

GEO-ENVIRONMENTAL AUDIT PHASE 1 PRELIMINARY RISK ASSESSMENT

**PROPOSED MIXED COMMERCIAL & RESIDENTIAL
DEVELOPMENT**

**BOARSHAW RD & CLOUGH STREET
MIDDLETON
MANCHESTER
M24 2WQ**

Author: Daniel Slattery
Client: Mr Zulqurnain Shah
Reference: rep-tjba-shah-boarshaw rd & clough st-Phs1Env-070825.docx

Revision	Date	Reason
0	Aug 2025	Original to address planning condition.

T J Booth Associates.
20A Eastgate St,
Rochdale,
Lancs,
OL16 1DH.
Tel: 01706 868288.
Email: office@tjba.co.uk



CONTENTS.

1.	Phase 1 - Preliminary Risk Assessment.....	3
1.1.	Introduction.	3
1.2.	Proposed Development.....	3
1.3.	Historic Maps.....	3
1.4.	Present Day Maps.	4
1.5.	BGS Geology.....	5
1.6.	Boreholes Records.....	5
1.7.	Groundsure Environmental Data.	5
1.8.	Mining Remediation Authority.....	7
1.9.	Local Authority Details.	7
1.10.	Site Reconnaissance (August 2025).	7
1.11.	Identification of Source-Pathway-Receptor.	8
1.12.	Preliminary Conceptual Model.....	9
1.13.	Conclusions.	11
3.	Appendix A: Figures.	13
3.1.	Location Plan.	13
3.2.	Existing Site Plan.....	14
3.3.	Proposed Development.....	15
4.	Appendix B: Site Walkover Photos.	16
5.	Appendix C: Groundsure.....	17

1. PHASE 1 - PRELIMINARY RISK ASSESSMENT.

1.1. Introduction.

T. J. Booth Associates have been appointed by Mr Zulqurnain Shah to compile a phase 1 preliminary risk assessment (PRA), to a plot of land on the corner of Boarshaw Road & Clough Street, Middleton.

The site is currently a vacant plot of land. The proposal is for the erection of a new building that will serve as a ground floor shop, and an upstairs 1st floor residential flat.

The site has an approved outline planning permission, ref: 24/00646/OUT, for the: "erection of a two storey building comprising of a retail unit at ground floor and one, two bedroom apartment at first floor".

It also has a more recent reserved matters application for the same, under planning ref: 25/00177/REM.

As part of the reserved matters decision notice, there was a condition relative to environmental assessment of the site:

- 3 Prior to commencement of the development a Phase I Report (Preliminary Risk Assessment) shall be completed to assess the actual and/or potential contamination risks at the site. The Phase 1 Report shall be submitted to, and approved in writing by, the Local Planning Authority and shall include a desk top study, site walk over, conceptual model, basic hazard assessment and recommendation regarding the need or otherwise for further investigation and risk assessment.

Where the Phase 1 Report has identified potential unacceptable risks, a suitable investigation, risk assessment and remedial action shall be carried out in accordance with details and within a timescale to have first been submitted to and approved in writing by the Local Planning Authority.

In the event that contamination is suspected or found at any time when carrying out the approved development that was not previously identified, or contamination is caused, the Local Planning Authority shall be notified immediately and development affected and potentially affected by the contamination must stop. An investigation and/or risk assessment and/or remediation shall be carried out in accordance with an agreed process and within agreed timescales to have first been submitted to and approved in writing by the Local Planning Authority. If contamination is not suspected, found or caused during development, this must be confirmed in a completion letter which is subject to the approval in writing of the Local Planning Authority.

This report provides a desk-based study based on current UK guidance for environmental investigation within the construction industry. Principal to the assessment is the potential for contamination pollutant linkages via the Land Contamination Risk Management (LCRM) source-pathway-receptor methodology. Assessment of potential pollution linkages is primarily undertaken in strict accordance with BS 5930:2015, BS 10175:2011+A2:2017, CIRIA C665, and BS 8485:2015+A1:2019 et al.

1.2. Proposed Development.

The proposal is for the construction of 1No two-storey masonry building. It will have a shop on the ground floor accessed from the front of the building via Boarshaw Road.

There will be a two bedroomed flat to the 1st floor, accessed via a separate entrance staircase to the rear of the building.

The plot is small and there is little external space. There will be enough room around the perimeter of the building for a pathway only, and two car parking spaces. Refer to Proposed Plan in the Appendix.

1.3. Historic Maps.

DATE	ON-SITE	OFF-SITE/SURROUNDING AREA
c1851	Site is part of vacant land in open fields - likely agricultural.	Terraced dwellings form the closest development, nominally 10-20m northwest. Boarshaw Clough Dye Works is approximately 80-100m north.

		White Brook is the main river flowing through the local area, noted approximately 80m west and flowing south. There is a tributary from the west of Whit Brook noted on the same latitude as the Application Site.
c1893	Site is part of vacant land between sparse development in the local area.	Residential dwellings and amenities such as public houses noted along Boarshaw Road in the vicinity of the site. Mill ponds noted approximately 120-150m north associated with What is now noted as Boarshaw Bleach Works. Boarshaw Mill (cotton) noted c75m southwest. Another unnamed works noted 100m southeast with associated mill pond. Some areas of made ground noted around both the unnamed site and Boarshaw Mill.
c1910	No change.	Some minor development in the local area primarily associated with dwellings along the local highways. Boarshaw Mill now noted as a raising & finishing mill. Much of the tributary from the west to Boarshaw Clough is now infilled/culverted.
c1922	No change.	Some further minor development in the local area. The tributary from the west to Boarshaw Clough is now totally infilled/culverted.
c1932	No change.	The works to the north is now noted as Boarshaw Bleach, Dye & Print Works. There is now a new Boarshaw Bleach Works to the south adjacent Boarshaw Mill. Tanks noted in the adjacent unnamed works site. Much residential development in the local area.
c1954	No change.	Residential dwellings now line almost the full extent of Boarshaw Road especially around and to the east of the site where housing estates are erected. Land to the rear of the site (approximately 25m northeast) has now been turned into a residential garage site, with the entrance to it from Boarshaw Road to Clough Street adjacent the Application Site.
c1960	No change.	No change.
c1992	Footpath noted through the site.	No change.
c2003	No change.	No change.

1.4. Present Day Maps.

Site boundaries, outlines of structures and buildings:	Present day maps show the site to be vacant and generally comprising an unmade surface. The site is surrounded by small buildings, generally residential dwellings and residential commercial amenities. There is a car park to the rear at the end of Clough Street.
Ground contours, natural drainage features:	The site is generally level, with a gentle gradient from east to west in the order of 92.6 to 92.20m aOD. The local area falls toward Whit Brook to the west.
Watercourses:	The site is close to the valley bottom, with Whit Brook generally remaining an open watercourse 70m west.
Below ground obstructions:	None noted.

1.5. BGS Geology.

Superficial geology:	The site is underlain by glaciofluvial sheet deposits, Devensian - sand & gravel.
Bedrock geology:	The site is underlain by the Pennine Lower Coal Measures Formation - mudstone, siltstone and sandstone.
Coal seams:	The closest coal seams are 110m northeast and 40m southwest.

1.6. Boreholes Records.

Only 1 borehole in the local area which is 125m south. The borehole recorded clay superficial deposits to 4m deep, with coal measures beneath.

1.7. Groundsure Environmental Data.

1.7.1. Historical Industrial Sites.

Historical industrial land uses:	Site relating to bleach works, dye works, and unspecified mills and works locally.
Historical tanks:	Closest is 58m southwest.
Historical energy features:	Closest is a substation 77m southwest.
Historical petrol stations:	None with 500m.
Historical garages:	Closest is a 330m northwest.
Historical military land:	None noted.

1.7.2. Waste & Landfill.

Active or recent landfill:	None with 500m.
Historical landfill (BGS):	None with 500m.
Historical landfill (LPA/mapping records):	1No. refuse tip noted 447m north.
Historical landfill (EA/NRW records):	1 record as follows: 434m N - Site Address: Land at Stanycliffe Bridge, Rochdale Road, Middleton, Manchester, Greater Manchester. Waste Licence: n/a. Site Reference: D067. Waste Type: n/a. Environmental Permitting Regulations (Waste) Reference: n/a. Licence Issue: n/a. Licence Surrender: n/a.
Historical waste sites:	None with 500m.
Licensed waste sites:	None with 500m.
Waste exemptions:	1 record as follows: 35m E - 221 Boarshaw Road Manchester M24 2wq. EPR/RF0735P W/A001. Treating waste exemption. Non-agricultural waste only. Sorting and de-naturing of controlled drugs for disposal.

1.7.3. Current Industrial Land Use.

Recent industrial land uses:	Numerous sites within the local area. None closer than 63m west (infrastructure/electrical).
National geographic database (NGD) current or recent tanks:	None noted.
Current or recent petrol stations:	Nearest is 301m northwest (now obsolete).
Electricity cables:	None noted.
Gas pipelines:	None noted.

Sites determined as contaminated land:	None noted.
Control of major accident hazards (COMAH):	None noted.
Regulated explosive sites:	None noted.
Licensed industrial activities (Part A(1)):	None noted.
Licensed pollutant release (Part A(2)/B):	Closest is 309m southeast.
Licensed discharges to controlled waters:	Closest is 71m west – sewage storm overflow.

1.7.4. Hydrogeology & Hydrology.

Superficial aquifer:	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
Bedrock aquifer:	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 aquifer.
Groundwater vulnerability:	Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer.
Groundwater abstraction licenses:	Closest is 775m southeast (commercial).
Surface water abstraction licences:	Closest is 902m southeast (commercial).
Potable water abstraction licences:	0 records within 2000m.
Source protection zone:	Not within a Source Protection Zone.

1.7.5. Environmental designations.

Sites of Special Scientific Interest (SSSI):	Closest is 849m northeast (Rochdale Canal).
Conserved wetland sites (Ramsar sites):	None noted within 2000m.
Special Areas of Conservation (SAC):	Closest is 849m northeast (Rochdale Canal).
Special Protection Areas (SPA):	None noted within 2000m.
National Nature Reserves (NNR):	None noted within 2000m.
Local Nature Reserves (LNR):	Closest is 614m north (Hopwood Woodlands).
Designated Ancient Woodland:	Closest is 987m north (Hopwood Clough).

1.7.6. Natural Ground Subsidence.

Potential for shrinking or swelling clay ground stability hazards:	Very low risk.
Potential for running sand ground stability hazards:	Very low risk.
Potential for compressible ground stability hazards:	Negligible.
Potential for collapsible ground stability hazards:	Very low risk.
Potential for landslide ground stability hazards:	Very low risk.

Potential for ground dissolution stability hazards:	Negligible.
1.7.7. Radon.	
Estimated properties affected:	Less than 1%.
Radon protection measures required:	None.

1.8. Mining Remediation Authority.	
Mine Shafts, Pits, Adits/Entries:	No coal entries within 20m of the site boundaries.
Past Recorded Underground Mining.	No recorded workings noted beneath the Site.
Present/Future Underground Mining.	Not known to be a risk.
Unrecorded Probable/Potential Shallow Underground Workings:	However, no probable workings are shown within the Site boundaries.
Past/Present/Future Surface Mining/Opencast:	None noted locally.
Mining Geology and Subsidence:	Not noted.
Hazards and Mine Gas:	Unknown.
Development High Risk Area:	The Site is NOT within a Development High Risk Area.
Abandonment Plan Data:	No data available.

1.9. Local Authority Details.	
No data noted.	

1.10. Site Reconnaissance (August 2025).	
Details of existing structures:	The site is a small plot of vacant land on the corner of Boarshaw Road and Clough Street. The west site boundary comprised the external wall to a neighbouring building, which is the only structure, other than a telegraph pole and litter bins to the front on the Boarshaw Road pathway.
Adjacent properties:	There are commercial takeaways to the west neighbouring the site. Boarshaw Road and Clough Street form the south and east boundaries respectively. To the north of the site is a small doctors practice & car park. Land elevation falls to the northwest beyond the doctors practice, with the residential dwellings beyond this at the bottom of a retaining wall.
Water levels, directions of flow and rates in rivers:	The nearest watercourse was Whit Brook noted approximately 100m west.
Old mine or quarry workings:	None noted on site reconnaissance.
Obvious/immediate hazards to health/safety:	None noted on site reconnaissance.
Areas of discoloured soil, polluted water, vegetation, and significant odours:	Made ground only noted on the site surface.

1.11. Identification of Source-Pathway-Receptor.

1.11.1. Environmental Summary.

The site has not been subject to historic industrial activity. It was originally agricultural land, and later vacant land in between sparse residential development. It has remained vacant until the present day.

The local area has primarily comprised a residential use throughout its history, although there have been some mills/works in the local area – most of these are now disused or redeveloped.

The site reconnaissance has recorded made ground/hardcore on the surface of the site, although considering the site has never been used for anything, the made ground is expected to be superficial, and relatively thin.

There may be minor contaminants in the upper made ground although these are likely to be minor and immobile.

There has been coal mining in the local area, although the Mining Remediation Authority records suggest there is little risk to the site.

There site is not in a radon risk area.

1.11.2. Potential Contaminant Sources.

ORIGINAL ASSOCIATED SOURCE	CONTAMINANT/S
Made ground.	Metals, PAHs, sulphates, asbestos, VOCs, SVOCs.

1.11.3. Potential Pathways.

The potential pathways to/from the Development Site include (not an exhaustive list but a summary of the main points):

PATHWAY	MEDIA
Soil and dust ingestion	Soil and indoor dust
Consumption of home-grown fruit and vegetables	Produce
Skin contact (indoors)	Indoor dust
Skin contact (outdoors)	Soil
Inhalation of dust (indoors)	Air
Inhalation of dust (outdoors)	Air
Vapours (indoors)	Air
Vapours (outdoors)	Air

1.11.4. Potential Receptors.

Future residential users.

Construction phase workforce.

1.12. Preliminary Conceptual Model.

POLLUTANT RISK IDENTIFIER	SOURCE	CONTAMINANT TYPE	POTENTIAL PATHWAY	RECEPTOR	POLLUTION LINKAGE	CONSEQUENCE	PROBABILITY	RISK
PL1	General contaminants in upper site soil/made ground, and effects on humans/animals /ecology as a receptor.	Metals, PAHs, inorganics, organics, asbestos.	Direct ingestion, aerial ingestion, dermal contact, drinking water. Crops.	Primarily human - Site construction operatives & future site users.	The site hasn't had a specific use historically, and although there is some hardcore made ground across the site surface, the proposal doesn't comprise soft landscaping so the pathway will be removed, and the pollution linkage broken.	Minor.	Unlikely.	Very low risk.
PL2	Potential historic use of hazardous PSRAS chemicals & effects on PE water pipes.	Hydrocarbons, BTEX & MTBE, VOCs/SVOCs, phenols, cresols and chlorinated phenols.	Contact with water pipes/services.	Water pipes/services & human/pet end users.	There is no historic use of the site noted in the desk study, that would have contributed PSRAS chemical to the site. The also site fronts the main road, and water pipes will be via the pavement direct to the dwelling, and thus will not be routed through any made ground. There is no significant source, the pathway will be removed, and the pollution linkage broken.	Minor.	Unlikely.	Very low risk.
PL3	Hydrocarbon contaminants in upper site soil/made ground, and effects on groundwater or watercourses as a receptor.	Potential hydrocarbons.	Groundwater via potential leaching and transport of potential contaminants.	Underlying aquifer or watercourse as a receptor.	There is no historic use of the site, no tanks or potential for mobile contamination noted in the desk study, that would have contributed hydrocarbons or similar mobile contaminants on the site. There is no significant source, and the pollution linkage broken.	Minor.	Unlikely.	Very low risk.
PL4	Geological ground gas from coal seams/workings.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	There are no coal seams or workings which coal affect the site. There is no significant source, no pathway, and the pollution linkage broken.	Medium.	Unlikely.	Low risk.
PL5	Geological ground gas, radon sources in Namurian deposits.	Rn.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants.	No credible pollutant linkage. The Groundsure data report is based on a refined site-specific risk analysis which has identified that the property is within a lower probability radon area (<1% of homes estimated to be at or above the action level). No radon protection measures are required.	Medium.	Unlikely.	Low risk.



PL6	Anthropogenic ground gas from historic/present landfill, infilled mill ponds.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	There are no historic landfill site or significant infilled land local to the site. There is no significant source, no pathway, and the pollution linkage broken.	Medium.	Unlikely.	Low risk.
PL7	Alluvial ground gas.	CH ₄ , CO ₂ .	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	There are no alluvial deposits beneath the site. There is no significant source, no pathway, and the pollution linkage broken.	Medium.	Unlikely.	Low risk.

