

GEO-ENVIRONMENTAL AUDIT

PHASE 1 PRELIMINARY RISK ASSESSMENT

**KEN MILLS HOUSE
NEW STREET
SHAWCLOUGH
ROCHDALE
OL12 6NS**

Author: Daniel Slattery
Client: B&L Homes Ltd
Reference: rep-tjba-B&L-new st-Phs1Env-020326.docx

Revision	Date	Reason
0	March 2026	Original to support planning application for residential development.
1	March 2026	Sect 2 updated.
2	March 2026	Sect 1.11, 1.12, 1.13.1, & Appendix C/D amended/materials import spec.

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1. PHASE 1 - PRELIMINARY RISK ASSESSMENT.

1.1. Introduction.

T. J. Booth Associates have been appointed by B&L Homes Ltd to undertake an environmental assessment to a former commercial building on New Street, Shawclough.

Planning permission has been obtained for a change of use relating to a former commercial building into residential apartments. Condition No.6 on the planning approval related to environmental site assessment – see planning application particulars below:

APPLICATION REFERENCE: 25/01096/PRA56

Applicant Mr Brodie Ingoe(B & L Homes Limited) 247 Bury Old Road Prestwich Manchester M25 1JE UK	Agent Mrs SHEILA KEAN() JAMES CAMPBELL ASSOCIATES LTD CAMPBELL HOUSE 173 ROCHDALE RD FIRGROVE, MILNROW Rochdale Lancashire OL16 3BN United Kingdom
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Part I - Particulars of Application

Proposal: Prior approval for change of use from commercial, business and service (Class E) to 12 residential flats (Class C)
Location: Ken Mills Engineering Co New Street Rochdale OL12 6NS
Valid On: 28 October 2025

DECISION: PRIOR APPROVAL REQUIRED AND GRANTED SUBJECT TO CONDITIONS

Condition(s) (7)

- 6 Prior to first occupation of the development, a Phase I Report (Preliminary Risk Assessment) must be completed to assess the actual and/or potential contamination risks at the site. The Phase 1 Report must 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

Although the report is authored as of March 2026, initial reconnaissance by TJBA took place in September 2024.

As of March 2026, much of the internal building work has been undertaken.

As part of the assessment, current UK guidance for environmental investigation within the construction industry will be adhered to. 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. Site Plans.

The existing plan shows the site as a hardstanding area, currently used as a car park and for access to private residential garages.

The proposal is for a single detached 2 storey residential dwelling with access driveway and 2 parking spaces to the front, and soft landscaped garden area surrounding the property.

There is a small area of the car park that is to comprise astroturf, however, this is temporary astroturf placed above the proposed macadam which can be removed as required.

1.3. Historic Maps.

DATE	ON-SITE	OFF-SITE/SURROUNDING AREA
c1850	Shaw Clough Foundry (iron) building noted to the east corner of the Application Site – the building is much smaller than in the present day. The north corner appears to be part of neighbouring land. The south the Site appears to be an open yard area. There are buildings to the south side but the boundary appears to be skewed on the map incorporating the dwellings that currently exist and are outside of the Site.	The immediate local area comprises local residential buildings, as well as local amenities such as the public house, shops and schools. There are industrial buildings and infrastructure in the area with a gasometer noted 90m northwest, Lee Mill (woollen) approximately 150m northwest, Shaw Clough Mill (cotton) 75m west, and Horse Carr Mill (woollen) approximately 200m southwest. All mills have associated mill ponds. Much of the local area to the northeast to southeast is part of agricultural land. Shaw Clough village is noted to the west & southwest. Shaw Clough (watercourse) located approximately 100m north, and flows nominally northeast to southwest through the area.
c1890	Much larger building now incorporating most of the Site except for the northern part adjacent Sweet Briar Close. The note on the map indicates the Shawclough Foundry to be “disused”.	Much more detailed map of the area now shows back-to-back dwellings to the south. To the northwest boundary is Shawclough Mill which has increased in size with the mill now immediately next to the Application Site boundary. Small ponds noted 25-75m southeast at higher elevation. Brickworks noted 150m east, with Oxford Mill (cotton) beyond.
c1910	Site buildings now only noted along New Street, with open space to the rear.	Shawclough Mill now reduced in size and noted as Asbestos & India Rubber Works. The building remains butted up to the west Application Site boundary. Lee Mill reduced in size and noted as a soap & chemical works.
c1929	No change.	Asbestos India Rubber Works Increases in size to Shawclough Road. Lee Mill disused.
c1959-60	Works now encompass the rear yard area of the Site essentially taking up the footprint of the Site again apart from the north corner which appears to remain in other ownership.	Asbestos India Rubber Works now just noted as works. Lee Mill demolished and replaced with housing. Housing along New Street erected.
c1970-73	Building now extended into the north corner of Site.	Former asbestos works now noted as a transport depot. Further residential housing estates to the north and southeast. Shawclough Brook still present to the north.
c1984-89	No change except for the building noted as a warehouse.	Almost all original mills now demolished and replaced with residential housing estates. Shawclough Brook now fully culverted in the local area.
c1988-92	No change.	Horse Carr Mill now demolished and replaced with a housing estate.
c2003	No change.	Application Site surrounded by residential dwellings.
2023	No change.	Application Site surrounded by residential dwellings.

1.4. Present Day Maps.

Site Boundaries, Outlines of Structures and Buildings:	The Application Site is now completely surrounded by residential development on all sides. As of 2026, the Site comprises the former ‘works’ buildings fronting New Street, and wrapping around Sweet Briar Street. The rear of the Site is open yard area where part of the extension building was demolished c2023/24.
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Ground Contours, Natural Drainage Features:	Overall land elevation falls to the north towards Shawclough Brook which is now fully culverted. The gardens to the north, bank down to the residential buildings at lower elevation.
Water Courses:	Shawclough Brook is now fully culverted beneath the local area.
Below Ground Obstructions:	None noted.

1.5. Geology.

Bedrock Geology:	Pennine Lower Coal Measures Formation: mudstone, siltstone, and Sandstone.
Superficial Geology:	Till, Devensian-Diamicton.
Coal Seams/Faults.	No coal seams in the immediate local vicinity.

1.6. BGS Boreholes Records.

No BGS boreholes within relevant distances.

1.7. Groundsure Environmental Data.

1.7.1. Historical Industrial Sites.

Historical industrial land uses:	4 onsite records including unspecified works, and iron foundry. No unspecified tanks were noted in the database.
Historical tanks:	No tanks noted on the Application Site. The nearest historical tanks are 87m northwest.
Historical energy features:	Closest is an electrical substation from 1970-94 90m west.
Historical petrol stations:	None within influencing distance of the site.
Historical garages:	None within influencing distance of the site.
Historical military land:	None noted.
Potentially infilled land:	None noted.

1.7.2. Waste & Landfill.

Active or recent landfill:	No records within a 250m radius.
Historical landfill (BGS):	No records within a 250m radius.
Historical landfill (LPA/mapping records):	2 records relating to a small area to the north, and 2 records relating to a small area to the northwest. Both relate to very small areas of refuse heaps, and have no related data.
Historical landfill (EA/NRW records):	1 record relating to the former Shawclough Brickworks 208m east (inert fill and higher than the Application Site). 1 record relating to the former Shawclough Road reservoir 214m west. (Area is very small and at much higher elevation.
Historical waste sites:	No records within a 250m radius.
Licensed waste sites:	No records within a 250m radius.
Waste exemptions:	No records within a 250m radius.

1.7.3. Current Industrial Land Use.

Recent industrial land uses:	1 record noted on-site of unspecified works. The next nearest is a substation 116m west.
NGD – current or recent tanks:	None within influencing distance of the site.
Current or recent petrol stations:	None within influencing distance of the site.
Sites determined as contaminated land:	0 records within 500m.
Control of major accident hazards (COMAH):	None within influencing distance of the site.
Regulated explosive sites:	None within influencing distance of the site.
Licensed industrial activities (Part A(1)):	None within influencing distance of the site.
Licensed pollutant release (Part A(2)/B):	None within influencing distance of the site.
Pollution incidents (EA/NRW):	None within influencing distance of the site.
Discharge to controlled waters.	None within influencing distance of the site.

1.7.4. Hydrogeology & Hydrology.

Superficial aquifer:	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.
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 aquifers.
Groundwater vulnerability:	Secondary superficial aquifer - Summary Classification: Secondary superficial aquifer - Low Vulnerability, Leaching class: Low, Superficial Geology Vulnerability: Low, Bedrock Vulnerability: Low.
Source protection zone:	Not within a Source Protection Zone.
Groundwater abstraction licenses:	Closest is 1305m distant.
Surface water abstraction licences:	Closest active is 1319m northeast (potable).
Source protection zones:	0 records noted within 500m.

1.7.5. 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:	Low risk.
Potential for ground dissolution stability hazards:	Negligible.

1.7.6. Radon.

Estimated properties affected:	Less than 1% at or above the action level.
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Radon protection measures required:	None.
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1.8. Mining Remediation Authority.

Mine Shafts, Pits, Adits/Entries:	None noted local to the Site.
Past/Present Recorded Underground Mining:	Deeper underground workings noted.
Probable/Potential Shallow Underground Workings & Outcrops:	None noted local to the Site.
Outcrops:	None noted local to the Site.
Development High Risk Area:	The Site is not within a Development High Risk Area.

1.9. Local Authority Details.

No data noted.

1.10. Previous Site Investigations.

None undertaken.

1.11. Site Reconnaissance (September 2024).

Details of Existing Structures:	A site reconnaissance was undertaken previously in September 2024. The interior and exterior were briefly inspected. Externally, the frontage of the building along New Street & Sweet Briar Close was being cleaned up, with stonework cleaned, and repointed. To the rear yard area, the former extension had been removed. Where visible, the original ground surface appeared to comprise minor made ground which may contain minor contaminants such as metals, inorganics, PAHs & asbestos, but on visual/olfactory inspection it was relatively clean and free from notable contaminated material. The formation of the rear yard/car park was being undertaken with imported inert fill (6f2 recycled demolition crush) being placed on the existing surface to provide a suitable structural capping layer for the car park, and topped with a subbase – refer to photos on pages 25-27 & certification on page 31-34 in Appendix. Inside, the building had been stripped of former working structures etc. The floors comprised a mix of concrete slabs, and historic paving slabs. There was no visual or olfactory evidence of contamination, and no evidence of former infilled pits etc. The only exception was an extant UU manhole within the building serving the rear of the site.
Adjacent Properties:	Surrounded by residential dwellings and gardens. Old disused lane to the north side.
Water Levels, Directions of Flow and Rates in Rivers:	None noted.
Old Mine or Quarry Workings:	None noted.
Obvious/Immediate Hazards to Health/Safety:	None noted.

Areas of Discoloured Soil, Polluted Water, Vegetation, and Significant Odours:	None noted.
Relevant Ground Levels, Ground Water Levels, Positions of Wells and Springs:	The Site was relatively level to the rear, with a fall in elevation to the north corner where the rear entrance meets Sweet Briar Close. There was a small retaining wall to the northwest boundary, which accounts for the made ground noted above in this area.

1.12. As Built Records (March 2026).

Prior to construction, an asbestos survey was undertaken, and all asbestos removed professionally by a qualified/certified asbestos surveyor/contractor – refer to completion certificate in the Appendix (page 35).

Internally, the floors were excavated in places to provide drainage soil pop up pipes, and to construct necessary support walls for upper floor structures.

The support wall was positioned to the northwest side of the existing building, close to the rear of the elevation, indicating relatively shallow clay beneath the entirety of the ground floor slabs.

Drainage channels were only excavated into the made ground/blinding enough to fit a 100mm pipe, and thus no other excavations through to virgin clay was noted.

The investigations revealed nominally 150 thick slabs sat on minimal made ground used as a blinding course. This in turn was sat on light brown-grey mottled virgin CLAY. Virgin CLAY is known to underlie the area, predominantly firm to stiff.

The floors were reinstated with mass concrete fill, and finished with DPM, insulation, and floor screed.

Refer to photos in Appendix.

1.13. Identification of Source-Pathway-Receptor.

1.13.1. Summary & Discussion.

The Application Site was formerly a foundry from c1850s to 1890s, and then after was unspecified works until the present day. Initially the foundry was a much smaller building which was extended over time eventually taking up the entire site footprint. There has been no evidence for the use of tanks either on historic mapping, anecdotal evidence, or from the reconnaissance survey.

In the wider area the site was originally surrounded by farmland, the Shawclough village, and other commercial works & mills predominantly working cotton and woollen products. Over time these grew in size, the most pertinent being Shawclough Mill which later became the Asbestos India Rubber Works, the mill structure of which was situated immediately adjacent the site, albeit at lower level.

The Application Site is at higher level to the adjacent residential estate (Hawley Green) to the northwest. However, general contours of the area suggest the difference in level is due to the Hawley Green site having been excavated to a lower level historically for mill extension.

The Application Site and adjacent terraces (as well as the Sweet Briars Lane semi-detached dwellings) are in keeping with the surrounding land and general contours apart from their boundary with the Hawley Green site.

However, Hawley Green in contrast, is quite obviously excavated lower than the surrounding land on all sides apart from the dip on Shawclough Road, which was the former entrance to Shawclough Mill.

Ultimately this suggests that the Site and surrounding high areas are a result of the Hawley Green Site having undergone historic excavation rather than the rest of the area (and Application Site) having been artificially built up.

On Site reconnaissance, there was no visual or olfactory evidence of contamination within the interior of the building. Undoubtedly chemical storage would have occurred within the building over time, but there was no evidence of former tanks, nor areas of infill where tanks may have been excavated and infilled.

Trenches excavated within the building for structural/drainage purposes noted virgin CLAY at shallow depth, with only a minimal blinding/MADE GROUND between the CLAY & slab. This is pertinent for two reasons:

- The minimal profile of the MADE GROUND beneath the slabs are too shallow to provide any risk with regard to ground gas;

- The CLAY superfcials beneath the Site will act to mitigate any ground gases from outside the Site although sources are minimal.

To the rear yard area, the existing surface prior to car park construction comprised minor made ground, but no visual or olfactory contamination was evident. There may be some minor contamination associated with this material (metals, inorganics, PAHs & asbestos), but the formation of the car park capping/subbase and surface courses will mitigate any minor risk from this source.

There is a small area of the car park that is to comprise astroturf noted on the site plan, however, this is temporary placed above the proposed macadam which can be removed as required, and therefore has the same mitigation with respect to any potential underlying minor contaminants provided by the permanent car park and inert buildup.

Radon is not an issue in locally.

Coal mining or its legacy is not an issue locally.

Ground gas from landfills or infilled land aren't an issue locally.

All infilled land is either minimal in size or at higher elevation to the Site.

1.13.2. Potential Contaminants.

CURRENT SOURCE/S	CONTAMINANT/S
MADE GROUND.	Metals, PAHs, sulphates, asbestos.

1.13.3. Potential Pathways.

The potential pathways to/from the Application 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

1.13.4. Potential Receptors.

Receptors mainly comprise workers in the construction phase, and residents for the proposed end use.

Controlled waters:

1.14. Preliminary Conceptual Model.

POLLUTANT RISK IDENTIFIER	SOURCE	CONTAMINANT TYPE	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. PATHWAY IS MITIGATED BY PERMANENT END USE/CAR PARK & ASSOCIATED BUILD UP.	Primarily human - Site construction operatives & future site users.	Minor made ground was noted on the site surface to the exterior areas, however virgin clay has been noted at very shallow depth on the interior of the building. The made ground profile is expected to be shallow, not particularly contaminated, and is mitigated by the proposed permanent hard standing & car park area. Due to the pathway being removed, the pollution linkage is broken.	Medium.	Unlikely.	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 was no evidence of contamination & the building is supplied with water routed through the virgin CLAY noted at shallow depth beneath the ground slabs. No particular source, no pathway. The pollution linkage is broken.	Medium.	Unlikely.	Low risk.
PL3	Mobile contaminants in the water environment.	Hydrocarbons.	Groundwater.	Aquifer.	No evidence of tanks, spills or mobile contamination. In addition, the site is underlain by glacial clay which would protect the underlying aquifer. No source noted and the pathway isn't present. The pollution linkage is broken.	Medium.	Unlikely.	Low risk.
PL4	Mobile contaminants in the water environment.	Hydrocarbons.	Groundwater.	Watercourses/canals.	No evidence of tanks, spills or mobile contamination. In addition, the site is underlain by glacial clay which would protect the underlying aquifer & movement to watercourses. No source noted and the pathway isn't present. Receptor not present in the immediate locality. The pollution linkage is broken.	Medium.	Unlikely.	Low risk.
PL5	Geological ground gas from coal seams/workings.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human. Explosion, suffocation.	No shallow coal mines or seams. Source missing, no credible pathway. The pollution linkage is broken.	Mild.	Unlikely.	Very low risk.



PL6	Geological ground gas, radon sources in Namurian deposits.	Rn.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants.	The site-specific radon maps suggest a risk of less than 1% of properties affected in the local area which is considered low risk. No radon protection measures are required. Source missing, no pollutant linkage.	Mild.	Unlikely.	Very low risk.
PL7	Anthropogenic ground gas from historic/present landfill.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	There are no current active landfill sites in the local area. There are some very small areas of infilled land locally, but are insignificantly small. A larger area to the east is inert & at higher level to the site. Sources questionable, no credible pathway. The pollution linkage is broken.	Medium.	Unlikely.	Low risk.
PL8	Anthropogenic ground gas from on-site refuse tips/infilled ponds/infilled land.	CH ₄ , CO ₂ , other trace gases.	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	There are no current active landfill sites in the local area. There are some very small areas of infilled land locally, but are insignificantly small. A larger area to the east is inert & at higher level to the site. Sources questionable, no credible pathway. The pollution linkage is broken.	Medium.	Unlikely.	Low risk.
PL9	Anthropogenic ground gas sources from alluvium.	CH ₄ , CO ₂ .	Diffusion through soil, substructures, aerial inhalation.	Human - future Site residential occupants. Explosion, suffocation.	No alluvial deposits noted beneath the Site. Source missing. The pollution linkage is broken.	Mild.	Unlikely.	Very low risk.

