Larch Mill,
Bleasdale Street,
Royton,
Greater
Manchester

Archaeological
Evaluation Report

Oxford Archaeology North

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Morris Homes Ltd

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SUMMARY

In June 2014, Oxford Archaeology North (OA North) were commissioned by CgMs Consulting, acting on behalf of Morris Homes Limited, to carry out a programme of archaeological evaluation at the former Shiloh Healthcare Warehouse on Bleasdale Street, Royton (centred on SD 91948 08155). The evaluation was required to satisfy a condition attached to planning consent for a proposed redevelopment of the site (Planning Reference PA/334685/13).

Four evaluation trenches were placed across the proposed development site. These were targeted on the footprint of the steam-power plant associated with the former Larch Mill. The mill, known originally as Highfield Mill, was erected in 1876-7 to the designs of Edward Potts, an eminent local mill architect. The mill was eventually renamed Larch Mill in 1932, when the production processes it housed were changed from the spinning of fine cotton yarn to condenser spinning. The mill closed in 1962, and was used subsequently as a food warehouse and distribution centre. It was ultimately demolished in 1989.

The evaluation trenches produced mixed results, but valuable information pertaining to the steam-raising plant was recovered from one of the excavated trenches. This demonstrated that the steam for the mill had been raised in two Cornish-type boilers, the foundation beds for which survived largely intact. Similarly, elements of the foundations for the mill chimney also survived in-situ, occupying the position shown on the sequence of historical Ordnance Survey maps for the site. A trench was also placed across the footprint of the engine house, although this revealed that all buried remains had been removed entirely, presumably during the redevelopment of the site during the second half of the twentieth century.

The archaeological evaluation has demonstrated that the study area has some potential for the survival of buried archaeological remains, namely the foundations of two Cornish-type boilers and the mill chimney. It is not considered that these remains are of national importance that would necessitate preservation in-situ. Whilst the remains encountered during the evaluation are considered to be of local significance in archaeological terms, an appropriate record has been compiled during the evaluation programme. This record will mitigate the damage or destruction of the buried remains during the groundworks necessitated by the proposed development.

The results obtained from the evaluation have indicated that there is little potential for further archaeological remains of interest to survive beyond the limits of the trenches that have been excavated to date. Any unrecorded remains that may survive are unlikely to have significant potential to inform any of the initiatives for archaeological research of the industrial and modern periods stated in the current Archaeological Research Framework for North West England, and the archaeological impact of development on these remains will therefore be negligible. It is thus concluded that there is little merit in undertaking any further archaeological investigation in advance of, or during, the proposed development programme.
ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) is grateful to Myk Flitcroft of CgMs Consulting for commissioning and supporting the project on behalf of Morris Homes Ltd. OA North is also grateful to Scott Grady and Richard Hall of Morris Homes Ltd for logistical support. Thanks are also expressed to Dr Andrew Myers of the Greater Manchester Archaeological Advisory Service (GMAAS) for his advice and guidance.

The evaluation was carried out by Chris Wild, assisted by Andy Phelps and Aidan Parker. The report was written by Andy Phelps and Ian Miller, and the illustrations were prepared by Mark Tidmarsh. The report was edited by Ian Miller, who was also responsible for project management.
1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 Oldham Council has granted Morris Home Ltd planning consent to redevelop the former Shiloh Healthcare Warehouse on Bleasdale Street, Royton (Planning Reference PA/334685/13). The development proposals allow for the demolition of the existing warehouse, and the construction of 32 new residential properties. The proposed development will necessitate considerable earth-moving works, which will inevitably have a negative impact on any buried archaeological remains.

1.1.2 The archaeological potential of the site was highlighted in a desk-based assessment produced by CgMs Consulting. This identified the potential of the site to contain buried remains of a cotton mill dating to the mid-1870s. In particular, it was concluded that any surviving buried remains of the steam-power plant could be of archaeological interest, and would merit intrusive archaeological investigation in advance of development (CgMs 2014).

1.1.3 In the light of the conclusions drawn from the desk-based assessment, the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Oldham Council, recommended that a programme of intrusive archaeological investigation was carried out in advance of development. In the first instance, it was recommended that a scheme of evaluation trenching was implemented, which was intended to determine the extent, depth, character and relative significance of any buried archaeological remains that survive, in line with the National Planning Policy Framework (NPPF), Policy 12 Paragraphs 128-9.

1.1.4 In line with this advice, Oldham Council attached a condition to planning consent (Condition 13) that required a scheme of archaeological investigation in line with GMAAS’ recommendation. The precise scope and extent of these required works were defined in a Written Scheme of Investigation, devised by CgMs Consulting (Appendix 1). In the first instance, this allowed for the excavation of three evaluation trenches that were to be placed across the footprint of the steam-power plant for the former textile mill. Following the formal approval of this Written Scheme of Investigation by GMAAS in June 2014, Oxford Archaeology North (OA North) was commissioned by CgMs Consulting to undertake the archaeological evaluation.

1.1.5 The fieldwork was undertaken in accordance with the approved Written Scheme of Investigation during June 2014. The results obtained from the evaluation are presented in this report.
1.2 SITE LOCATION AND GEOLOGY

1.2.1 The study area is situated to the north of Bleasdale Street in Royton, which lies in the Metropolitan Borough of Oldham in Greater Manchester (Fig 1). The site is bound to the north by Park Lane, to the east by a modern housing development, to the west by modern residential and commercial properties, and to the south by Bleasdale Street (centred on SD 91948 08155). At the time of the evaluation, the site was occupied by a modern steel-framed block-clad warehouse, with the evaluation trenches located across the loading bay and external car park to the south (Plate 1).