1.13. Conclusions.

1.13.1. General.

No risks have been identified in the desk study.

No further assessment is required.

For the avoidance of doubt, the remediation summary is below.

1.13.2. Human Health Risk.

1.13.2.1. Shallow soil contamination.

There is a potential made ground, although this is likely very shallow.

However, due to the proposed building taking up almost the entire footprint of the site, and no external soft landscaped areas, the risk is low.

No remediation is required in this regard.

1.13.2.2. Buildings & services.

1.13.2.2.1. Water pipes.

There is no risk of mobile contamination from the desk study.

Water pipes will be directly routed from the pathway into the building structure and not through any made ground.

No remediation is required in this regard, and standard PE pipe is considered sufficient for the site.

1.13.2.3. Ground Gas Risk.

1.13.2.3.1. Historic landfill sites.

No risk noted. No remediation is required in this regard.

1.13.2.3.2. On-site refuse tips/infilled ponds/infilled land.

No risk noted. No remediation is required in this regard.

1.13.2.3.3. Radon.

No risk noted. No remediation is required in this regard.

1.13.2.3.4. Alluvium.

No risk noted. No remediation is required in this regard.

1.13.3. Controlled Waters Risk.

1.13.3.1.1. Surface waters.

No risk noted. No remediation is required in this regard.

1.13.3.1.2. Aquifers.

No risk noted. No remediation is required in this regard.

1.13.4. Additional Notes.

Before any further work is undertaken, this report should be submitted to and agreed by the Local Planning Authority Contaminated Land Department/Building Control Department as necessary.

We trust that the above clear, but should you require further advice please contact the undersigned.



Signed.....

A handwritten signature in black ink, appearing to be 'D.S. Slattery', enclosed within a light grey rectangular box.

D.S. Slattery BSc (Hons).

T J Booth Associates.

Authorised...

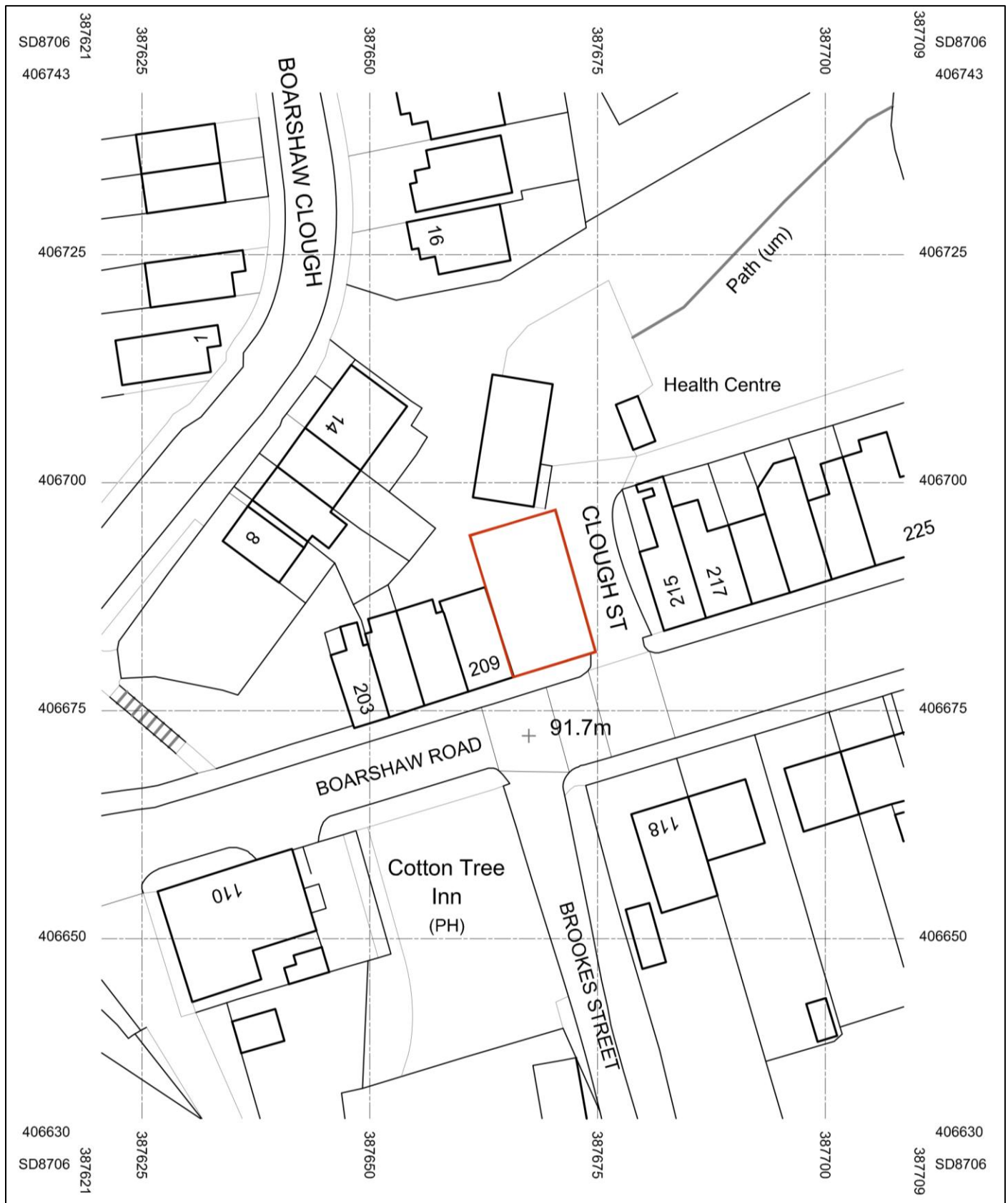
A handwritten signature in black ink, appearing to be 'T J Booth', enclosed within a light grey rectangular box.

T J Booth BSc (Hons), C. Eng. C. Env. MICE.

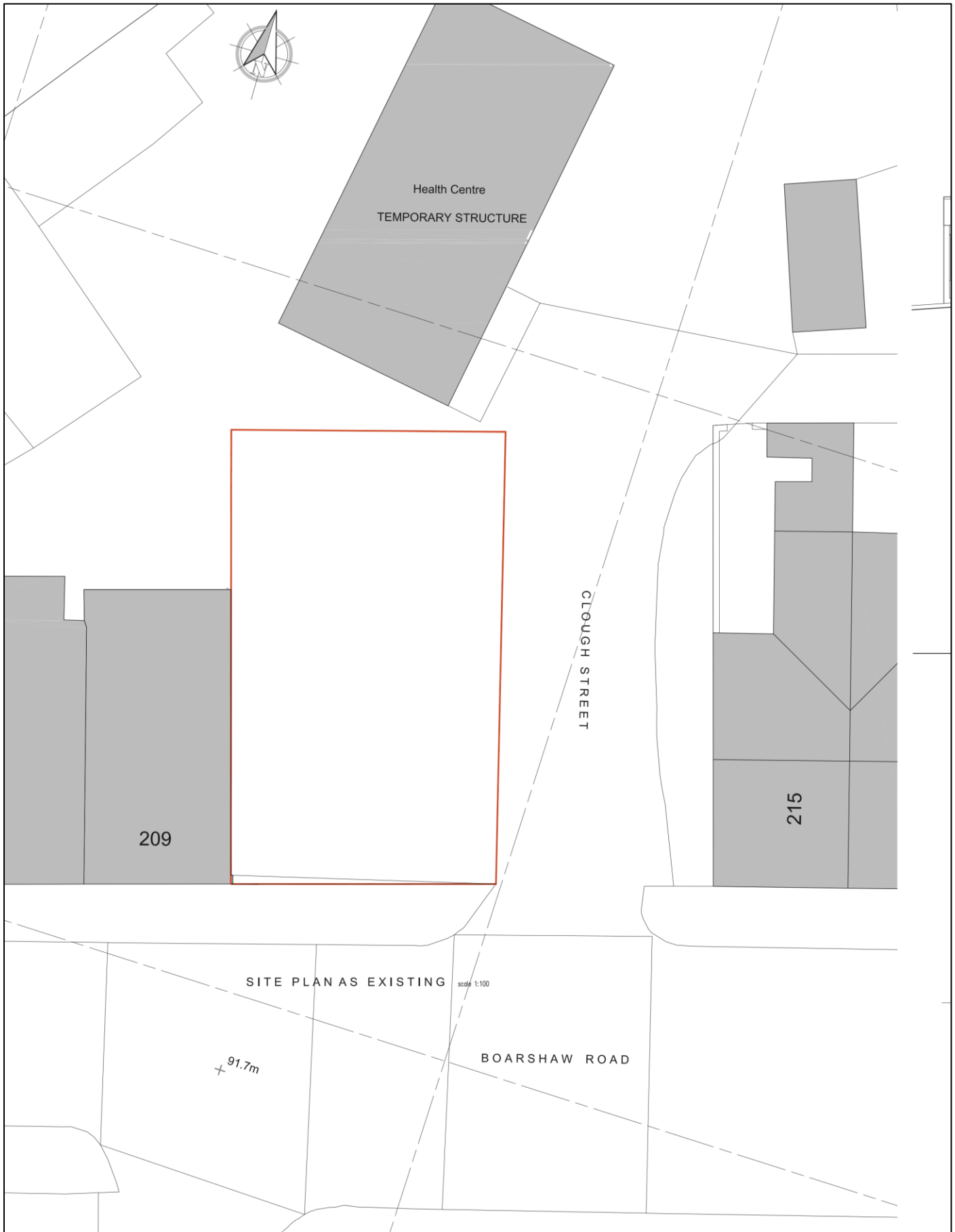
T J Booth Associates.

3. APPENDIX A: FIGURES.

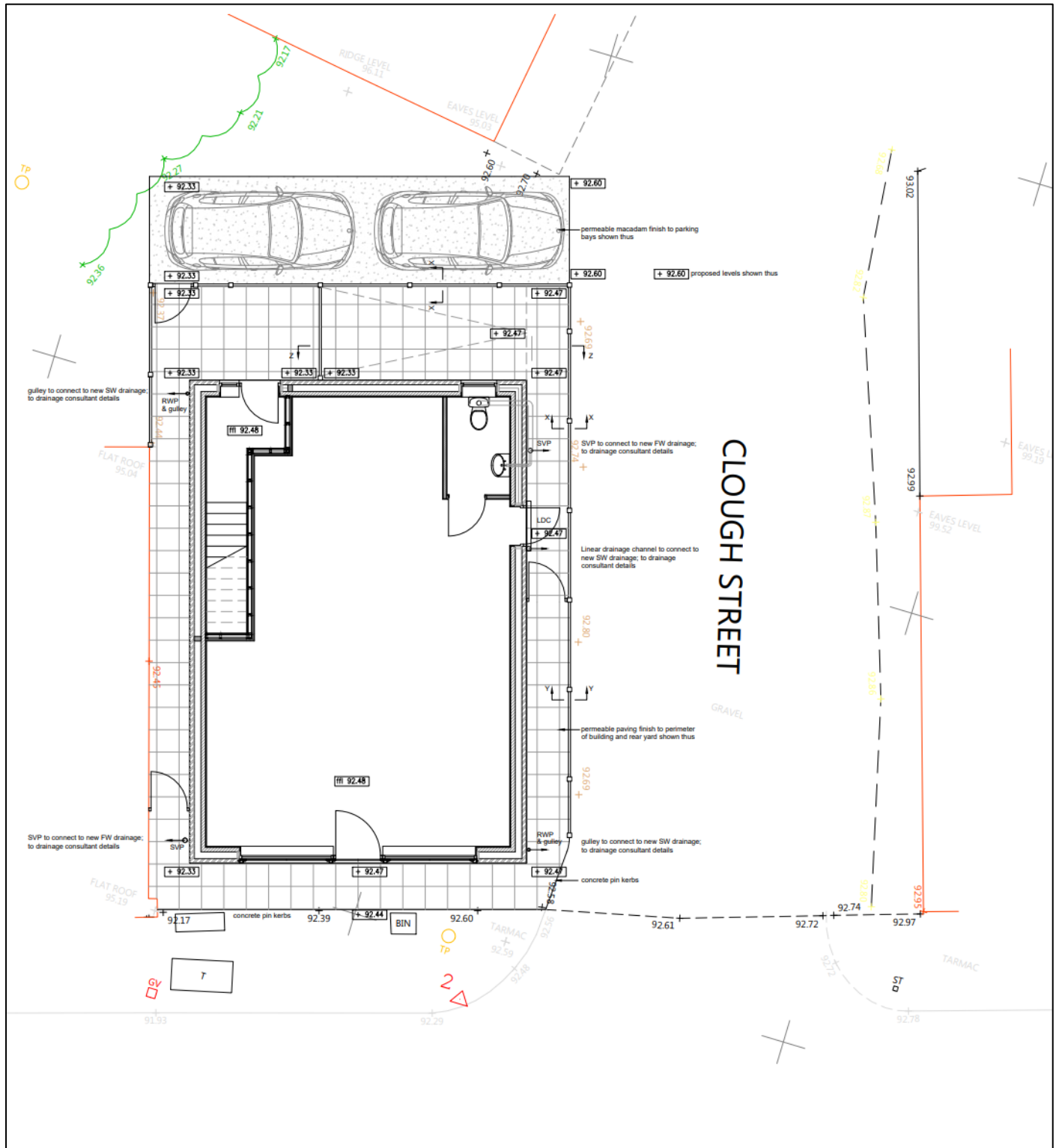
3.1. Location Plan.



3.2. Existing Site Plan.



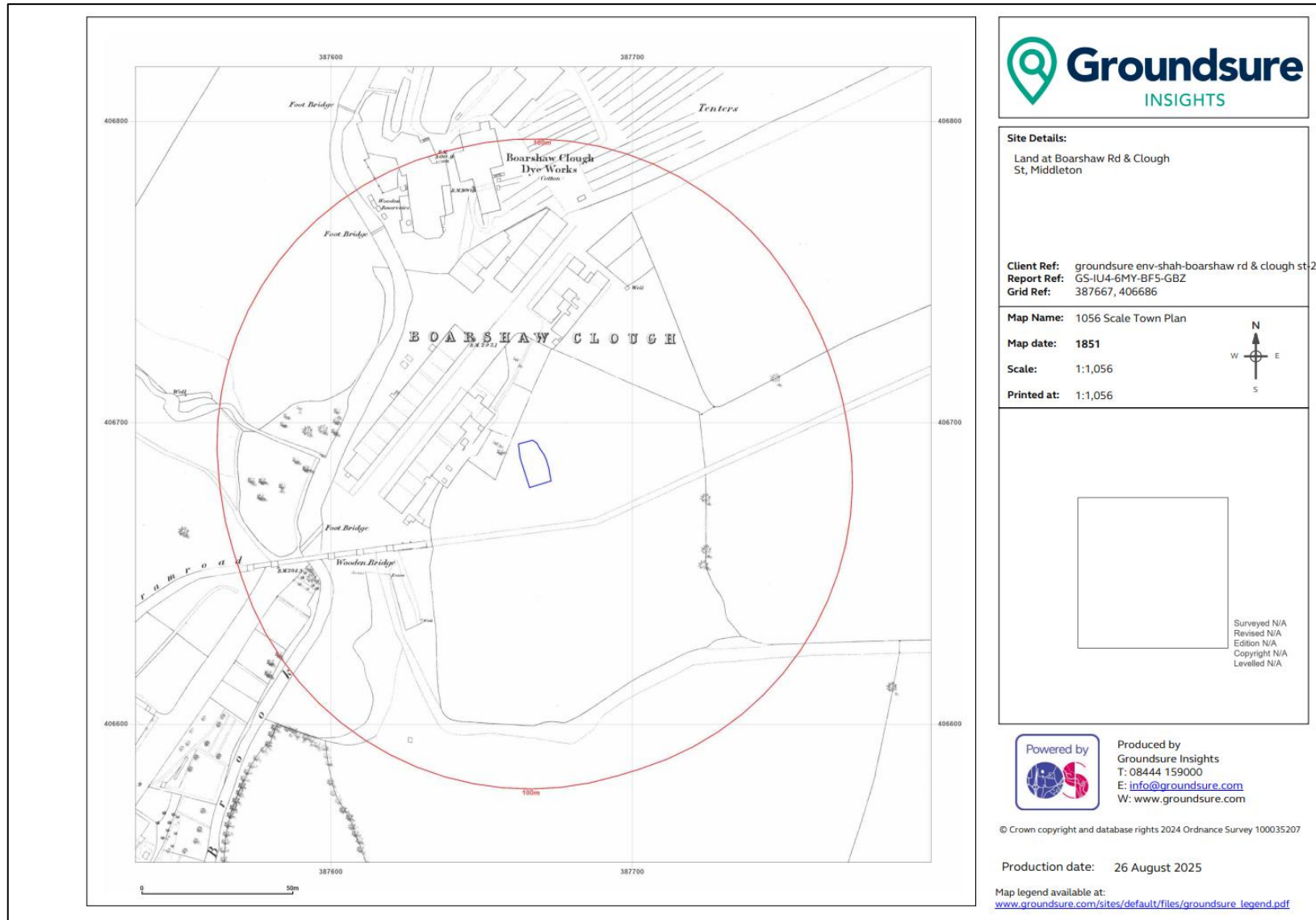
3.3. Proposed Development.



