

Haslam Street Mill, Haslam Street, Bolton

Greater Manchester

Archaeological Assessment



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SUMMARY

Haslam Buildings Ltd has obtained planning consent (Application No 92369/14) for the redevelopment of land on Haslam Street in Bolton (centred on NGR 370980 408041). The site was occupied previously by a steam-powered weaving mill, which was established in 1850 and remained in production until 1957. There is scant documentary material pertaining to the development of the mill, although the detail shown on a late nineteenth-century illustration raises the possibility that the mill may have incorporated an unusual system of power transmission.

The development proposals allow for the erection of 12 dwellings, which will inevitably necessitate earth-moving works with some potential to damage or destroy any below-ground archaeological remains. In order to secure archaeological interests, Bolton Metropolitan Borough Council attached a condition to planning consent that required an appropriate scheme of archaeological investigation to be implemented prior to development. Following consultation with the Greater Manchester Archaeological Advisory Service, it was recommended that a programme of historical research into the development of the mill complex was carried out in the first instance, coupled with the monitoring of the excavation of trial trenches for geo-technical purposes. The data generated from this investigation was intended to provide a considered basis regarding the archaeological significance of the site, and thereby inform the planning process.

Oxford Archaeology North was commissioned by the Haslam Buildings Ltd to undertake the required scheme of works in November 2014. Most of these trenches were placed across the footprint of the weaving shed, although two trenches were targeted on the footprint of the engine and boiler houses and the mill reservoir specifically for archaeological purposes.

The results obtained from the archaeological work carried out to date have concluded that the site of Haslam Street Mill is likely to contain non-statutory buried remains of low significance. The site of the weaving shed and the warehouse block is of little or no archaeological interest, and the impact of development upon buried remains across the central and southern parts of the site will be negligible. The site of the engine and boiler houses is also considered to be of low significance, reflecting the replacement of the engine in the later nineteenth century and the extent to which the foundations may been damaged or removed during demolition. However, it is acknowledged that the extent of site investigations carried out to date have been limited, and the possibility that some foundations for the steam engine and its associated boilers survive *in-situ* cannot be discounted entirely.

The requirement for any further archaeological recording of buried remains within the development area will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Bolton Metropolitan Borough Council. However, if any further archaeological investigation of the Site Area is deemed necessary, it is envisaged in the first instance that this may be in the form of a watching brief, targeted on the footprint of the engine and boiler houses, although more detailed investigation should be anticipated if significant archaeological remains are encountered.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Haslam Buildings Ltd, and especially Shafi Patel and Mohammed Limbada, for commissioning and supporting the project. Thanks are also due to Dr Andrew Myers of the Greater Manchester Archaeological Advisory Service (GMAAS) for his advice and guidance. OA North is also grateful to the staff at the Bolton Archives History Centre for their assistance with the documentary research. Especial thanks are extended to Aled Owen of Manchester Geotechnical Ltd for his invaluable support during the geotechnical site investigation.

The desk-based research was undertaken by Ian Miller, and the site investigation was carried out by Graham Mottershead. The report was written by Ian Miller and Graham Mottershead, and the illustrations were produced by Mark Tidmarsh. The report was edited by Ian Miller, who was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 Haslam Buildings Ltd has obtained planning consent (Application No 92369/14) for the redevelopment of land on Haslam Street in Bolton. The site was occupied previously by a steam-powered weaving mill, which was established in 1850 and remained in production until 1957. There is scant documentary material pertaining to the development of the mill, although the detail shown on a late nineteenth-century illustration raises the possibility that the mill may have incorporated an unusual system of power transmission.
- 1.1.2 The development proposals allow for the erection of 12 dwellings, which will inevitably necessitate earth-moving works with some potential to damage or destroy any below-ground archaeological remains. In order to secure archaeological interests, Bolton Metropolitan Borough Council attached a condition to planning consent that required an appropriate scheme of archaeological investigation to be implemented prior to development. Following consultation with the Greater Manchester Archaeological Advisory Service (GMAAS) in their capacity as archaeological advisors to Bolton Metropolitan Borough Council, it was recommended that a programme of historical research into the development of the mill complex was carried out in the first instance.
- 1.1.3 In November 2014, Oxford Archaeology North (OA North) was commissioned by the Haslam Buildings Ltd to undertake the required scheme of archaeological investigation. Following further consultation with GMAAS, it was agreed that the historical research, and the nature of the sub-surface archaeological resource, could be usefully informed by monitoring the excavation of a series of trial pits that were required for geo-technical purposes. Most of these trenches were placed across the footprint of the weaving shed, as this occupies the largest part of the development area, although two trenches were targeted on the footprint of the engine and boiler houses and the mill reservoir specifically for archaeological purposes.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The study area (centred on NGR 370980 408041) is situated at the south-eastern end of Haslam Street, a minor road off Derby Street (A579). The site lies a short distance to the south-west of Bolton railway station, on the south-western fringe of the town centre (Fig 1).
- 1.2.2 *Topography:* topographically, Bolton Metropolitan Borough straddles the southern edge of the West Pennine Moors, where several deeply cut river valleys open out into the broad basin of the Greater Manchester urban area. The region as a whole comprises the Mersey River Valley (Countryside Commission 1998, 125), although the topography of the Bolton area reflects the valley of the River Croal, a tributary of the River Irwell.

