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Historic Building Investigation

Jersey Street Bridge, Ancoats, Manchester

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Contents

Summary 1

1. Introduction 2

1.2 Research Aims and Objectives 3
1.3 Historic Building Investigation Methodology 4

2. The Setting 5

2.1 Location 5
2.2 Geology and Topography 5

3. Historical Background 6

3.1 Old Colony House 6

4. Historic Building Investigation 7

4.1 Introduction 7
4.2 External Description 7
4.3 Internal Description ..... **Error! Bookmark not defined.**

5. Watching Brief Results 11

6. Discussion 31

6.1 Introduction 31
6.2 Results 32
6.3 Results 34

7. Archive 35

7.1 Archive 35

Sources 36

Secondary Sources 36
Web Sources 36

Acknowledgements 37

Appendix 1: Illustrations 38

Summary

Manchester City Council has obtained planning consent from Manchester City Council to carry out the demolition of a redundant bridge and associated works required to facilitate the creation of a new at-grade pedestrian and cycle route with enhanced public realm centred at NGR SJ 85269 98802 (Planning Ref: 133406/VO/2022).

The site contained two upstanding stone parapet walls with the bridge deck having been obscured by modern tarmac. The bridge had been constructed in the early-19th-century spanning the Prussia Street arm of the Rochdale canal. Johnson's map of 1820 shows that various branches of the canal were crossed by bridges. Surviving examples exist on Jersey Street, German Street and Poland Street. The bridge over Jersey Street had been noted as a narrow crossing during the early-19th-century and was clearly functioning as a lifting bridge in the mid-19th century. However, by the late-19th-century this had been widened to the full width of Jersey Street. Any earlier mechanisms were seemingly modified and the surviving configuration – a fixed road bridge – was assembled.

The historic building survey (Level 1) and watching brief allowed for the final configuration of the bridge to be examined in detail. Complimentary to the investigation of the bridge were several associated trenches to carry diverted services; these trenches revealed remains of an adjacent wharf, cotton mill and manufactory, which were established beside the waterway over the course of the 19th century. Of particular interest were the remains of Beaver's Mill / Jersey St Mill(s). The survival of both internal and external walls and floor surfaces demonstrates good potential for the remainder of the mill to survive *in-situ*.

The combined archaeological investigation of Jersey Street Bridge and its immediate surroundings had provided worthwhile examination of the bridge's construction and allowed for a brief assessment of the surviving archaeology to the south and north of the bridge.

1. Introduction

1.2 Background

Manchester City Council has obtained planning consent from Manchester City Council to carry out the demolition of a redundant bridge and associated works required to facilitate the creation of a new at-grade pedestrian and cycle route with enhanced public realm centred at NGR SJ 85269 98802 (Planning Ref: 133406/VO/2022).

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In view of the historic interest of the building, the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as Archaeological Advisors to Manchester City Council, recommended that a historic building investigation of Jersey Street bridge was carried out in advance of any development works. It was also recommended that a condition be attached to planning consent (Condition 14) that advised:

'No development works shall take place until the applicant or their agents or successors in tile has secured the implantation of a programme of archaeological works in accordance with a Written Scheme of Investigation (WSI) which has been submitted to and approved in writing by the local planning authority. The WSI shall cover the following:

'1. A phased programme and methodology investigation and recording to include:

a. a historic building investigation commensurate with a Level 1 survey;

b. pending the results of the above, a watching brief during demolition;

c. a targeted archaeological watching brief during landscaping works.

2. A programme for post-investigation assessment to include:

a. production of a final report on the results of the investigations and their significance.

b. Deposition of the final report with the Greater Manchester Historic Environment Record.

3 Dissemination of the results of the archaeological investigations commensurate with their significance.

4. Provision for archive deposition of the report and records of the site investigation.

5. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI

Reason: To record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) and to make this evidence (and any archive generated) publicly accessible, and pursuant to policy of EN3 of the Manchester Core Strategy and saved policy DC20 of the Unitary Development Plan for the City of Manchester (1995).'

In order to address this recommendation Faithful + Gould, who acted as consultants to Manchester City Council, commissioned Salford Archaeology within the University of Salford to undertake the recommended Level 1 historic building investigation in accordance with the approved Written Scheme of Investigation (WSI) prepared by Salford Archaeology.

1.2 Research Aims and Objectives

The principal aim of the historic building investigation, given the commercial nature of the project, was to provide a detailed record of Jersey Street bridge prior to its demolition. Following the results, a watching brief had been maintained during the demolition and the subsequent landscaping works.

The stated objectives of the archaeological investigation included:

- to carry out an archaeological survey commensurate with an enhanced Historic England Level 1-type historic building investigation of Jersey Street Bridge. This will comprise a comprehensive photographic record and a written description along with using the existing plans and elevations.
- a watching brief will be required to record the bridge during the demolition process;
- to present the results of the historic building investigation in a fully illustrated report that provides an account of the bridge's origins, development and use;
- to produce an archive for the project;
- to make the results of the work publicly available via the deposition of the final digital report with the Greater Manchester Historic Environment Record and OASIS.

In addition, it was anticipated that the historic building investigation may inform some of the research questions presented in the current North West Archaeological Research Framework (https://researchframeworks.org/nwrf/):

- *GS44:* How can individual site based projects make a significant contribution to the region, in terms of defining trade centres or products?
- *GS46:* how can archaeological investigations inform our understanding of the development of transport and infrastructure
- *Ind93:* How well do we understand the evolution of rural versus urban bridge construction
- *Ind98:* How well understood and recorded are the North-West canals, waterways and basins?

1.3 Historic Building Investigation Methodology

The historic building investigation of Jersey Street bridge was conducted following the CIfA Standards and guidance for archaeological building surveys (updated 2020), and was commensurate with a Historic England Level 1-type survey (Historic England 2016).

Level 1 Recording

Photographic Archive: a comprehensive photographic archive of the historic elements of Old Colony House was produced utilising a high-resolution digital camera. All frames, excluding general contextual views, incorporated a graduated metric scale.

Written Description: a description of the historic structures will be maintained to Historic England Level 1 standard. The records will essentially form a summary statement of the exterior and interior of the buildings.

In August 2022, Salford Archaeology was commissioned by Faithful + Gould to undertake the recommended investigation and fulfil the archaeological planning obligations. This report presents the findings of the historic building investigation and the watching brief, coupled with a summary of the documentary evidence.

2. The Setting

2.1 Location

Jersey Street bridge (centred on NGR SJ 85269 98802) is located within the Ancoats area of Manchester. The site is bounded by the infilled canal spur to the north, Jersey Street to the east and west and vacant commercial land to the south (Plate 1; Fig 1).



Plate 1: Recent aerial shot across Jersey Street Bridge looking south

2.2 Geology and Topography

The underlying solid geology of the site comprises mudstone of the Manchester Marls formation, consisting, in the area previously dominated by lakes and lagoons, and which is overlain by superficial deposits of Devensian Till (British Geological Survey, 2018).

Topographically, the Manchester conurbation as a region lies within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region as a whole comprises the Mersey river valley, whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester and Salford (Countryside Commission 1998, 125).

3. Historical Background

3.1 Jersey Street Bridge

A more detailed historical background was undertaken within the Desk Based Assessment that was undertaken by Salford Archaeology (Fletcher 2022). This section summarises its findings.

A bridge carrying Jersey Street over the Prussia Street Arm of the Rochdale Canal was built in the early 19th-century. Johnson's map of 1820 shows that the canal arms branching off the Rochdale Canal were crossed by bridges on Jersey Street, German Street and Poland Street.

