Watching Brief Report

Knightsbridge,
Stockport

Client:
Stockport Metropolitan Borough Council

Technical Report:
Lewis Stitt

Report No:
SA/2018/39

Site Location:	Knightsbridge, Stockport, Cheshire
NGR:	Centred at NGR 389817 390739
Internal Ref:	SA/2018/39
Prepared for:	Stockport Metropolitan Borough Council
Document Title:	Knightsbridge, Stockport, Cheshire
Document Type:	Watching Brief Report
Version:	Version 1.0
Author:	Lewis Stitt & Chris Wild
Date:	June 2018
Approved By:	Graham Mottershead Signed:
Position:	Project Manager
Date:	June 2018

Contact: Salford Archaeology, Centre for Applied Archaeology, Peel Building, University of Salford, Salford, M5 4WT

Telephone: 0161 295 4862

Email: g.d.mottershead@salford.ac.uk

Contents

Summary ----------1

1. Introduction ----------2

2. The Setting ----------3

3. Historical Background ----------4

4. Historic Building Investigation----------8

5. Discussion----------19

Sources ----------20

Acknowledgments ----------21

Appendix: Illustrations ----------22

Summary

Stockport Metropolitan Borough Council (SMBC) is undertaking a scheme of improvement works to the current highway of Great Portwood Street, Stockport, including the construction of a cycle path and associated remediation and landscaping.

This included the removal of the mainly-demolished remains of Warren Street Mill, and early-nineteenth century cotton spinning and weaving mill situated on the west bank of the River Goyt. The mill was established prior to 1824, and represented an early example of the use of powered looms within the region, prior to the boom in power loom weaving following the invention of the Roberts loom, patented in 1830.

In order to mitigate any loss of potentially archaeologically-significant fabric, Salford Archaeology were appointed by SMBC to undertake a programme of archaeological building recording of the upstanding remains of the mill complex, followed by a watching brief during demolition.

The extant fabric represented the remains of a multi-phase boiler house, placed to the south of the mill, adjacent to an internal engine house. The earliest fabric appears to relate to the boiler house of 1827, erected when the mill was expanded on its southern side.

The mill was significantly rebuilt following a fire in 1873, and although the boiler house appears to have been unaffected by the fire, the power plant was remodelled prior to 1893, with the addition of an economizer house and the replacement of the small square chimney with a larger octagonal example, and a third storey to the boiler house. However, by the early 1890s the mill had been abandoned, and the boiler house was reduced in size on its southern side to accommodate the widening of park Bridge in 1894.

The mill was used subsequently for the production of cocoa and chocolate by Henry Faulder & Co, with the reduced boiler house apparently being retained, presumably to supply the complex with hot water.

The upper storey of the boiler house was removed in the mid-twentieth century, to create a forecourt to an entrance into the mill from Warren Street, with parts of the upper northern and eastern walls retained as boundary walls, and with the insertion of a concrete deck at road level, above a small basement created within the former boiler house.

1. Introduction

1.1 Planning Background

In March 2018 Salford Archaeology was commissioned by Stockport Metropolitan Borough Council to carry out an archaeological watching brief and building recording at the site of the former Warren Street Mill, Knightsbridge, Stockport, Greater Manchester. The watching brief was carried out during improvement works to the current highway including the construction of a cycle path and associated remediation and landscaping.

2. The Setting

2.1 Location and Topography

The study area (centred on NGR 389817 390739) lies on the western bank of the River Goyt in Stockport. It is bound by Great Portwood Street to the south, Knightsbridge to the west and a public car park to the north (Plate 1).

Plate 1: Recent aerial view, with an arrow marking the area of the archaeological watching brief

The site comprises waste ground at the western canalised riverbank, with the bridge to the immediate south.

The solid geology, as recorded by the British Geological Survey, consists of fluvial sedimentary rocks of the Chester Sandstone Formation. The overlying drift geology comprises fluvial sand and gravel river terrace.

3. Historical Background

3.1 The development of Warren Street Mill

Warren Street Mill comprised a complex of buildings situated on a triangular plot of land bordered on the east by the River Goyt, on the south by Warren Street and to the west by a street variously known as Raffald Street, Mersey Street and Corporation Street, and now part of Knightsbridge.

