



WYAS
**Archaeological
Services**

**The Former Marina
Ropeworks,
Brunswick Street, Heywood
Greater Manchester**

Archaeological Strip, Map and
Plan

Report no. 4212
November 2024

Client: Lanpro Services Ltd/Westchurch
Homes



**The Former Marina Ropeworks,
Brunswick Street, Heywood
Greater Manchester
Archaeological Strip, Map and Plan**

Summary

Archaeological Services WYAS were commissioned by Lanpro Ltd on behalf of Westchurch Homes to carry out a programme of archaeological excavation. Two trenches were excavated revealing structural remains dating from the late 19th to mid-20th centuries. These structures relate to steam power generation, the movement of waste gases and the production and storage of gas on site. One of the two trenches was severely contaminated and, in this case, it was not possible to fully excavate and interpret the structures.



Report Information

Client: Lanpro Services Ltd/Westchurch Homes
Address: One St Peter's Square, Manchester, M2 3DE/
Kennedy House, 31 Stamford St, Altrincham, Cheshire,
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1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by Lanpro Services Ltd (on behalf of Westchurch Homes) to carry out an archaeological strip, map and plan at the former Marina Ropeworks, Brunswick Street, Heywood, Greater Manchester. The work was undertaken prior to the redevelopment of the site to fulfil Condition 6 of planning permission (ref. 21/01796/FUL) issued by Rochdale Borough Council on 13th June 2023. The work was undertaken between the 23rd and 27th of September 2024, in accordance with the National Planning Policy Framework (NPPF), and a Project Design (PD, Appendix 1) produced by Lanpro Services Ltd and approved by Greater Manchester Archaeological Advisory Services (GMAAS).

Site location, topography and land use

Marina Ropeworks comprises two plots, divided by Wesley Street, which lie on the east side of Brunswick Street, within the town of Heywood, Greater Manchester (NGR SD 85290 10662, Fig. 1). The development site extends to a combined area of 1.114ha and includes the buildings of the former ropeworks along with concrete and tarmac and waste ground. The site is level and lies at approximately 121m aOD. The site is bounded by Fox Street to the north, Hill Street to the east, Brunswick Street to the west, and terrace housing to the south.

Soils and geology

The recorded bedrock geology within the development site consists of the Pennine Lower Coal Measures Formation overlaid by superficial deposits of Glaciofluvial Deposits (BGS 2024). The soils are unrecorded urban deposits (SSEW 1983).

2 Archaeological and Historical Background

The archaeological background below is taken from the Project Design (Appendix 1), based on information from the Heritage Statement and Impact Assessment (Dickinson Waugh Conservation 2021) and a geotechnical desk study report (Betts Geo 2021).

The site was established by William Healey in 1843 as Cartridge Works and by 1891, they were advertising in Worrall's Directory as manufacturers of rope, twist, cotton and tubular banding (Grace's Guide 2024). By 1874, they became Healey Brothers Limited when William's sons, William, Robert and Jehu took over the business (Heywood History 2024). They had two other works at Broadfield Mill, Broadfield and Frankfort Mill, Oldham.

By the time of Whitakers Red Book, 1914, they were manufacturing many different ropes, cords and twines and had 700 to 800 employees (Grace's Guide 2024). An advertisement in Worrall's Yorkshire Textile Directory of 1917, lists the products but also contains an illustration of Cartridge Ropery (Grace's Guide 2024).

The buildings within the site are, according to historic mapping, of differing phases, from c. 1850 to 1929 with later additions (Dickinson Waugh Conservation 2021, figure 2; Betts Geo

2021). The original complex comprised three linear structures arranged around a courtyard concealed behind terraced housing along Brunswick Street (Dickinson Waugh Conservation 2021). The complex was extended and added to in the later 19th century and early 20th century. Healey Brothers was acquired by British Ropes Ltd in 1968 (Grace's Guide 2024) and became British Twine and Rope in 1971 (Heywood History 2024).

In January 2024, Salford Archaeology carried out a historic building recording on the standing buildings of the former Marina Ropeworks (Salford Archaeology 2024). By the time of the strip, map and plan, the majority of the structures had been demolished.

3 Aims and Objectives

The overall aim of the archaeological work was to obtain sufficient information to establish the presence/absence, character, extent, state of preservation and date of any archaeological remains relating to the features of the complex. This was achieved by:

- determining the location, extent, date, character, condition and significance of any archaeological remains;
- excavating and recording identified archaeological features and deposits to a level appropriate to their extent and significance;
- assessing the vulnerability/sensitivity of any exposed remains;
- assessing the impact of previous land use on the site;
- assessing the potential for survival of environmental/industrial evidence;
- informing a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains;
- undertaking sufficient post-excavation assessment to confidently interpret identified archaeological features; and
- reporting the results of the investigation and place them in their local, regional or national context and making this record available by disseminating the results in an appropriate form.

The objective of the work was to excavate two trenches and assess the resultant areas for their archaeological potential. Any remains were then subject to archaeological excavation. Recovered artefacts were subject to analysis.

Greater Manchester Lives/Rochdale Local Studies and Archives was consulted for any materials relating to the remains on the site but no relevant records were found.

Research Framework

The programme of archaeological investigation and recording was to be conducted within the general research parameters and objectives defined by in the regional research agenda, the North West Regional Research Framework for archaeology (NWRF 2021). The previous research agenda The Archaeology of North West England: An Archaeological Research Framework for North West England, Vol 2 Research Agenda and Strategy (Brennand 2007) was also considered.

4 Methodology

The work involved the excavation of two trenches of varying size, positioned to target features of archaeological features identified from historic mapping. The size of each trench is listed below:

- Trench 1 – 154m²
- Trench 2 – 80m²

All work was undertaken in accordance with accepted professional standards and guidelines (Historic England 2008; CIfA 2020), in accordance with the ASWYAS site recording manual (ASWYAS 2020) and in compliance with the PD (Appendix 1).

All trenches were set out and the limits resurveyed using a Trimble VRS differential GPS accurate to +/-0.01m. The trenches were opened in a controlled manner using a 360° excavator using a flat-bladed ditching bucket under direct archaeological supervision. A toothed bucket was permitted when breaking up and lifting large sections of concrete or brickwork. All deposits were removed in level spits (not more than 0.20m). Machining stopped at the first archaeological horizon or natural deposits, whichever was encountered first. All excavations of archaeological deposits were undertaken manually with the stripped surface being cleaned and investigated for archaeological remains.

