

Twibells Yard and Old Smithy Garage, Mobberley, Cheshire

An Archaeological watching brief of the Mill

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Non-technical Summary

This report presents the results of an archaeological watching brief conducted by the University of Manchester Archaeological Unit at Twibells Yard and Old Smithy Garage, Mill Lane, Mobberley, Cheshire (SJ 789 796) on behalf of Egerton Estates Ltd.

Twibells Yard lies to the north and west of Mill Lane and has been identified as the site of Mobberley Mill, a water-powered corn mill probably originating in the medieval period, which in the early 19th century was rebuilt as a substantial textile mill.

Old Smithy Garage lies to the east of Mill Lane and directly opposite the Twibells Yard site, and as the name suggests was once the location of a 19th century smithy

The watching brief was initiated because the Twibells Yard site has the potential for exposing remains relating to the development of the mill, which would be of regional significance.

Acknowledgements

The watching brief and the report were undertaken by E.P.Peers, BA (Hons).
Thanks to Egerton Estates, Mark Leah Planning Archaeologist Cheshire County Council, Dave Thompson Site Liaison A.I.G, Dr Peter Arrowsmith U.M.A.U, Graham Mottershead U.M.A.U

1. Introduction

1.1 The University of Manchester Archaeological Unit was commissioned by Egerton Estates Ltd to undertake an archaeological watching brief at Twibells Yard and Old Smithy Garage, Mill Lane Mobberley, Cheshire (SJ 789 796).

1.2 The work was undertaken between the 5th and 15th February 2001.

2. Aims and Objectives

2.1 The site of the proposed development lie to the north and west and east of Mill Lane, Mobberley. The aim of the watching brief was to observe and record any archaeological features and finds associated with the development of Mobberley Mill and the Old Smithy which was located on the site of a 20th century garage. This involved regular visits to the site during ground disturbance works.

2.2 The main importance of the site was the potential for existing in situ remains relating to the development of the mill, which had under gone substantial changes from its original use as a corn mill to a textile mill. The identification of these changes could be of regional importance. The identification of remains to the Smithy site however would only be of local interest.

3. The Setting

3.1 Location

The proposed development area comprises a plot of land on the west side of Mill Lane, Mobberley (Twibells Yard) at SJ 789 796 and a smaller plot on the opposite, east side of that Lane (Old Smithy Garage). The Old Smithy Garage is bounded on the by the Mobberley Brook.

3.2 Geology

The solid geology of the study area, as mapped by the OS Geological Survey (sheet 98) comprises Lower “Keuper” Marl of the Triassic. This solid geology is covered by glacially deposited boulder clay of which at least part and possibly all is overlain by a band of alluvium running along the Mobberley Brook.

3.3 Topography

The study area lies at a height of c50m AOD in the base of the valley of the Mobberley Brook. Allowing for recent earthmoving in the south-west of the Twibells Yard site, ground level within the study area is fairly level, with the exception of along the south-east boundary of that site where the ground slopes up by c 1m to Mill Lane. This last area is defined on the north-east by a modern brick wall projecting into the site.

4. Methodology

The study area was visited regularly throughout the ground works disturbance. A continuous presence was maintained during deeper intrusions into the area of the location of the mill. A photographic record of the stratigraphy of these intrusions was undertaken (See appendix 2).

5. Summary of Results: Old Smithy Garage Area (east of Mill Lane)

5.1 Topsoiling Operations

The area of the Old Smithy Garage had a surface of concrete which covered all of the study area therefore no topsoil removal was necessary.

5.2 Excavation Operations

The concrete surface varied in depths from 12cm in the southern part of the site, to a depth of c45cm in the north of the site. Directly below this surface layer of concrete was a layer of brick hardcore that had been used as a base for the concrete surface. The brick hardcore was overlying a deposit of darkish brown silty soil of some 30cm in depth, which in turn was lying directly above a light brown/grey silty sand deposit of c1 metre in depth. The final deposit, which was exposed within the study area, was of yellow brown clay to a depth of 1 metre, which was to the extent and limit of the excavation.

The southern half of the study area revealed a foundation wall aligned approximately north-west to south-east and was 3 metres in length and three course of brick wide. It was found at a depth of approximately 1.5 metres below the concrete surface. There were no other archaeological features within this area.