From cartographic evidence a mill had been built by 1824 when it was shown on Thornton's map of the town. Details of the building are provided by a survey of factories in stockport township compiled for rating purposes in 1842. The main part of the mill is described as 'old' 6 storeys high with an attic, it had an internal engine house at the south end rising through four floors of the building. Attached to the south-eastern corner of the mill block was a square two-storey boiler house. Only the northern half of this appears on the 1824 plan, and other evidence indicates the southern half to have been an addition of 1827. The alterations in 1827 also involved the dismantling of the old engine house and boiler house. These may have been located at the south-east end of the original mill, where the 1824 map shows a square projection between the mill and the river, reminiscent of the arrangement in the post-1827 mill.

On the west, along Mersey Street, the 1842 plan shows a three-storey range comprising a warehouse and factory, and on the south a three-storey lodge and office. These buildings also appear on the 1824 plan.

It has been suggested that the Warren Street Mill was the Cast Metal Mill in Warren Street which is listed in directories until 1900. This was a locally important site in that as 'the Gas Metal Mill' it was named in 1830s as one of Stockport's earliest mills of fireproof construction predating 1824. In the nineteenth century John Greenhalgh recalled how the mill on Warren Street which he named the 'Cast Metal Shop' had been occupied in the 1820's and for many years after by the Clayton family. This connection helps prove that the Warren Street Mill and Cast Metal Mill were not in fact the same. The 1842 survey of Stockport factories show that Francis Smith Clayton then occupied a mill in Warren Street, but this lay to the west of Warren Street Mill.

By 1842, Warren Street Mill was then owned by Edmund Sykes, how belonged to one of Stockport's leading industrial families, owning an extensive bleachworks in Edgeley on the western edge of the town. A study of this family revealed that in 1812 Edmund's father William Sykes had bought at auction a steam-powered mill in the Park area of Stockport, six-storeys high with a room in the roof, and leased this to an unnamed spinner who equipped it with 10,000 spindles. A validation of this mill in 1816 is preserved among Sykes' papers in Stockport Local Heritage Library. This describes the mill as 'this large factory 324 yards long 17 yards wide, 6 storeys high and a room in the roof' , with an

'engine house, boiler house, chimney and coal place'. Also an 'old warehouse 3 storeys high, a new warehouse 71' long 23½' wide and 3 storey high, a smithy and a foundry house 2 storeys high'. The dimensions of the 'large factory' correspond with the northern half of the mill as shown on the 1842 map.

By the late 1850's the mill had been evidently taken over by Eskrigge and Bar. In the directories of 1857-72 the mill is listed as a cotton spinners and manufactures at Park Mill, the address being variously given as Warren Street and Mersey Street (Kelly 1857: Morris 1864: Worrall 1872).

During the occupation of Eskrigge and Barr, on the 14th May 1871 the mill was burnt down. It was rebuilt by the owners and occupied by T&L Leigh. This was one of the largest cotton-spinning firms in late nineteenth century Stockport and in 1880's occupied four mills, Beehive, Hope, Meadow and Park. The mill as rebuilt after the fire shown on the 1873 OS map (Plate 2). Its south and west walls appear to have followed those of its predecessor but the new mill extended further to the east and north. The other buildings on the site including the boiler house, appear unchanged from the earlier OS mapping. The 1893 map shows that an octagonal chimney had been added on the north-east side of the boiler house, immediately next to the river bank.