Feature plans were drawn recorded in plan at a scale of 1:20 or 1:50. All drawings include spot heights that relate to Ordnance Datum in metres. It was not possible to hand draw plans of Trench 1 due to contamination but the area was planned digitally using a survey grade GPS and photogrammetry. Otherwise, a full written, drawn, and photographic record was made of all archaeological work undertaken. An inventory of the primary archive is presented in Appendix 2 and a concordance of contexts is given in Appendix 3. ASWYAS currently hold the site archive in a stable and secure location.

5 Results

Below is a description of the results of the excavations in each trench. The location of the trenches and archaeological features recorded are shown on Fig. 2 and overlain on historic mapping in Figs 3-6. The excavations immediately followed the demolition of the ropework structures, the subject of a historic building recording survey (Salford Archaeology 2024). Trench 1 was excavated in what was recently an open yard with a concrete slab surface. Trench 2 was excavated in the location of an existing engine house. The engine house was originally a double height structure but had been modified into a two-storey structure, likely following the removal of the steam engine and the conversion of the works to electric power.

Trench 1 (Fig. 7; Plates 1-15)

Trench 1 (Plates 1 and 2) measured 154m² in total. Overburden was machine excavated down to the uppermost archaeological horizon. The upper surfaces of the surviving structures were then hand cleaned. It rapidly became apparent that the lower deposits in the trench were widely contaminated with liquid elemental mercury, hydrocarbons and suspected asbestos containing materials. It was not possible to safely enter the excavation to further define the structures. It was also important not to spread any contaminants to the surrounding land and air and to avoid negative health effects for ASWYAS staff, local residents and other contractors on site by any further exposure. As such, the following represents a description the exposed structures based on the limited observations it was possible to carry out safely. Fortunately, the majority of the remains correlate with structures depicted on historic mapping which provides invaluable evidence on the date and, in some cases, the purpose of the structures.

The earliest deposit encountered in the trench was the natural geology (102) consisting of a mid-greyish-brown clay.

Chimney 104 (Plate 3) correlates with a square chimney depicted on late 19th and 20th-century mapping (Figs 3-6). The southern, western and northern sides of the chimney were exposed, stepping out towards its base on the southern side where it measured at least 2.40m wide and was 1.08m tall (Plate 4). In total, the chimney base was square and measured c. 2.40m across. It was constructed from red bricks bonded with a very light yellowish-grey mortar. Flue 105 (Plate 5) extended eastwards from the centre of the chimney, then to the north. It was constructed with a mixture of standard red brick and light yellow refractory bricks bonded with light grey mortar. The bricks were heavily sooted, suggesting it drew smoke from the east and/or north. A square concrete surface (106) partially sealed flue 105. It may have either formed a covering for the flue or a floor surface which existed following the disuse of at least this part of the flue. It was constructed from a light grey concrete and measured at least 1.63m long and 1.43m wide.

The north-western corner of the trench contained structures that were not fully characterised (Plate 6), but clearly form a cellar of some kind, bounded by a set of brick walls (107, 116) and containing a brick surface (117), many of which were heavily truncated, likely during

later demolition. Wall 106 was bonded by a dark grey mortar and exposed along the western edge of the trench for a length of 3.50m, turning south-eastwards for 1.30m, and then eastwards along the northern edge of surface 106. A trace of the eastern end of the cellar (116) was likely marked by another brick wall, abutted by a trace of a brick surface (117), with a cut into natural clays visible on its eastern side. Given the proximity to the chimney and direction of the flue, these remains likely represent a boiler house. The concentration of suspected asbestos containing materials in demolition deposits here adds weight to this interpretation. By 1929 (see Fig. 5), this building no longer existed.

By 1910 (Fig. 4) a further structure of similar proportions had been constructed immediately adjacent to the putative boiler house on its eastern side (111, Plate 7). In total, this surface measured 3.59m long and 3.10m wide. It was heavily truncated but best preserved on its eastern edge where the surface had three clear steps, descending to the south. It was constructed of both un-frogged and frogged bricks (L: 230.00 mm, W: 120.00 mm, H: 80.00 mm) bonded with a friable light pink mortar. By 1929 (see Fig. 5), this building no longer existed.

To the north of surface 111, a series of likely related structures (Plate 8) were recorded none of which are depicted on historic mapping suggesting they were remains associated with a structure after the site was surveyed by the Ordnance Survey in 1910. Wall 114 extended northwards from the north-east corner of surface 111 and beyond the edge of the trench. It was constructed from bright orangey-red bricks bonded with mid-whitish-grey mortar, laid in header bond. It measured 0.41m wide and 0.55m tall. Wall 112 extended northwards from close to the north-west corner of surface 111, separated by a gap of c. 0.35m. It was constructed from red bricks bonded with a mid-whitish grey mortar, laid in stretcher bond. It stepped out eastwards towards its base whilst its western side was vertical and it extended northwards beyond the trench. To its immediate east was a brick floor surface (113) constructed from bright orangey-red bricks.

Historic mapping illustrates that the gasometer (115) was added by 1929 (Fig. 5; Plates 9-11). The gasometer was circular in plan, 4.05m across, and was exposed during the excavation to a depth of at least 2.25m. It was formed by a brick wall, 0.50m wide, constructed with frogged red bricks (L: 230.00 mm, W: 120.00 mm, H: 70.00 mm) bonded with a light grey mortar. The circuit of the wall was broken by two brick niches, which stepped outwards from the centre. One lay to the west and one to the south. These represent the likely location of the gas inlet and outlet pipes. A pair of large cast iron pipes were removed from the overlying demolition material, thought most likely to represent one or both of the gas inlet or outlets (Plate 12). Neither pipe was *in-situ* when encountered. Two external brick buttresses lay on the exterior side of the gasometer, one facing north-west and one south-west. By 1973 (see Fig. 6), this building no longer existed.

Further structures depicted on later historic mapping from 1929 to 1973 (Figs 5 and 6) correlate to some degree with other remains encountered in the trench. Surface 108 was only

exposed over a small 1.50m long and 0.83m wide area and was constructed in red bricks (L: 230.00 mm, W: 120.00 mm, H: 70.00 mm). Whitish material facing the bricks may be an asbestos containing material or lime deposits, indicating a sub-surface structure such as a flue was more likely than a floor. By 1973 (see Fig. 6), no buildings in this location existed. To the south of surface 108, wall 110 (Plate 13) formed a rectangular area measuring 3.68m long and 1.75m wide, constructed with red frogged bricks bonded with dark grey mortar laid in common bond. Wall 110 bounded surface 109 and may form part of a cellar or flue. This was constructed in a light grey cement. Demolition deposits here contained high concentrations of elemental mercury forming beads throughout the overlying demolition deposits. This building may either relate to structures depicted on 1929 (Fig. 5) mapping to the east of the chimney or structures to the south of the chimney depicted on 1973 mapping (Fig. 6), though neither fully correlate with the form of the excavated remains.