4. APPENDIX B: SITE WALKOVER PHOTOS.



5. APPENDIX C: GROUNDSURE.





Site Details:

Land at Boarshaw Rd & Clough St, Middleton

Client Ref: groundsure env-shah-boarshaw rd & clough st 26
Report Ref: GS-IU4-6MY-BF5-GBZ
Grid Ref: 387667, 406686

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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

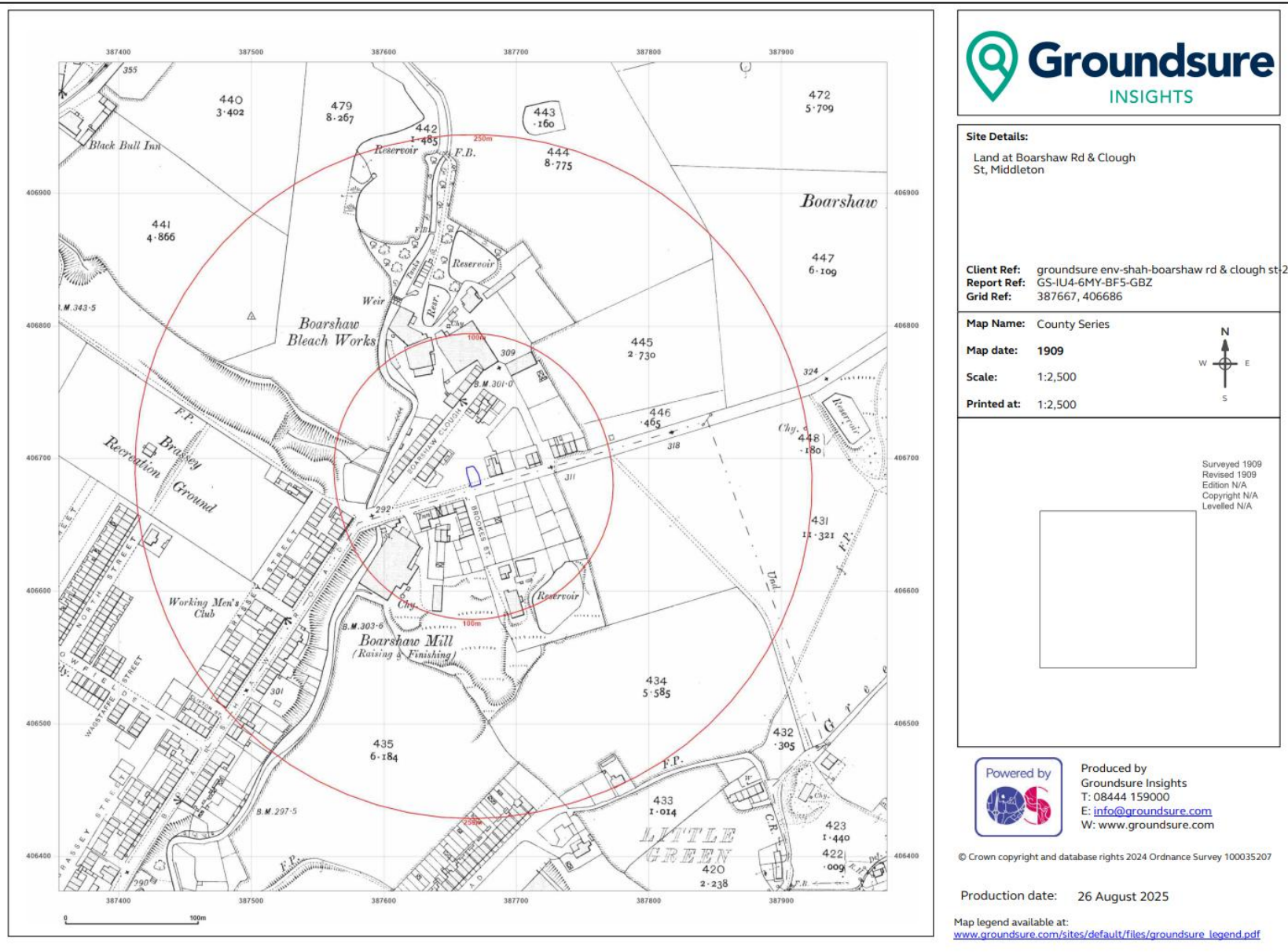


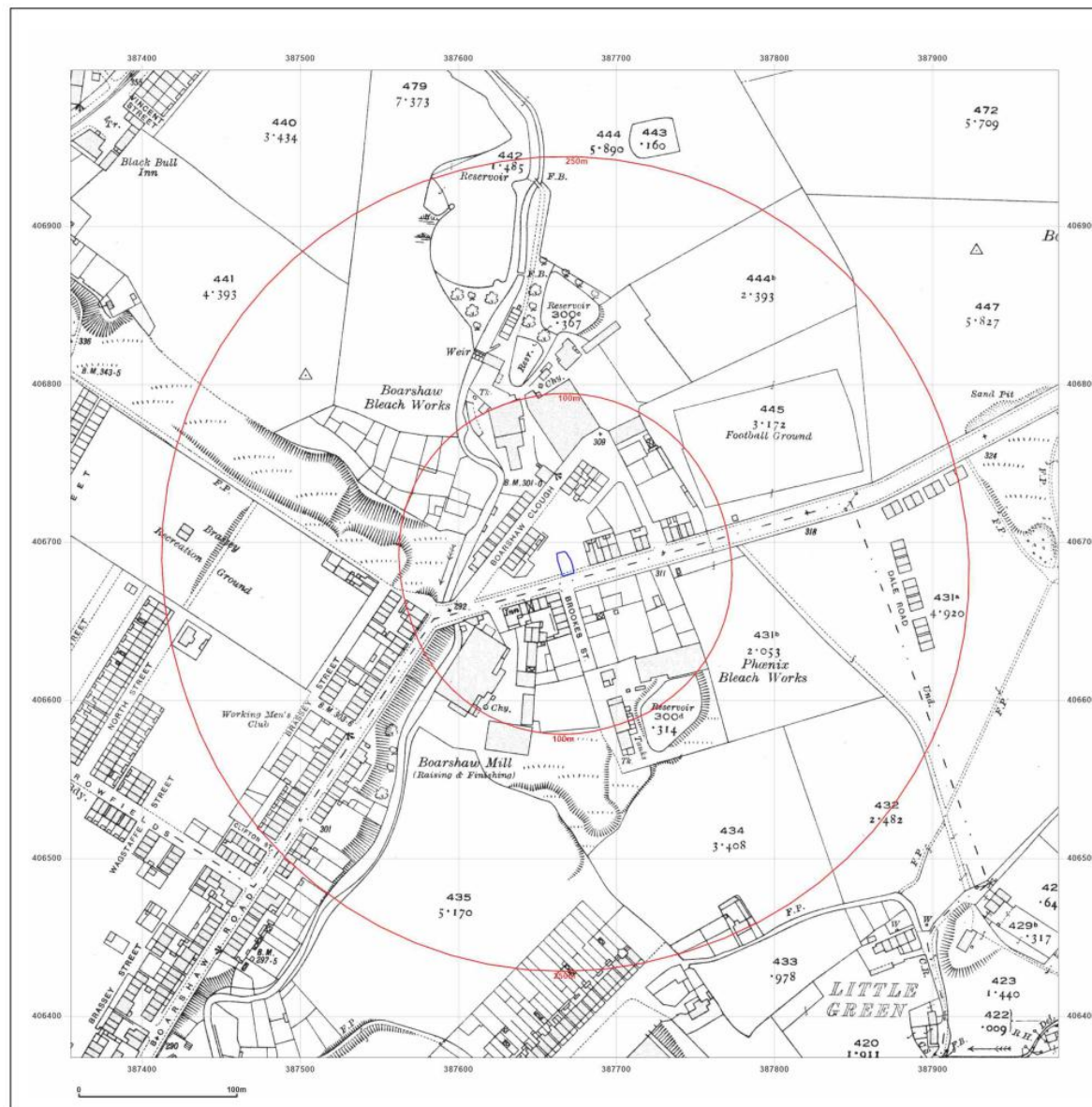
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2024 Ordnance Survey 100035207

Production date: 26 August 2025

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





Site Details:

Land at Boarshaw Rd & Clough St, Middleton

Client Ref: groundsure env-shah-boarshaw rd & clough st-26
 Report Ref: GS-IU4-6MY-BF5-GBZ
 Grid Ref: 387667, 406686

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



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

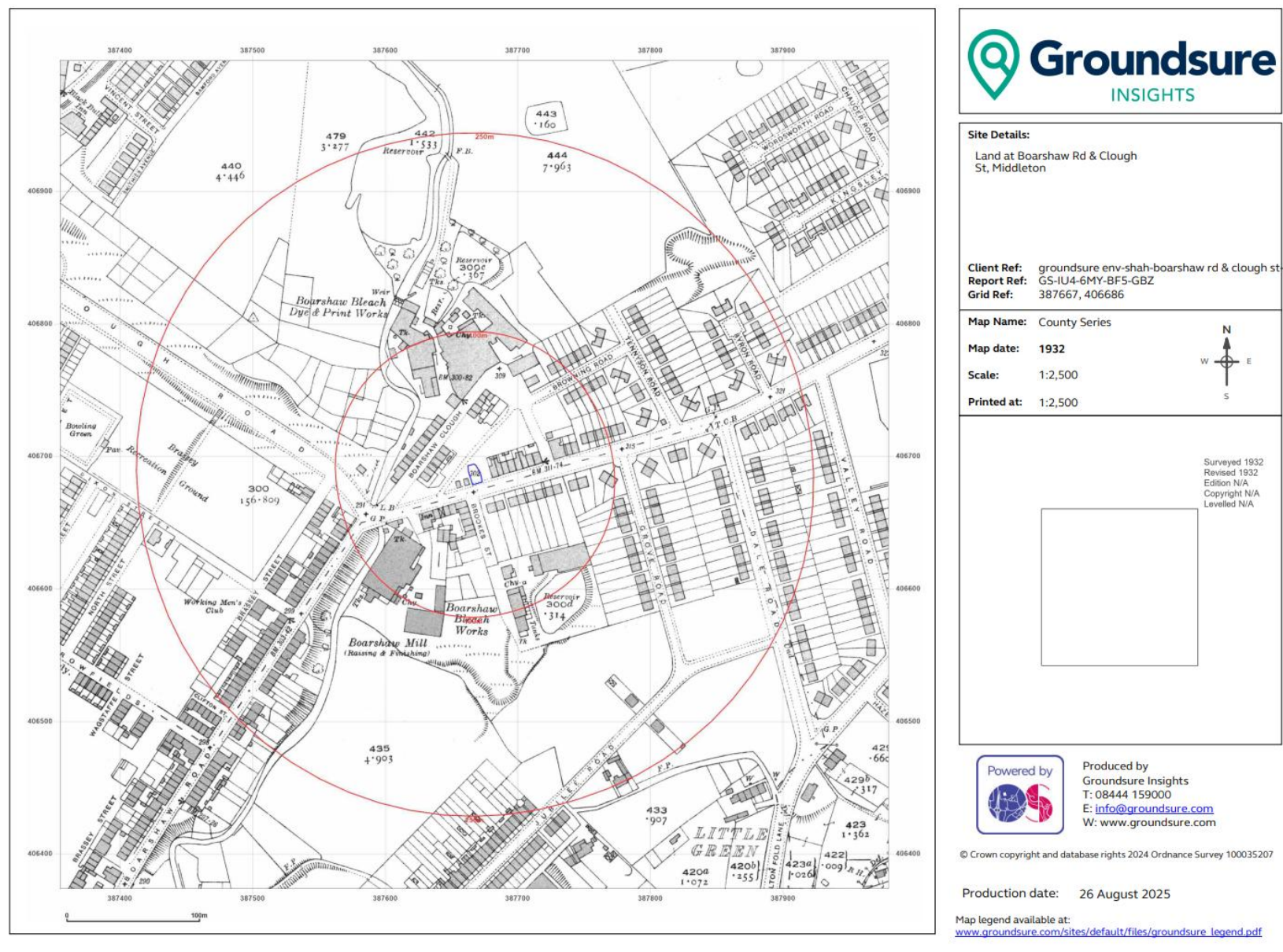


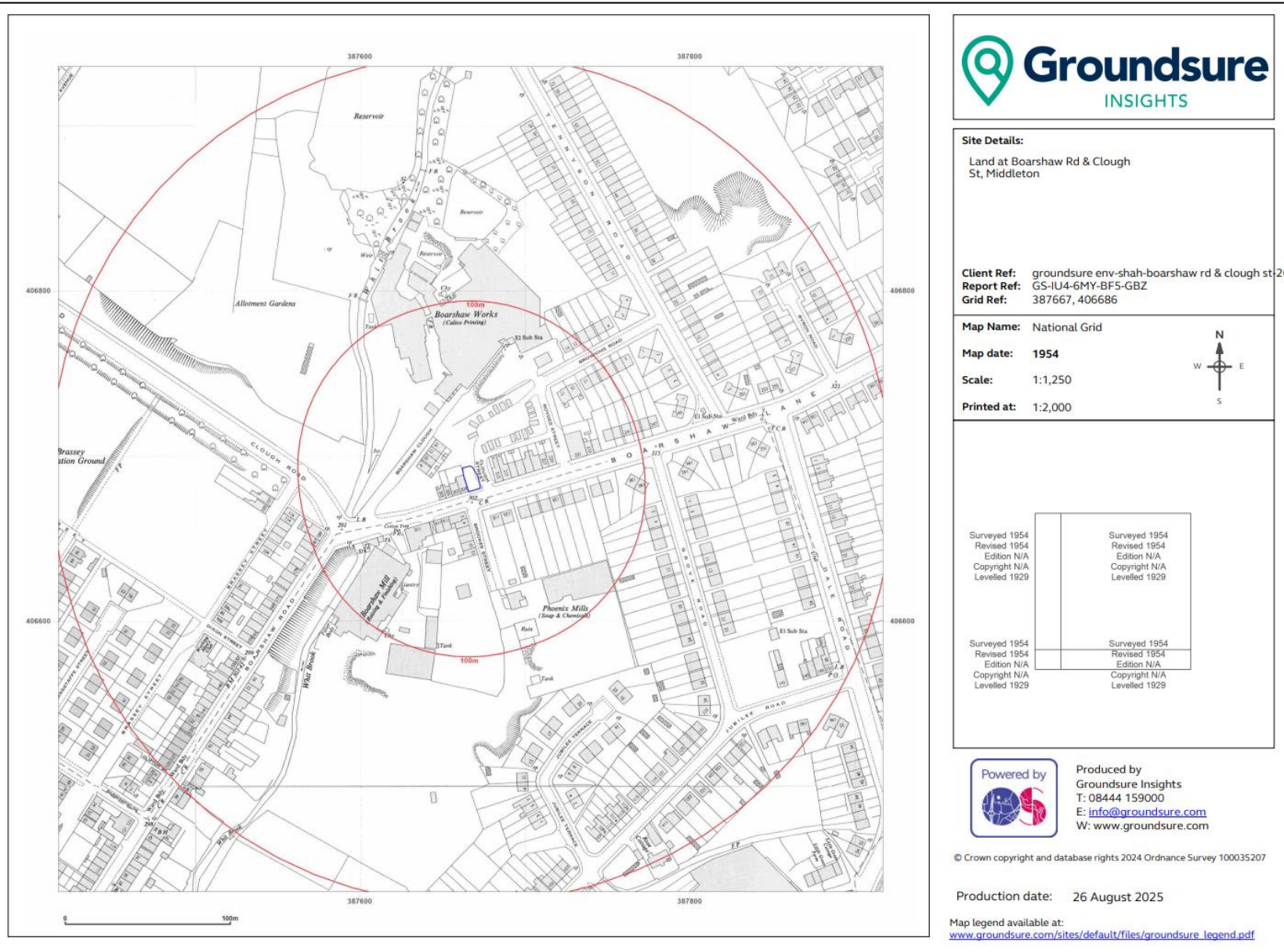
Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