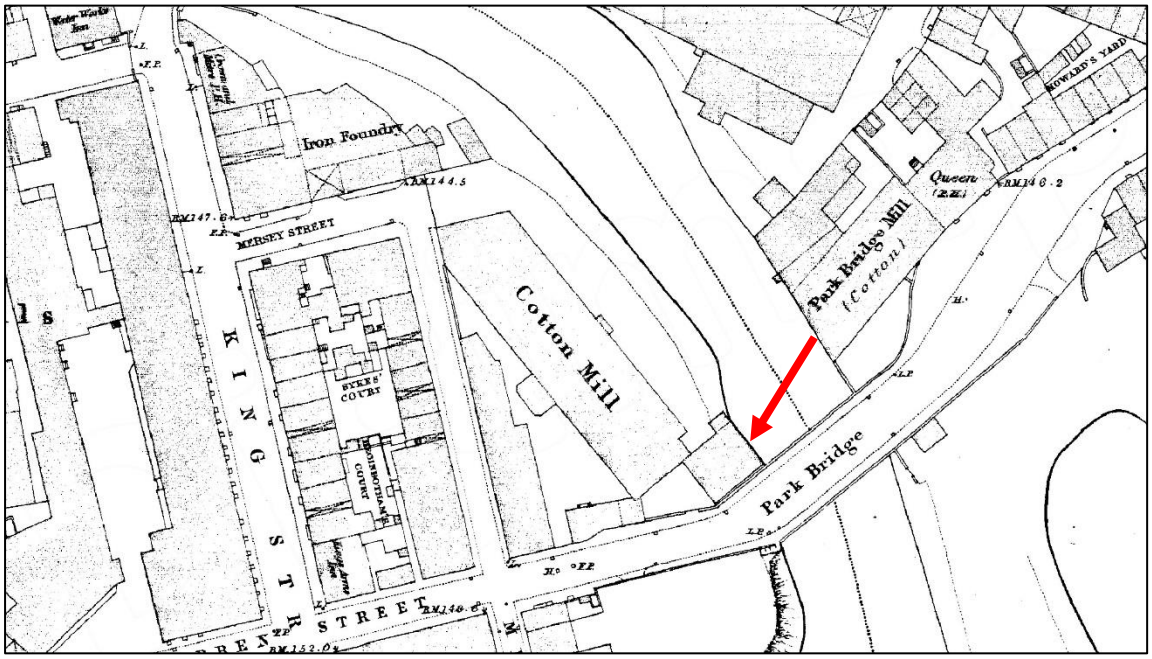

Plate 2: Extract from the Ordnance Survey map of 1873, with a red arrow showing the area of the watching brief of the Warren Street Mill

T&L Leigh were still occupants at Warren Street Mill in the early 1890s, with the Ordnance Survey map of 1895 still depicting the complex as a Cotton Mill (Plate 3). By the edition of 1898, however, the mill is shown as 'disused', and was taken over shortly afterwards by the Stockport firm of Henry Faulder & Co, for the manufacture of cocoa and chocolate. The firm continued production on the Warren Street site into the 1920s.

The Ordnance Survey edition of 1898 also shows that the road leading to Park Bridge had been widened, reducing the southern extent of the Warren Street Mill complex in the intervening three years. The work was actually undertaken in 1894, following the survey of the 1895 Ordnance Survey edition, but prior to its publication, as shown within a date stone within the bridge parapet. This widening truncated the boiler house significantly, and was possibly associated with the temporary abandonment of the mill at this time. The narrowed structure is clearly depicted on the Ordnance Survey edition of 1917, which also shows the main body of the mill to have been extended to the river bank on its eastern side, and with a further addition to the north (Plate 4).

