



HOLLOWFORTH MILL WOODPLUMPTON

WYRE ARCHAEOLOGY EXCAVATION 2014 – 2018

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1 BACKGROUND

Early in 2014, the society was contacted by John Grimbaldeston, a volunteer at Farmer Parr's Fylde Country Life Heritage Centre, through another volunteer and WA member Paul Ashman. Paul, now sadly deceased, was a keen metal-detectorist who for some time had been detecting on land near the village of Woodplumpton owned by John's family since the 19th Century. John explained that on his land, close to the Lancaster Canal, there had been a watermill of some age that had collapsed during a storm sometime in the 1920s. He wondered if Wyre Archaeology would be interested in investigating the mill and helping in dating it. We readily accepted this invitation and shortly afterwards mounted an expedition to the site of Hollowforth Mill.

2 HISTORY

Desk research indicated that the mill certainly existed well before the end of the 18th C, since an estate map of 1770 shows the mill before the construction of the Lancaster Canal. The mill seemed to have some importance as it required its own specially-constructed aqueduct to take the canal, built between 1794 and 1797, over the mill race, fed from New Mill Brook.



Left: This estate map of 1770 shows the mill just above the 'LL' of 'HOLLOWFORTH'. The blue-grey line running upwards has been drawn in to show the proposed route of the Lancaster Canal.



Left: The beautifully constructed base of the aqueduct over the mill race.

However there are clues to the existence of a mill at Newsham* or Hollowforth (these names seemed to be somewhat interchangeable) at least as early as 1292. A document in Chester Archives recorded:

Concord 58

At Lancaster, on the Octave of Holy Trinity, 20 (year) Edward I. (i.e. 8th June 1292) Between Robert, son of Adam de Holand, plaintiff, and Adam de Neusam, deforciant of a mill, two oxgangs of land, and ten denariates of rent in Neusam (Newsham).*

Adam de Neusam acknowledged the mill, land and rent to be the right of Robert, as those which he had by the gift of Adam, to hold him and his heirs in perpetuity, of the chief lords of the fee, by the services thereto belonging. For this acknowledgement Robert gave him a sor (chestnut coloured) sparrow-hawk.

A further probable reference appears in Edward Baines "History of the County Palatine and Duchy of Lancaster" of 1824/5:

In 17 Edward II. (i.e. between 8th July 1323 and 7 July 1324). William de Holland of Eukestone held a messuage, lands and a water-mill in Newsom, in Amundenesse. Escaet. 17 Edw. II. n. 54.*

Richard Cookson in his "Goosnargh, past and present" of 1888 includes the same entry but adds:

'The present mill is thus inscribed: I.W. JOHN WARREN. E.W. ELIZABETH WARREN. 1702.'

The likelihood is, therefore, that Hollowforth Mill was certainly in existence by the 13th century or earlier; the proximity of the site to settlement and to roads and tracks, the ford across and the power source provided by the New Mill (or Barton) Brook would have been of great advantage.



Old maps of the area in Preston's County Archives show several water mills in the area and Yates's map of 1786 clearly shows Hollowforth Mill. (Right: top of map, north of Newsham Hall)

Official records are scant; however, a newspaper report of 1845 gives a more interesting image of the mill, although it strongly suggests that by this time the mill was in a dilapidated state.

STRANGE FEAT BY A COW. On Thursday week, ... the servants of Peter Brown Esq., at the "Brands" estate, Woodplumpton, discovered that five of his master's cows were missing from a field eddish, near Hollowforth Mill, After a little search he found four of them in an outbuilding closely

*Newsham/Neusum/Newsom are variations of the same name, meaning '(place) at the new houses'.

adjoining the drying kiln. In a short time the remaining animal was found under the kiln floor, in a place called the "Hell Hole". It would appear that she had got on the kiln floor through an aperture in the wall, which is only 40 inches in depth. and her weight (being a large cow, and fat) had forced a hole through the floor, from which she was precipitated a depth of full six feet, carrying along with her a heap of tiles, ponderous stones, and other materials; yet, strange to say, she was not injured in the least; indeed, there was not a mark or blemish on her body. A hole was immediately made in the wall, and she was released from her "prison house". Had the kiln been in use at the time her situation would have been a most perilous one, the probability being that she would have been suffocated, or rather roasted alive. We understand the damage done to the kiln, which amounted to a considerable sum, has been defrayed by Mr Brown.

