
HOUGH MILL QUARRY

**SECOND STAGE ARCHAEOLOGICAL ASSESSMENT
AT LEA FORGE FARM, WYBUNBURY, CHESHIRE**

Report No. 27

**Prepared for
ECC Quarries**

**Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust**

REPORT ON A SECOND STAGE ARCHAEOLOGICAL ASSESSMENT AT LEA FORGE FARM, WYBUNBURY, CHESHIRE, FOR ECC QUARRIES, CROFT, LEICESTERSHIRE

INTRODUCTION

The Gwynedd Archaeological Trust was contracted to do a second stage archaeological assessment by ECC Quarries Ltd, Croft, Leicestershire, at Lea Forge Farm, Wybunbury, Cheshire (NGR SJ 706 486) as part of the company's process of drafting a planning application to extend sand extraction at their Hough Mill Quarry site, Wybunbury.

The application area contains the presumed site of Lea Forge, a post-medieval ironworks on the Checkley (Forge) Brook, known from documentary sources to have been in operation from c. 1650 to 1820.

The first stage assessment, undertaken in April 1991 and comprising a limited documentary search of archive material, a topographical (EDM) survey and three hand-dug trenches on surface features in Hammer Meadow, SW of the Old Mill Race, had proved inconclusive.

BRIEF

In view of these results, a brief for a second stage archaeological assessment was agreed with Mr Adrian Tindall, Principal Archaeologist, Environmental Planning Service, Cheshire County Council. The brief followed the ' framework of the first stage assessment, namely determining the extent and survival of the remains of the ironworks and producing a report evaluating the archaeological implications of planning permission being granted, but widened the scope of the work to include:

- (a) a more detailed appraisal of existing archive data relating to the site in the Cheshire County Record Office.
- (b) a field survey by surface inspection, fieldwalking, and topographical survey of a part of the application area NE of the first stage assessment, in the field between Lea Forge Farm and the Old Mill Race.
- (c) trial trenching by machine, or a combination of machine and hand, of selected surface features identified during the first stage assessment SW of the Old Mill Race, and also, dependent on the results of (a) and (b), selected surface features in the field between Lea Forge Farm and the Old Mill Race.

PROCEDURES AND METHODS

A. Archive Appraisal and Ground Survey

(i) A second, more detailed, search of archive sources in the Cheshire County Record Office was undertaken and copies obtained of three of the most relevant maps of the application area and presumed site of the forge. These were:

Map of the Township of Lea in the Parish of Wybunbury and County of Cheshire, 1762 (Ref. WB/Q/1/7)

Lea Township Tithe Map and Apportionment, 1838 (Ref. EDT 230/2)

Ordnance Survey 6" Map First Edition, c. 1880 (Ref. OS 611 Sheet LXII).

(ii) The portions of the maps covering the assessment area and showing evidence of the forge site were enlarged to match the current Ordnance Survey 1:2500 map (Sheet SJ 7048) as closely as possible.

(iii) The information was collated onto one plan so that it could be incorporated with the results of the Trust's first and second stage topographical (EDM) surveys on either side of the Old Mill Race.

(iv) Fieldwalking as part of the first stage archaeological assessment in April 1991 had identified some topographical features, mainly modern drainage ditches, NE of the Old Mill Race, in the field adjoining Lea Forge Farm. It was decided to examine this area in more detail as the results of the first stage assessment, SW of the Old Mill Race, had been inconclusive.

(v) On 20 June 1990, a topographical ground survey of all the visible surface features NE of the Old Mill Race was undertaken with an EDM Geodimeter, using Digital Ground Modelling software enhanced by Easycad 2 for plotting. Conditions were, to some extent, hampered by the hay crop and the level of water in the Old Mill Race.

Results

(a) Archive Sources (fig. 1)

On the 1762 **Map of Lea Township**, the most likely site of the forge is the large, unnamed building next to the Old Mill Race, under the E side of the modern car park at the corner of the field (SJ 7066 4851). In this position, water power would have been available via the race from Forge Pool.

The map also shows a number of smaller buildings, grouped in a compound on either side of the Old Mill Race, around the presumed site of the forge, and in all probability associated with it.

However, the plots of these structures on fig. 1 are approximate, owing to the cartographical distortions inherent in any map of this age.

Over seventy years later, the same area is shown blank on the **Lea Township Tithe Map** of 1838, confirming, possibly, the published account of the demolition of the forge c. 1820 (Dodgeson, J McN, *The Place Names of Cheshire*). By about 1880, the W half of the site, now under the modern car park, was occupied by the *Lea Forge Flour Mill*, a building, once again, sited to exploit water power from the Mill Pool, originally the *Forge Pool*.