1.2.3 *Geology:* the underlying solid geology of the area consists mainly of Bunter sandstones of Permo-Triassic age, which were deposited under the marine conditions of the period, between 280 and 195 million years ago (Countryside Commission 1998, 125). The overlying drift geology is composed of essentially Pleistocene boulder clays of glacial origin, and sands, gravels, and clays of fluviatile/lacustrine origin (Hall *et al* 1995, 8).



Plate 1: Aerial view looking south across the study area

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

2.1.1 The desk-based research and assessment was carried out in accordance with the relevant IfA and English Heritage guidelines (IfA 2011, Standard and Guidance for Archaeological Desk-based Assessments; IfA 2010 Code of Conduct; English Heritage 2006, Management of Research Projects in the Historic Environment (MoRPHE)). The principal sources of information consulted were primary documents held by the Bolton Archives History Centre in Bolton, maps and a review of published and unpublished secondary sources.

2.2 WATCHING BRIEF/TRENCHING

2.2.1 An archaeologist was present during the site investigation works, which was carried out mechanically using a toothed bucket in December 2014. The archaeological watching brief/trenching recorded the location, extent, and character of all surviving features and deposits of archaeological interest. All work carried out was consistent with the relevant standards and procedures provided by the Institute for Archaeologists (IfA), and their code of conduct.

2.3 ARCHIVE

- 2.3.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991), and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long-Term Storage* (Walker 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format, and will be lodged with the Bolton Archives History Centre in Bolton.
- 2.3.2 The Arts and Humanities Data Service (AHDS) online database project *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project. A copy of this report will be forwarded to the Greater Manchester Historic Environment Record (HER).

3. BACKGROUND

3.1 DEVELOPMENT OF HASLAM STREET MILL

3.1.1 Haslam Street Mill was established in 1850 as a purpose-built cotton weaving mill. Known originally as German Street Mill, it was erected by the German Street Mills Company on vacant land beyond the south-western fringe of Bolton town centre. The site is shown as largely undeveloped on the Ordnance Survey maps of 1849-50 (Plates 2 and 3), although a building had been erected on the Derby Street frontage.

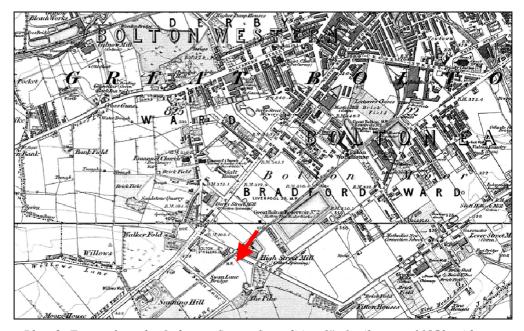


Plate 2: Extract from the Ordnance Survey first edition 6": 1 mile map of 1850, with arrow marking the site was developed subsequently as Haslam Mill

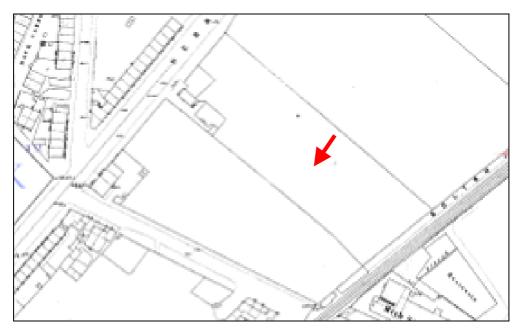


Plate 3: The detailed Ordnance Survey 1:1,056 map of 1849

- 3.1.2 Little is known about the initial development of the mill, although an entry in the Greater Manchester Historic Environment Record notes that a warehouse was added to the site in 1877. The mill remained in the hands of the German Street Mills Company until 1888, when it was sold to John Haslam & Co Ltd (Longworth 1987, 149). New looms were installed shortly after the mill was purchased by John Haslam & Co Ltd, and the weaving shed was enlarged. A new boiler house and size-mixing room were also added at this time. A plan of the mill at this date is provided by the detailed Ordnance Survey 1:500 map of 1891 (Plate 4).
- 3.1.3 The Ordnance Survey map of 1891 shows the plan of mill to have conformed to the standard layout of a mid-nineteenth-century weaving mill. It appears to have comprised a preparation/warehouse block, with adjoining steam-power plant, forming the front part of the mill complex, overlooking German Street, with the weaving shed situated to the rear (Plate 4). The weaving shed occupied all the space available to the rear, with the south-eastern elevation built along the edge of an access road to a railway siding. According to an entry in a directory for 1891, the weaving shed housed 730 looms, specialising in the production of satteens, shirtings and plain goods (Worrall 1891).
- 3.1.4 The steam-power plant is depicted occupying the northern corner of the site, overlooking the small mill yard, and appears to have comprised two principal buildings, which will undoubtedly have been the boiler house and the engine house. It is likely that the smaller of these buildings, placed against the north-eastern end of the preparation/warehouse block, was the boiler house, the size of which is broadly consistent with it having housed a single Lancashire-type boiler. The slightly larger building immediately to the north is likely to have been the engine house, with the chimney adjacent to its eastern corner. A square-shaped reservoir on the opposite side of the mill yard presumably furnished the steam-power plant with a supply of water. A weighing machine (W.M.) is also shown by the Ordnance Survey, situated between the boiler house and the reservoir, across the entrance to the mill yard.
- 3.1.5 The purpose and form of a narrow building shown by the Ordnance Survey adjacent to the north-eastern side of the engine house, and enveloping the northern side of the chimney, is unclear. Its position relative to the chimney raises the possibility that the building was intended to house an economiser, although there is no supporting evidence.
- 3.1.6 Further details of the mill complex may be gleaned from a contemporary illustration (Plate 5). Whilst the provenance, date and accuracy of this illustration is uncertain, it appears to depict the mill in its late nineteenth-century format, as the footprint of the buildings shown corresponds broadly to those mapped by the Ordnance Survey. The engine and boiler houses are shown as three-storey structures, with the unusual arrangement of the fenestration matching that in the preparation/warehouse block, and all with multi-pitch roofs. A four-storey water tower is shown adjacent to the engine house, but set back slightly; the position of this structure does not correspond precisely to the outline shown by the Ordnance Survey (Plate 4). The tapering, octagonal chimney is also show to the rear of the water tower.