So, desk-top research proving of only limited value in getting a firm date for the mill's origin, we were left with the original task of trying to tell the mill's story through archaeological investigation.

What follows is, however, not a 'purist' technical description of an archaeological excavation but, hopefully, an account of the more significant aspects of the dig that will be easily accessible to the non-technical but interested reader.

3 EXCAVATION

The excavation proper commenced on 13 August 2014. The site of the mill (*Right*) lies alongside the Lancaster Canal close to its aqueduct over New Mill Brook and to the ford across the river from which the area, Hollowforth (ford on the hollow way), got its name. The canal also features a much smaller but beautifully constructed aqueduct over the mill race which drew its water from the river. Unfortunately the race and a potentially significant portion of the mill lies across a boundary in a neighbouring property – unoccupied at the start of our dig - whose later owner declined to respond to our requests to discuss possible investigation of this part.



On first inspection, therefore, of the part of the mill site accessible to us, we were



presented with simply a field under grass approaching knee-height with only minor undulations apparent under the grass to hint at possible underlying features. Immediately spotted obstacles were a barbed-wire fence, indicating the boundary to the adjoining property, and a large tree, the branches of which overshadowed the site and hinted at a significant root system.

(Above: Chris (in hat) asking Paul to point out the site while Carlo (at rear in red hat) watches Dave probing ground.)

The first question on site is where to begin. We know how to begin; we mark out our trenches and begin to remove turf but this site had no discernible shape to help us. We began by examining the surface and were surprised but pleased to find a variety of artefacts which were at first unidentifiable.



Dave B was able to identify the largest and most significant of these (Left) as the central metal rynd and two blocks of stone from the (upper) running stone of a mill. The running stone is supported by this metal piece fixed to a "mace head" (Below right) topping the main shaft or spindle leading to the driving mechanism of the mill. Of more significance was that the stones were blocks of a particular limestone, originating in an area about 25km SE of

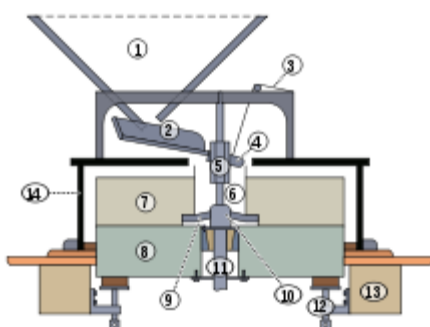
Paris. The requisite number of shaped blocks are assembled into the disc then bound by an iron band and the top surface set in a matrix of plaster of Paris. The completed running stone is known as a 'French Burr'. Their characteristic is that they have a fine surface that produces a very finely ground meal. The



cost of importing the stone either in unassembled pieces or in a finished form and the fine nature of the end product suggests that Hollowforth Mill was, at that time, a profitable venture.



(Left: Complete running stone at Heron Mill, Beetham).



(Left: Wikipedia image of mill mechanism. 1. Hopper 2. Shoe 3. Crook string 4. Shoe handle 5. Damsel 6. Eye 7. Runner stone 8. Bedstone 9. Rind 10. Mace 11. Stone spindle 12. Millstone support 13. Wooden beam 14. Casing)

Since the neighbouring property was, at that time, unoccupied, the opportunity was taken to investigate the mill-race* and some upstanding masonry features. It appeared that the previous occupiers had made use of the substantial masonry walls to facilitate some landscaping of the garden. Fortunately, however, it looked like no major movement of the features had taken place.