Bancks & Co.'s map of 1831 and Adshead's Map of 1851 show the Jersey Street crossing as a narrow bridge that would have been little more than a single track/pedestrian crossing. It is annotated on the 1851 Town Plan as a 'draw bridge', which was presumably lifted to allow passing river traffic below. However, the bridge had been widened to the full width of Jersey Street by the time of the Ordnance Survey Town Plan of 1891. By this time, the canal network in Ancoats had developed several branches, which served private factory wharves. The widening would have provided a full carriageway across the canal arm and based on its observed construction likely functioned as a fixed bridge. The bridge and canal arm had remained unaltered during the early- and mid-20th-century. By the 1960s the canal arm that flowed under the Jersey Street Bridge was infilled. The bridge is currently visible within the Site, demarcated by stone blocks and a slightly raised road surface, denoting the arch of the bridge.

4. Historic Building Investigation

4.1 Introduction

The programme of historic building investigation undertaken at the Jersey Street Bridge in Ancoats, area of Manchester, was carried out to Historic England Level 1 standard. The site comprises two upstanding stone walls of the bridge that spanned the Bengal Street arm of the Rochdale canal, while the bridge deck was incorporated into the modern road surface of Bengal Street.

4.2 External Description

The north parapet wall: the north wall of the bridge comprised two upstanding courses of local stone above a stone sting course below. The string course projected out 2" (0.05m) on the northern elevation and flush on the southern elevation (Plate 2&3). The upper stone course contained a chamfered coping rising to a concave face that was carved into each of the stones (Plate 3).



Plate 2: The northern elevation of the northern parapet wall of Jersey Street bridge, looking south-east



Plate 3: The southern elevation of the northern parapet wall of Jersey Street bridge, looking north

Access into the underside of the bridge was restricted due to the infilled debris, but part of the bridge construction could be seen at the northern elevation of the bridge. The string course at the base of the parapet wall was laid directly onto of a cast-iron beam spanning the opening. Two stone piers supported each end of the beam and were keyed into the adjoining brick walls (Plate 4).

The southern elevation of the wall fronted Jersey Street. This followed the camber of the bridge with the original deck obscured by the modern tarmac road and pavement (Plate 3).



Plate 4: Detail of the cast-iron beam and stone pier forming the northern extent of the bridge, looking south

The south parapet wall: as with the northern parapet wall, the southern wall comprised two upstanding courses of local stone above a stone sting course below. This was flush on the northern elevation while it projected out 2” on the southern elevation (Plate 5). The upper stone course also contained a chamfered coping rising to a concave face that was carved into each of the stones (Plate 5).

No access was gained to the southern side of the bridge as this was located on private land.



Plate 5: The northern elevation of the southern parapet wall fronting Jersey Street bridge, looking south

5. Watching Brief Results

5.1 *Introduction*

The archaeological observations made on site are described below on a trench-by-trench basis, according to the sequence the groundworks took place.

The first stage of the watching brief involved the excavation of a service trench (designated Trench 1) to the south of Jersey Street Bridge; this allowed buried services beneath the road to be temporarily diverted. Remains of the canal arm and two industrial complexes on either side were subject to investigation.

The second stage oversaw the excavation of 12 test pits, encompassing 6 test pits on either side of the former bridge. From east to west, these investigated an area of 61.5m in length. Remains of the canal wall and bridge and a sequence of levelling layers used to create the approach to the bridge and road surface were revealed.

The northern side of the bridge was more fully revealed during this phase of works, which saw part of the canal arm excavated and vegetation removed from the face of the parapet.

5.2 *Trench 1 (East)*

The first stage of the watching brief was conducted to the south and east of Jersey Street Bridge and revealed the eastern side of the 'Prussia Street Arm' of the Rochdale Canal (Plates 6 & 7), together with a series of structures relating to the late-19th-century 'City of Manchester Screw and Bolt Works' (Plates 8 & 9).

The earliest deposit revealed within the trench was identified as the natural geology; this comprised a layer [100] of stiff, orangey-brown clay, consistent with the naturally occurring glacial till, which covers much of Ancoats and the surrounding area.

Prussia Street Canal Arm

The natural clay [100] was truncated in the first instance by the linear cut [101] for the canal arm but due to the constraints of the watching brief, this cut [101] was not clearly defined within the trench. Lining the eastern side of the canal arm [101] was a revetment wall [102] (Plates 6 & 7). The wall [102] was constructed of handmade red clay brick set

in a lime-based mortar surmounted with large sandstone coping stones, typical of the formation of early canals.

Built atop the wall [102] of the canal arm was a later wall [103] formed of red brick bonded with black ashy mortar, typical of the late 19th century (Plates 6 & 7).

Abutting the western face of the canal wall [102] was a deposit [104] formed of a soft, dark blackish-brown loamy-clay sediment, which constituted the lower backfill of the canal arm.

The uppermost backfill of the canal [105] was deposited against the face of both the canal wall [102] and overlying structure [103] above the earlier fill [104]; the fill [105] comprised loose, light greyish brown demolition material.



Plate 6: The eastern canal arm wall [102], with later wall foundation [103] above, looking north-west (scale: 1m) Note the slight dogleg to the canal arm wall, where it the canal narrowed at its point of crossing.



Plate 7: The eastern canal arm wall [102], with a later wall foundation [103] above. The overlying wall forms one side of the City of Manchester Screw and Bolt Works. This shows both walls as initially exposed, prior to the insertion of the service trench. The photograph was taken looking north-east (scale: 1m)

City of Manchester Screw and Bolt Works

To the north-east of the canal arm [101]/[102] and overlying wall [103] were further structural remains associated with the 'City of Manchester Screw and Bolt Works'. The buildings here evidently had a long period of use as the majority of surviving structures had been cast in concrete.

A concrete foundation [106] was identified in eastern part of the trench in the south-east-facing section (Plate 8). This had a maximum exposed length of 2m and may have formed a stanchion base. The top of the concrete foundation was sealed by a later concrete surface [107].

A brick-walled drain or conduit [108] was also observed running the length of the trench for approximately 12m. This was formed of two parallel brick walls, measuring 0.15m wide and had an internal width of 0.68m and internal height of 0.80m. The structure [108] was sealed by the aforementioned concrete surface [107].



Plate 8: A cast concrete foundation [106], likely forming a stanchion base within the screw and bolt works (scale: 1m)



Plate 9: Mid-excavation shot showing the eastern continuation of Trench 1 looking north-east (scale: 1m)

The entirety of the trench was sealed by the 170mm-thick concrete surface [107]. This surface [107] post-dated the concrete foundation [106] and ran up to the south-west wall of building [103]; it extended for 30m in length and evidently formed an internal floor surface within the screw and bolt manufactory.

The surface [107] was sealed by a thin layer of made ground [109] and tarmac surface [110], which formed the current ground surface within the site.

5.3 *Trench 1 (west)*

The south-western half of the trench contained the foundations of Beaver's Cotton Mill, which was opened on Jersey Street by Hugh Beaver as a 'principal mill' in 1825 (Fletcher 2022, 25). The mill was later known as Jersey Street Mill.

The earliest deposit in this part of the trench consisted of a layer [100] of stiff, light orange-brown, natural clay.