1.15. Preliminary Risk Assessment.

1.15.1. Human Health Risk.

1.15.1.1. Shallow soil contamination.

No risk to the development end users.

No soil sampling needs to be undertaken.

1.15.1.2. Buildings & services.

1.15.1.2.1. Water pipes.

No risk to the development end users.

Any routing of water pipes will be through virgin CLAY.

1.15.1.3. Ground Gas Risk.

1.15.1.3.1. Historic landfill sites.

No risk to the development end users.

No further assessment required.

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

No risk to the development end users.

No further assessment required.

1.15.1.3.3. Radon.

No risk to the development end users.

No further assessment required.

1.15.1.3.4. Alluvium.

No risk to the development end users.

No further assessment required.

1.15.2. Controlled Waters Risk.

No risk.

No further assessment required.

2. REMEDIATION & VERIFICATION.

2.1. Remediation Statement.

Planning condition No 6 indicated that prior to occupation of the development, a Phase 1 Report needed to be completed for the Site.

The Phase 1 Report needed to include a desk top study, site walkover, conceptual model, basic hazard assessment, and recommendation regarding remedial measures if found to be required by the assessment. This report has included all of the above.

Environmental risk works on the source-pathway-receptor model. For each risk category: a source, a credible pathway, and a receptor/end user; must all be present for there to be a pollution linkage and therefore a risk. If one or more of the source, pathway or receptor are not present, the risk is mitigated.

Through analysis of the data study, site walkover & subsequent model and risk assessment; it is concluded that there are no risks to the building/end user or other receptors; and it is therefore proposed that no remedial measures are required for the proposed end use.

2.2. Verification & Completion Statement.

The planning condition requires a completion letter/statement.

Prior to demolition and involvement by TJ Booth Associates, the only suspected contaminative materials related to asbestos, which was located around the former structures comprising ACM sheet materials as follows:

- ACM roof materials (small area to north block).

Demolished Building formerly to rear yard area:

- Internal flat lining boards.
- ACM roof, walls, gables, & gutters.
- Fibre board lining panels.
- ACM rain water pipe.
- ACM valley gutter.

All asbestos materials were removed prior to any construction taking place, by a registered & qualified survey/removal specialist.

On T J Booth Associates site reconnaissance, no visual or olfactory evidence of contamination was suspected.

Since construction & renovation of the building internals & external yard area, the site contractor has not reported any suspect areas of contamination either inside the building, beneath the ground floor slabs when excavated, or externally.

Photographic evidence has been included in the Appendix.

2.3. Final Risk Assessment & Conclusion.

As no further potential contamination has been suspected in the renovation, there is no change to the findings of the preliminary risk assessment.

Due to the above, no further risk assessment, investigations, or environmental reporting is required.

The site is suitable for the proposed end use.

This report should be issued to the LPA, and review by the RMBC Contaminated Land Officer prior to condition discharge.

Signed.....  .

D.S. Slattery BSc (Hons).

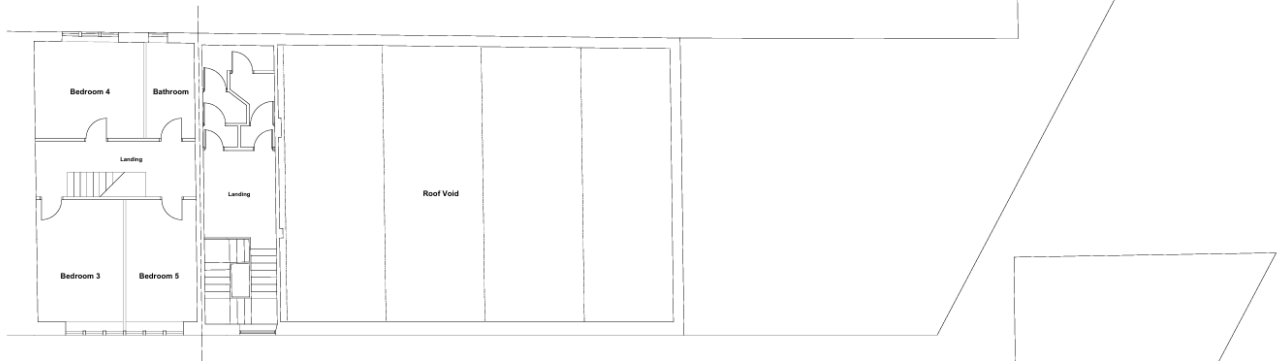
T J Booth Associates.

Authorised...  .

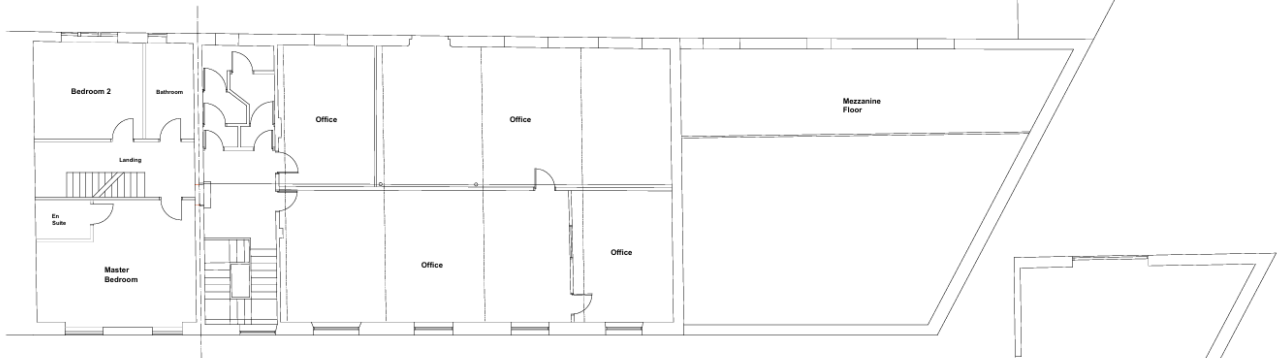
T J Booth BSc (Hons), C. Eng. C. Env. MICE.

T J Booth Associates.

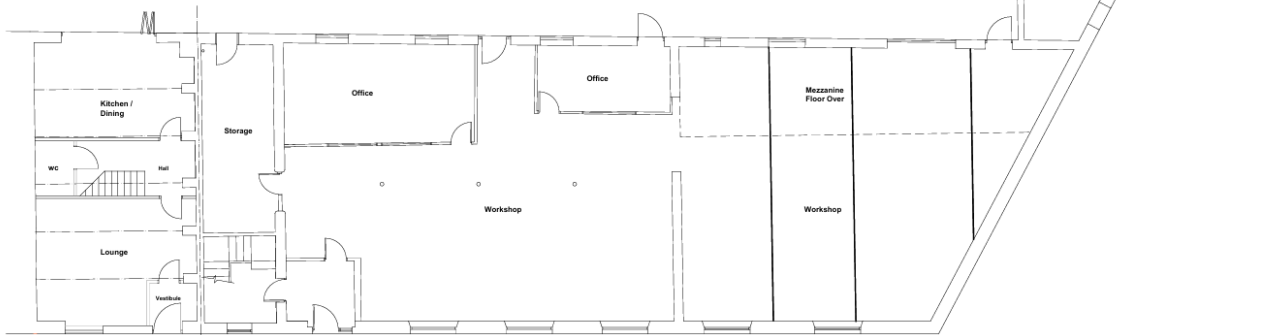
3.2. Existing Plans.



EXISTING SECOND FLOOR PLAN

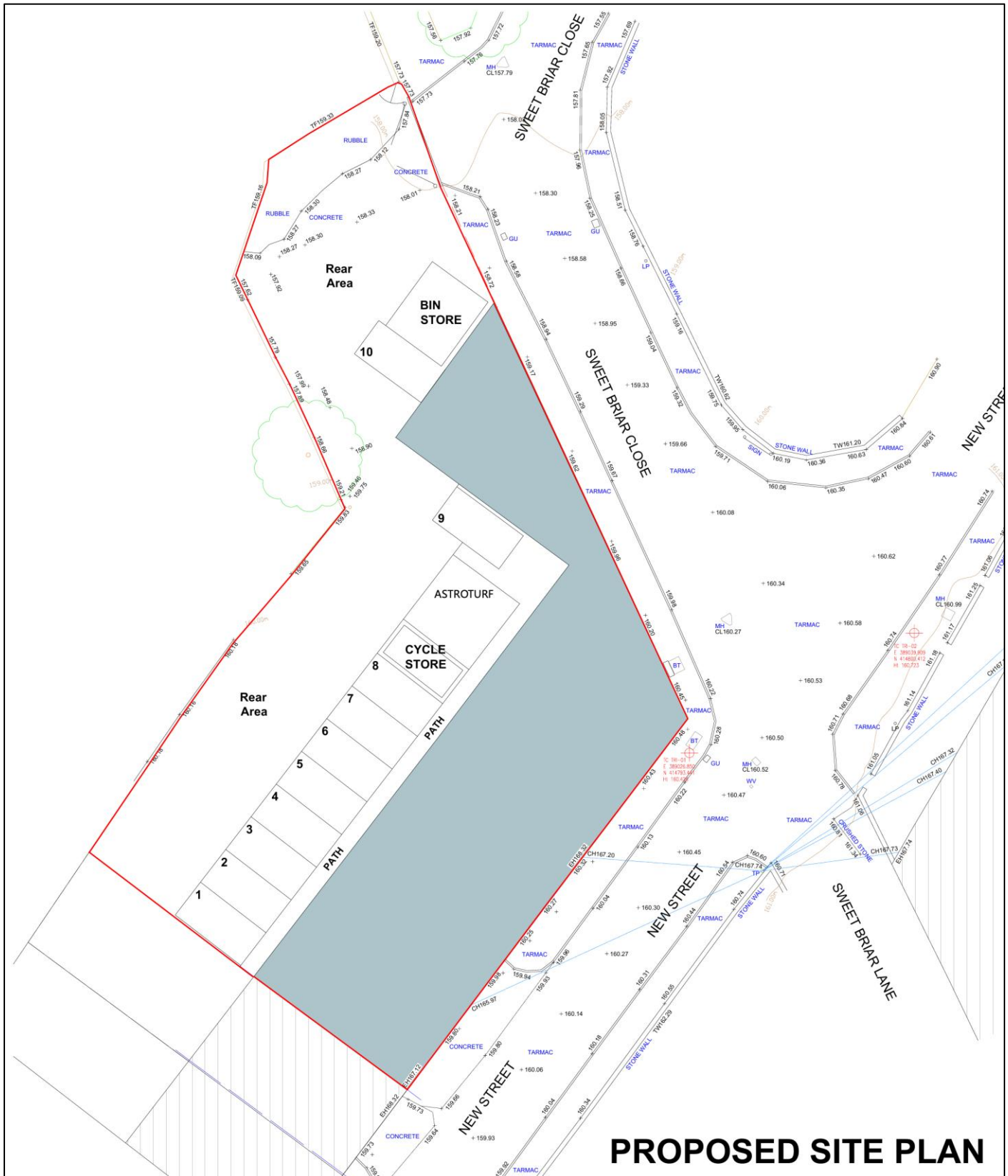


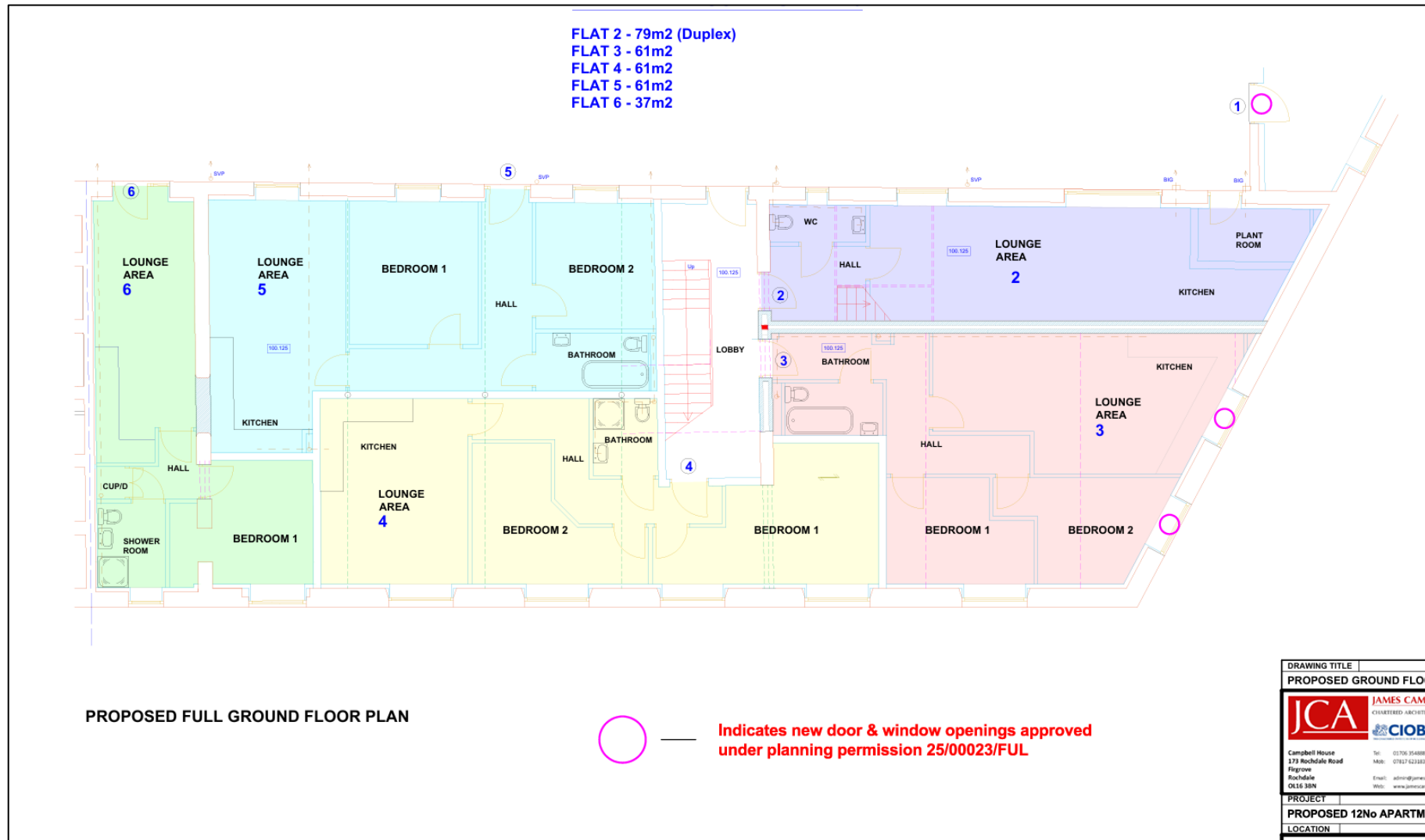
EXISTING FIRST FLOOR PLAN

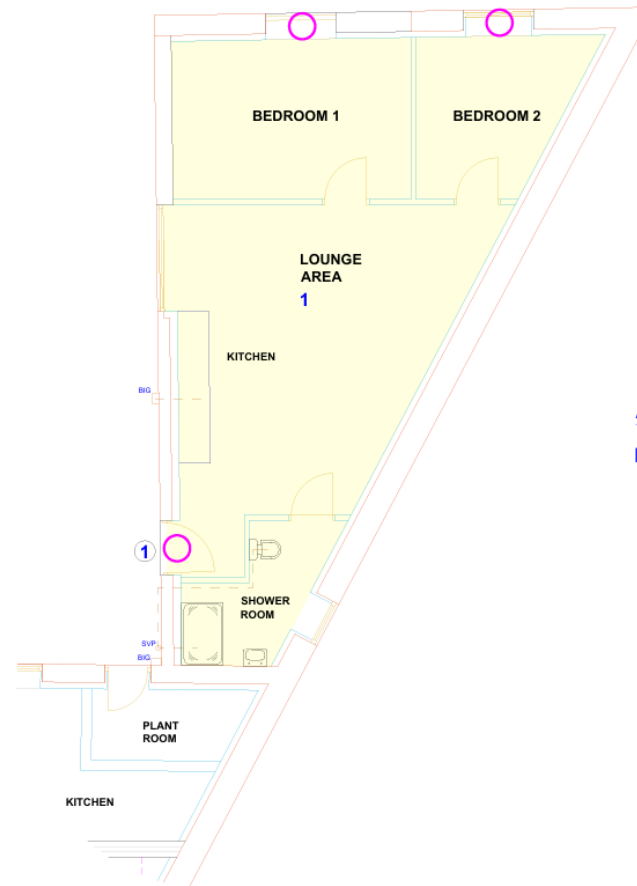


EXISTING GROUND FLOOR PLAN

3.3. Proposed Plans.







APARTMENT SCHEDULE 1

FLAT 1 - 61.5m²

PROPOSED GROUND FLOOR PLAN 2

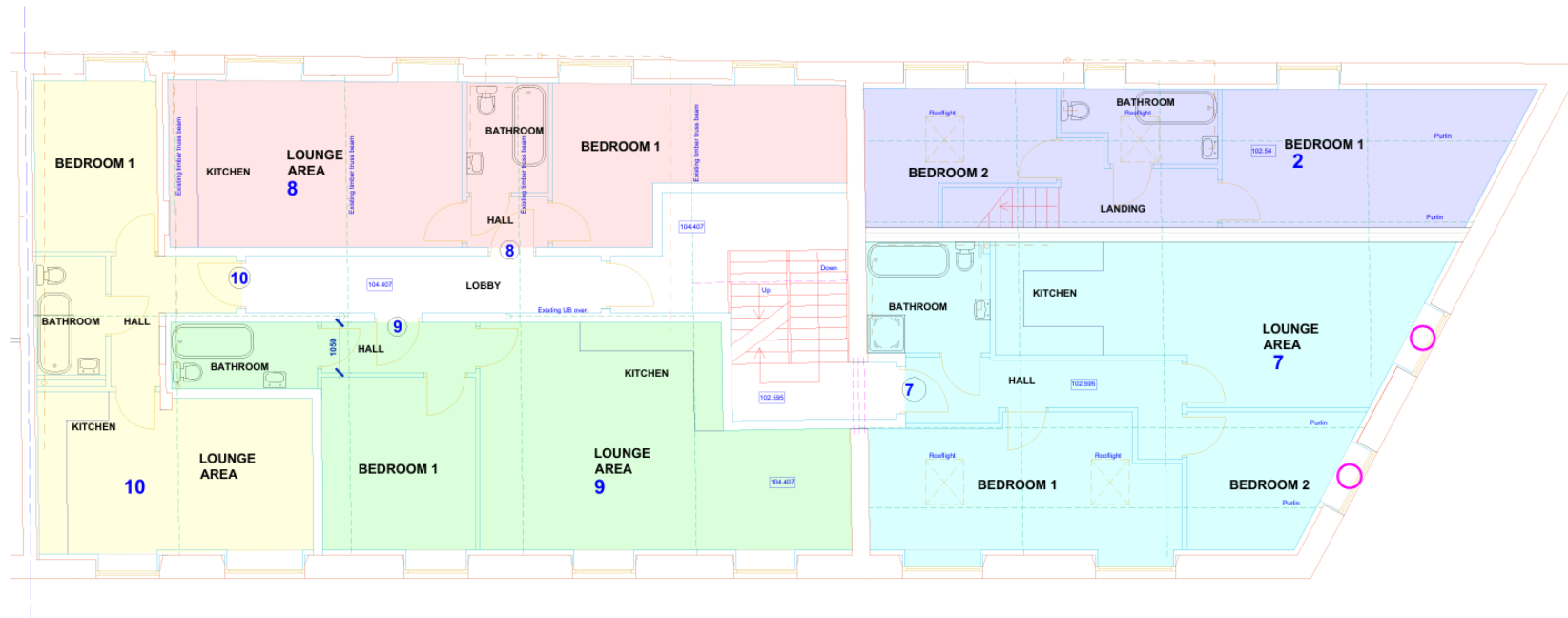
— Indicates new door & window openings approved under planning permission 25/00023/FUL