(b) Topographical Survey

The second stage survey NE of the Old Mill Race identified two substantial drainage ditches running from Lea Forge Farm to the Old Mill Race, both cutting the earlier bank aligned SE to NW across the middle of the field. The SE part of the bank merges into a slightly raised area of ground, about 30 by 7m, adjacent to the narrower, SE ditch; almost certainly the area noted on the 0 S Record Card as *Most likely site of building at W 7065 4850* (SJ74NW7). The ruins of a mill wheel were noted lying in the Mill Race channel at the corner of the field, with extensive nineteenth century brickwork supporting the adjacent car park wall.

B. Trial Trenching

On the basis of the inconclusive results of the first stage archaeological assessment, and also the archive and ground survey information gathered in the second stage archaeological assessment; eight more, machine-dug trenches were excavated (fig. 2, trenches A2, E, F, J, K, L, M and N). After consultation with Mr Adrian Tindall, Principal Archaeologist, Environmental Planning Service, Cheshire County Council, the trenches were sited where the combination of possible earthworks and archive information held the best potential for buried archaeological features.

Methods

In the absence of any archaeological features being recognised, the trenches were all dug to a natural, silty-sand layer at 1.00 - 1.50m depth, using a JCB 3C machine with a 4ft. ditching bucket. Hand clearance of selected portions followed, either to clarify the stratigraphy or potential archaeological features revealed. Extensive archaeological remains were found only in trench J, which was subsequently cleaned by hand, planned and photographed.

Results

Trenches A2 9 E and F were excavated to the SE of the Old Mill Race to examine further the nature of the deposits recorded in the hand-dug trenches of the first stage archaeological assessment (fig. 2, trenches A1, B and C). The apparently mixed and disturbed sequence of sand and humic sand layers recorded under the sandy-loam topsoil during the first stage were found to overlay natural, heavily waterlogged silty-sand at 1.00+m depth.

Because of the waterlogging, the sides of the trenches were very unstable and could not be recorded in detail, but an extensive band of iron slag and cinders was briefly noticed above the natural sand in Trench E, before the trench flooded and the sides collapsed. There were no finds in any of the trenches and no trace of the small structure recorded on this side of the old Mill Race on the 1762 **Map of Lea Township** (fig. 1)

On the other side of the Old Mill Race, extensive deposits of charcoal debris occurred in all the trenches excavated (fig. 2, trenches J, K, L, M and N). The deposits were up to 0.50+m thick in trenches J and N, but gradually thinned out towards the outer ends of trenches K and M. Occasional lenses of fragmented, possibly crushed, slag, or similar debris, were noted between the charcoal deposits and the natural sand. Waterlogging hampered detailed recording and there were no finds found in situ. A small collection of post-medieval pottery sherds was collected from the surface of the machine-dug spoil from the trenches.

The corner of a substantial structure was revealed in trench J. It was possibly rectangular, with one pair of opposing sides at least 12m long and the interior divided into more than one compartment (fig. 3). Only the foundation trenches

had survived, cut into the natural sand (context 006), robbed, and back-filled with varying proportions of broken bricks, sandy clay and charcoal (fig. 3, contexts 001, 002, 007). The end of one foundation trench was seen in section (fig. 3, section, context 010).

The stump of the 0.25m square wooden post (fig. 3, context 005) could have been part of a supporting timber in the original building, whilst the pit (fig. 3, context 009) might have also been connected with the structure in some way. All the foundation trenches were abutted by the charcoal deposits (fig. 3, context 003) and in places, cut by recent land drains (fig. 3, contexts 004 and 008).

ARCHAEOLOGICAL SUMMARY

1. The archive evidence strongly points to the forge itself having stood next to the Old Mill Race, under the east side of the modern car park. The site was later occupied in the second half of the nineteenth by Lea Forge Flour Mill, parts of which including the ruins of the mill wheel still survive. The earliest map evidence also shows ancillary buildings, associated with the forge, grouped in a compound to the NW on either side of the Old Mill Race.

2. One of the ancillary structures on the NE of the Old Mill Race is almost certainly represented by the traces of the large

building revealed in trench J, which in association with the surrounding charcoal deposits, might have been a shed where wood was burnt to supply the forge with charcoal. However, no trace of any of the other structures noted on this side of the Old Mill Race on the 1762 **Map of Lea Township** was found.

3. The nature of the excavated evidence from the second stage archaeological assessment, on both sides of the old Mill Race, confirms the account of the early nineteenth century demolition of the forge; much of the fabric doubtless having been reclaimed for re-use elsewhere. Nevertheless, ample indications survive in the areas examined of some of the processes associated with ironworking. Such evidence is rare and little understood for the post-medieval period, and would provide a valuable insight into the technicalities and operation of the furnace itself. (for a published summary of ironworking in this period, see *Post-Medieval Archaeology in Britain* by D Crossley, pub. by Leicester University Press, 1990).