Plate 10: The remains of the north-western wall [117] of Beaver's Mill / Jersey Street Mill looking north-west (scale: 1m)



Plate 11: Detail of wall [117] looking north-east. Note the wider foundation and narrower upstanding wall. The upper courses of brickwork visible in section likely represent a repair or infilled aperture, such as a doorway or cellar light, (scale: 1m)

Beaver's Mill / Jersey Street Mill

A north-east by south-west-oriented wall foundation [117] was exposed at the western end of the trench (Plate 10). The lower part of the foundation was exposed over an area

of 2.40m north-east to south-west, measuring a maximum of 1.15m in width (Plates 11 & 13). The upstanding wall built atop the 1.15m-wide foundation was approximately 0.60m wide (Plates 11 & 12). The wall [117] was constructed using handmade red brick set in a sandy lime-based mortar. This wall has seen repairs during its lifetime; the upper courses of the wall utilised re-used handmade brick set in a cementitious grey mortar (Plate 12). This supposed repair could also be interpreted as a blocked aperture within the wall, such as a doorway or cellar light. The earliest wall fabric [117] was interpreted as the original north-western wall of Beaver's Cotton Mill, later Jersey Street Mills. The blocking or repair might tentatively be ascribed to the mill's adaptation in the late 19th century, when it was converted into tenements.



Plate 12: Detail of the supposed repairs to or insertion within wall [117]. Note the possible sandstone ledge, right of shot, (scale: 1m)



Plate 13: North-east-facing section through wall [117] Note the offset foundation (scale: 1m)



Plate 14: The south-east-facing section of the trench showing wall [118], with wall [117] in the foreground (scale: 1m)

Running parallel with the northwest of the mill wall [117] was an additional brick wall [118]. This wall [118] was only exposed in the southeast-facing section of the trench (Plates 10 & 14); it was constructed using red bricks set in a black ash mortar, laid in English Garden Wall bond.



Plate 15: Wall [111] looking north (scale: 1m)

The most substantial and intact internal wall [111] within the mill was situated in the south-western part of the trench. The east by south-west-aligned wall [111] had an L-shaped plan; it measured approximately 6.68m in length, 0.39m in width and stood to a height of 1m. It was constructed using red brick bonded with a sandy lime-based mortar (Plates 15 & 16). The position of the wall corresponds closely to a square chimney shown on the 1851 Town Plan (Figure 5), suggesting it could have formed the foundation of that chimney.

An associated sandstone floor [112] was exposed at the foot of the wall [111] to the south-east (Plate 16).

A single-skin brick wall [113] was recorded running across the trench to the east of wall [111] (Plate 17). It was truncated during the watching but was recorded in both the south-east and north-west-facing sections of the trench. The wall was constructed using red

brick set in sandy limed based mortar and retained a skim of render or plaster on its north-eastern face. It measured 1.28m in length extending north-west and south-east beyond the limits of excavation and had a maximum width of 0.11m, standing to a height of 0.77m.



Plate 16: South-westerly continuation of wall [111] with the sandstone floor [112]

Remnants of a later wall [116] were identified immediately to the south-west of the canal arm. The wall [116] constructed using machine-made red brick, which appeared to have been set in lime-based mortar and had later been repointed with cement (Plate 18). The wall was in a poor state of preservation and collapsed during the course of the watching brief.

Abutting the face of the brick walls and lying above the sandstone floor was a layer of demolition debris [114] comprised mainly of brick rubble and degraded mortar. This was in turn sealed by a layer [115] of blackish brown loam with regular brick inclusions.

The entirety of the trench was sealed by a thin layer of made ground [109] and a tarmac surface [110], which formed the current ground surface within the site.



Plate 17: North-west-facing section through wall [113] (scale: 1m)



Plate 18: Collapsed brick wall [206] looking north-west (scale: 1m) Note the alignment of in-situ bricks, right of shot.

5.4 *Jersey Street Test Pits (Figure 3):*

A total of 12 test pits (numbered TP1-TP2) were excavated from west to east along Jersey Street, covering the approaches to the bridge and former crossing (Plate 19, Figure 3). The test pits measured 0.90m in width and were typically 2.50m wide. The test pits were excavated to varying depths; the deepest test pits reached a depth of 1.80m below the current road surface. The sequence within Test Pit 7 is described below owing to the discovery of a brick wall [001] associated with the canal arm and bridge (Plate 20). The remaining 11 test pits contained a similar sequence of levelling and bedding layers, and road surfaces, which are not replicated within the text.

Test Pit 6 contained the earliest remains in the form of a north-west by south-east aligned wall [001]. The wall [001] had a maximum exposed height of 1.55m and ran both north-west and south-east beyond the limits of excavation. It was constructed using handmade brick bonded with a sandy lime-based mortar. The wall [001] was interpreted as the north-eastern wall of the canal arm and bridge.



Plate 19: The infilled test pits (TP7-12) looking north-east, the parapet of Jersey Street Bridge is visible, right of shot

The wall was abutted by a sequence of deposits. The earliest recorded deposit was a layer [002] of firm, blackish brown sandy clay with ash and rubble inclusions. This was investigated to a maximum depth of 1.50m. This was interpreted as a levelling layer used to raise the ground on the approach to the canal bridge. It should be noted that a similar deposit was recorded in all of the 11 other test pits.

Above the levelling layer [002] were a series of thinly banded layers of sand and ash, allocated context number [003], which had a combined thickness of 0.45m. These acted as bedding layers for a 19th-century road surface [004]. This deposit was observed in the remaining 11 test pits.

The former road surface [004] was made up of 150mm-thick rectangular setts. The sett surface extended across the entire area of investigation covered by TP1-12.

Visible in section directly above the brick wall [001] was a 0.25m-thick concrete slab [005], possibly associated with improvements to the road bridge in the 20th century.

Immediately overlying the former road surface [004] and lying above the concrete [005] was an 80mm-thick layer of tarmac, constituting the current road surface [006].



Plate 20: Oblique shot of Test Pit 7 showing the sequence of fills abutting the canal arm and bridge wall [101]. Note the concrete capping above the wall, which extended across the bridge

5.5 *The Bridge, Stage 5*

The third stage of the watching brief took place on the site of northern side of the extant road bridge (Plate 21), revealing various details of the bridge's construction.

On either side, the bridge walls were comprised of large sandstone blocks. These sandstone blocks were set into the pre-existing canal walls to support the bridge deck. The bridge comprised series of cast iron beams forming a frame and plate. The stone parapet of the bridge was also constructed atop the ironwork. The cast iron frame dates to the mid-19th-century alteration to the bridge, when it was widened to accommodate more frequent road traffic.

The backfill of the canal arm immediately below the bridge was formed of loose, dark brown loam and demolition rubble, which became siltier in composition towards the base of the trench.

The north-eastern side of the modern bridge was buttressed by a concrete foundation, which obscured the masonry and brickwork visible on the south-western side (Plate 21).



Plate 21: The northern elevation of the northern parapet wall of Jersey Street bridge, looking south-east (compare to plate 2) (scale: 1m)

5.6 *Trench 2 (North-west of Jersey Street Bridge)*

The excavation of Trench 2 took place on within a former wharf bounded on its north-east side by the Prussia Street Arm of the Rochdale Canal, and to the north-west by the former Bengal Street canal arm. Trench 2 measured 5.50m x 3.90m and was excavated to a maximum depth of 4 meters below the current ground level (Plate 23).

The earliest deposit identified within Trench 2 was a layer [200] of stiff, light orangey-yellow clay (Plate 23). This was interpreted as the natural geology.