1.2.2 Royton lies within the undulating foothills to the west of the Pennines in a shallow valley some seven and a half miles from the centre of Manchester. The land falls gently from east to west.

1.2.3 The underlying solid geology consists of inter-bedded mudstone, siltstone and sandstone of the Pennine Lower Coal Measures. The overlying drift geology is composed of superficial glaciofluvial deposits (mapapps.bgs.ac.uk/geologyofbritain/).

Plate 1: Recent aerial view across the study area
2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 The approved Written Scheme of Investigation (Appendix 1) allowed for the excavation of three targeted evaluation trenches. The trenches were targeted on the footprint of the engine house, boiler house and associated chimney, although circumstances on site necessitated the sub-division of Trench 1 into two separate trenches to avoid the western wall of a canopy for the loading bay associated with the modern warehouse. In addition, the identification of the boiler house in Trench 1 prompted the slight relocation of Trenches 2 and 3 in order to identify the southern wall of this building, and ensure the best chance of determining the location of the chimney.

2.1.2 The fieldwork was undertaken in June 2014, with all archaeological work complying with the relevant standards and procedures provided by the Institute for Archaeologists.

2.2 EVALUATION TRENCHING

2.2.1 The trenches were located across the former loading pay/car-parking area with a reinforced concrete surface, which required breaking with a mechanical breaker. A toothed bucket was then employed to remove the concrete down to a modern Type-3 levelling layer. The majority of the overburden deposits comprised demolition rubble, and was easily removed with a toothless ditching bucket. The machining carefully defined the extent of any surviving walls, foundations and other remains, after which all excavation was undertaken manually. The floor and sides of each trench were cleaned and recorded in an appropriate manner.

2.2.2 All information was recorded stratigraphically with accompanying documentation (plans, sections and digital photographs, both of individual contexts and overall site shots from standard view points). Photography was undertaken using a digital 35mm SLR camera using appropriate metric scales.

2.2.3 The precise location of the trenches, and the position of all archaeological structures encountered, was surveyed by GPS. This process generated scaled plans and sections within AutoCAD, which were then subject to manual survey enhancement. The drawings were generated at an accuracy appropriate for 1:20 scale, and all information was tied in to Ordnance Datum.

2.3 FINDS

2.3.1 Artefacts: no finds were recovered from the excavated trenches. Similarly, none of the excavated deposits had any potential for environmental sampling.
2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the project design, and in accordance with the current IfA and English Heritage guidelines (English Heritage 2008). The paper and digital archive will be deposited with Gallery Oldham on completion of the project.
3. BACKGROUND

3.1 **HISTORICAL BACKGROUND**

3.1.1 The historical background to the study area was considered through a programme of documentary study undertaken by CgMs. This collated available information held in the Greater Manchester Historic Environment Record, Oldham Archives and Local Studies, historic map sources, and geotechnical borehole information for the study site. The following section focuses specifically on the development of the textile mill that occupied the site from the mid-1870s.

3.1.2 Larch Mill was known originally as Highfield Mill, and was built by Robert Mellor in 1876-7 to the design of Edward Potts. Born in 1839 in Bury, Edward Potts moved to Oldham in the 1860s, and was taken into partnership with the eminent architect George Woodhouse. Potts’ first mill design was Bedford Mill in Oldham in 1871, and he was later responsible for designing the Prince of Wales Mill of 1875, described as ‘one of the most complete and well-arranged mills in Oldham’. Highfield Mill was designed in the wake of Potts’ success with the Prince of Wales Mill, and comprised a three-storey spinning block with associated steam-power plant, which included a 220hp engine supplied by J Musgrave & Son of Bolton (Gurr and Hunt 1998, 84). The layout of the original mill is captured on a Building Control Plan of 1877 (UDR9/136A), which annotates the spinning block, engine and boiler houses, chimney and a ‘shed’, together with an office block and two lodges (Plate 2).
3.1.3 The site is annotated as Highfield Mill on the Ordnance Survey 25″:1 mile map of 1891 (Plate 3). This shows a broadly similar layout to that depicted on the Building Control Plan of 1877, with the steam-power plant focused on the southern side of the spinning block, and a slightly larger office on the northern side. The Ordnance Survey only recorded a single lodge, rather than the two shown on the Building Control Plan.
The mill appears to have stopped in 1903, as it was purchased by Park Mill (Royton) Ltd in 1904, having lain empty for 12 months (Gurr and Hunt 1998, 84). It was re-named to Park Mill at this time. It is identified as such on a photograph taken in c 1918, which shows the engine house with its characteristic tall arched widows having been the same height as the spinning block (Plate 4). The photograph also shows No 2 Mill, which was added to the site by the Park Mills (Royton) Ltd in 1912. The architect for this second mill was Arthur Turner, and the steam-power plant was supplied by Yates & Thom of Blackburn.

Two small towers for bobbin conveyors, again designed by Arthur Turner, were added to the north and south elevations of the spinning block in 1932. A Building Control Plan deposited with Royton Urban District Council as part of these planned small additions provides a block plan of the component buildings at this date (Plate 5). Comparison of this plan with the Ordnance Survey map of 1891 shows the footprint of the mill to have been largely unaltered.
Larch Mill, Bleasdale Street, Royton: Archaeological Evaluation

Plate 4: Photograph of Park Mills in c 1918

Plate 5: Building Control Plan of 1932
3.1.6 It was also in 1932 that the mill was converted to condenser spinning, a branch of the cotton trade more frequently associated with the Rossendale area of Lancashire. The change to condenser spinning coincided with a change in the name of the mill complex to Larch Mill. It is referred to as Larch Mill on a Building Control Plan of 1936, which detailed proposals for a new single-storey card shed against the western elevation of the spinning block (UDR9/3342A).