*A mill's feeder stream, its 'leat/leet', or more usual in the North its 'race' is divided into three parts. Upstream, above the mill is the Mill Race, flowing past the mill is the Wheel Race and below or downstream of this is the Tail Race. (Historic England 2018 Mills: Introductions to Heritage Assets. Swindon. Historic England.)

These largely consisted of masonry blocks of regular size, probably 0.3m x 0.15m x 0.15m, assembled to line both sides of the race for a distance of approximately 15m and to a depth of around 1.5m – 2m. Built into these walls on opposite sides of the race were upright masonry posts of about 1.5m height with a longitudinal slot, probably intended to accommodate wooden beams inserted to cut off the flow of

Note well-constructed masonry wall on left of race.



water in order to carry out maintenance of the race and mill machinery (Above). It was interesting to note that the race still contained running water and that 'downstream' of the mill (the tail race) was a large hollow, beyond which the eroded sides of the race suggested flood damage. The race's course continued in the direction of the river which it rejoined close to the modern road bridge. From the profile of the mill race we concluded that the millwheel had been 'undershot' i.e. the water of the race passing under the wheel and turning it counter to the flow.

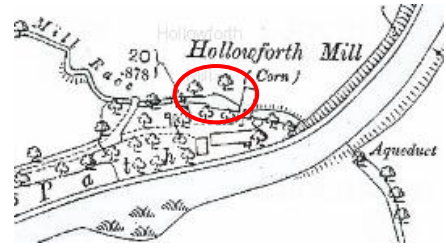


Left: This image (courtesy of Lancashire Archives) shows the area around Hollowforth Mill. The original, base map may have been produced around 1800. At this date the Mill Cottage was two, separate, buildings and the mill itself straddles the mill race.

After consulting a 19th century map it could be seen that the mill buildings at that time straddled the race with a rectangular feature of roughly 15m by 14m on 'our' side of the race. Marking out this rough area, we determined to try to locate the northern extremity of the buildings and began by removing a narrow strip of turf 1m X 3m in a N-S orientation approximately 3m from the supposed NW corner. Immediately below the turf we encountered evidence of destruction: debris consisting of pieces of brick, glass and slate (Right).



It became apparent as we excavated deeper that we had opened the trench across what appeared to be a ditch lying E-W along the edge of the building. Leaving a narrow 0.5m baulk to the W of this excavation we opened a second 1m x 1m trench again to the W to confirm that the ditch continued to the W. Beyond the postulated western edge of the building was a considerable sub-circular hollow, some 15m x 12m into which the tail race appeared to run. The idea took shape that the ditch might have been a by-pass channel into which the race could be diverted by means of sluices when maintenance of the mill's water wheel was required and that the hollow was the resulting pond formed by this; alternatively, and more likely, the hollow may have been a fishpond, since such features are not unknown to be associated with ancient watermills. This feature is visible on the estate map on P5 and also on the 1840s OS 1:2500 map (Above).



As the dig progressed, these two trenches were backfilled with spoil (our first mistake since we had to reopen them later). The turf was stripped, again revealing destruction debris, in a narrow trench running E-W within the boundary formed by the ditch and starting from the supposed N-E corner of the site. Immediately below the turf was exposed a line of brickwork and stone slabs. The deposition of this led to an initial thought was that this was an external wall that had collapsed outwards into the ditch.

Left: NE Corner with 'collapsed wall'. Trowel points N

Right: View of path looking towards E corner.



Discussion also led to suggestions that the feature may have been a bridge over the ditch, but as more was exposed the view emerged that it was a path, constructed around the external wall of the mill. However later investigation of the ditch showed that our first thoughts were not far off the mark.

By the end of September 2014, the outline of the upstanding remains of the mill had been exposed and we were down to 'real archaeology'.



Left: Overburden removed, the outline of the mill building is evident. Possible entrance passage/staircase nearest camera.

Below: Cheese-press base in situ. Stone flag floor also visible.



