An Historic Building Survey and Desk-Based Assessment at Fern Mill, Davies Street, Ashton-under-Lyne, Tameside

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Executive Summary

In March 2011 Archaeological Research Services Ltd were commissioned by Hill's Biscuits to undertake a programme of archaeological work at Fern Mill, Ashton-Under-Lyne, Tameside. This work comprised of a desk-based assessment and Level 3 building recording.

The building analysis and recording concludes that this three-storey mill was built for cotton carding and spinning. The investigation revealed that the building exhibited little alteration throughout its lifespan. Two single-storey extensions were built along the north and south walls, probably to house extra cotton carding machines and an extension on the east end, probably to house two Lancashire boilers, have been demolished. Another integrated two-storey structure on the east wall has also been demolished, this contained taking-in bays. The mill was powered by a steam engine with transmission through a possible vertical drive shaft and a series of horizontal line shafts on each floor. It was constructed using a cast-iron frame supporting fire-proof brick jack-arches and flagged stone floors.

The desk-based assessment followed the development of Ashton-Under-Lyne as an industrial centre during the late eighteenth and nineteenth centuries and has shown that Fern Mill is marked as a known heritage asset within the development area. Haynes states that the mill was built in 1856 as an extension to the Ryecroft Mills complex (Haynes 1989, 33) and it is marked on the First Edition Six-Inch Ordnance Survey Map. Ryecroft Mills was owned by Abel and James Smith Buckley and they were locally important landholders and industrialists.

Fern Mill has been assessed as having local significance as a typical example of a mid-nineteenth century cotton mill, owned by locally important individuals. The proposed development requires the demolition of the structure and erection of a new factory building on its footprint. The impact upon its significance is therefore high.

In terms of setting, however, Fern Mill is largely sheltered from the road by development in its vicinity. It is therefore unlikely that its demolition will an impact on the general industrial character of the area, since at present it is difficult to see and its chimney stack has already been reduced in height. The fact that a new industrial/factory site will be erected in its place means that the industrial nature of the local area will be retained, albeit in a more modern form.

1 INTRODUCTION

1.1 Project Background

1.1.1 A planning application (No: 10/01049/FUL) for the demolition of Fern Mill, Ashton-Under-Lyne and its replacement with a new-build industrial unit has been approved by Tameside Metropolitan Borough Council (TMBC) subject to the following negative planning condition:

'No demolition or development shall take place until the applicant or their agents or their successors in title have secured the implementation of a programme of archaeological work to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by the Local Planning Authority.'

1.1.2 The Greater Manchester Archaeology Unit (GMAU) have requested the following phased programme of works:

1. A desk-based assessment
2. A historic building assessment and survey (English Heritage Level 3, (English Heritage 2006))
3. Where merited by the desk-based assessment and/or historic building survey, further phases of fieldwork (evaluation, excavation, watching brief).

1.1.3 A detailed WSI was prepared by Archaeological Research Services (ARS ltd) and approved by GMAU (see Appendix V).

1.1.4 The historic building survey and desk-based assessment have been carried out in accordance with the approved WSI and a consultation response by Greater Manchester Archaeology Unit on the 14th January 2011 (see Appendix VI).

1.2 Location and Land-use

1.2.1 Fern Mill is located to the south-west of Ashton-Under-Lyne (Figure 1), approximately 600m north of the Rive Tame and 650m north of the Ashton canal (NGR SJ 92595 98282). This waterway, constructed in 1792, links Ashton-Under-Lyne to Manchester and was an important route for the transportation of coal and other commodities (www.penninewaterways.co.uk/ashton). Historic Landscape Character Records of the area around Fern Mill describe it as 'industrial' (HER No: HGM40753).

1.2.2 The solid geology of the study site consists of a bedrock of Pennine Middle Coal Measures Formation (mudstone, siltstone and sandstone) with Devensian glacio-fluvial superficial deposits (bgs.ac.uk/opengeoscience). The soils are classified as slow permeable, seasonably wet acid loams and clays (landis.org.uk/soilscapes)...The topography of the site is relatively level with a rise of approx. 1m from east to west.

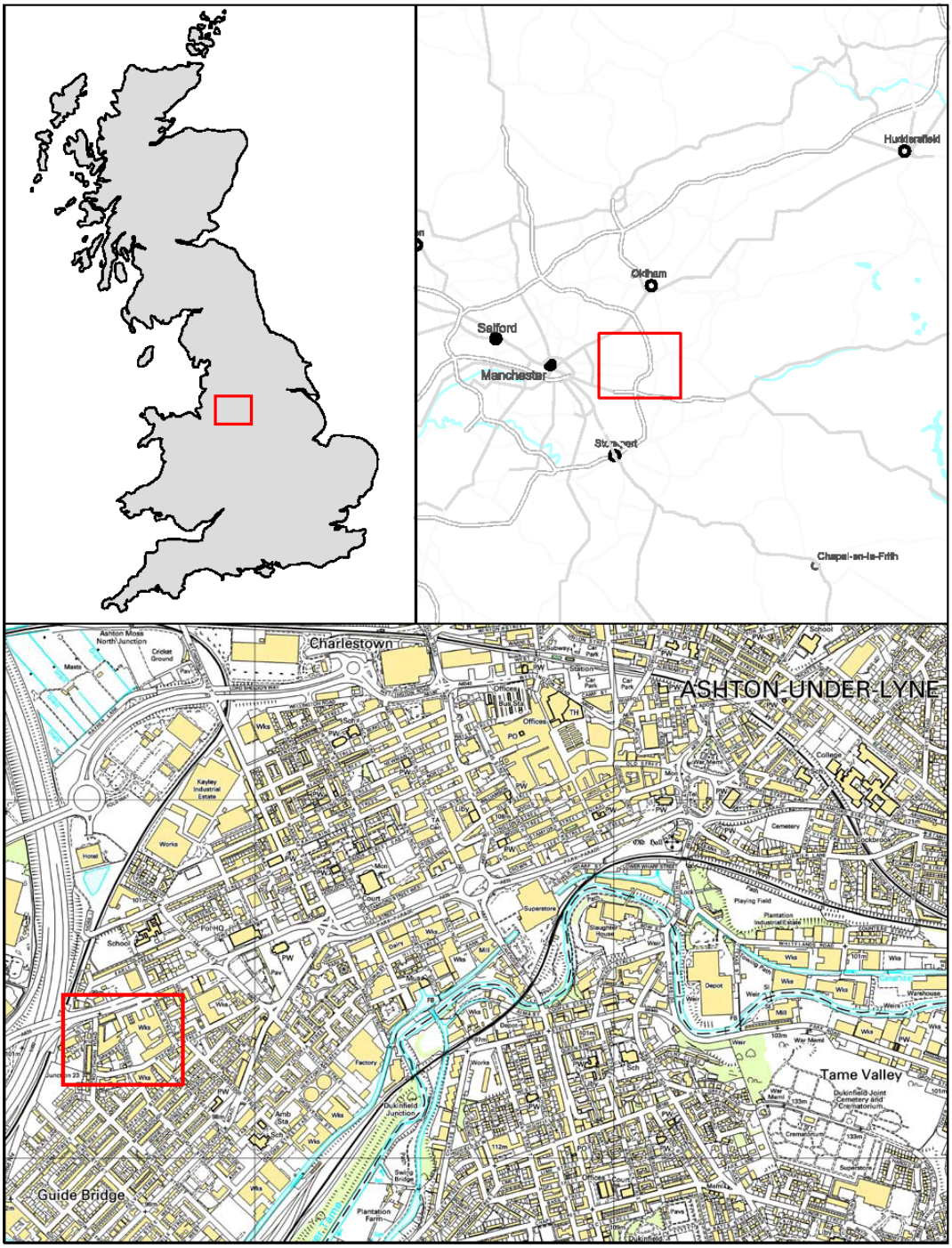


Figure 1. General site location.

(Ordnance Survey data Copyright OS, reproduced by permission, Licence No. 100045420)

1.3 Study Area

1.3.1 The study area consists of the area of impact of the proposed development, namely Fern Mill (see Figure 2). Haynes states that this mill was built in 1856 as an extension to Ryecroft Mills (Haynes 1987, 33).

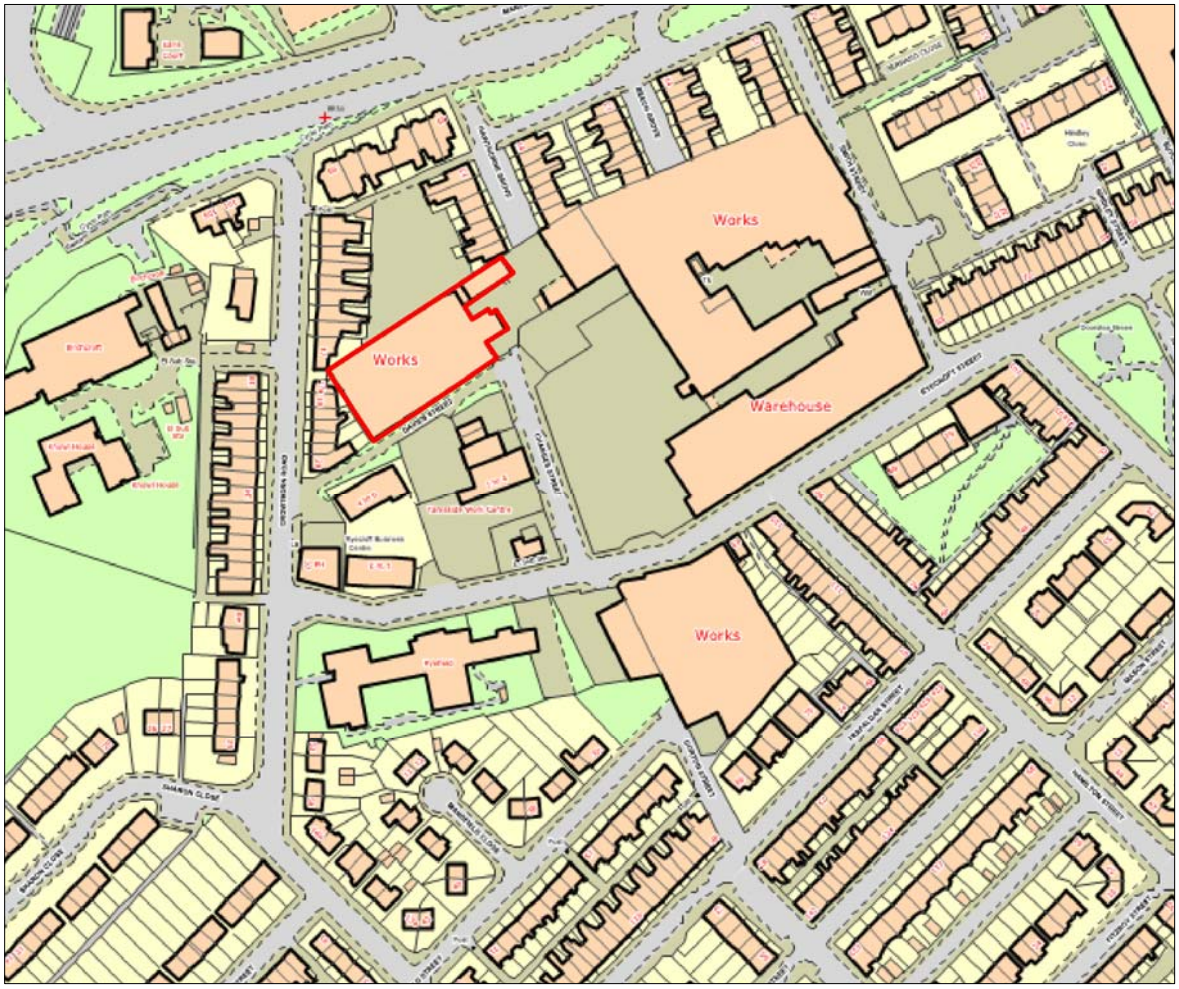


Figure 2. Plan of the site showing the extent of the development area outlined in red

(Ordnance Survey data Copyright OS, reproduced by permission, Licence No. 100045420)

2 METHODOLOGY

2.1 Aims and objectives

2.1.1 The purpose of the full programme of archaeological work was to 'record and advance the understanding of the significance of the heritage asset for archival and research purposes' (GMAU Consultation Response, Appendix IV).

2.1.2 The desk-based assessment aimed to assess the potential for any buried archaeological deposits at the site, as well as provide a documentary and cartographic analysis of the function, history and development of Fern Mill, within the context of the industrial archaeology of Greater Manchester. This was to be achieved through research in relevant archives, as well as the Greater Manchester Historic Environment Record (HER) and the National Monuments Record (NMR).

2.1.3 The building recording aimed to provide an understanding of the form, function and phasing of the surviving building and to identify all fixtures and fittings

relevant to its original and subsequent uses. This was to be achieved through a building investigation, complemented by a drawn, written and photographic record.

2.2 Scheme of Work

2.2.1 A detailed Written Scheme of Investigation (WSI) was prepared by ARS Ltd (see Appendix III).

2.2.2 Documentary research was undertaken in order to put the site into its historic context and to establish the function, dates and sequence of development of the building and its environs. Archival research included the consultation of relevant primary and secondary sources pertinent to the study area located at the Greater Manchester HER, held at GMAU, the NMR, held at Swindon and the Tameside Local Studies Library and Archives Centre. The results are discussed in the relevant sections of this report.

2.2.3 *Historic Environment Record (HER)* the HER was consulted in order to obtain information on the location of all designated heritage assets within 500m of the development area, including findspots, monuments and listed buildings (Figure 3). A list of these sites can be found in Appendix I. Short reports on previous archaeological investigations within or close to the study area were also consulted in order to help understand the context of the building and to assess the level of preservation and potential for archaeological remains to survive within the study area. Aerial photographs of the building, held by GMAU, were also consulted.

2.2.4 *National Monuments Record (NMR)* the NMR located at Swindon was consulted in order obtain information on designated historical sites within 500m of the development area (Figure 4). A list of these sites can be found in Appendix I.

2.2.5 *Archival Sources* the Tameside Local Studies Library and Archives Centre was consulted in order to study historic documents specific to Fern Mill and the Ryecroft Mill complex of which it forms a part. Historic maps, local history publications, Trade Directories and Poor Rate Books were consulted in order to establish the significance, use and development of the study site.

2.2.6 The following web sources, which provided information relevant to the study area, were also consulted:

- Magic Maps: www.magic.gov.uk
- Archaeological Data Service: www.ads.ahds.ac.uk
- British Geological Survey: www.bgs.ac.uk/geoindex/index
- Ashton-Under Lyne: www.ashton-under-lyne.com
- Pennine Waterways: www.penninewaterways.co.uk/ashton
- Tameside Photographic Archive: www.tameside.gov.uk/archives/imagearchive

2.2.7 The archaeological building survey was carried out by Dr Gillian Eadie, Karl Taylor and Angela Walker on 21st – 24th March 2011. This consisted of the following:

- A written record of the buildings was carried out by annotating plans and elevations and by completing ARS Ltd pro-forma building recording sheets. Descriptions and terms use widely accepted conventions...

- A metric survey was undertaken, initially based on architects plans and elevations supplied by the client. These were annotated to include archaeological sequences and architectural features. The plans show the form and location of features such as blocked windows and doors, along with evidence for fixtures of significance, such as former machinery and power transmission systems. The drawn survey comprised measured floor plans, elevations and one section at 1:100 scale.

- A detailed photographic survey was undertaken that included external photographs of the building's wider aspect, as well as general views of the appearance of the building and its elevations. The overall appearance of internal rooms and circulation areas were photographed, as well as detailed views of significant architectural and functional features. All detailed photographs contained a graduated scale. The photographic archive produced consists of 35mm monochrome film photography, supplemented with 35mm full frame sensor (36x24mm) digital SLR colour photography at a minimum of 12 megapixels. Medium format photography of external elevations was not deemed appropriate as the elevations were generally obscured, either by nearby buildings, or greenery. A photographic register was compiled during fieldwork detailing the location and direction of each photograph.

3 POLICY AND GUIDANCE

3.1 National

3.1.1 This desk-based assessment has been carried out in accordance with government guidance on the historic environment and planning (PPS5) (DCLG 2010).

PPS5 policy HE 6.1 states:

'Where an application site includes, or it considered to have the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation'

PPS5 policy HE12.3 states:

'Where the loss of the whole or material part of a heritage asset's significance is justified, local planning authorities should require the develop to record and advance the understanding of the significance of the heritage asset before it is lost, using planning conditions or obligations as appropriate'

PPS5 Practice Guide states:

'Desk based assessment is an assessment only of existing information, such as that contained in the main national and local records; topographic, cartographic and other historic sources; site specific information e.g. existing soil engineers reports; geophysical and geotechnical surveys and existing and proposed site plans…the aim is to assemble the available information about the architectural, historical, artistic and/or archaeological interest of the site and to assess what, if any, further expert investigation and on-site evaluation will be needed.'

3.2 Local

3.2.1 In this instance the following local legislation is also relevant. The Tameside Unitary Development Plan (adopted 2004)

Policy Part 2 Unit C10 states that:

'Where development is proposed in other areas of known or suspected archaeological importance, the Council will ensure that:

- *provision is made for the prior investigation and evaluation of the site*
- *facilities are made available for suitable inspection during site preparation, and*
- *sites and monuments are not needlessly damaged or destroyed, and unavoidable damage is mitigated, and*
- *preservation of the archaeological evidence in situ is the preferred solution, or if this is not justified, adequate provision is made for excavation and recording before and during development.*

Wherever practical, measures should be taken to facilitate the conservation, accessibility and interpretation of archaeological remains, in light of the educational, recreational, and tourism potential which they may have.'

3.2.2 All aspects of this Desk Based Assessment and Building Recording follow government guidance on archaeology and planning (PPS 5), 'Standard and Guidance for Archaeological Building Recording' published by the Institute for Archaeologists (IfA 2008), 'Standard and Guidance for Desk Based Assessments' (IfA 2008), 'Recording Historic Buildings' published by the Royal Commission on the Historical Monuments of England (RCHME 1996) and 'Understanding Historic Buildings; A Guide to Good Recording Practice' published by English Heritage (English Heritage 2006).

4 BASELINE DATA

4.1 Known Heritage Assets within the Development Area

4.1.1 The following assessment results are based on the Greater Manchester HER, the NMR data and on the primary and secondary documents noted in section 2. A full descriptive list of the sites identified by this assessment is given in Appendix I.

4.1.2 *Designated Heritage Assets* no designated heritage assets will be directly affected by the proposed development (see Figures 3 and 4).

4.1.3 *Non-designated Heritage Assets* Fern Mill is marked on the Greater Manchester HER (HER No: 3339.1.0) and it will be demolished as part of the proposed development (see Figure 3). It is for this reason that the current programme of archaeological work is being completed. Fern Mill was recorded in the initial stages of the Greater Manchester Textile Mill Survey (Williams and Farnie 1985), but it was not selected for subsequent detailed survey and recording and was not assigned a Listed Building status.

4.2 Known Heritage Assets beyond the Development Area

4.2.1 *Designated Heritage Assets* within 500m of the proposed development there are two designated sites recorded on in the NMR and two Listed Buildings (see Figure 4).

The NMR sites are both related to the partly industrial character of Ashton-Under-Lyne. The Oldham, Ashton and Guide Bridge Railway (NMR No: LINEAR 704), opened in 1861 and closed in 1959, linked these three industrial areas. The Oxford Institute (NMR No: SJ99NW35) was built in 1868 by Hugh Mason as part of his wider Oxford Mills colony which is beyond 500m from the proposed development on the banks of the Ashton canal. The Institute was a space for mill workers, and contained swimming baths, hot and cold baths, a library and a reading room. These sites are approximately 125m and 460m away from the proposed development site respectively.

One of the Listed Buildings recorded is also associated with Oxford Mills. The Twelve Apostles row of brick-built terraced housing (Listed Building No: 358729) was built in 1871, again by Hush Mason, to house his mill managers. These are the largest houses associated with Oxford Mills, have been modernised and are still in use. The second Listed Building is St Peter's Church (Listed Building No: 212664) which was built in 1821-24 by F. Goodwin for the Church Commissioners. These buildings are approx. 405m and 500m away from the proposed development site respectively

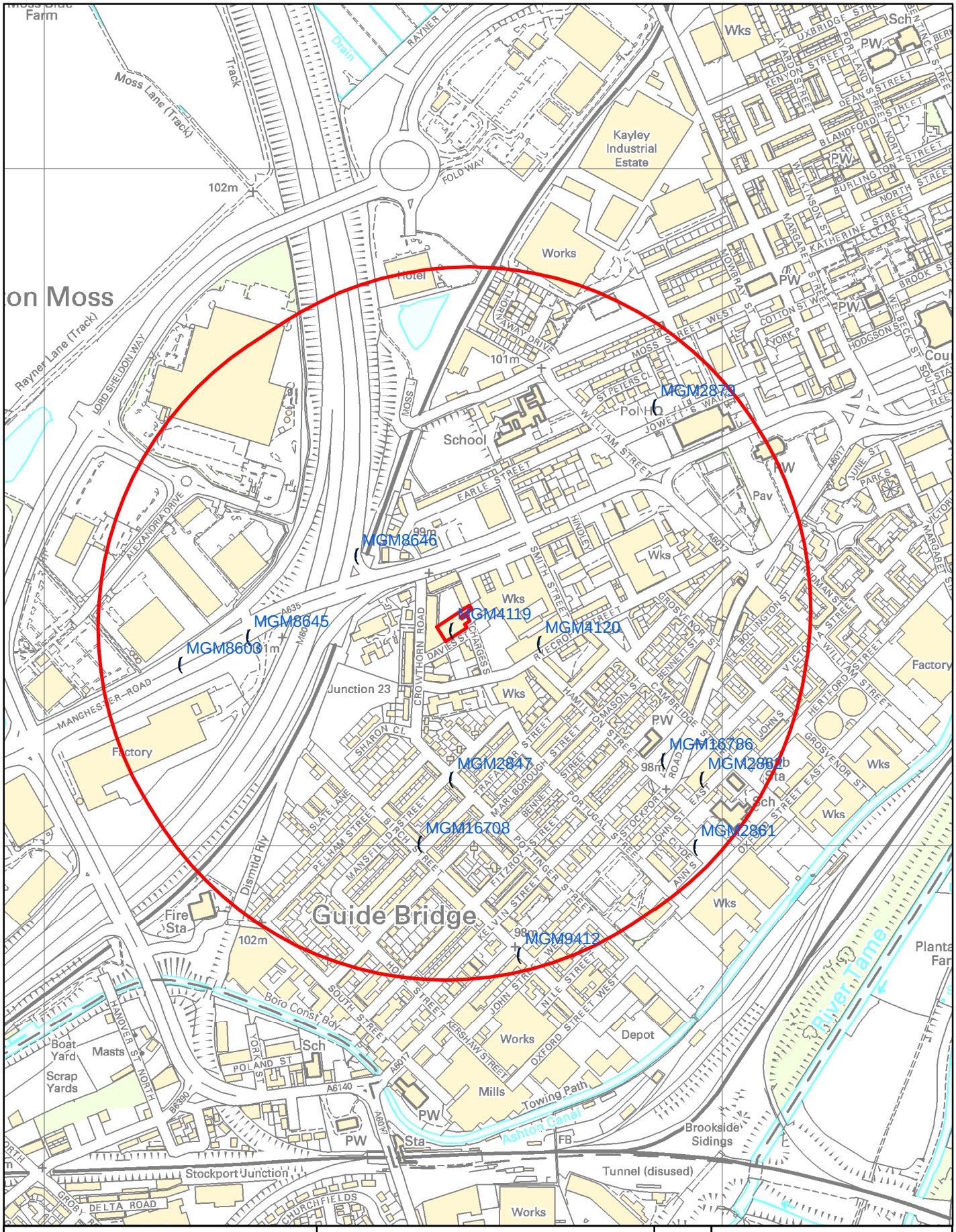
4.2.2 *Non-designated Heritage Assets*
Within 500m of the proposed development area, there are twelve entries in the Greater Manchester HER (see Figure 3). Three of these have been discussed above; The Oxford Institute, The Twelve Apostles and Fern Mill.