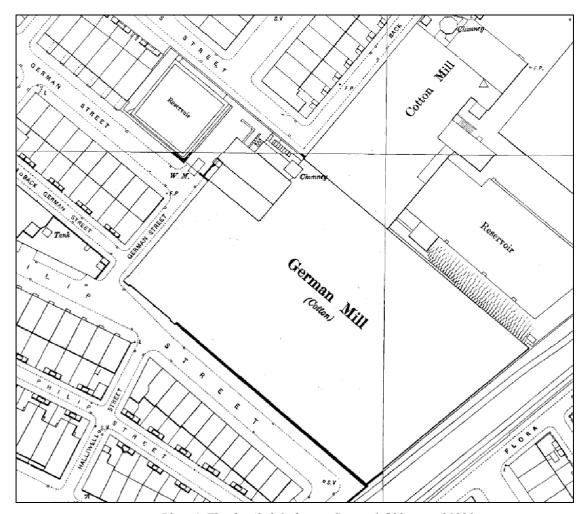


Plate 4: The detailed Ordnance Survey 1:500 map of 1891

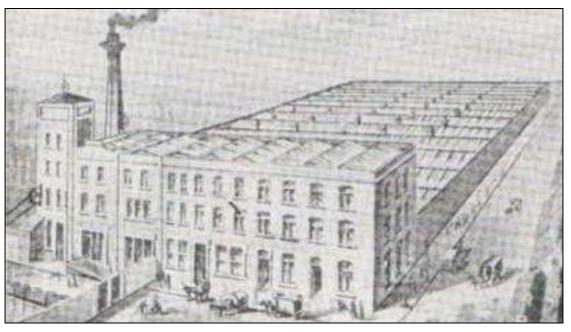


Plate 5: Illustration of Haslam Street Mill, probably dating to the late nineteenth century, reproduced in Longworth 1986

- 3.1.7 A detail of particular interest on the illustration is what seems to be a belt drum protruding from the first floor of the water tower (Plate 5). This appears to house a drive belt, which continues towards the ground level in the direction of the reservoir, suggesting that it may have powered at item of machinery in the mill yard. The rationale for such an arrangement cannot be explained easily, and it is unfortunate that there is no other evidence available to confirm the accuracy of the illustration, and that this unusual power arrangement actually existed. There is certainly no indication for any powered machinery in this area on the 1891 Ordnance Survey map, or any pumping mechanism associated with the reservoir that may have required power.
- 3.1.8 The next available plan of the mill complex is provided by the Ordnance Survey 25": 1 mile map of 1908 (Plate 6). The detail of this map suggests that the northern corner of the mill complex, and specifically the four-storey tower, had been remodelled or replaced. The new structure extended further to the north-west, bringing its front elevation in line with the adjacent engine house. This map similarly provides no indication of any features that might have been powered by the drive belt shown in the late nineteenth-century illustration.

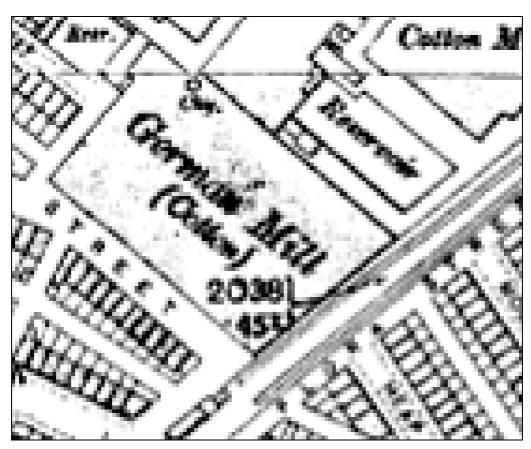


Plate 6: The Ordnance Survey 25": 1 mile map of 1908

3.1.9 The outbreak of hostilities with Germany in the second decade of the twentieth century ultimately led to the re-naming of the building to Haslam Mill, and German Street was also changed accordingly. Shortly after this date, the Haslam Weaving Co Ltd, together with several other sizeable textile manufacturers, merged with the Amalgamated Cotton Mills Trust Ltd.