DRAWING TITLE	PROPOSED GRO
JCA	
Campbell House 173 Rochdale Road Rogrove Rochdale OL16 3BN	
PROJECT	
PROPOSED 12N	
LOCATION	
Ken Mills Engine New Street Shawclough Rochdale	

APARTMENT SCHEDULE 2, 7, 8, 9, & 10

FLAT 2 - 79m² (Duplex)
 FLAT 7 - 69.5m²
 FLAT 8 - 44m²
 FLAT 9 - 52m²
 FLAT 10 - 38.2m²

CONSTRUCTION



PROPOSED FIRST FLOOR PLAN



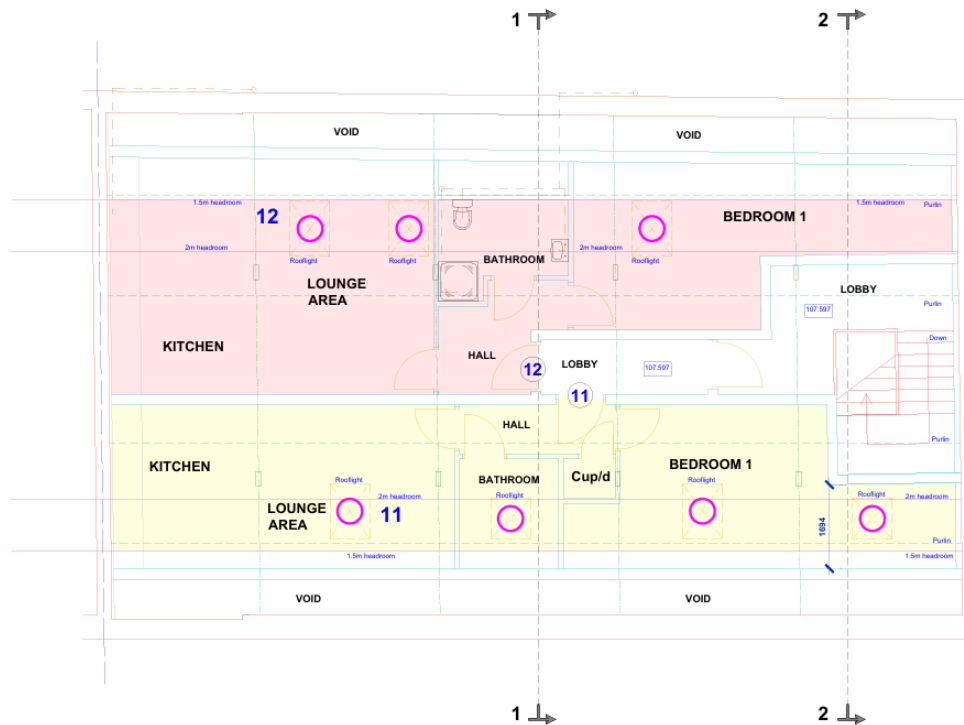
Indicates new door & window openings approved under planning permission 25/00023/FUL

DRAWING TITLE	PROPOSED FIRST FLOOR
JCA JAMES CAM CHARTERED ARCHITECT	CIQB
Campbell House 173 Rochdale Road Rugby Rochdale OL16 3BN	Tel: 01763 354888 Mob: 07817 623162 Email: admin@jcam.co.uk Web: www.jcam.co.uk
PROJECT	PROPOSED 12No APARTM
LOCATION	Ken Mills Engineering

APARTMENT SCHEDULE 11 & 12

FLAT 11 - 47m² (Floor space above 1.5m)
FLAT 12 - 50m² (Floor space above 1.5m)

CONSTRUCTION



PROPOSED SECOND FLOOR PLAN



Indicates new door & window openings approved under planning permission 25/00023/FUL

DRAWING TITLE	
PROPOSED SECOND FLOOR	
 	
Campbell House 173 Rochdale Road Ringrove Rochdale OL16 3BN	
Tel: 01762 354999 Mob: 07827 422464 Email: admin@jcam.co.uk Web: www.jcam.co.uk	
PROJECT	
PROPOSED 12No APARTMENTS	
LOCATION	
Ken Mills Engineering New Street	

4. APPENDIX B: PHOTOGRAPHS.







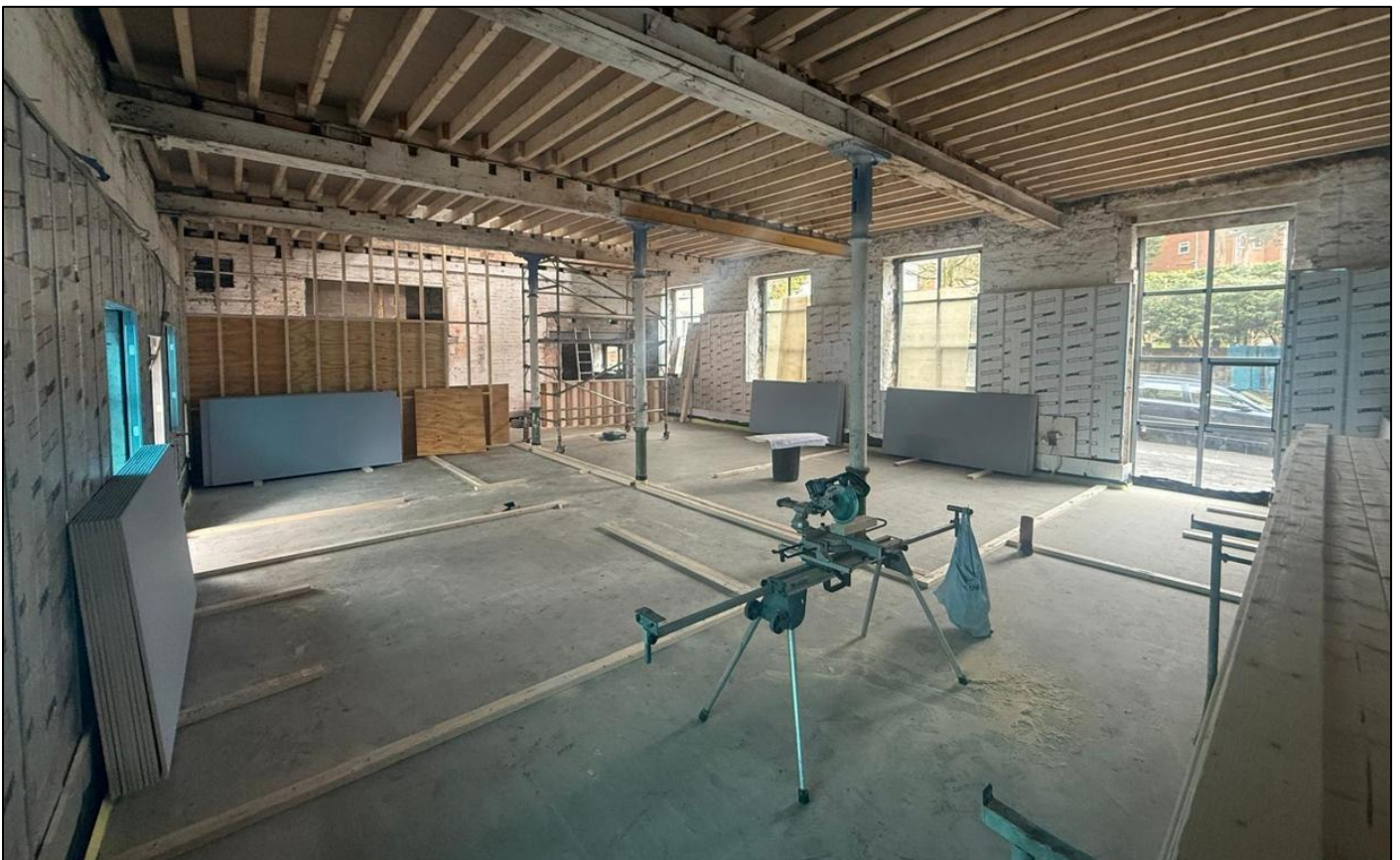












5. APPENDIX C: CERTIFICATION.

MURRAY RIX

CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client Pearl Environmental (UK) Ltd**Address** 59 Marford Crescent
Sale
Cheshire
M33 4DL**Contract** Cheshire Demo -
Moss Lane, Macclesfield**Job Number** MRN 24059/13**Date of Issue** 18 August 2024**Page** 1 of 4

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

Murray Rix is the trading name of Murray Rix (Northern) Limited. Registered in England 2878361

MURRAY RIX
ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

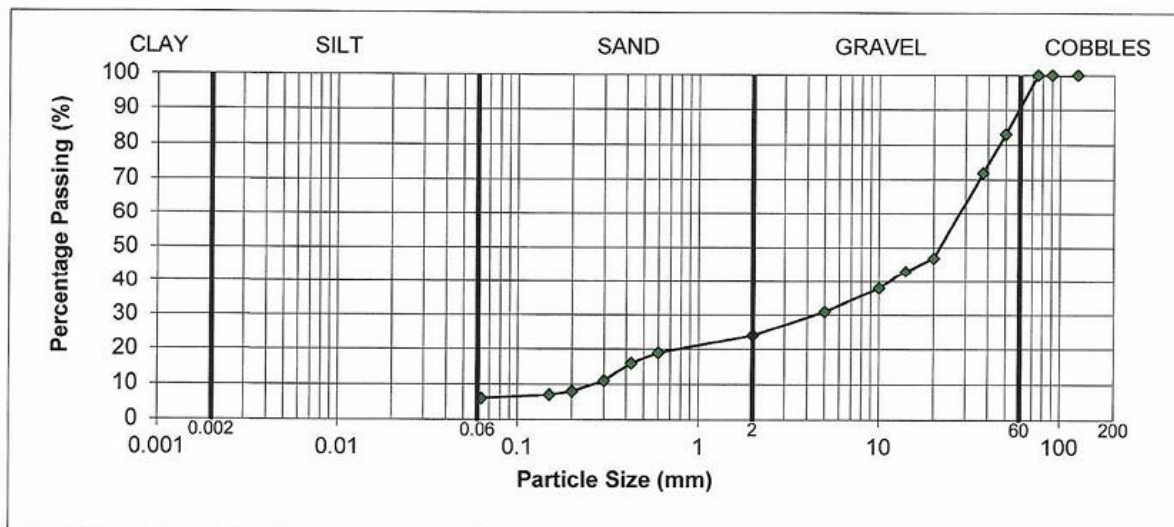
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Pearl Environmental (UK) Ltd
SITE	Cheshire Demo - Moss Lane, Macclesfield
JOB NUMBER	MRN 24059/13

SAMPLE LABEL	6F2	DATE SAMPLED	11-Aug-24
LAB SAMPLE No	5128001	DATE RECEIVED	11-Aug-24
DATE TESTED	12-Aug-24	SAMPLED BY	Client

MATERIAL	Recycled Crush
ADVISED SOURCE	Cheshire Demo - Moss Lane, Macclesfield

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	5	31	10-45
90	100	80-100	2	24	
75	100	65-100	0.6	19	0-25
50	83		0.425	16	
37.5	72	45-100	0.3	11	
20	47		0.2	8	
14	43		0.15	7	
10	38	15-60	0.063	6	0-12



REMARKS

Sample complies with the advised grading specification for a 6F2 material (SHW Series 600, Table 6/2, Feb. 2017)

SIGNED

NAME

O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE

18-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

**TEST CERTIFICATE**

DETERMINATION OF CONSTITUENTS OF COARSE RECYCLED AGGREGATE

BS EN 933-11:2009

CLIENT	Pearl Environmental (UK) Ltd
SITE	Cheshire Demo - Moss Lane, Macclesfield
JOB NUMBER	MRN 24059/13

SAMPLE DETAILS

Laboratory sample number : 5128001
 Site mark : 6F2
 Advised source : Cheshire Demo - Moss Lane, Macclesfield
 Material : Recycled Crush
 Certificate of sampling received : No
 Date and time of sampling : 11-Aug-24
 Date received at Laboratory : 11-Aug-24
 Date of start of test : 12-Aug-24
 Sampling Location : Site
 Method of sampling : BS EN 932-1 : 1997
 Sampled by : Client
 Mass of dry sample tested : 50 kg
 Drying Temperature : 110 ± 5°C

RESULT

Constituent	Description	Proportion (%)
Rc	Concrete, Concrete products, Mortar, Concrete masonry units	55
Ru	Unbound aggregate, Natural stone, Hydraulically bound aggregate	0.2
Rb	Clay masonry units (i.e. bricks & tiles), Calcium silicate masonry units, Aerated non-floating concrete	44
Ra	Bituminous materials	0.1
Rg	Glass	0.0
X	Other: Cohesive (i.e. clay & soil), Metals (ferrous & non-ferrous), Non-floating wood, plastic & rubber, Gypsum plaster	0.1
FL	Floating Particles (cm ³ /kg)	0

Comment

SIGNED

NAME

O.P. DAVIES BA (Hons)
(Director / Head of Laboratory)