The upstanding archaeology comprised what appeared to be well-constructed, though collapsed in places, external brick walls and beaten-earth floor. Apparent internal brick-built walls formed sections or compartments, the function of which was uncertain. In the SW corner was a stone slab floor and, immediately adjacent, a stone cheese-press base still *in situ*. During November 2014, colleagues from Wigan Archaeology assisted with a GRS (Ground Resistivity Survey) of an area to the west of the building to determine the existence and location of a possible track leading to the mill from the south. However the results were inconclusive. During the course of several further site visits over weekends and occasional 'big digs' of a few days with additional volunteers, more underlying archaeology was revealed.



At the eastern end of the building a well-laid stone flag floor was uncovered and the external wall appeared to have a blocked up doorway, since there was an obvious difference in the laying of the bricks and a slight change in alignment (*Left*). Also visible in one of the flags (*inset*) was a shallow rectangular depression approximately 10cm square, the significance of which was not immediately apparent. In the western half of the building a line of four

large rectangular blocks featured a 10cm – 12 cm spike in each. It was suggested that these may have been intended to support vertical timbers, perhaps forming the framework of a partition separating off an entrance corridor or staircase (*Right*).



The surprises continued. The stone slabs along the north face of the building that were thought to be a path were removed to reveal a 1m wide by 8m long feature of well-laid, hand-made bricks. Our 'Big Dig' student volunteers were put to work lifting the top course of bricks



that, although closely laid were not fixed with any mortar. Below this course of bricks was revealed...another course, similarly well-laid. Painstakingly lifted, yet another course was revealed; in fact a total of 7 courses of bricks lay under the surface layer to a depth of over 0.5m (*Left*). The bottom layer was laid directly on natural and the feature appeared to abut the ditch previously exposed. This

brickwork was in such a contrast to some of the external walls which were in places patched and filled with stone and rubble that it provoked much discussion as to its purpose. The eventual consensus was that it may have been built against the

'bypass ditch' to provide a loading bay for carts carrying grain across the fields, perhaps sheltered by a wooden veranda.

As more of the upstanding, more 'modern' brickwork was removed (*Below left: centre top of picture*) two further rectangular stone blocks of approximately 40 cm and 50cm were revealed, both of which had a 10cm square depression, identical to that described above (*Below right*). It was thought that these represented an earlier phase of the building and possibly represented bases for timber uprights as part of a partition framework.



The photo below shows an overview of the site viewed from the eastern boundary with the backfilled ditch to the right, the brickwork feature left of that and the stone blocks centre. Also note the eastern wall closest to camera. The interior is comprised of brick work while the exterior appears to be made up of masonry and re-used millstones (*centre bottom of shot*). On the other side of the fence, however the structure was entirely of masonry, as may be seen in the photograph on page 5 above.



Excavation continued along the extent of the eastern wall and exposed what evidently was a field drain, laid in 30cm sections and running at 90 degrees to the mill race (*Below left*). This was considered to be a later addition and unconnected with the structure but further excavation revealed that at the NE corner where in the above photo a large masonry block is visible, the drain made a 90 degree turn to the west and continued along the now re-excavated ditch (*Left*). At the point where it changed direction it was covered over by a piece of slate.

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As noted above, the E – W aligned ditch, first uncovered at the beginning of the excavation contained much destruction debris: brick, slate and glass of various thicknesses representing, it was thought, windows of different dates. The eastern end however appeared to be filled with several courses of brick from an apparently ‘slumped wall’

(Right: the wall appears to have collapsed in one piece into the ditch on the left). Below this feature was more destruction debris and one piece of timber (the only one found in the entire excavation) with a nail hammered into it. Altogether this was taken to be further evidence of the sudden and catastrophic end of the mill’s life in the 1920s.