The closest HER site to Fern Mill is Ryecroft Mills (HER No: 3340.1.0), located 107m to the southeast. Ryecroft Mills was built in 1834 by Abel and James Smith Buckley who had also built another mill complex in the Ryecroft area in 1927, on Lodge Street (Haynes 1987, 30-33). The Lodge Street Mills, later known as Victoria Mills, have now been demolished, but the Ryecroft Mills are still standing and

occupied by Hills biscuit factory. The HER gives the grid reference for the location of Ryecroft Mills, but the attached site description is erroneously, a description of the Victoria Mills complex. Fern Mill is part of the Ryecroft Mills complex and owned by the Hills Biscuits...

The remaining HER entries in the area consist of; one post-medieval farmstead at Clay Hill (HER No: 8206.1.0), now destroyed; two 18th-century farms (HER No's: 7471.1.0, 13650.1.0), now destroyed; one 18th-century house (HER No: 7470.1.0), now destroyed; one 19th-century bronze statue of the Oxford Mills master, Hugh Mason (HER No: 13694.1.0); one Late-Victorian house, named Heathfield House (HER No: 7431.1.0), now destroyed; one Late-Victorian block of the Bye-Law housing (HER No: 2164.1.0); one 20th-century school (HER No: 2193.1.0). A detailed description of these sites is included in Appendix I.

The archaeology of this area is therefore of post-medieval, industrial and modern date and a large proportion of the HER sites have been demolished. This mainly leaves the industrial sites, such as Oxford Mills and its associated Institute and statue, Ryecroft Mills and Fern Mill. Even the Bye-Law housing can be seen as a product of industry, as it was an attempt by the government to improve the basic living conditions of industrial workers.



Legend

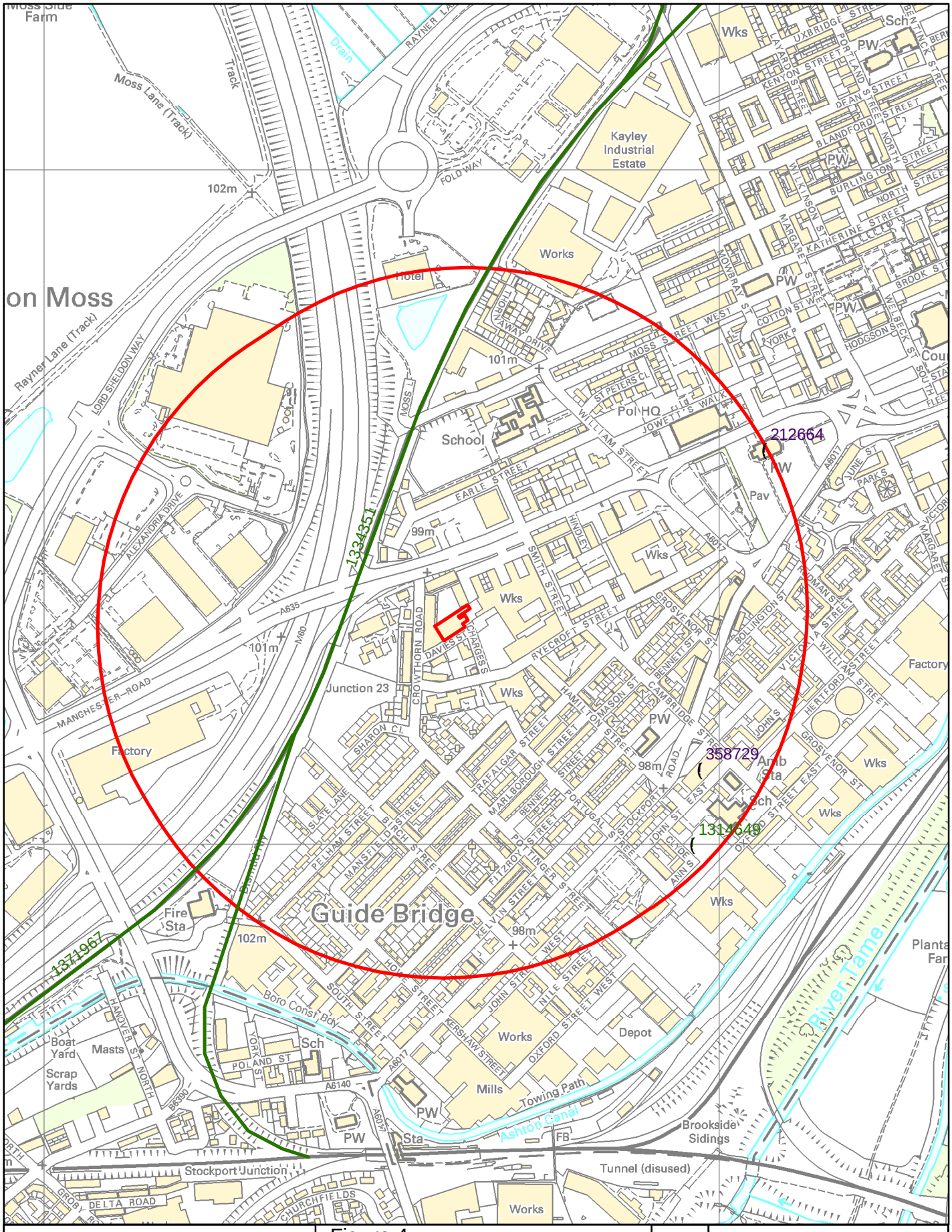
(HER Point

Site boundary

0 75 150 300 Meters

Figure 3.

Map of HER Points Within 500m of the Proposed Development



Legend

- (Listed Building Point
- (NMR Point
- Site boundary

0 75 150 300 Meters

Figure 4.

Map of NMR Points and Listed Buildings Within 500m of the Proposed Development

4.3 Aerial Photograph Analysis

4.3.1 The photographs reproduced below were taken as part of the initial assessment carried out on Fern Mill for the Greater Manchester Mills Survey (Williams and Farnie 1992). Figure 5 shows Fern Mill in the foreground, with its chimney standing to its full height, and a single-storey boiler house and an additional two-storey attached structure present on the east end. The chimney has now been reduced in height to the level of the top of the building and the boiler house and additional structure on the east end have been demolished. The area around the mill is characterised by terraced housing, associated with the industrial nature of this area. There is no evidence to suggest that the area around Fern Mill was formally planned, in a manner similar to the Oxford Mills colony, but it would not be unusual for mill owners to also own a range of housing which would be rented to their workforce (Tarlow 2007, 132).

Figure 5. Aerial Photograph of Fern Mill from the north (© GMAU)

4.3.2 Figure 6 shows Fern Mill from the north-west and highlights its association with Ryecroft Mill in the background. Haynes states that Fern Mill was built as an extension of Ryecroft Mill in 1856 (Haynes 1987, 33)

Figure 6. Aerial Photograph of Fern Mill from the northwest (© GMAU)

4.3.3 Figure 7 is a detailed view of Fern Mill from the southeast, showing clearly the single-storey boiler house with a double pitched roof and the two-storey attached structure on the east wall which have now been demolished. The mill of three storeys with a triple-pitched roof, there are two single-storey extensions running along the north and south walls, each with a north-light roof.

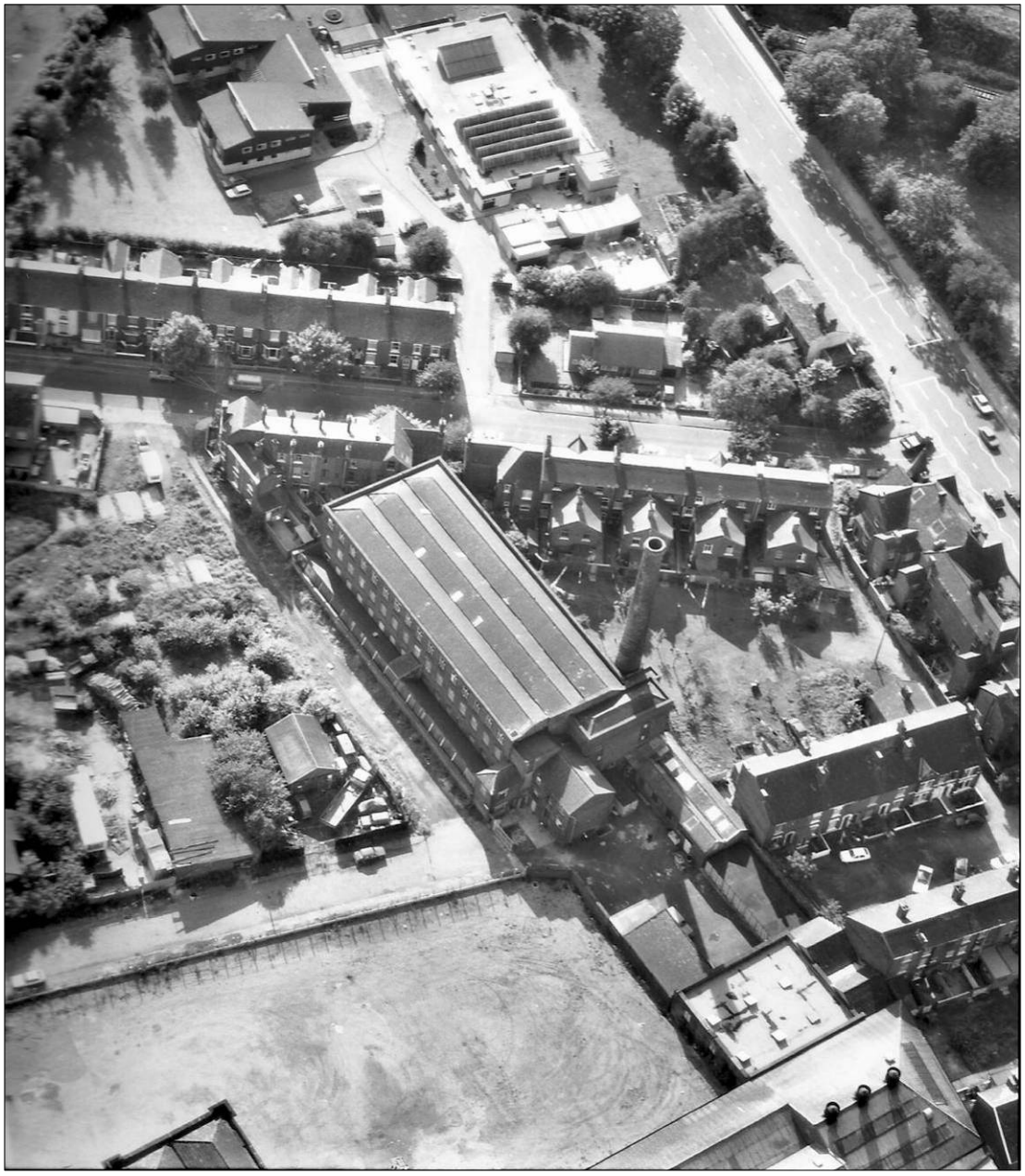


Figure 7. Aerial Photograph of Fern Mill from the southeast (© GMAU)

4.4 Map Regression Analysis

4.4.1 The earliest mapping evidence available for consultation was William Yates map of Lancashire from 1786 (Figure 8). This shows the location of the town of Ashton-under-Lyne with a series of buildings aligned along a cross-roads in the centre of the town. This can be contrasted with John Stockdale's map from 1798 (Figure 9). Here, the Ashton Canal is marked on the map running from Manchester towards Huddersfield and joining with the Peak Forest Canal, running south. Also 'Ashton Mill' has been added to the south-west of the town alongside the canal.

Figure 8. William Yates' map of Lancashire showing Ashton-Under-Lyne 1786 (Harley 1968, 45)

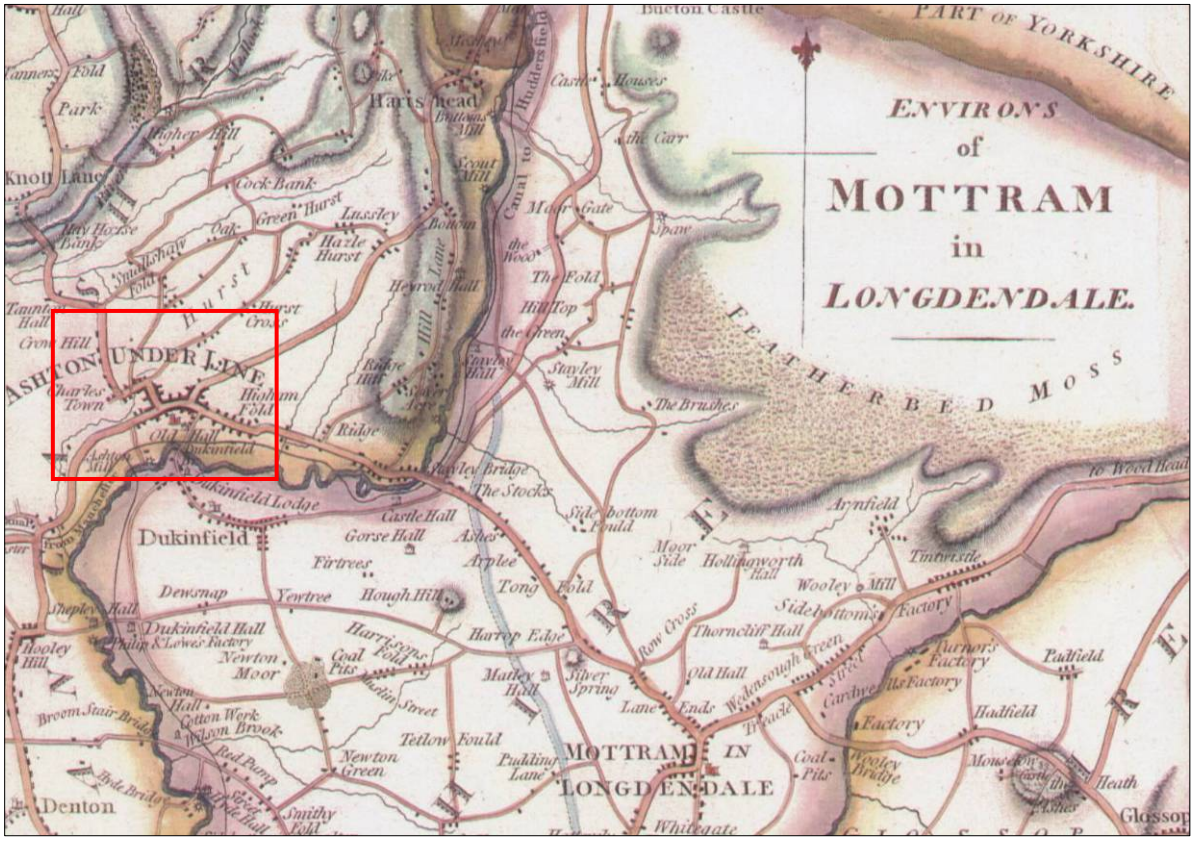


Figure 9. John Stockdale's map of the Environs of Mottram in Longendale 1789 (courtesy of Tameside Local Studies Library)

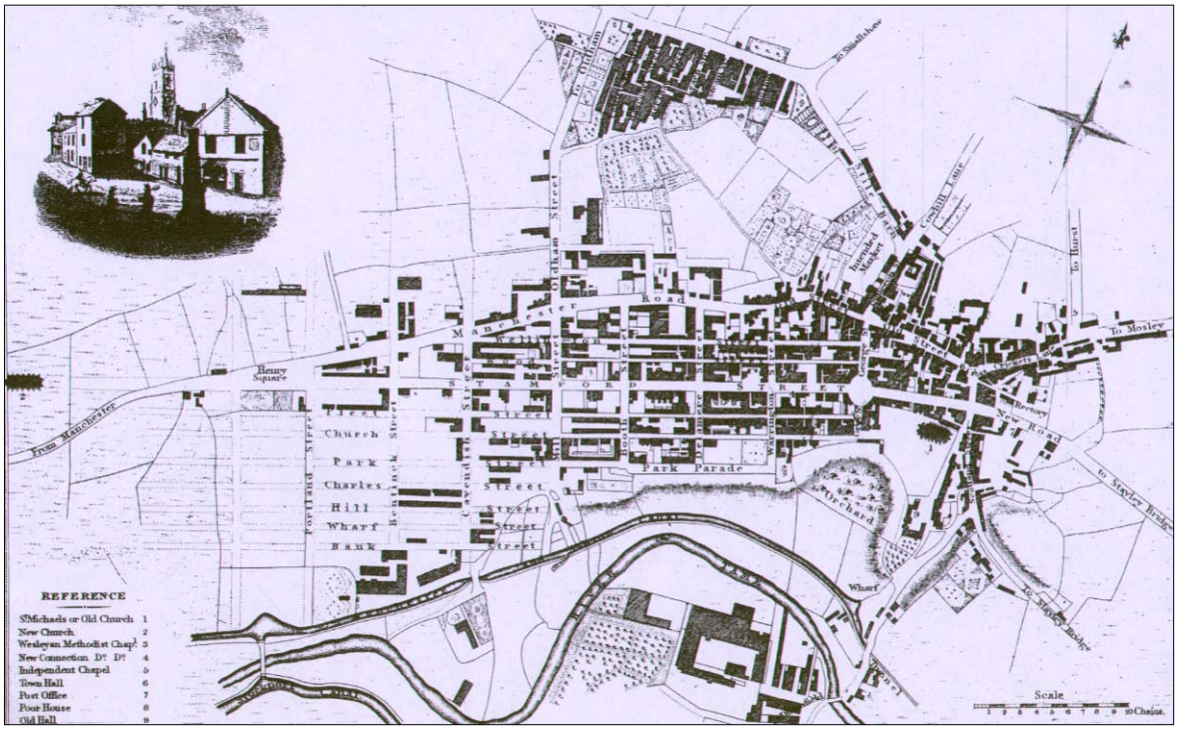


Figure 10. J. Atkinson's map of Ashton-Under-Lyne, surveyed for 'Baines' Lancashire' in 1824 (courtesy of Tameside Local Studies Library)

Figure 11. Mitchell's watercolour view of Ashton-Under-Lyne from Duckinfield in 1852 (courtesy of Tameside Local Studies Library)

4.4.2 Figure 10 shows J. Atkinson's map of Ashton-Under-Lyne from 1824. This shows the growing nature of the gridded street system of the town. The church of St Peter, built in 1821-4, is depicted on the far left of the map labelled as 'New Church'. The map does not extend far enough to the west to show the proposed development area, though it would appear that this area was not heavily built-up in the early 1820s.

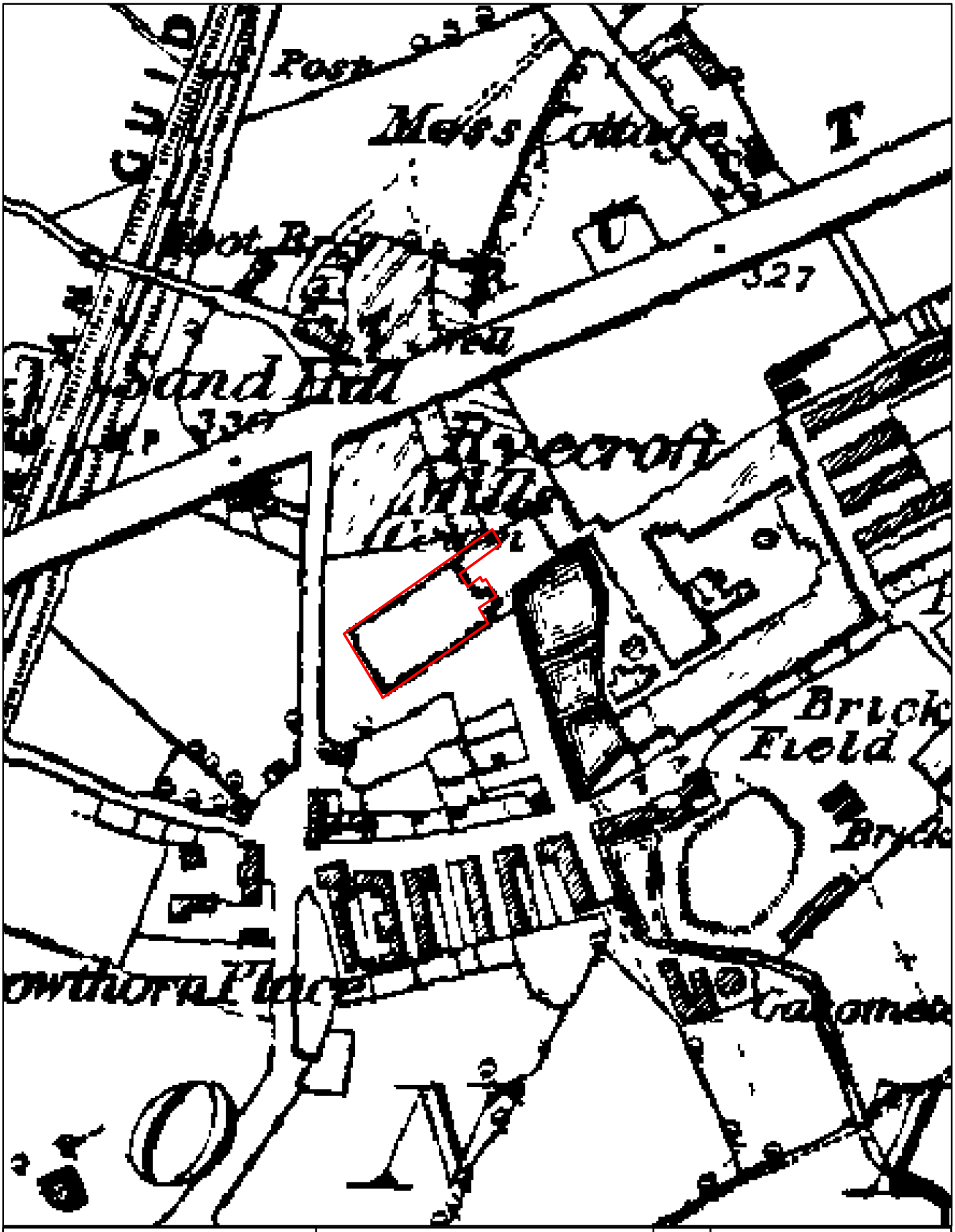
4.4.3 The Greater Manchester Records Office holds a collection of Title Deeds including sketch plans, relating to Abel and James Smith Buckley's 1824 purchase of property in Ryecroft Street (ref. DD72/0084). The deeds were consulted as part of this project, however, they were found to relate to Ryecroft Mills on Lodge Street, later known as Victoria Mills (Haynes 1987, 30), rather than Ryecroft Mills on Smith Street, where Fern Mill was built (Haynes 1987, 33). The area illustrated on the sketch maps did not cover the location of Fern Mill.

4.4.4 Mitchell's view of Ashton-Under-Lyne in 1852 (Figure 11) clearly illustrates the industrial nature of the town. The Ashton Canal is depicted in the foreground with mills built along its bank. Unfortunately, the illustration does not extend far enough to the west to show the location of Fern Mill.

4.4.5 Figures 12-17 show the historical Ordnance Survey Mapping available for the study area. The building known as Fern Mill is depicted on the First Edition Six-Inch map of 1848, with the label 'Ryecroft Mills (Cotton)' close by (Figure 12). This appears to contradict Haynes' statement that it was built as an extension to Ryecroft Mills in 1856 (Haynes 1987, 33), however, the 1848 First Edition map of the Ashton area was actually revised in 1863 without the date being amended (Nevell pers. comm.). This could be responsible for the confusion. Haynes' reference for the 1856 construction date is the Memoir of John Ross Coulthart which was not available for consultation as part of this project. No further evidence for a construction date was uncovered during the documentary research.

4.4.6 It would appear from Figure 12 that Fern Mill did not have a boiler house at this stage of its development. In the surrounding area, there are water reservoirs to the southeast of Fern Mill alongside Davies Street. These appear to be fed from Shaw Brook, a small stream running southeast towards the River Tame. They were most likely associated with Ryecroft Mills, as a good supply of water would be required to run steam engines (Roberts and Stockley 1998, Appendix II, 3). Ryecroft Mills appear to be on the very outskirts of Ashton-Under-Lyne at this date. Aside from mills built alongside the Ashton Canal, there is only limited development to the south and west.

