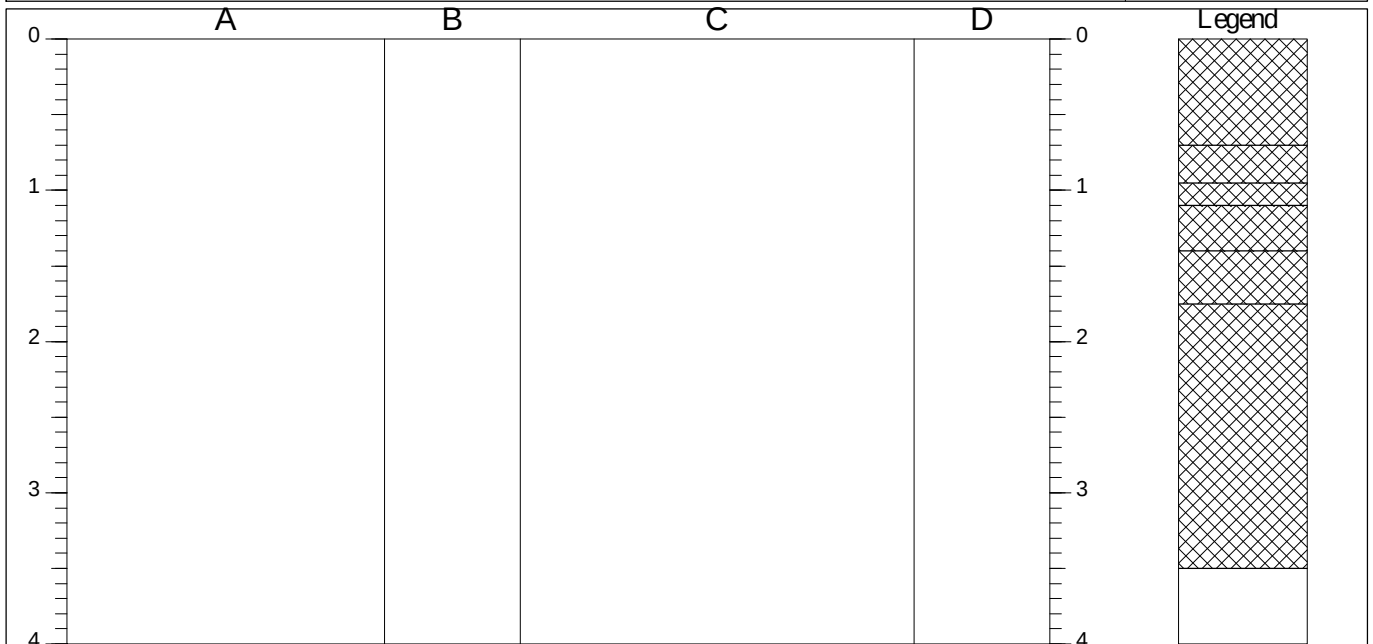
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-1.15		MADE GROUND: Loose sandy GRAVELS and COBBLES. Gravel and cobbles fine to coarse brick, concrete, metal, plastic, rubber and sections of footings.	0.20	ES	
1.15-1.20		MADE GROUND: Concrete slab- very hard, possible machine base.			

Shoring/Support: Stability: Stable 	GENERAL REMARKS Hole terminated on very hard concrete slab. Cannot be broken out by JCB.
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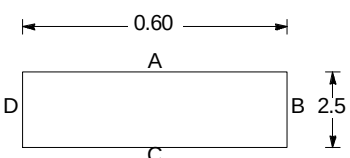
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP10
Job No 18ECH016	Date 25-06-19 25-06-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