The natural clay [200] was sealed by a 1.20m-thick levelling layer [201] raising the ground within the site. This levelling layer [201] was formed of a mixture of ash, clinker and clay. It was likely laid down in association with the creation of the wharves.

Above the levelling layer [201] was a 130mm-thick surface [202] formed of rectangular granite setts. The sett surface [202] was interpreted as the former working surface of the wharf (Plate 22).

The sett surface [202] was truncated by the cut [203] for a linear drain, which ran diagonally across the trench and south-east towards the road (Plates 22 & 23). The cut [203] for the drain had a concave profile (Plate 23). At the base of the cut was a salt-glazed ceramic pipe, measuring 0.25m in diameter. The cut [203] had largely been backfilled with brick rubble [204], which was laid flush with the sett surface [202].

The infilled drain [203]/[204] and sett surface [202] were covered by a layer of bricks [205], which were laid to a thickness of 0.22m.

The entirety of the trench was capped by a layer of MOT [206] and concrete [207], which formed the modern concrete surface of the area.



Plate 22: Trench 2 looking south-west.



Plate 23: Trench 2 looking south-east.

5.7 *Trench 3*

This final stage of the watching brief oversaw the excavation of the infilled canal arm below Jersey Street Bridge (Plate 24).

The eastern and western revetment walls of the canal arm [301]/[302] were exposed and recorded within the trench. Both walls [301]/[302] were constructed using handmade red brick set in a sandy lime-based mortar. The bricks were laid in English Garden Wall bond (Plates 24-27). The walls were surmounted by sandstone coping stones (Plates 24-27).



Plate 24: The western canal arm wall [302]. Note the curvilinear portion of the wall, where the canal arm narrowed

The extant bridge arrangement was formed by an iron frame and plate [303], which spanned the canal arm, resting on the revetment walls [301]/[302]. This was capped by a layer of concrete [304], which was also partially observed within Test Pit 6. The arm of the canal had been partially infilled below the level of the bridge deck by a 1.5m-thick deposit of light grey concrete, which had exuded in from the concrete capping. The concrete capping was interpreted as a more recent repair to the bridge deck, likely carried out in the 20th century.



Plate 25: The western canal arm wall [301], looking south



Plate 26: The eastern canal arm wall [301], looking north



Plate 27: Detail of the stonework on the western canal arm wall [302]



Plate 28: Detail of the stonework on the eastern canal arm wall [301]. Note the truncation to the stonework caused by the insertion of a modern concrete foundation

The canal arm was infilled in the late 20th century. The infill comprised a loose deposit [302] of silty sand with frequent inclusions of brick rubble, which was progressively loamier in composition towards the surface of the deposit. This was excavated to a maximum depth of 1.30m.

The eastern wall [301] was truncated at its southern end by the insertion of a modern concrete wall [+] (Plate 26).

6. Discussion

6.1 Introduction

The archaeological building investigation and watching brief of Jersey Street bridge has provided a valuable opportunity to record an example of an early-19th-century bridge which had been altered during the latter half of the century. While no structural features directly attributable to the early lifting bridge that spanned the canal arm were brought to light, the removal of the modern road surface and bridge deck exposed the walls of the Prussia Street arm of the Rochdale Canal; the canal walls had been obscured since the installation of a fixed bridge in the late-19th century.

The diversion of live services to the south of the bridge, which were accommodated within a new service trench allowed for a brief but nevertheless worthwhile investigation of two industrial complexes, 'Beaver's Cotton Mill' (later known as 'Jersey Street Mill' and later still the converted Jersey Street Industrial Dwellings) and the 'City of Manchester Screw and Bolt Works', which were developed on the land to the south-west and north-east of the canal arm, respectively.



Plate 29: General shot looking south-east down the excavated canal arm

6.2 Results

Phase 1: Early 19th century

The Prussia Street Arm of the Rochdale Canal was built in the intervening years between 1805 and 1808. It 'ran northwards towards Oldham Road, along the former route of Buckle Street, shown on Laurent's plan of 1793' and 'split west towards Bengal Street, known as the Bengal Street Arm' (ibid). William Johnson's map of 1820 indicates that the canal arm was crossed by bridges on Jersey Street, German Street now Radium Street and Poland Street. The bridges are shown in more detail on Bancks and Co.'s map of 1831 (Plate 30). The bridge spanning the Prussia Street Arm is also captured on the on the 1851 Ordnance Survey Town Plan, where it is labelled 'Draw Bridge (Iron)' indicating the bridge could be raised and lowered to facilitate the movement of canal and road traffic.

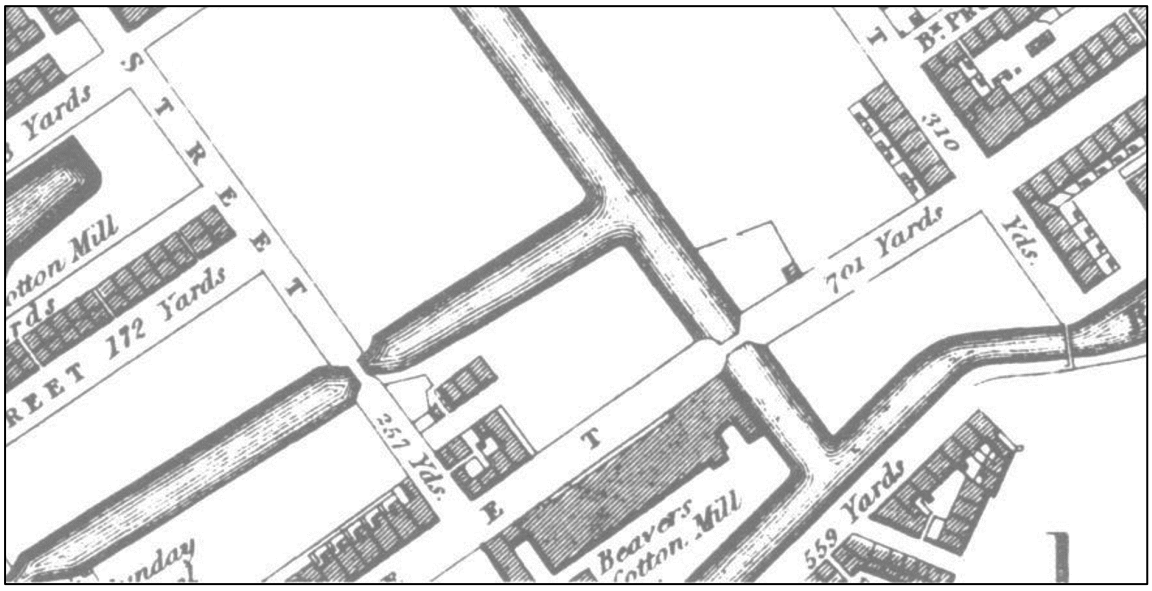


Plate 30: Extract from Bancks and Co's map of 1831 showing the Jersey Street Bridge with Beaver's Cotton Mill to the south

The canal arm was initially exposed within Trench 1. Here, the north-eastern side of the canal arm was survived by a brick-built wall surmounted with sandstone coping stones. The corresponding south-western wall was not initially exposed during the excavation of Trench 1. Both walls were however investigated more fully during the final stages of the watching brief, following the dismantling of the bridge.

Broadly contemporary with the canal arm was sett surface identified in Trench 2, which formed the working surface of the 19th-century wharf.

Phase 2: Early to mid-19th century:

This phase is represented by the remains of Beaver's Mill / Jersey Street Mill, which was established in 1825. Of the three walls exposed within the footprint of the mill, only three walls [117]/[118]/[111] could securely be assigned to this phase of development.