4.4.7 The 1st edition 1:2500 map of 1854 (Figure 13) shows few changes, with Fern Mill still depicted without its boiler house. Again this map apparently pre-dates the construction date of 1856 given by Haynes. The area surrounding the mill has seen increased development with the addition of several blocks of terraced housing in the vicinity of Ryecroft and Oxford Mills. Interestingly one of the streets adjacent to Ryecroft is named 'Buckley Street', perhaps indicating that it was laid out by Abel and James Smith Buckley, to provide housing for their workforce.



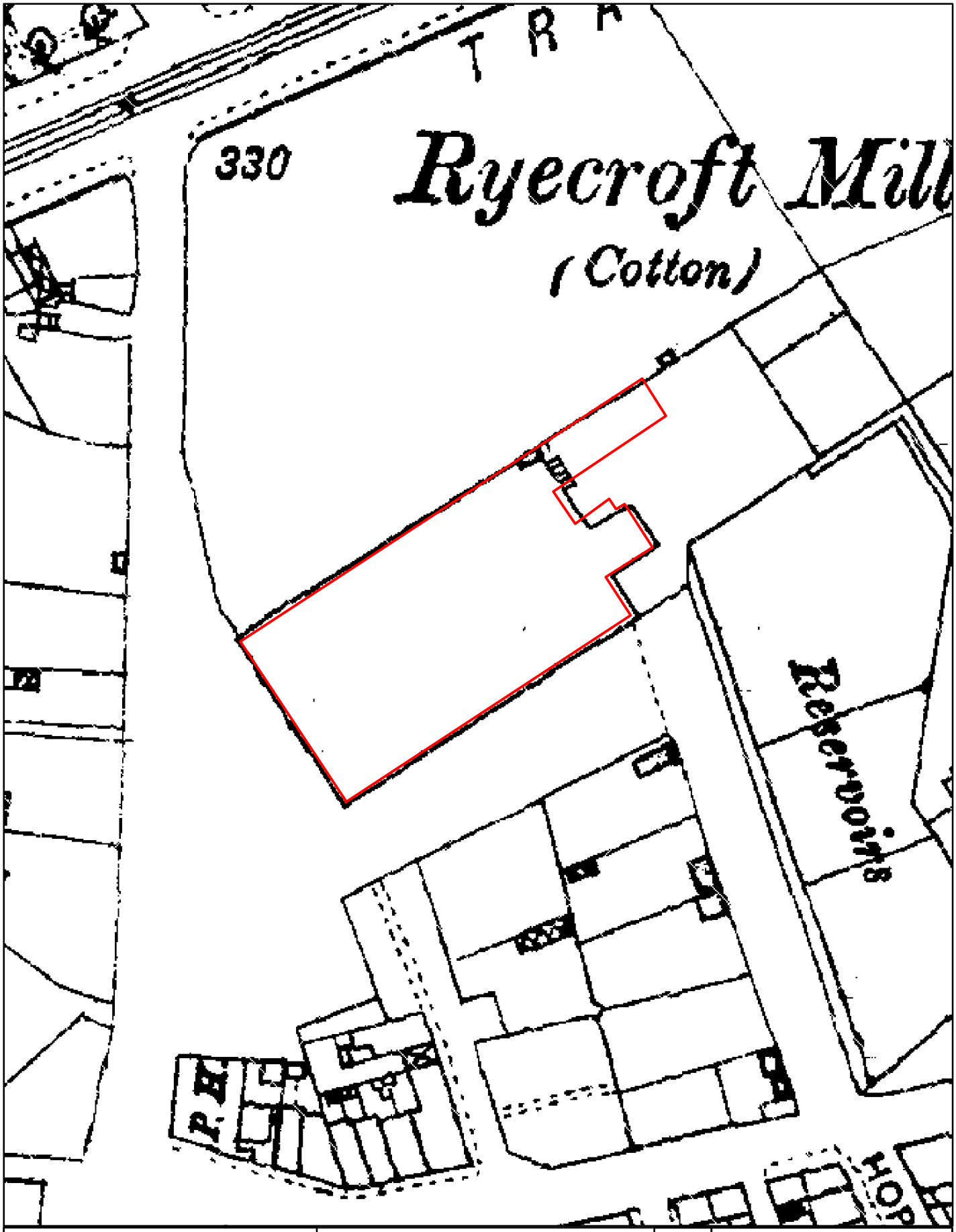
Legend

Site boundary

0 10 20 40 Meters

Figure 12.

1st Edition Six-Inch Ordnance Survey Map of the study area (1848)



Legend

Site boundary

0 5 10 20 Meters

Figure 13.

1st Edition Ordnance Survey Map of the study area (1854)

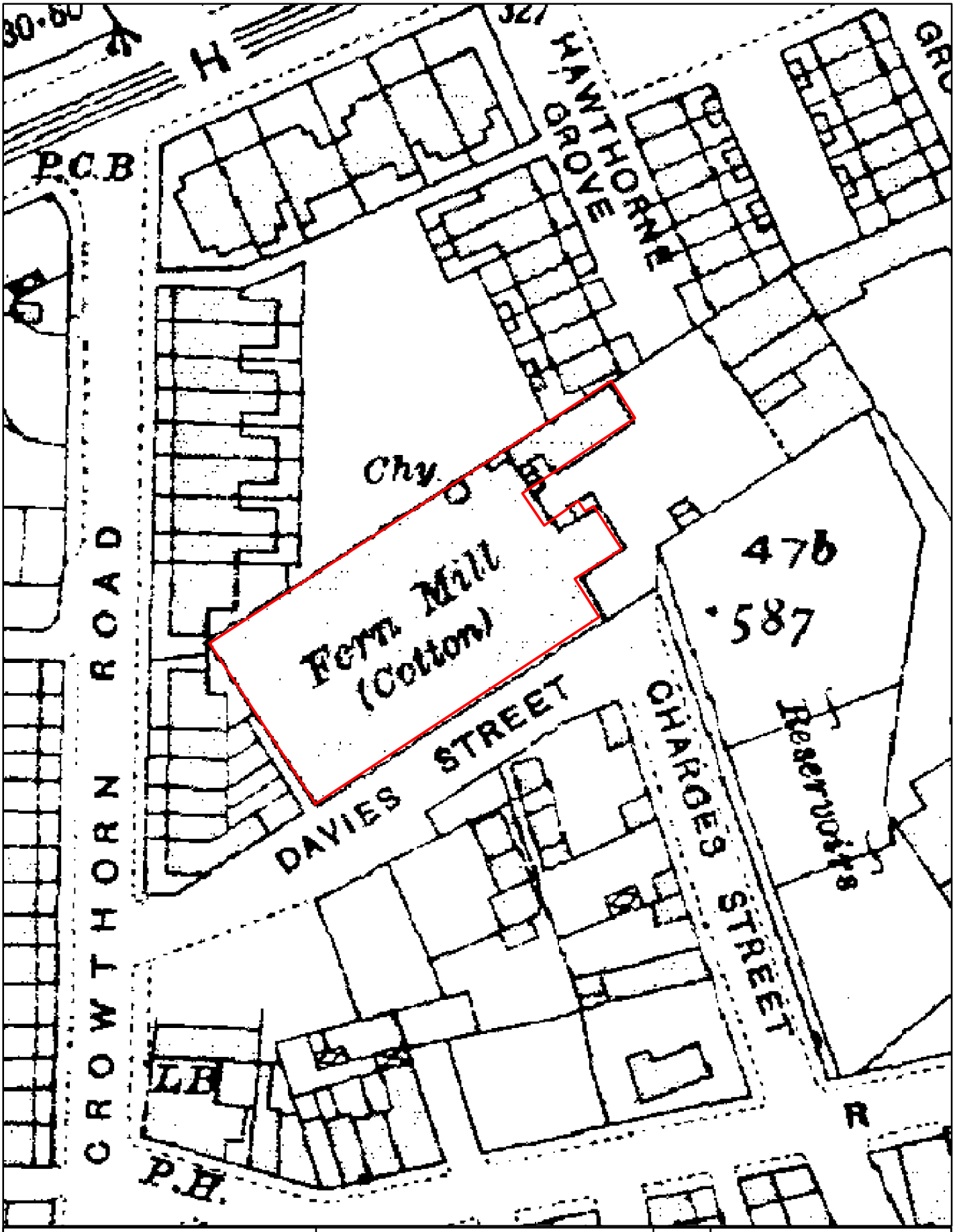
Legend

Site boundary

0 5 10 20 Meters

Figure 14.

1st Revision Ordnance Survey Map of the study area (1893)



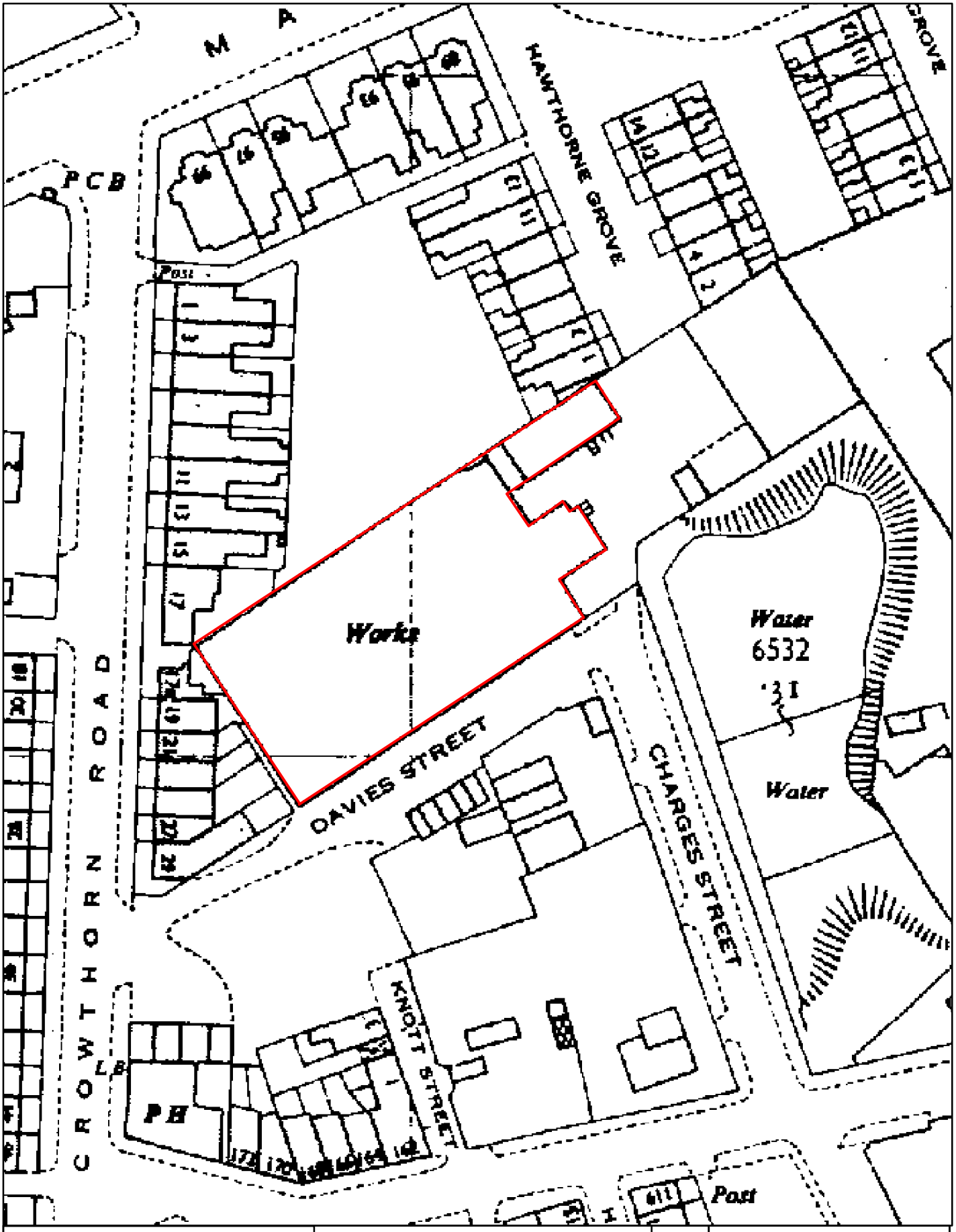
Legend

Site boundary

0 5 10 20 Meters

Figure 15.

2nd Revision Ordnance Survey Map of the study area (1906)



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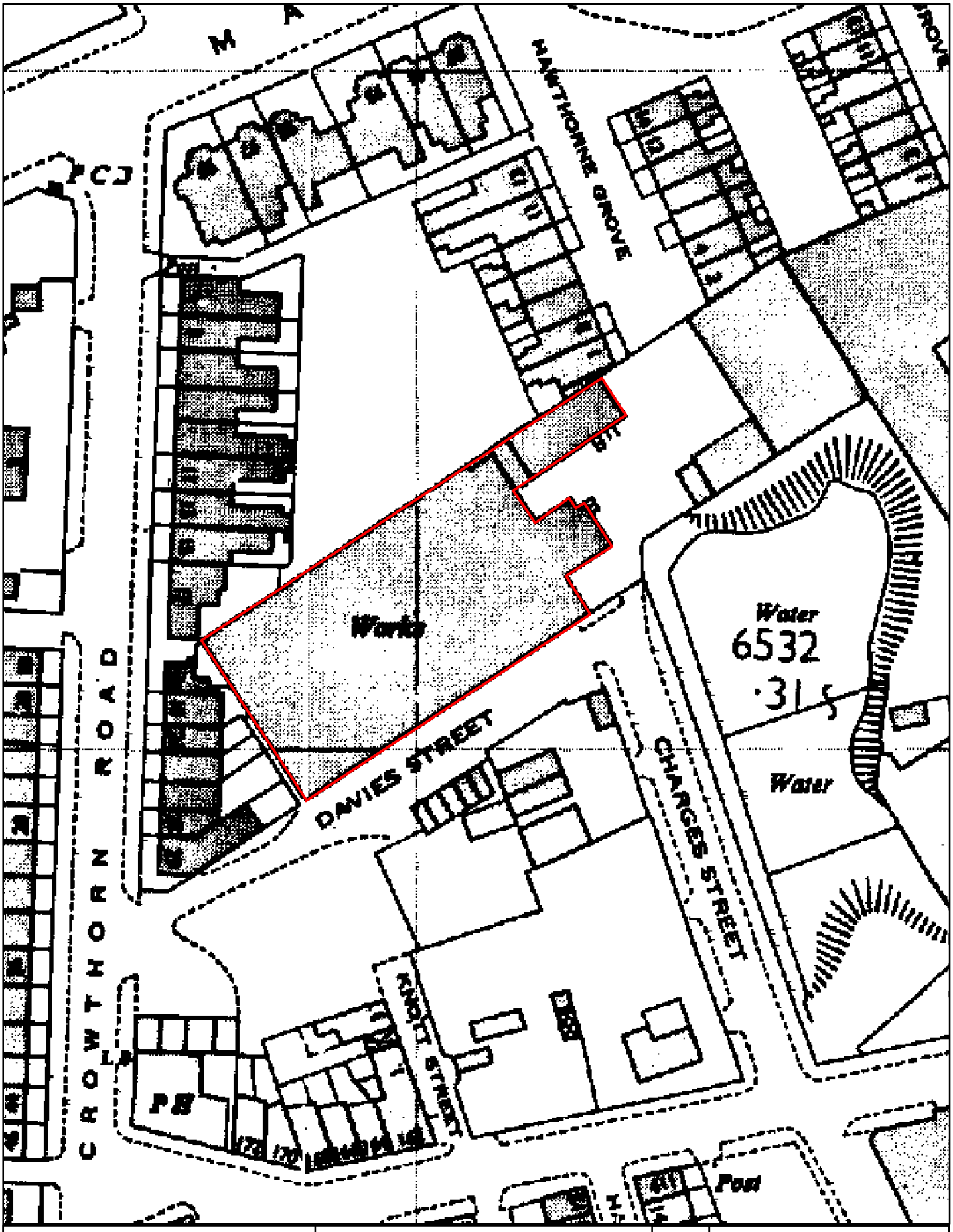
Site boundary

0 5 10 20 Meters

Figure 16.

1st Edition National Grid Ordnance Survey Map of the study area (1943)



Legend

Site boundary

0 5 10 20 Meters

Figure 17.

1st Revision National Grid Ordnance Survey Map of the study area (1949)

4.4.8 The First revision map of 1893 (Figure 14) shows some development at Fern Mill. It would appear that the Ryecroft Mills complex has been divided into three, Fern Mill is now labelled as 'Fern Mill (cotton)' with the other buildings in the complex labelled as 'Smith Street Mills (cake and biscuits)' and 'Ryecroft Mills (cotton)'. Fern Mill is depicted with its boiler house and chimney, though it would appear that at this stage the mill had only one boiler. The boiler house depicted is around half the width of that depicted on modern mapping. The mill is now almost entirely surrounded by terraced housing, with allotments to the west, and Davies Street is labelled for the first time.

4.4.9 The second revision map of 1906 (Figure 15) shows no significant changes.

4.4.10 he first edition National Grid map of 1943 (Figure 16) shows Fern Mill, labelled as 'works', with a larger boiler house sufficient to house two boilers. Its chimney is no longer labelled, though neither are the chimneys on adjacent mills, so this may not be significant. Aside from this, the surrounding street plan appears much the same as it did in 1893, though 'Smith Street Mills' is now also labelled as 'works', whilst Ryecroft Mills is labelled as a 'warehouse'.

4.4.11 The first revision National Grid map of 1949 (Figure 17) is the final map in the available sequence and shows much the same picture as in 1943. Fern Mill is labelled as 'works' and is largely surrounded by terraced housing. The reservoirs observed in the first edition six-inch map of 1848 are still in place, demonstrating their importance to the operation of the mill machinery.

4.5 Other Information

4.5.1 The Poor Law Rate Books were consulted for the years 1855-1857. James Smith Buckley is assessed as the owner of the following property in the Ryecroft area:

- Thirty-six cottages
- One house and shop
- Fifteen houses
- Cotton mill
- Mill gearing and other premises
- Warehousing
- A gas works
- Stable and gig house
- Cart Shed
- Boiler houses
- Lodge and offices
- Two further illegible items of property

This would suggest that much of the housing surrounding the mill was owned by the mill masters and rented to their workers. Also there was no addition of an extra mill building after 1856 and this could be further evidence against an 1856 date for the construction of Fern Mill.

4.5.2 Trade directories for Ashton-Under-Lyne were also consulted:

Directory	Date	Description
Pigot's	1814	• 'cotton spinners' Buckley and Biuns, Do
Pigot's	1816-17	• 'cotton spinners' Buckley and Binns, Duckinfield
Pigot's	1824-25	• 'cotton spinners' Buckley, Abel, Stamfort St.
Pigot's	1829-20	• 'cotton spinners' Buckley, Abel and Co. Oldham Road
Pigot's	1834	• 'cotton spinners and manufacturers by power' Buckley, Abel and Co. Ryecroft
Pigot's	1838	• 'cotton spinners and manufacturers by power' Buckley, Abel and James Smith, Ryecroft
Pigot's	1841	• 'cotton spinners and manufacturers by power' Buckley, Abel and James Smith, Ryecroft • Buckley, James Smith manufacturer, house, Ryecroft
Slater's	1844	• 'cotton spinners and manufacturers by power' Buckley, Abel and James Smith, Ryecroft • Buckley, James Smith manufacturer, house, Ryecroft
Slater's	1848	• 'cotton spinners and manufacturers by power' Buckley, Abel and Co. Ryecroft • 'cotton spinners and manufacturers by power' Buckley, James Smith, Ryecroft Mills and 30 Mosley Street, Manchester
Slater's	1851	• 'cotton spinners and manufacturers' Buckley, Abel and Co. 31 Faulkner Street • 'cotton spinners and manufacturers' Buckley, James Smith. 38 Mosley Street, house, Ryecroft
Slater's	1855	• 'cotton spinners' Buckley, Abel and Co. Ryecroft Mills • 'cotton spinners' Buckley, James Smith. Ryecroft Mills and 79a Mosley Street, Manchester
Worrell's	1871	• 'cotton spinners' Buckley, Abel and Co. Ryecroft Mills • 'cotton spinners and manufacturers' Buckley, James Smith. Ryecroft Mills, Ryecroft residence, Richmond House
Morris and Co.	1874	• 'cotton spinners and manufacturers' Buckley, Abel and Co. Ryecroft Mills • 'cotton manufacturer' Buckley, James Smith. Ryecroft Mill and at Mosley Street, Manchester
Morris and Co.	1878	• 'cotton spinners and manufacturers' Buckley, Abel and Co. Ryecroft Mills • No James Smith Buckley
Slater's	1879	• 'cotton spinners' Buckley, Abel and Co. Ryecroft Mills • No James Smith Buckley
Slater's	1888	• 'cotton spinners' Buckley Abel and Co. Ryecroft Mills • No James Smith Buckley
Slater's	1901	• 'cotton spinners' Buckley Abel and Co. Ryecroft Mills • 'cotton spinners' Ryecroft Mill and Co. Ltd Ryecroft Street (50-60 weft, 50000 spindles) (WM Hallam sec.) • 'cotton doublers' Barker and Ashworth. Fern Mill, Ashton (20s to 120s, 16000 spindles)
Slater's	1905	• 'cotton spinners' Buckley Abel and Co. Ryecroft Mills • 'cotton spinners' Ryecroft Mill and Co. Ltd Ryecroft Street (50-60 weft, 50000 spindles) (WM Hallam sec.) • 'cotton doublers' Barker and Ashworth. Fern Mill, Ashton (20s to 120s, 16000 spindles)
Kelly's	1930	• No Barker and Ashworth
Kelly's	1932	• No Barker and Ashworth
Barret's	1957-58	• 'cotton doublers' Barker and Ashworth (1920) Ltd. Fern Mill
Barret's	1959	• 'cotton doublers' Barker and Ashworth (1920) Ltd. Fern Mill
Barret's	1961	• No Barker and Ashworth
Barret's	1964	• 'cotton doublers' Barker and Ashworth (1920) Ltd. Fern Mill
Barret's	1972-73	• No cotton doublers.

4.5.3 The pattern of ownership represented in the trade directories is confused by the fact that Fern Mill was not known as Fern Mill until quite late in the sequence, and

also because there were two mill complexes known as Ryecroft Mills. There were Ryecroft Mills on Lodge Street, as well as Smith Street, and both were once owned by the partnership 'Abel and James Smith Buckley' (Haynes 1987, 30-33). Haynes states that this partnership was dissolved in the 1840s when Abel Buckley took hold of the older mills and James Smith Buckley took over the newer buildings (Haynes 1987, 33). This is borne out by the information in the directories, where in 1848 we find both 'Abel Buckley and Co.' and 'James Smith Buckley' as owners of Ryecroft Mills. Haynes associates Fern Mill with the cotton spinner James Smith Buckley, and it would appear from the directories that he held the mill until at least 1874. After this it is not mentioned in the directories again until 1901, when it is in the possession of the cotton doublers Barker and Ashworth and containing 16,000 spindles. Once rebranded as Barker and Ashworth (1920) Ltd, they held the mill until at least 1964. Haynes states that, based at Fern Mill, they were the last cotton doubling firm in Ashton (Haynes 1987, 7) and indeed no cotton doublers are listed in the available directories after 1964.

5 BRIEF PERIOD SYNTHESIS FOR THE DEVELOPMENT AREA AND 500M HALO

5.1 *Prehistoric, Romano-British and Medieval Periods*
The background research highlights that there are no prehistoric, Romano-British or medieval sites recorded within 500m of the development area.

5.2 *Post-medieval, Industrial and Modern Periods*
One post-medieval farmstead was recorded in the Greater Manchester HER (HER No: 8206.1.0), though this is described as having been 'built over in 1852'.

Ashton-Under-Lyne became an industrial centre during the late-18th and early-19th centuries (Haynes 1987, 1), and it is largely this period which is represented in the HER and NMR data consulted. Of a total of thirteen sites recorded, seven are directly related to industrial processes and in all seven cases the industry concerned is cotton.