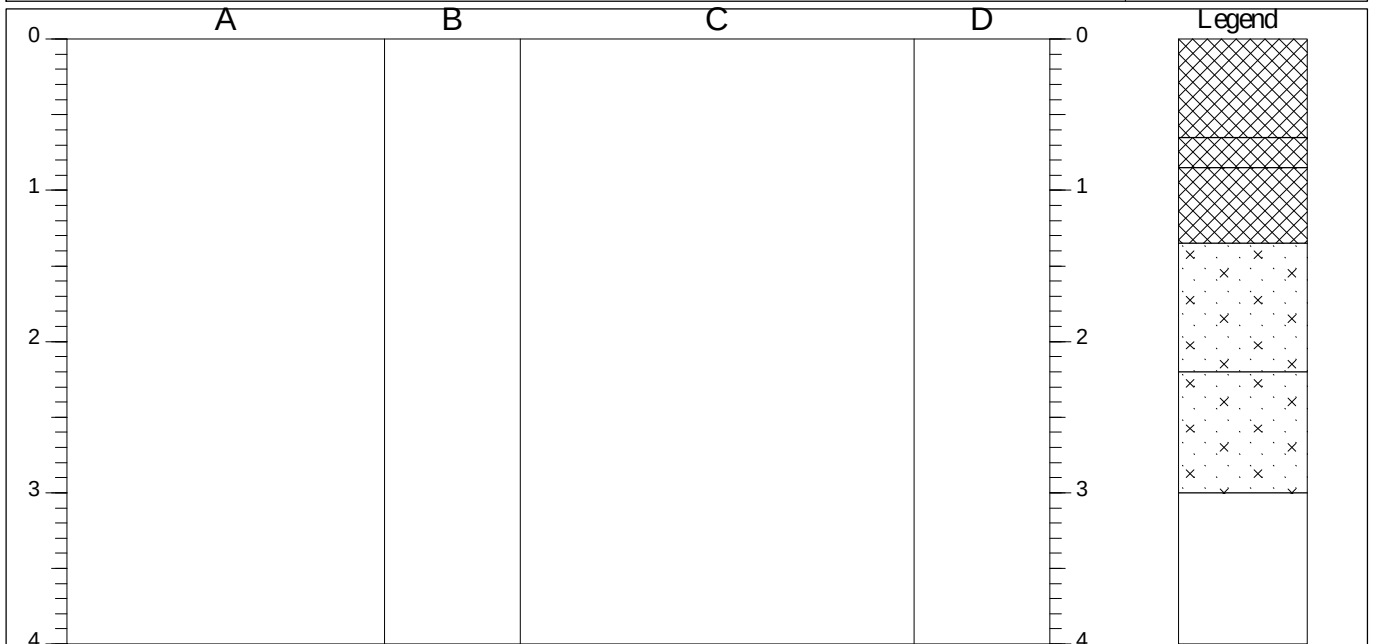
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.70		MADE GROUND: Loose sandy GRAVELS and COBBLES. Gravel and cobbles fine to coarse brick, concrete, metal, plastic, rubber and sections of footings.	0.50	ES	
0.70-0.95		MADE GROUND: Metal flooring tiles 40x40cm over concrete slab.			
0.95-1.10		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
1.10-1.40		MADE GROUND: Soft brown clayey sandy SILT.	1.75	ES	
1.40-1.75		MADE GROUND: Loose to medium dense red gravelly SAND. Gravel is fine to coarse angular to subangular of brick and ash. SAND is of crushed brick.			
1.75-3.50		Possible MADE GROUND: Soft greyish brown and black clayey sandy SILT. Damp from 1.75m and water strike at 3.50mbgl. Possible reworked.			

Shoring/Support: Stability: Stable		GENERAL REMARKS Damp from 1.75mbgl. Water strike at 3.50mbgl
		

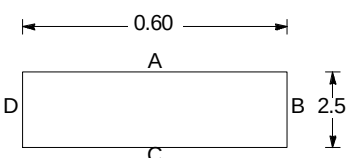
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used JCB 3CX	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP11
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



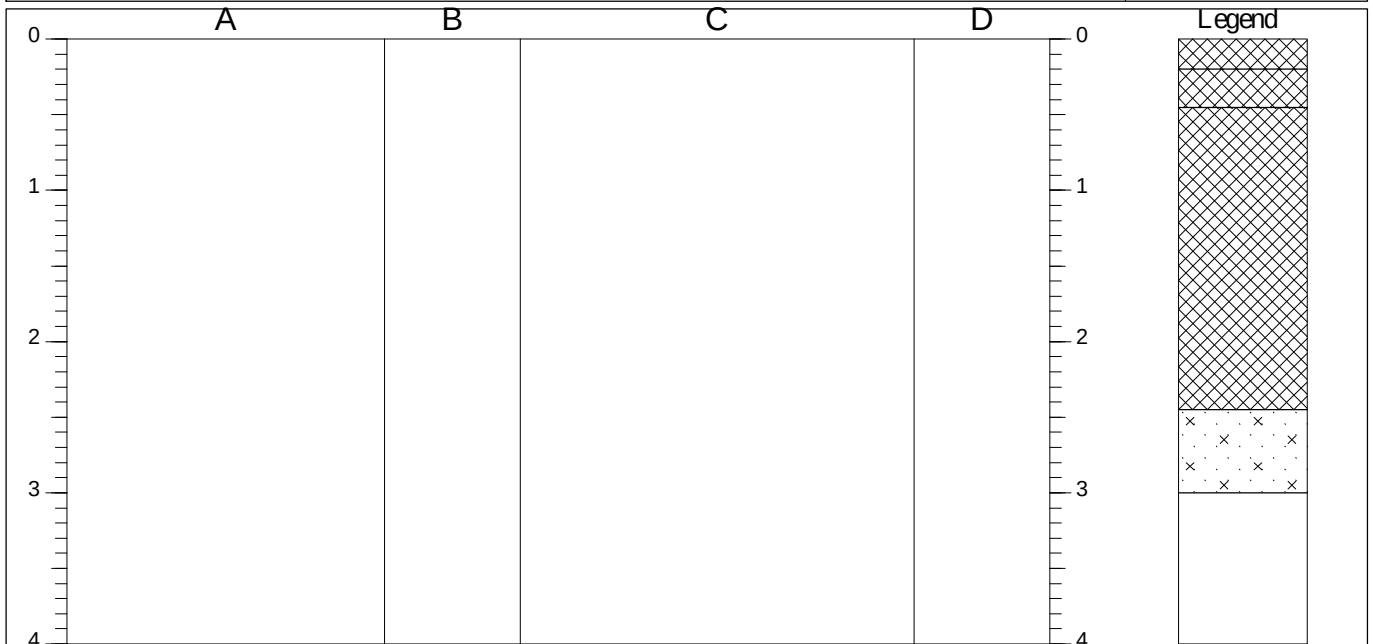
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.65		MADE GROUND: Brown fine to coarse SAND & GRAVEL. Gravel is fine to coarse angular to subrounded of sandstone, brick and concrete.	0.50	ES	
0.65-0.85		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course. Noted as being very hard.			
0.85-1.35		MADE GROUND: Loose mixed lithology SAND & GRAVEL with occasional cobbles. Gravel and cobbles are fine to coarse angular to subrounded of brick, concrete, metal, plastic and other demolition type materials.	1.40	ES	
1.35-2.20		Medium dense greyish brown silty SAND. Strata is slightly damp.			
2.20-3.00		Medium dense grey silty SAND. Strata is slightly damp.			