No archaeological features were found in the southern part of the trench, south of wall 110 (Plate 14) aside from drain 103. This measured 1m wide and at least 0.86 long and formed the truncated base of a drain or manhole. It was constructed with two courses red frogged bricks, bonded with a very light grey mortar.

Demolition deposits (101) sealed the archaeological features in the trench. They largely comprised contaminated ash with brick, concrete and mortar rubble. One pipe boiler or support brick was noted in material overlying surface (111, Plate 15). This was not retained due to contamination potential but may indicate either a boiler or pipes carrying steam, water or gas.

Trench 2 (Fig. 8, Plates 16-22)

Trench 2 (Plate 16) measured 80m² in total. In contrast to Trench 1, no contaminants were found and the structures were hand cleaned and recorded sufficiently to fully characterise the remains and their stratigraphic relationships.

The earliest deposits in the trench were the natural geology (201) comprising a mid-greyish-brown clay. Occasional brick inclusions are likely to represent some disturbance and intrusion of the overlying demolition rubble.

The earliest structures in the trench comprised two east-west oriented walls crossing the centre and northern edge of the trench (Plate 17). The central wall survived as footing (209) constructed with light grey concrete with crushed brick aggregate (*c.* 70mm). The footing measured 0.6m wide and 0.8m deep. The footing was overlain with a brick wall (207/208), up to nine courses in height. Both walls were constructed in red bricks (L: 0.23 mm, W: 0.11-0.12 mm, H: 0.08 mm) bonded with a dark greyish-brown mortar. Wall 207 was laid in header courses whilst wall 208 (Plate 18) was laid in common bond dark grey mortar.

At the northern limit of the trench a concrete footing (213) was formed with a light grey concrete with crushed brick aggregate (*c.* 50mm). It measured *c.* 0.50m wide and at least 0.20m deep. This was overlain by brick wall 203 (Plate 19), constructed with up to seven

courses of red frogged bricks (L: 240.00 mm, W: 130.00 mm, H: 70.00 mm) bonded with a dark grey mortar. Only stretcher bond was observed. The exposed section of the wall measured at least 0.5m wide and 1m in height.

Contexts 212, 214 and 215 (Plate 20) abutted walls 207 and 213 and may represent several phases of construction. The stratigraphic relationships between these structural elements was unclear. Wall 212 was an irregularly coursed brick wall, found along the western edge of the trench. It was constructed with a mix of frogged and unfrogged red bricks (L: 110.00 mm, W: 230.00 mm, H: 80.00 mm), bonded with dark grey mortar. Wall 215 lay to its east and was constructed with frogged red bricks (L: 110.00 mm, W: 230.00 mm, H: 80.00 mm) and bonded with a dark grey mortar. It was laid in stretcher bond. The gap between the walls comprised a light grey concrete (214) which may represent a wall footing or a walkway.

Abutting wall 212 was a surface (206) and two rectangular plinths or buttresses (204 and 205, Plate 20). Each structural element was formed from a light yellowish-grey concrete with stone aggregate (c. 50mm). Plinths 204 and 205 measured approximately 0.6m long, 0.55m wide and 0.25m in height. Surface 206 may represent a walkway.

Abutting wall 203 and surface 206 was engine bed 202 (Plate 21), constructed in a light yellowish grey concrete with angular stone aggregate (up to 0.05m). The bulk of this structure was formed by a deep rectangular foundation extending eastwards beyond the edge of the trench, measuring 3.63m long, 4.5m wide and c. 1.1m deep. The northern edge of the engine bed was much shallower and, visible in the west-facing elevation, was seen to be constructed above a dark greyish-brown silty-clay levelling deposit (216). It was itself constructed above the natural geology. It was not visible at the surface. It is possible that this represents a later shallow surface abutting the large concrete engine bed but the concrete of the two surfaces appears continuous, albeit with cracks. Similarly the southern extent of the deposit is much shallower and forms an apparently contemporary low surface. In the centre of the engine bed, a trapezoid-shaped wheel pit was aligned west-south-west to east-north-east (Plate 22). It measured 3.04m long and 0.77m wide and was 0.70m deep. In profile, it sloped steeply down from each edge at an angle of c. 45° with a flat base.

Later than and abutting the south side of engine bed 202 was a mid-grey concrete surface or foundation (211). The latest structural element in the trench was a light greyish brown concrete surface with crushed brick aggregate, laid on a dark greyish-brown silty-clay levelling deposit (210). It covered an area measuring 2.20m long, 0.50m wide and 0.7m deep, abutting wall 208 and surface 211. The final deposit in the trench was demolition rubble (200) which sealed the structures beneath.

6 Artefact Record

Post-medieval finds by Z Horn

An assemblage of twenty items of pottery, leather and ceramic building material were recovered. Due to known contamination, the finds were quickly examined (un-washed). Each item, consistent with finds from an industrial site, was quantified (Table 1).

No further analysis is required, and it is recommended that this assemblage is deselected from the site archive rather than being retained for museum deposition.

Table 1. Catalogue of the recovered artefacts

Context	Material	Description	Quantity	Date
105	Brick	Sandy coloured refractory brick (designed to endure extremely high temperatures) measuring 116 x 232 x 76mm. Not frogged	1	Industrial/Modern (after 1770)
200	Pottery	Sherd of brown glazed earthenware from a storage jar	1	Industrial/Modern (after 1770)
200	Pottery	Sherds from brown glazed teapot	2	Industrial/Modern (after 1770)
200	Pottery	Sherds from a blue and white banded ware jars or mugs	5	Industrial/Modern (after 1770)
200	Pottery	Sherds a of transfer printed plates	4	Industrial/Modern (after 1770)
200	Pottery	Sherds from a white glazed stoneware teapot	4	Industrial/Modern (after 1770)
200	Pottery	Sherd from a large black glazed pancheon or dairy bowl	1	Industrial/Modern (after 1770)
200	Drive Belt	A coiled leather drive belt measuring approximately 4000 x 90 x 8mm	1	Industrial/Modern (after 1770)
212	Brick	Red brick measuring 110 x 230 x 75mm. Double frogged. No makers stamp.	1	Industrial/Modern (after 1770)

7 Recommendations for Further Work

It is recommended that the material finds are discarded upon completion of the project. Due to the temporary closure of Touchstones, Rochdale, no local museums are available to accept the site archive. As a result, it is recommended that the physical archive is digitised and submitted to the Archaeology Data Service (ADS) in addition to the digital archive, including photographs and digital context records and registers. The report, once finalised, will also be submitted to OASIS.