Southeast Lancashire offered favourable conditions for the establishment and growth of the factory-based cotton industry for numerous reasons (Williams and Farnie 1992, 3). Its landscape of undulating lowlands, containing the River Mersey and its tributaries, offered excellent opportunities for the exploitation of water-power in the early years of the industry. Whilst in later years, when steam power was more popular, local coal reserves were exploited to run the many engine houses within cotton mills across the region (Williams and Farnie 1992, 3). Aspin goes so far as to state that the 'damp Pennine air' even made the cotton fibres easier to work (Aspin 2004, 4). The development of the port of Liverpool and the Bridgewater Canal that linked it to Manchester, in the 18th century, provided easy access to international trading links and facilitated the importation of the all-important raw cotton from America, and later from Egypt and India (Williams and Farnie 1992, 4). These favourable conditions saw Lancashire become the centre of the English cotton industry in the 18th century, with the majority of its population involved in cotton production (Aspin 2004, 3).

Ashton-Under-Lyne was already involved in domestic cotton production when the industrial revolution gathered pace in the second half of the 18th century. However, key developments in mill machinery, particularly Arkwright's 'water-frame' and rotary motion carding machine and Crompton's 'spinning mule', soon put domestic spinners out of business forcing cotton production into large and specialised mill buildings (Haynes 1987, 1-2). The first factory-type mills to be built in Ashton-Under-Lyne relied either on horse-power or water-power and were generally small carding factories. Those requiring water were built alongside the River Tame and its suitable tributaries, but the Tame was not ideal for supplying water-power. It flowed relatively slowly through Ashton, with the best sites for harnessing water power being located on the Cheshire side of the River, rather than in the town (Haynes 1987, 1). The improvements made in steam engine technology in the 1790s were, therefore, very welcome in Ashton and the introduction of steam-powered mill machinery in c.1800 saw the town enter 'into 60 years of rapid expansion which saw the population of the town quadruple and the number of mills increase by two and half times' (Nevell 1993, 35). Ashton witnessed two great mill building booms in 1823-25 and 1832-37 (Haynes 1987, 3). The erection of both Ryecroft Mill complexes fall within these boom periods, though it would appear that Fern Mill belongs to the later part of the 60 years of expansion.

The outbreak of the American Civil War in 1861 would have lasting effects on the English cotton industry, as production relied upon the importation of American raw cotton. 'The cotton famine', as it came to be known, lasted until 1865 and Ashton was slower to recover from it than most neighbouring towns. Haynes puts this down to population decline, as people left the town in search of other work, again highlighting the town's reliance upon the cotton industry. New mills built after 1865 were almost exclusively run by joint-stock companies, rather than the entrepreneurs of earlier times (Haynes 1987, 5), and the fate of the older mills was varied depending on several factors such as size, specialisation and ownership. Increasing workers' rights saw profits decrease, as mill masters were forced to make better provision for workers' housing, shorter working days and better educational opportunities. It is this movement which would have led to the development of the 'Bye-Law' housing noted in the Greater Manchester HER (HER No: 2164.1.0) (Aspin 2004, 29-30). In Ashton-Under-Lyne, as in the rest of southeast Lancashire, there was an increasing tendency towards specialisation in cotton spinning using the mule-frame (Haynes 1987, 5). The next sixty years were relatively stable, even though the number of active mills declined. This was due to increased mechanisation of the process, which saw fewer firms able to produce the same amounts of finely spun cotton (Nevell 1993, 35).

During the First World War, Britain's international trading routes were disrupted prompting the development of rival cotton exportation in Latin American countries, Egypt and South Africa (Haynes 1987, 6). This loss of overseas markets would prove to be permanent and the cotton industry in Ashton contracted dramatically after 1930 (Nevell, 1987, 35). The Second World War did not help matters as many mills had to cease textile production in favour of products to help the war effort. Whilst there was an increase in production following the war, peaking in 1951, the cotton industry in Ashton-Under-Lyne was never to recover and the last of the mills ceased cotton production in the 1970s (Haynes 1987, 7).

6 BUILDING RECORDING

6.1 Introduction

6.1.1 Fern Mill is a three-storey mill of 16 bays, with integrated offices and engine room. There is an external chimney which is now reduced to second-floor level and partially enclosed by one of two extensions running along the north and south walls of the structure. These extensions are provided with north-light style roofs. The engine room is integrated with the mill and located in the northeast corner of the structure. There was once a single-storey boiler house and an additional integrated two-storey structure attached to the east end of the mill, however these have been demolished in recent times. Survey drawings consisting of plans, elevations and one section are included as Appendix II. Phased plans are included as Appendix III.

6.2 The Exterior

6.2.1 *South Elevation (see also Drawing 7)*

The site is currently approached from the south via the cobbled Charges Street (see Figure 18). This gives access to Davies Street running east/west, along which Fern Mill is oriented. The mill is brick-built using Scotch Bond. An integrated office block sits on the southeast corner of the building containing a boarded-up casement window with sandstone sill and lintel at first floor level (see Figure 19). This is composed of one large pane below three smaller panes, the central one opening outwards. A hatch for delivering post has been inserted into the southwest corner of this structure.

There was once a further two-storey structure behind the office block and projecting further to the east. A photograph of Fern Mill from the 1960s shows this to have been fitted with taking-in doors and cranes on the ground and first floors, flanked by 'two-over-two' fixed casement windows on either side at each level (see Figure 20).

The main mill building is of 16 bays, each marked by a fixed 'two-over-three', wooden casement window with projecting sandstone sill and lintel, on the first and second floor (see Figure 21). The windows on the first floor are now boarded-up and those on the second floor are in various states of repair. The ground floor elevation is composed of solid brick walling using English garden wall bond, punctuated by small squares of cast iron, marking the location of internal brackets (see Figure 22). The change in the type of bond used indicates that this may be a different phase from the main mill building. The brackets support a north-light style roof over an aisle running along the south side of the building, this is likely to be an extension. The walling has also been heightened using modern bricks, probably recently...

Figure 18. Site from the south showing cobbled access road (Charges Street).

Figure 19. Site from the southeast.

Figure 20. Photograph dated to the 1960s showing the two-story attached building in-situ (© Tameside MBC).

Figure 21. South elevation.

Figure 22. Detailed view of the end of cast-iron brackets running through the South wall.

6.2.2 *West Elevation*

The west elevation of the main mill building is largely inaccessible, but is featureless and composed of brick walling using Scotch Bond (see Figure 23).

The west elevation of the southern extension is also featureless, but is composed of brick walling using English garden wall bond (see Figure 24). Figure 24 also shows the location of a further mill building within the Ryecroft complex in the background.

The west elevation of the small office building shows evidence of brick-infilling, possibly marking the location of an original window at first floor level (see Figure 25).

Figure 23. West elevation.

Figure 24. Site from the southwest, also showing Ryecroft Mill in the background.

Figure 25. West elevation of the integrated office block.

6.2.3 *North Elevation (see also Drawing 7)*

The north elevation is largely obscured by foliage. At the eastern end, the engine room contains a tall window with a sandstone lintel and segmental head comprising a double row of bricks laid soldier. The window is composed of 24 rectangular panes, arranged 'six-over-six', and a semi-circular head (see Figure 26).

There is a projection on this side of the wall, carrying the toilets accessed from the main mill building on first and second floors (see Figure 26). The bricks of this projection are clearly of a different character to those found elsewhere and suggest that it is a secondary feature. Ventilation holes composed of a square opening laid with four semi-circular half-bricks, give light and air to the toilets and the passage leading to them.

To the west of the toilet block, the circular chimney stack rises to its truncated height at second-floor level (see Figure 26). At ground-floor level it is contained with an extension running along the north wall. The extension has a north-light

roof, the same as that on the south wall, with boarded-up ground floor windows behind (see Figure 27).

The north wall of the main mill building is similar to the south wall, with its series of 16 bays marked by 'two-over-three' casement windows. The first-floor windows have not been boarded-up on this side (see Figure 28).

Figure 26. Eastern end of the North Elevation.

Figure 27. View along the north elevation, showing the top of the north-light roof of the single-storey extension.

Figure 28. North elevation of the main mill.

6.2.4 *East Elevation (see also Drawing 6)*

The eastern end of the mill contains the integrated two-storey office block, staircase and engine room (see Figure 29). The office block in the southeast corner of the building has a single window on each of the ground and first floors. This is a wooden casement window composed of a large central pane with semi-circular head with three smaller square-headed panes above, the central pane opening outwards. Each window has a sandstone sill and lintel. The window on the first floor has been partially boarded-up, whilst that on the ground floor has had a metal grill placed in front (see Figure 30).

There are two side-by-side entrances into the structure, one leading to the office block and one the staircase. Each is contained within a rounded headed doorway with sandstone ashlar rusticated surrounds. The doors are a typical Victorian four-panelled type with semi-circular fixed transom window above (see Figure 30). The doorway into the staircase has been boarded-up. Above the entrance into the staircase, there are taking-in doors on the first and second floors, each with a sandstone sill (see Figure 30). Again these are timber panelled doors. Modern brickwork to the south of the lower portion of the first floor doorway indicates that this section has been extended or remodelled. The roof of the staircase is flat and lined with riveted sheet metal, forming a possible water tank.

Scars on this wall indicate the location of the integrated two-storey structure which has been demolished on this side (see Figures 20 and 30). This has exposed part of the roof structure of this building which is a timber king post truss.

The engine room is located at the north-east corner of the building and can be identified by several features shown on the eastern elevation (see Figure 31). There is a sandstone base on the eastern side of the engine room, used to limit the effects of vibration caused by the motion of the engine. There are also two tall round-headed windows composed of twelve lights, and these presently span two floors of the structure. Tall windows of this kind were used to provide light to the engine room. Below these windows two casement windows with concrete sills and steel lintels have been inserted, the original lower windows being the smaller square type with sandstone surrounds. There is one at ground floor level and one, blocked with bricks, at basement level. The sandstone engine bed was recorded during the demolition of the mill. This is presented in Section 6.3.

Scars on this wall indicate the location of external steps leading to a building which has been demolished (see Figure 32). This building can be identified as the mill's boiler house, as it was surveyed by separately prior to demolition. The survey shows a typical boiler house plan, possibly designed to hold two Lancashire boilers at right-angles to the engine house. The remains now present consist of various openings containing pipes running though the east wall and into the engine room (see Figure 33). A flue, blocked with modern brick, is also present at ground level on the northeast corner. This was recorded during the demolition process and is presented in Section 6.3. A photograph from the 1960s shows the boiler house in situ, with a double pitched roof and cast iron sliding door entrance (see Figure 34). The vehicle in the foreground bears the Barker and Ashworth (1920) Ltd, 'cotton doublers' logo.

Figure 29. Eastern elevation.

Figure 30. South portion of the East elevation.

Figure 31. North portion of the East elevation.

Figure 32. Detail of the remains of external steps.

Figure 33. Detail of the demolished boiler house.

Figure 34. Photograph dated to the 1960s showing the extent boiler house attached to the East wall.

6.3 The Engine Bed and Flue (see also Drawing 1)

6.3.1 The sandstone engine-bed was recording during the demolition process at Fern Mill (Figure 35). It is located at the north-eastern end of the building.

The wheel-pit is located along the long-axis of the building on its west side. It is 4.7m in length, giving some indication of the size of the wheel that it would have housed (Figure 36). Towards the north side of the building there is a second pit measuring 2m x 4m which may have housed machinery (Figure 37). The engine would have sat on top of the sandstone base at the north end of the building near to the boiler house and flue.

The flue leading from the demolished boiler house to the chimney stack consists of a brick-built round-headed arch. It was constructed separately form the main mill block, but is integrated with the northern boundary wall of the mill complex. This suggests that it is a secondary feature, as the boundary wall is part of an aisled extension to the mill (see Section 6.41). The flue is possibly contemporary with the demolished boiler house and the extension of the ground floor of the main mill.

Figure 35. The extent of the engine bed facing southeast.

Figure 36. The engine-bed and piston-pit at the north end of the east wall.

Figure 37. The engine bed facing south, with wheel-pit to the west.

Figure 38. Brick-built flue from the southeast.

Figure 39. Brick-built flue from the south

6.4 Ground Floor (see also Drawing 2)

6.4.1 *Room G-1*

This room is accessed from G-3 in the east wall via a square-headed doorway, fitted to carry a cast-iron sliding door, now removed. This room is in the main body of the mill and is composed of 16 bays each with a fixed casement window high up on the north and south walls. In Bay 8 on the south wall, and Bay 9 in the north wall, the casement window has been removed to create a large opening into the extensions G-1.1 and G-1.2.

The flooring of this room is concrete with some patches of cement running down the central portion of the room. These do not appear to follow a regular pattern, but may be related to the location of mill machinery in its later phases.

This mill contains cast iron beams and columns typical of mill buildings of this date. Bowed cast iron beams are supported by cast iron columns and carry north-south aligned brick vaults covered with plaster, called jack-arches, used as fire proofing (see Figures 41).

There are 15 paired columns running down the centre of the room and each has a decorative fluted foliage capital (see Figure 43). Capitals of this type were recorded at Hurst mill in Ashton-Under-Lyne and dated to 1858-9 (Nevell and Hradil 2002, 22). The based of the columns are placed in concrete beds (see Figure 44).

The walls are brick-built (9"x3"x4.5") using Scotch bond with bull-nose bricks used on all wall edges and corners, including window embrasures. The east wall contains seven bearing boxes and three brackets associated with power transmission (see Figures 45-47). A cast-iron lined opening leading from the east wall into the engine room, behind, has been blocked with modern brick (see Figure 49). There is a large cast-iron bracket directly above the opening suggesting that this would have housed substantial machinery. There is also an inserted lift shaft along this wall, giving access to a basement level and the upper floors (see Figure 48).

The west wall contains four window openings, the southern two of these have been provided with steps and adapted as fire escapes, whilst the northern two are now blocked with breeze-blocks. There are three small bearing boxes along this wall.

Along the north and south walls, aisled extensions (rooms G-1.1 and G-1.2) have been built onto the room, formed by breaking through the thinnest parts of the north and south walls, creating column-like piers of brick. The lines of the original exterior walls are visible as scars on these piers (see Figure 51). An English Heritage advisory document concerning the listing of textile mills (1994) states that extensions to the lower storey of cotton mills were usually related to increased demand for carded cotton to use in spinning machines, usually mules, in the upper storeys (English Heritage 1994, 14). This may help to explain the single-storey extensions at Fern Mill and suggests that rooms G-1, G-1.1 and G-1.2 would have contained cotton carding machines.

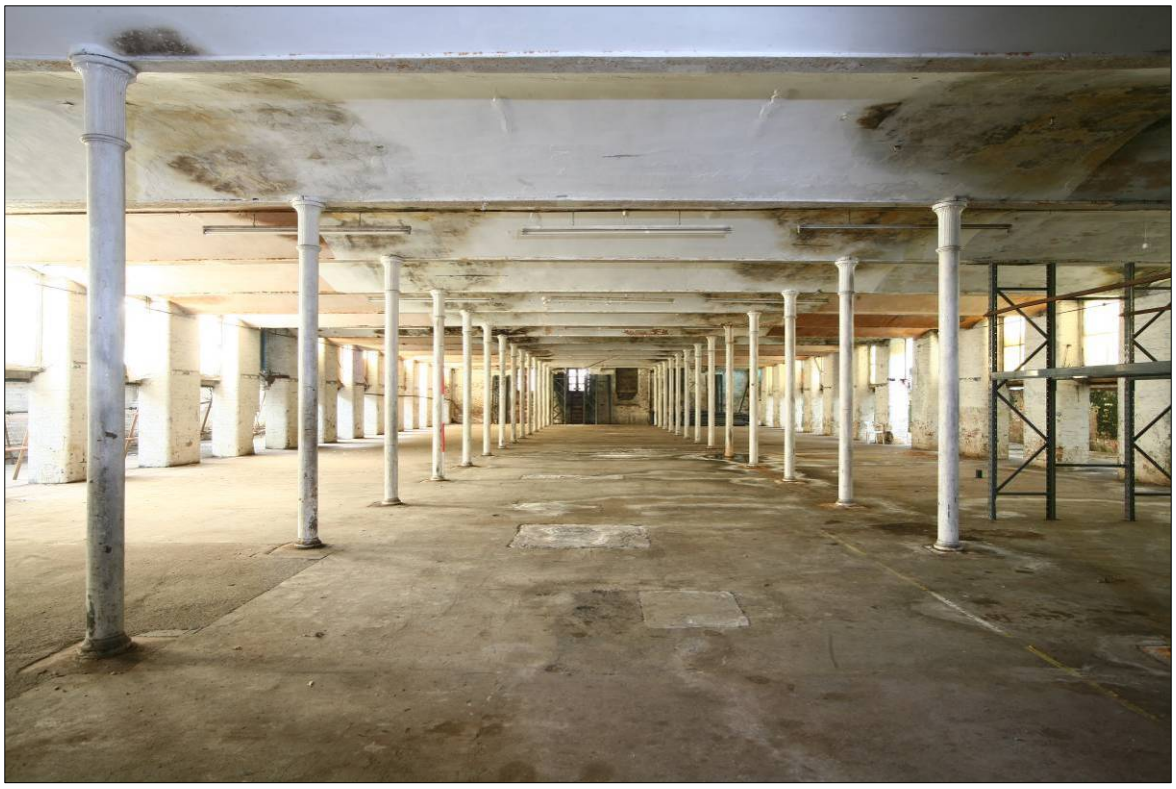


Figure 40. General view of room G-1 from the east.

Figure 41. General view of room G-1 from the southeast.

Figure 42. General view of room G-1 from the east.

Figure 43. Detail of fluted foliage capitals supporting bowed beams.

Figure 44. Concrete base of supporting cast iron columns.

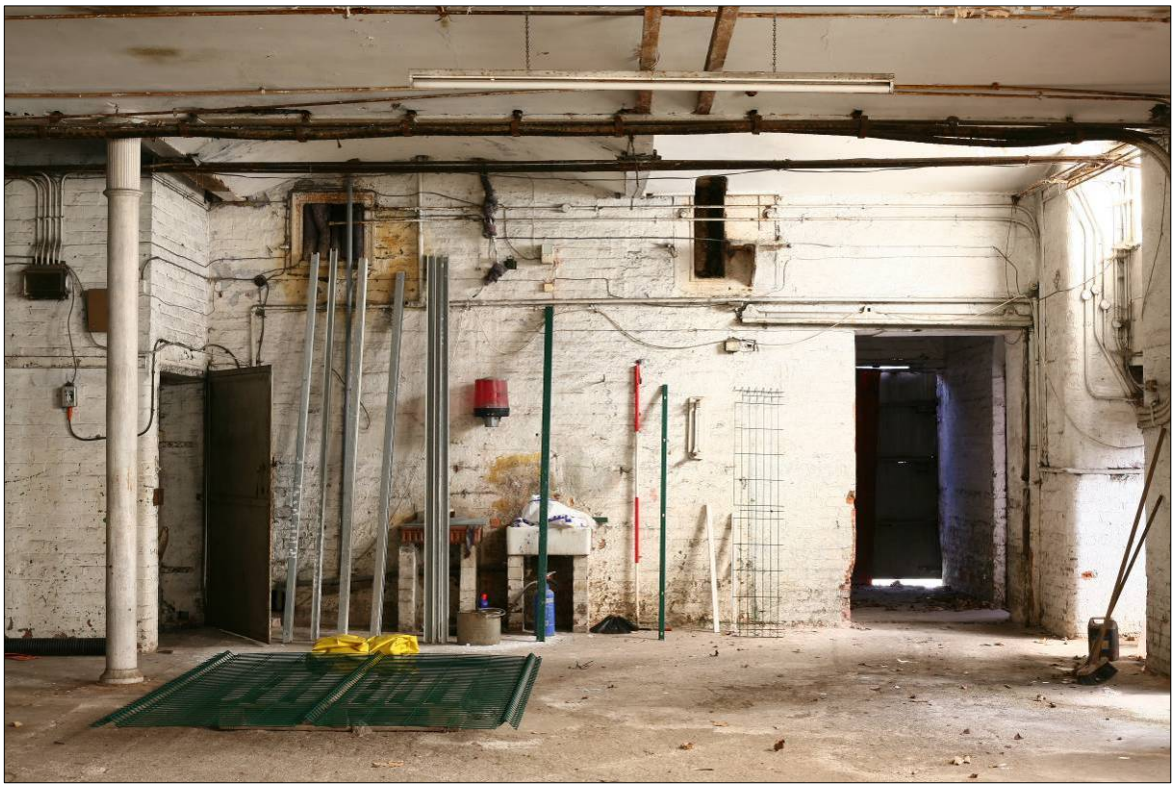


Figure 45. South end of the east wall showing the location of bearing boxes.

Figure 46. Detail of bearing box with bracket in the east wall.

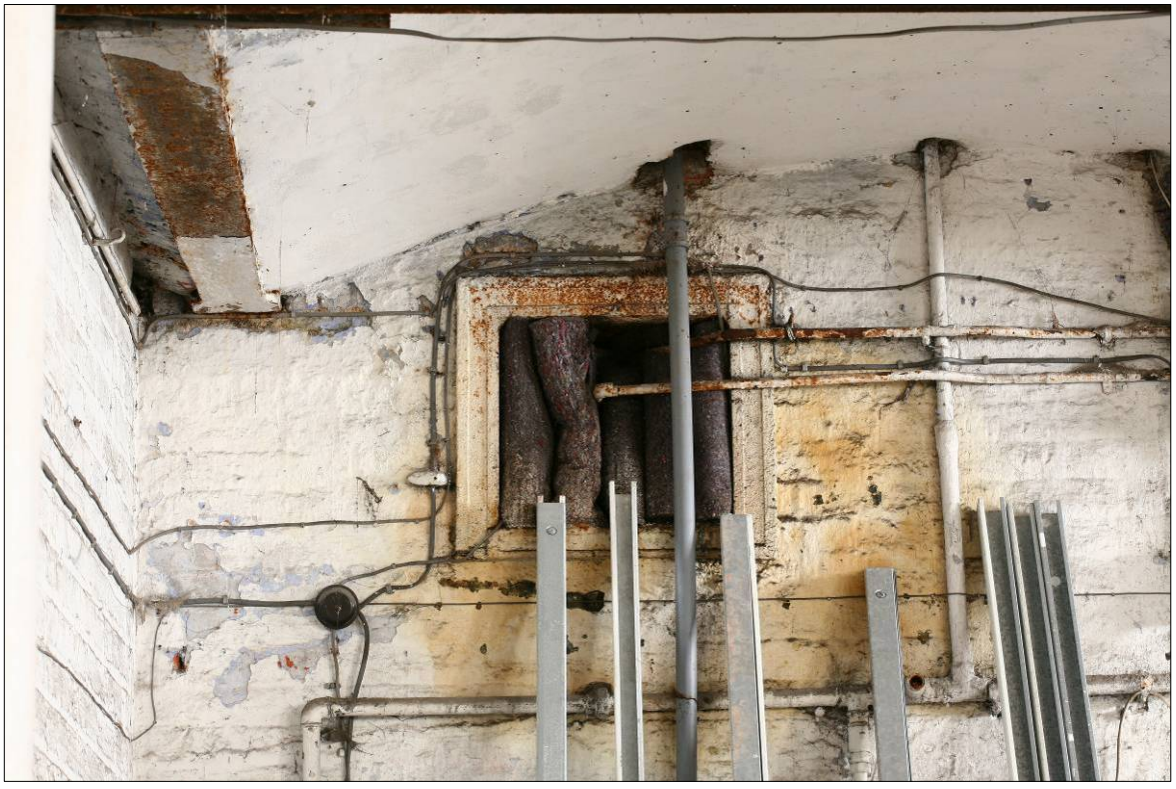


Figure 47. Detail of bearing box in the east wall.