Shoring/Support: Stability: Stable 		GENERAL REMARKS Hole undertaken adjacent to slab. Observed to be at least 650mm thick.
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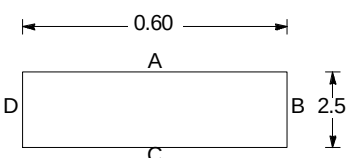
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP12
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



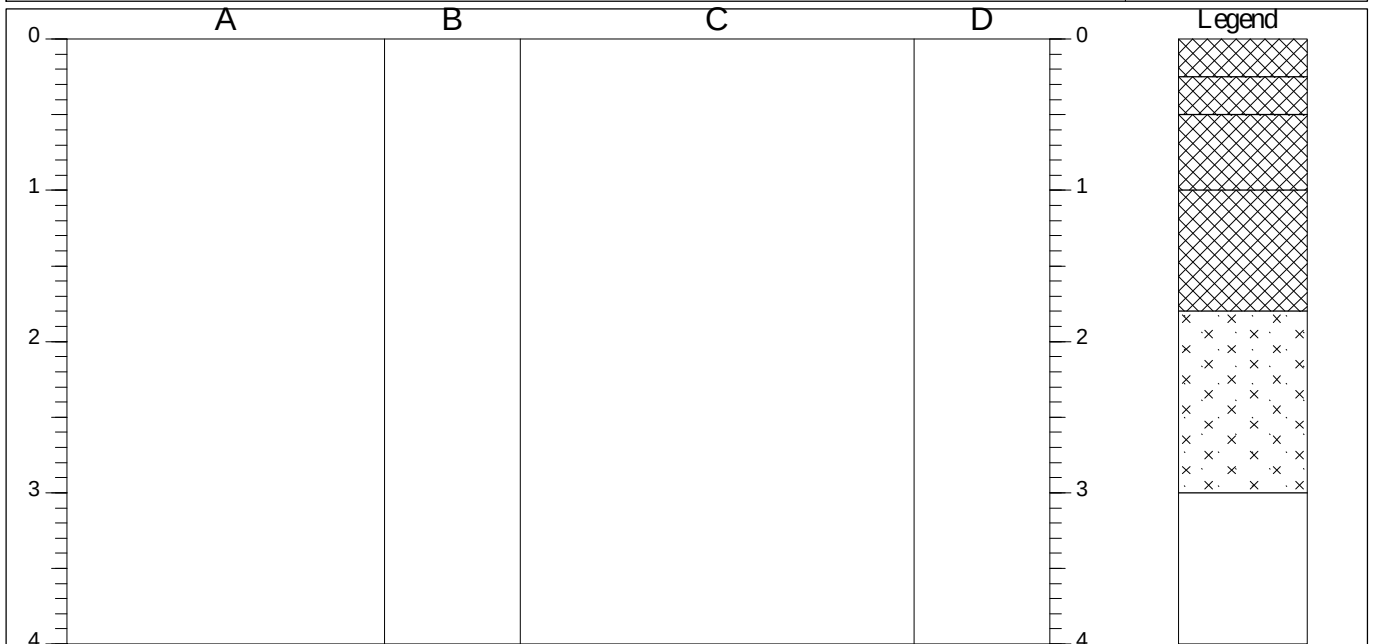
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.45	ES	
0.20-0.45		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.45-2.45		MADE GROUND: Loose to medium dense brown, black and orangish brown fine to coarse SAND & GRAVEL angular to subangular of brick, concrete, ash and metal. Concrete slab noted in southern quarter of pit at 1.00mbgl.			
2.45-3.00		Medium dense brown and grey very silty SAND.			

Shoring/Support: Stability:	GENERAL REMARKS Concrete slab in southern corner of pit at 1.00mbgl.
	