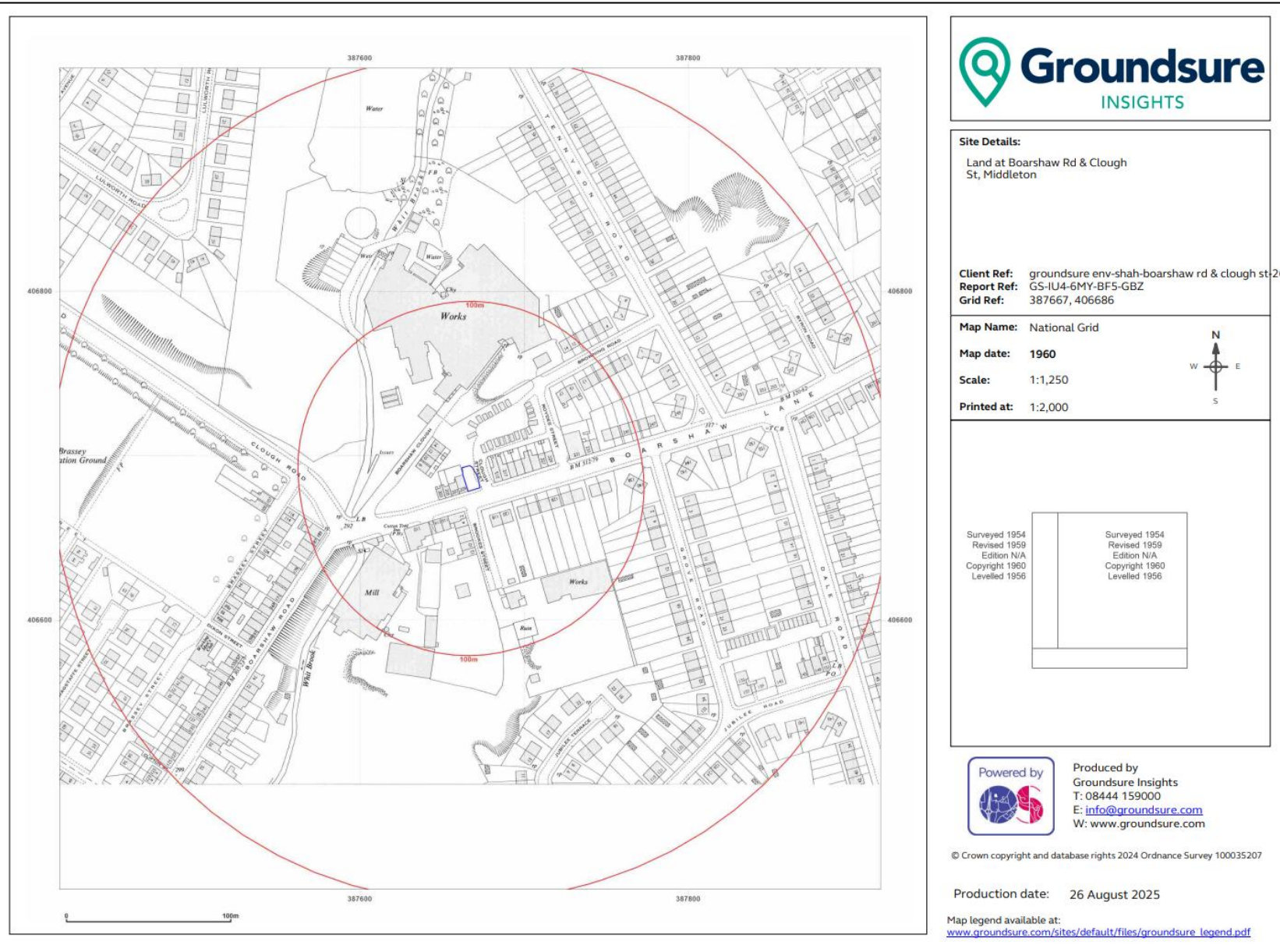
© Crown copyright and database rights 2024 Ordnance Survey 100035207

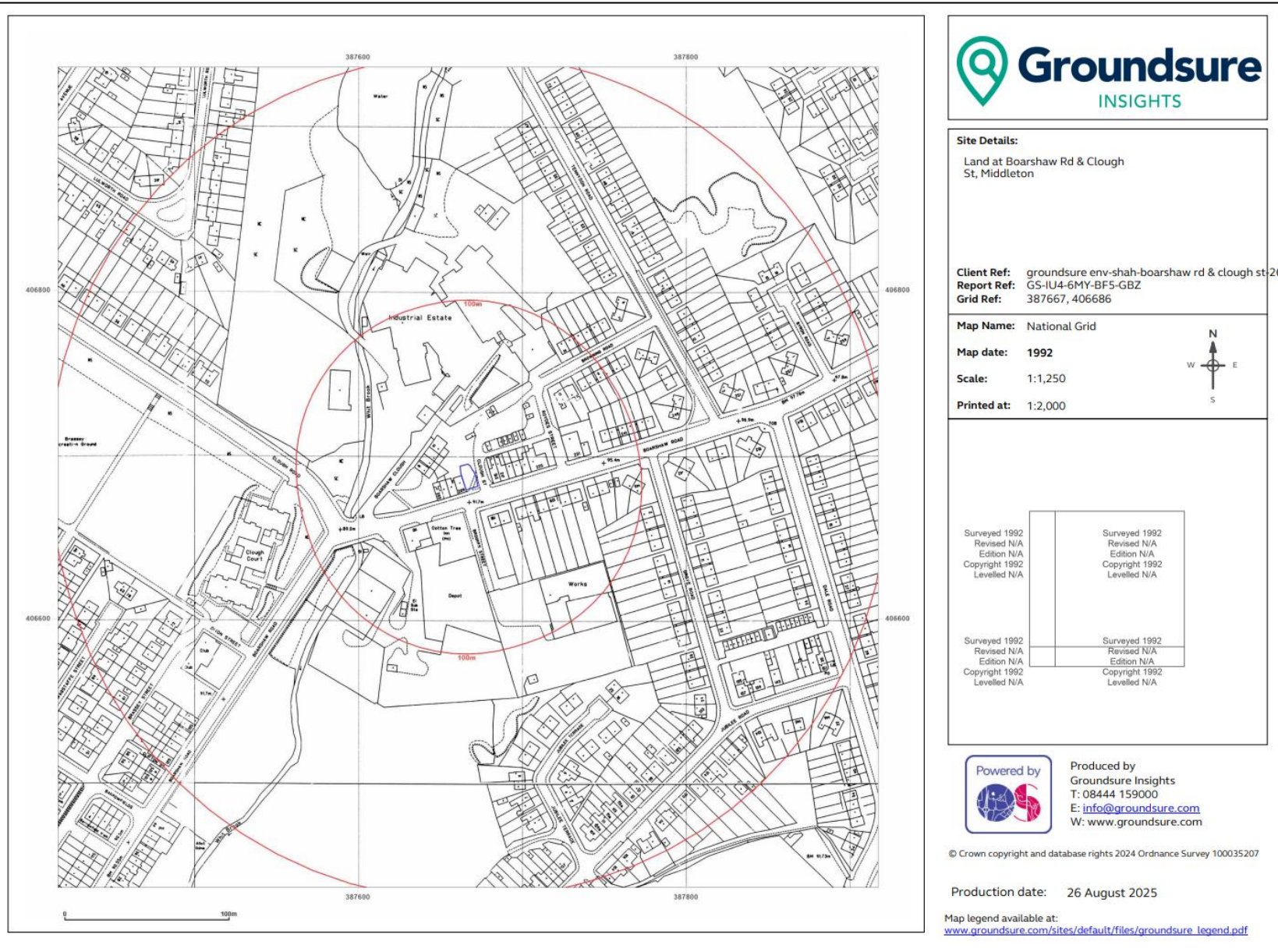
Production date: 26 August 2025

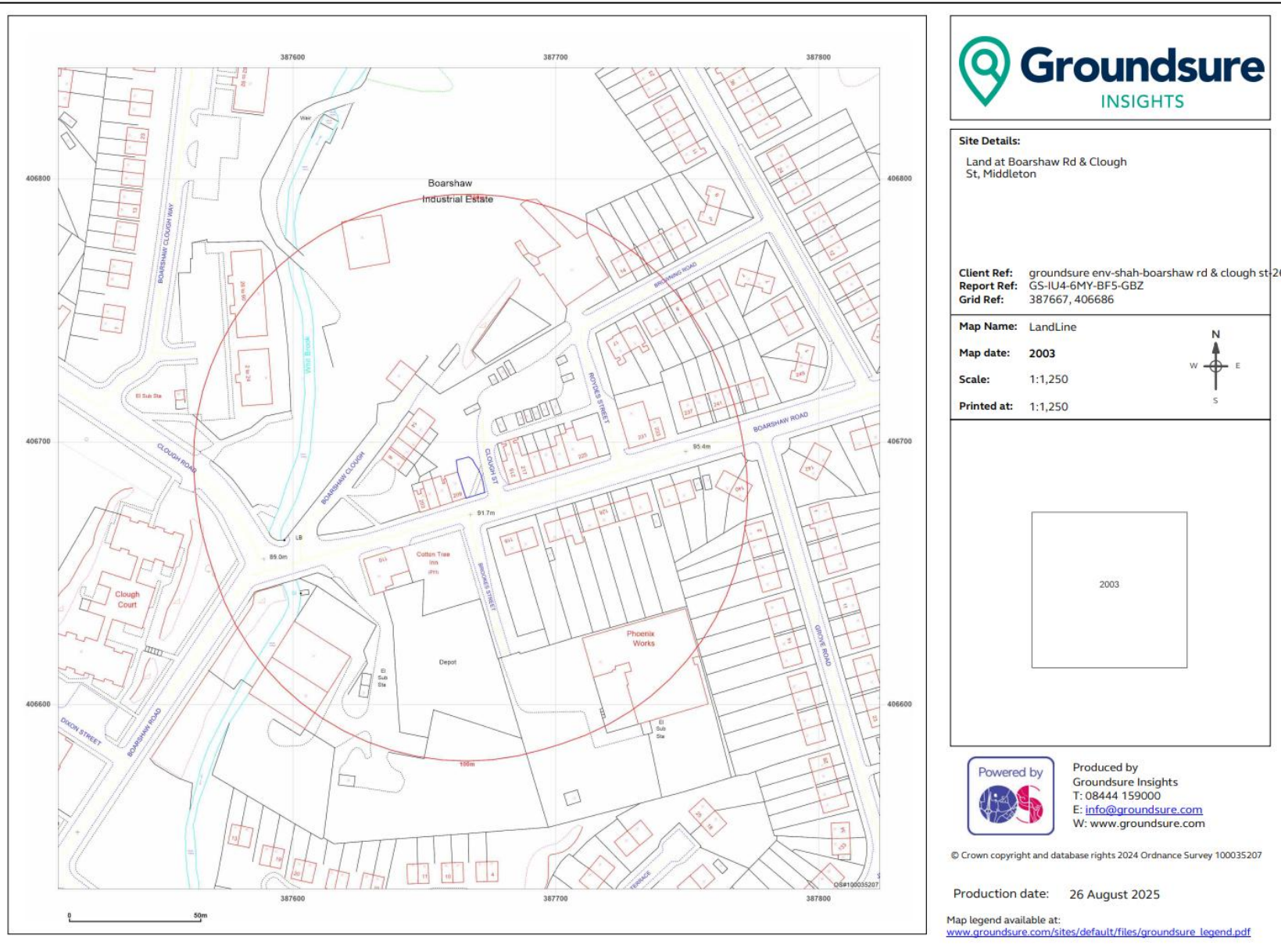
Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf













Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Recent site history - 2000 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 19/06/2000

Site Area: 0.02ha



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Recent site history - 2011 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 01/05/2011

Site Area: 0.02ha



Contact us with any questions at:
info@groundsure.com
01273 257 755

Date: 26 August 2025

12



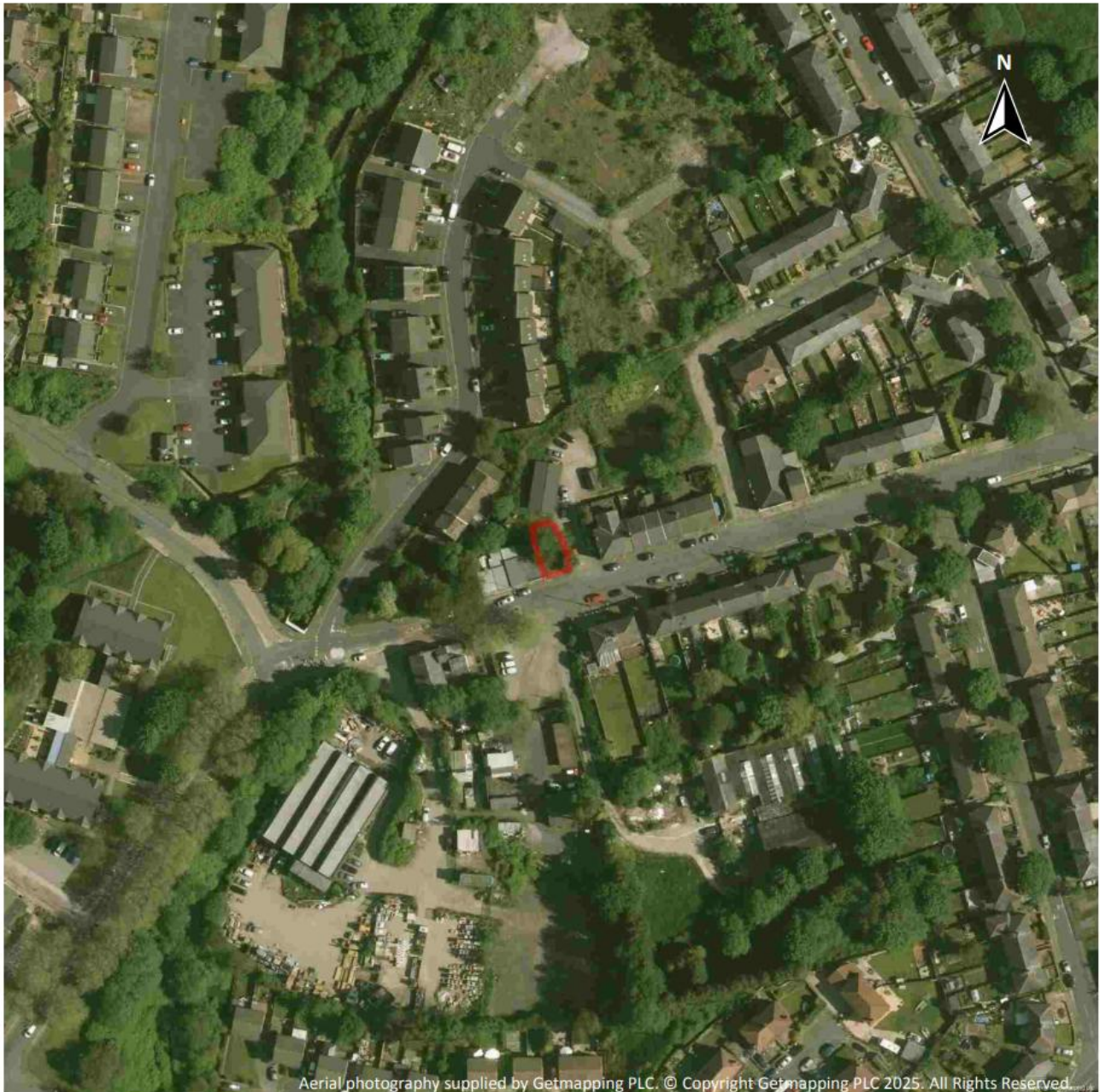
Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8

Your ref: groundsure env-shah-boarshaw rd &
clough st-260825

Grid ref: 387667 406686

Recent site history - 2015 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 11/06/2015