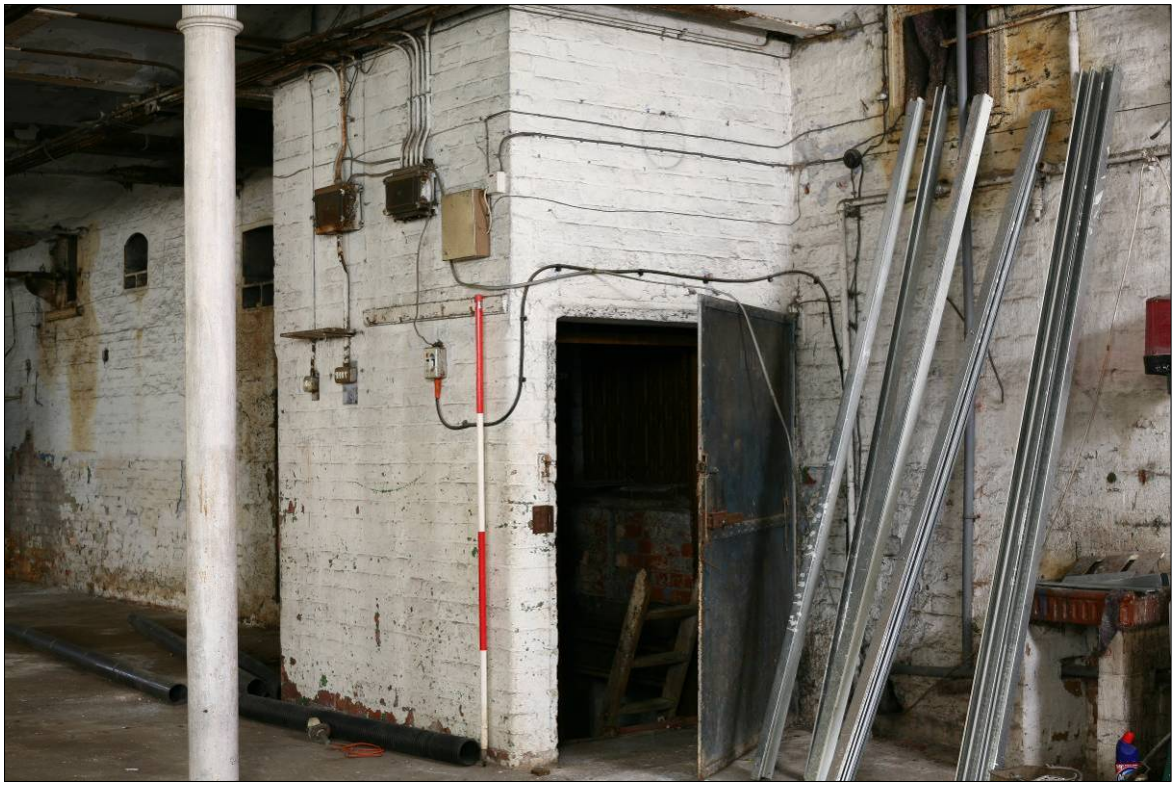


Figure 48. Inserted lift in the centre of the east wall.

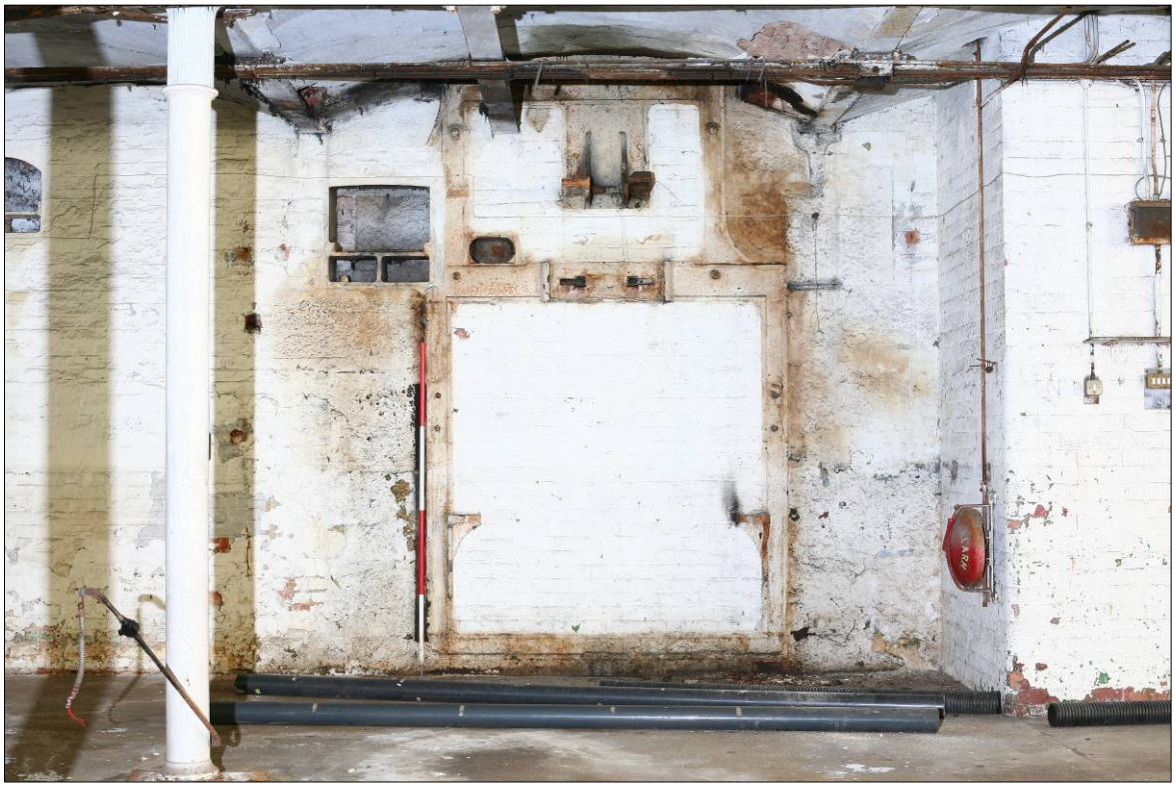


Figure 49. Blocked opening from the engine room in the east wall.

Figure 50. Detail of bearing boxes in the north end of the east wall.

Figure 51. Possible scar of original wall line on the north wall.

6.4.2 *Room G-1.1*

This room is an extension of G-1 and is accessed from it through openings created by breaking through the south walls of each bay. It is a long aisle-like room with a north-light style roof, though in this case the glazing faces south as a necessity (see Figure 52). The roof is carried on a wall-plate supported by cast-iron brackets which run right the way through to the exterior of the north and south walls of the room.

In the roof trusses, the fixtures for line shafts are visible which would have carried power to the machinery along this room (see Figure 53-54). The line shaft carried in the centre of the tie-beam would have run the full length of the room to meet with a small bearing box in the west wall (see Figure 55). Whilst the second line shaft appears to start in the rafter of Bay 4 and run as far as Bay 12.

Figure 52. General view of Room G-1.1.

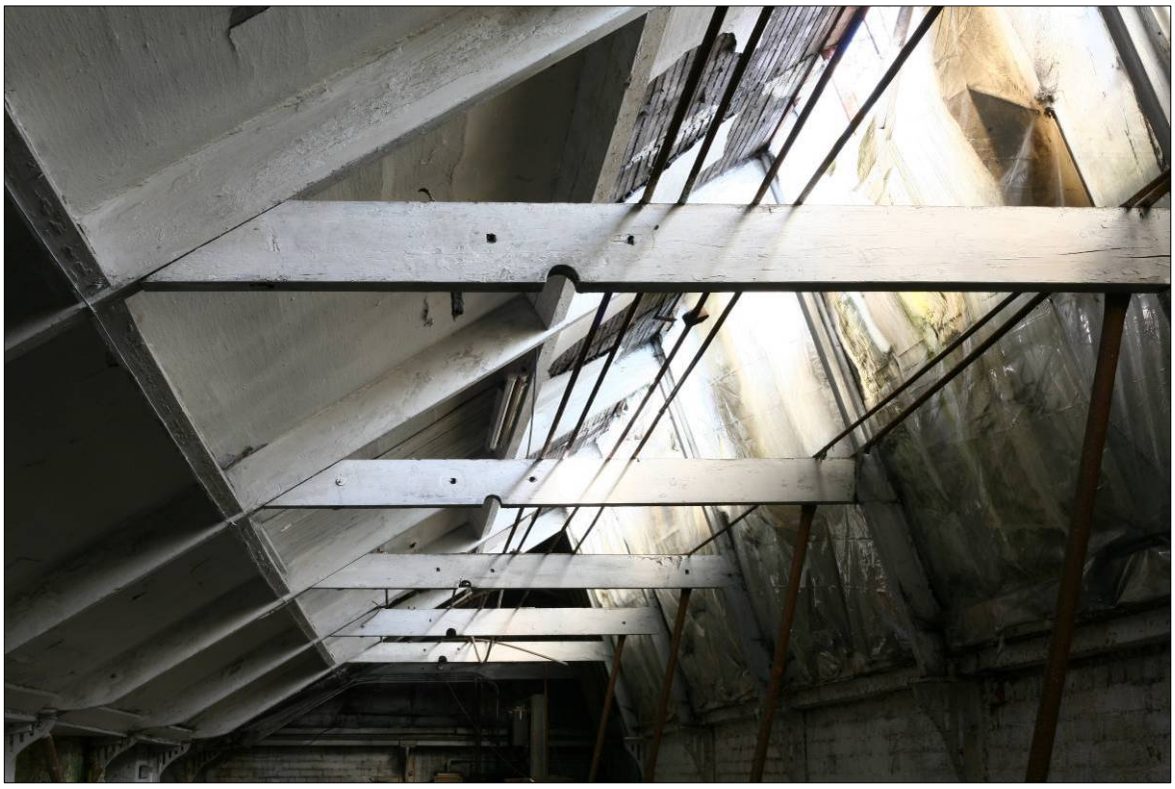


Figure 53. Evidence of the location of a line shaft on the collar beams.

Figure 54. Evidence of a second line shaft in the common rafters.

Figure 55. Bearing box in the west wall.

6.4.3 *Room G-1.2*

This room is similar to room G-1.1 in that it was built as an extension to G-1 and has a north-light roof carried on cast-iron brackets in the north and south walls (see Figure 56). The location of two line shafts are visible in the tie-beam of the roof structure, one carried almost centrally down the length of the room, on the under side of the tie beam, and one carried off-centre to the north, on the top of the tie-beam.

The north wall shows contains a series of small regular holes, indicating the position of some sort of fixed frame along the full length of the wall (see Figure 57). This could possibly be a drying frame as there is a drain running along the floor at this side.

The east side of this room encloses the mill's chimney stack which would originally have been an exterior feature. A bearing box has been inserted into the side of the chimney and it contains a shaft leading to a surviving pulley (see Figure 58-59). This shaft and pulley are not perfectly aligned with the location of the line shafts noted above, but they do correspond with a small bearing box in the west wall (see Figure 60).

Figure 56. General view of Room G-1.2.

Figure 57. Evidence for a frame attached to the north wall.

Figure 58. Detail of a surviving pulley on the east wall.

Figure 59. Location of the surviving pulley on the east wall and its bearing box set into the chimney stack.

Figure 60. Bearing box in the west wall.

6.4.4 *Room G-2*

This room is a small office, originally accessed from the main entrance into the building on the east wall (see Figure 61). There is only one window, in the east wall. The room now contains a modern stud partition creating a small corridor area within the room. Access was originally provided from this room to G-3 via a wood panelled door with round-headed fixed window above in the north wall. The doorways that relate to the stud partition are insertions.

The walls of the room have been lined with match-board and have timber skirting, dado and cornice in place (see Figure 61). The roof is also covered in match-board and the timber floorboards have been covered with linoleum.

There is a standing safe in the south-west corner of the room and a floor safe in the north-east corner (see Figure 61). A hatch for receiving post has been inserted into the south wall.

Figure 61. General view of Room G-2.

6.4.5 *Room G-3*

This room is a corridor formed from the entrance to the staircase in the east wall, to the entrance to G-5 in the north wall. The entrance in the east wall has been blocked and the door-head has been removed. The corridor has a concrete floor along its east-west access and an original flagged stone floor in its north-south access leading to G-5 (see Figure 62).

This room gives access to a cupboard under the stairs in the east wall of the passage, which contains the base of chute or flue connected with the possible water tank on the roof of the staircase.

6.4.6 *Room G-4*

This is the well-worn stone staircase giving access to the first floor, it is fitted with a hollow steel hand-rail. The continuation of the chute or flue leading to the possible water tank on the roof is visible in the northeast corner (see Figure 63). Bull-nose bricks are used on wall edges throughout.

Figure 62. General view of Room G-3.

Figure 63. General view of Room G-4.

6.4.7 *Room G-5*

This room is accessed from G-3 via a plank and board door and a series of four ascending stone steps. The change in level indicates that the room is positioned above the sandstone base provided for the engine house. A square section of sandstone is visible on the floor in front of the access to an inserted lift shaft in the west wall (see Figure 64). No engine machinery survives.

The room has been truncated by the removal of the two-storey structure integrated into the east wall of the mill. Its eastern wall is now built of breeze blocks (see Figure 64).

The floor of this room is composed of stone tiles (9"x9") (see Figure 60) whilst the roof is a north-south aligned brick barrel vault, probably an original feature.

Figure 64. Detail of stone tiles, sandstone base and breeze block walling in room G-5.

6.4.8 *Room G-6*

This room is formed by the division of the engine room into three smaller rooms using modern stud partition walls. It is essentially a corridor leading to room G-8 to the north.

The floor is cement and the walls are covered with textured plaster. The inserted roof is formed of rolled steel joists (RSJs) with a plasterboard suspended ceiling below, covered with textured plaster. Strip lighting is contained within the cavity between the joists and the suspended ceiling and fixed moulded glass/plastic panels (see Figure 66). Originally this room would have been open to second-floor level.

One interesting feature in this room is an opening lined with cast iron that would originally have communicated with room G-1. This feature is related to the engine machinery which would have been housed in this room (see Figure 65).

Figure 65. Blocked opening through to Room G-1 in the west wall.

6.4.9 *Room G-7*

This room is again formed by the partition of the engine house (see Figure 66). It contains a timber casement window with splayed reveals with bull-nose bricks in the east wall. The northern pane opens outwards, but this window is now blocked by wooden interior shutters. There is also another inserted timber casement window with concrete sill on the east wall.

This room gives access to G-8 via a modern doorway in the north wall.

Figure 66. General view of Room G-7.

6.4.10 *Room G-8*

This room is again formed by the partition of the engine room and is similar to G-6 and G-7. It contains an inserted timber casement window in the east wall and the bottom portion of an original tall casement window in the north wall set in splayed reveals with bull-nose bricks. This window terminates at second-floor level. There is a projection running along the north wall below the window that currently carries a shelf.

Figure 67. General view of Room G-8.

6.4.11 *Room G-9*

This 'room' is formed in the cavity between the chimney on its west side and the engine room on its east side. Above this level an inserted toilet block serves the first and second floor. At this level, however, the room is unroofed. A projection runs around the south and east walls carried on brackets that are the same style as those used to carry the north-light roofs of the extensions G-1.1 and G-1.2, though in this case it does not appear that they ever carried a roof structure. There is a bearing box in the east wall and cast iron feature similar to a bearing box in the south wall (see Figures 68-69).

The north wall of this room is blocked by a flue leading into the chimney, presumably originating from the now demolished boiler house (see Figure 68). It was not possible to investigate this relationship any further, though a full understanding of the relationship between the flue and the chimney may help to explain the purpose of this room.

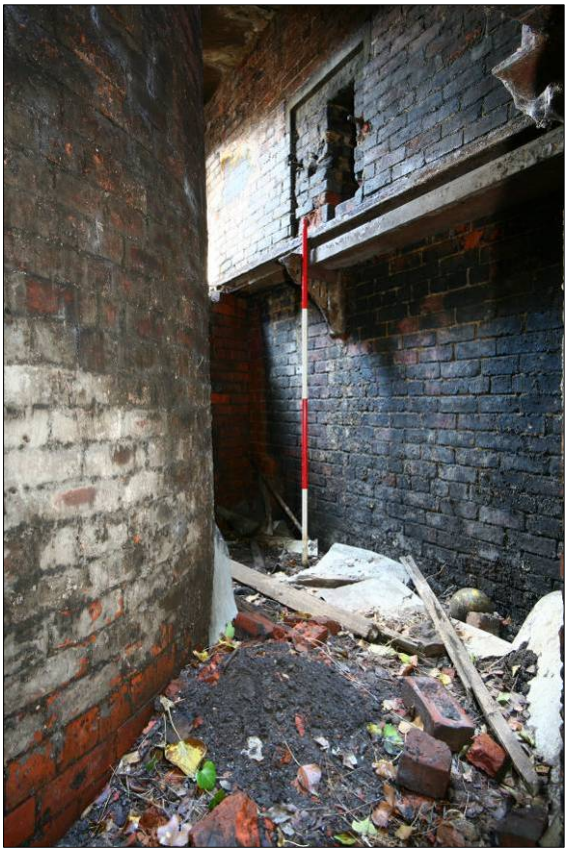


Figure 68. General view of Room G-9.

Figure 69. Detail of bearing box and blocked window in the south wall.

6.5 First Floor (see also Drawing 3)

6.5.1 *Room F-1*

This room is located above G-1 and is in the main part of the mill. It is of the same construction as G-1, but does not contain extensions along its north and south sides. The capitals of the cast-iron columns supporting the roof are decorated with the same fluted foliate style.

There is a large opening in the east end of the ceiling between this room and S-1 above. This has been inserted and is not an original feature. This provides an opportunity to view the beams used in the construction of the floor. These are bowed, the upper side having a parabolic curve. There is a bolt hole in the centre of the girder. The brick vaulting rests on the lower flange. The ends of the beams are semi-circular where they meet the supporting columns and the lower flanges are bowed (see Figures 70-72).

The east wall contains a series of bearing boxes and brackets in a similar arrangement to G-1 and these correspond with four bearing boxes in the west wall (see Figures 73-75 and 78). An iron plate in the floor in the centre of the east wall covers an opening from the floor below and a similar opening is found in the roof above (see Figure 76-77). This may have housed a vertical drive shaft.

Along the north and south portions of this room, large areas of flagged stone floor survive and these contain a series of notches which mark the possible locations of mill machinery (see Figure 79). These have been mapped on the floor plan and are generally regularly spaced, firstly at a distance of 0.6m apart and then at a distance of 1.45m apart. There are also some plug-like sockets in the floor, though these are more difficult to discern. It is possible to deduce the type of machinery used based on this arrangement, as Williams and Farnie provide the following description of a mule frame:

'it was a long machine with bobbins containing the roving arranged along the back and the spindles containing the spun yarn along a moveable parallel carriage. The carriage was mounted on wheels and moved about 1.5m away from the bobbins, so pulling at the roving. At this stage the roving was twisted into yarn and was wound onto the spindles as the carriage moved back in' (Williams and Farnie 1992, 7)

An illustration of a late 19th century self-acting mule is shown in Figure 75 and the pattern of points where this machine would mark the floor can be matched reliably with the pattern of notches recorded on the first floor. This arrangement would see two rows of mule frames arranged transversely along each of the side wings of the first floor. The arrangement of machinery, or lack thereof, in the central part of the room cannot be determined as the floor has been concreted over. The use of mule frames on this floor would support the interpretation of the ground floor as a cotton carding floor. This arrangement, with carding on the ground floor and mule frames above, would be the most common layout of a cotton mill in Ashton (Nevell pers. comm.).

Figure 70. General view of Room F-1.

Figure 71. Inserted opening in the ceiling of Room F-1 leading.

Figure 72. Detail of bowed cast-iron girder.

Figure 73. South end of the east wall showing the location of bearing boxes.

Figure 74. Centre of the east wall showing the location of bearing boxes.

Figure 75. North end of the east wall showing the location of bearing boxes.

Figure 76. Sheet metal plate covering an opening through to Room G-1 below in the centre of the east wall.

Figure 77. Sheet metal plate in the ceiling, covering a similar opening through to Room S-1 above.

Figure 78. Bearing box in the west wall.

Figure 79. Detail of notches in the flagged stone floor marking the location of mill machinery

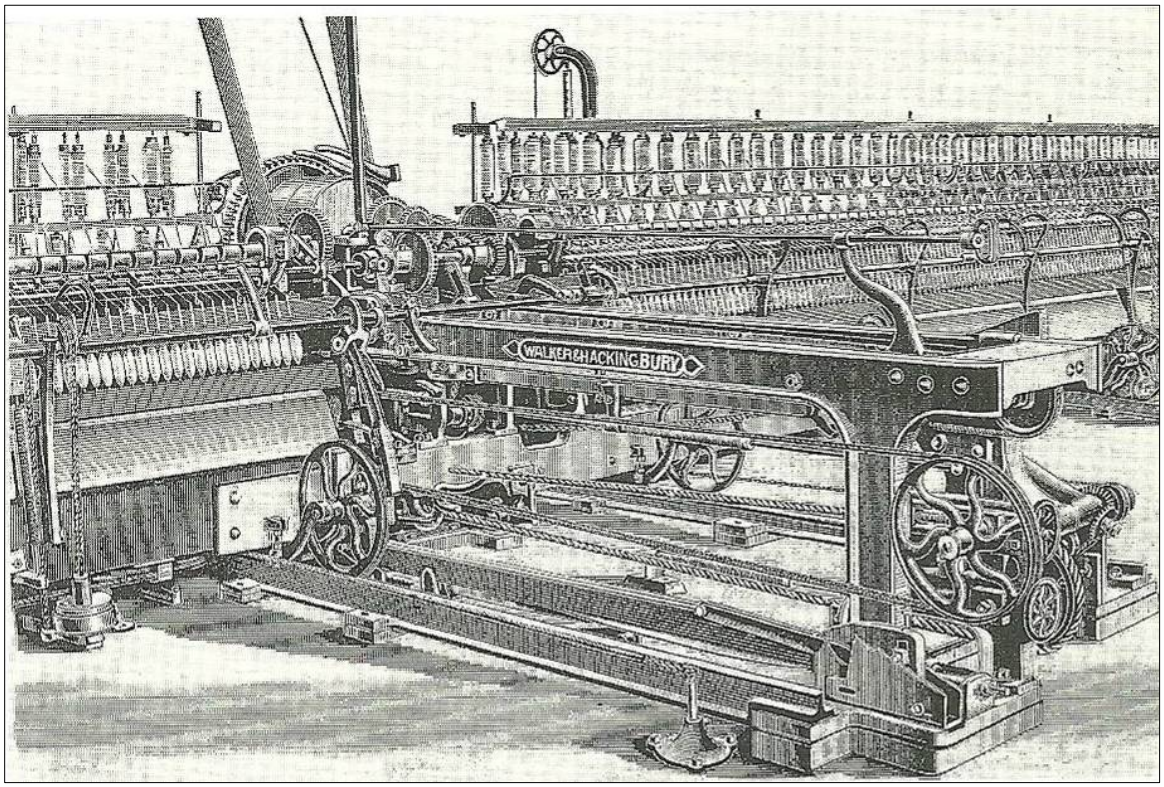


Figure 80. Illustration of a self-acting mule frame dated to the 1880s (Williams and Farnie 1992, 9)

6.5.2 *Room F-2*

This room is an office located above that in G-2 below. It has a concrete floor and lath and plaster ceiling (see Figure 76). There are two semi-circular stone steps that lead down into the room which contains timber casement windows on its south and east walls.

Figure 81. General view of Room F-2.

6.5.3 *Room F-3*

This is the corridor and staircase leading up to the second floor. There is a large taking-in door in the east wall which is currently divided into two parts (see Figure 82). The upper portion is original and contained within an opening formed with bull-nose bricks. It is a plank and board timber door in a timber frame. This frame did originally extend for an unknown distance into the lower portion, but this has been cut by the widening and possibly lowering of this part of the doorway.

6.5.4 *Room F-4*

This room is accessed via two stone steps from room F-1. It sits above room G-5 and is also truncated by the demolition of the two-storey structure on its east wall. The east wall of the chamber is currently timber in the lower portion with wire mesh above. The floor has stone tiles the same as in G-5 and the roof is formed of the partial remains of the roof of the demolished building. It is formed of timber boards with two purlins present (see Figure 78).

There is a bearing box in the west wall of this room, as well as very small cast iron bracket. In the floor alongside the south wall there is a small hatch leading to the floor below, with steel surrounds.

An opening has been created in the north wall of this room giving access to the inserted first floor of the engine room (Room F-5).

Figure 82. General view of Room F-3.

Figure 83. General view of Room F-4

6.5.5 *Room F5*

This room is formed by the insertion of a floor into the engine room which would originally have been open to the second floor. The floor is concrete and the roof is a modern insertion using a series of RSJs and concrete slabs (see Figure 84).