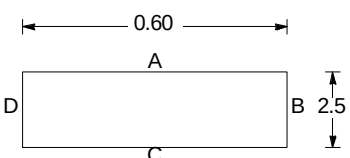
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP13
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

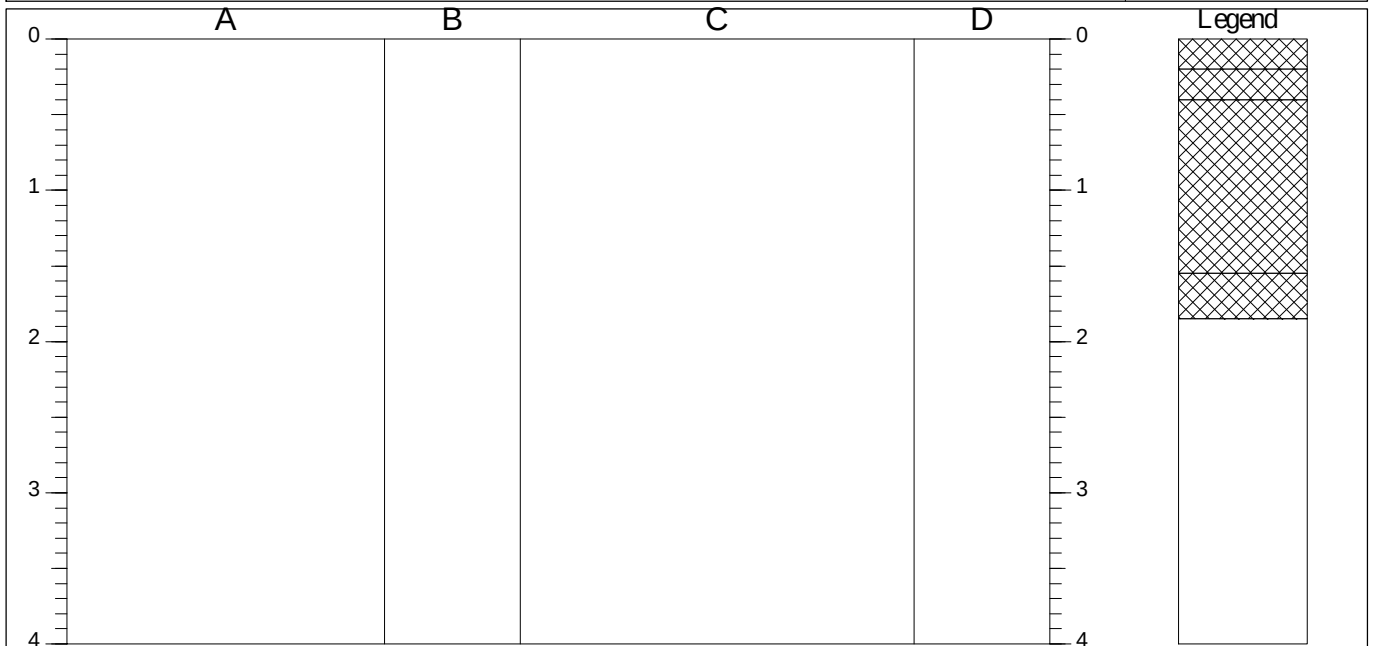


STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.25		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	1.00	ES	
0.25-0.50		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
0.50-1.00		MADE GROUND: Loose to medium dense brown and black very sandy GRAVEL. Gravel is fine to medium angular to subrounded of sandstone and ash.			
1.00-1.80		MADE GROUND: Soft black, grey and reddish brown clayey very sandy SILT.			
1.80-3.00		Soft grey very sandy SILT. Damp from 2.50mbgl.			

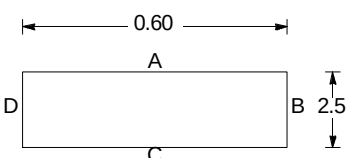
Shoring/Support: Stability: Made Ground Unstable			GENERAL REMARKS Damp from 2.50mbgl.
			
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR

TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP14
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



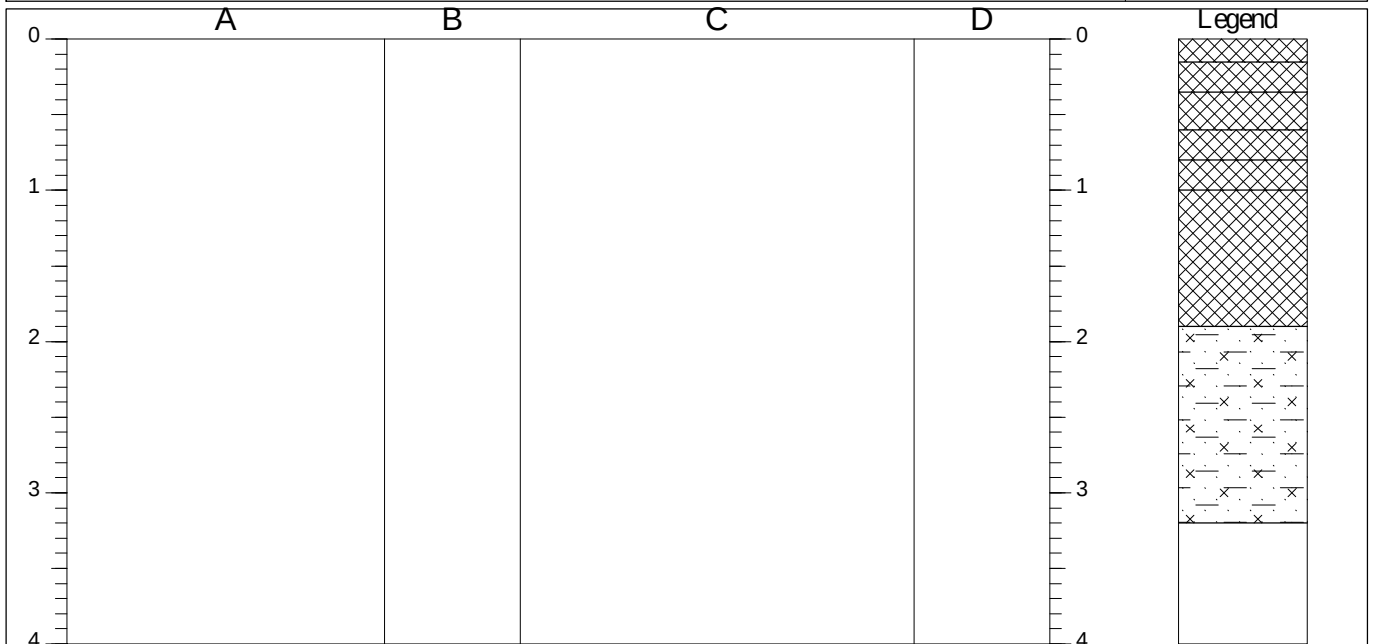
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.50	ES	
0.20-0.40		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.40-1.55		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL with common cobbles. Gravel is fine to medium angular to subangular of sandstone, brick, ash and metal with sections of footings. Possible basement strucutre.			
1.55-1.85		MADE GROUND: Concrete slab with reinforcement on eastern half. Loose to medium dense clayey silty SAND on other half.	1.55	ES	