Walls [117] and [118] correspond closely to the mill's north-west wall and an outside wall, which ran along the edge of the road. It seems likely given the gradient of the road approach to the bridge that the outside wall acted as a retaining wall. The presence of a blocked aperture within wall [118] suggest the front elevation of the mill could have had lightwells, affording ample light into the lower floor of the mill.

A brick wall identified in the middle of the trench [111] has tentatively been interpreted as the wall of a chimney shown on the 1851 Town Plan (Plate 31, Figure 5). The wall was not investigated fully but was at least 0.39m wide. This suggests other remains associated with the mill's power systems may survive intact in the adjacent area.

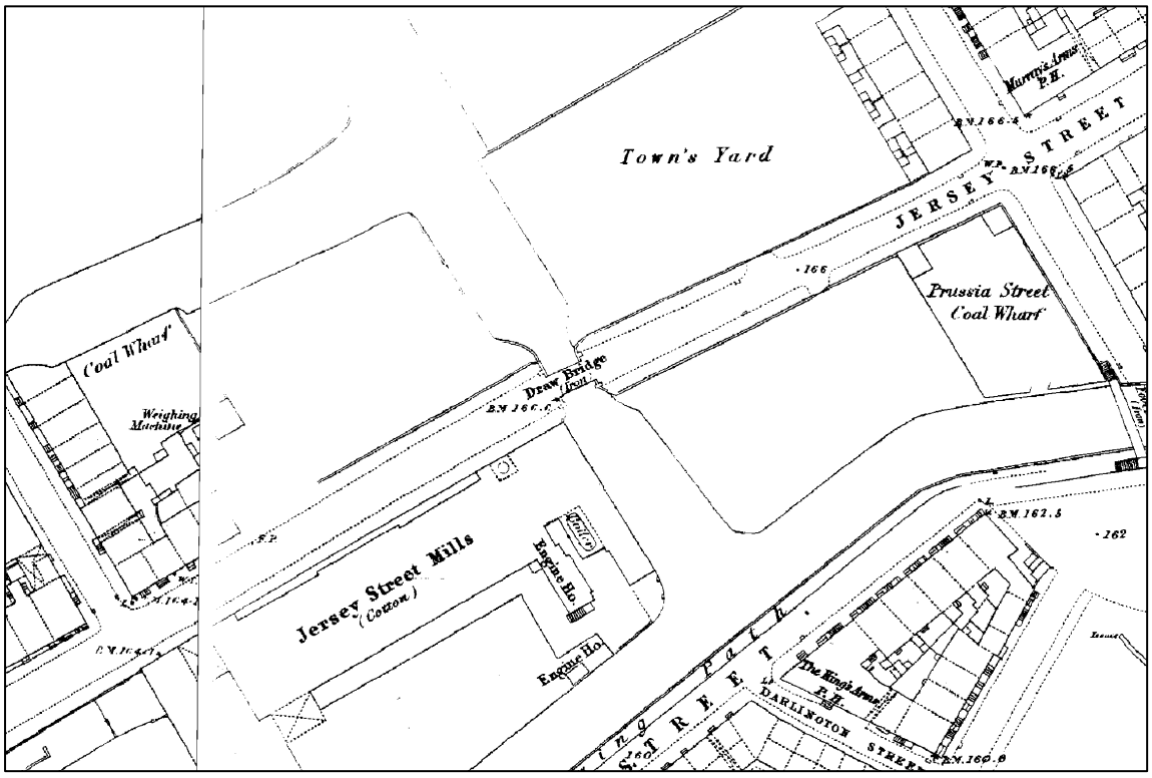


Plate 31: Extract from Ordnance Survey Town Plan from 1851 showing the bridge arrangement. The bridge is similarly depicted on the 1831 survey by Bancks and Co. Note the annotation 'Draw Bridge (Iron)' implying the bridge could originally be raised. The south of the bridge lay Jersey Street Mills.

Phase 3: Mid- to late 19th century:

Jersey Street Bridge was investigated across several stages of the watching brief, the results of which were complimentary to the standing building survey. The structure exposed during the groundworks was a later incarnation of the early-19th-century bridge first depicted in detail on Bancks' map of 1831 (Plate 30) and later on the Ordnance Survey Town Plan of 1851 (Plate 31). The bridge together with Jersey Street was widened in the second half of the 19th century, becoming a fixed road bridge. The modified bridge was illustrated on Ordnance Survey Town Plan of 1891. In its modified form it consisted of a wrought iron frame [503] and plate [701], which spanned the western and eastern walls of canal early carrying traffic over the water. A sandstone parapet had been constructed atop the iron frame (504).

Recent research conducted as part of a desk-based assessment (Fletcher 2022, 20) identified that '*Jersey Street Mill…was converted into 149 dwellings and the homes were opened by the Mayoress of Manchester in 1892, by which time 105 of the flats had been let (Coventry Evening Telegraph 31 May 1892). They were 'intended as a first step towards the provision of sufficient healthy accommodation for those of our artisans who are compelled to live in crowded portions of the city' (Empire News & The Umpire 29 May 1892).*'

Several of the walls identified within Trench 1 have tentatively been ascribed to this phase of activity and could relate to alterations carried out around the time of the mill's conversion.

The 'City of Manchester Screw and Bolt Works' was established on the north-eastern side of the canal arm in the latter half of the 19th-century. This formed on of several premises in the area fulfilling a vital role, supplying Ancoats-based engineers (Rose *et al* 2011, 28). Fewer structural remains were revealed within the trench, however it was noticeable that the walls of the factory were built directly atop of the canal wall, evidently using all available building land alongside the canal.

Phase 4: 20th century:

The remainder of the contexts encountered were attributed to events taking place during the 20th century. Debris encountered within the footprint of the two industrial buildings derive from their demolition in the mid- to late-20th century. The canal arm was infilled around the same time.

6.3 Conclusion

The Prussia Street Arm of the Rochdale canal survives intact beneath the later bridge arrangement, continuing to the south-east in the direction of the Rochdale Canal. The archaeological building survey and watching brief found that due more recent interventions the majority of the original bridge structure have been removed and no surviving features could be directly linked to the original lifting bridge arrangement.

The remains of Beaver's Mill later Jersey Street Mill(s) exposed during the diversion of services to the south-west of the bridge was an unexpected but welcomed discovery. The internal and external walls of the mill are well intact and there is good potential for further remains associated with both its use as a cotton mill and subsequent conversion to tenements in the late 19th-century.

7. Archive

7.1 Archive

The results of the archaeological investigation form the basis of a full archive that has been prepared to professional standards, in accordance with current Historic England guidelines, the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990), and current CIfA standards and guidance for the creation, compilation, transportation and deposition of archaeological archive. The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the CIfA in that organisation's code of conduct.

The documentary and digital archive generated from the historic building investigation is currently in the possession of Salford Archaeology. A copy of this report will be submitted to the Greater Manchester Historic Environment Record in digital and hard copy formats. A digital copy of the report will be publicly available on the Archaeological Data Service (ADS) website.

Sources

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Salford Archaeology would like to thank Chris Bishop of Faithful + Gould, for commissioning and supporting the historic building investigation. Salford Archaeology would also like to thank Ian Miller for providing monitoring support and advice through GMAAS.

The historic building investigation was undertaken by Lewis Stitt, who also compiled the technical report alongside Jennifer Addis. The report was edited by Oliver Cook and Graham Mottershead, who were responsible for the project management.