There is further evidence here of this room's use as the housing for the engine. There are a series of sandstone slabs built in to the east and west walls which would have mitigated some of the vibration caused by the engine's movements (see Figures 85 and 86). The room is also very well lit with two original casement windows in splayed reveals in the east wall and the continuation of the tall casement window that began on the floor below in the north wall. All of these windows continue up to second-floor level.

There are scars on the east and west walls that may relate to a housing for the engine. They are of a similar form and are located directly opposite each-other towards the north end of the room (see Figures 85 and 86). There is a cast iron bracket in the east wall.

Figure 84. General view of Room F-5

Figure 85. Detail of scar in the east wall.

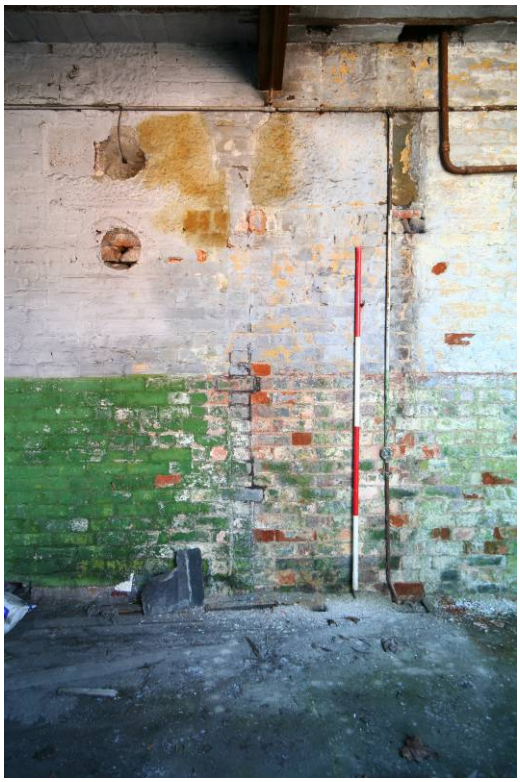


Figure 86. Detail of scar in the west wall.

6.5.6 *Room F-6*

This room is an extension to the original building between the chimney stack and the engine house. It is a narrow passage leading to a probable toilet. The passage is floored with stone flags and it and the toilet are ventilated by a series of openings in the west, north and east walls. The roof is formed by the stone slabs of the floor above. Hand washing facilities must have been provided at the sink located next to the entrance of Room F-1.

It is difficult to date this extension, though before it was erected there would have been no lavatory facilities within the building, not even in the office block. This may suggest that it was built shortly after the construction of the mill. Even with this addition, however, the sanitary provisions for workers within this mill were rudimentary at best.

Figure 87. General view of Room F-6.

6.6 Second Floor (see also Drawing 4)

6.6.1 *Room S-1*

Room S-1 comprises the uppermost floor of the main block of the mill, and has the same dimensions as Room F-1. For the most part, the construction details are similar to those described for Rooms G-1 and F-1, the main obvious difference being the visible roof construction and the nature of the associated supporting columns (see Figure 88). The roof is of triple pile construction with three rows of fifteen identical king post trusses. Each truss has two trenched purlins and twin braces (Drawing 5). The king post is bolted to the tie beam but the other members are joined by mortise joints. Each roof slope is either match-boarded or covered with lath and plaster.

The column tops are dissimilar from those on the ground and first floors due to the requirement to support the timber trusses of the roof. They are quite plain with U-section channels, into which the heels of the trusses are fitted. The soffits of the channels are supported with flanges (see Figure 89). The tie beams are joined together by long cast iron plates bolted to either side beam. The columns also support a longitudinal cast iron trough situated within each of the two valleys. These perform the function of channelling rainwater. Similar cast iron troughs are also situated in each of the long walls which appear to rest on each of tie beam ends, these also channel rain water.

Evidence for power transmission is visible on six of the trusses in the form of cast iron brackets and/or bolt holes situated in the centre of each tie beam, below the king post (see Figure 90). These are limited to trusses six, seven, eight and nine (counted from the east end). There are three cast iron brackets or boxes, one of which still contains cogs. Some of the column tops also contain some evidence, in the form of bolt holes that line shaft hangers may have been fitted to the columns. There are no bearing boxes in the west wall and the extents of possible line shafts from the available evidence have been plotted in Drawing 4.

The main transmission drive emanated from the engine room located at the east end of the building and, in common with Room F-1, there are bearing boxes set into the east wall. There is, also in common with Room F-1, a large box set into the east wall which may have contained the final drive (see Figure 91). This was altered in order to accommodate the drive for the lift which still survives (see Figures 91 and 92). A rectangular aperture with an iron plate cover is set into the floor adjacent to the east wall (see Figure 93) and may have housed a vertical drive shaft.

The floor of Room S-1 contains, in similar fashion to the floor of Room F-1, areas of surviving sandstone flagged flooring. The extent of the flagstones is limited to the flanking aisles, extending approximately 3.2m from the west wall (Drawing 4). There is a small section remaining close to the west wall in the central aisle. Each flagstone measures some 900mm by 650mm. The remainder of the floor has been concreted. Also in common with the Room F-1, there are numerous regularly spaced scars and notches cut into the flags suggestive of the positions of former machinery as outlined in Section 6.31. The locations of these are plotted in Drawing 3.

Figure 88. General view of Room S-1.

Figure 89. Detail of flanged column capitals.

Figure 90. Detail of cast-iron bracket located on the roof truss.

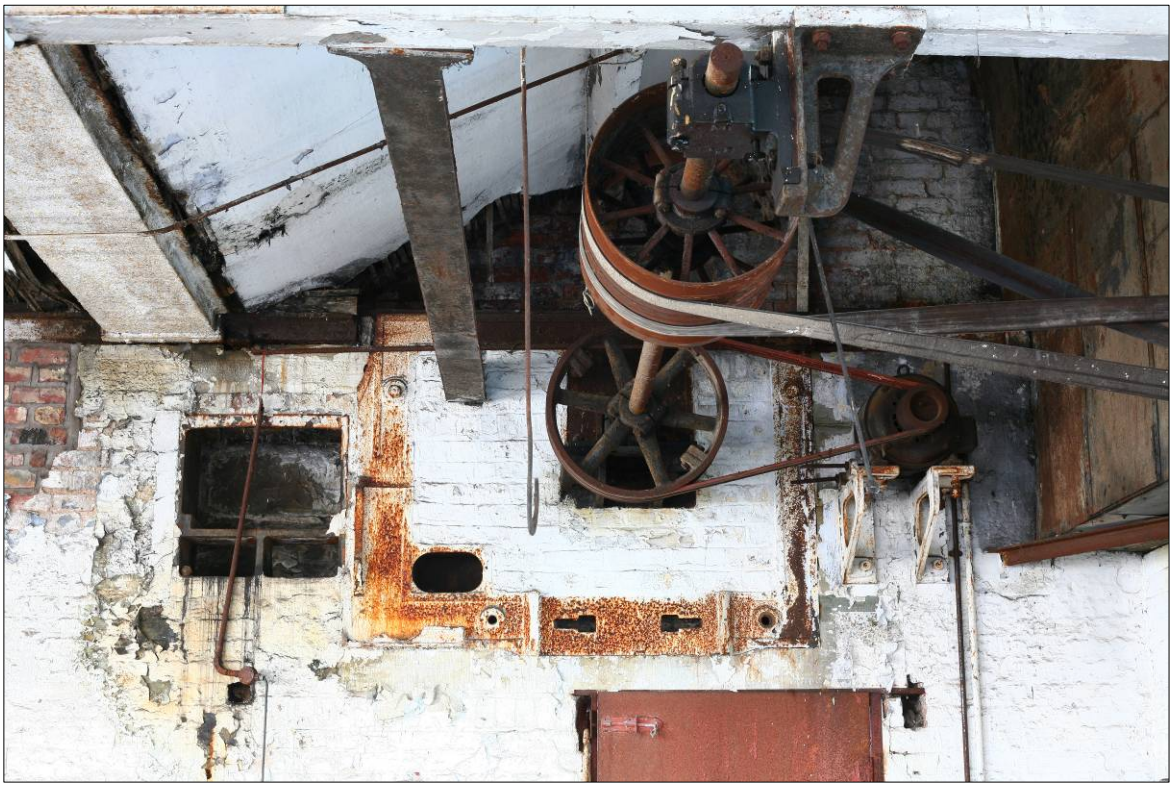


Figure 91. Detail of surviving gearing in the centre of the east wall.

Figure 92. Detail of surviving gearing powering the inserted lift in the centre of the east wall.

Figure 93. Sheet metal plate over opening in the floor through to Room F-1.

6.6.2 *Room S-2*

Room S-2 forms the upper stair well allowing access to the top floor of the mill and the room is a continuation of Room F-3. There is a small landing which allows access to Room S-1 as well as a loading door in the east wall of similar appearance to that in Room F-3. The landing floor is constructed from large sandstone blocks similar to those on the landing below. The ceiling consists of numerous large rectangular iron plates which are riveted together to form a continuous sheet (see Figure 94). This appears to form the base of a tank which is situated at the top of the stair tower. This is visible externally and may have been used for the storage of water.

Figure 94. Riveted sheet metal ceiling in Room S-2

6.6.3 *Room S-3*

Room S-3 has been created by the insertion of a concrete floor into the formerly high engine room (see Figure 95). The floor cuts across the tall window openings which are still visible externally. The walls in this room contain evidence for the possible former location of the flywheel, and there are substantial sandstone blocks set close to the floor in the middle of each of the west and east long walls (see Figure 96). The south end of the west wall contains a substantial sandstone block, through which the door allowing access to and from Room S-1 is situated. This corresponds to the large cast iron box set into the east wall of Room S-1. The south jamb of the door aperture contains some graffiti stating the, now illegible, dates of replacements of the motor and ropes (Figure 97).

The ceiling of Room S-3 is vaulted and is of identical appearance to that in both Rooms G-1 and F-1. The cast iron beams appear to be of similar appearance as does the nature of the construction of the vaulting. Various iron rings are fixed to the cast-iron beams which may be associated with the room's former use.

Figure 95. General view of Room S-3

Figure 96. Detail of sandstone inclusion in the east wall.

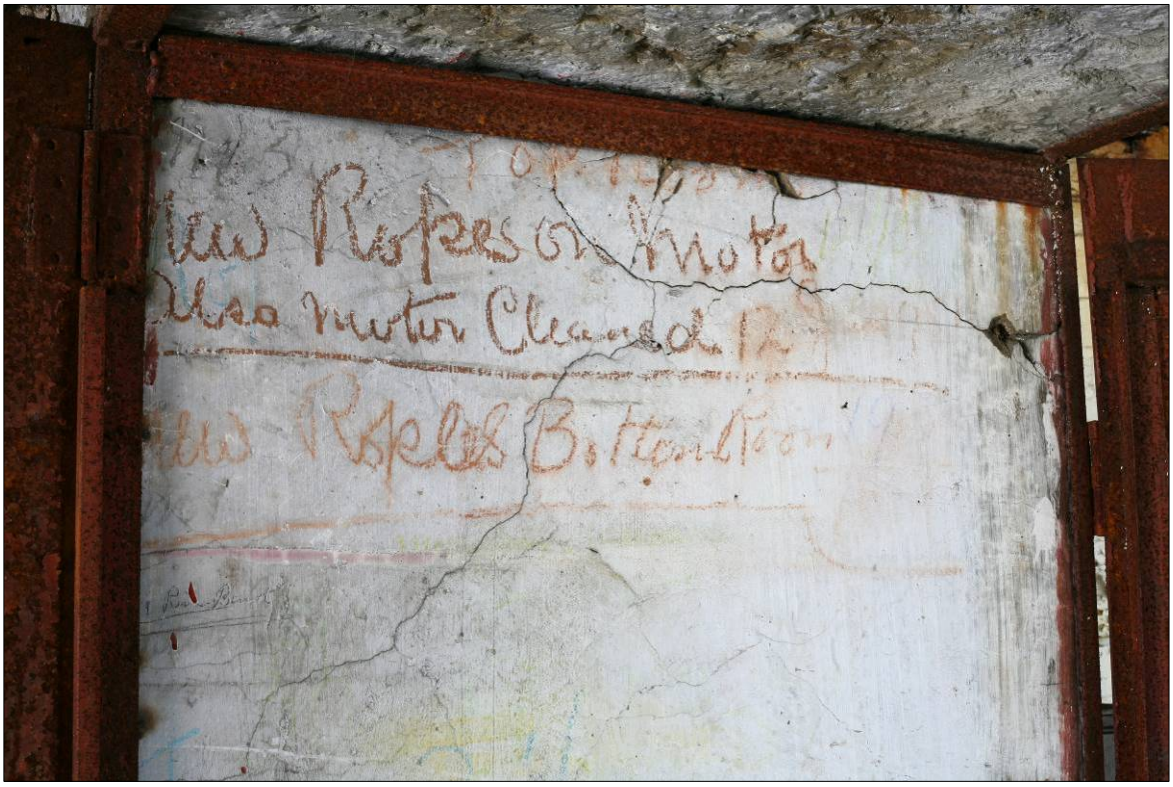


Figure 97. Graffiti on the south side of the doorway into Room G-3.

6.6.4 *Room S-4*

Room S-4 is of identical appearance to F-4 and was added later in order to provide lavatory facilities. Both the ceiling and floor are of sandstone flag construction. There are several ventilation bricks and the brackets for a high level cistern still survive.

6.7 Discussion

6.7.1 *Function and Phasing (see also Appendix II)*

Fern Mill appears to have been erected to serve the purpose of cotton carding and spinning. There is some confusion surrounding its construction date, since it appears on the Ordnance Survey Maps of 1848 and 1854, though Haynes dates its construction to 1856. The 1848 map of Ashton is unreliable, however, as it may in fact date to 1863 (Nevell pers. comm.) and the date of the 1854 map could easily be one or two years out either side. The source of Haynes' reference for the 1856 date was not available for consultation. In terms of architectural style and construction methods, there is nothing to suggest an earlier date for the mill and the column capitals used in the ground and first floors are the same as those used at Hurst Mill dated to 1858-9 (Nevell and Hradil 2002, 22). It is therefore likely that the mill was erected sometime in the mid-nineteenth century.

In its original form, Fern Mill was composed of a three-storey rectangular mill block with integrated engine house, two-storey office block and two-storey taking-in block. Its external chimney stack was not labelled on mapping evidence until 1893, but this does not necessarily mean that it did not exist. The construction of the mill is cast-iron framed, fire proof type with brick jack-arches and flagged-stone floors, cast-iron sliding doors and stone stairs.

Sometime before 1893, the mill was fitted with a boiler house for a single boiler, probably of the Lancashire boiler type. This communicated with the engine house, via a series of openings in the east wall, and the chimney, via a flue wrapping around the north wall of the engine house. The location of the original boiler for the mill is unknown, though the possible water tank on the roof of the staircase may be associated with it. It is possible that a boiler was contained within the demolished two-storey block, though there is no evidence of how this would have communicated with the engine house and chimney.

The toilet block is an undated extension, though it is probable that it was constructed only a short time after the mill. The addition of single-storey north-light aisles along the north and south walls of the main mill block is also undated, though this was probably associated with advances made in mule-frame technology. As mule frames became more efficient in the later 19th century, they could process larger qualities of carded cotton which would be produced on the ground floor of the mill. On this basis, they can be dated to the late-nineteenth century, or later.

According to map evidence, a second boiler was added to the boiler house between 1906 and 1943. Other additions to the mill were an elevator connecting all floors, probably of late-nineteenth century date, and the insertion of floors in the engine house, which must post-date the removal of the steam engine after it went out of use as a cotton doubling mill in the 1960s.

6.7.2 *Power and Transmission (see Appendix I)*

Fern Mill was originally steam powered with the engine house located at the east end of the building. It most likely used a beam engine. The engine house has a large sandstone base with a 4.7m long wheel pit and a smaller piston-pit. It would also have acted as a stabiliser for the walls. The engine room was originally open from ground to second floor level and there are various points within the structure where sandstone blocks are integrated into the east and west walls. Again, these would perform the function of stabilising the walls against the heavy vibration of the engine, but they also probably carried the housing for the fly wheel. Some evidence of this may be scaring seen at first floor level in the east and west walls of Room F (see Figures 85 and 86). Two cast-iron beams in the east wall at first and second level may also mark the location of a beam floor, used as a platform from which to monitor and repair the engine. The exact type of beam engine used at Fern Mill is not known, though at the date of its construction McNaught's compound engine system was gaining popularity following its development 1845 and it soon became customary to build mill engines in this way (Watkins 1999, 11).

Transmission at Fern Mill could be achieved in two ways, firstly via a series of bearing boxes and power transmission systems running from the engine house at the east wall, through the main body of the mill and into bearing boxes located in the west wall. There are no surviving line shafts, belt drives or gears associated with the mill machinery, apart from one small pulley in the east end of Room G-1.2. Secondly, there appears to have been a vertical drive shaft running from the ground floor to the second floor via openings in the floor and ceiling at the centre of the east wall of the main mill. Surviving pulleys and belts, together with a small electric motor on the second floor are associated with the insertion of an elevator in the late-nineteenth century.

The arrangement of the original boiler house at Fern Mill could not be discerned during the survey and the additional boiler house which probably housed Lancashire boilers at the east end of the building has been demolished. It is not possible, therefore, to reconstruct the workings of this element of the mill engine. There was a flue running from the location of the demolished boiler house to the chimney.

7. STATEMENT OF SIGNIFICANCE

7.1.1 The significance of Fern Mill was already assessed to come degree in the late 1980s during the project design and selection phase of the survey of cotton mills in Greater Manchester conducted by the GMAU. At this time it was not seen as significant enough to warrant detailed survey and archival research, as is evident by its exclusion from the subsequent mills survey and the lack of a Listed Building request for the structure. The selection of mills for the survey was based upon the following brief:

'*Aim to select a sample of sites which could be used to illustrate the historical development of the functional and architectural types. Typical Mills should be contrasted with innovative mills.*' (Mills of Greater Manchester unpublished project design).

Fern Mill was not seen to represent a key stage in the development of the industry and its buildings and was also not included as a 'typical' example. The Ryecroft Mill complex as a whole was not included in the detailed survey.

7.1.2 As a result of the survey and a general initiate by English Heritage a number of cotton mills were put forward for Listing in the early 1990s. The criteria for listing was based upon site layout, building plan and design, constructional technique, wider context, contribution to the history of milling and mill development, degree of completeness and evidence of evolutionary change (English Heritage 1994, 13).

Fern Mill was not put forward for Listing and was not Listed as part of this process.

7.1.3 The significance of Fern Mill, in terms of the development of the cotton industry in Ashton-Under-Lyne is therefore low. It is a small mill, built as an extension to an existing mill complex which was itself not innovative, architecturally important or owned by key players in the evolution of cotton milling in Lancashire. Its value lies in being a typical, common example of a cotton mill of the mid-nineteenth century. It is important to note that if survival is based only on important, innovative and architecturally pretentious examples, then these smaller, but more characteristic mills will eventually be lost, leaving only the outliers.

7.1.4 The area around Fern Mill in Ashton-Under-Lyne underwent significant change during the industrial revolution and the growth of the cotton industry in Lancashire more generally. Some of this development can be attributed to the owners of Fern Mill who owned substantial property in the area and may have had 'Buckley Street' named either by them, or in their honour. Fern Mill and Ryecroft Mill as a whole are therefore of local significance.

8. POTENTIAL IMPACTS ON SIGNIFICANCE

8.1 Fern Mill has been assessed as having local significance as a typical example of a mid-nineteenth century cotton mill, owned by locally important individuals. The proposed development requires the demolition of the structure and erection of a new factory building on its footprint. The impact upon its significance is therefore high.

In terms of setting, however, Fern Mill is largely sheltered from the road by development in its vicinity. It is therefore unlikely that its demolition will an impact on the general industrial character of the area, since at present it is difficult to see and its chimney stack has already been reduced in height. The fact that a new industrial/factory site will be erected in its place means that the industrial nature of the local area will be retained, albeit in a more modern form.

9. STATEMENTS AND ACKNOWLEDGEMENTS

9.1 Publicity Confidentiality and Copyright

9.1.1 Any publicity will be handled by the client.

9.1.2 Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

9.2 Statement of Indemnity

9.2.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

9.3 Acknowledgements

9.3.1 Archaeological Research Services Ltd would like to thank all those involved with the archaeological fieldwork, especially, Andy Myers and Lesley Mitchell of the Greater Manchester Archaeology Unit, Paul Baines of P.A.B Architects and Robin Bennett and the staff of Hill's Biscuits and the helpful staff of the Tameside Local Studies Library and Archives Centre. Special thanks also to Mike Nevell of the Centre for Applied Archaeology, University of Manchester, for helpful comments and advice.