- 3.1.10 Haslam Street Mill featured in a publicity brochure that was produced by the Amalgamated Cotton Mills Trust Ltd in 1921. This states that the mill housed 725 looms, 840 winding spindles, seven warping mills, two slashing machines and a warp drawing machine. It was described as being 'of modern construction, with light and airy weaving shed and other buildings'. The steam-power plant comprised a horizontal compound engine and two boilers, one of which was added shortly after the mill was purchased by John Haslam in 1888. Whilst there is no reference to the engine having been installed by John Haslam, it is unlikely to have been the one that was fitted when the mill was built in 1850, as horizontal engines were only introduced in the 1860s.
- 3.1.11 The brochure also includes several photographs and an illustration of the mill that provides a view across the north-light weaving shed roof to the rear elevation of the three-storey preparation/warehouse block and steam-power plant (Plate 7). The boiler house appears to have formed the northern two bays of the preparation/warehouse block, with the distinctive pitched gabled of the engine house being visible. A tower similar to that shown in the late nineteenth-century illustration is partial visible, behind a large rectangular water tower that may have been added to the mill complex.



Plate 7: The view looking west across Haslam Street Mill (reproduced from the Amalgamated Cotton Mills Trust Ltd, 1921)

3.1.12 Amongst the photographs in the brochure is a view of the three-storey preparation/warehouse block from Haslam Street. Whilst this block is shown as a three-bay structure on the late nineteenth-century illustration, it is depicted clearly as four bays in the photograph (Plate 8). The pitched roof of the engine house can just be seen projecting beyond the preparation/warehouse block into the mill yard, and the large rectangular water tank lies beyond. The tower in the illustration, however, is absent.



Plate 8: View of Haslam Street Mill from Haslam Street (reproduced from the Amalgamated Cotton Mills Trust Ltd, 1921)

- 3.1.13 Other photographs feature the interior of the weaving shed (Plate 9) and the cloth warehouse (Plate 10). The weaving shed appears to be typical for the period, with power to the looms provided via drive belts from overhead line-shafts. The roof trusses appear to be of timber, consistent with a midnineteenth-century construction date, together with relatively narrow spacing between the columns that was necessary before the introduction of steel joists in the late nineteenth century.
- 3.1.14 The next available plan of the mill complex is provided by the 1929 edition of Ordnance Survey mapping, which identifies the site as Haslam Mill. The footprint of the component buildings appears to be exactly the same as that shown on the edition of 1908. The Ordnance Survey maps of 1938 and 1952 similarly show the site as unchanged, although the reservoir had been infilled by the time of the latter map. Some five years later, in 1957, the mill closed, and the building was eventually used subsequently by British Aerospace PLC.
- 3.1.15 The mill was subject to a preliminary survey during the county-wide study of cotton mills that was undertaken jointly by the Greater Manchester Archaeological Unit and the Royal Commission on the Historical Monuments (England) in the late 1980s. The survey noted that the mill complex was 'interesting', with the three-storey block considered to be 'unusual'. However, the mill was not selected for more detailed survey, and the information available is thus limited. An aerial photograph taken shortly before the recent demolition of the mill, however, shows the buildings being largely intact (Plate 11).



Plate 9: View of the weaving shed (from the Amalgamated Cotton Mills Trust Ltd, 1921)



Plate 10: View of the cloth warehouse (from the Amalgamated Cotton Mills Trust Ltd, 1921)

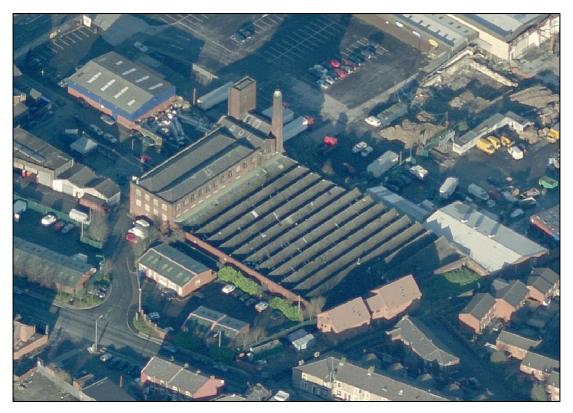


Plate 11: Aerial view of the mill shortly before demolition

4. SITE INVESTIGATION

4.1 Introduction

4.1.1 In December 2014, OA North maintained a watching brief during the excavation of a series of trial trenches. These were intended primarily for geotechnical purposes, although two trenches were located specifically to establish the potential for buried archaeological remains. Trench 1 was excavated across the former engine house and the adjacent water tower, and was extended subsequently to the edge of the demolished chimney. Trench 2 was excavated within the former reservoir to the north-west of the mill. The remaining nine trenches were placed across the site of the weaving shed and three-storey block, as shown on Figure 2. With the exception of Trench 1, all of the trenches measured *c* 3 x 1m, unless stated otherwise.