3.1.7 The mill ceased production in 1962, and was used subsequently as a food warehouse and distribution centre. In 1989, the mill was purchased by Shiloh Spinners Ltd and demolished.
4. EVALUATION RESULTS

4.1 INTRODUCTION

4.1.1 This section summarises the results obtained from each of the excavated trenches. The trenches and walls were all aligned approximately north-west/south-east, but in the following descriptions this has simplified to north/south. The western half of Trench 1 was located as accurately as possible, adhering to the Written Scheme of Investigation (Appendix I) and the information collated in the documentary study, although a brick wall supporting the canopy of the present warehouse interrupted the continuation of this trench to the east. Trench 1 was therefore subdivided to create an additional trench (Trench 4), to the east, but still within the footprint of the original trench. The positive identification of the boiler house in Trench 1 prompted the repositioning of Trench 2 in order to maximise the chances of locating the chimney. Trench 3 was placed slightly further to the west than originally planned to avoid a modern drain (Fig 2).

4.2 TRENCH 1

4.2.1 Trench 1 measured 9.14 x 8.91m, and was excavated to a maximum depth of 1.3m (Plate 6). It was aligned north-east/south-west, and was intended to identify any remains of the engine house as depicted upon the Ordnance Survey map of 1891 (Fig 3).

4.2.2 Natural yellow sands were encountered across the north-western part of the trench at a depth of approximately 1m below the modern ground surface. This was overlain by a layer of rubble, which included cobbles in a grey sandy matrix.

4.2.3 A red brick wall, probably representing the partition wall between the engine and boiler houses, extended eastwards from the western edge of the trench for a length of 7.61m (Fig 3). The fabric of this wall comprised hand-made bricks laid in a stretcher bond using a lime-based mortar, consistent with a mid-nineteenth-century construction date. The base of the wall was not uncovered, but the presence of three projecting plinth courses suggested it probably did not continue much deeper.

4.2.4 This wall was bonded to a second wall, which defined the western limits of the boiler house. Its western elevation was exposed in the western section of the trench, and arranged at right angles to the north wall (Fig 4). The top of the wall extended to the west beyond the limits of the trench, but was revealed at the eastern end of Trench 2. It had a length of 8.91m and a width of 0.36m, but its base was not revealed. It had been constructed in the same manner as the first wall, but towards its southern end an iron I-section beam had been incorporated into its length (Plate 7). The purpose of this beam was not entirely clear, but it may have served as a lintel for some form of opening that
was inserted following the original construction, and which had been blocked subsequently in brick.

Plate 6: Northern elevation of north wall of the boiler house, showing projecting plinth foundation courses. Undisturbed natural sands visible to right

Plate 7: West wall of the boiler house, facing north-west
4.2.5 Two bays formed of heavily sooted refractory brick were revealed in the south-eastern corner of the trench. Each bay comprised three walls, standing to a height of up to 1.2m, and arranged to form a rectangle, open to the east and measuring 1.68m across internally by 3.36m in length (Fig 4). At the western end, the terminal walls were 0.27m wide, and each had evidence for a narrow spine wall projecting eastwards into the centre of the bay. The spine wall of the northern bay had been lost, but that to the south was partially exposed during excavation and appeared to survive in part. To the north, the wall of the northern bay abutted the northern wall of the boiler house and carried a row of brick boiler supports along its upper internal edge (Plate 8). A sooted channel formed between the boiler supports and the north western wall of the boiler house presumably served as a side flue. The space between the northern and southern boiler bays had been badly disturbed by the insertion of a modern drain, but bull-nose bricks at the south-western corner of the northern bay, and again on the opposing corner of the southern bay, suggested that this space also held a side flue. The base of the southern bay was not exposed during the evaluation, but the flame bed in the northern bay had a well-preserved sooted brick floor (Plate 8).

4.2.6 Although heavily truncated by later activity, it was evident from the presence of an apparently in-situ brick-built boiler support protruding from the eastern section that the boiler bays had continued beyond the limits of the excavated trench on that side.

Plate 8: Northern boiler bay, facing west, with brick boiler supports along the edge of the northern wall. 1m scale
4.2.7 To the west of the boiler bays, a line of refectory bricks laid in stretcher bond formed a narrow wall just one brick wide (Plate 9). It was aligned north/south, terminating to the south with a bull-nose brick. The opposing end may have originally abutted the southern elevation of the northern wall of the boiler house, but this relationship had been lost due to later disturbance.

4.2.8 A small area of brick flooring was recorded to the west of the southern end of this narrow wall. The floor measured just 1.12 x 0.62m, and the exposed section turned west at its southern end, indicating the presence of a corner. The remaining brick floor showed traces of a lime plaster finish.

4.2.9 Both boiler bays and the area to their west were sealed by a deposit of loose rubble, which included a large quantity of brick and crushed lime mortar. This had almost certainly derived from the demolition of the boiler house in the mid-twentieth century.