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APPENDIX I: SURVEY DRAWINGS

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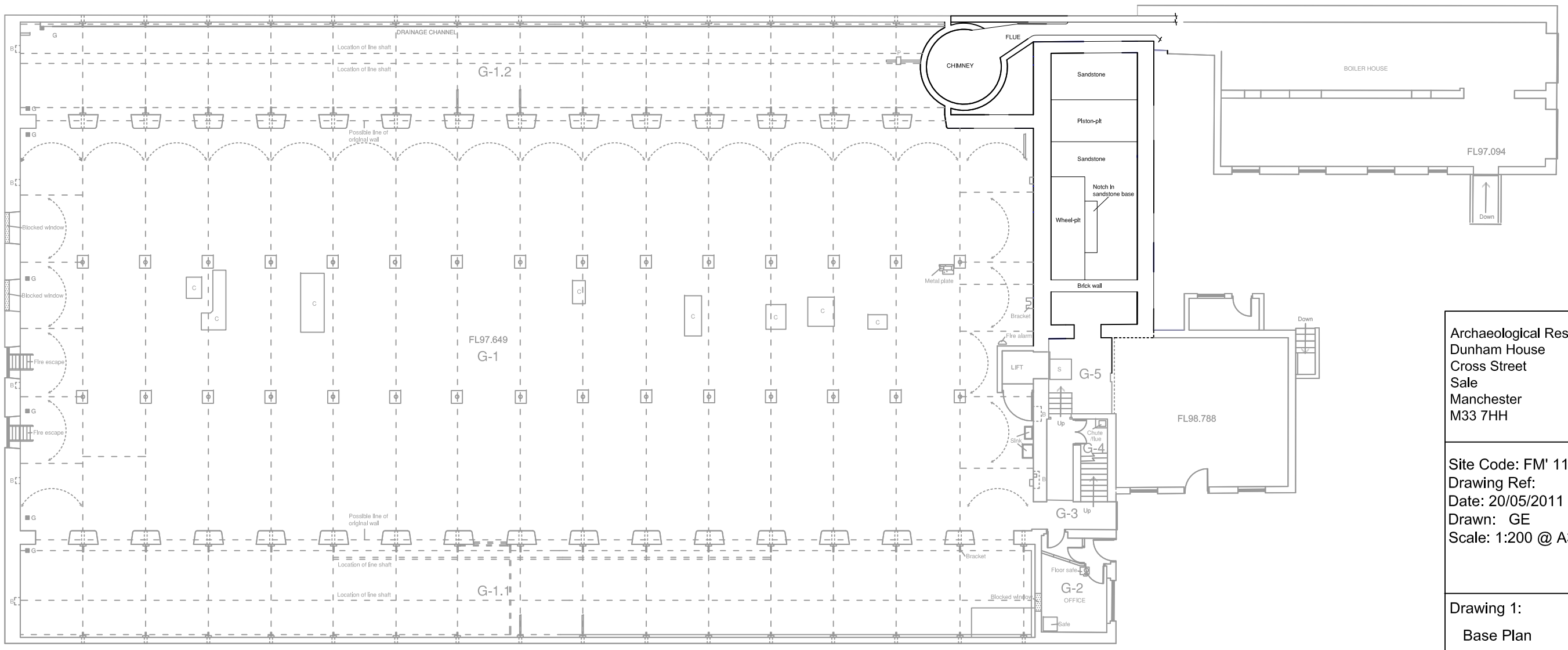

metres 2 0 8

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Dunham House
Cross Street
Sale
Manchester
M33 7HH

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Drawn: GE
Scale: 1:200 @ A3

Drawing 1:

Base Plan

Key:

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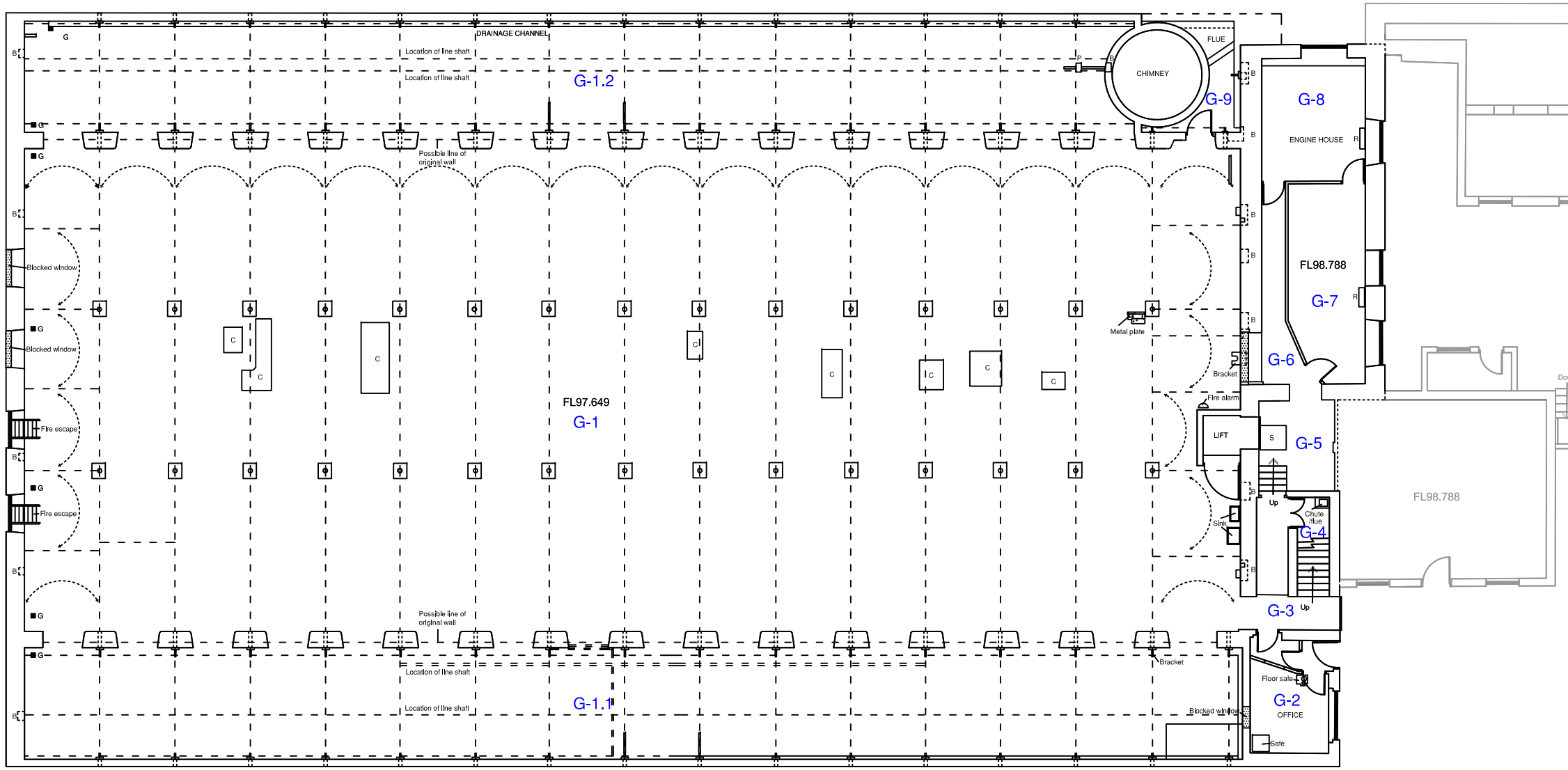

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Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

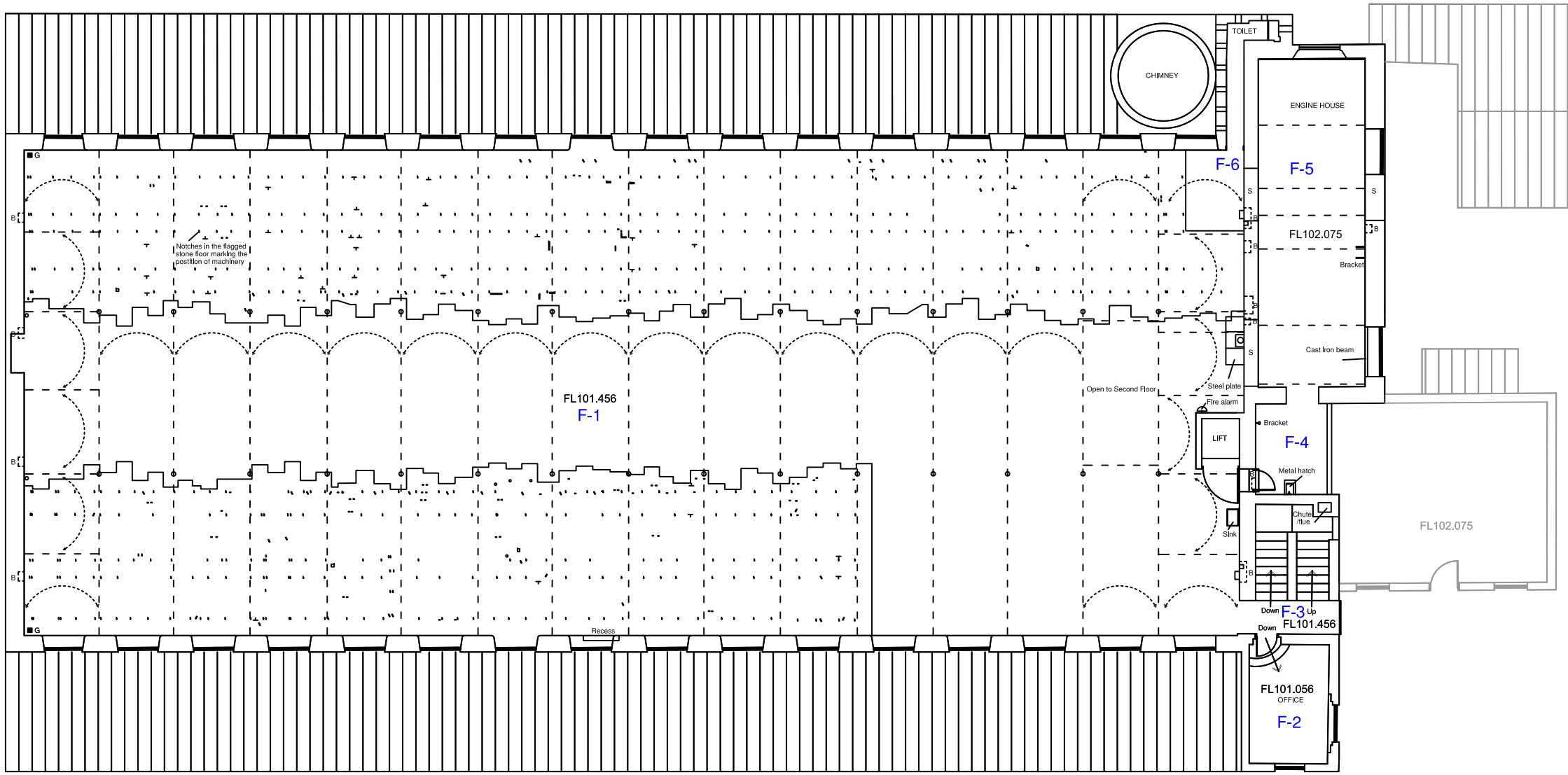
Drawing 2:

Ground Floor Plan

Key:

B	Bearing Box
C	Cement
G	Gutter
P	Pully
R	Radiator
S	Sandstone
☐	Demolished

N



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Manchester
M33 7HH

Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

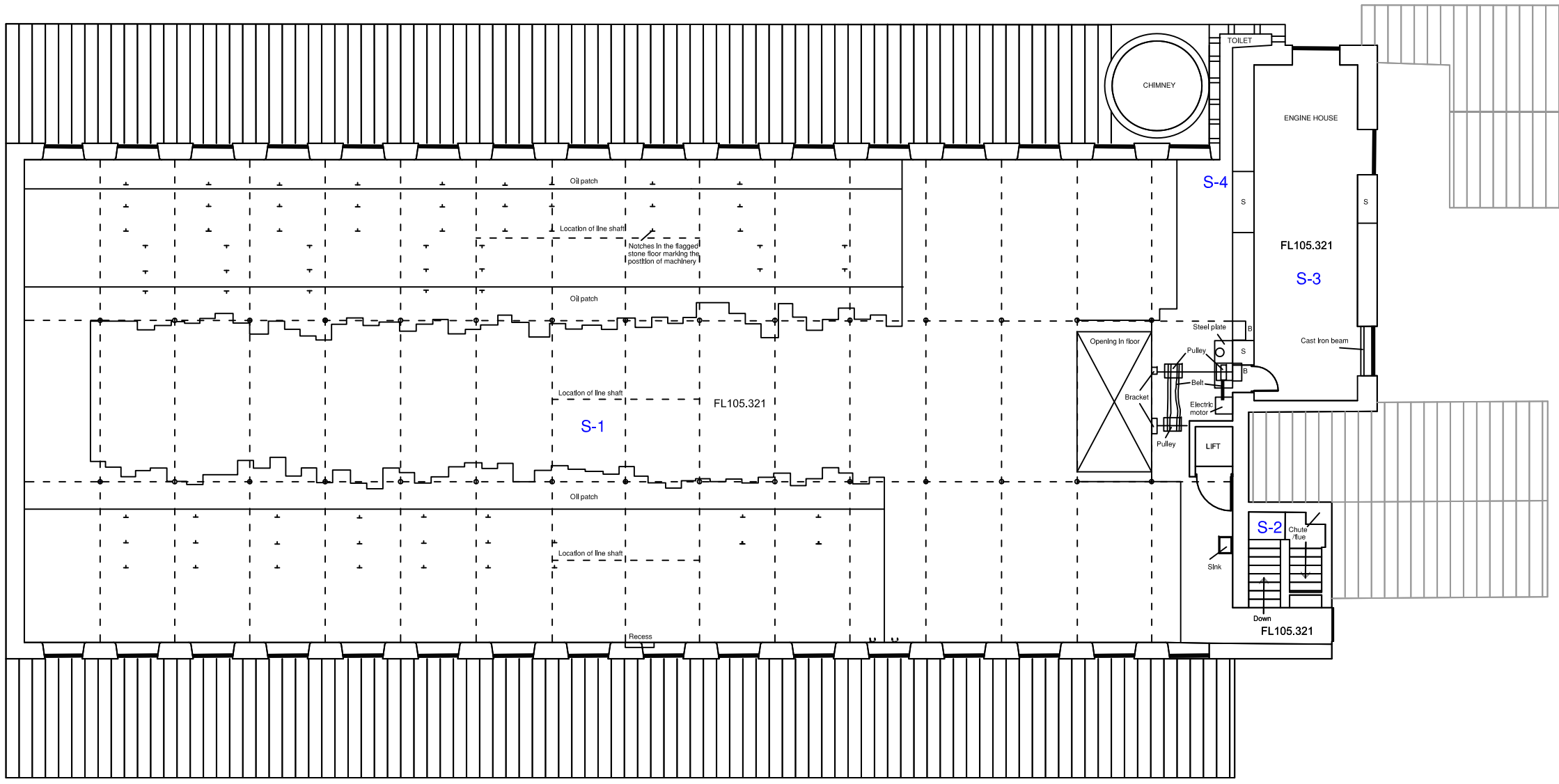
Drawing 3:

First Floor Plan

Key:

B	Bearing Box
G	Gutter
S	Sandstone
☐	Demolished

N



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Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

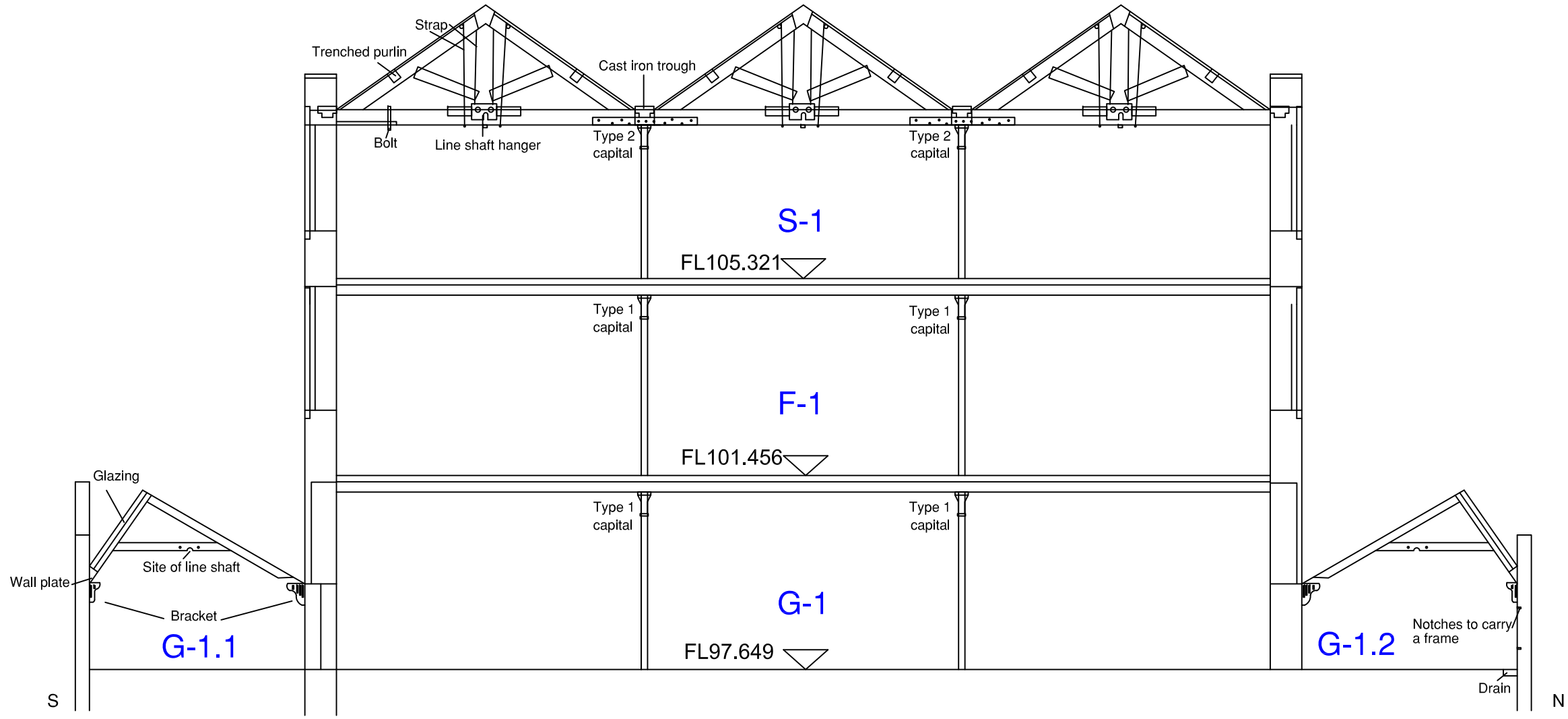
Drawing 4:

Second Floor Plan

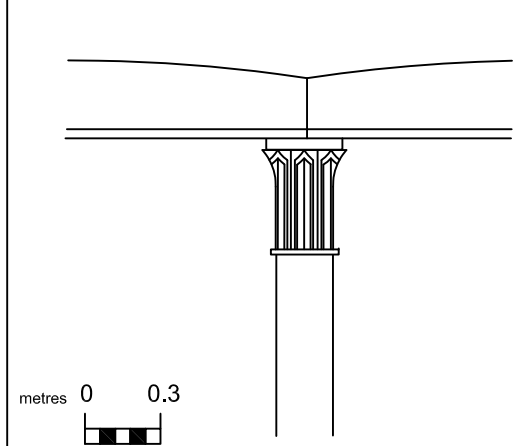
Key:

B	Bearing Box
S	Sandstone
☐	Demolished

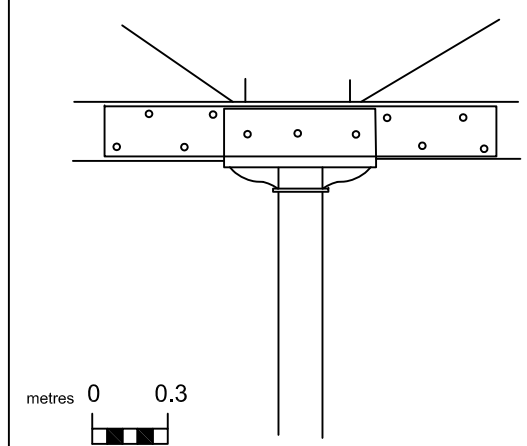
N



1 Fluted foliage capital supporting bowed girder



2 Flanged capital affixed to a cast iron plate



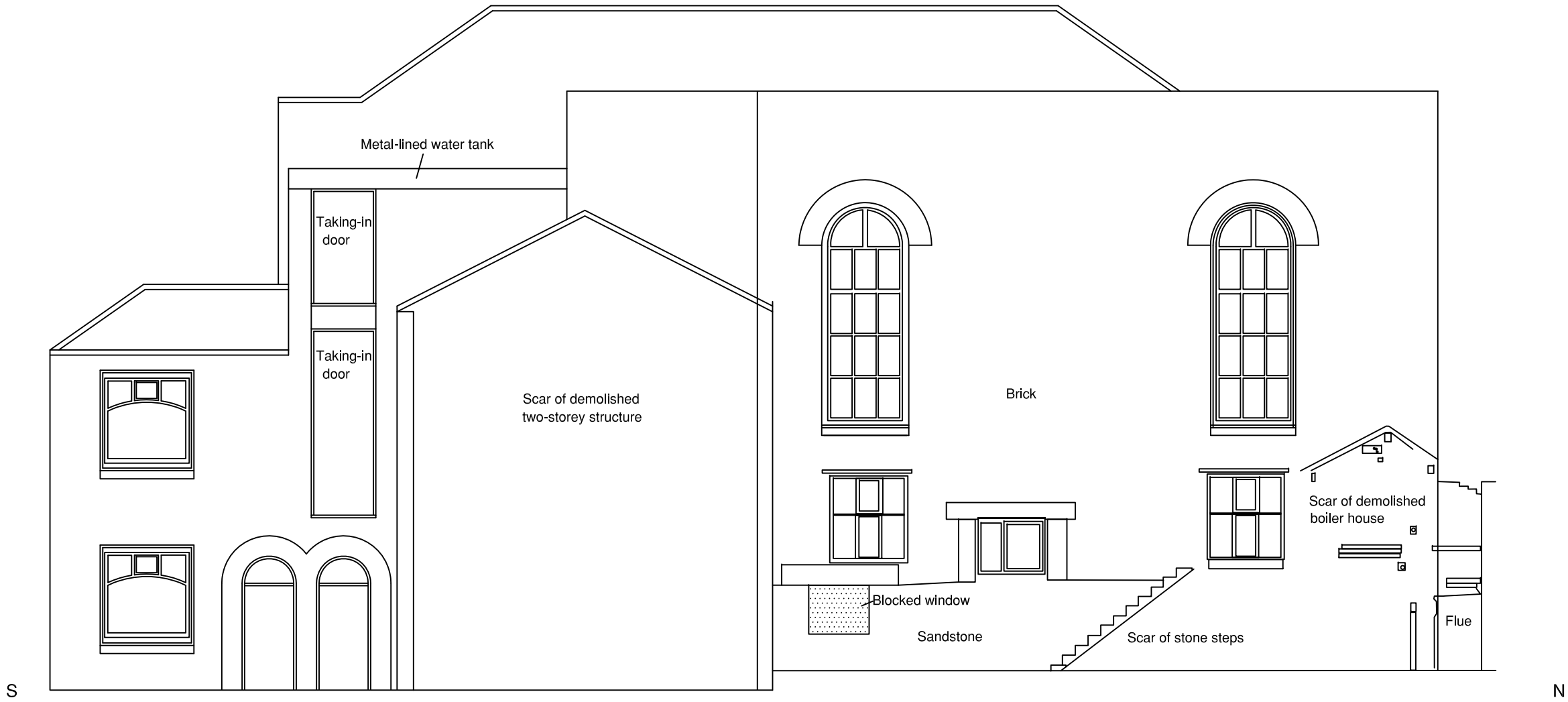
Archaeological Research Services Ltd
Dunham House
Cross Street
Sale
Manchester
M33 7HH

Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:100 @ A3

Drawing 5:

East Facing Section

Key:



metres 1 0 4

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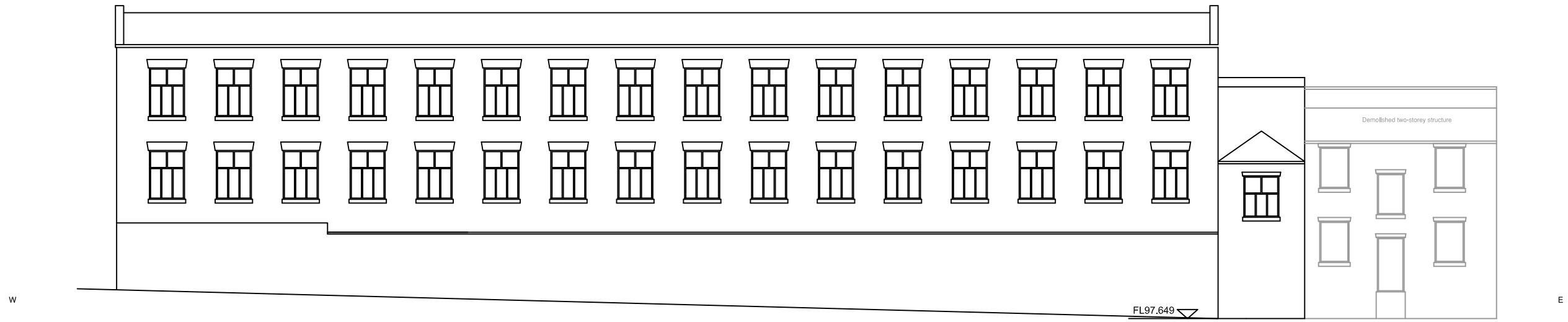
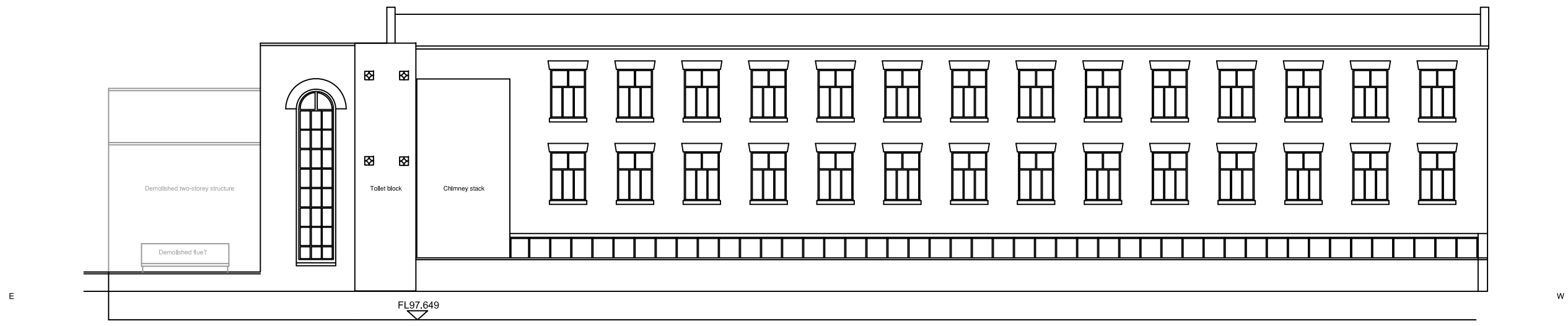
Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:100 @ A3