4.2 THE TRIAL TRENCHES

4.2.1 **Trench 1:** in the first instance, this trench measured 5 x 1.7m, and straddled the footprint of the engine house and water tank in the northern part of the study area (Fig 2). The trench contained loose brick and masonry rubble, and was excavated to a maximum depth of 2.7m. The fragmentary remains of the brick-built wall between the engine house and the adjacent building were observed on the north-western side of the trench (Plate 12). However, only the north-western end of this wall survived *in-situ* within the confines of the small trench, with no evidence for any interior fixtures, fittings or floor. The loose demolition rubble contained numerous metal pipes, which probably derived from the mill's sprinkler system and steam pipes.



Plate 12: Trench 1 looking west, remains of dividing wall centre right

4.2.2 In order to further understand the nature of the buried remains in this part of the site, the trench was extended to dimensions 15 x 5m along the footprint of the engine house and the adjacent water tower, incorporating the southwestern edge of the chimney. The north-eastern wall of the engine house was exposed along the length of the trench as a depth of *c* 1.4m (Plate 13). The wall was three brick-courses thick, and the fabric comprised a combination of hand-made and machine-pressed bricks, suggesting that the building was constructed after 1850, and was thus added to the original mill complex in the later nineteenth century. The demolition rubble around the intact element of the wall contained numerous examples of bricks stamped 'J Higson Daubhill'; this local brickworks did not open until the mid-1870s.



Plate 13: The extended excavation of Trench 1, looking east across the north-eastern wall of the engine house and the side of the refractory-brick lined flue to the rear

- 4.2.3 Lying parallel to the engine house wall was a second wall that was lined with refractory bricks, almost certainly representing the remains of the flue to the chimney. The top of this wall was exposed beneath demolition rubble at a depth of *c* 1.9m below the modern ground surface. The base of the flue was not exposed, although the side wall survived to a height of at least six courses. The flue continued to the south-eastern end of the excavated trench, where it joined to the chimney.
- 4.2.4 The remains of the chimney stack and its foundations were exposed in the south-eastern section of the trench. The foundations were built entirely of brick, and the chimney throat was lined with refractory bricks. The arched aperture that connected with the flue at the base of the stack was largely collapsed (Plate 14).
- 4.2.5 Structural remains of the water tower were revealed at the north-western end of the trench (Plate 15). This comprised a large stone slab, which was exposed at a depth of c 0.9m.

4.2.6 Limited excavation against the exterior of the engine house wall revealed what appeared to be the foundation course at a depth of *c* 3.5m. However, a floor to the engine house was not exposed in the trench, and no remains of the engine beds were revealed, suggesting that they had either been removed, or lay beyond the edge of the excavated trench.



Plate 14: The remains of the demolished chimney stack, and the side wall of the flue



Plate 15: The north-eastern wall of the engine house and stone foundation at the base of the water tower at the north-western end of Trench 1

- 4.2.7 **Trenches 2 9 and 11:** these trial trenches were placed across the footprint of the weaving shed and the three-storey block, as shown on the Ordnance Survey plan of 1891 (Fig 2), and were excavated primarily for geo-technical purposes. The trenches all measured 3m long, with the exception of Trench 11, which was excavated to a length of 7m.
- 4.2.8 The concrete floors throughout these buildings were revealed beneath the existing ground surface and demolition rubble. Excavation through the concrete and into the natural clay geology revealed no remains of any archaeological interest. The natural clay geology was exposed at a depth of 0.3m to 0.4m at the south-western side of the site, sloping gradually downwards to the north-east where it was observed at between 0.7m and 1.1m below the existing ground surface (Plates 16-19).



Plate 16: Trench 2, looking south-west



Plate 17: Trench 6, looking south-east



Plate 18: Trench 8, looking south-west



Plate 19: Trench 11, looking north-west

4.2.9 *Trench 10:* this trench was placed across the site of the former reservoir to the north-west of the main mill complex (Fig 2). Excavation revealed that the reservoir had been backfilled with layers of cinder, ash and sand. The trench was subject to rapid flooding at a depth of *c* 1.2m (Plate 20), undermining the loose material in the vertical sections, and precluding any further excavation. No remains of archaeological interest were identified in the trench