Shoring/Support: Stability: Stable 	GENERAL REMARKS Backfilled voids, possible basement.
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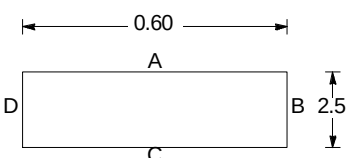
All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP15
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.15		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	1.00	ES	
0.15-0.35		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.35-0.60		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
0.60-0.80		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.			
0.80-1.00		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
1.00-1.90		MADE GROUND: Loose to medium dense brown and black very sandy GRAVEL. Gravel is fine to medium angular to subrounded of sandstone and ash.			
1.90-3.20		Medium dense brown fine to medium silty clayey SAND.	1.90	ES	

Shoring/Support: Stability: Stable 	GENERAL REMARKS Dry
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All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP16
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1

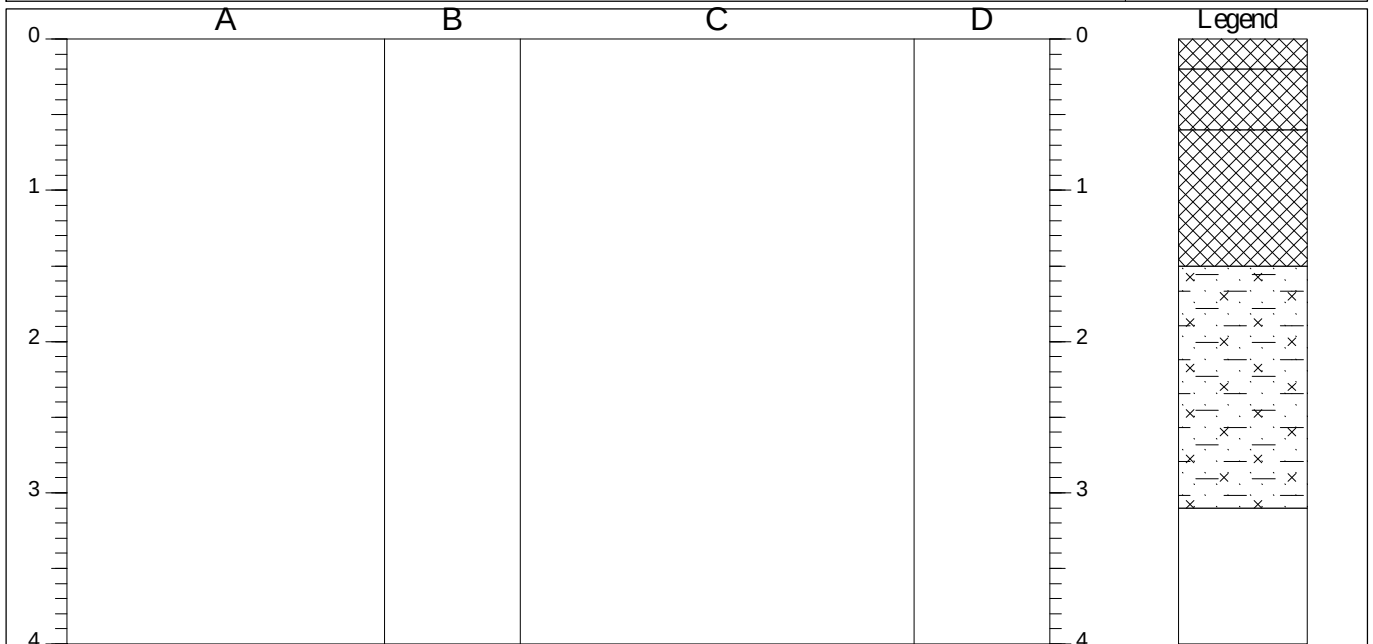
The image shows a blank 4x4 grid with columns labeled A, B, C, D and rows labeled 0, 1, 2, 3, 4. A legend on the right shows a cross-hatched pattern.

STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.60		MADE GROUND: Loose black and red SAND, GRAVEL & COBBLES of brick, concrete, plastic, metal and other demolition waste materials. Standing water at 0.60mbgl. Strong hydrocarbon and 'waste' odours. Hole aborted due to potential for containation spreading.	0.60	ES	

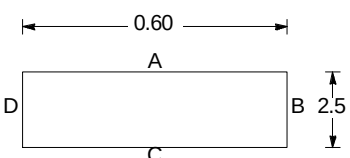
Shoring/Support: Stability: Stable 	GENERAL REMARKS Hole undertaken between hard concrete slabs. Standing water at 0.60mbgl, no flow. Strong hydrocarbon and 'waste' odour with sheen and possible free product.
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TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP17
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



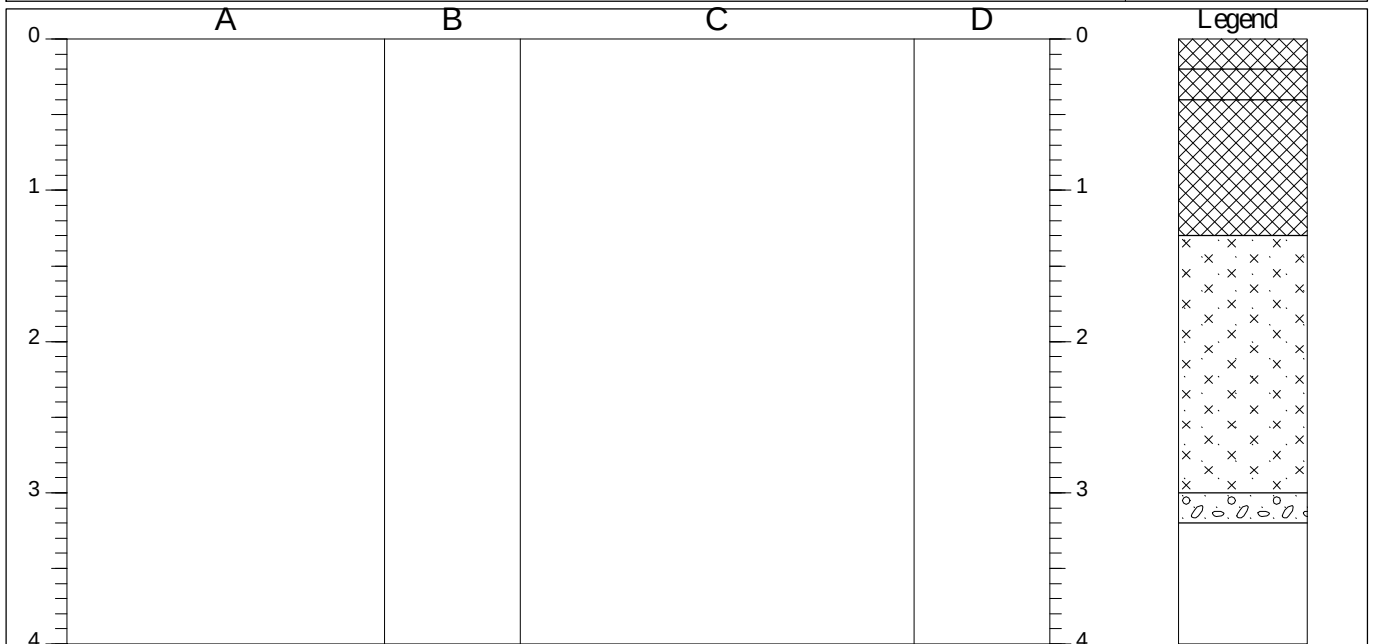
STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.60	ES	
0.20-0.60		MADE GROUND: Loose to medium dense yellowish brown and black fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone, brick and ash. Ash becoming more common with depth.			
0.60-1.50		MADE GROUND: Loose to medium dense fine to coarse SAND & GRAVEL. Gravel is fone to coarse angular to subangular of ash and brick.			
1.50-3.10		Loose to medium dense brown clayey silty fine to medium SAND. Occasional orange mottle noted. Reducing cohesive content with depth.	1.50	ES	

Shoring/Support: Stability: Stable		GENERAL REMARKS Dry
		

All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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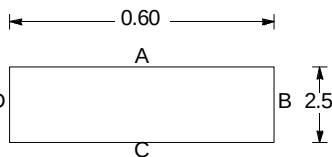
TRIAL PIT LOG

Project Mondi Site, Ramsbottom				TRIAL PIT No TP18
Job No 18ECH016	Date 02-07-19 02-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor BETTS GEO Ltd				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.20		MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.	0.50	ES	
0.20-0.40		MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.			
0.40-1.30		MADE GROUND: Loose brown fine to coarse SAND, GRAVEL & COBBLES of of concrete, metal, brick, sandstone and other demolition materials.			
1.30-3.00		Stiff grey very sandy SILT. Slightly damp.	1.30	D	
3.00-3.20		Medium dense very silty fine to coarse SAND & GRAVEL. Gravel is fine to coarse subangular to subrounded of mixed lithology.			

Shoring/Support: Stability: Stable	GENERAL REMARKS Water strike at 3.20mbgl.