It appears that any further foundations, which may have represented the old smithy, had been removed and redeposited as the brick hardcore base mentioned above. In the extreme south of the area a large deposit of orange brown sand was found which was absent elsewhere within the study area. This gave an indication that the sand had been imported to the site and used to back fill inspection pits that had been in use by the garage during the 20th century.

The northern part of the study area had been badly disturbed by the locating of two underground fuel storage tanks, the dimensions of which were approximately 2 metres by 1 metre in diameter, and a square tank of 2 metres by 2 metres. These fuel tanks were installed on the site at some time in the middle period of the 20th century. No archaeological features were found within this northern part of the study area.

It is concluded that the area of the Old Smithy Garage had been greatly disturbed during the 20th century and any archaeological features relating to the earlier smithy had been destroyed by the development of the area into garage status.

6. Summary of Results: Twibells Yard (West of Mill Lane)

6.1 Topsoiling Operations

It should be noted that soils in some areas of the site, notably the northern area immediately west of Mill Lane, were contaminated with diesel fuel that necessitated removal from the site. In compliance with the Health and Safety Regulations these areas were avoided. The study area had already been stripped of any topsoil prior to arrival on the site and had been stored on the site, and would be used to back fill any areas where contaminated soil had been removed. The only area that had not seen any initial groundwork intrusions was a hard standing area of concrete, where the site offices were located immediately west of Mill Lane at the entrance to the study area.

6.2 Excavation Operations (See Appendix 3 for plan of the mill tailrace)

On arriving at the site on the first day of this watching brief, the northern section of a 2.5 metre diameter brick barrel vaulted mill tailrace, aligned approximately north-west to south-east had already been exposed. The stratigraphic sequence of layers and deposits within this northern and central zone of the study area were recorded in a south facing section (See Appendix 2 Plates 19 & 20), and consisted of a surface layer of tar-macadam of some 8cm in depth. Directly below this was a layer of concrete that varied in depth from 10cm in the west of the section, to 8cm in the east. Beneath this was a further layer of tar-macadam of c8-10cm in depth. This was immediately overlying a 0.5 of a metre deposit of a darkish brown silty soil with occasional brick and tile rubble inclusions. Lying immediately below this was a deposit of light brown clayey sand of c 0.5 of a metre in depth, The final deposit was of a light grey alluvium of c 0.4 of a metre in depth that being the limit of the excavations for the section that was recorded.

The main feature of the study area was the mill tailrace that was aligned north-west to south-east. This had been cut into the natural boulder clay, and the clay that had been removed had then been redeposited as a capping and sealant around the full extent of the tailrace.

At a point 15 metres south from the extreme northern end of the tailrace and hedge line, which is the demarcation of the sites boundary, a brick wall 3.8 metres long and 3 course of brick wide and aligned approximately east-west, was exposed during the excavation. However for reasons of safety the full height of the wall could not be determined due to flooding within the area. The wall butted up against the tailrace, however the brickwork did not interlace, and there was no indication that the wall was of a later date than the tailrace. The tailrace continued on the other side of the wall in a south-easterly direction but was reduced in size to 2 metres in diameter. It would appear that the wall had been used to allow for an expansion to the diameter of the tailrace to allow for the out flowing water from the mill wheelhouse, which is located in the southern section of the tailrace (See below), to reduce in velocity.

The brick tailrace continued in a south-easterly direction for a further 6 metres from the wall at which point the tailrace had been collapsed (See Appendix 2 Plate 15), but

at what period is unknown. To the west of the collapsed tailrace at a distance of approximately 2 metres, a wall or foundation wall was exposed aligned approximately north-west to south-east. This wall protruded from the section of the excavated area of the tailrace. The dimensions that were visible were 1.2m x 0.15m, the purpose of this wall is unknown as is the full extent of its size for reason of the section not being excavated.

At a point 2 metres north of the collapsed end, a baulk section running approximately east-west and overlying the tailrace, was left in situ (See Appendix 2 Plate 15). This section contained a working drainage system and therefore could not be removed.

The northern part of the tailrace had two inspection holes located within the top of the vaulted brickwork. The northerly of the two was located approximately 2.5 metres from the extreme northern end of the tailrace and had dimensions of 1m x 0.5m x 0.3m in depth, and was covered by a stone slab. The second of these inspection holes was located 3.5 metres south of the first hole and measured 0.5m x 0.5m x 0.3m, again this was covered by a stone slab. Observations into these holes revealed that the tailrace contained stagnant water (See Appendix 2 Plates 2,3,4).