8 Discussion and Conclusions

The excavations have revealed a series of structures relating to the development of the Ropeworks in the late 19th to mid-20th centuries.

The structures in Trench 1 were, in general, poorly preserved. Several structures indicated on historic mapping were not observed in the trench. The majority of remains in the trench were sub-surface structures or those with more substantial, deeper foundations that survived their levelling in the later 20th century. As described above, the trench was dangerously contaminated and it was not possible to fully excavate and record the remains here. These two factors hinder a full interpretation and discussion of the remains exposed, but useful conclusions can still be drawn.

The structures here clearly relate to at least part of the power generation infrastructure on the site in the late 19th century and early 20th century. The chimney and flue suggest a boiler house was close by, likely the structure to its north. This may have also housed the steam engine. Unfortunately no evidence for power transmission was recorded in the surrounding extant structures during the historic building recording (Salford Archaeology 2024).

In the early 20th century this area of the ropeworks underwent significant development. Additional structures were added including a gasometer. This suggests this area of the ropeworks was used for the production of gas from coal and its storage. No direct evidence of gas production was observed, though it is thought likely that one of the adjacent structures was a retort house. Further stages of gas purification in the form of condensers, washers and purifiers may have also been located in adjacent structures, though again, no direct evidence was observed. It is likely that this material evidence, such as retorts, would be contained above ground and long since removed and their materials recycled. Gas production, however, is inferred through contamination by elemental mercury, concentrated around a structure to the south-west of the gasometer (109/110). Elemental mercury is a trace element in coal and is released particularly through coal gasification (Altaf *et al.* 2022). An alternative source may be spillage from broken thermometers or similar instruments, though the volumes of mercury present suggest this is unlikely.

Trench 2 was located in order to investigate the sub-surface remains of the engine house which recently stood in this location. The structure was added in the early 20th century and

was later modified and reused following the removal of the steam engine and the conversion of the ropeworks to electrical power.

There was clearly some phasing of the structures in this area evidenced by stratigraphic relationships in the brick and concrete walls. The two northern and southernmost, east-west oriented walls formed the earliest structural remains. This may indicate the structure was originally open on its western side. The western wall of the engine house was added later, along with two concrete plinths or buttresses and a concrete surface. These may relate to an earlier engine bed. The later structures in the trench relate to the large concrete engine bed and wheel pit. The dimensions of the engine house and the location of the flywheel pit suggest it contained a vertical or upright engine. It is likely that the engine was powered by steam brought in from boilers to the west and powered machinery in the eastern wing of the ropeworks. This is supported by evidence of power transmission recorded during the historic building recording (Salford Archaeology 2024). The historic building recording does not suggest there were multiple phases of development of the walls of the engine house. It is possible the above ground structure recorded represents a later rebuild, contemporary with later phases of activity in the trench.

The excavations at the former Marina Ropeworks have contributed to a fuller understanding of the operation and development of the Cartridge Ropery in the late 19th and early to mid-20th centuries, particularly when read alongside the historic building recording which could not investigate the below ground and demolished structures found in Trench 1 and evidence of phasing and the engine bed and wheel pit recorded in Trench 2.