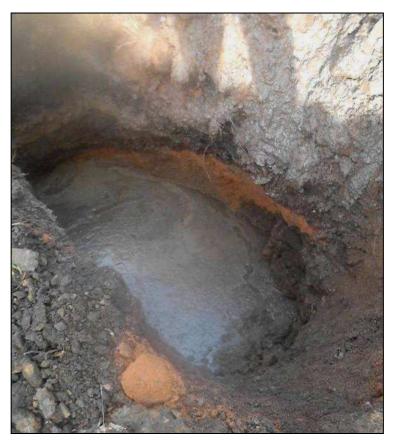


Plate 20: Flooded Trench 10, looking south

5. DISCUSSION

5.1 THE DOCUMENTARY MATERIAL

- 5.1.1 The desk-based study has yielded little primary documentation for the early development of the mill, reflecting the paucity of available pertinent information. However, the sequence of Ordnance Survey maps, coupled with the information printed in the Amalgamated Cotton Mills Trust Ltd publicity brochure of 1921, informs a basic understanding of the mill complex. The layout of Haslam Mill appears from the cartographic evidence to conform to the standard layout of a mid- to late nineteenth-century weaving mill, comprising a single-storey weaving shed with a north-light roof, and engine and boiler houses abutting a multi-storey preparation block and cloth warehouse. The mill lodge and a water tower for the fire-fighting equipment are also common features of weaving mills across Lancashire.
- 5.1.2 The most intriguing element of the documentary material is the illustration presumed to date to the late nineteenth century, which depicts a belt drum protruding from the first floor of the water tower (Plate 5). Whilst the inclusion of this unusual feature implies that there was a requirement to supply power to machinery in or beyond the mill yard, there is nothing on the Ordnance Survey mapping to indicate what this may have been. The accuracy of the illustration should also perhaps be considered, as some 'artistic licence' has clearly been incorporated. Most obvious in this respect is the width of the preparation/warehouse block, depicted on the illustration as a three-bay structure, whilst the photograph from 1921 clearly shows it to have been fourbays wide. The multi-pitch roof structure shown on the illustration is similarly incorrect, as later photographs depict a twin-span roof with hipped gables.
- 5.1.3 The most enigmatic feature on the illustration, however, is the four-storey water tower that is shown to have housed the belt drum. The footprint of this building does not correspond easily to the detailed Ordnance Survey map of 1891, and whilst a similar tower is partially visible on an illustration produced by the Amalgamated Mills Trust Ltd in 1921, it is absent from a photograph of the same date. The footprint of the mill shown on the Ordnance Survey map of 1908, moreover, corresponds closely with the buildings that survived immediately prior to demolition, with the tall rectangular water tower occupying the site of the tower shown on the late nineteenth-century illustration.

5.2 THE TRENCHES

5.2.1 The trenches placed across the site were excavated primarily for geo-technical purposes, but provided a valuable opportunity to investigate any buried remains. Two of the trenches, moreover, were placed specifically across areas of potential archaeological interest, enabling a brief examination of the sites of the engine and boiler houses and the reservoir. Whilst some structural walls survived *in-situ*, no internal fixtures or fittings were revealed.

6. ASSESSMENT AND SIGNIFICANCE

6.1 ASSESSMENT

- 6.1.1 *Criteria:* in their *Scheduling Selection Guides: Industrial Sites*, English Heritage has identified several areas of heritage values, which need to be considered when determining the overall significance of the site as a whole and its component elements (English Heritage 2013). Similarly, the particular considerations used by the Secretary of State when determining whether sites of all types are suitable for statutory designation through scheduling are set out *in Scheduled Monuments: identifying, protecting, conserving and investigating nationally important archaeological sites under the Ancient Monuments and Archaeological Areas Act 1979* (DCMS, March 2010). These considerations (generally referred to as the non-statutory criteria) are under the following headings: period; rarity and representativity; documentation; group value; survival/ condition; and potential. These criteria can usefully be applied to assessing the archaeological significance of Haslam Street Mill.
- 6.1.2 **Period:** Haslam Street Mill dates to the mid-nineteenth century, although little is know about the layout of the building until the later nineteenth century. There is no indication that the Site Area may contain archaeological remains predating the mid-nineteenth century.
- 6.1.3 *Rarity and Representativity:* this heritage value is based on a site being a rare survival of its type, which includes sites where technological experimentation took place. For the most part, Haslam Street Mill appears to have been a typical steam-powered weaving factory that characterised many towns in historic Lancashire. The notable exception is the unusual, but putative, power-transmission system that can be implied from the late nineteenth-century illustration. The rationale for this system, and specifically the exterior belt drive, remains unclear, assuming that it did actually exist.
- 6.1.4 When built, it is probable that the mill was powered by a vertical beam engine. However, it is documented by the Amalgamated Cotton Mills Trust Ltd in 1921 that the mill was powered by a horizontal compound engine, which were not applied to textile mills until the 1860s, and became the preferred source of motive power from the 1870s onwards. This implies that the original beam engine was removed, and the engine house remodelled for the installation of the horizontal engine. Whilst any remains of the original beam engine would have some rarity value, it is likely that any buried remains in the engine house will represent the later engine, which would have a lower rarity value.
- 6.1.5 **Documentation:** despite the local importance of the Haslam family, there is a little primary documentation surviving for the mill. The historic research has been drawn largely from the sequence of Ordnance Survey maps for the site, coupled with an account published by the Amalgamated Cotton Mills Trust Ltd in 1921. Secondary accounts are limited to Longworth's account of the cotton mills in Bolton (Longworth 1987).

- 6.1.6 *Historic Importance:* in the absence of the actual buildings, the site is of little historic importance. Whilst the Haslam family were important locally, Haslam Street Mill is not associated with an innovative industrialist, engineer or company and, notwithstanding the possibility that it housed an unusual power-transmission system, it associated with any pioneering new process or innovation.
- 6.1.7 *Group Value:* Haslam Street Mill had some group value with the other textile mills in the vicinity, although this value has been reduced now that the building has been demolished.
- 6.1.8 *Survival/Condition:* the results obtained from the trial trench investigation have concluded that the site was subject to fairly comprehensive demolition, and that any buried remains that do survive are likely to be damaged. In particular, the site of the weaving shed appears to be of no archaeological interest, as even the original floor seemed to have been replaced with concrete in the twentieth century. It also seems likely that the area of the engine house was also subject to some disturbance during demolition, and whilst the exterior wall of the engine house was identified, no internal fixtures, fittings or floors were identified in the trial trench. However, the trench did not investigate the footprint of the boiler house, and the possibility that buried remains of this building, together with remains of the engine beds, do survive *in-situ* cannot be discounted. Elements of the flue from the boiler house to the chimney were identified, although this had evidently lost what will probably have been an arched capping.
- 6.1.9 **Potential:** industrial sites sometimes have the potential of yielding historic information which can only be gained through the use of the scientific investigative techniques of archaeology. Analysis of waste artefacts and process residues can elucidate industrial techniques unrecorded elsewhere, for instance. The site of Haslam Street Mill, however, has little or no potential to contain any material that would yield significant information from scientific investigative techniques.