4.2.10 The foundations of a later brick wall, aligned north/south and placed on a raft of concrete, were exposed in the south-western corner of the trench (Plate 10). This wall had been cut through the rubble deposit that sealed the boiler bays, indicating that it post-dated the demolition of the boiler house. This wall was 0.35m wide, abutting the foundations of the north wall of the boiler house. It was constructed of a hard, light orange, machine-made brick, laid in a concrete mortar, consistent with a mid-twentieth-century construction date. The position of this wall corresponded with the footprint of a building depicted on late twentieth-century mapping.
4.3 TRENCH 2

4.3.1 Trench 2 extended west from the southern end of the western edge of Trench 1 (Fig 2). It measured 9.96 x 2.6m, and was intended to locate the base of the chimney. It was excavated to a maximum depth of 1.6m, with natural sands attained at 158.3m aOD.

4.3.2 A red brick wall was revealed along the southern edge of the trench from the western wall of the boiler house to which it was bonded (Plate 11). This wall was constructed of hand-made bricks, laid in a predominantly stretcher bond using lime-based mortar. It had a total length of 8.36m, and, where exposed, a height of 1.08m, although its foundation was not revealed. The wall curved across the trench, terminating to the west where it was bonded to a substantial brick-built structure, which was probably the base of the chimney.

4.3.3 This wall was 0.36m thick and projected to the north beyond the limit of the excavation (Fig 4). To the south, it had a single skin of heavily fired refractory brick, with a thick coating of soot. A sondage at the western end of the trench revealed a second wall to the south of the first and sharing its curved alignment (Fig 4).

4.3.4 The visible portion of this wall measured 2.3m long, but was only revealed in plan at the base of the trench. It consisted of a single internal skin of stretchers with a bed of lime-based mortar to the south. At its western end, the wall turned southwards and continued beyond the limits of the trench. The space between the two walls was filled with a sooty demolition rubble, the base of which was not reached.
Plate 11: View south-west across Trench 2, showing curving brick wall. 1m scale

Plate 12: Southern elevation of curving brick wall in Trench 2, with opposing wall in foreground, facing north.
4.4 **TRENCH 3**

4.4.1 Trench 3 extended south from the centre of the southern edge of Trench 1 (Fig 2). It measured $7.49 \times 2.61\text{m}$, and was excavated to a maximum depth of $1.6\text{m}$ at the southern end. The trench was targeted on the southern wall of the boiler house, as shown on the sequence of historical mapping.

4.4.2 Natural sands were encountered at a depth of $c 1.4\text{m}$ at the southern end of the trench. These were overlain by what appeared to be a layer of dark brown soil (Plate 13). This may have represented a buried soil horizon relating to the agricultural use of the land prior to the construction of the mill, but the depth of the excavation prevented close inspection for health and safety reasons. A layer of re-deposited natural sand lay above this soil horizon, and continued to the modern levelling layer beneath the concrete.

![Plate 13: Section through southern end of Trench 3, showing possible buried soil over natural sands and re-deposited natural sand above. 1m scale](image)

4.4.3 At the northern end of the trench, the upper surviving course of a brick wall was exposed immediately beneath the levelling material for the modern reinforced concrete surface (Plates 14 and 15). It extended across the full width of the trench on an east/west alignment, and appeared to be the southern wall of the southern boiler bay. It had a width of $0.39\text{m}$, and was exposed for a length of $1.18\text{m}$, with its northern elevation identified in the adjacent southern section of Trench 1. The remains of a wall of hand-made red brick, laid in a lime-based mortar using an English bond was recorded in this section, although it continued below the limits of excavation.
Plate 14: Southern boiler bay, looking west with northern elevation of southern wall of boiler bay to left and Trench 3 extending south beyond it

Plate 15: Trench 3, looking west, 1m scales
Just to the south of this wall a second wall, probably representing the southern wall of the boiler house, was recorded in plan. This wall was aligned parallel to the southern wall of the southern boiler bay, and was of comparable width (Fig 4). It was also constructed of hand-made bricks using lime-based mortar, and was topped along its north half by two rows of brick, a single course high and resting upon the wall below. It extending beyond the limits of the excavated trench to both the east and west.

A third wall, also at the northern end of Trench 3, projected southwards along the centre of the trench for a length of 2.10m (Fig 4). It consisted of a single course of refractory brick, arranged in stretchers as pairs, and had a width of 0.56m. At its southern end, the two end bricks were finished with opposing bull-nosed ends. The northern end of the wall had been truncated, presumably during demolition, but a pair of bricks on the same alignment and resting upon the top of the southern wall of the boiler house suggested that the two were once bonded and probably contemporary.

In the south-western angle formed between this wall and the southern wall of the boiler house there was an area of red brick flooring (Fig 4). The brick floor respected the edges of both walls, and appeared to continue to the west beyond the limit of excavation, but to the south the bricks were cut to a sharp finish, just short of the bull-nosed end of the stub wall.

Trench 4 measured 8.26 x 6.53m, and was aligned approximately north/south (Plate 16). It was excavated to a maximum depth of 1.45m, with natural sands encountered at c. 158m aOD. In the south-western corner of the trench, a red brick wall was recorded upon a north/south alignment, which may have represented the eastern wall of the boiler house (Plate 17). It was constructed of hand-made brick laid in lime-based mortar. A spur wall constructed of the same materials projected from its western face. The two walls were clearly bonded at the junction, and were therefore of a contemporary date. The bricks were frogged and several were stamped ‘Smethurst Grimbies’ (Plate 18). Grimbies Brick Works was on Rochdale Road in Oldham, and was in operation by the 1890s. Other stamped brick recovered from demolition material included examples from Accrington and New Hey (Plates 19 and 20).