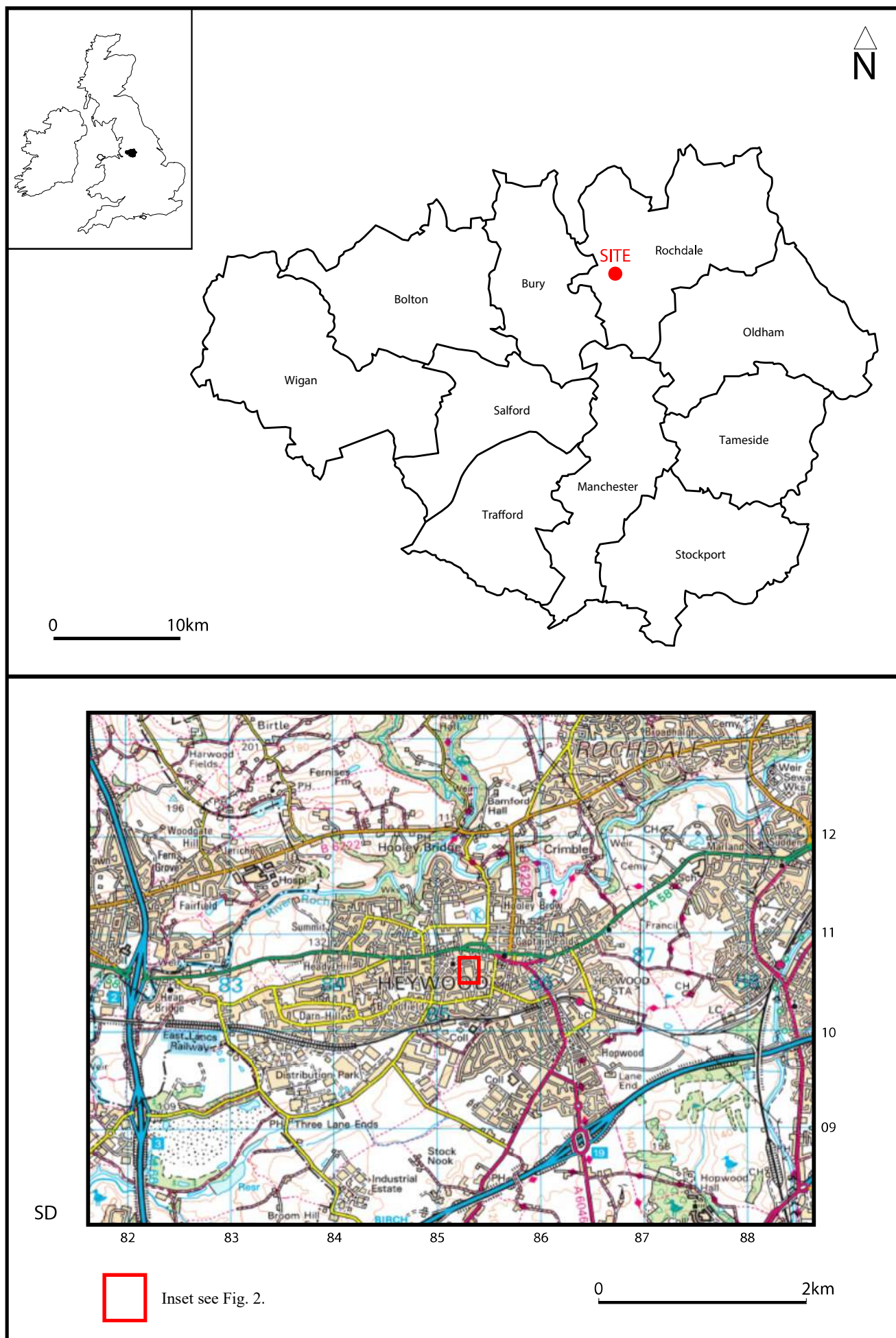
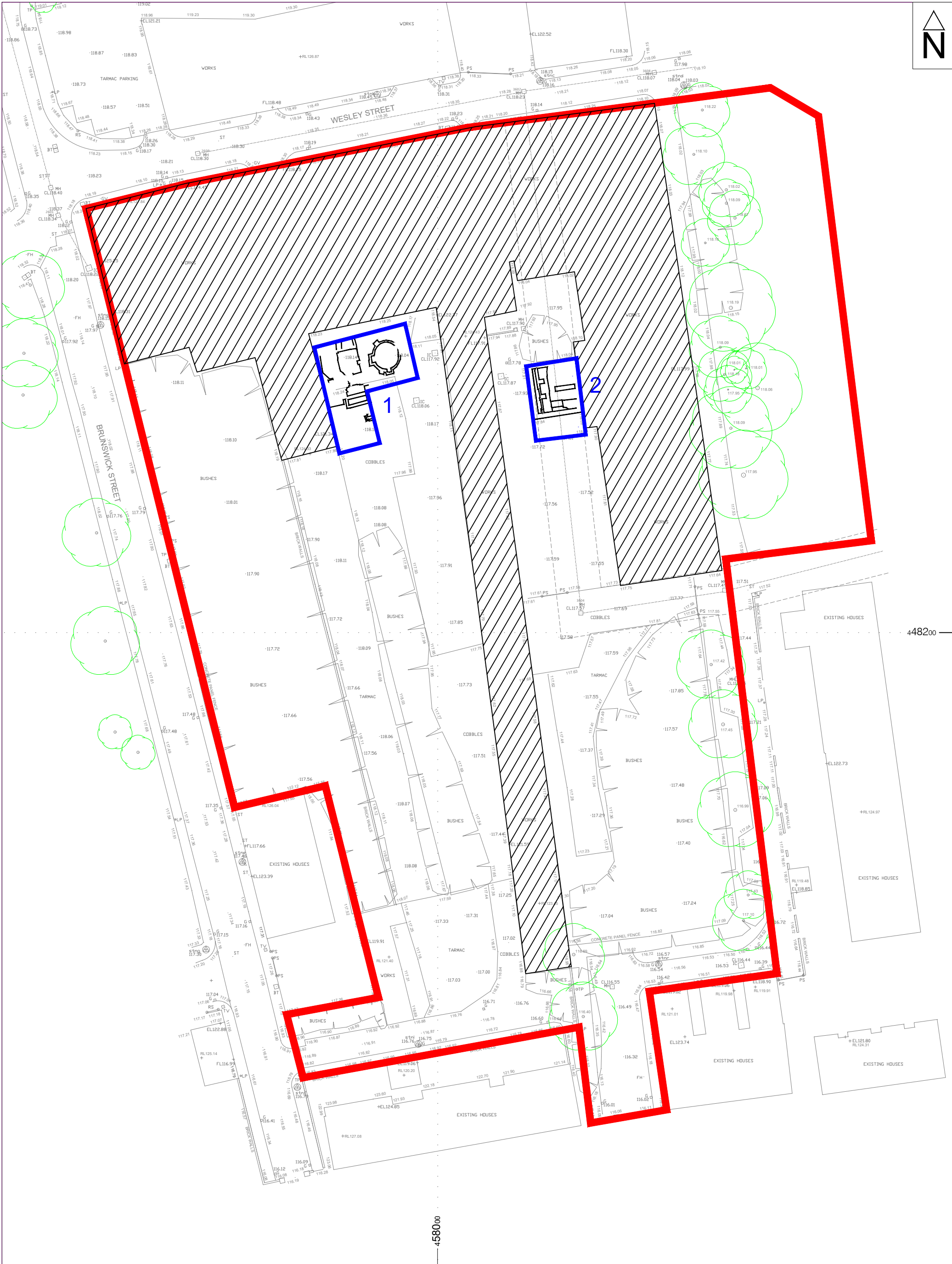


Fig. 1. Site location

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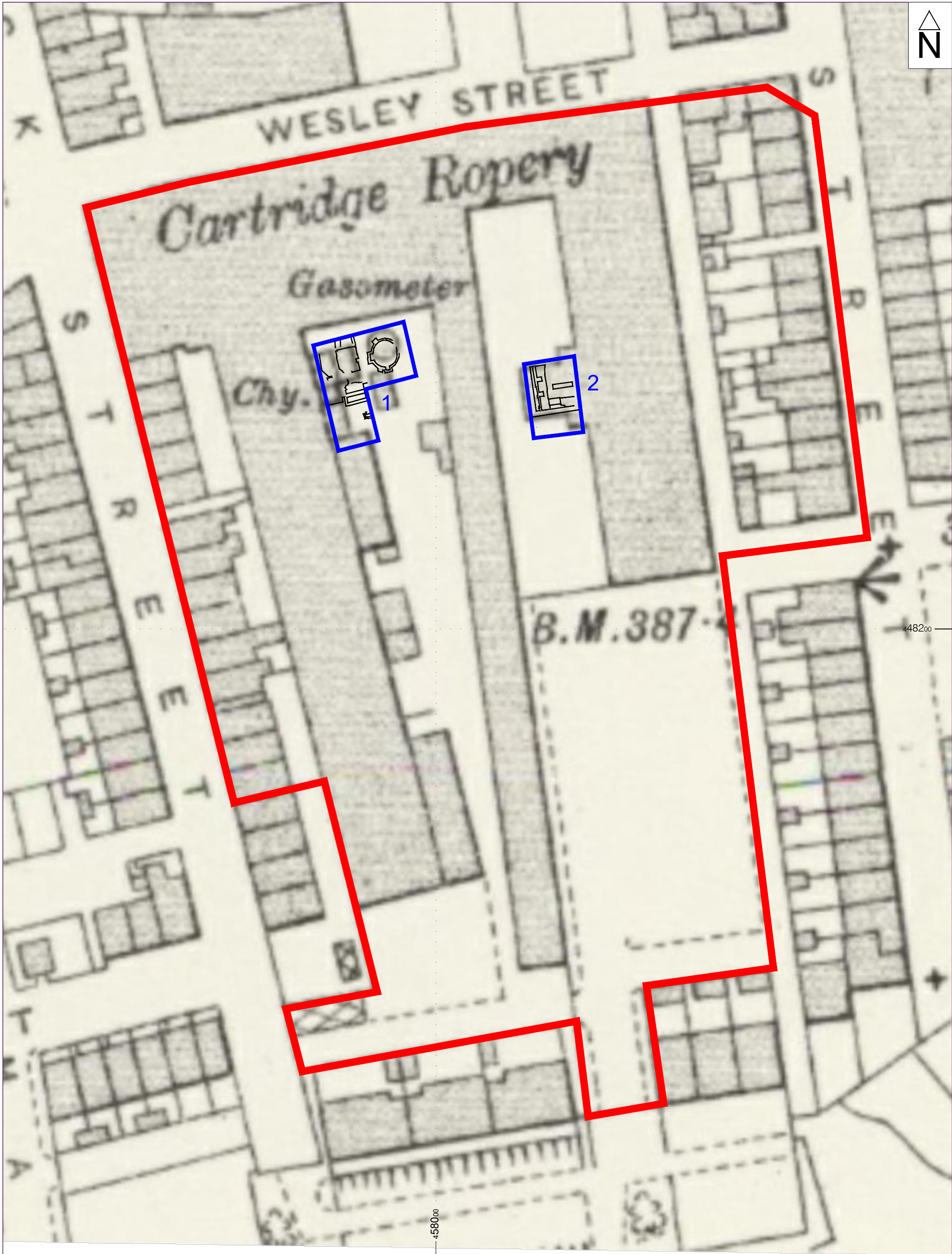
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	Fig. 2.	 TRIAL TRENCH	
	Site plan	 ARCHAEOLOGICAL FEATURE	