6.2 SIGNIFICANCE

- 6.2.1 Using the above criteria, and particularly rarity and survival/condition, the site of Haslam Street Mill is likely to contain non-statutory buried remains of low significance. In particular, the site of the weaving shed and the preparation/warehouse block is of little or no archaeological interest, and the impact of development upon buried remains across the central and southern parts of the site will be negligible.
- 6.2.2 Based on the evidence gathered to date, the site of the engine house is also of low significance, reflecting the extent to which the foundations have been damaged or removed during demolition. However, it is acknowledged that the extent of site investigations carried out to date have been limited, and the possibility that some foundations for the steam engine and its associated boilers survive *in-situ* cannot be discounted.

7. CONCLUSION

7.1 CONCLUSION

- 7.1.1 The *National Planning Policy Framework* instructs that in the case of heritage assets that either have designated status or are non-designated but are of a significance demonstrably comparable with a Scheduled Monument, *ie* of national importance, the general assumption should be in favour of conservation. Where the loss of the whole or a part of a heritage asset's significance is justified by a development, the developer should be required first to record that asset and advance understanding of its significance, in a manner proportionate to their importance and the impact (NPPF, p 32 para 141). Development also has the potential for enhancing heritage assets, and NPPF encourages developments which change the setting of a heritage asset so as to better reveal its significance.
- 7.1.2 Notwithstanding the intriguing detail shown on a late nineteenth-century illustration, the archaeological works carried out to date suggest that the site of Haslam Mill has little potential to contain surviving remains of archaeological interest. It is acknowledged, however, that should well-preserved remains of the engine and boiler houses survive as buried remains, they may merit preservation by record, where they will be directly affected by development.
- 7.1.3 The requirement for any further archaeological recording of buried remains within the Site Area will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Manchester City Council. However, if any further archaeological investigation of the Site Area is deemed necessary, it is envisaged in the first instance that this may be in the form of a watching brief, targeted on the footprint of the engine and boiler houses (Fig 3), although more detailed investigation should be anticipated if significant archaeological remains are encountered.