The western wall (*Below*) also showed evidence of collapse. The upstanding remains, again comprised of hand-made brick laid on masonry, had also begun to sag outwards; investigation of this meant that the spoil heap – now nearly 1.5m in height and colonised by Japanese Balsam had to be edged away from the excavation area. As elsewhere, tree roots had penetrated cracks in and between the brickwork and, apart from the damage done to the archaeology, these often had to be chopped away by axe before trowels could be employed.



Investigation here indicated that the wall on ‘our side’ of the fence had been laid partly on the natural surface although at the southern end close to the fence there was evidence of a possible foundation trench and levelling with clay and sand. At the boundary under the fence brick work had been bonded with masonry blocks that continued into the adjoining property (*Right*).



The dig necessarily over the almost 4 years of work was interrupted by bad weather and non-availability of diggers but ultimately most of the area was taken down to the natural surface. On the way other features were explored but there was little to add to what had previously been learned.

4 FINDS

As discussed in the preceding text, many of the 'finds' were associated with the apparent collapse and destruction of the mill sometime in the early 20th C. Apart from a few sherds of glazed ceramic from mugs and plates, some mechanical parts of the mill machinery were recovered as were possible elements of the framework of the machinery. Many pieces of – and some whole – kiln tiles were recovered as were



fragments of clay, maybe furnace pipes and possibly originating from the nearby Threlfall's pipe factory, melded together but no trace of the actual kiln or furnace was uncovered. However a piece of cast iron, embossed with the word 'ATMOS', hinted at a later phase of the mill, since research indicated that this probably referred to a Swedish manufacturer of steam boilers in the mid to late 19th C. It was initially suggested that the water driven machinery may have been converted or supplemented by the installation of a steam engine to drive what may now have become a bone-meal mill, although, since there is no evidence of a change of use, it may have simply been for heating the mill and so its precise purpose remains unknown.

One final 'find' was a large irregular sandstone boulder which on one surface had carved into it a neat rectangle and a small circular image. Intriguingly when turned over there appeared to be the scratched initials 'JW' and other indiscernible lines.



In discussion no explanation could be found for the rectangle and circle but the team wondered if the 'JW' might have been carved by the John Warren (1702) mentioned in Richard Cookson's 'Goosnargh Past and Present' referred to in section 2 above.

5 SUMMARY AND CONCLUSION

Despite not having been able to confirm its precise date of construction of, the archaeology, together with the documentary evidence detailed above, demonstrated that Hollowforth Mill had been a multi-phase site of some complexity, with origins probably as early as the 13th C, coming to an end in the early 20th C. The archaeology, particularly the significant masonry remaining *in situ* observed in the adjoining property on both sides of the race, suggested that the mill had been, at an early stage of its existence, a substantial masonry building, straddling the mill race.

On 'our side' of the fence the multi-phase and complex nature of the building was clear. The western external wall consisted of hand-made brick laid on masonry or on the natural surface while the eastern wall had an outer 'skin' of masonry lying on lower courses and foundations of masonry and re-used millstones, suggesting re-use of material from a demolished earlier structure, and an inner 'lining' of more modern brick with evidence of a blocked doorway. This inner wall may have been bonded with the masonry in the adjoining property but unfortunately this join lay under a large tree and was impossible to investigate. No evidence of any external brick or masonry wall on the northern elevation was found.

Internal walls were principally of modern brick, in some instances overlying older masonry that may have supported timber structures. Flagged floors were exposed but also bare earth floors in some areas hinted at the previous existence of floor boards. A doorway had been blocked in where a wall showed signs of having been rebuilt and at some point in the past some 500 handmade bricks had been laid to form a 1m x 8m x 0.6m platform overlain with flagstones either in or abutting the bypass ditch. Many fragments and some whole kiln tiles were found but there was no evidence of an actual kiln on our site. The absence of any wooden finds other than one broken piece of timber with an iron nail, or of any indications of human activity such as clay pipe stems, broken china or coins suggests either that the mill's occupants were extremely tidy or that the mill had been emptied before its collapse and any valuable remains such as floorboards etc., had been salvaged.