The southern section of the tailrace began at a point 4 metres from the collapsed end mention above, and ended in an arch which had been incorporated into the brick wall foundation of the mill wheelhouse (See Appendix 2 Plates 8 & 9)). The full measurements of this wall could not be determined because of the limit of the excavation having been attained and also because of flooding making the area unsafe to enter. The estimated dimensions for the wheelhouse are thus based on what was actually visible at the time of recording. The estimated dimensions are as follows 6.5m x 5m wide, the longest measurement being aligned north-west to south-east and thus parallel with the alignment of the tailrace.

In the extreme south of the wheelhouse and covering an area of 3m x 5m in width, was a stone tiled floor overlying brickwork that appears to have been used as a base for the stone tile. To the west the stone tile flooring was absent but the brickwork surface was in situ and continued for 6.5 metres but was only visible as a 1 metre wide strip, and thus formed an "L" shape in which the wheel would have been located. The dimensions of the pit that would have housed the wheel were approximately 3.6m x 5m x 3m in depth (See Appendix 2 Plate 31).

Immediately north of the wheelhouse foundation wall and 3 metres east of the tailrace, two stone capped brick lined drains c30cm square were exposed (See Appendix 2 Plates 13 & 14). The drains were aligned approximately east-west, the drain furthest north appeared to run straight into the eastern section of the site, while the other drain ran straight into the section for approximately 1 metre and then turned sharply to the south. The alignment of the southerly of these two drains which was 35cm north of the foundation wall, appeared to have been located to empty into one of two holes which had been cut into the eastern side of the tailrace at the junction of the foundation wall. It appeared that this intrusion was a post construction feature of the tailrace, since the brick vaulting of the tailrace had been broken into rather than being an original feature. The tailrace was found to be full of stagnant water and sludge.

During the course of excavating the area to the east of the northern section of the tailrace, another brick barrel vaulted “culvert” approximately 2 metres in diameter became exposed. The working drain mentioned above was again overlying this culvert (See Appendix 2 Plate 5).

This culvert was different to the main tailrace in that it was only 3m in length by 2.8m in width. It had a larger inspection hole than had previously been found on the main tailrace, the dimensions of which were 1.4m x 1m x 0.4m in depth which was bounded by 3 courses of brick thus raising the hole above the actual brick culvert. The brick culvert appears to have been modified at some point to perhaps alter its usage. 2 courses of brickwork had been added around all four sides which effectively altered its appearance from having been barrel vaulted in shaped to being square, with the northern end being completely sealed (See Appendix 2 Plates 16,17,18).

Immediately south of the baulk containing the working drain, a brick lined stone capped drain 11 metres long by 0.55 of a metre in width was found (See Appendix 2 Plate 10). This appeared to be connected to the square shaped culvert on the north side of the baulk. The drain continued south-eastwards from the baulk for approximately 6 metres at which point it turned to the south and continued for a further 5 metres at which point it had collapsed. A projected course for the continuation of the drain brought it into alignment with the main tailrace, and directly aligned to connect to the westerly of the two holes mentioned above (Page 9).

The usage of this second culvert and stone capped drain is not known and can only be theorised. It is possible that the culvert was the original tailrace when the mill was used for grinding corn, and that during the course of the development of the mill to textile status, a new tailrace was constructed to the west of the second culvert. If this is correct the evidence could suggest that the stone capped drain was an overflow outlet from the new and main tailrace, and flowed directly into the sealed culvert, which would have used as a catchment area for the excess water. However there was no evidence in any of the excavated sections to suggest that this second culvert had run through the study area, and that it was the original tailrace.

6.3 Artefactual Retrievals (from within the study area)

The finds that were discovered within the areas mentioned above were retrieved from the excavated spoil and consisted of the following, 1 earthen ware bottle, 1 dark brown glass bottle which has “Milton” embossed on the base. 1 broken ceramic egg cup with a thin gold painted line around the rim and with the word “foreign” inscribed on the base. 3 white clay tobacco pipe stems, 3 orange/brown ceramic pot sherds, 1 “willow pattern” pot sherd, 1 sherd of ceramic pot similar to Buckley type ware and finally 2 decorated ceramic pot sherds. All of the finds found within the study area are of post-medieval type and can be classed as modern.