To the west of the primary wall the area had been backfilled with demolition rubble in a dark black silty matrix, beneath a layer of re-deposited sand mixed with brick rubble. No further archaeological remains were present, and this re-deposited sand also covered the remainder of the trench up to the base of the hardcore which formed the modern levelling for the present car park.

A modern drain, cut through the re-deposited sands and into the natural below was encountered just beneath the hardcore levelling. It ran west across the centre of the trench from the eastern section before turning sharply to the south and continuing beyond the limits of excavation. A second drain ran along the southern edge of the trench, truncating the north south aligned brick wall at its southern end.
Plate 16: General view of Trench 4, looking north-east. A modern drain runs across the centre of the trench.

Plate 17: Trench 4, showing the north/south-aligned brick wall, with spur wall to right of centre, and a modern drain above. A second drain cuts the north/south wall to the right. 1m scale.
Plate 18: Brick manufactured at Grimbies Brick Works on Rochdale Road in Oldham

Plate 19: WINIL brick manufactured by the Winil Brick Company Ltd in Accrington
Plate 20: NEWHEY brick manufactured near Shaw between 1899 and the 1930s
5. DISCUSSION

5.1 LARCH MILL

5.1.1 The archaeological evaluation has established the date, nature, depth, extent and level of survival of the below-ground remains of the steam-power plant associated with Larch Mill. The walls uncovered during the course of the evaluation corresponded closely to the footprint of structures depicted on the Ordnance Survey map of 1891, whilst the character of the hand-made bricks and use of lime-based mortar in the fabric of most of the walls was consistent with the documented construction of Larch Mill in 1876-7. Much of the exposed fabric of the mill appeared to date to the original construction, with little indication for any extensive remodelling, except for the insertion of an iron beam in the boiler house.

5.1.2 The extent of the boiler house and the internal arrangements of the steam-raising plant have been determined, together with the location of the flue to the chimney. It is of note that the exposed remains were entirely consistent with the foundations for Cornish-type boilers, rather than the Lancashire-type boilers that were used widely in textile mills after the mid-nineteenth century. Indeed, the Lancashire boiler, which was patented by William Fairbairn and John Hetherington in 1844, became the standard boiler design used in cotton mills (William with Farnie 1992, 86). Cornish boilers typically measured 16ft by 6ft (4.88 x 1.83m), which is consistent with the remains excavated at Larch Mill. The characteristic feature of Cornish boilers, however, were the side flues that directed exhaust gases beneath and along the sides of a boiler. The presence of side flues in the boiler house at Larch Mill has been confirmed by the archaeological evaluation.

5.1.3 The efficiency of boilers was greatly improved by the introduction of the economiser by Edward Green in 1845. This device comprised a bank of cast-iron pipes mounted in the flue between the boiler and the chimney. Water entering the boiler was first passed through the pipes and heated by the exhaust gases in the flue, thereby reducing fuel costs considerably. Economisers were widely installed at cotton mills, and were usually placed to the rear of the boiler house. No evidence for an economiser at Larch Mill was recovered from the evaluation trenches, despite these having been placed in the likely location for an economiser.

5.1.4 Part of the foundations for the detached chimney were encountered. This chimney was of a circular plan form, had probably had a diameter of approximately 4.1m, although the foundations are likely to have stepped out.
6. CONCLUSION

6.1 CONCLUSION

6.1.1 The archaeological evaluation has provided a useful opportunity to examine the buried remains of the steam-power plant associated with a former textile mill dating to the 1870s. Valuable information pertaining to the steam-raising plant was recovered from one of the excavated trenches, although there was a remarkable paucity of physical remains of the associated engine house.

6.1.2 The archaeological evaluation has demonstrated that the study area has some potential for the survival of buried archaeological remains, namely the foundations of two Cornish-type boilers and the mill chimney. It is not considered that these remains are of national importance that would necessitate preservation *in-situ*. Whilst the remains encountered during the evaluation are considered to be of local significance in archaeological terms, an appropriate record has been compiled during the evaluation programme. This record should provide appropriate mitigate the damage or destruction of the buried remains during the groundworks necessitated by the proposed development.

6.1.3 The results obtained from the evaluation have indicated that there is little potential for further archaeological remains of interest to survive beyond the limits of the trenches that have been excavated to date. Any unrecorded remains that may survive are unlikely to have significant potential to inform any of the initiatives for archaeological research of the industrial and modern periods stated in the current *Archaeological Research Framework for North West England* (Newman and McNeil 2007; McNeil and Newman 2007), and the archaeological impact of development on these remains will therefore be negligible. It is thus concluded that there is little merit in undertaking any further archaeological investigation in advance of, or during, the proposed development programme.
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APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION
Summary

CgMs Consulting has been commissioned by Morris Homes Limited to address the archaeological requirements associated with planning permission for residential development at Bleasdale Street, Royton.

Full planning permission (ref PA/334685/13) has been granted for demolition of the existing (warehouse) buildings on the site, and erection of thirty-two new dwellings and associated landscaping. Planning permission was granted subject to various conditions, including one (nos. 13) requiring a programme of archaeological works to be conducted in advance of development.

The general scope of the programme of archaeological works was outlined in the condition wording, and confirmed in correspondence with Greater Manchester Archaeological Advisory Service in early May 2014. This Written Scheme of Investigation has been drawn up in response to the scoping, and details a programme of initial desk-based study followed by targeted archaeological trial trenching which will investigate and record surviving archaeological remains, and disseminate the information obtained from the investigations.