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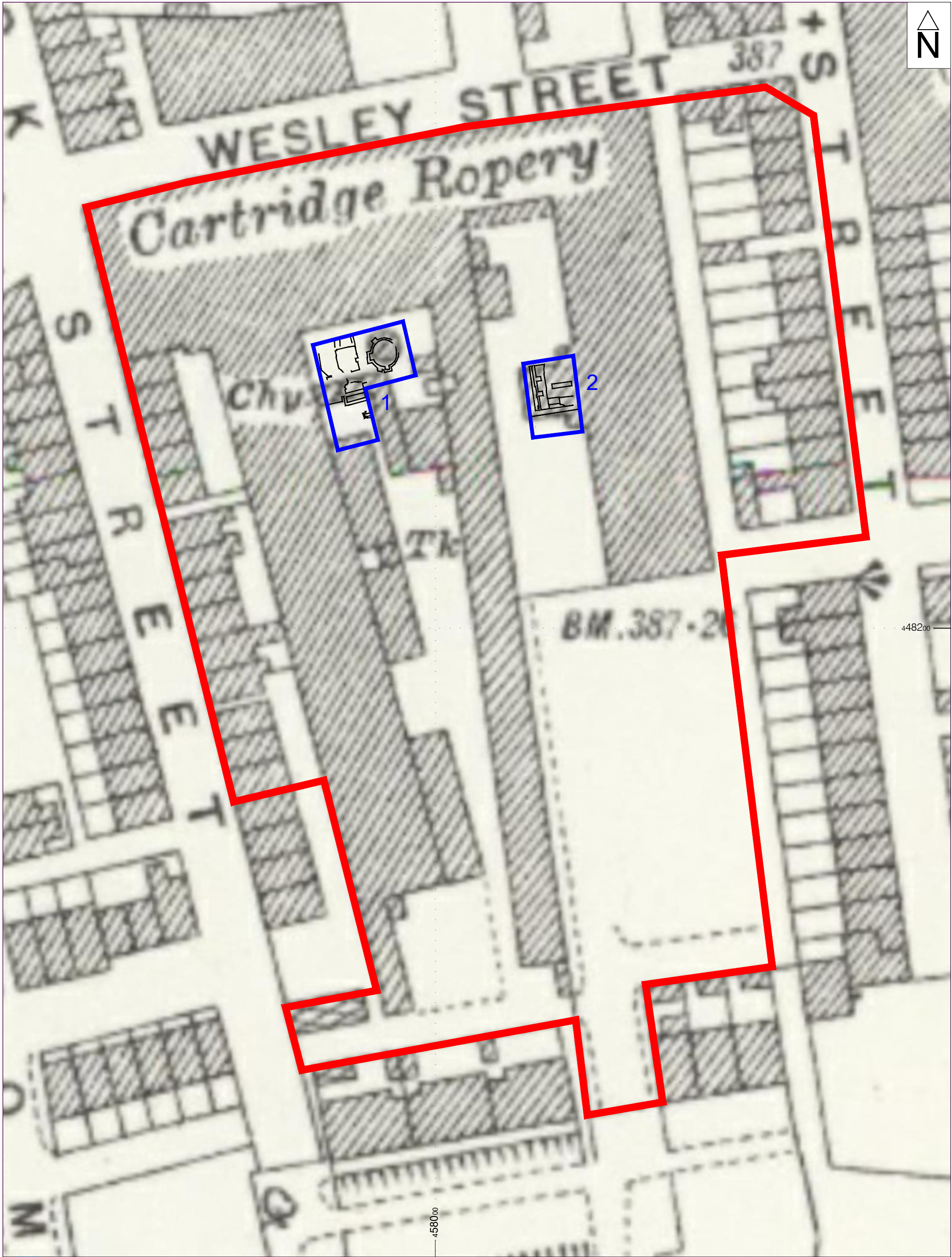


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	Fig. 3.	 TRIAL TRENCH	
	Site plan overlaid on the Heywood Town Plan of 1891	 ARCHAEOLOGICAL FEATURE	