DATE

18-Aug-24

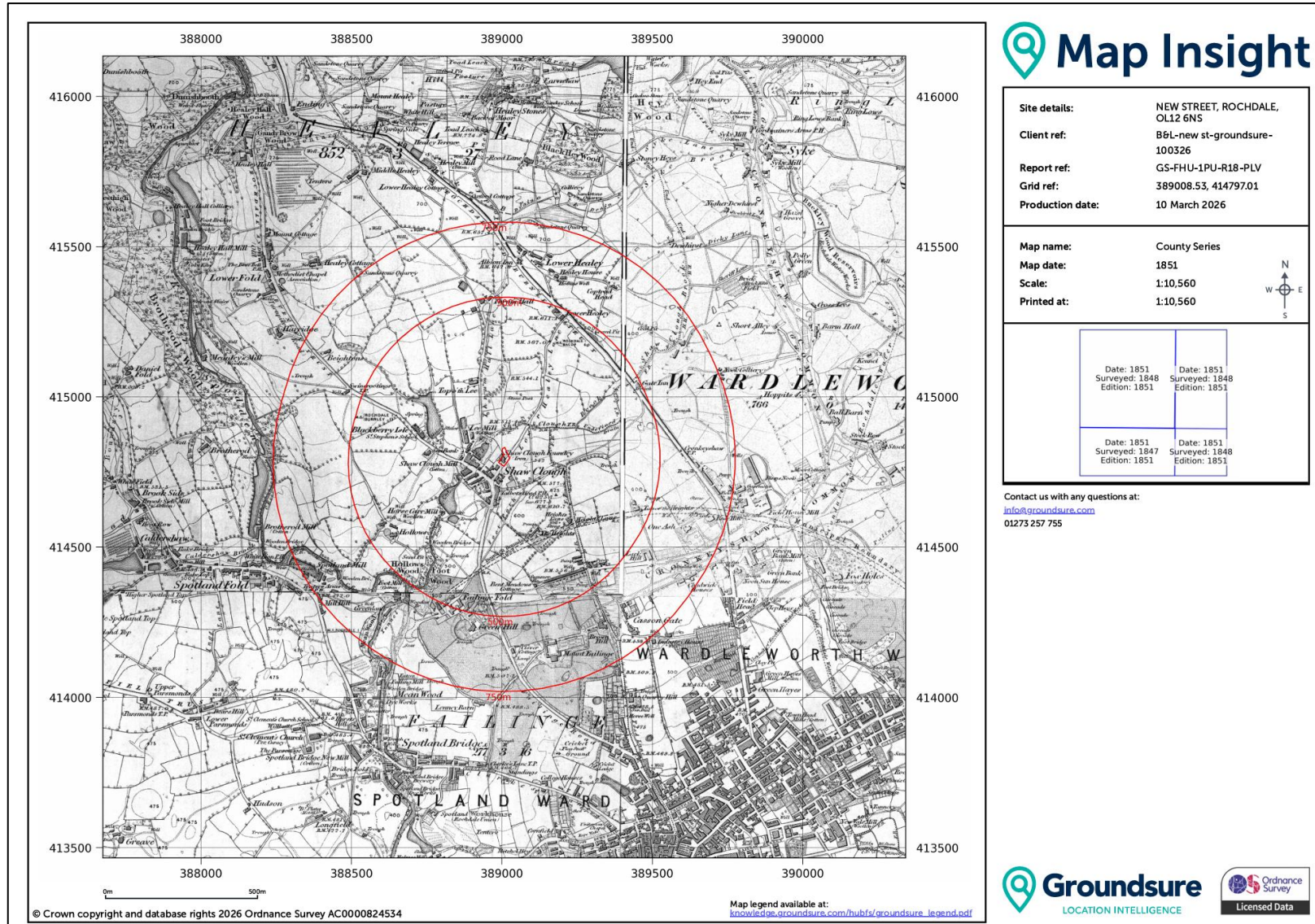
COMPLETION CERTIFICATE FOR THE REMOVAL OF ASBESTOS PRODUCTS

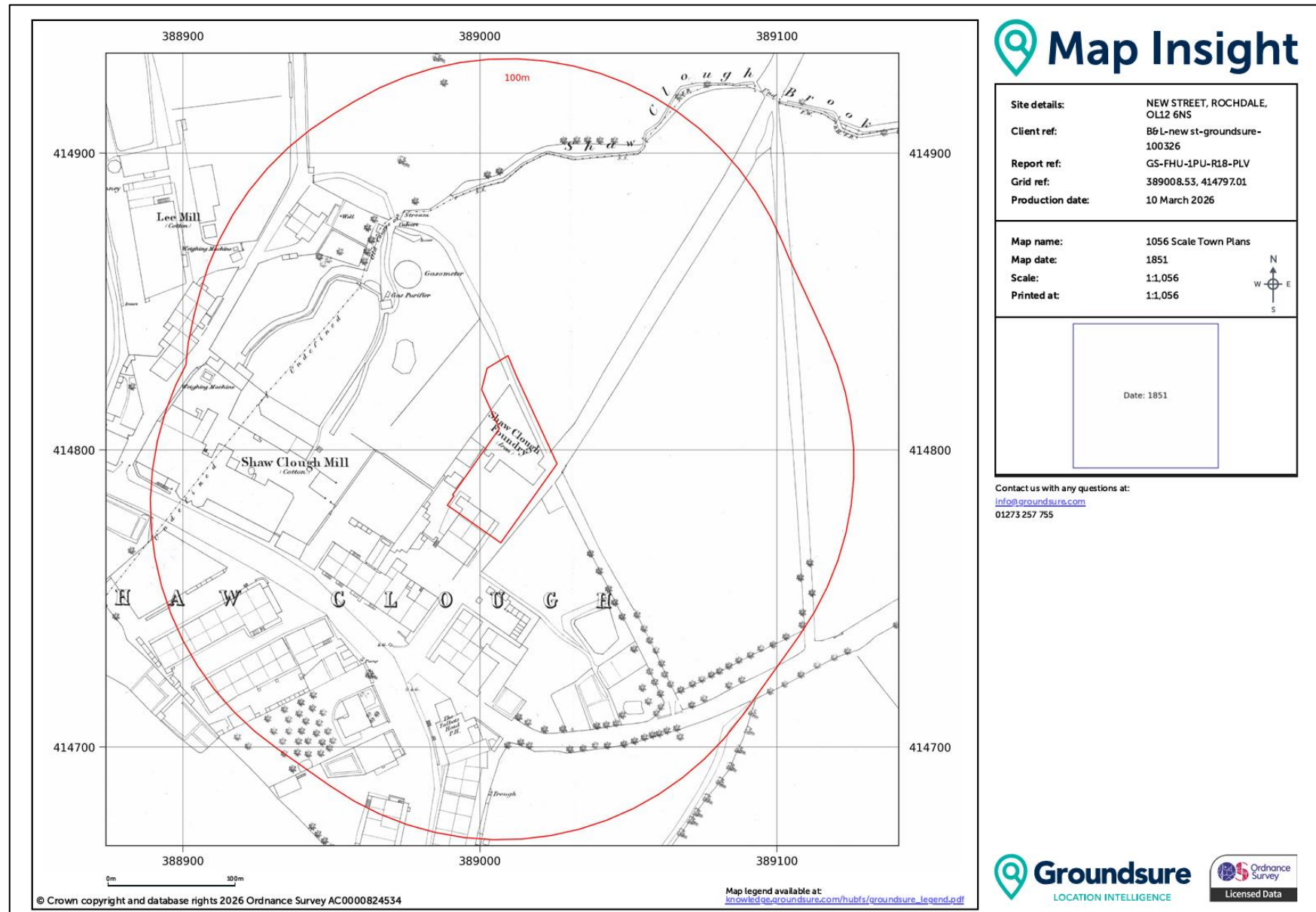
This certificate is to confirm the product listed below has been removed as far as is reasonably practicable in line with the control of asbestos regulations 2012, HSWA 1974 and the hazardous waste regulations 2005.

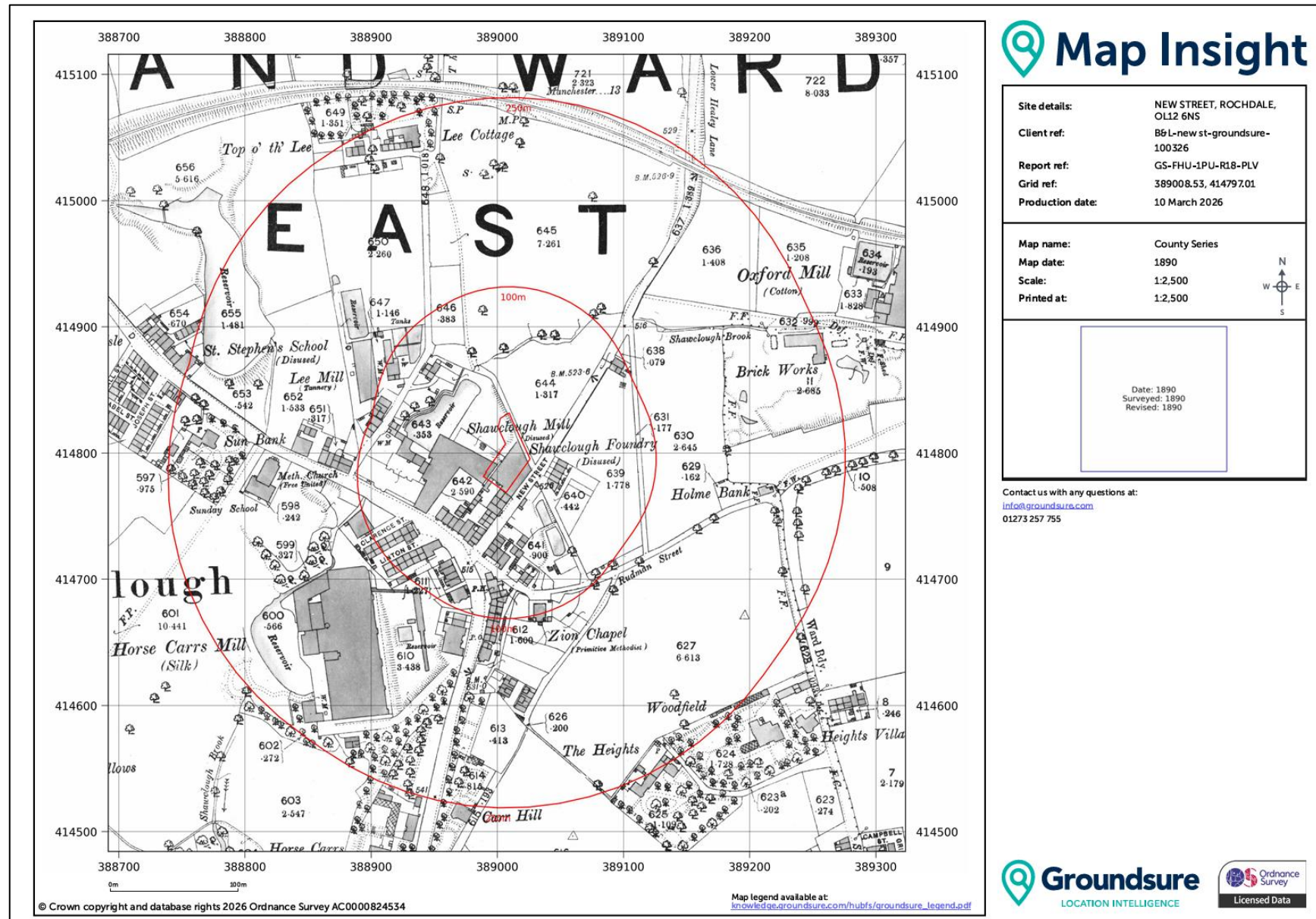
Client Name	B & L Inqoe Limited
Client Address	Higher Fields Farm Moss Hall Road Heywood OL10 2RE
Telephone	07813087852
Email Address	sales@mosshall.co.uk

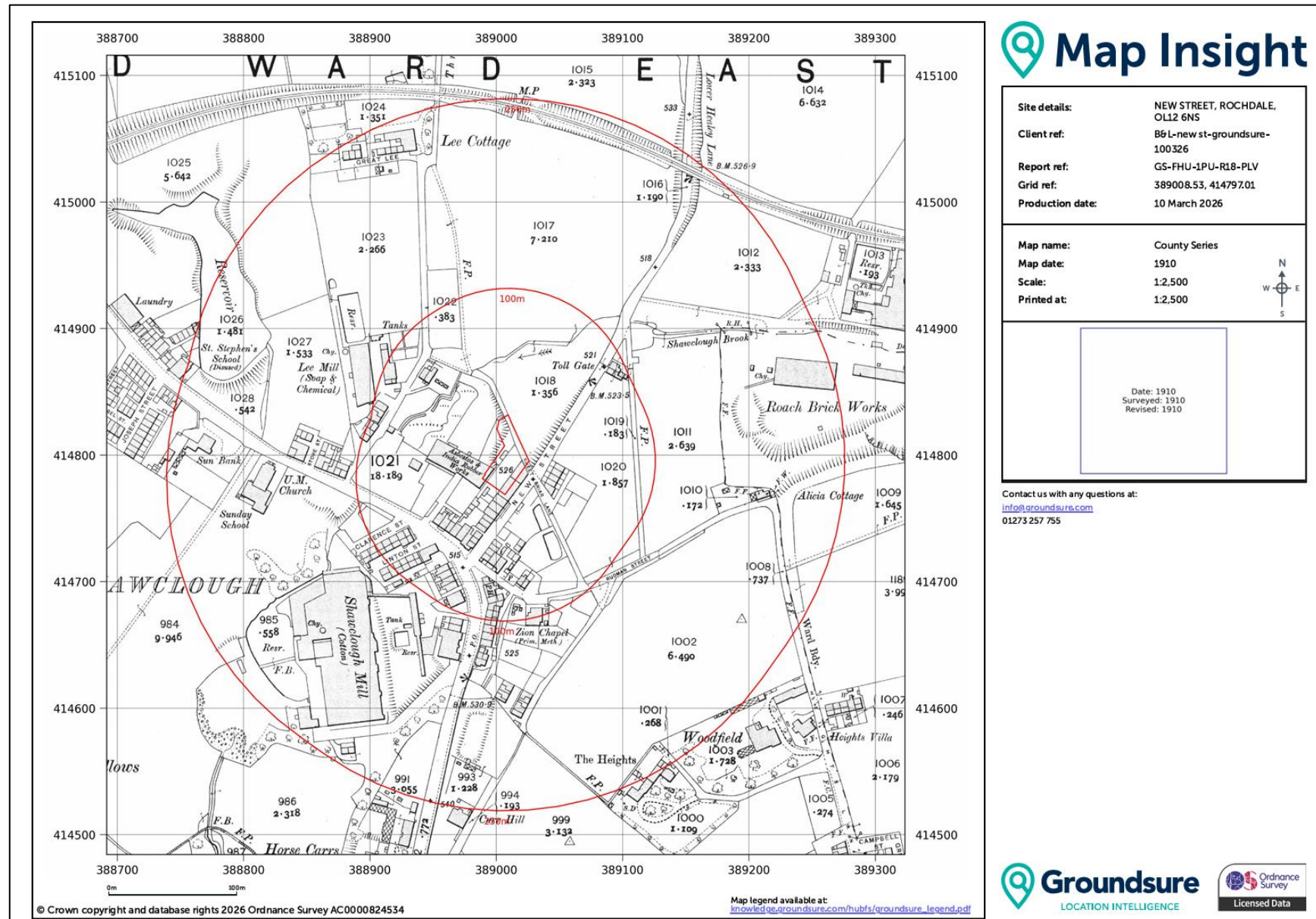
Site Address:	(Former Ken Mills) Now Flats 1-12 Ken Mills House Rochdale OL12 6NS
Asbestos Survey Reference:	S.J1736
Asbestos Product Removed:	Roofs, Gables ,Gutters
Extent of Product:	As Survey Report
Is the Area Clean and Free from Dust and Debris	Yes
Are Any ACM's To Remain in Situe In the Immediate Area	No
Site Supervisor Name	Martin Dennett
Site Supervisor Signature	
Date	26/02/2026
Comments	All work on site has been completed and the mill has now been converted into flats with no asbestos present.

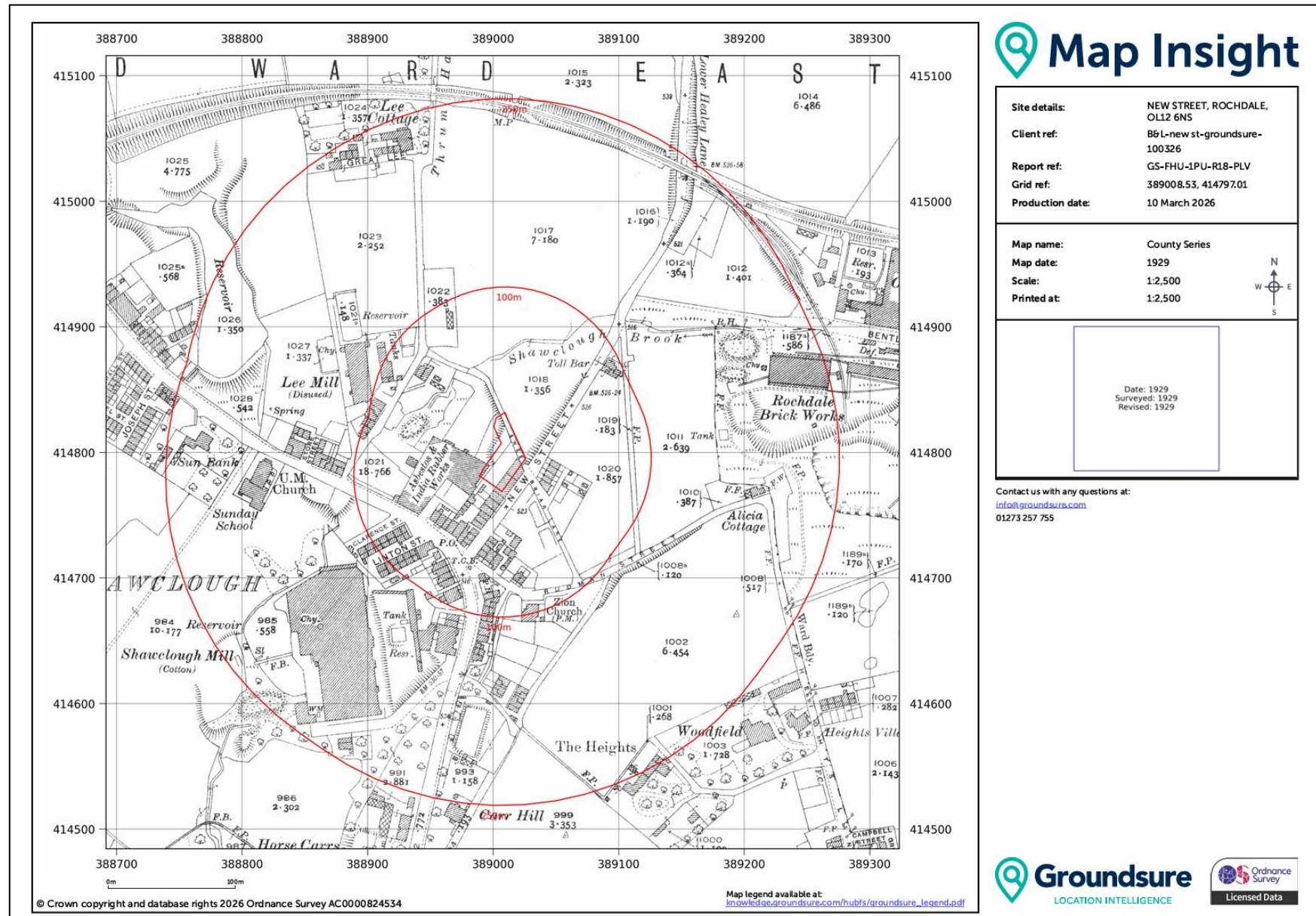
6. APPENDIX D: GROUNDSURE ENVIRONMENTAL DATA.