This Written Scheme of Investigation has been produced by Myk Flitcroft of CgMs Consulting in collaboration with Oxford Archaeology North. It has been prepared on behalf of Morris Homes Limited and is subject to approval by Greater Manchester Archaeological Advisory Service, and the local planning authority, Oldham Council.
1. **INTRODUCTION**

1.1. **Site Location and Description**

1.1.1 The site is located approximately 3.8km to the north of Oldham, and is centred on National Grid Reference SD 9194 0815. The site is largely flat and is approximately 0.9 hectares in area.

1.1.2 The centre of the site currently contains a steel framed, block-clad factory building, with an adjoining red brick building. The area around the factory is used for storage of waste and vehicle parking.

1.1.3 The earliest historical map indicates that the site and surrounding area were agricultural land to the north-east of Royton town centre in the 1850s. By the 1890s, Royton had undergone significant expansion to the east and west of the original town core; the Ordnance Survey map published in 1893-94 identifies a cotton mill (Highfields Mill) on the western half of the site, with associated reservoir to the northeast.

1.1.4 Later Ordnance survey editions show the expansion of the cotton mill through the first half of the 20th Century (the 1937 map labels the mill as Larch Mill). The 1975 Ordnance Survey map indicates the infilling of the southern part of the mill reservoir, with the remainder infilled by 1992. The Larch Mill buildings had been removed by 1993-96 and replaced by the industrial unit which currently stands on the site.

1.1.5 The surface geology of the site is described by the British Geological Survey as inter-bedded mudstone, siltstone and sandstone of the Pennine Lower Coal Measures, overlain by superficial glaciofluvial deposits (mapapps.bgs.ac.uk/geologyofbritain/).

1.2. **Planning Background**

1.2.1. Full planning permission has been granted for demolition of the current buildings on the site, and erection of thirty-two new dwellings and associated landscaping. Planning permission was granted subject to various conditions, including one (nos. 13) requiring a programme of archaeological works to be conducted in advance of development.

13. No development groundworks shall take place until the applicant or their agents or their successors in title has secured the implementation and submission of a report on a programme of archaeological works. That programme of archaeological works should be undertaken in accordance with
a Written Scheme of Investigation (WSI) which has been submitted to and approved in writing by the local planning authority. The WSI shall cover the following:

1. A phased programme and methodology of site investigation and recording to include:
   - An archaeological desk-based documentary study
   - A targeted evaluation
   - (where merited by the evaluation) open area excavation

2. A programme for post investigation assessment to include:
   - Analysis of the site investigation records and finds
   - Production of a final report on the significance of the archaeological and historical interest represented

3. Provision for publication and dissemination of the analysis and report on the site investigation

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

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

1.2.2. The planning condition was attached in accordance with NPPF Policy 12, paragraphs 128, 129 and particularly 141 – ‘to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part)’ and ‘to make this evidence (and any archive generated) publicly accessible’.

2. **RESEARCH DESIGN**

2.1 **Aims and Objectives**

2.1.1 The overall aims of the programme of archaeological works will be to record and advance understanding of the significance of the heritage interest of the site, and to assess the site’s potential for below-ground archaeological assets, before these are lost in the site’s development.

2.1.2 The objectives of the archaeological works are as follows:
   - To establish the presence of below-ground archaeological assets within the open areas outside the current warehouse building, and – as far as is feasible - the date, character, function and significance of any such features.
• To determine the presence, character and extent of the steam-power plant for the former weaving mill on the site

• To undertake a programme of post-excavation analysis assessing the potential of the remains to contribute to wider research agendas and the scope for dissemination of the project results to a wider audience.

• To prepare an ordered project archive and deposit the archive with an appropriate museum and provide information for accession to the Greater Manchester HER.

2.2 **Research Framework**

2.2.1 The programme of archaeological investigation will be conducted within the general research parameters and objectives defined by the Resource Assessment, Research Agenda and Research Strategy of the regional Archaeological Research Framework.

2.3 **Standards**

2.3.1 This specification has been designed in accordance with current best archaeological practice and the appropriate national and county standards and guidelines including:

• *Code of Conduct* (Institute for Archaeologists 2000);

• *Standard and Guidance for Archaeological Field Evaluation* (Institute for Archaeologists 2008);

• *Standard and Guidance for the archaeological investigation and recording of standing buildings or structures* (Institute for Archaeologists, 2008);

2.4 **Scope of Works**

2.4.1 The proposed works comprise

• A programme of documentary research, focused closely on the development site and the cotton mill (Highfield Mill / Park Mill / Larch Mill) formerly on the site

• Excavation of three trial investigation trenches to examine the archaeological potential of the site, specifically with regard to survival of former cotton mill
- Review of the trial investigation, identification and implementation of further archaeological investigation measures as appropriate to adequately safeguard the archaeological interest in the site
- Preparation of a report integrating the results of the documentary research and archaeological fieldwork

2.4.2 The desk-based documentary study and trial investigation work will be undertaken prior to demolition or any development within the current development site.

2.4.3 If, following review of the initial investigation areas with Greater Manchester Archaeological Advisory Service, additional archaeological investigation measures are appropriate, a supplementary specification will be prepared and submitted for approval. The additional works will be implemented in line with the agreed supplementary specification.

2.4.3 Following completion of the archaeological fieldwork, the results of the investigations will be assessed and integrated into a single report and archive for dissemination.