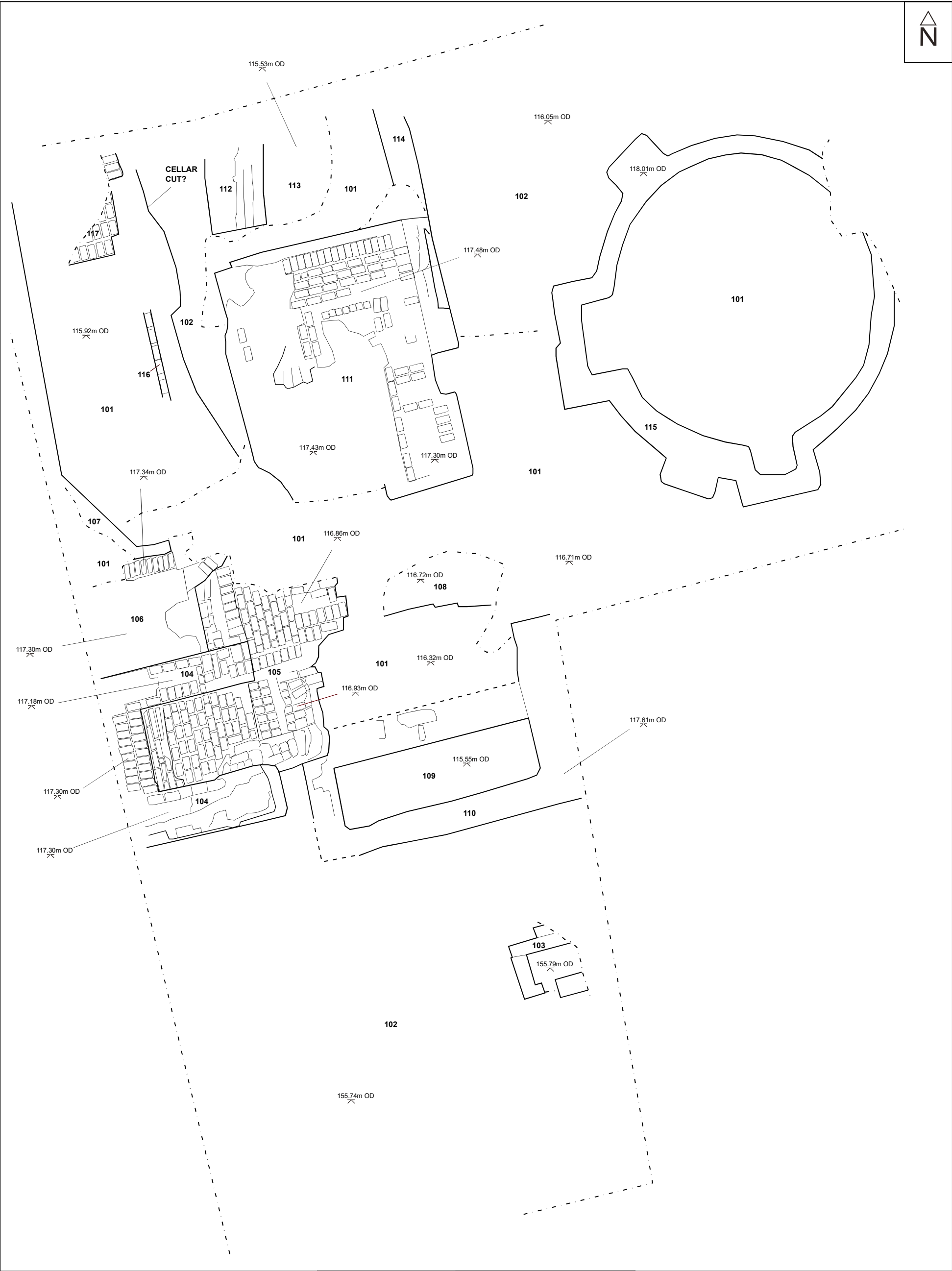


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	Fig. 4.	 TRIAL TRENCH	
	Site plan overlaid on the 25" OS map of 1910	 ARCHAEOLOGICAL FEATURE	



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	Fig. 5.	 TRIAL TRENCH	
	Site plan overlaid on the 25" OS map of 1929	 ARCHAEOLOGICAL FEATURE	





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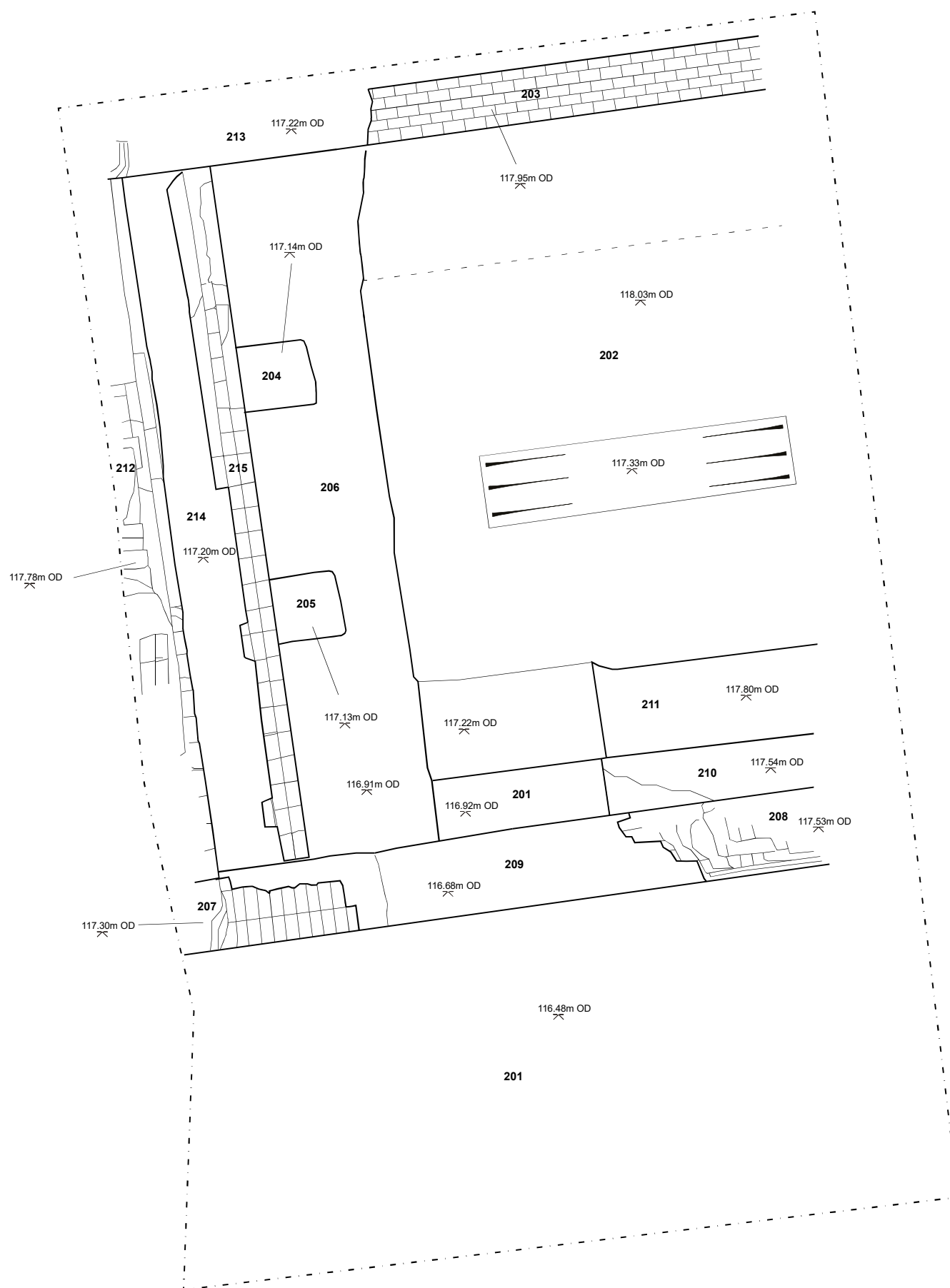
Project No. XM64