6.4 Areas to the south and west (within the study area)

The areas of the mill tailrace and secondary culvert, both of which have been described above, were located centrally to the study area. To the south and west of these areas lies an zone of what had been “wild undergrowth” which had been cleared by the mechanical excavator prior to the commencement of the watching brief. The area was extremely susceptible to flooding which resulted in there being large areas of sludge and slurry.

The stratigraphic sequence within the southern area consisted of a layer of a mid-brown coloured silty soil of approximately 1 metre in depth which was overlying a deposit of what appears to have been redeposited light brown clay of some 20cm in depth. Below this deposit of clay was a layer of ash/cinder that was c 20cm thick which in turn was lying on top of a further deposit of clay of approximately 1 metre in depth, that being the limit of the excavations (See Appendix 2 Plate 21).

Within this excavated area a brick foundation wall was exposed aligned approximately east-west (See Appendix 2 Plates 23 & 24), and was greater than 1.5 metres in depth and 8 course of brick wide (note these dimensions are an approximation as the area was unsafe to enter to take accurate measurements). The alignment of this wall appears to run directly towards the location of the wheelhouse mentioned previously and may form the base foundations for a building which may have housed an engine room associated with the wheelhouse during the textile status of the mill. Only a c 5-metre section of this wall was exposed.

During the continuing excavation of the area to the north and west of the wall described above, another 2 metre in diameter brick barrel vaulted culvert was exposed (See Appendix 2 Plates 32 & 33). The culvert was aligned north-south and appeared to be on a direct alignment with the main mill tailrace in the north of the study area, which has been described earlier. Although a 6-metre section of the culvert had been collapsed, a projected intersection of the two is estimated to occur outside of the boundary of the study area. It is probable that the two then continued as one culvert and flowed directly into Mobberley Brook at a point north of the study area.

The culvert could not be completely exposed to allow for a more detailed study. The condition of the area being extremely waterlogged prevented the mechanical excavator from being stood in any one place for any length of time, to do so would have resulted in the machine sinking into the water and the slurry. However an estimated length for this culvert would be greater than 50 metres.

The southern section of the culvert is still in situ and is outside of the limits of the excavation. The purpose of the culvert is unknown however it is possible that an additional wheelhouse was in operation in the south of the study area and may have been associated with the period when the mill was specifically used for grinding corn. If this were correct then this culvert would have been the original tailrace for the mill and the other culverts described previously would have been constructed during the conversion of the mill to textile status.

To the north of this culvert a foundation wall was exposed aligned east-west, again it was not possible to measure the dimensions accurately due to the continuing hazardous condition of the area.

The whole of the area to the south and west of the study area was back filled and levelled, as was the area of the main tailrace. All of the structures described were collapsed and the brickwork was removed from the site and will be used at a later date as a hardcore prior to the housing development.

At the time of writing the only area which has not had any groundwork intrusions is the area where the site offices are standing.

7. Conclusions

7.1 The area of the proposed development and thus study area, did not reveal any tangible evidence for the location of a medieval corn mill as has been suggested. The conditions on the site prevented a more detailed study of the area, however it is still possible that a corn mill dating from the medieval period may have been located at the site of Twibells Yard. The Bulls Head public house located immediately to the south of the study area, has a granite grinding wheel c1.5 metres in diameter set within a cobbled path and partially lies beneath the door step to the side entrance of the building (See Appendix 2 Plate 26). This attests to the fact that the mill had been utilised as a grinding facility at some period in its existence. Whether or not this grinding wheel is of medieval origin would necessitate a professional study of the artefact.

7.2 The main areas of interest are where the two tailrace/culverts were exposed. The evidence suggests that there may have been two separate wheelhouses, since two separate tailrace/culverts were found, although only one wheelhouse can be positively identified.

If this were correct it further suggests that either two if not three phases of development occurred during the history of the mill. The culvert in the south and west of the study area could have been the original tailrace for the corn mill, and the main tailrace further to the north within the study area, could have been a later addition to the mill during its conversion to textile status.