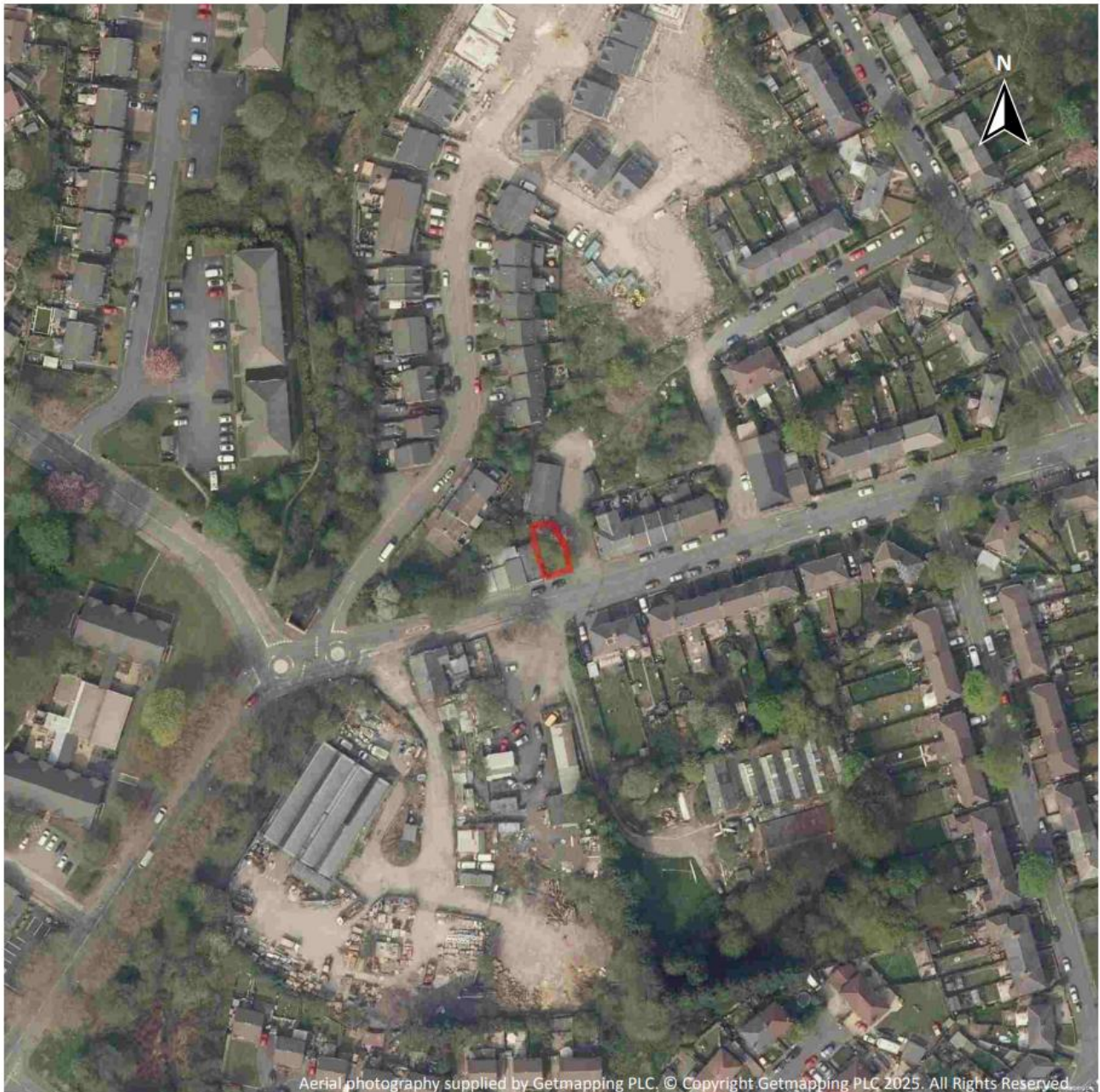
Site Area: 0.02ha



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Recent site history - 2019 aerial photograph



Capture Date: 22/05/2019

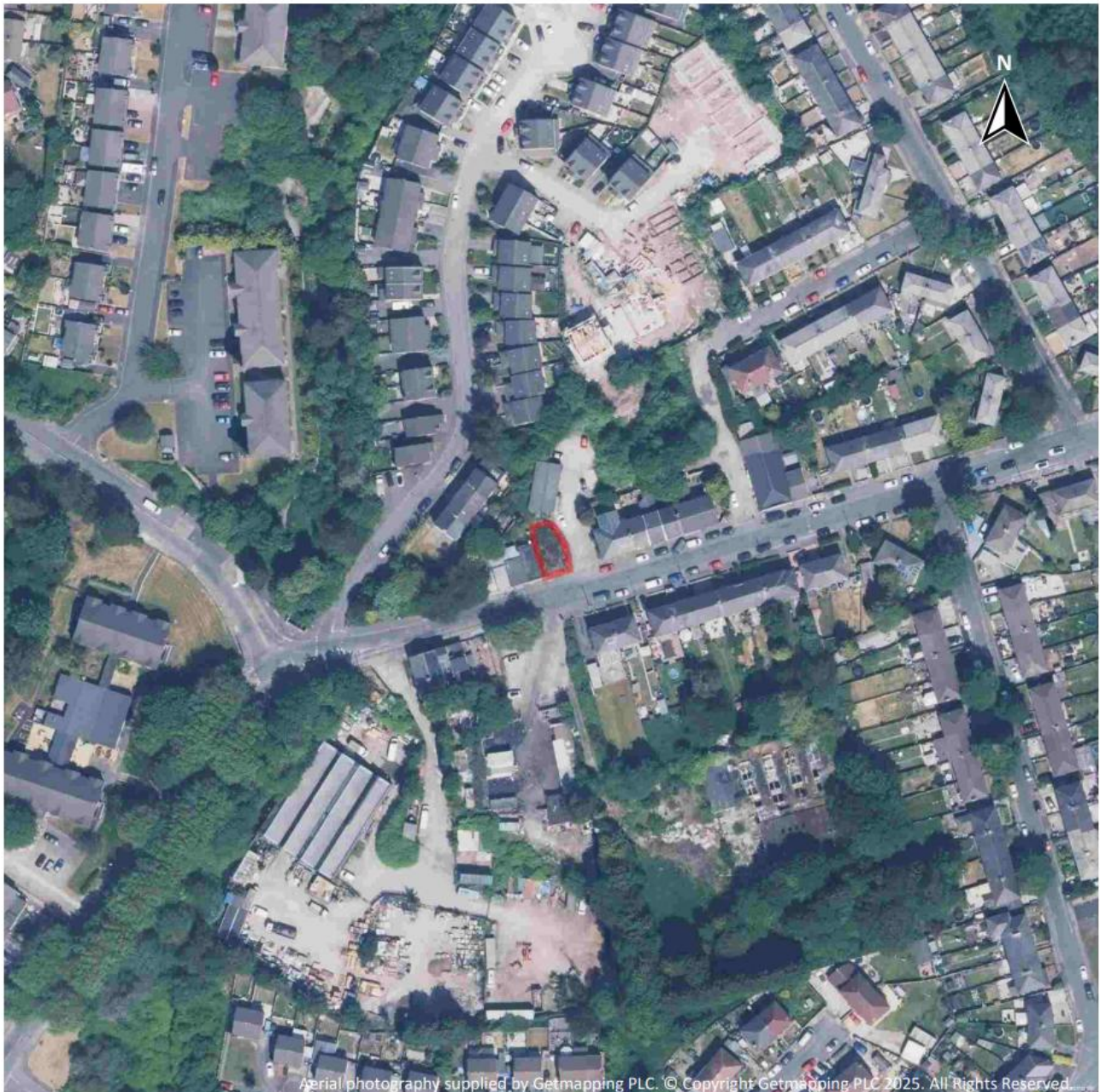
Site Area: 0.02ha



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2025. All Rights Reserved.

Capture Date: 07/04/2023

Site Area: 0.02ha



Enviro+Geo

Insight

Land at Boarshaw Rd & Clough St, Middleton

Order Details

Date: 26/08/2025
Your ref: groundsure env-shah-boarshaw rd & clough st-260825
Our Ref: GS-TWO-6AV-IPM-9H8

Site Details

Location: 387667 406686
Area: 0.02 ha
Authority: [Rochdale Metropolitan Borough Council](#)




Summary of findings

[p. 2 >](#)

Aerial image

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#)

[Insight User Guide](#) 



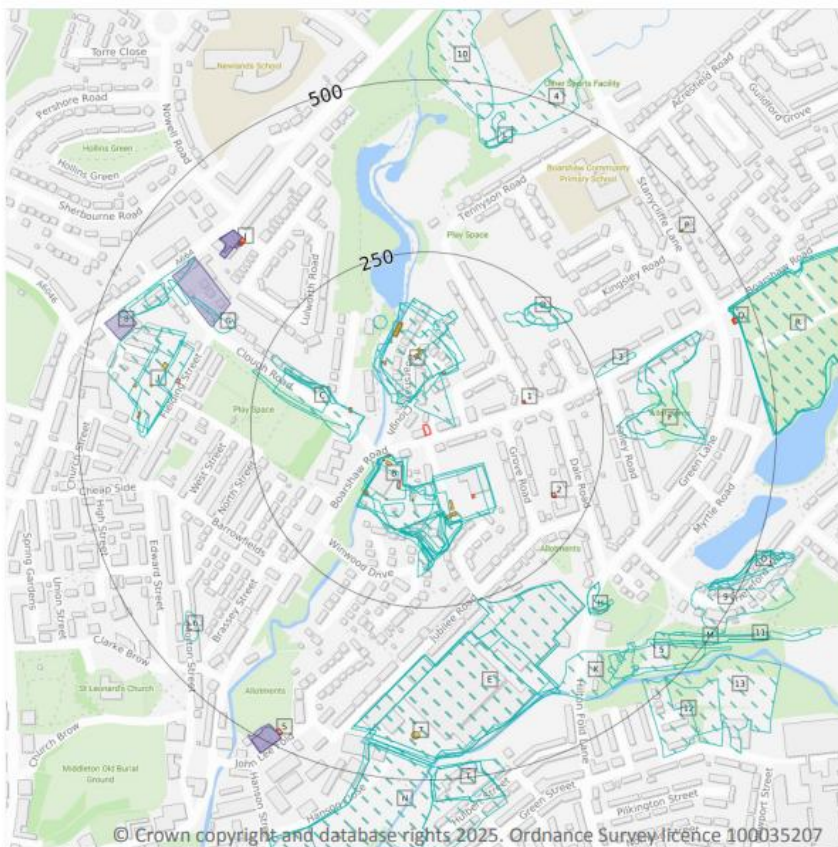
Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8

Your ref: groundsure env-shah-boarshaw rd &
clough st-260825

Grid ref: 387667 406686

1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

84

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
A	16m NE	Dye Works	1848	700518



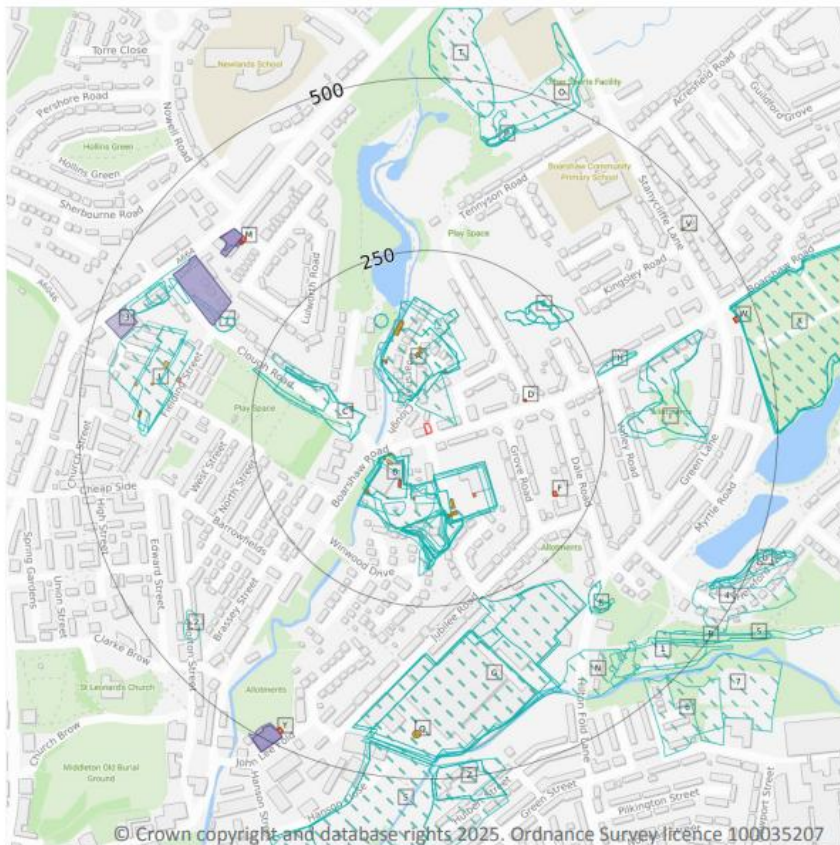
Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8

Your ref: groundsure env-shah-boarshaw rd &
clough st-260825

Grid ref: 387667 406686

2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

119

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 23](#) >

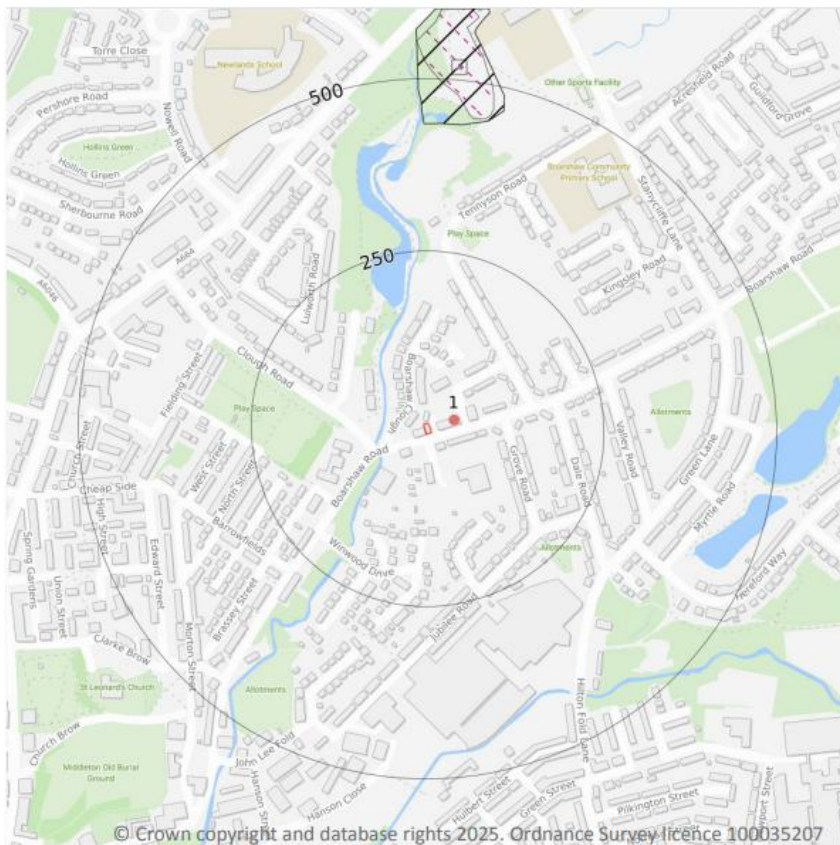
ID	Location	Land Use	Date	Group ID
A	16m NE	Dye Works	1848	700518
A	37m NW	Bleach Works	1891	780207
A	38m NW	Bleach, Dye and Print Works	1932	705120