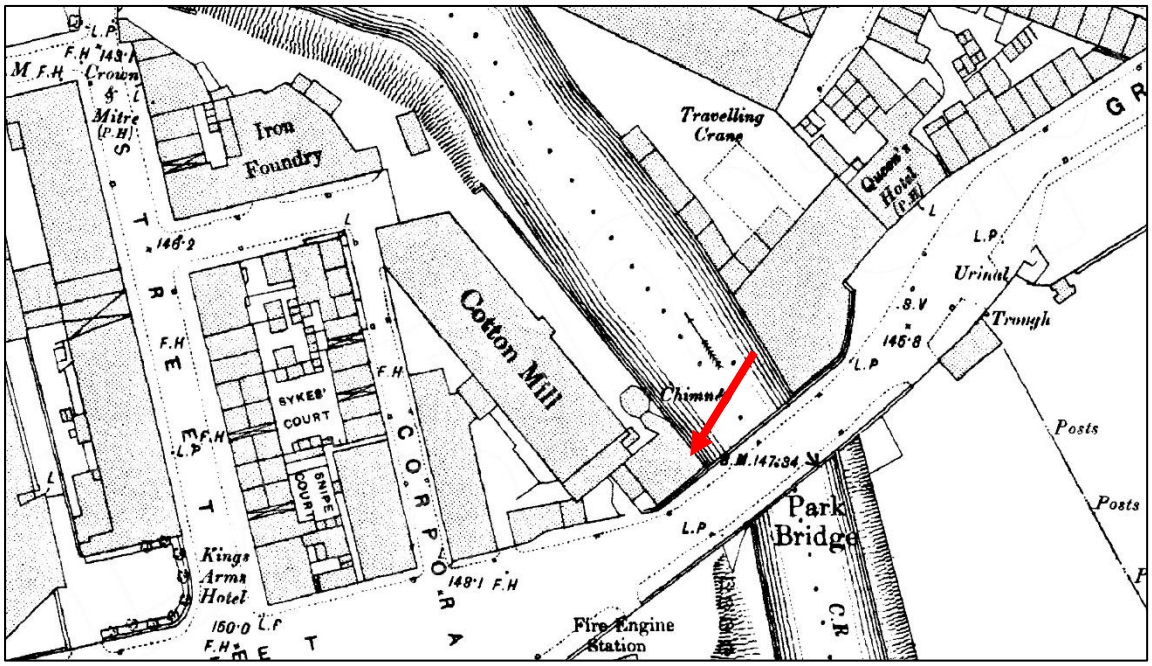

Plate 3: Extract from the Ordnance Survey map of 1895, with a red arrow showing the area of the watching brief of the Warren Street Mill

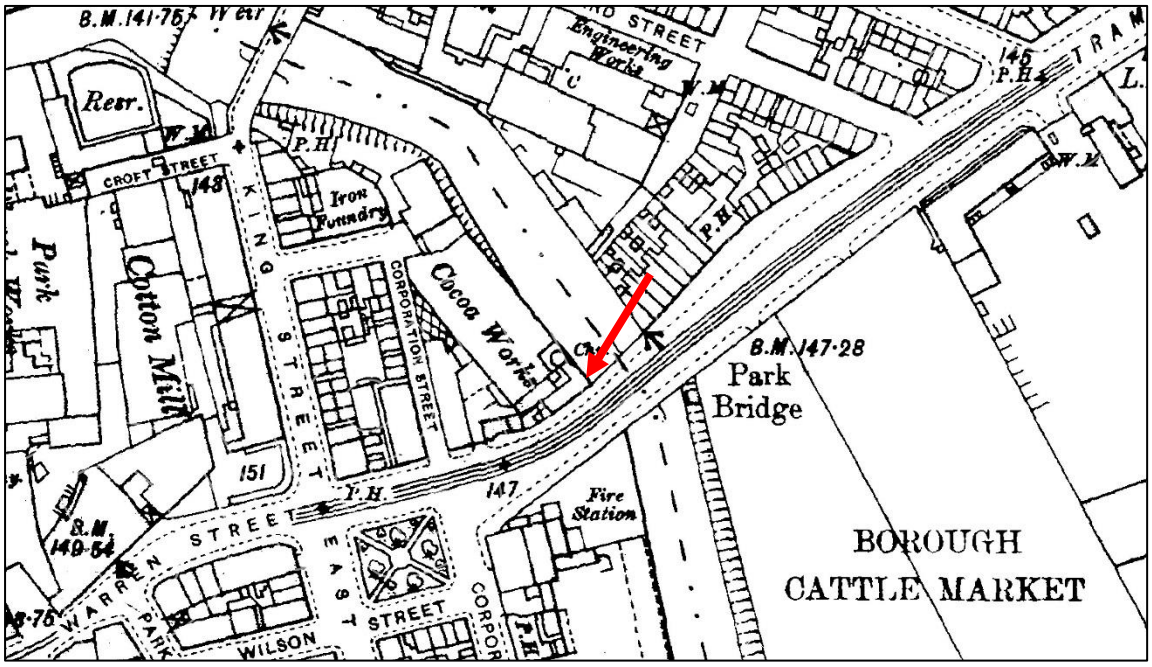

Plate 4: Extract from the Ordnance Survey map of 1910, with a red arrow showing the area of the watching brief of the Warren Street Mill

The mill was demolished in 1989, with photographs and descriptions compiled in the 1970's and for the Greater Manchester Mill Survey in the 1980's. These show it to have been five-storeys high with brick embellishments on its east and north sides. The mill survey noted no visible power features on the site, other than the octagonal brick chimney which still stood at its south-east corner.

4. Watching Brief Results

4.1 Introduction

An archaeological watching brief was undertaken at the small extant boiler house that had been attached to the south-eastern corner of the now demolished Warren Street Mill, Knightsbridge, Stockport.

4.2 External Description

North-western facade: this was brick-built in three-stretcher English Garden Wall bond and comprised several phases of construction (Plate 5). A doorway, placed 5.1m in from the extant north-eastern end of the wall, had plain brick reveals that carried a 0.26m thick sandstone lintel. The doorway had been blocked with brick at its base, below late twentieth-century concrete blocks (Plate 6).