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ILLUSTRATIONS

FIGURES

Figure 1: Site location

Figure 2: Trenches superimposed on the Ordnance Survey 1:500 map of 1891

Figure 3: Area of archaeological potential

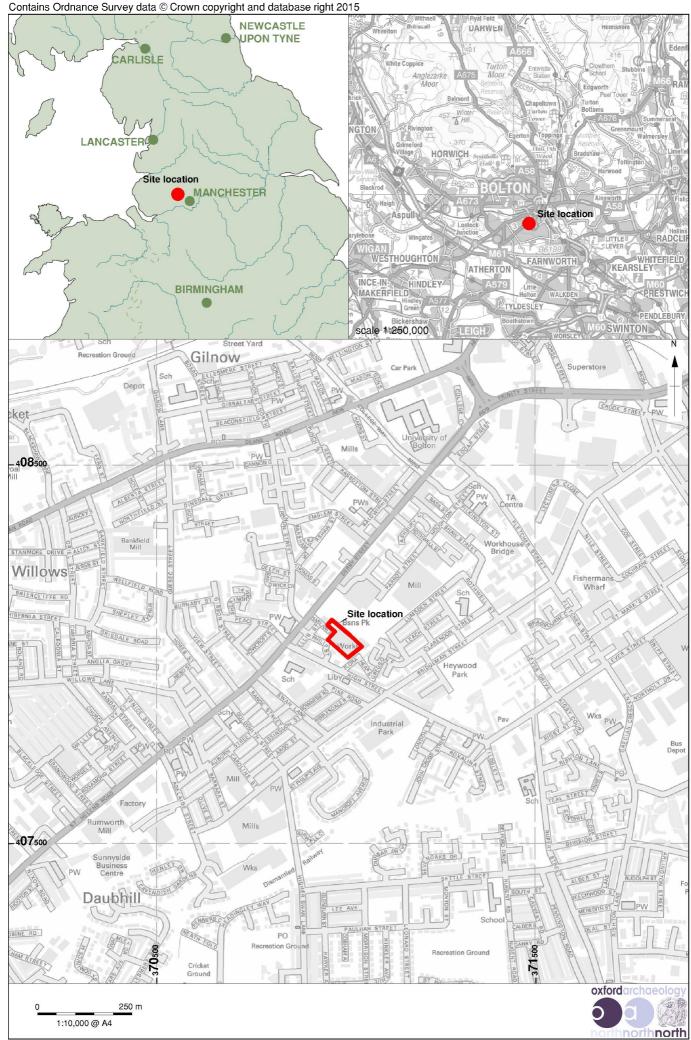


Figure 1: Site location

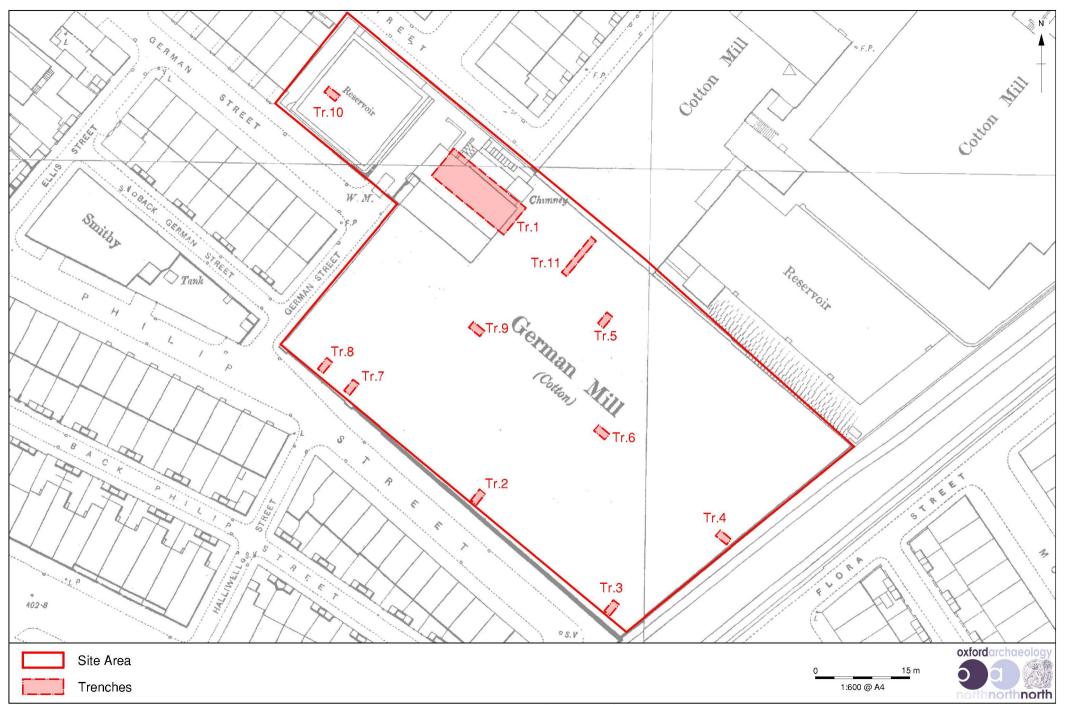


Figure 2: Trenches superimposed on the Ordnance Survey 25":1 mile map of 1891

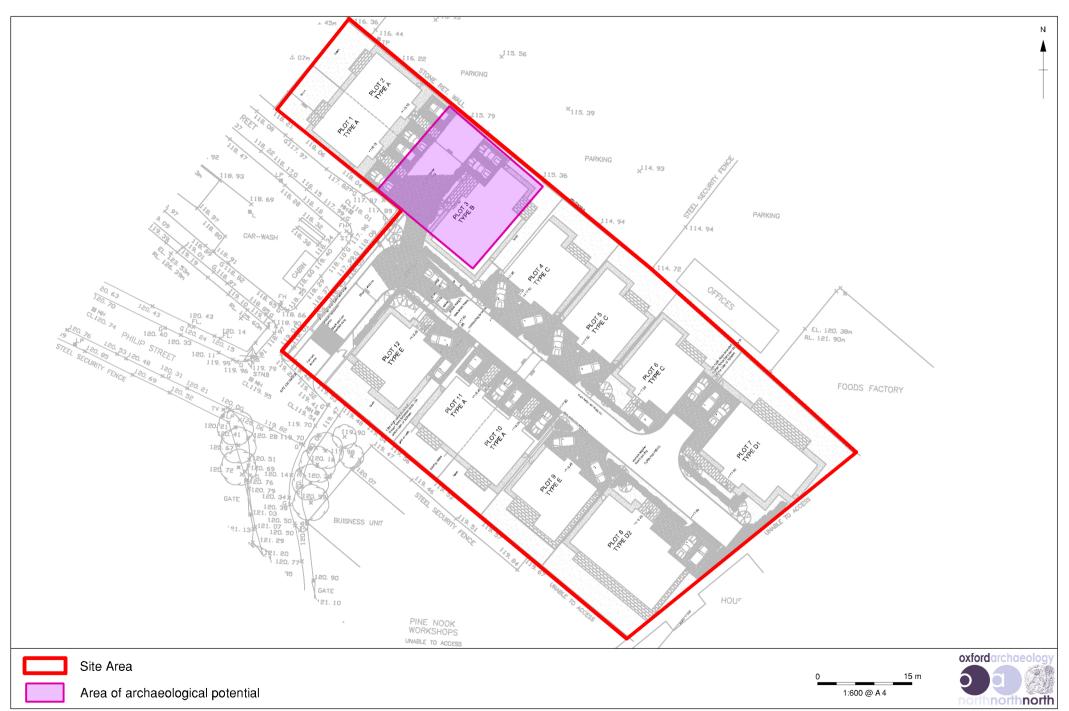


Figure 3: Area of archaeological potential