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

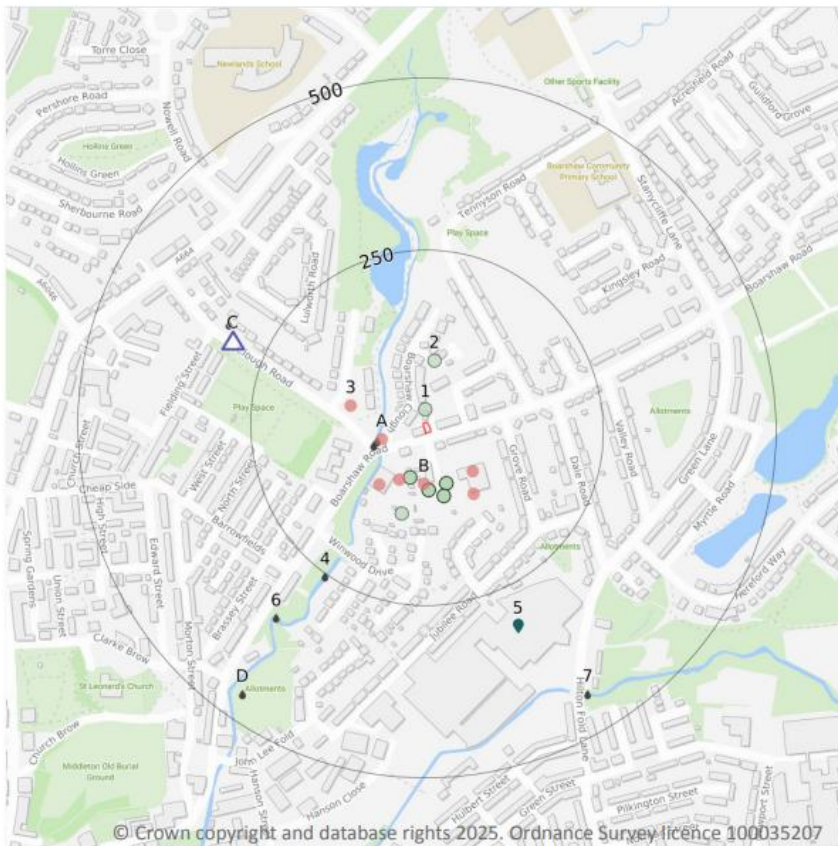
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- △ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

7

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 35 >](#)

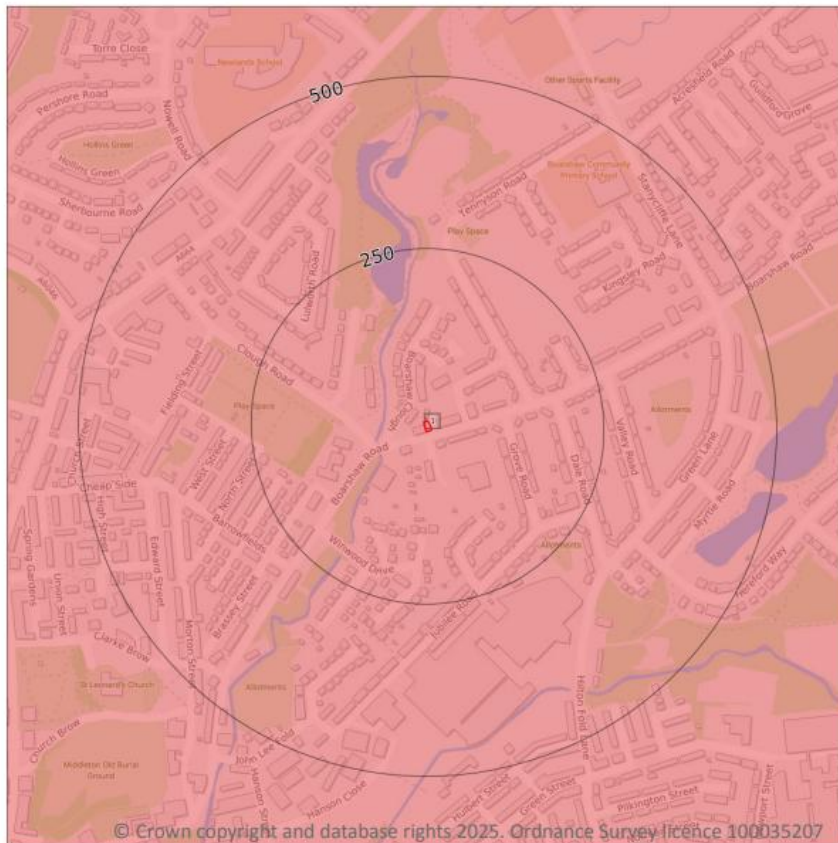
ID	Location	Company	Address	Activity	Category
A	63m W	Electricity Sub Station	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
B	74m S	Mast (Telecommunication)	Greater Manchester, M24	Telecommunications Features	Infrastructure and Facilities



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 44](#) >

ID	Location	Designation	Description
1	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

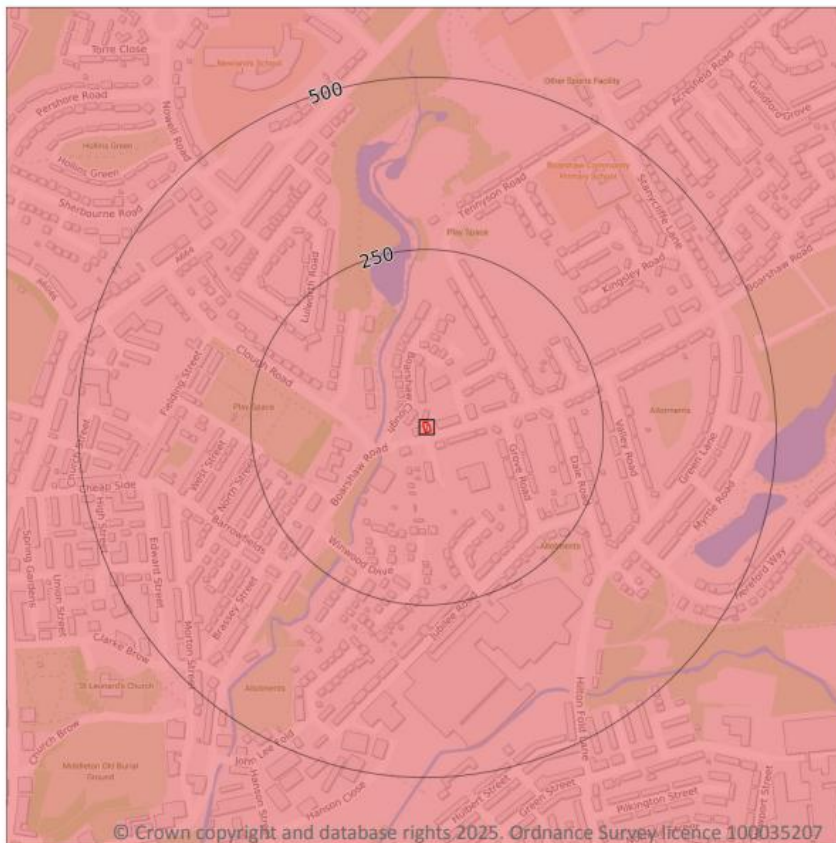
This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 45](#) >

ID	Location	Designation	Description
1	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

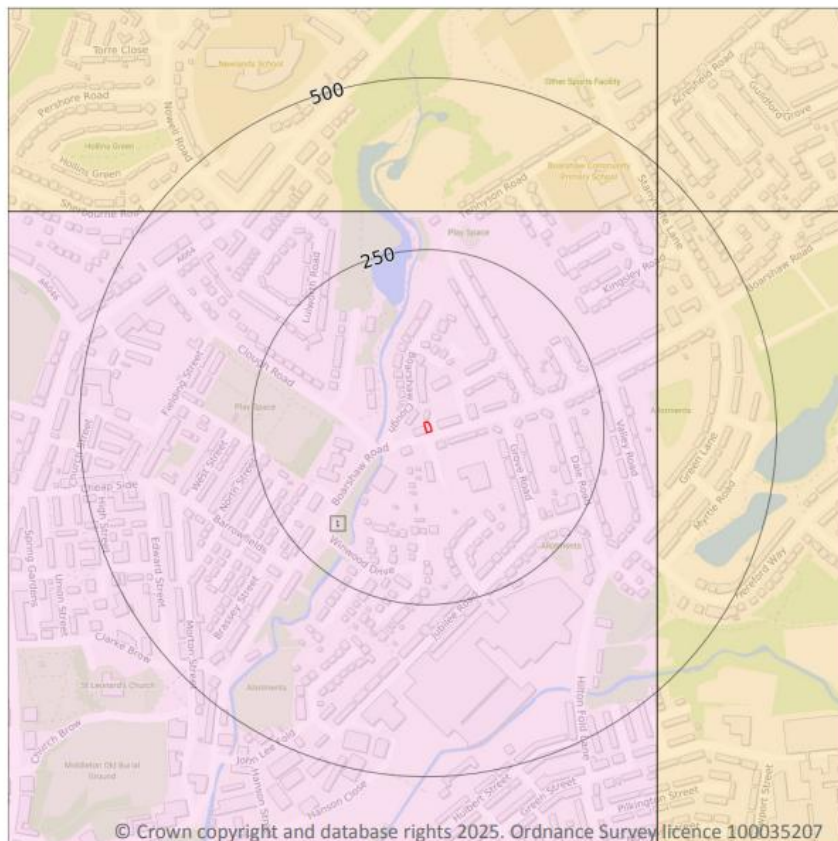
This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Groundwater vulnerability



— Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 46 >](#)



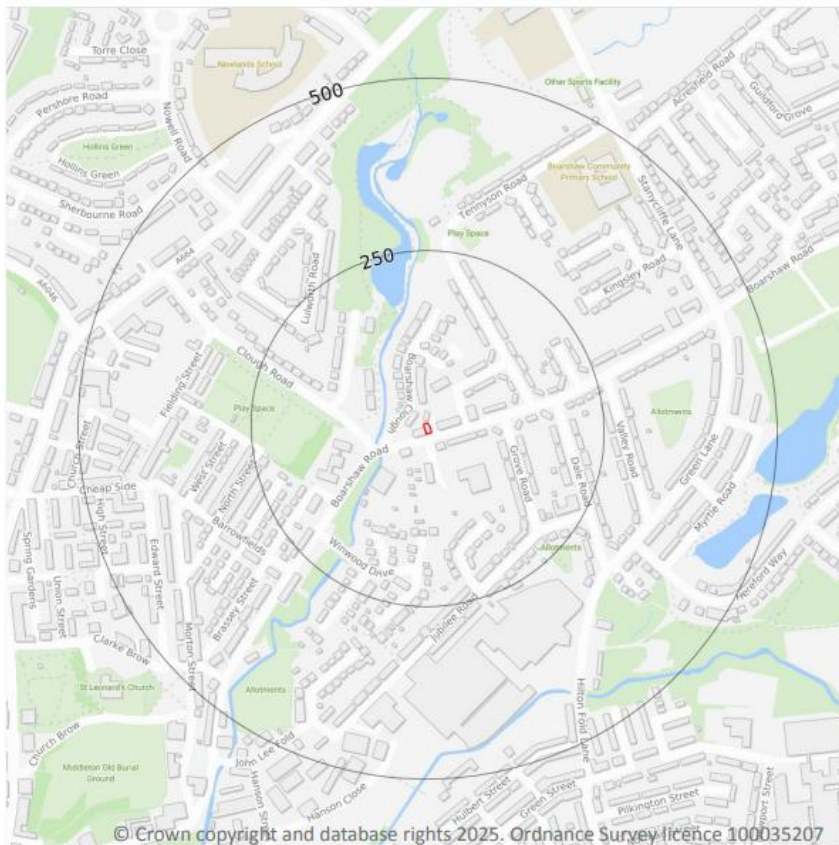
Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8

Your ref: groundsure env-shah-boarshaw rd &
clough st-260825

Grid ref: 387667 406686

Abstractions and Source Protection Zones



- Site Outline**
- Search buffers in metres (m)**
- Source Protection Zone 1
Inner catchment
 - Source Protection Zone 2
Outer catchment
 - Source Protection Zone 3
Total catchment
 - Source Protection Zone 4
Zone of Special Interest
 - Source Protection Zone 1c
Inner catchment - confined aquifer
 - Source Protection Zone 2c
Outer catchment - confined aquifer
 - Source Protection Zone 3c
Total catchment - confined aquifer
 - Drinking water abstraction licences
Polygon features
 - Drinking water abstraction licences
Linear features
 - Groundwater abstraction licence (point)
 - Groundwater abstraction licence (area)
 - Groundwater abstraction licence (linear)
 - Surface Water Abstractions (point)
 - Surface Water Abstractions (area)
 - Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

4

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

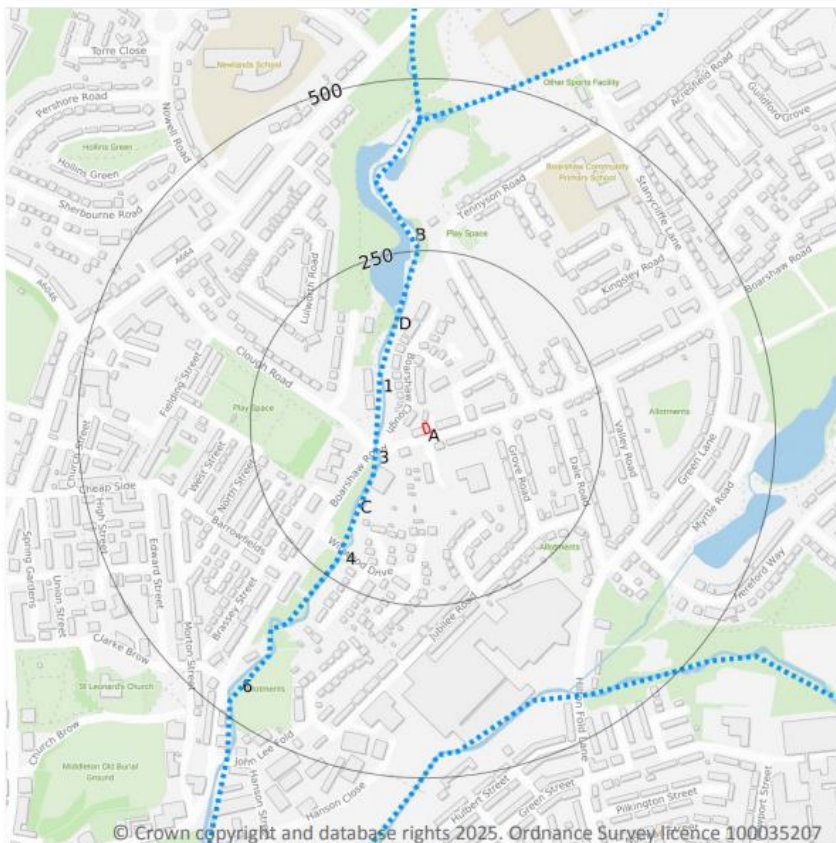
Features are displayed on the Abstractions and Source Protection Zones map on [page 48 >](#)



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

10

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on [page 53](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
1	58m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Whit Brook



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

7 River and coastal flooding



- Site Outline**
- Search buffers in metres (m)**
- River and coastal flooding:**
- High
 - Medium
 - Low
 - Very Low
 - Historical Flood Events
 - Areas Used for Flood Storage
 - Areas Benefiting from Flood Defences
 - Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m

1

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 57 >](#)



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

River and coastal flooding - Flood Zones



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
 - Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on [page 57 >](#)

Location	Type
15m W	Zone 2 - (Fluvial /Tidal Models)

This data is sourced from the Environment Agency and Natural Resources Wales.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 62 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

9 Groundwater flooding



- Site Outline
- Search buffers in metres (m)
- High
 - Moderate - High
 - Moderate
 - Low
 - Negligible

9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 64 >](#)

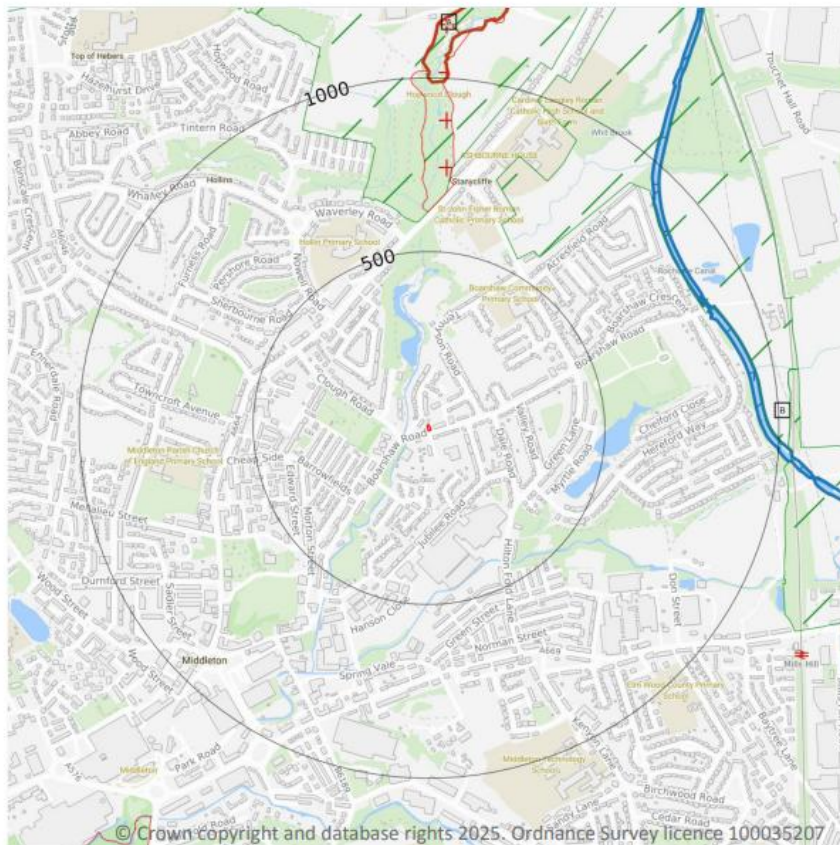
This data is sourced from Ambiantal Risk Analytics.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- + Local Nature Reserves (LNR)
- X Designated Ancient Woodland
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 65 >](#)