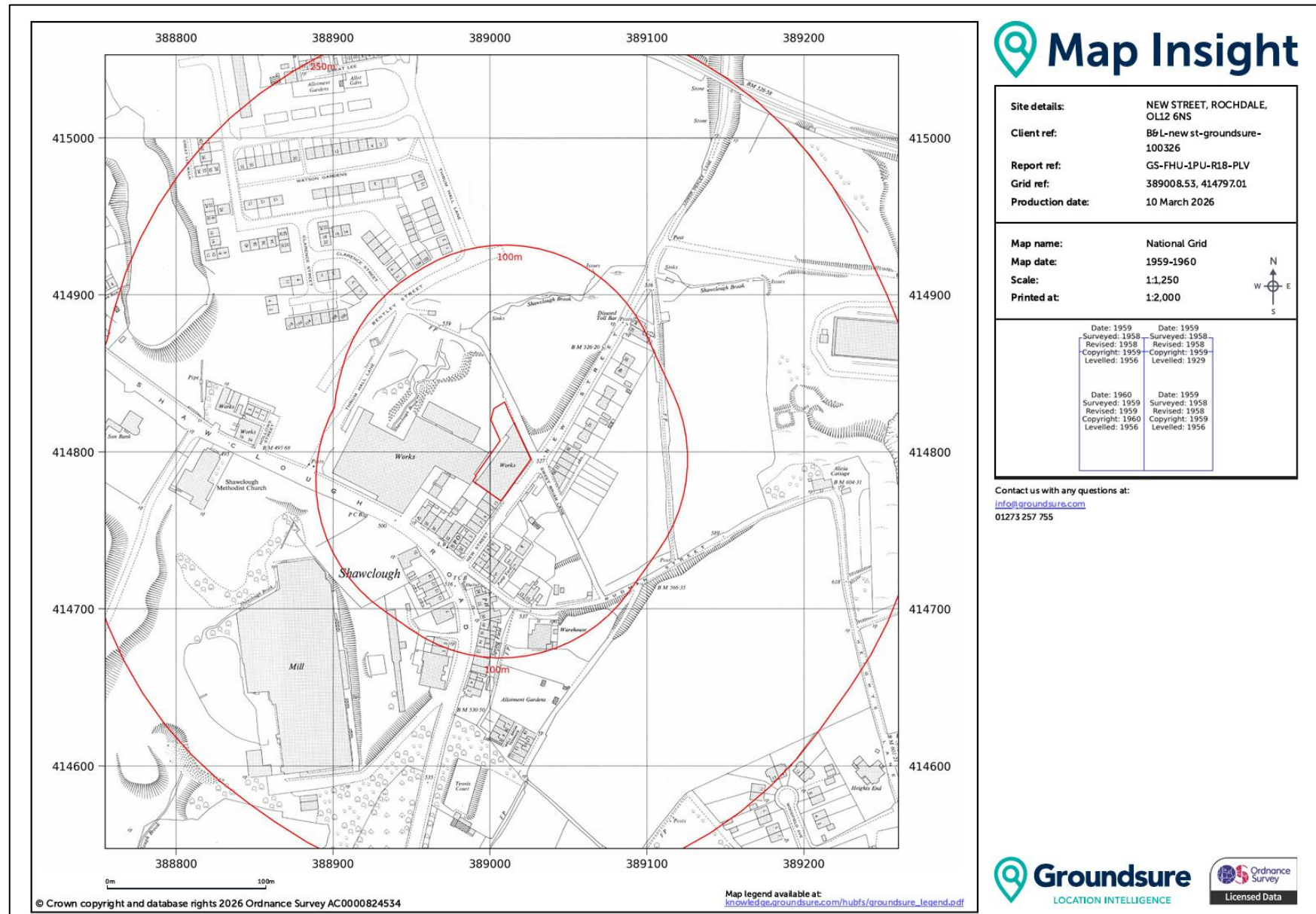


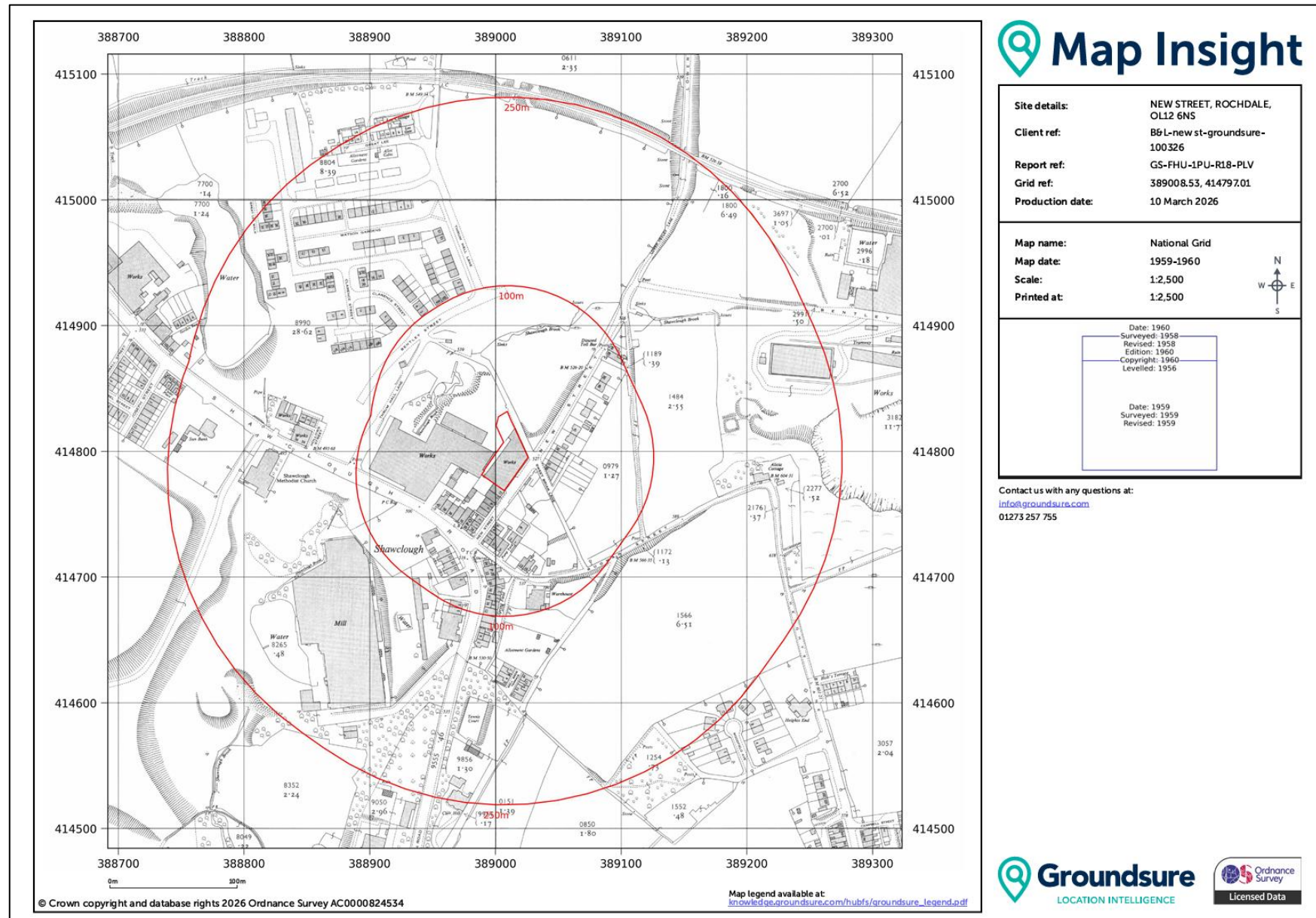


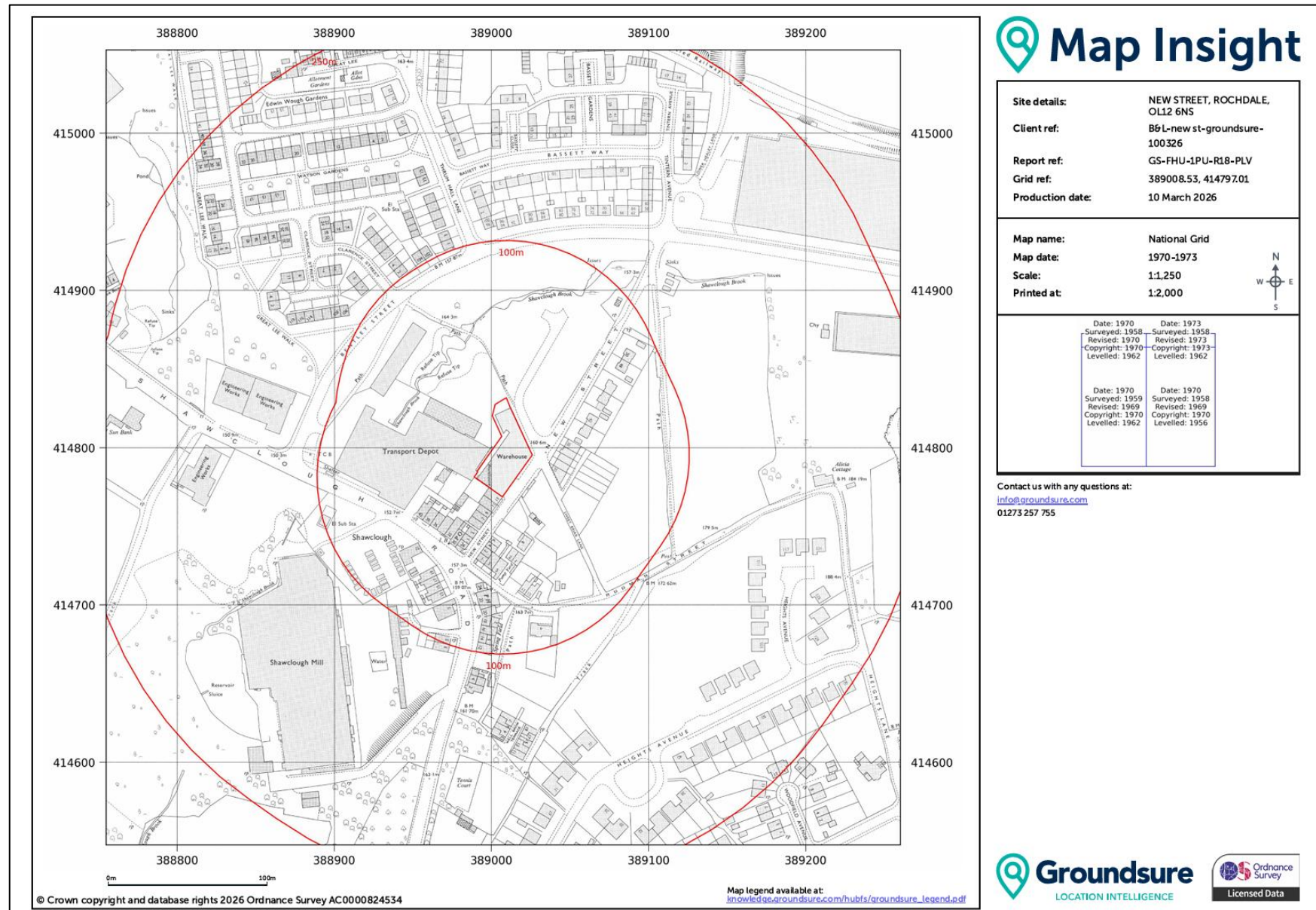


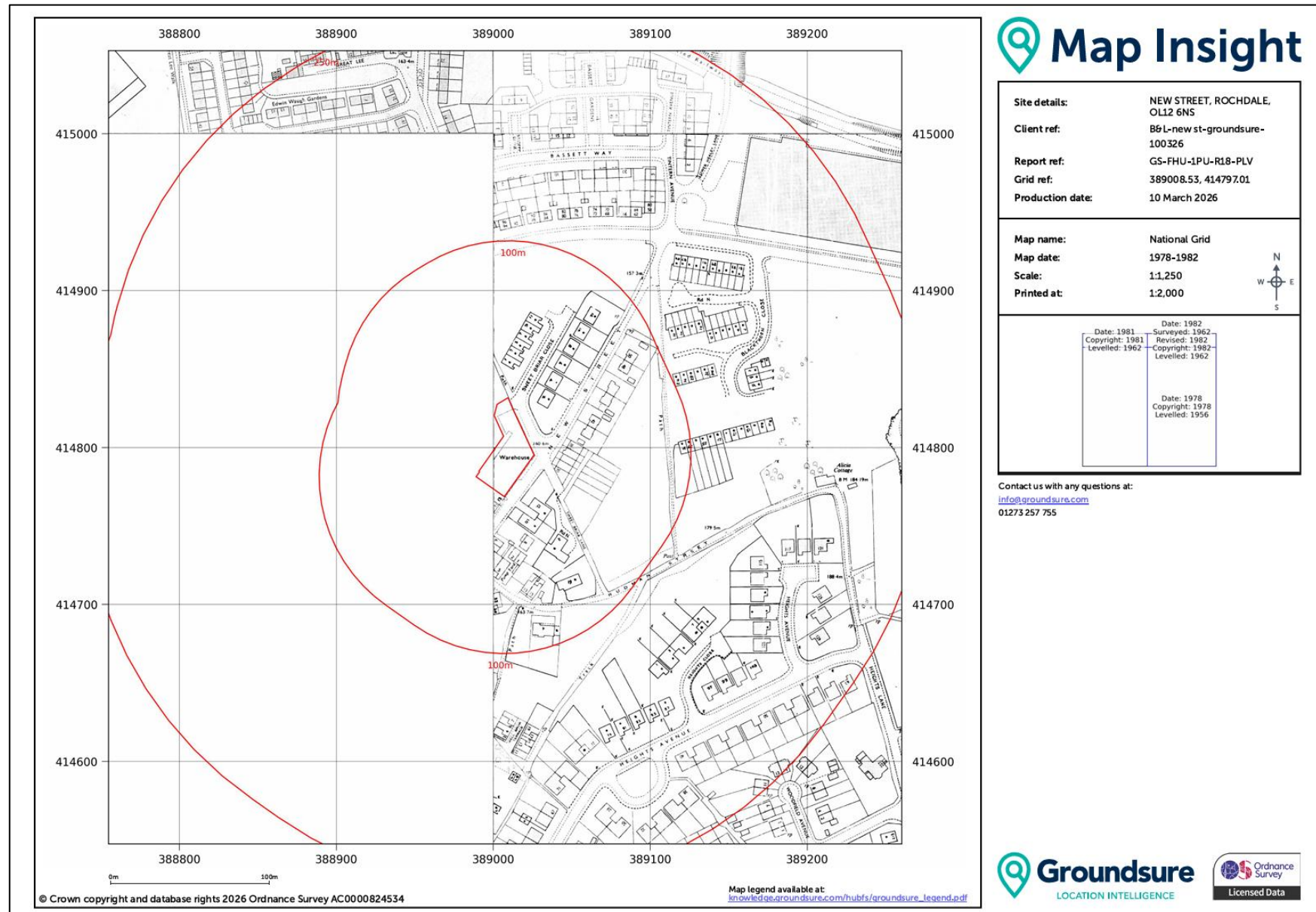


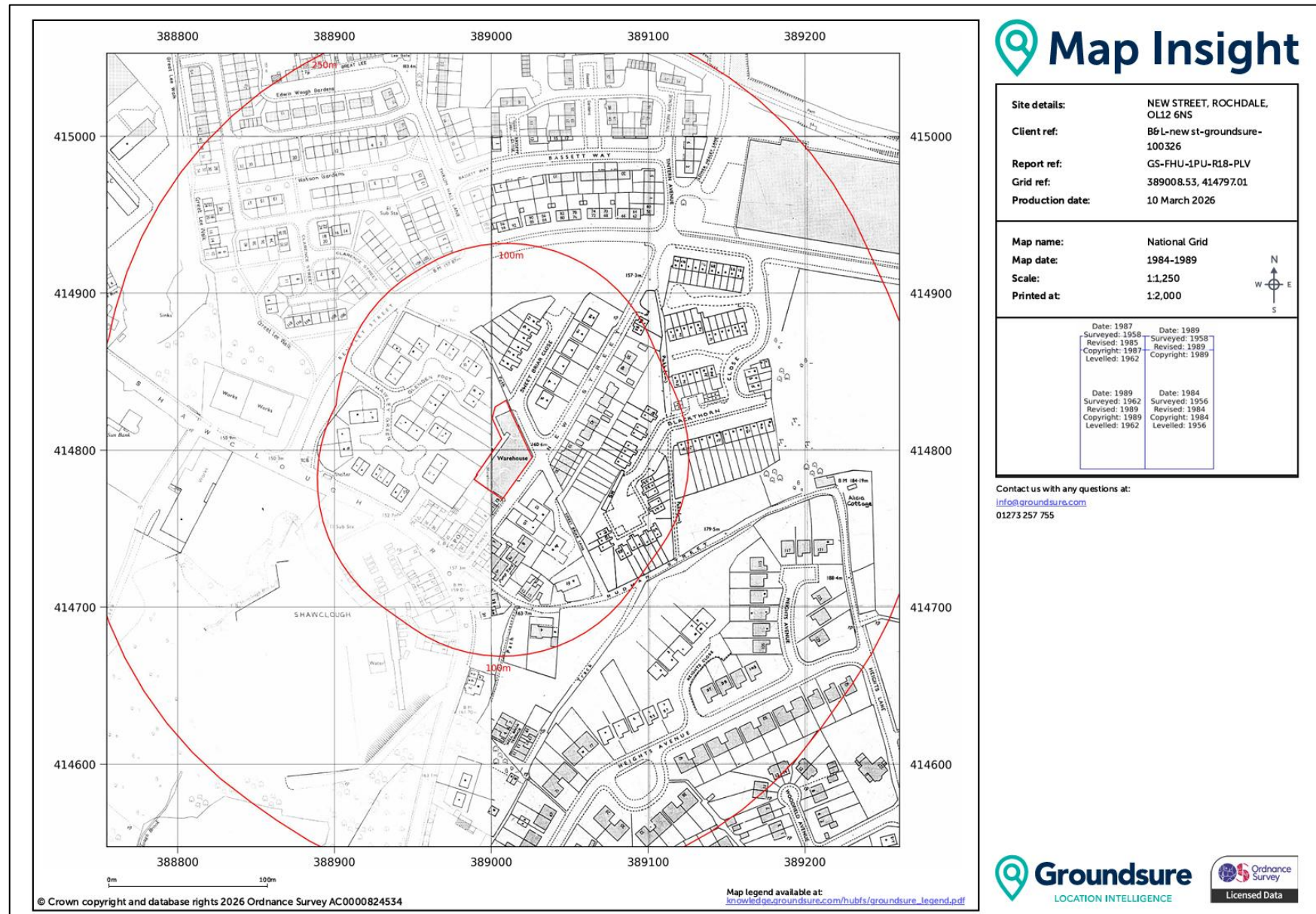


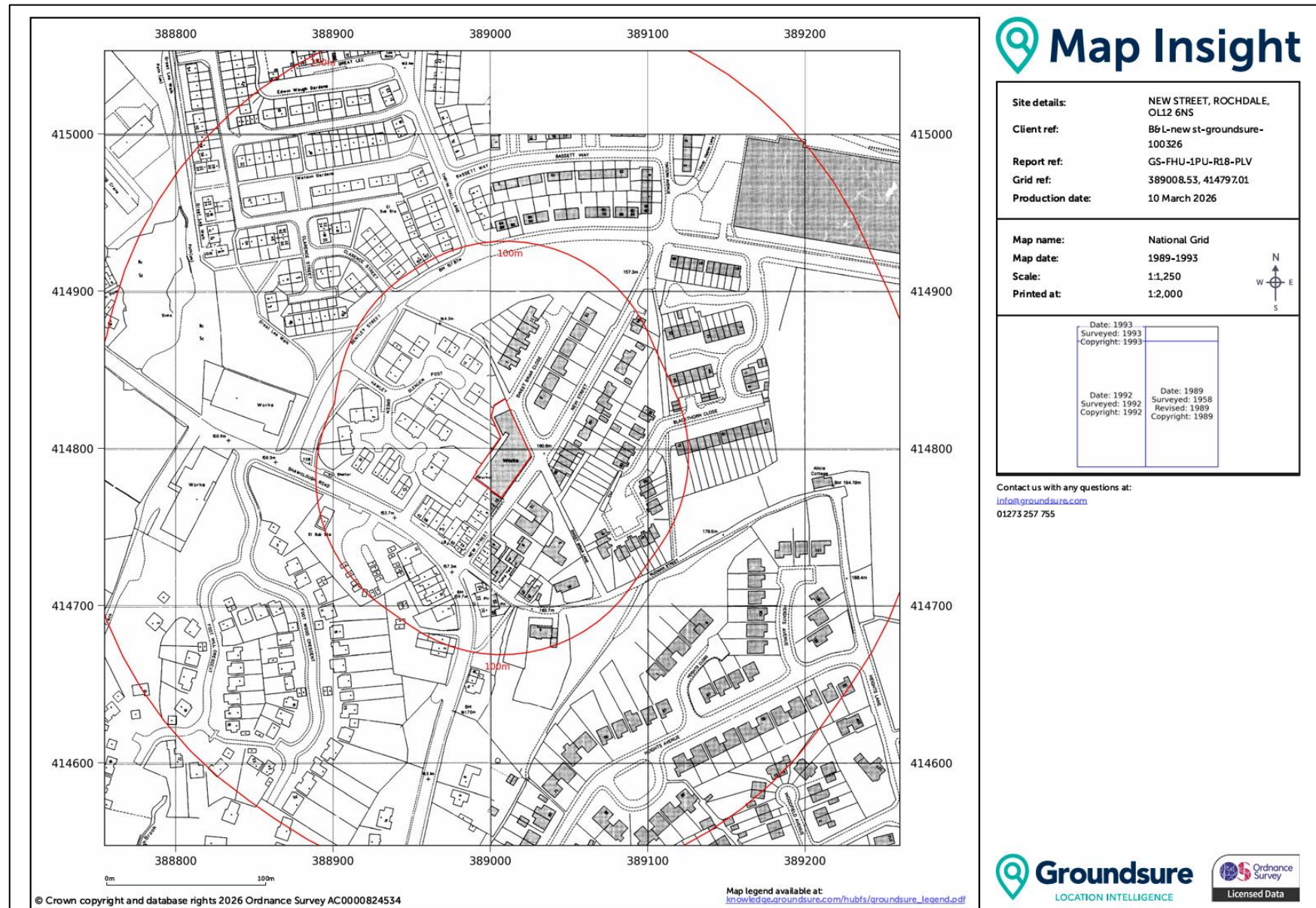


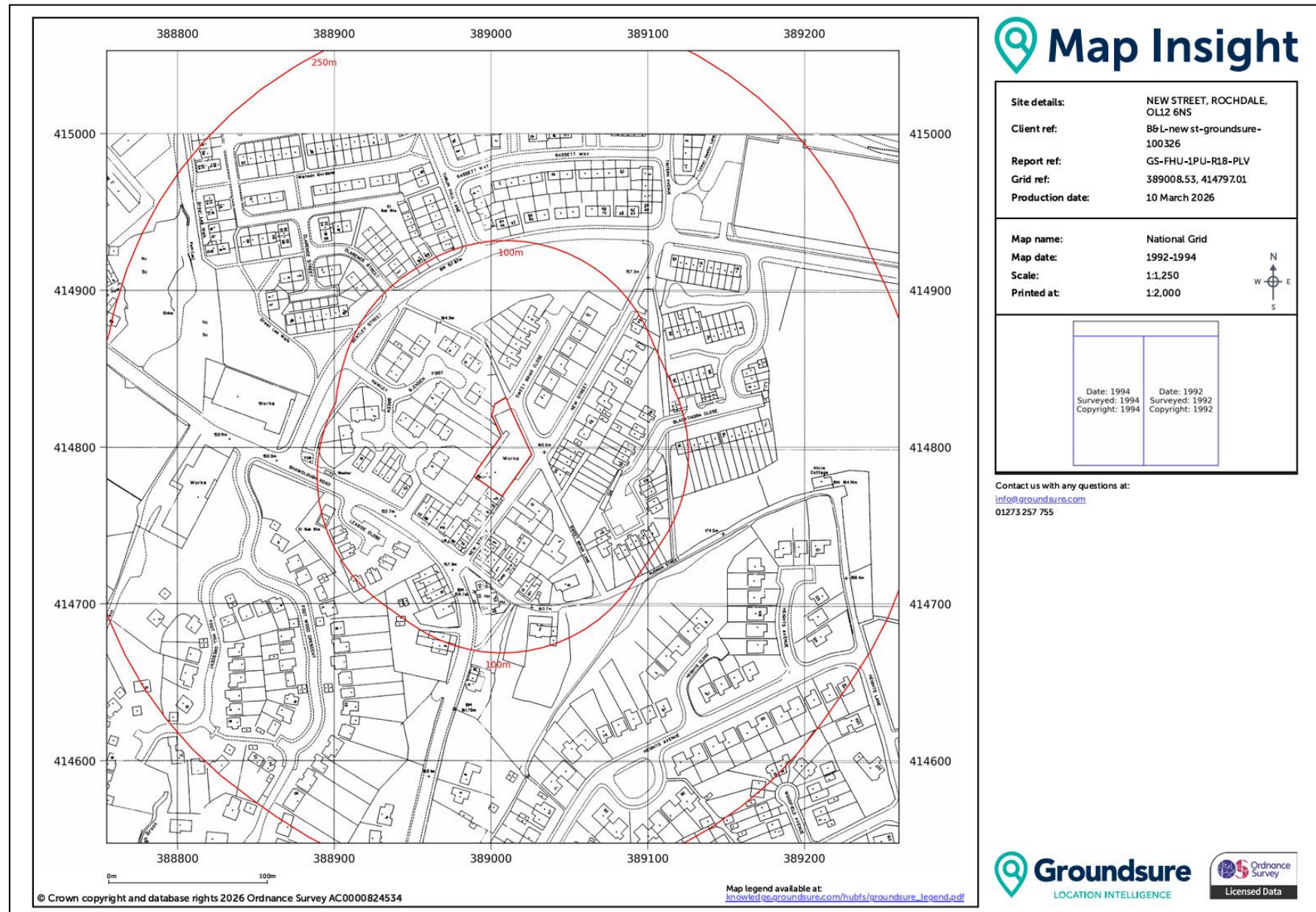


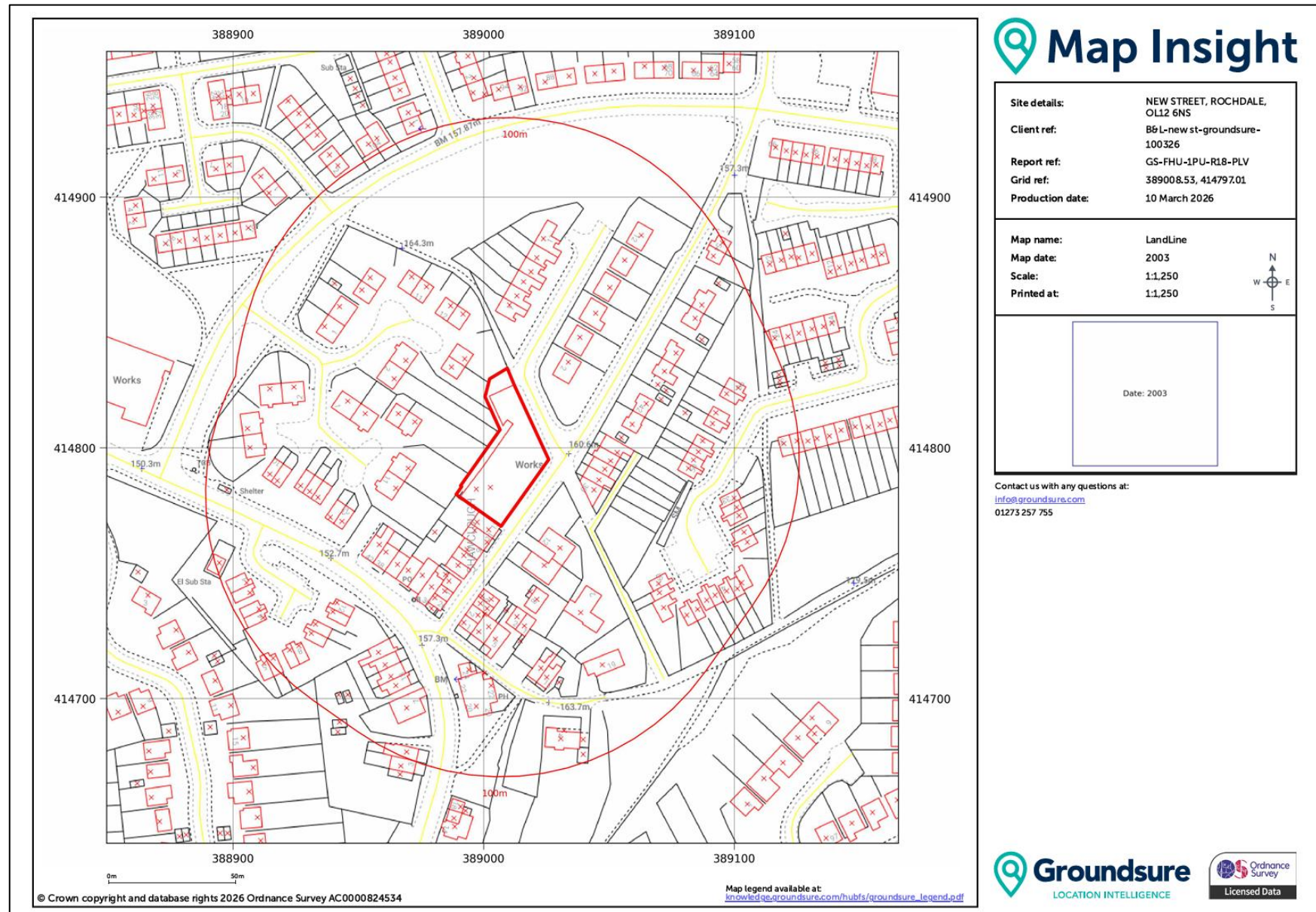














NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Recent site history - 1999 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved.

Capture Date: 10/09/1999

Site Area: 0.11ha



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Recent site history - 2000 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved.

Capture Date: 19/06/2000

Site Area: 0.11ha



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Recent site history - 2012 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved.

Capture Date: 26/03/2012

Site Area: 0.11ha



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Recent site history - 2019 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved.

Capture Date: 23/05/2019

Site Area: 0.11ha



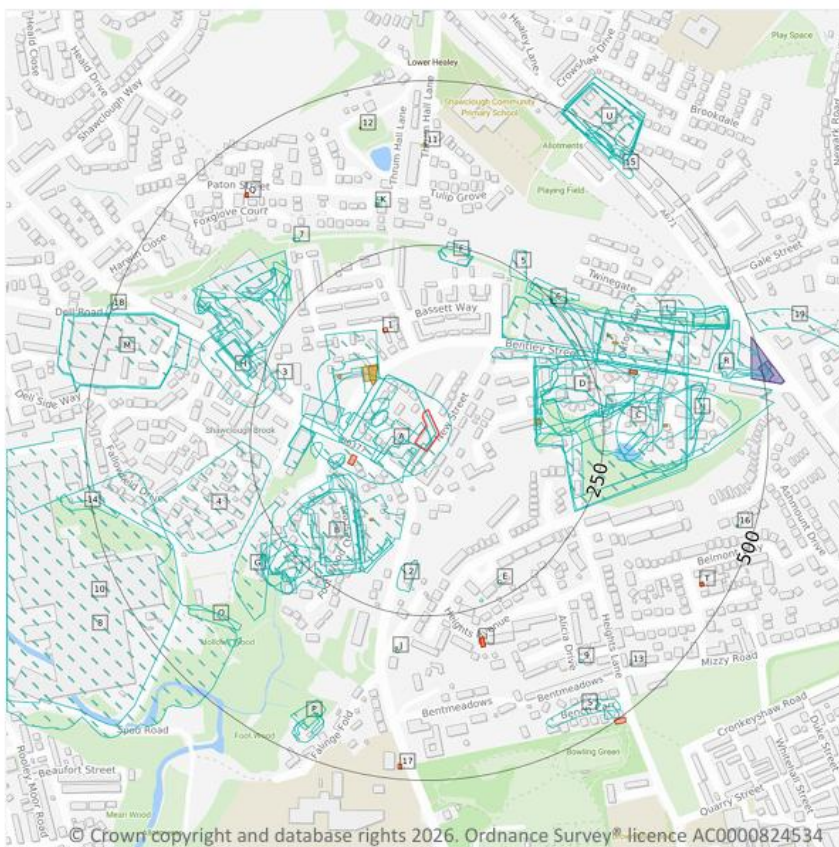
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

135

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	On site	Unspecified Mill	1890	673367



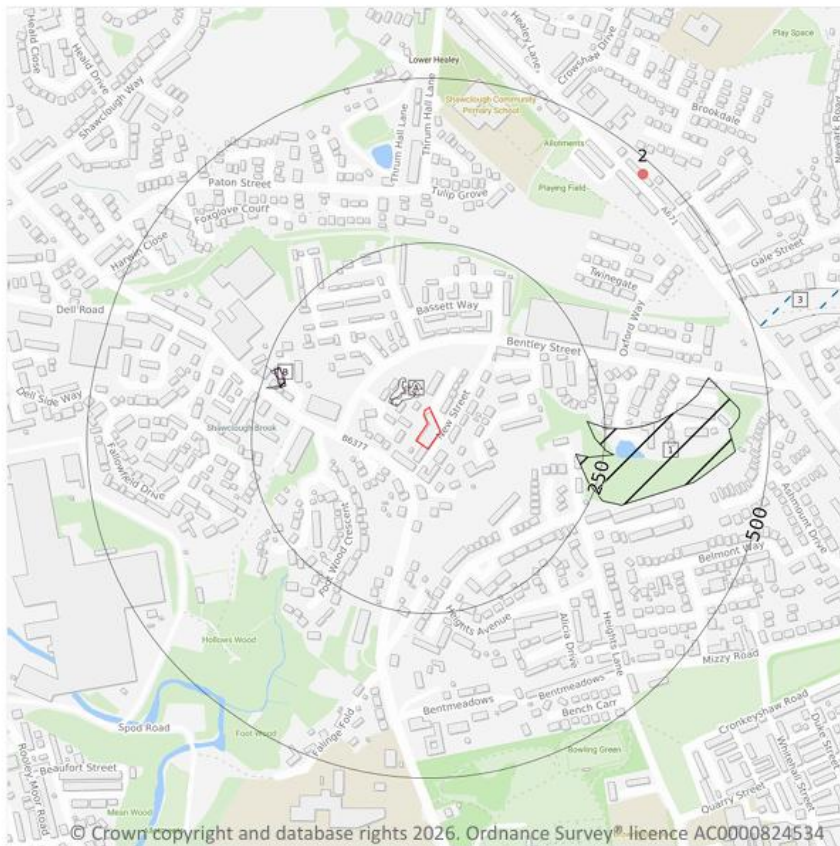