The stone capped brick lined drain that appears to empty into the theorised catchment pot, and which appears to have been connected to the main tailrace immediately north of the wheelhouse, may have been a still later addition. When the mill was converted to a crepe mill and if production increased, this may have necessitated a greater quantity of water to power the mill, therefore the drain may have been used to dispel any excess water not utilised by the mill.

7.3 The artefacts recovered from within the study area are all of post-medieval origin and can be assumed to have been associated with the mill during the 19th century.

7.4 The watching brief is now concluded and no recommendations are stipulated since any further groundwork intrusions during the housing development stage would only be intrusive into areas that have already been examined.

Sources

Dr Peter Arrowsmith U.M.A.U July 2000, Twibells Yard and Old Smithy Garage, An Archaeological Desk-Based Assessment

Photographs of the mill taken from The History of Mobberly c1981 Author unknown.

Appendix 1 Site Archive

The University of Manchester Archaeology Unit
Architects Building
University of Manchester
Oxford Road
Manchester

Appendix 2 Photographic register

PLATE No	VIEWED FROM
1 Mill tailrace	South
2 Inspection Hole	West
3 Inspection Hole	North
4 Inspection Hole	North (Overhead)
5 Working Shot Exposing the Catchment Pit	West
6 Tailrace	East
7 Tailrace	South
8 Tailrace Middle Section Removed	North
9 Wheelhouse	South
10 Tailrace & Stone capped drain	South
11 Wheelhouse	South
12 Wheelhouse	South
13 Brick lined drains North of Wheelhouse	West
14 Brick lined drains North of Wheelhouse	West
15 Collapsed middle section of the tailrace	South
16 Catchment Pit	South
17 Catchment Pit	West
18 Catchment Pit	NorthWest
19 South-facing Section	South
20 South-facing Section	South
21 South-East Facing Section	South-East

22 Foundation Wall (South on site)	East
23 Foundation Wall	South-East
24 Foundation Wall	South
25 Collapsed Tailrace	North
26 Grinding Wheel	South
27 Photograph from a book	
28 Photograph from a Picture	
29 Photograph from a book	
30 Demolition of the Wheelhouse Wall	South
31 Demolition of the Tailrace	South
32 Collapsed culvert in south of the site	North
33 Culvert left in situ in south of the site	North