Appendix 1: Illustrations

Figure 1: Site location plan

Figure 2: Building survey location

Figure 3: Watching brief trenches shown on modern mapping

Figure 4: Key structural remains encountered during the watching brief

Figure 5: Structural remains superimposed to the 1851 Town Plan

Figure 6: Structural remains superimposed to the 1891 Town Plan



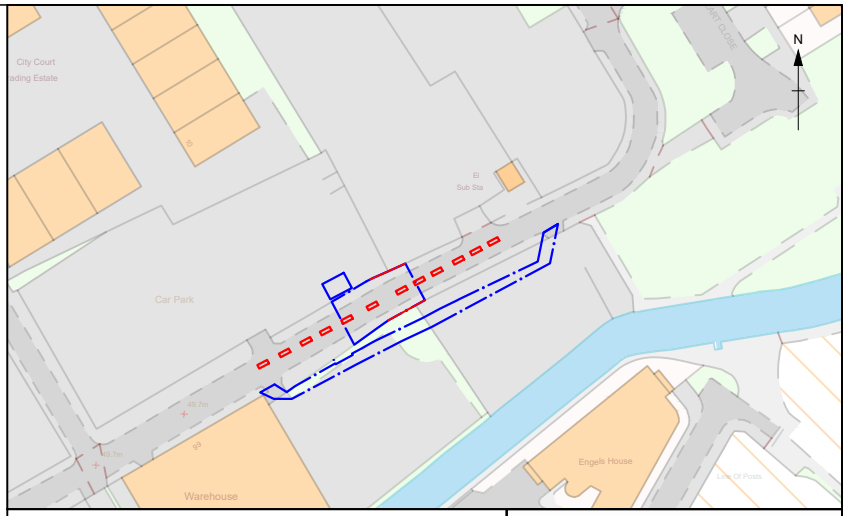
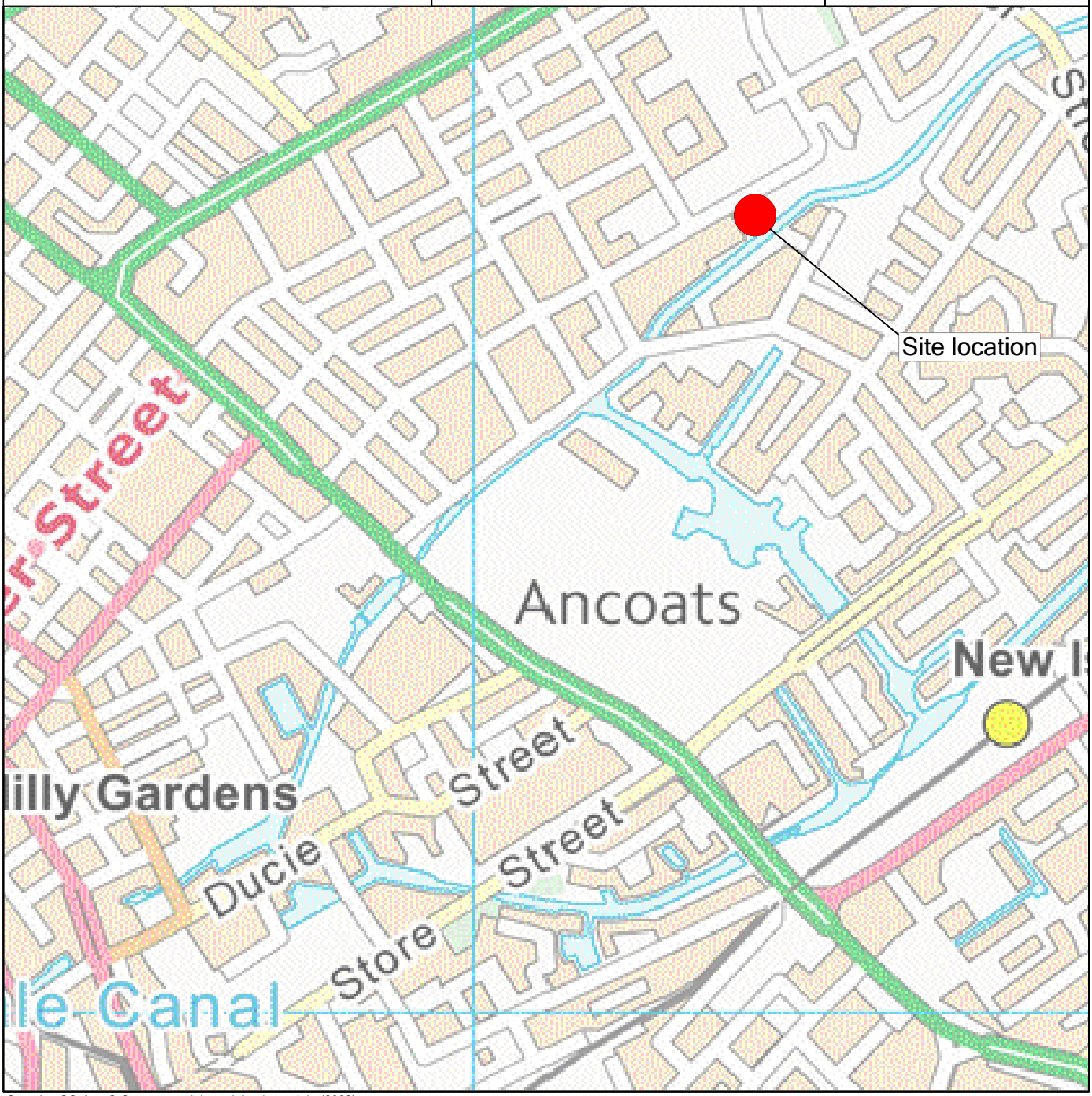


Figure 1: Site Location

SALFORD ARCHAEOLOGY



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Salford Archaeology, Peel Building,The Crescent, Salford, M5 4WT



Figure 2: Building Survey Location

N

Key:

Building Survey

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0 20 m

Scale at A4 1:500

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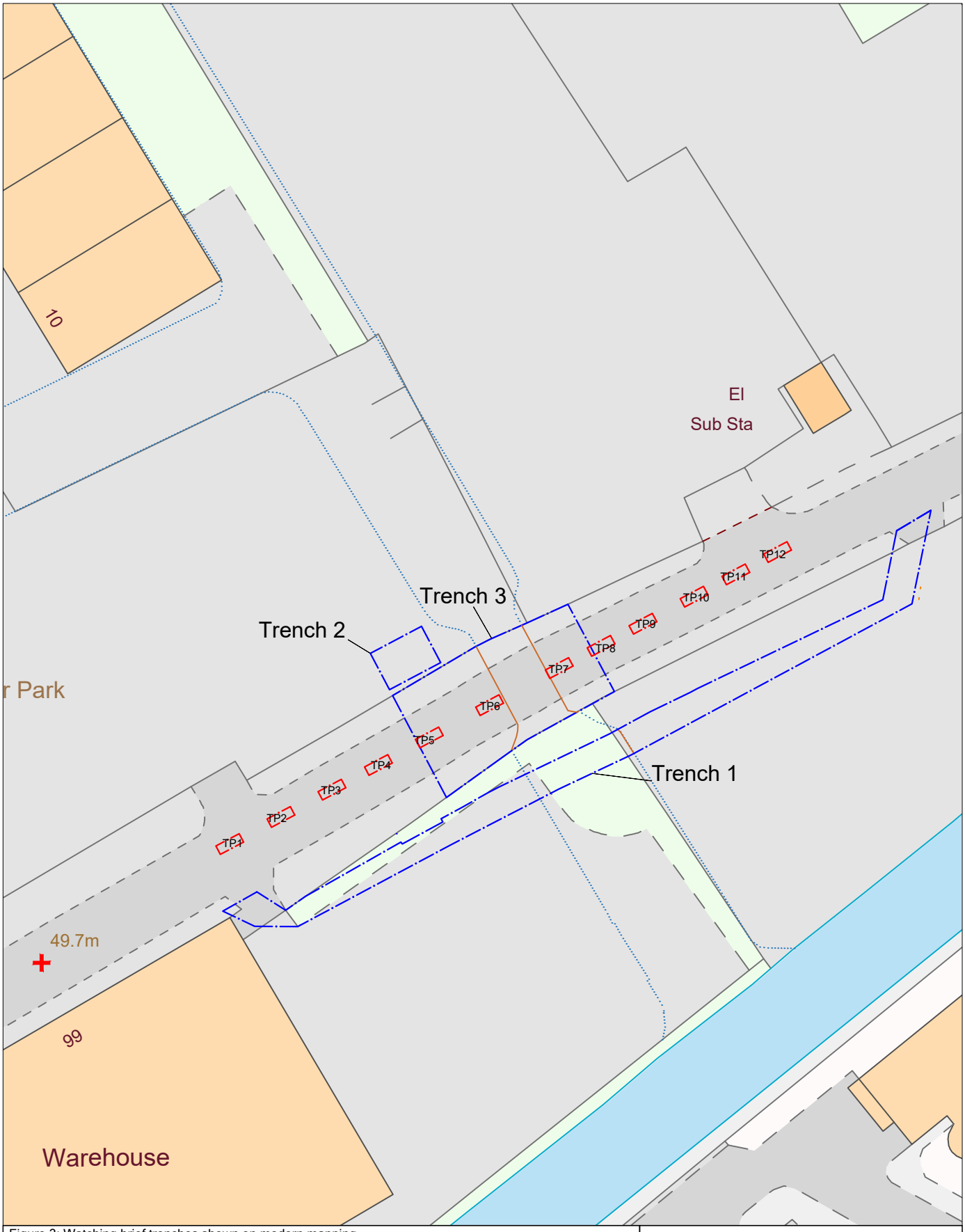


Figure 3: Watching brief trenches shown on modern mapping

N

Key:

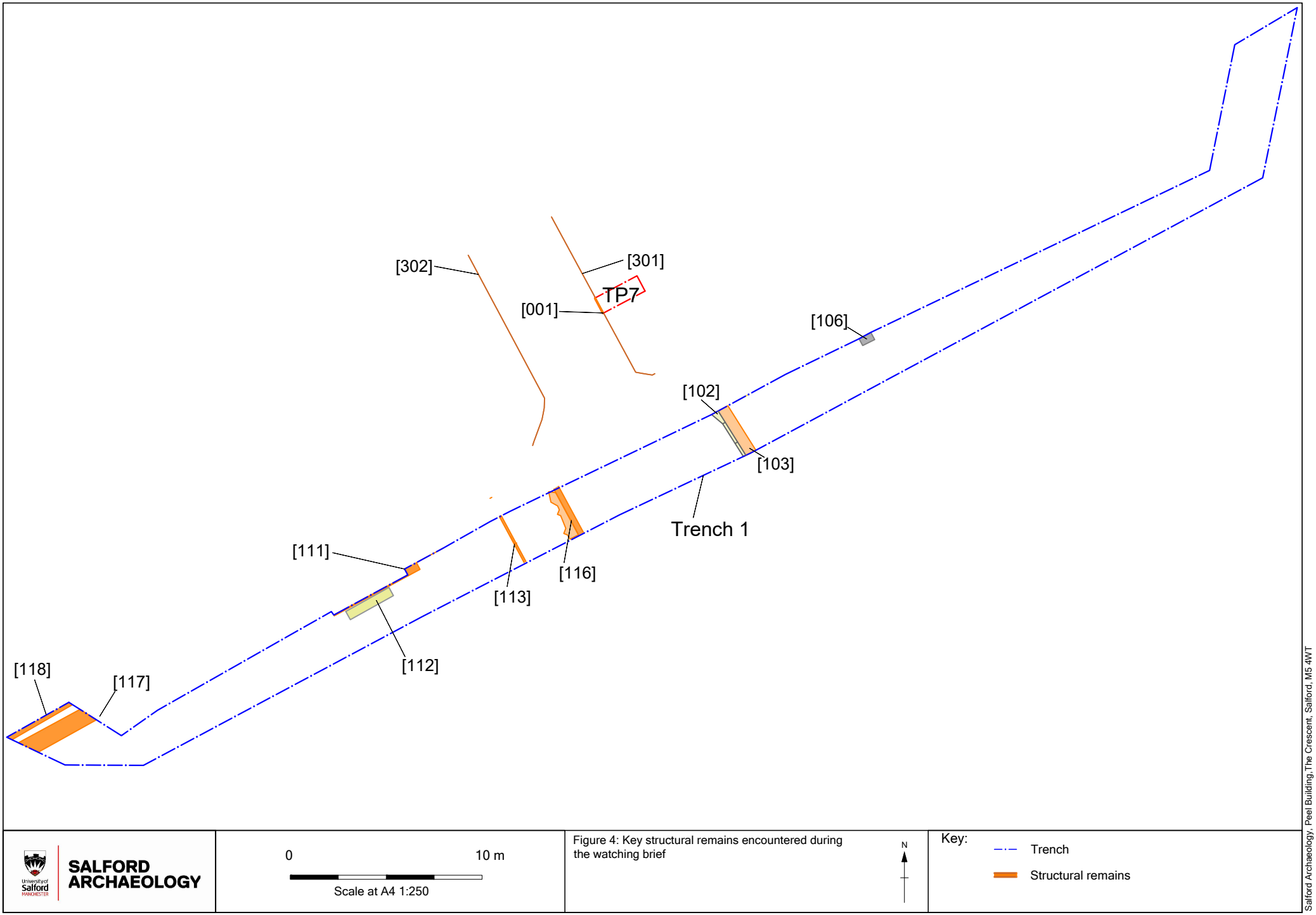
- Trench
- Test Pit
- Infilled canal arm
- Exposed canal wall