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

3 Waste and landfill



3.1 Active or recent landfill

Records within 500m

1

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

Features are displayed on the Waste and landfill map on [page 35 >](#)

ID	Location	Details	
3	497m NE	Operator: Rochdale M B C Site Address: Rochdale M B C, Fieldhouse Road, Rochdale, Lancashire, OL12 0AD	WML Number: 53951 EPR Reference: 664727 Landfill type: A05: Landfill taking Non-Biodegradable Wastes Status: Closure IPPC Reference: - EPR Number: EA/EPR/LP3791CR



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

4 Current industrial land use



— Site Outline

Search buffers in metres (m)

● Recent industrial land uses

● Licensed Discharges to controlled waters

● Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

11

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 39 >](#)

ID	Location	Company	Address	Activity	Category
1	On site	Works	Greater Manchester, OL12	Unspecified Works Or Factories	Industrial Features
2	116m W	Electricity Sub Station	Greater Manchester, OL12	Electrical Features	Infrastructure and Facilities
3	138m NW	Electricity Sub Station	Greater Manchester, OL12	Electrical Features	Infrastructure and Facilities



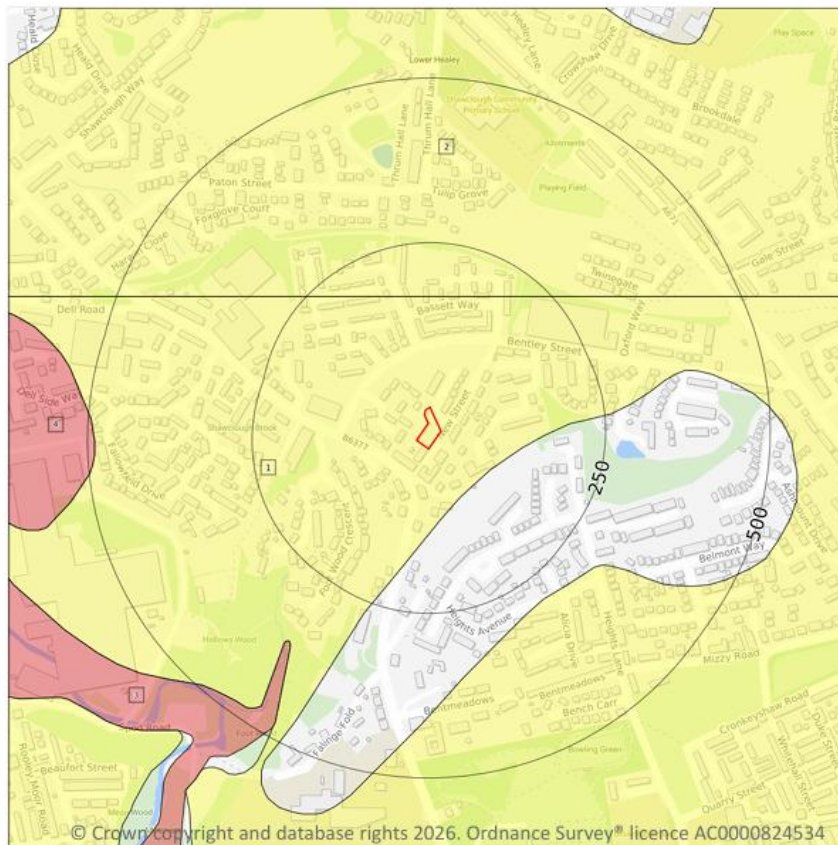
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