Appendix 3. Figures

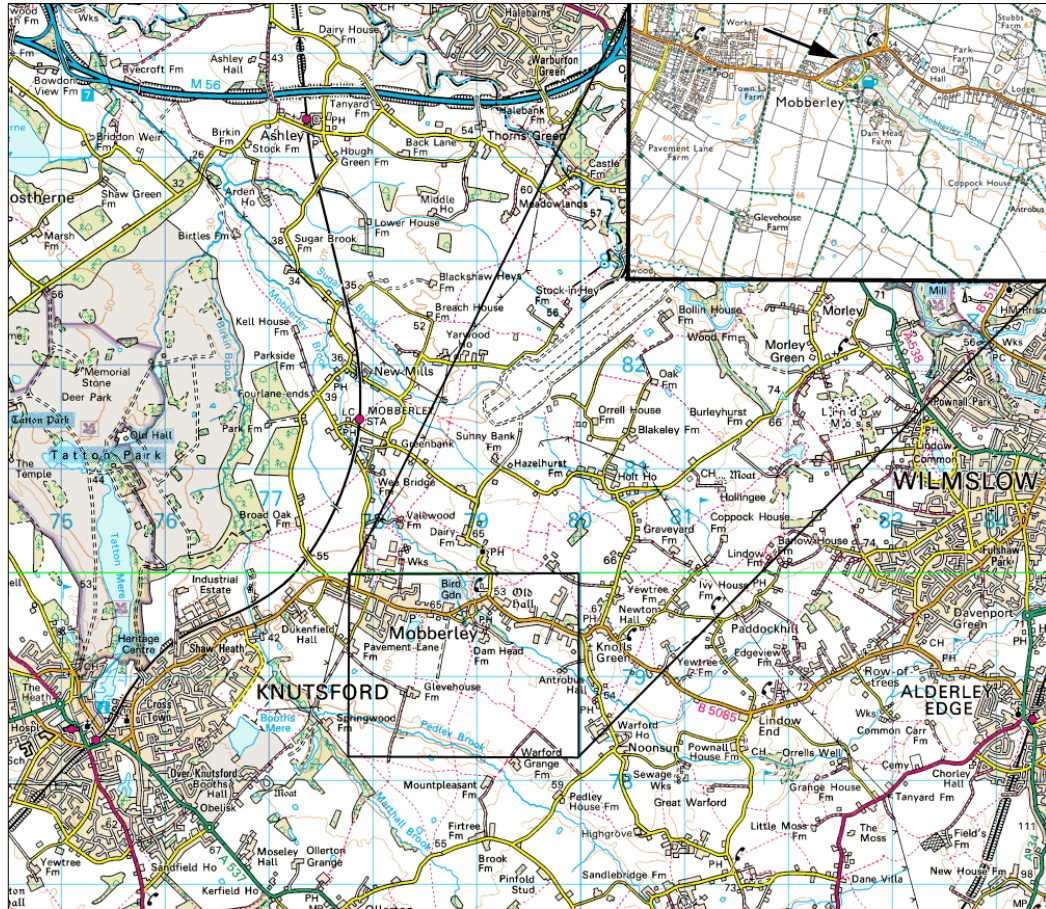


Fig 1: The location of the Twibells Yard archaeological watching brief, Moberley, Cheshire. Ordnance Survey 1:50,000 and 1:25,000 maps, 2000 editions. Crown copyright reserved.

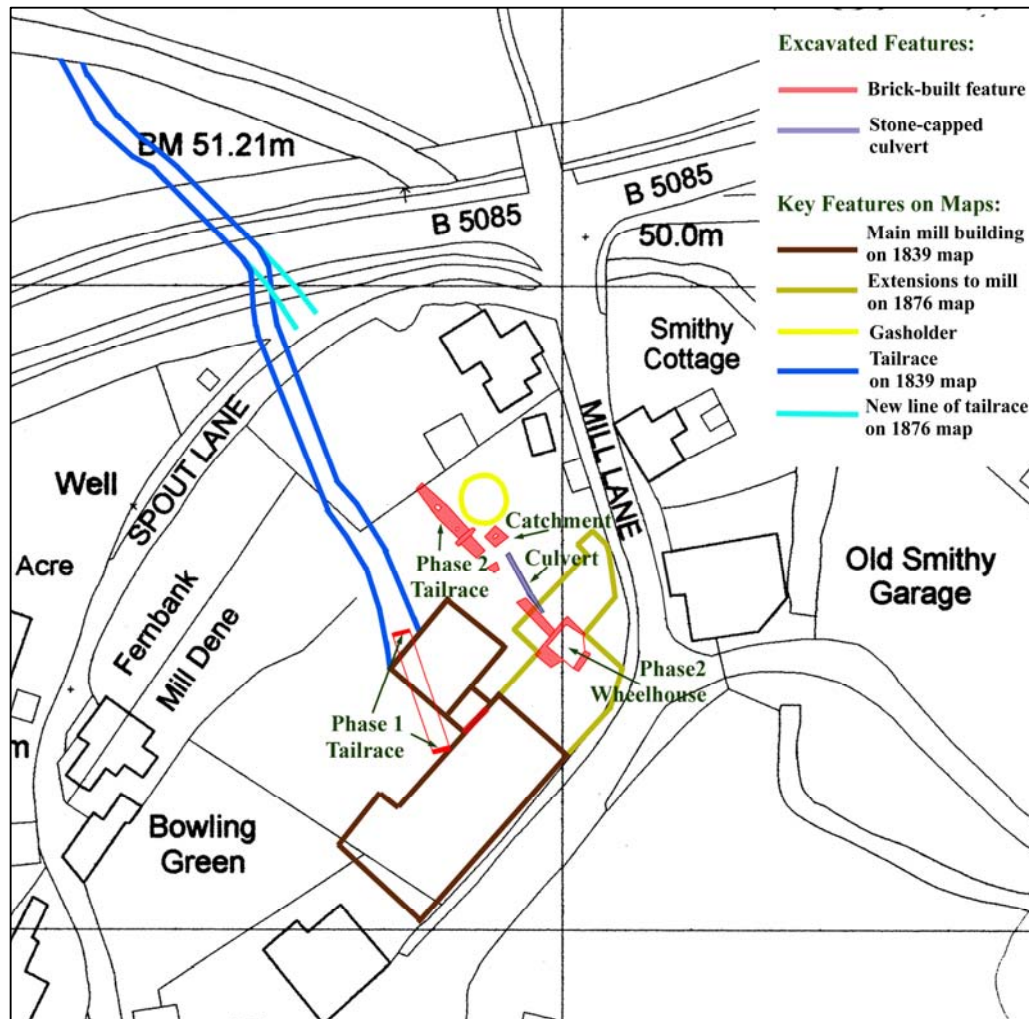


Fig 2: Moberley Crape Mill showing the location of the main archaeological features at Twibells Yard.