Plate 5: General view of the north-western façade

Plate 6: Detail of the blocked doorway

The western jamb of the door appears to have marked the interface between two phases of construction, the coursing above the doorway clearly being miss-matched (Plate 6). This section of wall had two approximately-rectangular voids, the lower of which retained a short stub of brickwork projecting from the wall face, strongly suggesting that a perpendicular wall of full-brick thickness was keyed into this wall face, which appeared to represent the earlier phase of construction.

At its western end this short section of wall had a vertical joint that included quarter-bat bricks in each header course in order to form the straight edge. The wall beyond comprised broken core work, and possibly represented the northward return of the original boiler house, that was rebuilt and extended westwards in the late-nineteenth century. The western end of the wall had been infilled and refaced with machine-made brick, almost certainly relating to mid-twentieth century remodelling following the removal of the upper storey of the structure.

An aperture at the extant base of the wall, probably for pipework associated with the boilers, was situated 0.5m to the north-east of the blocked doorway (Fig; Plates 6 and 7). This had a 0.06m thick sandstone lintel above recessed blocking below (Plate 7). At its lower eastern side, it appeared to retain five courses of earlier brickwork, butted on its eastern side by a concrete base that formed the extant internal flooring to the south (Plate 7).

At its eastern end, the wall was roughly keyed into the broken perpendicular north-eastern wall, which originally continued northwards along the river bank, to the original full depth of the boiler house (Plates 5 and 8).

Plate 7: Detail of cut out in the wall for pipework leading to the engine house

North-eastern facade: the north-eastern façade was built on the River Goyt embankment, using hand-made brick in a three-stretcher English Garden Wall bond arrangement. The south-eastern end of the wall was truncated by the south-eastern elevation of the brick and stone constructed Park Bridge that spanned the River Goyt, which replaced an earlier timber footbridge in 1857, and was further widened in 1894. Below present ground level, the façade continued northwards of its ragged brickwork end, butting a sandstone retaining wall for the river (Plate 8), and almost certainly denoting the northern extent of the original boiler house complex. At its base, the roughly-dressed, built-to-course sandstone wall retained the narrow arch of a culvert (Plate 8) that was almost certainly associated with drainage beneath the original construction of the Warren Street Mill complex.

Plate 8: General view of the north-eastern façade

The wall had two blocked apertures placed for a lower floor level slightly above that of the river (Plate 8), demonstrating that the boiler house was excavated to below ground level, to allow for the easier loading of coal. Both apertures had plain brick jambs, below a shallow segmentally-arched lintel of only a single edge-set brick row (Plate 9). Both were blocked although apparently at different times; that to the south retained well-defined jambs, and was blocked with hand-made brick, laid in five- stretcher English Garden wall bond; whilst that to the north retained little evidence of the jambs, with brighter red brick extending beyond the aperture to either side, and having a less regular five-stretcher English garden Wall bond arrangement (Plate 9). Between the windows, a cast-iron angled vent pipe and an oval fish-plate for a wall tie appear late-nineteenth century in date, almost certainly relating to the remodelling of the structure in the 1870s, or that around the turn of the twentieth century.

Immediately above and between the two windows, two vertical joints survive *in situ* within the wall face (Plates 8 and 9). It is probable that these represent the jambs of short window placed between those on the lower floor, the blocking brickwork appearing similar to that in the southern of the window below (Plate 9). However, various patches and repointing within the brickwork to either side does not discount the possibility that the vertical joints represent the jambs of windows placed above those below and that the majority of the wall was refaced at this level.

Plate 9: Blocked windows within the north-eastern façade

The structure appears to have originally been of two-storey height, although this was later extended to include a further floor that rose above the level of Warren Street. This appears to have been built in hand-made brick, in three-stretcher English Garden Wall bond, and incorporated an approximately central window, with a projecting narrow flat sandstone sill (Plate 10). 12 courses of this phase of construction survived to the south of the window, the remainder of the wall having been rebuilt in machine-made brick, also in three-stretcher English Garden Wall bond, and using a black sooty mortar. The window was blocked with darker crimson machine made brick that appeared contemporary with a late parapet capping to the wall (Plate 8), which appears to have formed a boundary wall to the river once the building was reduced in height in the mid-twentieth century.