3. **DESK-BASED DOCUMENTARY STUDY METHODOLOGY**

3.1 **Scope of Research**

3.1.1 The documentary study will focus on the development site and the cotton mill buildings present within the site from the late 19th Century to the mid 20th Century.

3.1.2 The documentary study will consider available information held in:
- Greater Manchester Historic Environment Record;
- Oldham Archives and Local Studies;
- published accounts of the Oldham cotton mill industry

3.1.3 The historical development of the site from the late 19th Century onwards will be plotted through review of Ordnance Survey maps.

3.1.4 Existing geotechnical site Investigation information and trial borehole data will be reviewed.

3.1.5 Information on the location, and extent of former buildings and
structures within the site will be plotted from the series of historical Ordnance Survey maps, and overlain to confirm precise locations for the archaeological trial investigation works.

3.2 **Reporting**

3.2.1 The data collected in the documentary study will be reviewed to confirm the precise locations to be excavated in the trial investigation fieldwork.

3.2.2 The results of the documentary study will be incorporated in the report prepared following completion of the archaeological investigation and recording fieldwork.

4. **TRIAL INVESTIGATION METHODOLOGY**

4.1 **Trial Trenching & Excavation Methods**

4.1.1 It is proposed to excavate three initial investigation areas. In the event that significant archaeological remains are discovered in the initial investigations, further archaeological investigation works will be identified in collaboration with GMAAS and implemented.

4.1.2 The trial investigations will focus on the footprint of the former mill engine, boilers, associated flue system and chimney located at the southern end of the mill buildings. These features are predicted to lie to the south of the warehouse building currently occupying the site; the documentary research will seek to establish precise locations.

4.1.3 It is provisionally proposed that the investigations will strip the footprint of the engine house, and excavate trenches across the boiler house and flues/chimney. The precise locations and extent of excavation will be informed by the documentary research.

- Trench 1 will strip the footprint of the engine house.
- Trenches 2 and 3 will investigate the location of the boiler house and chimney.

4.1.4 The trench positions will be located accurately using a Leica System 1200 GPS. The trench positions will be scanned with a Cable Avoidance Tool (CAT) prior to excavation.
4.1.5 Excavation of the modern concrete hard standing ground surface will be undertaken by a mechanical excavator (c 7 tonne tracked excavator) using a toothed bucket and, where necessary, a breaker. The uppermost levels of overburden / demolition material will be removed using the same machine, fitted with a toothless ditching bucket, to the top of the first significant archaeological level. The work will be supervised closely by a suitably experienced archaeologist. The spoil generated during the trial trenching will be mounded away from the edges of the trench.

4.1.6 Machine excavation will be used to define carefully the extent of any surviving mill foundations, floors and other remains. Structural remains will be cleaned manually to define their extent, nature, form and date. If the excavation has to proceed below a depth of 1.2m, then the trenches will be widened sufficiently to allow the sides to be stepped in.

4.1.7 The findings of the trial trenching will be reviewed with GMAAS’s Senior Planning Archaeologist. If warranted by findings, a programme of additional archaeological investigation and recording will be agreed and implemented.

4.1.8 Upon completion of the trial trenching, the excavated trench will be backfilled with arisings and loosely compacted. Trenches will not be backfilled without prior agreement with the Senior Planning Archaeologist.

4.2 Recording Methods

4.2.1 All information identified in the course of the site works will be recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage. Results of the trial investigation will be recorded on pro-forma context sheets, and will be accompanied with sufficient pictorial record to identify and illustrate individual features.

4.2.2 Context Recording: all contexts will be recorded using pro-forma
sheets, and details will be incorporated into a Harris matrix. Similar object record and photographic record pro-formas will be used. All written recording of survey data, contexts, photographs, artefacts and ecofacts will be cross-referenced from pro-forma record sheets using sequential numbering.

4.2.3 **Photography**: a full and detailed photographic record of individual contexts will be maintained and similarly general views from standard view points of the overall site at all stages of the evaluation will be generated. Photography will be undertaken using high-resolution digital cameras. All frames will include a visible, graduated metric scale. Photographs records will be maintained on special photographic pro-forma sheets.

4.2.4 **Planning**: the precise location of the trial investigation trenches, and the position of all archaeological structures encountered, will be surveyed by EDM tacheometry using a total station linked to a pen computer data logger. This process will generate scaled plans within AutoCAD, which will then be subject to manual survey enhancement. The drawings will be generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required. Sections will be manually drafted as appropriate at a scale of 1:10. All information will be tied in to Ordnance Datum.

4.2.5 Human remains are not expected to be present, but if they are found they will, if possible, be left in situ covered and protected. If removal is necessary, then the relevant Home Office permission will be sought, and the removal of such remains will be carried out with due care and sensitivity as required by the Burials Act 1857.

4.2.6 Any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996.
4.2.7 **Finds policy**: finds recovery and sampling programmes will be in accordance with best practice (following current Institute for Archaeologists’ guidelines) and subject to expert advice in order to minimise deterioration. OA North employs in-house artefact and palaeoecology specialists, with considerable expertise in the investigation, excavation, and finds management of sites of all periods and types, who are readily available for consultation. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by OA North with the Department of Archaeology, the University of Durham. Samples will also be collected for technological, pedological and chronological analysis as appropriate.

4.3 **Post-Excavation & Archiving**

4.3.1 Until the fieldwork is complete, the precise details of post-excavation analysis and reporting requirements will be uncertain. A formal process of post-excavation assessment of potential for analysis, in line with English Heritage ‘MoRPHE’ procedures will be undertaken if required to ensure that analytical and reporting work is most effectively targeted and that the potential of the excavated data is fully met in the post-fieldwork analytical programme.