Project Code: MRM24

Fig. 7

Trench 1 plan

0 2m (1:50)



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Project Code: MRM24

Fig. 8

Trench 2 plan

0 2m (1:50)



Plate 1. Trench 1, general photo, looking north-east



Plate 2. Trench 1, general photo, looking north



Plate 3. Trench 1, chimney 104, looking west



Plate 4. Trench 1, chimney 104, looking north



Plate 5. Trench 1, chimney 104, flue 105 and surface 106, looking south-west



Plate 6. Trench 1, structure 107, looking west



Plate 7. Trench 1, surface 111, looking north-east



Plate 8. Trench 1, wall 112, surface 113 and wall 114, looking north-east



Plate 9. Trench 1, gasometer 115, looking west



Plate 10. Trench 1, gasometer 115, looking north-west



Plate 11. Trench 1, gasometer 115, looking east



Plate 12. Trench 1, cast iron gas pipes associated with gasometer 115



Plate 13. Trench 1, surface 108 and wall 110, looking south-east



Plate 14. Trench 1, drain 103, looking east



Plate 15. Trench 1, ceramic pipe or boiler support in demolition deposits looking north



Plate 16. Trench 2, general photo, looking south



Plate 17. Trench 2, walls 203, 207, 208, 209 and 213, looking north



Plate 18. Trench 2, wall 208, looking north



Plate 19. Trench 2, wall 203, looking west



Plate 20. Trench 2, wall 212 and 215 and wall/surface 214, looking west



Plate 21. Trench 2, engine bed 202, looking south



Plate 22. Trench 2, wheel pit, looking south

Appendix 1: Project Design

Appendix 2: Inventory of primary archive

File/Box No	Description	Quantity
File no.1	Drawing register sheets	1
	Photo register sheets	1
	Context register	2
	Context record	34
	Permatrace sheets	2

Appendix 3: Concordance of contexts

Context	Area	Type	Description	Artefacts
101	1	Deposit	Rubble / clinker	Brick sample (1)
102	1	Deposit	Natural geology	
103	1	Masonry	Service access	
104	1	Wall	Chimney	
105	1	Wall	Flue	
106	1	Surface	Surface	
107	1	Wall	Brick cellar?	
108	1	Surface	Brick surface	
109	1	Surface	Concrete surface	
110	1	Wall	Brick wall	
111	1	Masonry	Surface	
112	1	Wall	Wall	
113	1	Surface	Surface	
114	1	Wall	Wall	
115	1	Masonry	Gasometer	
116	1	Wall	Brick cellar?	
117	1	Surface	Brick surface	
200	2	Fill	Rubble layer	Pottery (17), leather drive belt (1)
201	2	Layer	Clay natural geology	
202	2	Surface	Engine bed	
203	2	Wall	Wall	
204	2	Buttress	Concrete buttress	
205	2	Buttress	Concrete buttress	
206	2	Surface	Concrete surface	
207	2	Wall	Wall	

Context	Area	Type	Description	Artefacts
208	2	Wall	Wall	
209	2	Masonry	Footing	
210	2	Surface	Surface butting wall 209 and overlain by surface 203	
211	2	Surface	Lower surface butting machine plinth 210	
212	2	Wall	Western side wall	Brick sample (1)
213	2	Wall	Wall	
214	2	Concrete wall/surface	Wall or surface	
215	2	Brick wall	Wall	
216	2	Deposit	Levelling deposit	

Appendix 4: Catalogue of consulted historic maps and plans

Ordnance Survey

Description	Date
Heywood Town Plan of 1891 (1:500)	Heywood - Lancashire LXXXVIII.11.7 Surveyed: 1890, Published: 1891.
Ordnance Survey 25" map of 1910 (1:2500)	Lancashire LXXXVIII.11 Revised: 1907, Published: 1910
Ordnance Survey 25" map of 1929 (1:2500)	Lancashire LXXXVIII.11 Revised: 1927 to 1928, Published: 1929
Ordnance Survey 1:1250 National Grid Map of 1973	Published 1973

Bibliography

- Altaf, A.Z., Adewuyi, Y. G., Haipeng Teng, H, Liu, G., Abid, F., 2022, 'Elemental mercury (Hg0) removal from coal syngas using magnetic tea-biochar: Experimental and theoretical insights', *Journal of Environmental Sciences* 122, 150-161, <https://doi.org/10.1016/j.jes.2021.09.033>
- ASWYAS, 2020, *Archaeological Recording Manual* (unpubl.)
- Betts Geo, 2021, Westchurch Homes: Desk Study Report for Brunswick Street, Heywood
- BGS, 2024, British Geological Survey website, www.bgs.ac.uk/data/mapViewers/home.html (last accessed 15/01/2024)
- Brennand, M. 2007, *The Archaeology of North West England: An Archaeological Research Framework for North West England, Vol 2 Research Agenda and Strategy*
- Chartered Institute for Archaeologists, 2020, *Standard and Guidance for Archaeological Field Evaluation*
- Dickinson Waugh Conservation 2021, Heritage Statement and Impact Assessment: Proposed demolition of existing buildings in preparation for new dwellings, Land at Marina Ropeworks, Brunswick Street, Heywood, Rochdale
- Grace's Guide 2024, Graces Guide to British Industrial History: https://www.gracesguide.co.uk/Healey_Brothers (accessed 23/01/2024)
- Heywood History, 2024, <https://www.heywoodhistory.com/> (accessed 23/01/2024)
- Historic England, 2008, *Management of Research Projects in the Historic Environment. Archaeological Excavation (PPN3)*
- NWRF, 2021, *North West Regional Research Framework – The Research Framework for the North West*, <https://researchframeworks.org/nwrf/> (accessed 28/09/2022)
- Salford Archaeology, 2024, Marina Ropeworks: Brunswick Street, Heywood, Greater Manchester: Historical Building Investigation Report
- Soil Survey of England and Wales, 1983, *Soils of Northern England Sheet 1*