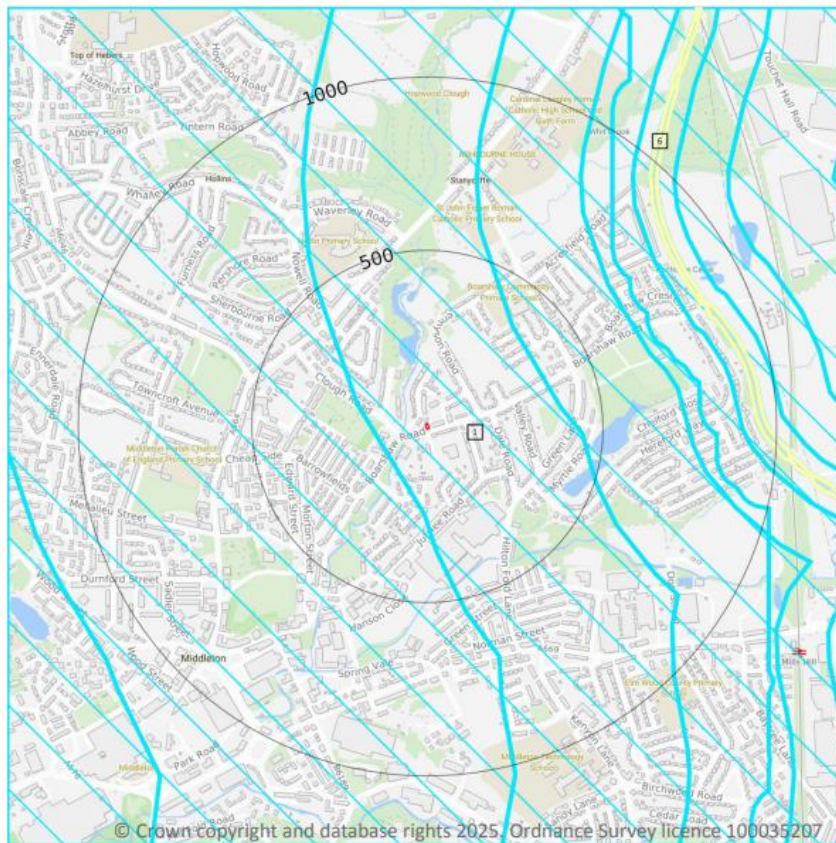
ID	Location	Name	Data source
B	849m NE	Rochdale Canal SSSI	Natural England



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 71 >](#)

ID	Location	Type of developments requiring consultation
1	On site	https://irz.geodata.org.uk/IRZ/step2.html?irzcode=0101054322201&notes=&location=389507,412645%20(IRZ%20polygon%20centre)

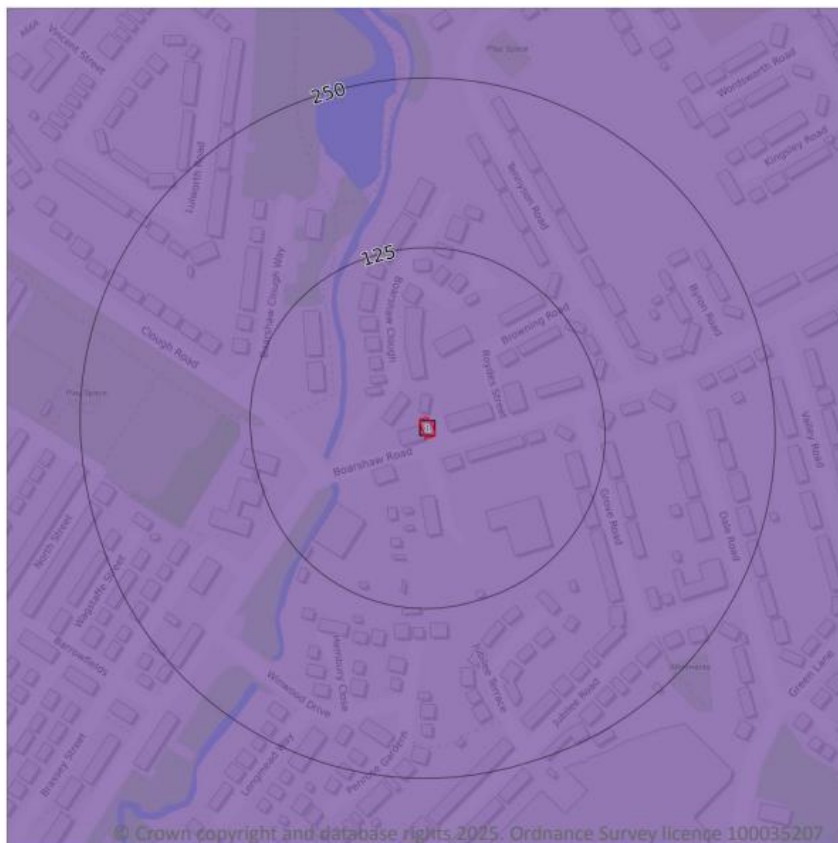
This data is sourced from Natural England.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 75 >](#)

ID	Location	Classification	Description
1	On site	Urban	Non-agricultural/no quality assigned

This data is sourced from Natural England.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

13 Habitat designations



- Site Outline**
- Search buffers in metres (m)**
- Priority Habitat Inventory
 - Open Mosaic Habitat
 - Limestone Pavement Orders
 - Habitat Networks**
 - Primary Habitat
 - Restorable Habitat
 - Associated Habitats
 - Habitat Restoration-Creation
 - Network Enhancement Zone 1
 - Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

2

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on [page 77 >](#)

ID	Location	Main Habitat	Other habitats
1	160m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	184m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

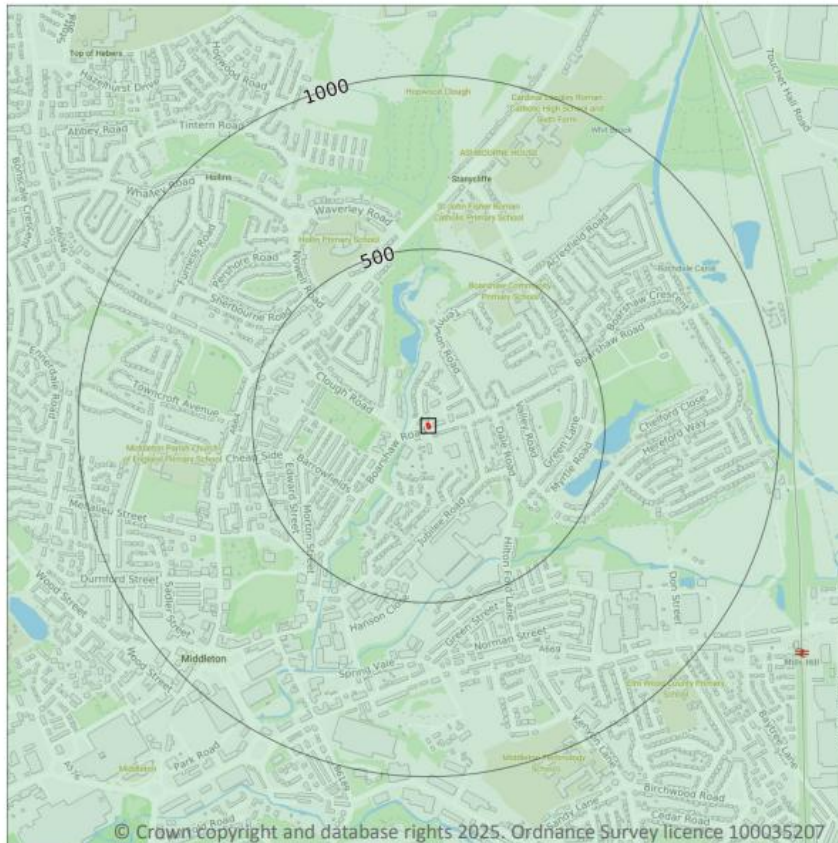
This data is sourced from Natural England.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 79 >](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD80NE

This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Geology 1:10,000 scale - Artificial and made ground



- Site Outline
- Search buffers in metres (m)
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

13

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 80 >](#)

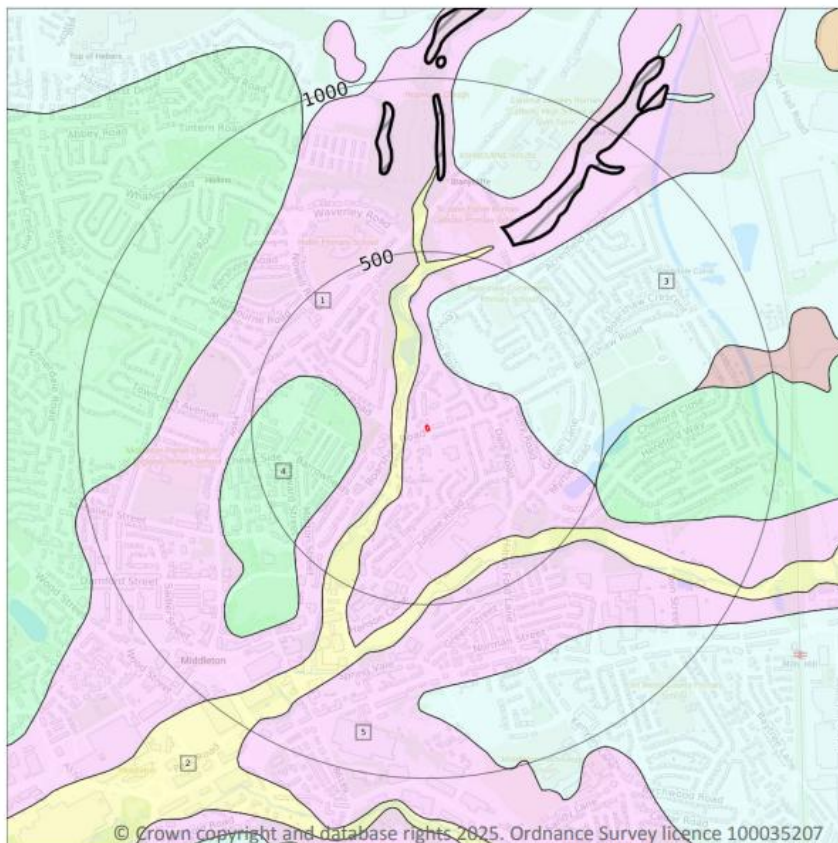
ID	Location	LEX Code	Description	Rock description
A	38m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
B	50m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	76m S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
B	106m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Geology 1:10,000 scale - Superficial



— Site Outline
Search buffers in metres (m)
 Landslip (10k)
Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

5

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 82](#) >

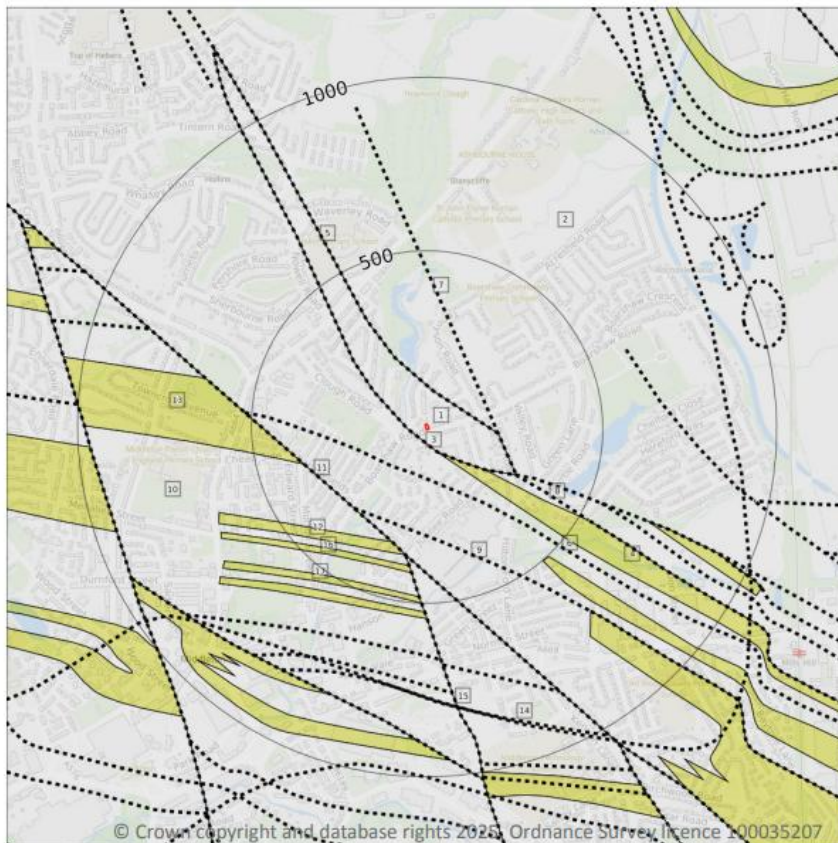
ID	Location	LEX Code	Description	Rock description
1	On site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
2	57m W	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
3	167m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

9

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 84](#) >

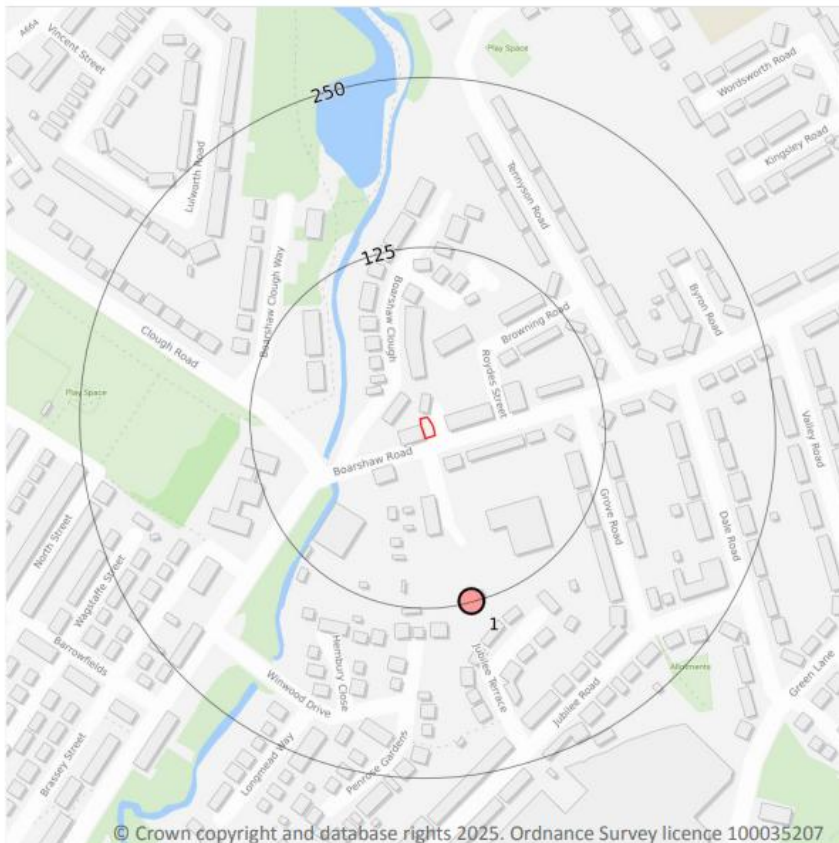
ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	32m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
4	70m S	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

1

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 93](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	124m S	387700 406559	RIBBLE MANUFACTURING CO BOARSHAW LANE	78.03	N	26961 ↗

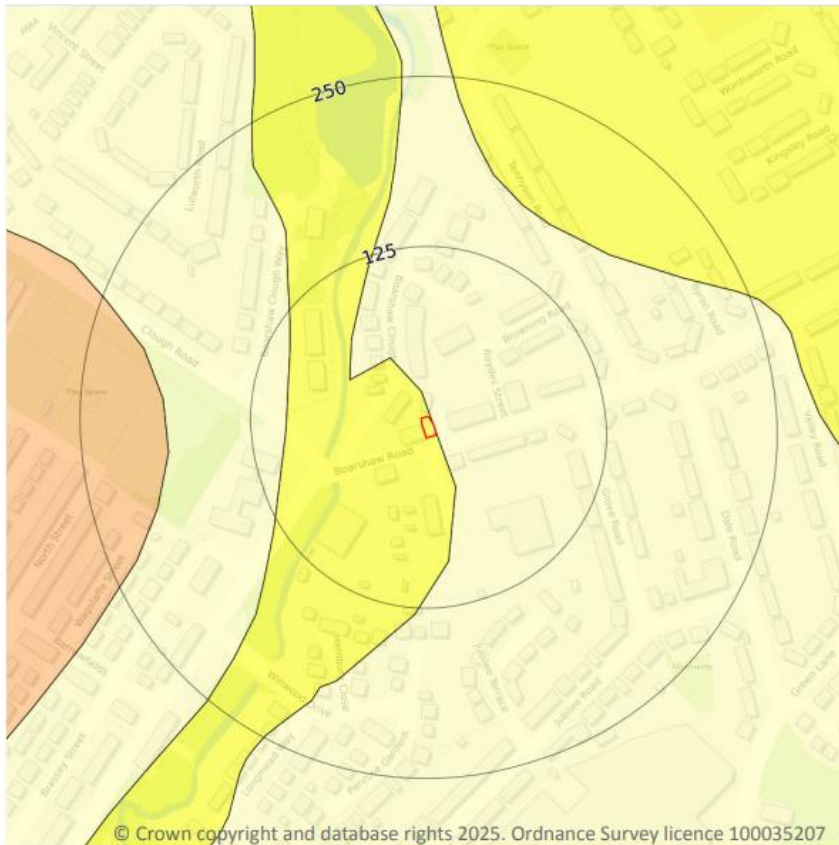
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

2

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 94](#) >

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.