In the process of our excavation we learned much about the structure and running of mills. At the start of the excavation there was no understanding of mills and their structure; the type of waterwheels; undershot (in this case), overshot or breast-shot wheels, the different types of mill stone (with the very hard French burr being one of



Hollowforth Mill before and after the dig

our discoveries) together with the techniques required for drying the corn and the different types of kiln tiles particularly fascinating. However, even with this new knowledge we remained frustrated that we had been unable to access that part of the mill that probably housed its waterwheel and thus the main operating machinery.

We also learned a lot about excavation – or at least were reminded about things we should have learned in the past.

Possibly the main learning point for any archaeologist is; always site the spoil heap well away from your trenches. This obviates the need to move the spoil heap when you realise that you have positioned it over key features that you now need to excavate.

Since closing the excavation, we learned that the owners of the land on which the race and the wheel were located has carried out further landscaping. We do not know if he has preserved or destroyed what remained of Hollowforth Mill.



Imagined views of Hollowforth Mill by Ria Teunisse. Left: from East. Right: from West.

7 DIG TEAM

At various times over the excavation period of four and a half years, the following, with apologies to those whose names are lost, have got their hands dirty:

Paul Ashworth
Dave Berry
Chris Birkett
Chris Clayton
Mike Edwards
Dave Hampson
Ross Hewitt
Davinia Jackson
Simon Millward-Hopkins
Gareth Monger
Jess Monger

George Nicholson
Sharon Nicholson (mum of above)
Carlo Ricco
Brian Rigby
David Seeley-Jones
Colin Sills
Ria Teunisse
Steve Weigh
Sue Yates
Various children & possibly others
Bill Aldridge & colleagues of Wigan A.S.

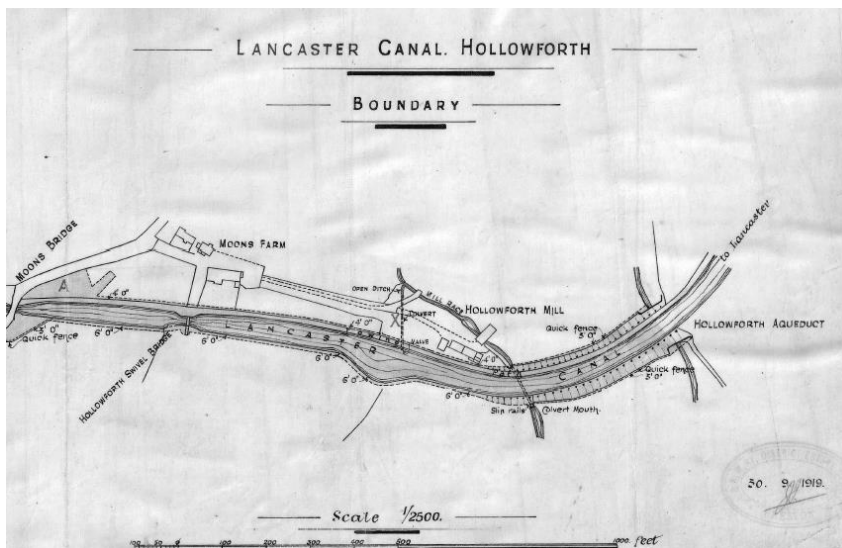
8 ACKNOWLEDGEMENTS

The following also made a great contribution to our dig:

John Grimbaldeston for access, storage of kit, the barbecue and use of 'the beast'.
Bill Aldridge & Wigan Archaeological Society for geophysics
David Ratledge for LiDAR imagery
Lancashire Archives for maps and research documents
Chester Archives - ditto
Heron Mill, Beetham for showing us how a water mill works
Wikipedia for odd bits of information.

David Hampson August 2020
All photographs © D W Hampson

ADDENDUM



John Grimbaldeston has contributed this 1919 plan of Lancaster Canal at Hollowforth. Interestingly, the feature on the tail race believed to be a fishpond appears to have an 'island' in the middle.