Drawing 6:

East Elevation

Key:





metres 2 0 8

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Sale
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Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

Drawing 7:

North and South Elevations

Key:

Demolished

APPENDIX II: PHASED PLANS

N

DRAINAGE CHANNEL
Location of line shaft
Location of line shaft
Possible line of original wall
G-1.2
CHIMNEY
FLUE
G-9
G-8
ENGINE HOUSE
BOILER HOUSE
FL97.094
Down
FL98.788
G-7
G-6
Metal plate
Bracket
Fire alarm
LIFT
S
G-5
Down
FL98.788
Up
Chute flue
SINK
G-4
G-3
Up
Blocked window
Blocked window
Fire escape
Fire escape
FL97.649
G-1
Possible line of original wall
Location of line shaft
Location of line shaft
G-1.1
Bracket
Floor safe
Blocked window
G-2
OFFICE
Safe

metres 2 0 8

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M33 7HH

Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

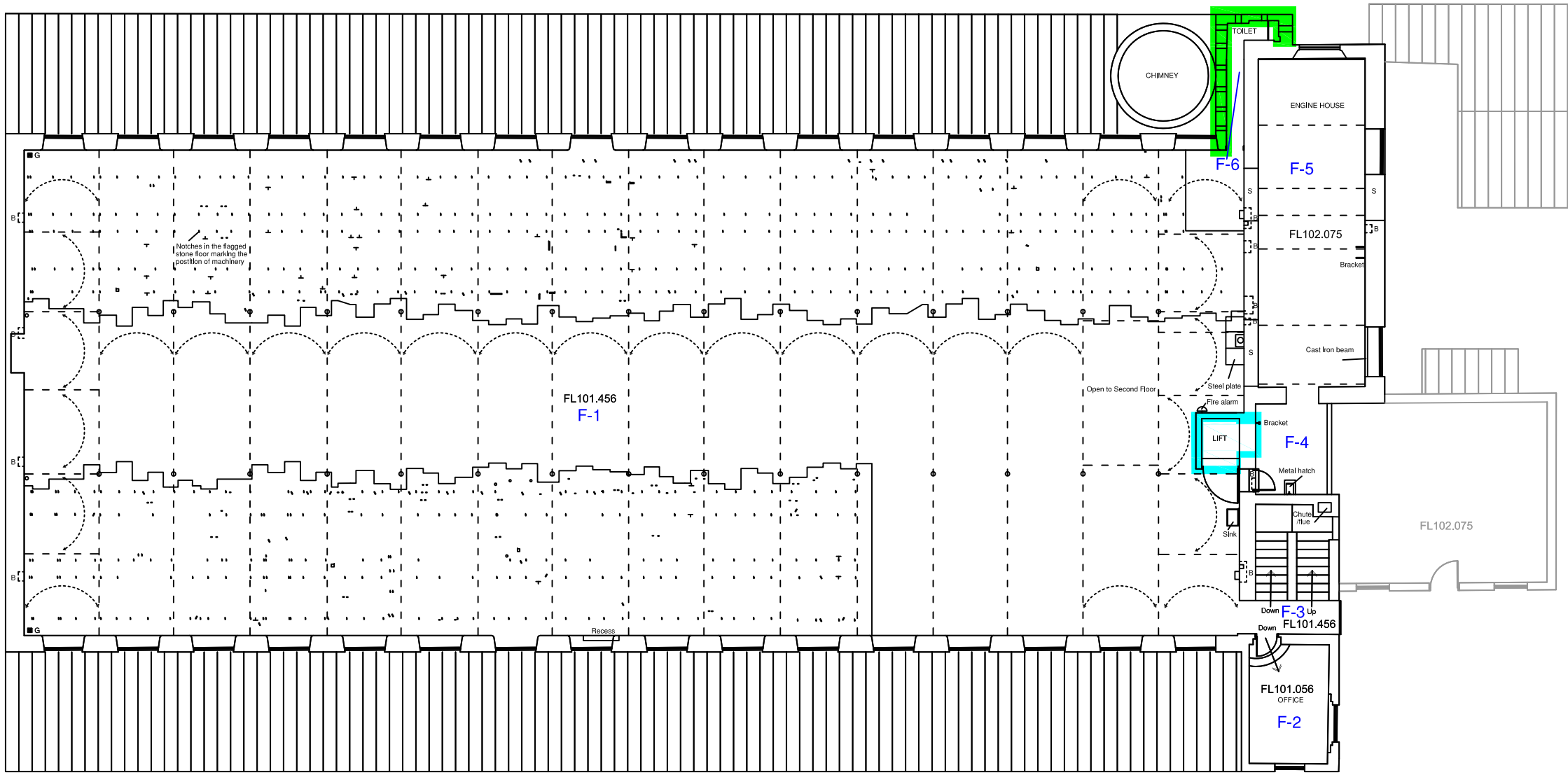
Drawing 8:

Ground Floor Phased Plan

Key:

Phase 1
Phase 2
Phase 3

N



metres 2 0 8

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Manchester
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Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

Drawing 9:

First Floor Phased Plan

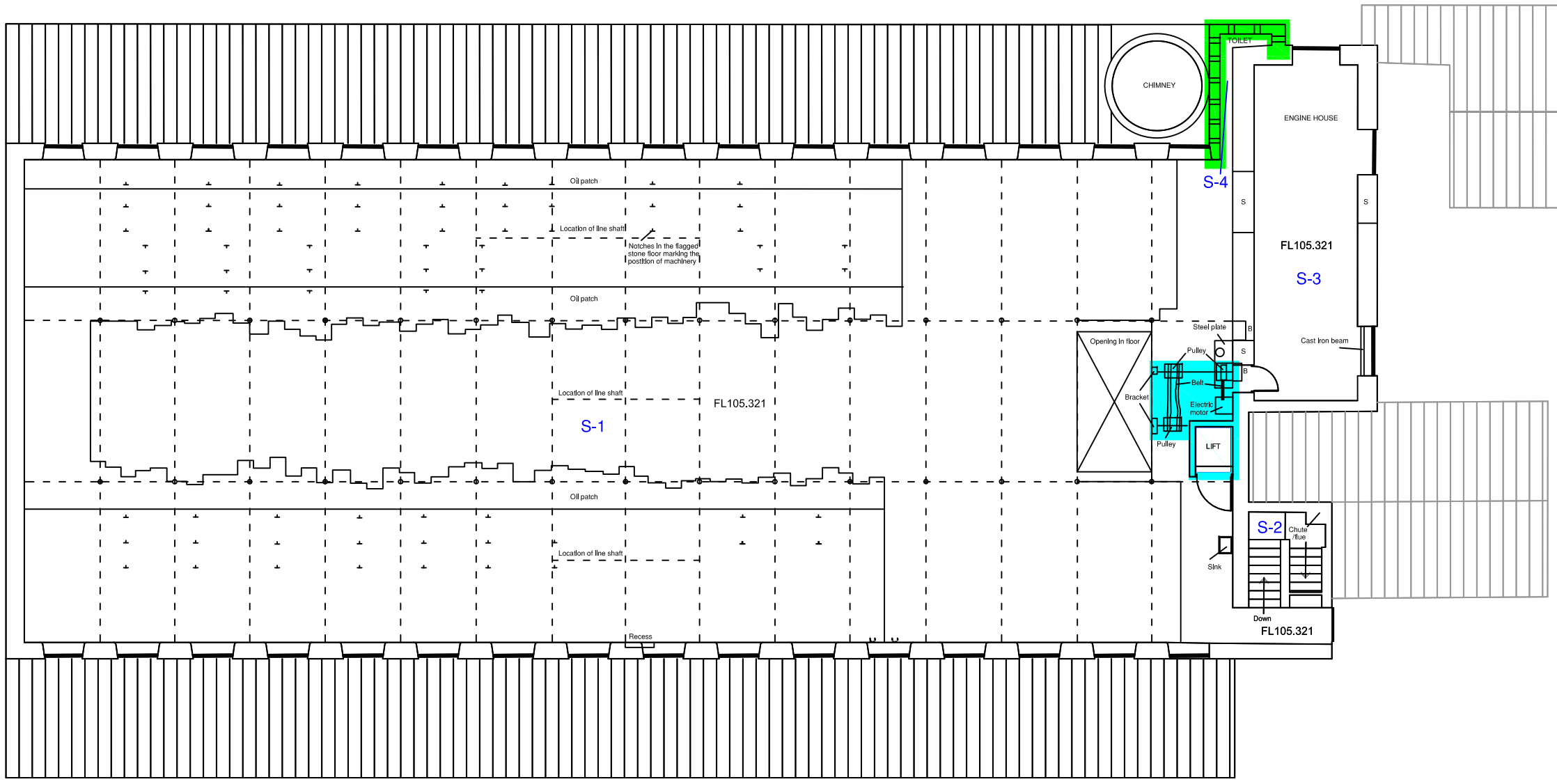
Key:

Phase 1

Phase 2

Phase 3

N



metres 2 0 8

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M33 7HH

Site Code: FM' 11
Drawing Ref:
Date: 11/04/2011
Drawn: GE
Scale: 1:200 @ A3

Drawing 10:

Second Floor Phased Plan

Key:

Phase 1

Phase 2

Phase 3

APPENDIX III: WRITTEN SCHEME OF INVESTIGATION

Archaeological Research Services Ltd

Fern Mill, Ashton-under-Lyne, Tameside
Written Scheme of Investigation for a Desk-Based Assessment and Historic Building Survey

Archaeological Research Services Ltd
Feb 2011

Compiled By:
Karl Taylor
Suite 1
First Floor
Dunham House
Cross Street, Sale
M33 7HH
Tel: 0161 9762544
Fax: 01629 814657
admin@archaeologicalresearchservices.com
www.archaeologicalresearchservices.com

1 Introduction

1.1 A planning application outlining the proposed demolition of an existing mill building known as Fern Mill, located at Davies Street, Ashton-Under-Lyne, Tameside (centred NGR SJ 92609 98314), and replacement with a new build industrial unit (10/01049/FUL) has been approved by Tameside Metropolitan Borough Council (TMBC). This document is a written scheme of investigation confirming the nature of the archaeological investigations proposed by Archaeological Research Services Ltd (ARS Ltd).

1.2 Fern Mill is illustrated on the First Edition Ordnance Survey map of 1848, the core of which is a three-storey brick structure with additional single-storey extensions. The mill was considered in the Greater Manchester Textile Mill Survey but was not selected for subsequent detailed survey and recording. The mill is judged to be of local rather than regional or national significance. The TMBC approved the planning application subject to a number of conditions imposed by the Assistant County Archaeologist at the Greater Manchester Archaeological Unit (GMAU), including the requirement for a programme of archaeological investigation both prior to, and possibly during the proposed redevelopment as outlined in Condition 11 of the Decision Notice;

1.3 "No demolition or development work shall take place until the applicant or their agents or their successors in title have secured the implementation of a programme of archaeological work to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by the Local Planning Authority. The development shall not be occupied until the programme of archaeological work has been completed in accordance with the approved WSI. The WSI shall cover the following:

1. A phased programme and methodology of site investigation and survey to include: a desk-based archaeological assessment; a historic building assessment and survey (EH level 3); and, where merited by the desk-based assessment and/ or historic building survey, further phases of fieldwork (evaluation, excavation, watching brief).

2. A programme for post-fieldwork assessment to include: analysis of the site investigation records and finds, and, production of final report(s).

3. Provision for dissemination of results, possibly to include publication.

4. Provision for archive deposition of the final report(s), finds and records of site investigation.

5. Nomination of a competent person, persons or organisation to undertake the works set-out in the approved WSI."

1.4 This condition has been imposed in order to fulfil the requirements of Planning Policy Statement 5 (PPS5) policy HE12, to record and advance the understanding of the significance of the heritage assets for archival and research purposes (CLG 2010). Any changes to the agreed WSI will be discussed with, and agreed with, the Assistant County Archaeologist at Greater Manchester Archaeological Unit (GMAU). The specifics of Points 2, 3 and 4 are unknown at this stage as they are dependent upon the scope and extent of any further works.

1.5 A risk assessment will be undertaken before commencement of the work and health and safety regulations will be adhered to at all times. Site welfare facilities will be arranged by ARS Ltd unless provided by the client.

1.6 All of the work carried out by ARS Ltd will adhere to the relevant codes of conduct and guidance published by The Institute for Archaeologists (IfA). The work will be carried out by Karl Taylor (AIfA) who has extensive experience of carrying out historic building surveys across the North West of England. He will be assisted in the field by a suitably qualified archaeologist.

2 Scope of Work and Methodology

2.1 Desk-Based Assessment

2.1.1 The first phase of investigation will consist of a desk-based assessment order to provide an historical background to the site and its immediate environment as well as a bibliographical and cartographic analysis. This will also inform the nature and extent of any further works following the building survey. This will establish the site in its local context and will comprise consultation of the following archival sources where relevant;

2.1.2 *The Greater Manchester Historic Environment Record (GMHER):* this is compiled by the Greater Manchester Archaeological Unit (GMAU) and is a comprehensive archive of sites of archaeological significance in the Greater Manchester area

2.1.3 *The National Monuments Record (NMR):* this is the public archive of English Heritage in Swindon, who also manage the national historic environment databases of England's buildings, sites and territorial waters.

2.1.4 *The Greater Manchester Country Record Office (GMCRO):* this holds archive material such as maps and plans, together with other relevant documentary sources such as Trade Directories.

2.1.5 *Tameside Local Studies and Archive Centre, Tameside Central Library:* this is the centralised repository for archive material relating to the nine towns of Tameside.

2.1.6 *Online Sources:* various online sources will also be consulted where applicable.

2.2 Historic Building Survey

2.2.1 Following the desk-based assessment, an historic building survey to English Heritage Level III standard (English Heritage 2006) will be carried out. This level of survey will provide an introductory descriptive account of the building together with a systematic account of the building's origins, development and use. The survey will consist of a written, drawn (measured) and photographic account comprising the following;

- The written record with comprise the precise location of the building together with any statutory and non-statutory designations together with the date of the survey and the location of the archive. A descriptive account of the form, function and phasing of the building. This work will identify all features, fixtures and fittings relevant to the original and subsequent uses of the site.

- The drawn record will consist of measured plans of each of the floors together with drawings of the principal elevations and one cross-section where appropriate. Existing plans and elevations, such as architects or engineers drawings may be suitable for

adaptation and use and their accuracy will be checked prior to use. ARS Ltd will not normally correct inaccuracies but if the drawings are not suitable for use then this will necessitate re-survey, incurring additional cost. The plans will show the form and location of features such as blocked windows and doors and evidence for fixtures of significance such as former machinery. Evidence for power transmission systems will also be illustrated.

- The photographic record will include photographs of the buildings wider aspect together with general views of the external appearance of the buildings. These will normally be oblique but right-angle photographs of elevations containing complex detail will be taken. The overall appearance of internal rooms and circulation areas will be captured, together with detailed views of features of significance. The photographic archive will consist mainly of 35mm monochrome film photography. This will be supplemented with 35mm full frame sensor (36x24mm) digital SLR colour photography at a minimum of 12 megapixels and where appropriate, medium format photography (for example right angle views of principle elevations). A variety of lenses of different focal lengths will be used as well as perspective control or 'shift lenses' where appropriate. All detailed photographs will contain a graduated photographic scale. A photographic register detailing (as a minimum) location and direction of each shot will be compiled. The location and direction of each photograph will also be noted on plans of the building.

2.3 Further Work

2.3.1 Where the deck-based assessment and/or building survey identifies issues relating to the development, history, sequence, function or other aspect of the buildings and site that may be resolved by hidden evidence, this will be noted and will form a specific element for subsequent archaeological works such as evaluation and/or excavation and/or watching brief (either focused on the buildings or below ground). The Assistant County Archaeologist will need to be informed if such works are required and the correct method of investigation will need to be agreed by all parties.

2.3.2 The objective of further work will be to provide a sufficient record of archaeological remains prior to their removal during the course of the development. In this case this will possibly include both structural building elements and below ground remains exposed during the demolition and re-development of the Fern Mill site. The work will therefore be phased.

2.3.3 The duration of the works will be dictated by the length and scope of the development works as well as the nature of the potential archaeology. Consultation between the client, ARS Ltd and the Assistant County Archaeologist will be required at the end of the initial phase of the investigation to ensure that any archaeological remains affected by development works have been adequately recorded. Separate WSIs (in accordance with PPS5) and costings will be issued and agreed by all parties prior to any further phases of archaeological investigation.

3 Monitoring Arrangements

3.1 The Assistant County Archaeologist will monitor the project on behalf of Tameside MBC and will be notified of the commencement date of the fieldwork. ARS Ltd will liaise with him during the course of the work.

3.2 The need for additional work to be undertaken will be discussed with and agreed by the Assistant County Archaeologist whilst the recording work is ongoing. Any alterations to the agreed programme, found to be necessary, will also be discussed and agreed.

4 Reporting

4.1 Following completion of the work ARS Ltd will produce an interim report which will include all aspects of the work undertaken thus far and will include:

- A non-technical summary of the results.
- Introduction and objectives of the archaeological investigations.
- Methodologies.
- An objective summary statement of results of the desk based assessment.
- An interpretive discussion of the results of the building survey, placing them in a local and regional framework and an assessment of the importance of the remains in relation to the criteria in PPS 5. The results of the building survey will be cross-referenced with the results of the desk-based assessment
- Appropriate supporting illustrations, including a site location plan, site plan, buildings plans elevations and sections. As well as a cartographic analysis.
- Recommendations for the extent and scope of any further works.
- References.
- A copy of any brief or specification and OASIS form.

4.2 Copies of the final report will be deposited with the Greater Manchester Historic Environment Record, and will be submitted to the relevant authority within six weeks of the completion of all aspects of the fieldwork.

5 Archive

5.1 A digital, paper and artefactual archive, which will consist of all primary written documents, plans, sections, photographs and electronic data will be submitted to GMAU in a format to be agreed. The final archive will be submitted once all fieldwork, including further works has been completed. Details of the excavation archive will be outlined in any further WSIs as required.

5.2 The Assistant County Archaeologist will be notified on completion of all fieldwork, with a timetable for reporting and archive deposition.

5.3 Written confirmation of the archive transfer arrangements, including a date (confirmed or projected) for the transfer, will be included as part of the final report.

5.4 An OASIS online record http://ads.ahds.ac.uk/project/oasis/ will be initiated for the desk-based-assessment and building recording phase of this project, and any further work will be added to this record. Key fields will be completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .PDF version of the entire report (a paper copy will also be included within the archive).

5.5 The Assistant County Archaeologist will be notified of the final deposition of the archive.

6 Changes to Methodology or Work Programme

6.1 Changes to the approved methodology or programme of works will only be made with the prior written approval of the Assistant County Archaeologist.

7 Publication

7.1 Following the completion of all the work including any further works, a suitable programme and timetable for publication and dissemination will be discussed and agreed upon by all stakeholders.

8 References

Department for Communities and Local Government (CLG). 2010. *Planning Policy Statement 5: Planning for the Historic Environment*. London, The Stationery Office.

English Heritage 2006. *Understanding Historic Buildings* A Guide to Good Recording Practice. English Heritage.

Institute for Archaeologists (IfA). 2000. *Code of Conduct*. Reading, Institute for Archaeologists

Institute for Archaeologists (IfA). 1994 (revised 2008). *Standard and Guidance for Archaeological Desk-Based Assessment*. Reading, Institute for Archaeologists

Institute for Archaeologists (IfA). 1996 (revised 2008). *Standard and Guidance for the Archaeological Investigation and Recording of Standing Structures*. Reading, Institute for Archaeologists

APPENDIX IV: CONSULTATION RESPONSE

Mr I. Berry
Planning
Tameside MBC
Council Offices
Wellington Road
Ashton Under Lyne
OL6 6DL

Your Ref: 10/01049/FUL
Date: 14th January 2011

Dear Mr Berry,

Planning Application No.: 10/01049/FUL Proposed Demolition of Existing Mill Building and Replacement With Newbuild Industrial Unit - Fern Mill, Davies Street, Ashton-Under-Lyne, Tameside OL7 0DR

The application concerns the demolition of Fern Mill, built in 1856 Abel and James Buckley as an extension of their Ryecroft Cotton Mills complex. There are entries on the Historic Environment Record for both Fern Mill (HER3339.1.0) and Ryecroft Mill (3340.1.0). Fern Mill was considered in the Greater Manchester Textile Mill Survey (1985), being recorded in the initial survey but was not selected for subsequent detailed survey and recording.

PPS5 HE6 policy HE 6.1 clearly states,

> "Local planning authorities should require an applicant to provide a description of the significance of the heritage assets affected and the contribution of their setting to that significance"
>
> and
>
> "As a minimum the relevant historic environment record should have been consulted and the heritage assets themselves should have been assessed"
>
> and
>
> "Where an application site includes, or is considered to have the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation".

The application has been submitted without any formal heritage assessment of the site in terms of known or potential heritage assets, their significance or the impact of the proposals upon that significance. There has been no desk-based

assessment or field evaluation relating to the archaeological interest. GMAU can confirm that no approach has been made either for HER information or for expert advice regarding known, or the potential for heritage assets to be impacted upon by the proposed development. It seems self evident that. if implemented, the proposals for redevelopment will severely reduce or damage the significance of the heritage asset. GMAU accepts however that the assessment undertaken as part of the Greater Manchester Textile Mill Survey recognised that the mill was of local, rather than of regional or national significance. It is also relevant that the building was the last phase in the expansion of the Ryecroft Cotton Mill complex and that the application does not include the complex as a whole.

Having balanced the loss of or damage to the various known or potential heritage assets with the perceived public benefits of redeveloping the site, the local planning authority may be minded to grant planning consent.

PPS 5, policy HE12.3, states:

> "Where the loss of the whole or material part of a heritage asset's significance is justified, local planning authorities should require the developer to record and advance understanding of the significance of the heritage asset before it is lost, using planning conditions or obligations as appropriate".

GMAU recommends that, as a condition of consent, a programme of archaeological work be undertaken. This would commence prior to demolition with a desk-based archaeological assessment (DBA) and historic building survey. The survey of the upstanding mill buildings would be based on an English Heritage level 3 survey. This would include the production of measured floor plans, elevations and through-sections, a detailed written description and interpretation of the building detailing phases of development, evidence for the power arrangements, surviving fixtures, fittings and blocked power conduits. This would be supported by detailed, annotated and scaled monochrome photographic record including medium format images of the building's elevations. Following the DBA and the historic building survey demolition could proceed, but this may be followed by further fieldwork. Such fieldwork would depend in no small part upon the results of the DBA and the building survey but could embrace targeted archaeological evaluation and excavation or simply an intra-demolition watching brief. The programme of archaeological work would however include a phase of post-excavation analysis, report writing, deposition of the site archive and potentially publication.

This programme of work is to be funded by the developer and should be secured by the following negative planning condition:

No demolition or development shall take place until the applicant or their agents or their successors in title have secured the implementation of a programme of archaeological work to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by the Local Planning Authority. The development shall not be occupied until the programme of archaeological work has been completed in

accordance with the approved WSI. The WSI shall cover the following:

1. **A phased programme and methodology of site investigation and survey to include:**
   - **A desk-based archaeological assessment**
   - **A historic building assessment and survey (EH level 3)**
   - **Where merited by the desk-based assessment and/ or historic building survey, further phases of fieldwork (evaluation, excavation, watching brief)**
2. **A programme for post-fieldwork assessment to include:**
   - **analysis of the site investigation records and finds**
   - **production of final report(s)**
3. **Provision for dissemination of results, possibly to include publication**
4. **Provision for archive deposition of the final report(s), finds and records of site investigation**
5. **Nomination of a competent person, persons or organisation to undertake the works set-out in the approved WSI.**

Reason: In accordance with PPS5 policy HE12, to record and advance the understanding of the significance of the heritage assets for archival and research purposes.

The programme of work should be undertaken by a suitably qualified and experienced archaeological contractor, funded by the applicant, to a brief supplied by GMAU who would also monitor the implementation of the survey on behalf of Tameside MBC.

Yours faithfully

Andrew Myers
(Assistant County Archaeologist)