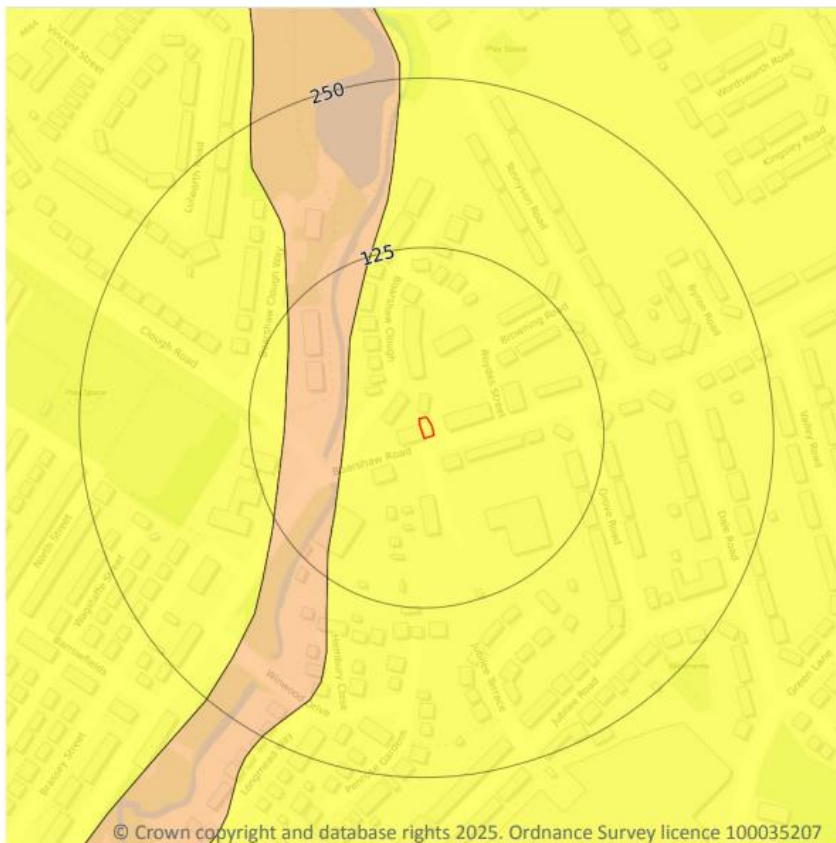
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 95 >](#)

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

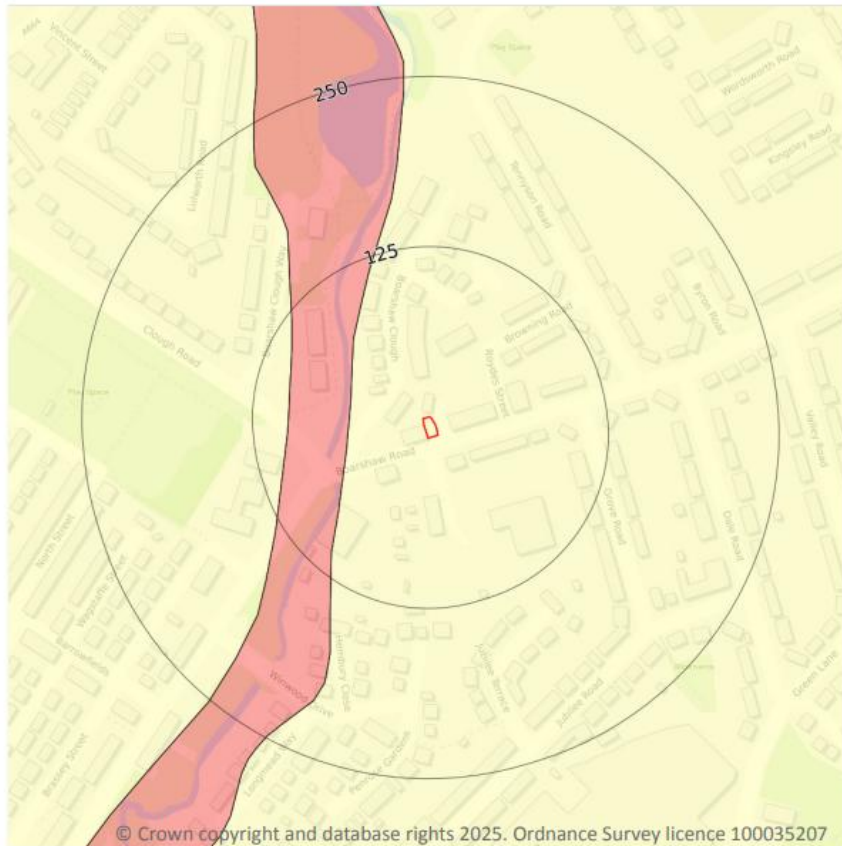
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 96 >](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

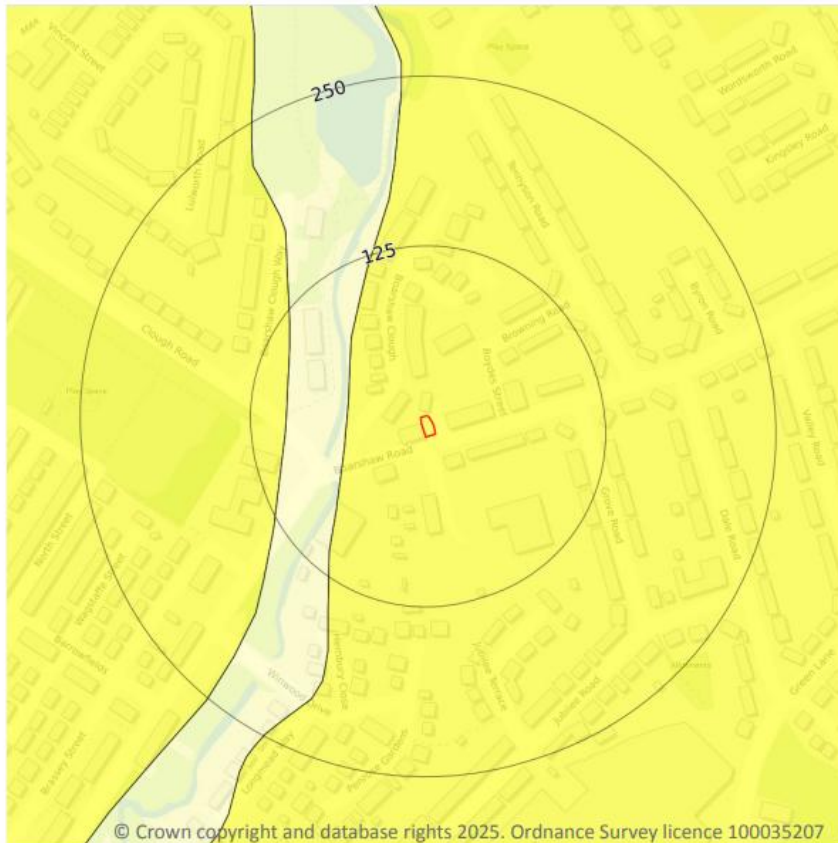
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 97 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

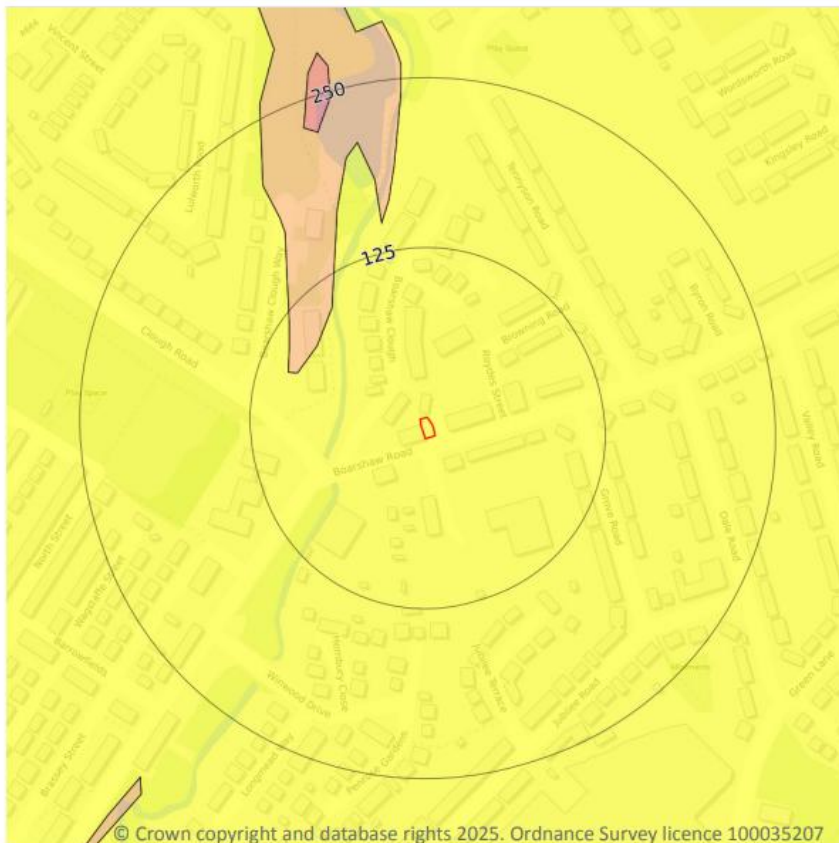
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on [page 98](#) >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

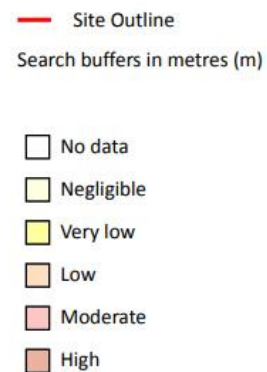
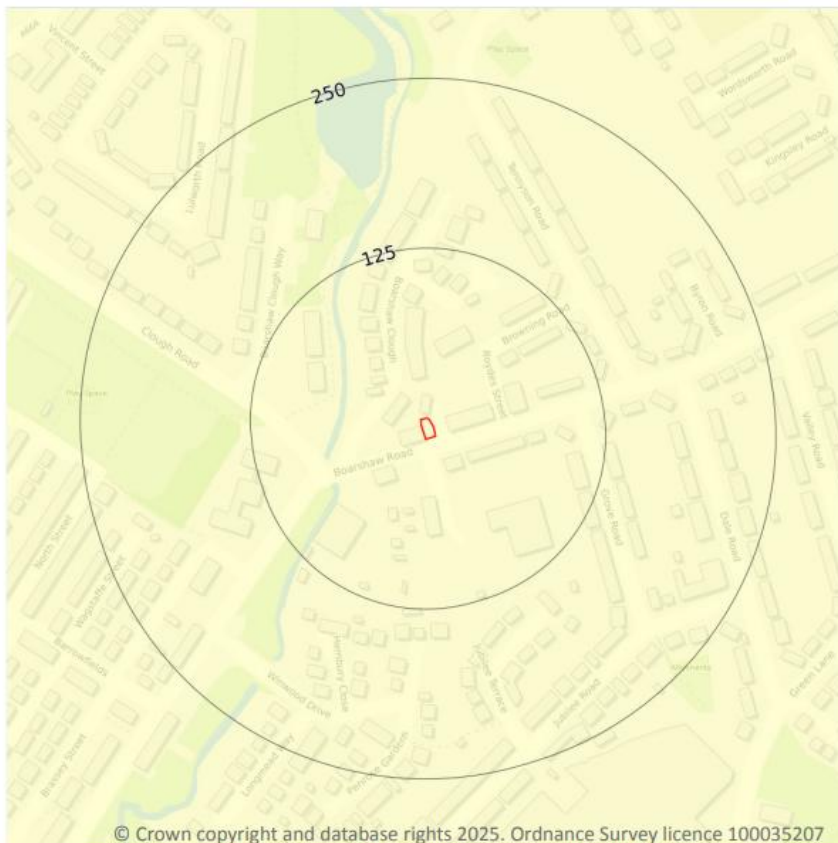
This data is sourced from the British Geological Survey.



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 99](#) >

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



 Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

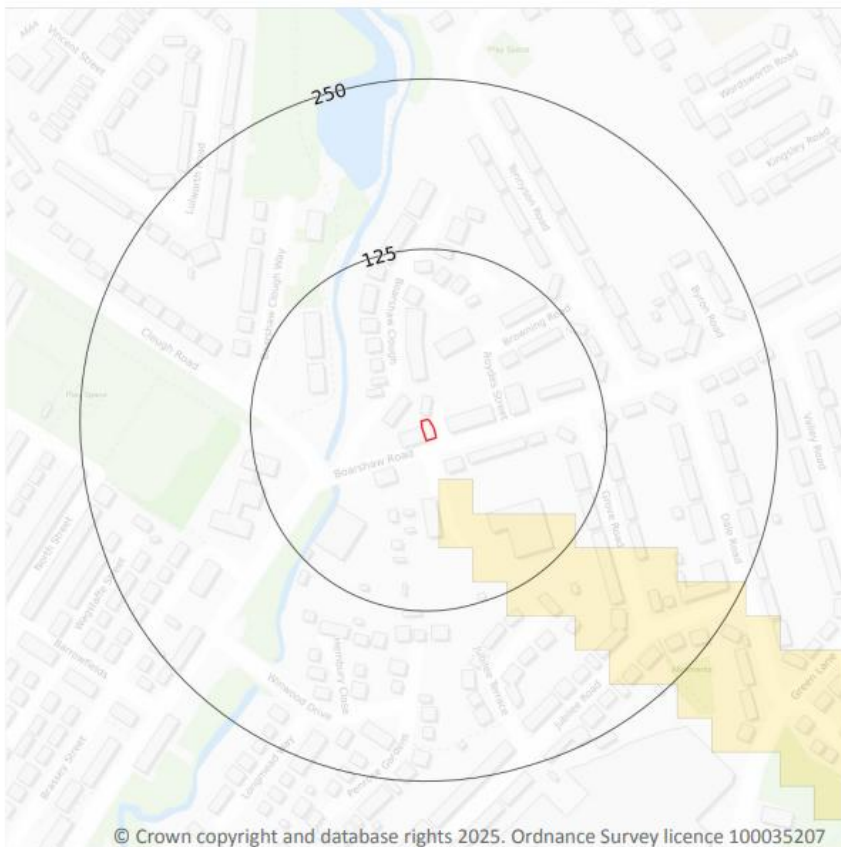
29/08/25



Land at Boarshaw Rd & Clough St,
Middleton

Ref: GS-TWO-6AV-IPM-9H8
Your ref: groundsure env-shah-boarshaw rd &
clough st-260825
Grid ref: 387667 406686

20 Radon



— Site Outline
Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 110 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None