Plate 10: Detail of the blocked up window on the extended upper floor of the north-eastern façade, with earlier fabric on the left side of the jamb

Internal Description

The structure was reduced in height in the mid-twentieth century, with a concrete deck placed on the reduced walls to form a forecourt to an entrance in the southern wall of the mill. This was constructed using pre-cast sections of concrete slab, supported by 12" (0.30m) thick reinforced concrete beams (Plate 11). A split-level internal concrete floor was also inserted at this time, although this was heavily obscured by modern debris, being only visible at its eastern end where it projected through the external north wall (Plates 5, and 12).

The southern wall latterly formed the retaining wall to the widened Warren Street. However this appeared to retain fabric relating to its earlier form as an extended upper floor of the boiler house. This was of hand-made brick construction, in three-stretcher English Garden Wall bond, and had several blocked apertures that would have formed windows in the south wall, prior to the construction of Park Bridge in 1857. Machine-made brick, bonded in a black sooty mortar, suggested that the blocking of these apertures was either undertaken, or more likely, reinforced following the narrowing of the structure when Park Bridge was widened in 1894 (Plate 13).

Plate 11: Concrete beam of supporting the concrete section ceiling of the remains of the boiler house

Plate 12: Modern rubbish obscuring the floor of the boiler house

Plate 13: Repaired section of the south-eastern wall

A mild-steel diesel tank had been inserted at the north-eastern end of the structure (Plate 14). This measured 7’ x 3’ x 4’ (2.13 x 0.91 x 1.21m), and contained an inspection hatch on the top that was bolted down with ¼” (6mm) bolts, and had a rubber gasket seal. Several 2” (0.05m) diameter pipes extended from the tank, and had been secured to the south-eastern wall (Plate 14). One of these pipes rose through a steel manhole cover in the concrete ceiling, leading to the first floor of the building (Plate 15).

Plate 14: The mild steel diesel tank at the north-eastern end of the boiler house

Plate 15: The manhole cover and 2" pipe from the diesel tank leading to the first floor of the boiler house

Additional features

A large cast-iron bracket, bolted to a substantial block of brickwork had been placed on the concrete deck of the boiler house (Plate 16). This represented a bearing for the main upright shaft of the power system of Warren Street Mill, with the bull-nosed returns of the attached brickwork demonstrating that it was attached to a pier between windows, almost certainly in the southern elevation of the mill. The 3' (0.91m) wide bearing plate had four substantial 1" (0.03m) bolts through the brickwork, secured by hexagonal nuts on the internal wall face (Plate 16). The bearing itself comprised a large horizontal mounting plate, with a pair of rectangular bolt holes, and a central cut-out section with a rounded end, above a vertical mounting with two larger bolting apertures. The lower plate would have house a pillow bearing to the upright shaft, holding it firmly below the upper plate, through which it passed in the rounded aperture, suggesting a 3 or 4" shaft diameter. A bevel gear cog would have been placed on the upright shaft above the plate, and this would have driven a smaller cog on a line shaft, again housed within a pillow bracket, placed on the outer edge of the horizontal plate (Plate 16).

Plate 16: Upright bearing box for line shafting bevel gear within demolition debris

5. Discussion

5.1 Discussion

Although heavily truncated, the remains of the small building on the south-eastern corner of the former Warren Street mill retained fabric relating to several phases of a structure that was originally erected as a detached boiler house in the early nineteenth century. Warren Street Mill represented an early textile mill within Stockport, erected prior to 1824, and incorporating the very early application of power looms within the region. Machine-driven looms formed only a minor part of the weaving industry in Manchester in the early-nineteenth century, with only 14,650 powered looms in use by 1820 (Hills 1993, 177). This had risen significantly by the end of the decade to around 55,500 in 1829 (*ibid*), but the rapid explosion in the use of power looms did not begin until Richard Roberts developed and patented his more reliable power loom in 1830, with over 100,000 power looms in use in Manchester as early as 1833.

This early powered weaving was not undertaken in the large single-storey weaving sheds that became synonymous with textile weaving from the mid-nineteenth century, but was instead undertaken within rooms in multi-storeyed narrower structures, similar to those used for warehousing and spinning, making the narrow site at Warren Street, with its tall six-storey mill a suitable location for the integration of weaving within the spinning mill. A good example of an early weaving 'block' survives at Quarry bank Mill, Styal, located less than 10 miles to the south-west.

The engine and boiler houses appear to have been remodelled as early as 1827 (Arrowsmith 2002), reflecting the rapid increases in steam engine technology throughout the early-nineteenth century. The new structure was approximately square in plan, and had a square chimney projecting from the riverside end of the north-western elevation.