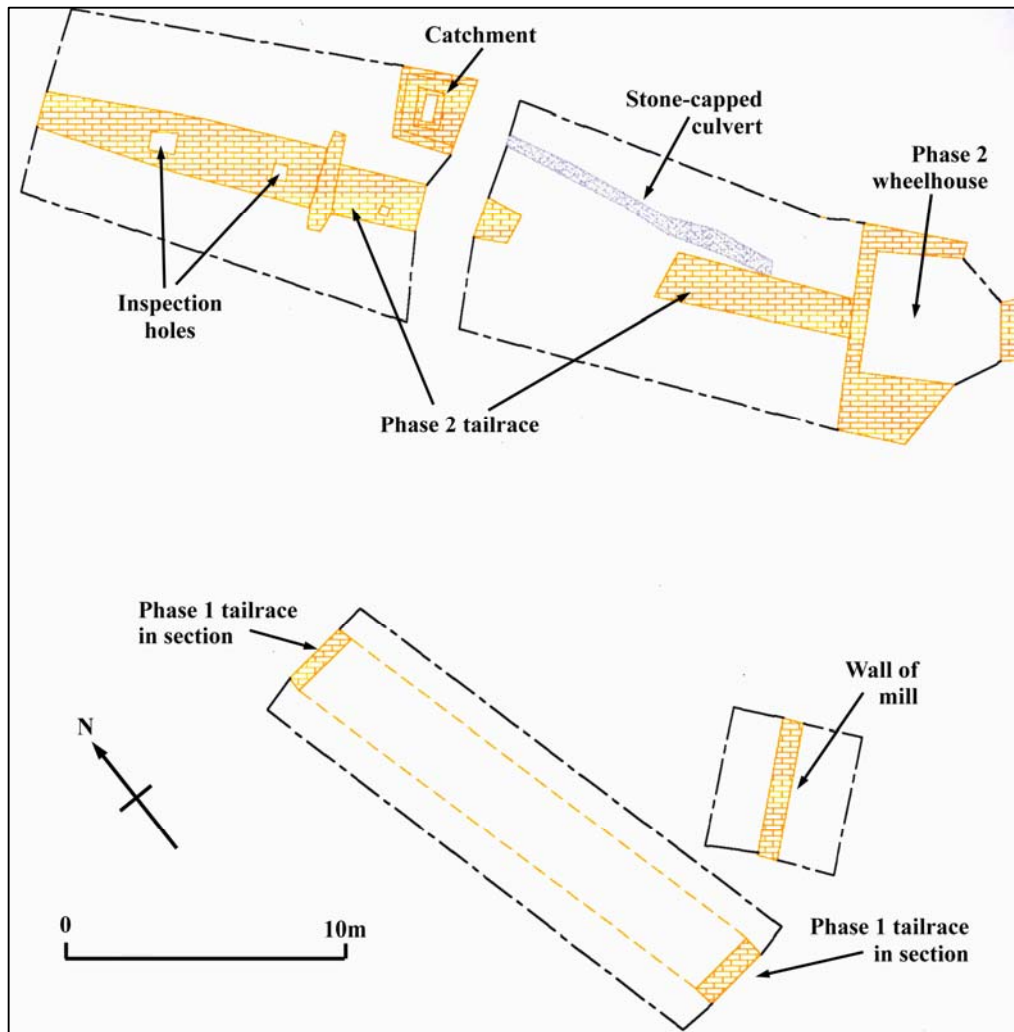


Fig 3: Mobberley Crape Mill showing the location of the watching brief archaeological trenches in 2001.



Fig 4: Mobberley Crape Mill from a post-card of c. 1900.



Fig 5: Mobberley Crape Mill showing the 1820s tail race.



Fig 6: Mobberley Crape Mill showing the 1850s wheelhouse.