All dimensions in metres Scale 1:50	Client Eccleston Homes	Method/ Plant Used 13t tracked excavator	Logged By KR
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BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS1	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
0.55	ES	N8	↓			0.20	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.		
				0.55		MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.			
1.20		N0				(2.00)	MADE GROUND: Loose black fine to coarse very gravelly occasionaly cobbley SAND. Gravel is fine to coarse angular to subrounded of of ash, clinker, brick and occasional clinker.		
2.00		N0				2.55			
2.75	ES					2.75	MADE GROUND: Very soft to soft brownish grey clayey sandy SILT.		
3.00		N0				(1.45)	MADE GROUND:MADE GROUND: Very soft greyish black clayey sandy SILT. Slight hydrocarbon odour. Occasional narrow sand bands with leaves noted. Possible pocket of paper waste 4.00-4.20mbgl.		
4.00		N0				4.20			
4.20	D					4.50	Possible MADE GROUND: Soft grey sandy SILT with occasional fine to medium angular to subangular gravel of sandstone.		
						(0.50)	Medium dense grey fine to coarse SAND & GRAVEL angular to subrounded of mixed lithology.		
5.00		N34				5.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Wet from 2.75mbgl
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		



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BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS2	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()	Sheet 1 of 1	
Contractor BETTS GEO Ltd					

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.60	ES					0.20	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.		
1.20		N50/ 85 mm				(1.20)	MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.		
						1.40			
						1.45	MADE GROUND: Concrete slab		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Concrete slab at 1.45mbgl.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		

AGS3 UK BH 19ECH016 - MONDI SITE, RAMSBOTTOM.GPJ GINT STD AGS 3.1.GDT 8/7/19

BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS6	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.55	ES					0.20	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.		
						0.50	MADE GROUND: Loose to medium dense grey sandy GRAVEL.		
						0.55	Gravel is fine to coarse angular to subangular of limestone.		
						0.60	MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.		
							MADE GROUND: Concrete slab		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Concrete slab at 0.60mbgl
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		

BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS7	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill		
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION				
0.95	ES	N2	1			0.20	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.				
						(0.45) 0.65	MADE GROUND: Loose to medium dense yellowish brown fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone.				
						0.95	MADE GROUND: Loose to medium dense brown and black very sandy GRAVEL. Gravel is fine to medium angular to subrounded of sandstone and ash.				
1.20	ES	N4				(0.55) 1.50	MADE GROUND: Loose to medium dense brown, black and white very sandy GRAVEL. Gravel is fine to medium angular to subrounded of sandstone and ash. Unkown white material.				
					1.80	MADE GROUND: Loose orange, black and brown silty clayey fine to medium SAND. Reworked.					
1.80				ES	N0			(2.05) 3.85		Loose to medium dense brown clayey silty fine to medium SAND. Wet 3.70-3.85mbgl.	
2.00	N0						(0.45) 4.30	Medium dense grey silty fine to medium SAND.			
						(0.70) 5.00	Soft grey very sandy SILT. Saturated.				
3.00		N0									
4.00	N0										
			N13								
5.00											
											
											
											
											
											
											
											
											
											
											
											
											
											
											
											
											
											
											
											

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Water strike 3.70-3.85mbgl
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		

BOREHOLE LOG

Project Holcombe Mill, Bridge Street, Ramsbottom				BOREHOLE No WS8	
Job No 19ECH016	Date 01-07-19 01-07-19	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.50-0.60	ES					0.10	Tarmac (cored).		
						0.25	[MADE GROUND]		
1.20	N7					(1.45)	Loose light grey brown very sandy GRAVEL of medium angular limestone (sub-base). [MADE GROUND]		
						1.70	Loose to medium dark brown black gravelly medium to coarse SAND. Gravel of fine to medium angular to subrounded mixed lithologies including sandstone and brick. [MADE GROUND]		
1.80-1.90	ES					2.00	Medium angular white sandstone cobble at 0.4mbgl.		
						2.00	Soft orange brown sandy CLAY with rare gravel of fine subrounded mixed lithologies. [ALLUVIUM]		
2.00	N17					(0.70)	No recovery.		
						2.70			
3.00	N17					(0.50)	Soft light yellow brown mottled blue grey, yellow and pink slightly sandy CLAY with rare gravel of medium angular sandstone. [ALLUVIUM]		
						3.20			
3.70-3.80	D					(0.50)	Medium light brown fine silty SAND. [ALLUVIUM]		
						3.70			
4.00	N11					4.00	Firm to stiff brown slightly sandy slightly gravelly CLAY. Gravel of fine subrounded to subangular mixed lithologies. [ALLUVIUM]		
						(0.80)	Very loose/sloppy brown fine to medium SAND. [ALLUVIUM]		
5.00	N10					4.80			
						5.00	Firm to stiff brown slightly sandy slightly gravelly CLAY. Gravel of fine subrounded to subangular mixed lithologies. [ALLUVIUM]		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											No olfactory evidence of contamination. Ground water at 4.0mbgl. Stable.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By RD		