Although the mill burnt down in 1873 (*ibid*), the plan form of the boiler house remained as previously, suggesting that it may have been unaffected, but a remodelling of the power plant followed prior to 1893, by which time the square chimney had been replaced, to the north, by an octagonal chimney, presumably of greater height, and the site of the earlier chimney housed a rectangular structure, almost certainly representing an economiser house.

The replacement of the timber bridge crossing the River Goyt immediately to the east of Warren Street Mill realigned the road adjacent to the mill boundary, possibly blocking access or light to the southern side. However, it appears unlikely that the additional storey was added until the remodelling of the power plant between 1873 and 1893. Although the addition of a storey above a boiler house would appear unusual, a broadly contemporary boiler house at Spring Garden Mill, Colne was rebuilt following a fire in 1875 with a drying room and office above the boilers (OA North 2016). However, a photograph of

Warren Street, dating to the turn of the twentieth century, shows two square timber louvres within the roof of the structure (Plate 17), which although further remodelled by this time, would appears to have been retained exclusively as a boiler house. The addition of an upper floor is therefore more possibly associated with the abandonment of the lower level during the remodelling of the structure, probably due to issues of water ingress from the adjacent river. The roof level of the adjacent economiser house between the boiler house and chimney would strongly suggest that ground level had been raised significantly within this part of the Warren Street Mill complex (Plate 17).

Plate 17: Looking west over the boiler house to Warren Street Mill, following the widening of Park Bridge in 1894

The photograph was taken after the widening of Park Bridge in 1894, and shows the narrowed structure. The inclusion of louvres within the pitched slate roof suggests that a boiler was retained for use by Henry Faulder & Co, although their demand for hot water / steam would have been much less for the production of cocoa and chocolate than had previously been required by the integrated cotton mill. A narrow range, possibly incorporating an office, given the window adjacent to the bridge, appears to have been included on the southern side of the remodelled structure at its upper level, the wall height being extended adjacent to the road to form a high boundary wall to the mill complex (Plate 17).

5.2 Conclusion

The programme of an archaeological watching brief undertaken has provided a detailed record of the extant structure, and no further investigation of the building is recommended in advance of demolition. GMAAS have advised that the site should be commemorated by the incorporation of a retained cast iron bearing box (see Plate 16) into the final design as a feature, along with an information board.

Sources

Maps

Ordnance Survey Map of 1873

Ordnance Survey Map of 1895

Ordnance Survey Map of 1898

Ordnance Survey Map of 1910

Ordnance Survey Map of 1969

Secondary Sources

Arrowsmith, P. 2002, *Great Portwood Street, Stockport: An Archaeological Desk-Based Assessment* unpbl report

Department for Communities and Local Government, 2012 *National Planning Policy Framework*

Hills, RL, 1993 *Power from Steam: A History of the Stationary Steam Engine,* Cambridge

Historic England 2008 *Conservation Principles, Policies and Guidelines* London

Historic England 2016 *Understanding Historic Buildings: A Guide to Good Practice* E-book https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/ Accessed 07.08.2017

OA North, 2016 *Spring Garden Mill: Archaeological Building Investigation*, unpubl report

Acknowledgements

Salford Archaeology would like to thank Jason Clarke of TEP, for commissioning the historic building investigation on behalf of Cheshire East Council. Salford Archaeology would also like to thank Cheshire Archaeology Planning Advisory Service (APAS) for providing monitoring support and advice during the project. The watching brief and survey were carried out by Lewis Stitt. The report was written by Lewis Stitt and Chris Wild, and illustrated by Lewis Stitt. The project was managed by Graham Mottershead, who also edited the report.

Appendix: Illustrations

Figure 1: Site location plan

Figure 2: Boundary superimposed onto O.S. 1:1056 Town Plan 1851

Figure 3: Boundary superimposed onto O.S. 1:500 Town Plan 1891

Figure 4: Boundary superimposed onto O.S. 1:2500 County Series 1907

Figure 5: Boundary superimposed onto O.S. 1: 2500 County Series 1922

Figure 6: Boundary superimposed onto O.S. 1:1250 National Grid 1959

Figure 7: Boundary superimposed onto O.S. 1:1250 National Grid 1972

Figure 8: Boundary superimposed onto O.S. 1:10000 1989

Figure 9: Northwest elevation drawing