SALFORD ARCHAEOLOGY

0 20 m

Scale at A4 1:500

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SALFORD ARCHAEOLOGY

0 10 m

Scale at A4 1:250

Figure 4: Key structural remains encountered during the watching brief

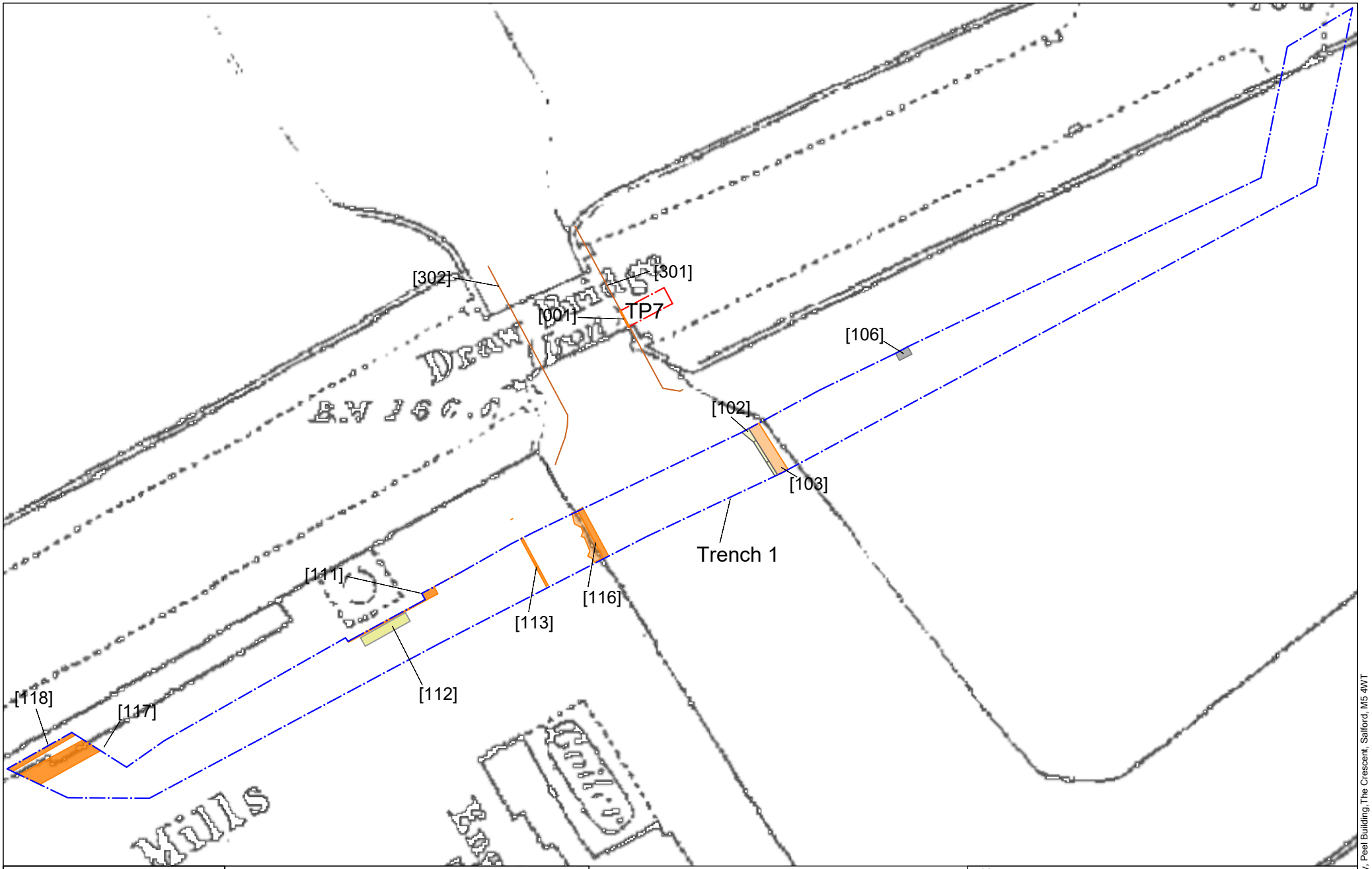
N

Key:

Trench

Structural remains

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0 10 m

Scale at A4 1:250

Figure 5: Structural remains superimposed to the 1851 Town Plan

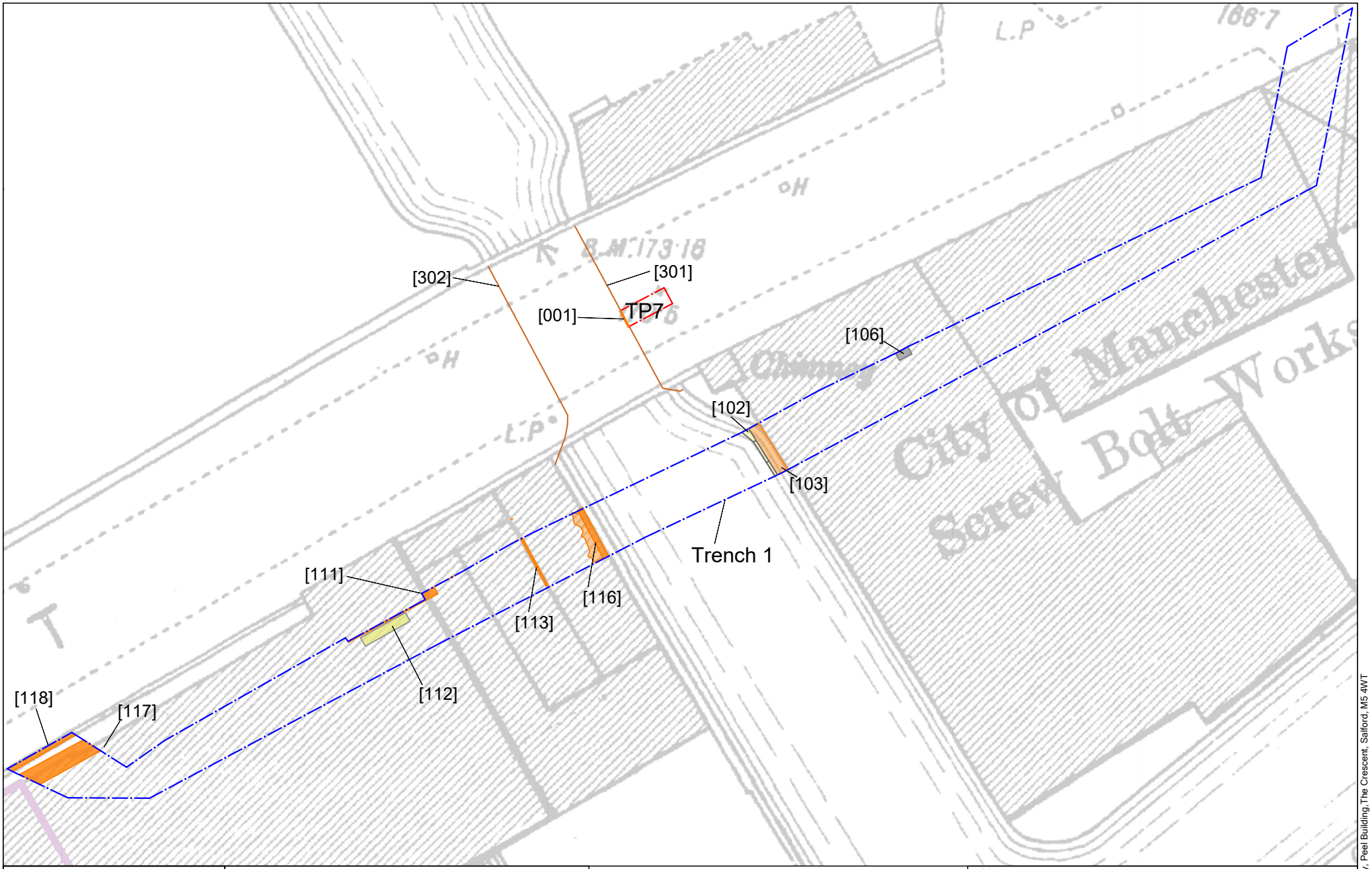
N

Key:

Trench

Structural remains

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SALFORD ARCHAEOLOGY

0 10 m

Scale at A4 1:250

Figure 4: Structural remains exposed during the watching brief superimposed to the 1891 Town Plan

N

Key:

Trench

Structural remains

Salford Archaeology, Peel Building,The Crescent, Salford, M5 4WT