AGS3 UK BH 19ECH016 - HOLCOMBE MILL, BRIDGE STREET, RAMSBOTTOM.GPJ GINT STD AGS.3.1.GDT 9/7/19

BOREHOLE LOG

Project Holcombe Mill, Bridge Street, Ramsbottom				BOREHOLE No WS9
Job No 19ECH016	Date 01-07-19 01-07-19	Ground Level (m)	Co-Ordinates ()	
Contractor				Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
0.60-0.70	ES	N15				0.06	Tarmac (cored).		
						0.40	[MADE GROUND]		
						0.60	Loose light grey brown very sandy GRAVEL of medium angular limestone (sub-base).		
						0.90	[MADE GROUND]		
1.00-1.10	ES					1.20	Loose to medium orange brown slightly cobbly gravelly fine to medium SAND.		
						1.40	Gravel of fine to coarse subrounded to rounded mixed lithologies including white sandstone.		
2.00	N14					(1.40)	Cobble of fine to medium subrounded mixed lithologies.		
							[RE-WORKED ALLUVIUM]		
							Loose black slightly gravelly ashy fine to medium SAND with rare cobble.		
							Gravel of fine to medium angular to subrounded mixed lithologies including white sandstone.		
3.00	N21					(2.20)	Cobble of fine to medium subrounded mixed lithologies.		
							[RE-WORKED ALLUVIUM]		
				Soft orange brown slightly gravelly sandy CLAY.					
				Gravel of fine to medium subrounded to subangular mixed lithologies.					
3.50-3.60	D				[ALLUVIUM]				
				No recovery.					
4.00	N30			(2.20)	Loose light orange brown clayey very sandy GRAVEL of fine to coarse angular to rounded white sandstone.				
					[ALLUVIUM]				
					Firm to stiff brown slightly sandy slightly gravelly CLAY.				
					Gravel of fine subrounded to subangular mixed lithologies.				
5.00	N23				[ALLUVIUM]				

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											No olfactory evidence of contamination. Ground water at 2.6mbgl. Casing required 0 - 3mbgl.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By RD		

BOREHOLE LOG

Project Holcombe Mill, Bridge Street, Ramsbottom				BOREHOLE No WS10	
Job No 19ECH016	Date 01-07-19 01-07-19	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		
1.00-1.10	ES					(0.60) 0.60	Tarmac (cored). [MADE GROUND]	
						0.95 1.10	Loose light grey brown very sandy GRAVEL of medium angular limestone (sub-base). [MADE GROUND]	
							Loose to medium dark grey brown slightly clayey gravelly medium to coarse SAND. Gravel of fine to coarse subrounded to subangular mixed lithologies including white sandstone. [ALLUVIUM]	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											No olfactory evidence of contamination. Dry and stable. Terminated at 1.10mbgl due to large cobble.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By RD		

BOREHOLE LOG

Project Holcombe Mill, Bridge Street, Ramsbottom				BOREHOLE No WS11	
Job No 19ECH016	Date 01-07-19 01-07-19	Ground Level (m)	Co-Ordinates ()	Sheet 1 of 1	
Contractor					

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
0.50-0.60	ES					0.06	Tarmac (cored). [MADE GROUND]	
						0.40		
						0.60	Loose light grey brown very sandy GRAVEL of medium angular limestone (sub-base). [MADE GROUND]	
						0.80	Loose black slightly gravelly ashy fine to medium SAND with rare cobble. Gravel of fine to medium angular to subrounded mixed lithologies including white sandstone. Cobble of fine to medium subrounded mixed lithologies. [RE-WORKED ALLUVIUM] Loose to medium light grey brown slightly clayey gravelly SAND. Gravel of fine to medium subrounded to subangular mixed lithologies including white sandstone. [ALLUVIUM]	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											No olfactory evidence of contamination. Dry and Stable. Terminated at 0.80mbgl due to concrete.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By RD		

BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS12	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
0.35	ES					0.20	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.		
						0.35	MADE GROUND: Loose to medium dense grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of limestone.		
						0.55			
						0.60			
							MADE GROUND: Loose to medium dense yellowish brown and black fine to medium SAND & GRAVEL. Gravel is fine to medium angular to subangular of sandstone, brick and ash.		
							MADE GROUND: Concrete slab		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Concrete slab at 0.60mbgl
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		

BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS13	
Job No 18ECH016	Date 26-06-19 26-06-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.35	ES					0.35	MADE GROUND: Concrete slab with reinforcement and Damp Proof Course.		
						0.55	MADE GROUND: Loose to medium dense grey sandy clayey		
						0.60	GRAVEL. Gravel is fine to coarse angular to subangular of limestone and brick.		
							MADE GROUND: Concrete slab		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Concrete slab at 0.60mbgl.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		

BOREHOLE LOG

Project Mondi Site, Ramsbottom				BOREHOLE No WS14	
Job No 18ECH016	Date 01-07-19 01-07-19	Ground Level (m)	Co-Ordinates ()		
Contractor BETTS GEO Ltd				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.25	ES					0.05 (0.50) 0.55 0.60		
						MADE GROUND: Brown gravelly SAND. Gravel is fine to medium of roots and brick. Topsoil.		
						MADE GROUND: Loose brown and white very gravelly SAND with occasional fine to coarse cobbles of brick, concrete, metal and plastic.		
						MADE GROUND: Concrete slab		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Concrete slab at 0.60mbgl.
All dimensions in metres Scale 1:50			Client Eccleston Homes			Method/ Plant Used Competitor Rig			Logged By KR		