4

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 47 >](#)

ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	168m N	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



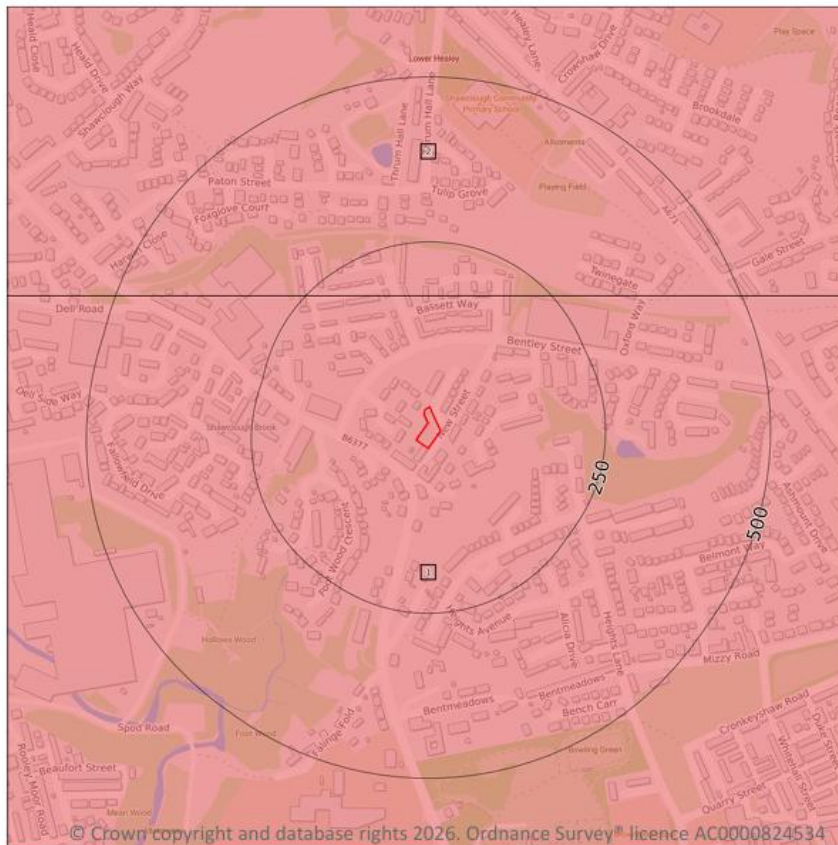
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 49 >](#)

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
2	168m N	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



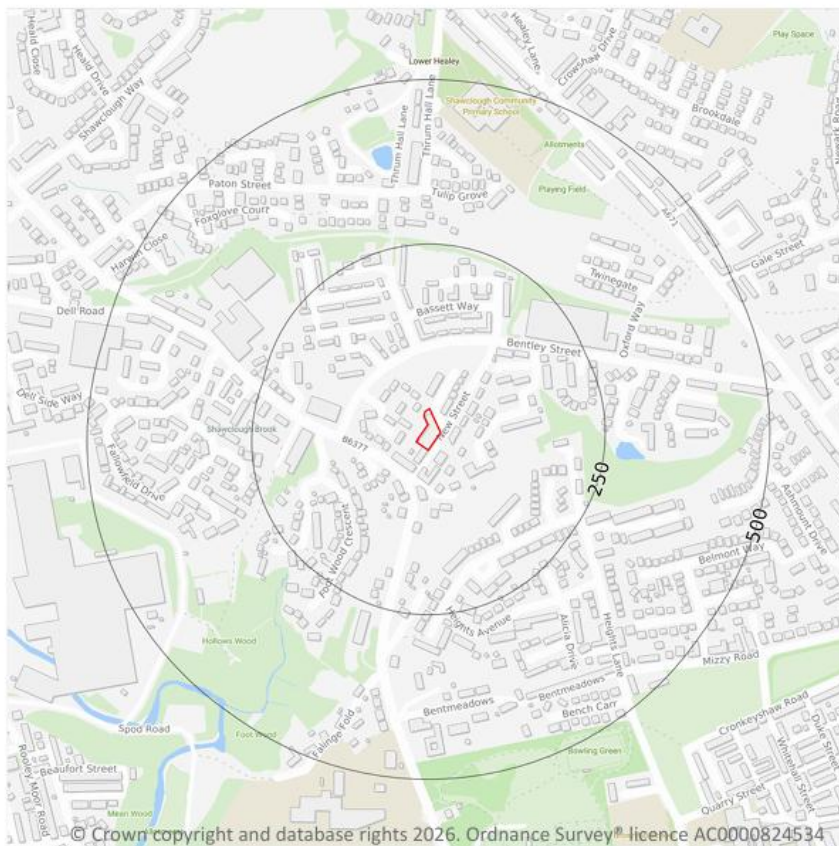
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

3

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 53 >](#)



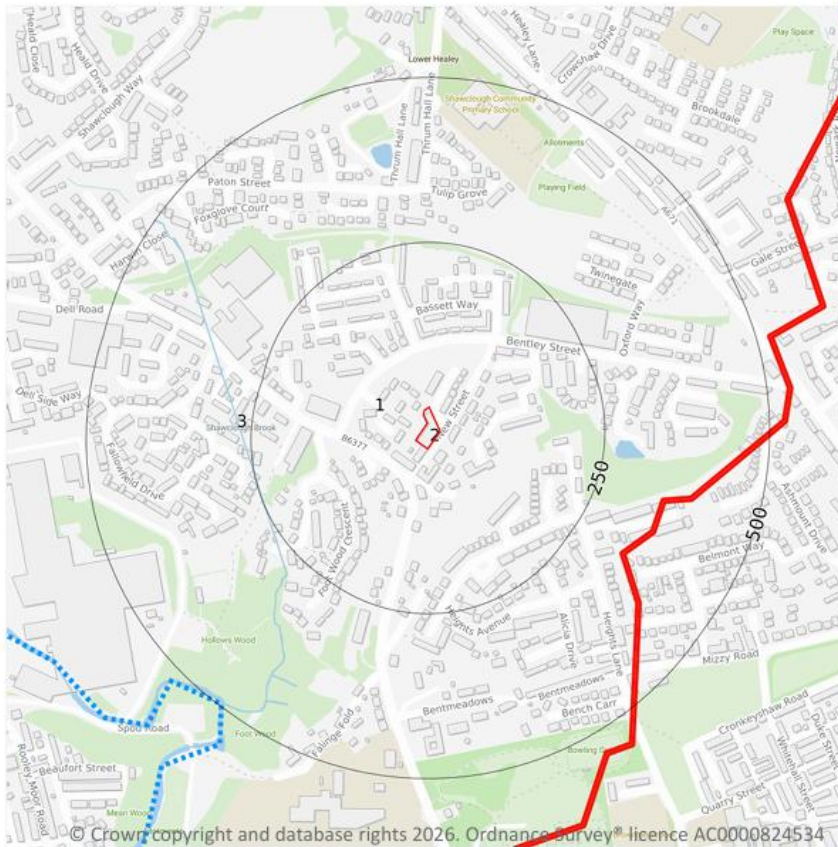
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

1

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 62](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
3	248m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Shawclough Brook

This data is sourced from the Ordnance Survey®.



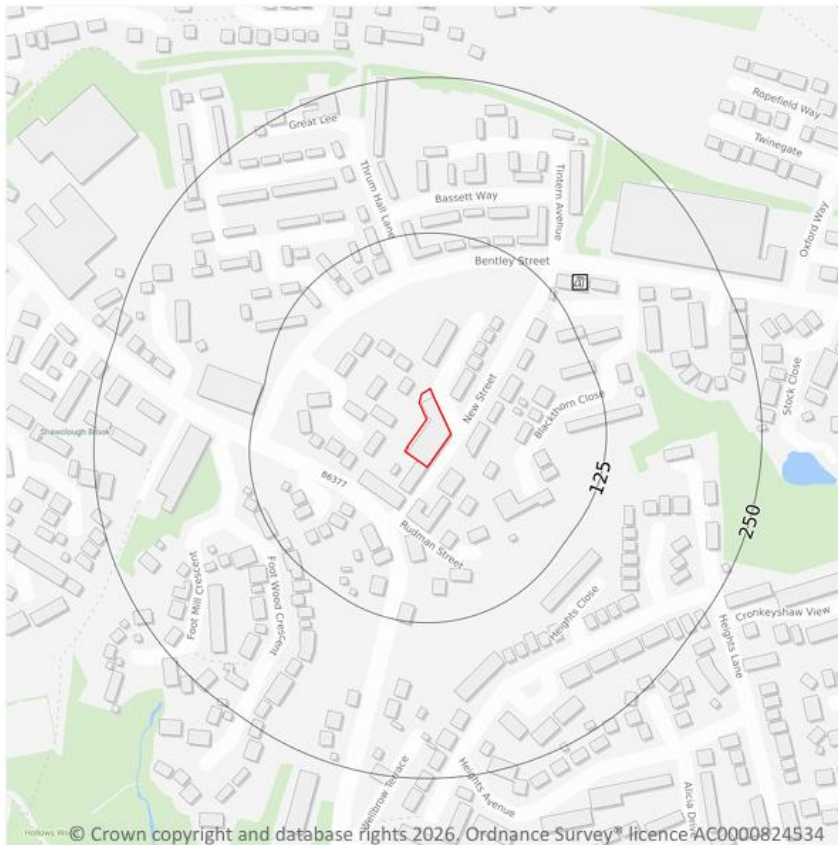
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

0

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).

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



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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 68](#) >

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.



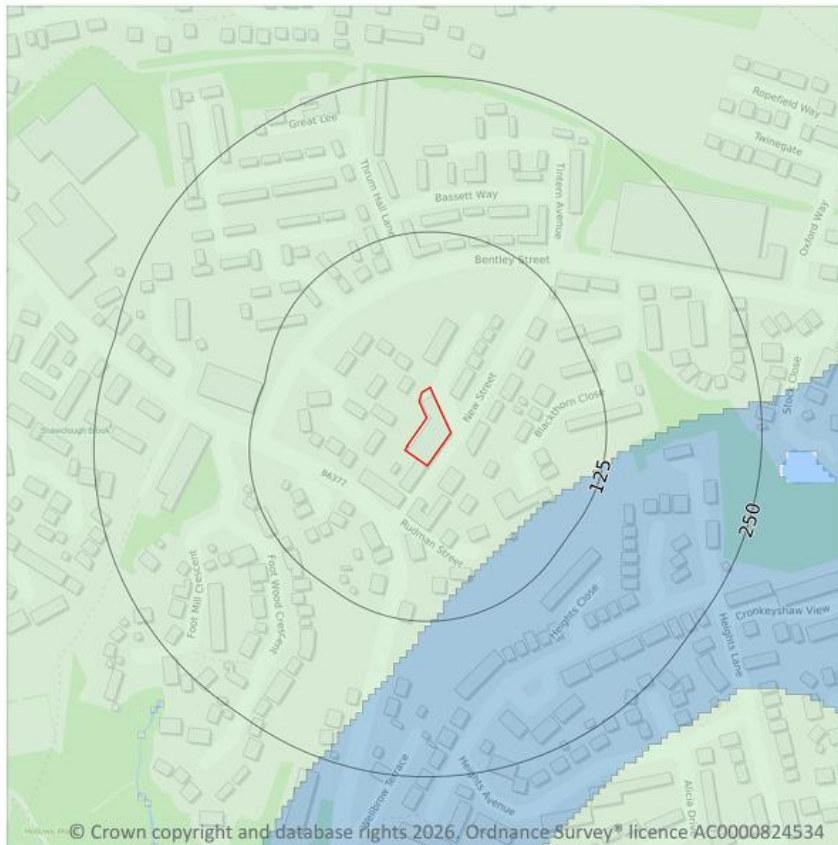
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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	Low

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 70 >](#)

This data is sourced from Ambiantal Risk Analytics.



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)
- ▨ Designated Ancient Woodland
- ▨ Green Belt

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10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



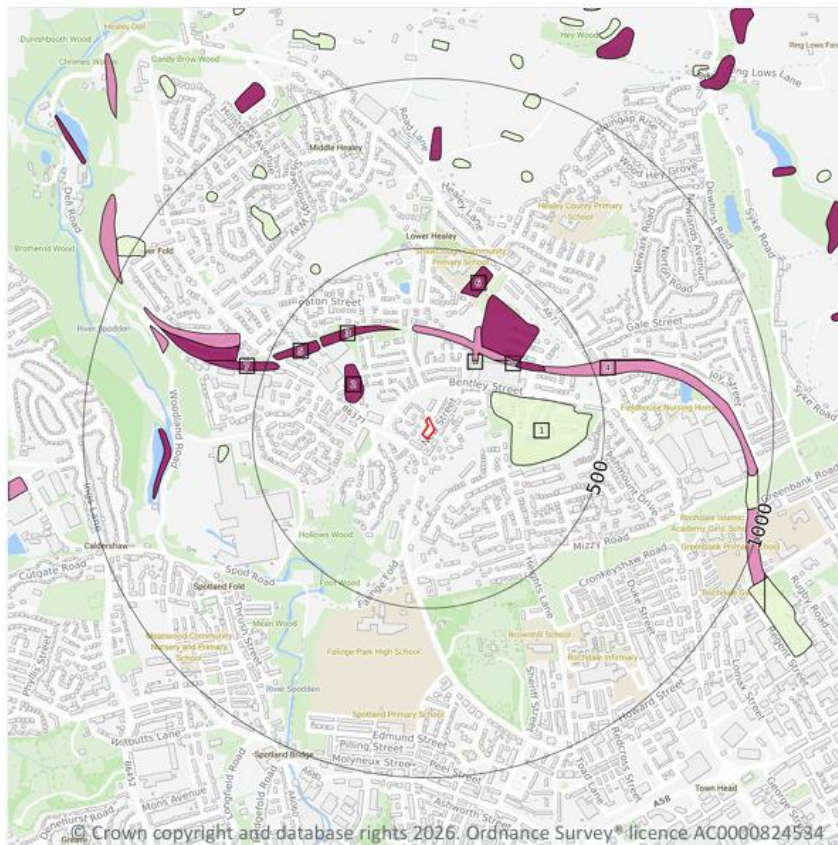
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

12

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 87 >](#)

ID	Location	LEX Code	Description	Rock description
1	182m NE	WMGR-ARTDP	Infilled Ground	Artificial deposit
2	202m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
A	208m NE	WGR-VOID	Worked Ground (Undivided)	Void
A	212m NE	WGR-VOID	Worked Ground (Undivided)	Void



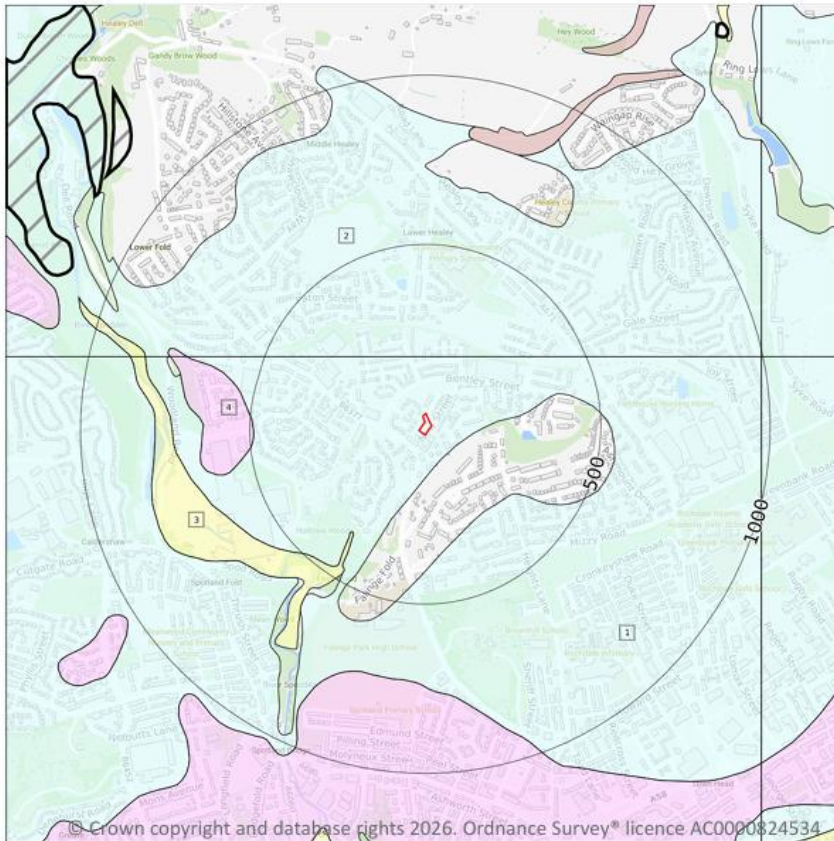
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

4

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 89](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
2	168m N	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
3	358m SW	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel



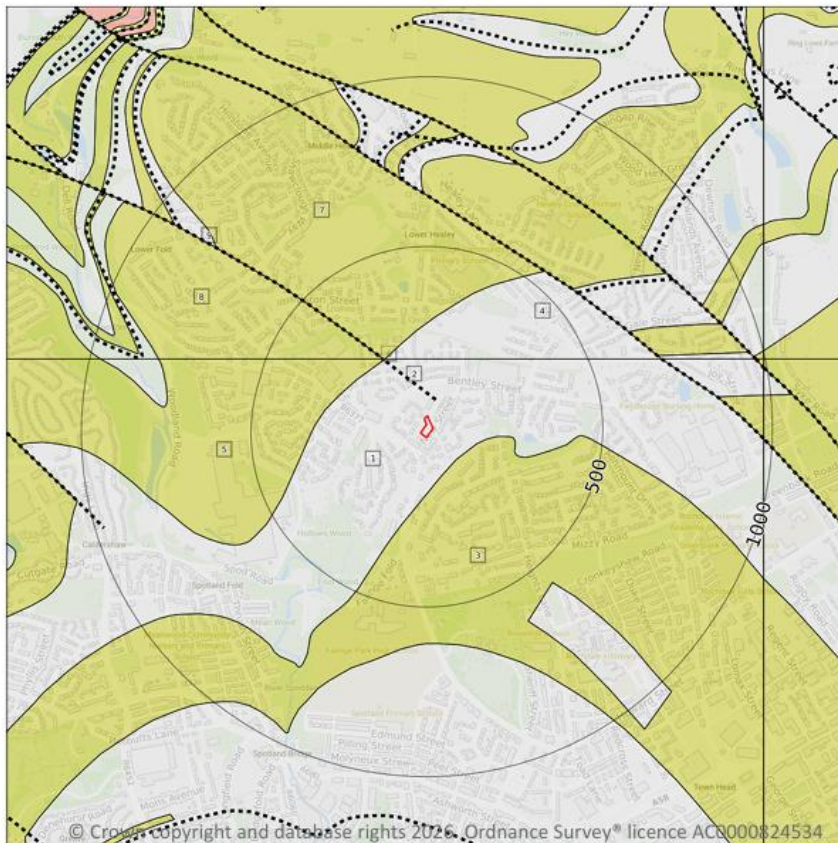
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

7

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 91](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
3	108m SE	OL-SDST	Old Lawrence Rock-Sandstone	Westphalian
4	168m N	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian



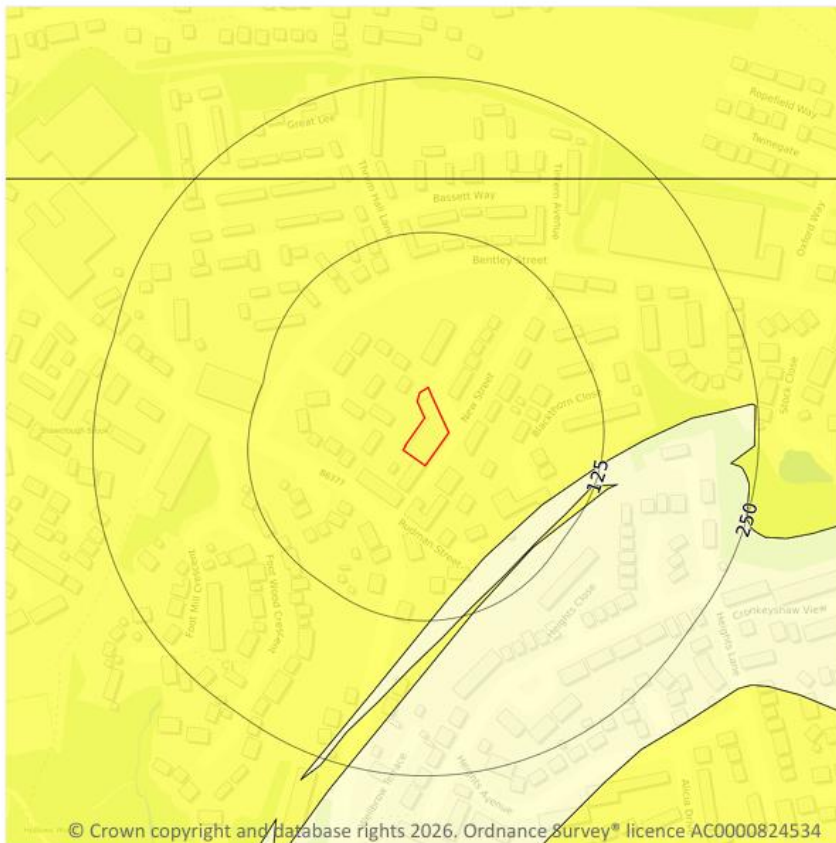
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

1

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 101](#) >

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



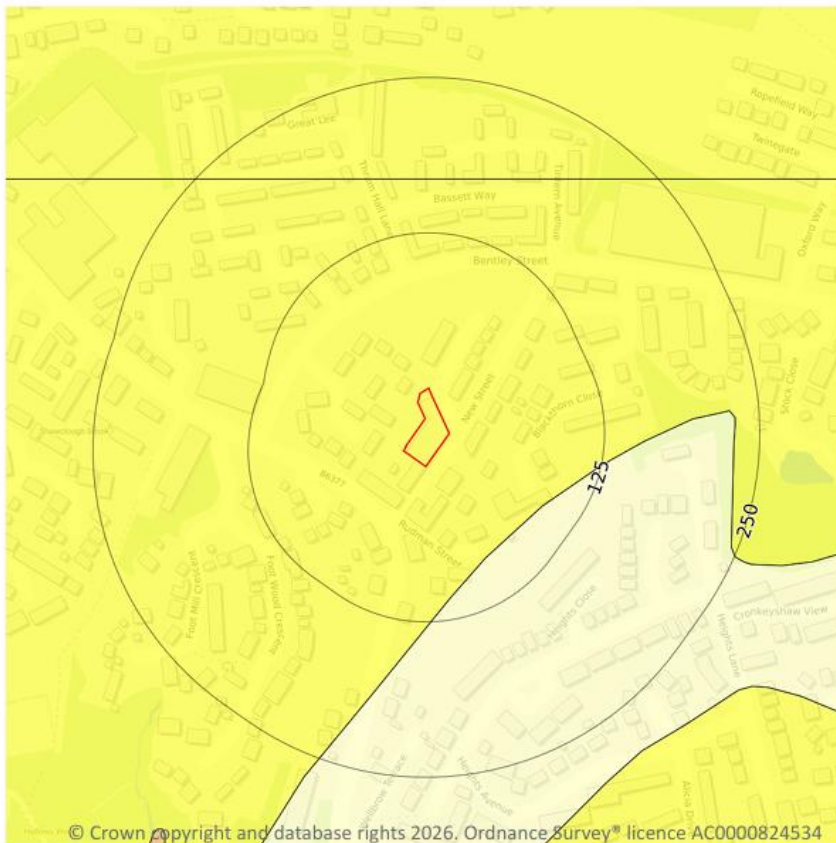
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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 102](#) >

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.



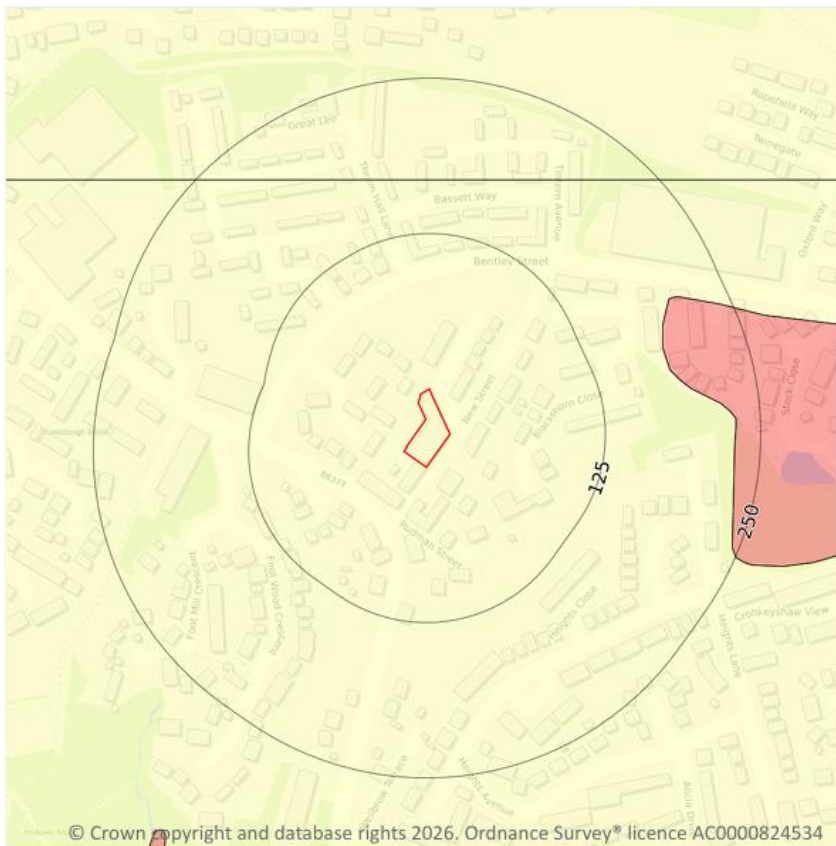
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsurre-100326

Grid ref: 389008 414797

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 103 >](#)

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

This data is sourced from the British Geological Survey.



NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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 104](#) >

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.



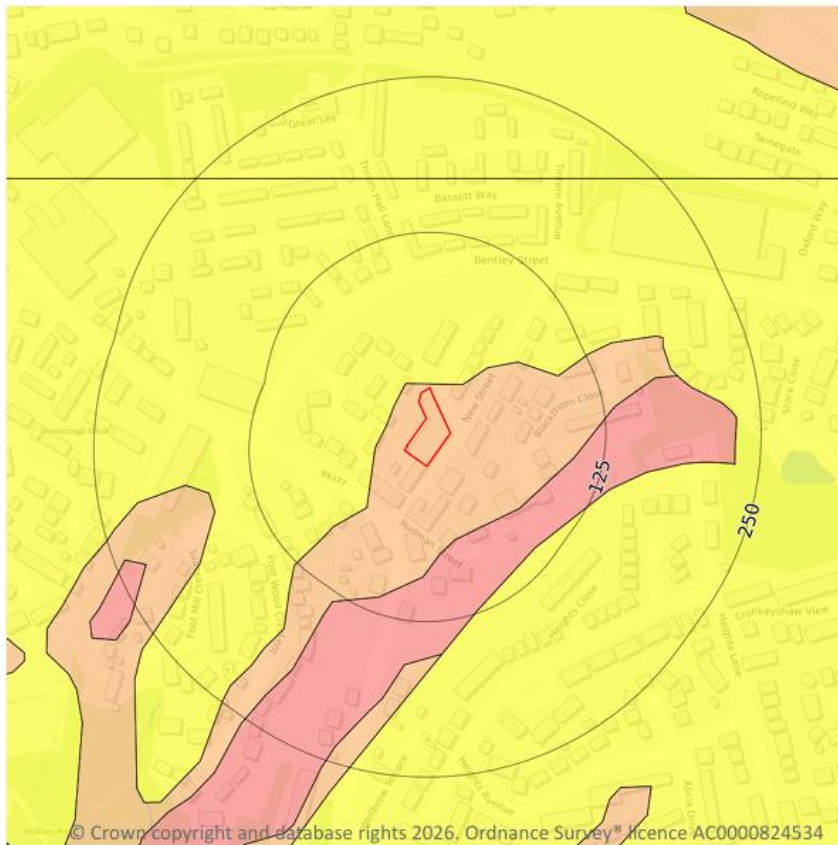
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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

2

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 105](#) >

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.



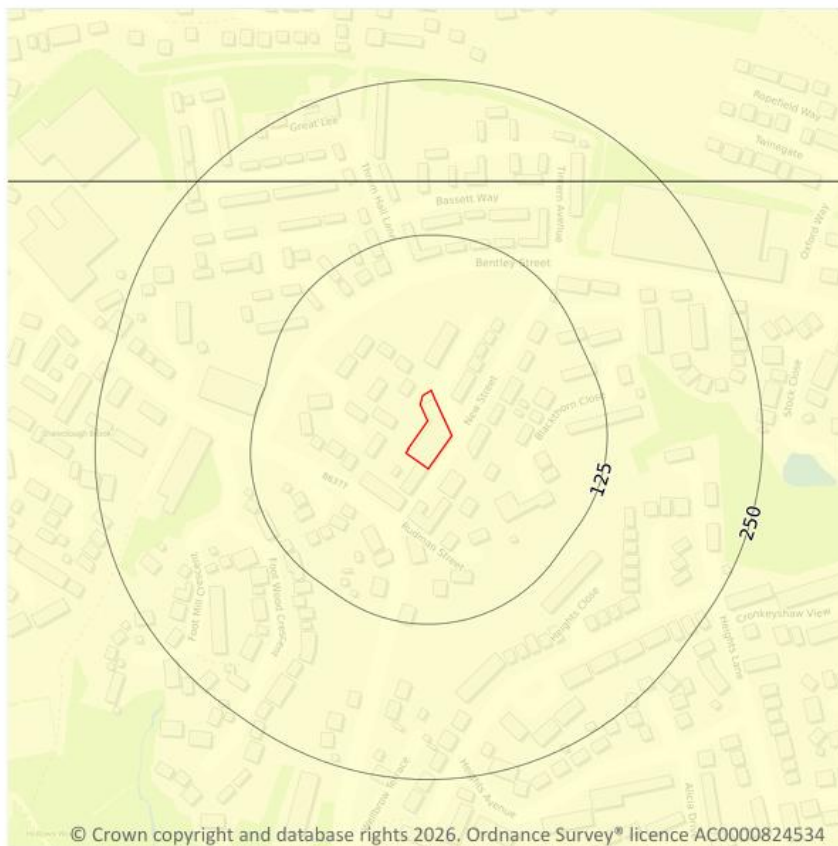
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

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 107 >](#)

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.



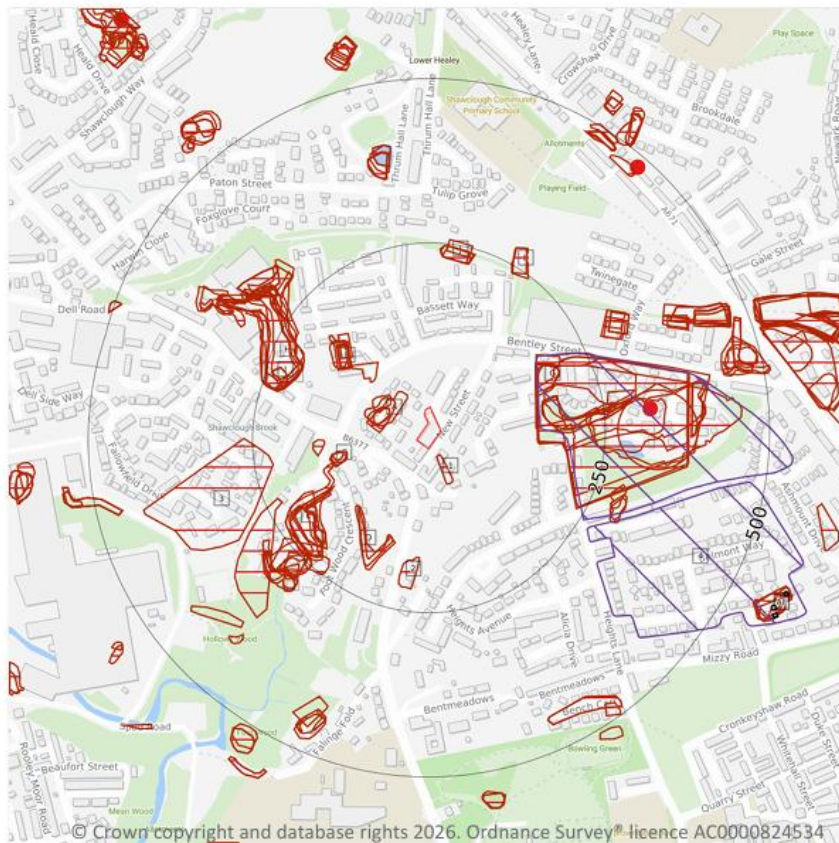
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

18 Mining and ground workings



— 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

18.1 BritPits

Records within 500m

2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 109](#) >



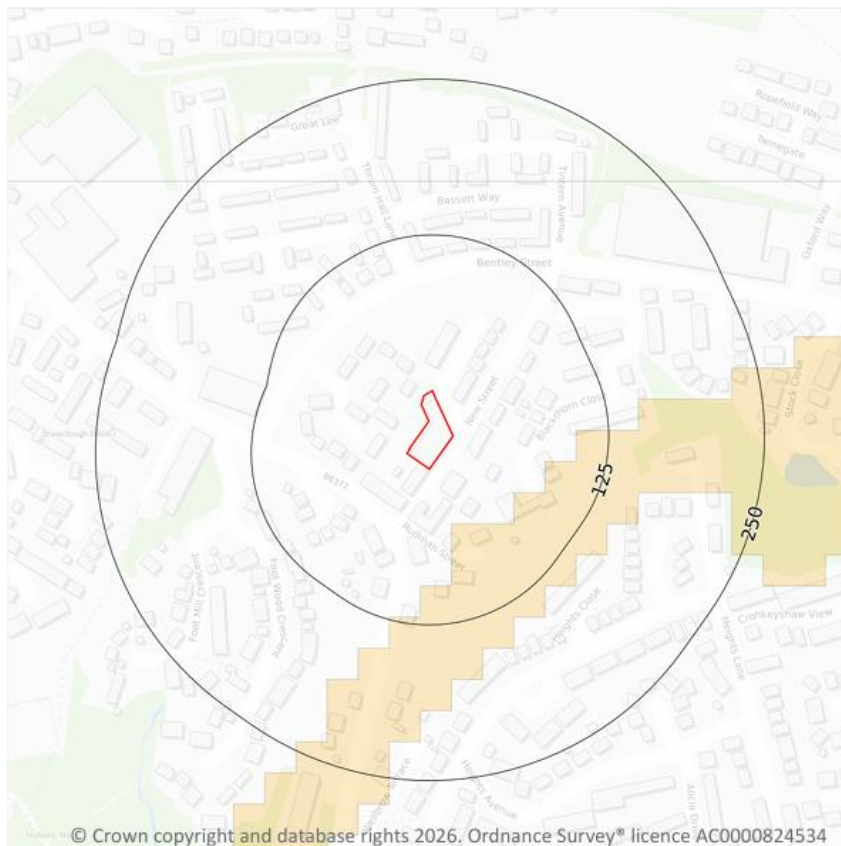
NEW STREET, ROCHDALE, OL12 6NS

Ref: GS-L53-Y7P-GG7-KPF

Your ref: B&L-new st-groundsure-100326

Grid ref: 389008 414797

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 120 >](#)

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