4.3.2 Post excavation work will comprise the following:

- checking of drawn and written records during and on completion of fieldwork;
- production of a stratigraphic matrix of the archaeological deposits and features present on the site, if appropriate;
- cataloguing of photographic material and labelling of slides that will be mounted on appropriate hangers;
- cleaning, marking, bagging and labelling of finds according to the individual deposits from which they were recovered. Any finds requiring specialist treatment and conservation will be sent for appropriate treatment. Finds will be identified and dated by appropriate specialists.
4.3.3 Unless otherwise agreed with GMAAS’s Senior Planning Archaeologist, an report detailing the findings of the archaeological investigation will be prepared within four weeks of the completion of site works (dependent on receiving specialist reports) and will consist of:

- a summary statement of the findings;
- the background to the evaluation, including location details;
- an outline of the methodology of the survey;
- results obtained from historical research;
- a description of the site’s setting, including topography and geology;
- an account of the documented historical background to the site;
- a summary, assessment, and interpretation of the results of the evaluation;
- an assessment of any finds and samples recovered from the trenches;
- a description of the significance of the site in its local and regional context;
- recommendations for any further archaeological investigation that is considered merited to mitigate the impact of the development works;
- a catalogue of archive items, including a list of photographs, and details of the final deposition of the project archive.
- the OASIS reference and summary form.

4.3.4 A draft copy of the report will be supplied to GMAAS’s Senior Planning Archaeologist for comment. Following approval of the draft report, one copy of the approved report will be provided to the local planning authority; one digital copy (PDF-A format) will be supplied to the Greater Manchester HER. A copy of the approved report will be uploaded to the OASIS database.

4.3.5 The project archive will be prepared in line with appropriate professional guidelines including the Archaeological Archives Forum’s “Archaeological Archives: A Guide to Best Practice in creation, compilation, transfer and curation” (2007).
4.3.6 Arrangements for deposition of the project archive with a local archive will be made. The project archive will be presented for deposition within the earliest feasible opportunity – anticipated to be within 6 months of the completion of fieldwork, unless other arrangements have been agreed in writing.

4.3.7 OASIS (Online Access to the Index of Archaeological Investigations) data capture forms will also be completed and submitted on completion of the project.

5. TIMETABLE & PERSONNEL

3.2 Myk Flitcroft MIIfA (CgMs Senior Associate Director) will be in overall charge of the project and will monitor the work on behalf of Morris Homes. Work will be undertaken by a professional archaeological team from Oxford Archaeology North; Ian Miller will be OA North’s Project Manager. Actual staff resources will be managed to ensure successful implementation of the programme of works.

3.3 Subject to approval of this Written Scheme, the documentary research is anticipated to be undertaken in late May 2014; research is expected to be completed within 2 weeks. The archaeological recording and trial trenching work is anticipated to take place in early June 2014. The Fieldwork is predicted to take up to five days on site.

3.4 Following completion of the fieldwork, the excavation report will be produced within four to six weeks, depending on the complexity of the archaeology recorded.

6. MONITORING

6.1 The aims of monitoring are to ensure that the archaeological works are undertaken within the limits set by this Specification, and to the satisfaction of Greater Manchester Archaeological Advisory Service’s Senior Planning Archaeologist, on behalf of the local planning authority.

6.2 Myk Flitcroft MIIfA, Senior Associate Director for CgMs, will monitor
implementation of the programme of works on behalf of Morris Homes.

6.3 GMAAS’s Senior Planning Archaeologist will be given notice of when work is due to commence and will be free to visit the site by prior arrangement with CgMs. The Senior Planning Archaeologist will monitor implementation of the programme of works on behalf of the Local Planning Authority, Oldham Council, and evaluate the work being undertaken on site against the methodology detailed in this specification.

6.4 The Senior Planning Archaeologist will also be responsible for considering any changes to the specification of works; any such alterations should be agreed in writing with the relevant parties prior to commencement of on-site works or at the earliest available opportunity.

7. INSURANCE

7.1 CgMs Consulting and Oxford Archaeology North both maintain Public Liability Insurance to the minimum value of £5m and Professional Indemnity Insurance to the minimum of £5m.

8. HEALTH and SAFETY

8.1 All works will be in compliance with the Health and Safety at Work Act (1974) and all applicable regulations and Codes of Practice and the Construction Design Management Regulations 2007.

8.2 All archaeological staff will undertake their operations in accordance with safe working practices. A site-specific risk assessment will be undertaken and recorded prior to the commencement of work on site.

8.3 A continuous process of dynamic risk assessment will be undertaken and if significant hazards are identified a specific risk assessment will be undertaken and recorded. Control measures will be implemented as required in response to specific hazards.

8.4 Safe working will take priority over the desire to record archaeological features or remains, and where it is considered that recording is dangerous, any such features or remains will be recorded by photography, at a safe distance.
ILLUSTRATIONS

| Figure 1: | Site location |
| Figure 2: | Trench location plan |
| Figure 3: | Plan of the archaeological features superimposed on the Ordnance Survey map of 1891 |
| Figure 4: | Plan of the archaeological features revealed during the excavation of evaluation trenches 1-4 |
Figure 1: Site location
Figure 2: Trench location plan
Figure 4: Plan of the archaeological features revealed during the excavation of evaluation trenches 1-4