CONCLUSIONS

In line with Cheshire County Council's brief for the assessment that the preferred option, wherever possible, should be preservation *in situ* of significant archaeological deposits, the Trust makes the following recommendations:

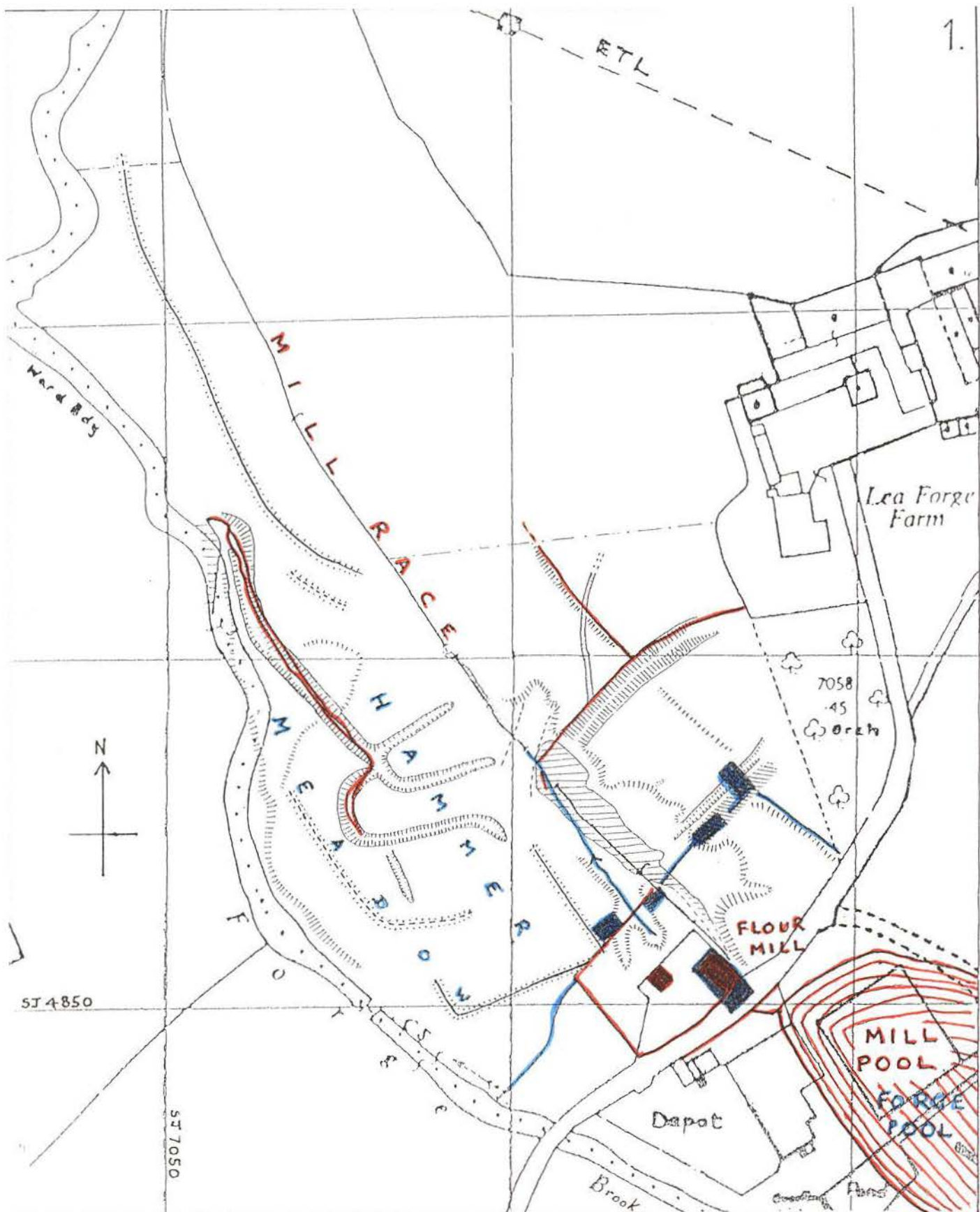
1. In spite of the forge and its buildings having been demolished, the rarity and extent of the related evidence surviving in the areas examined merits consideration being given to the preservation of the area shown on fig. 4

2. In the event, therefore, of planning permission being granted for extraction, it is suggested that the area shown on fig. 4 is completely excluded from quarrying operations. The area lies on the edge of the proposed concession where it would be feasible to implement this; however, if this is impractical, a reserve option of preservation by record (i.e. full rescue excavation) should be considered.

3. An inspection be undertaken by a competent specialist of the condition of the ruined mill wheel in the Old Mill Race channel next to the car park, to determine what, if any, further action may be suitable.

4. An archive and catalogue of the site records of the two stages of archaeological assessments are prepared at costs to be agreed with the developer: the total of material to be deposited with a competent curatorial body, by arrangement with the Principal Archaeologist, Environmental Planning service, Cheshire County Council.

5. A short report be prepared of the work for publication in the journal *Post Medieval Archaeology*, at costs to be agreed with the developer.

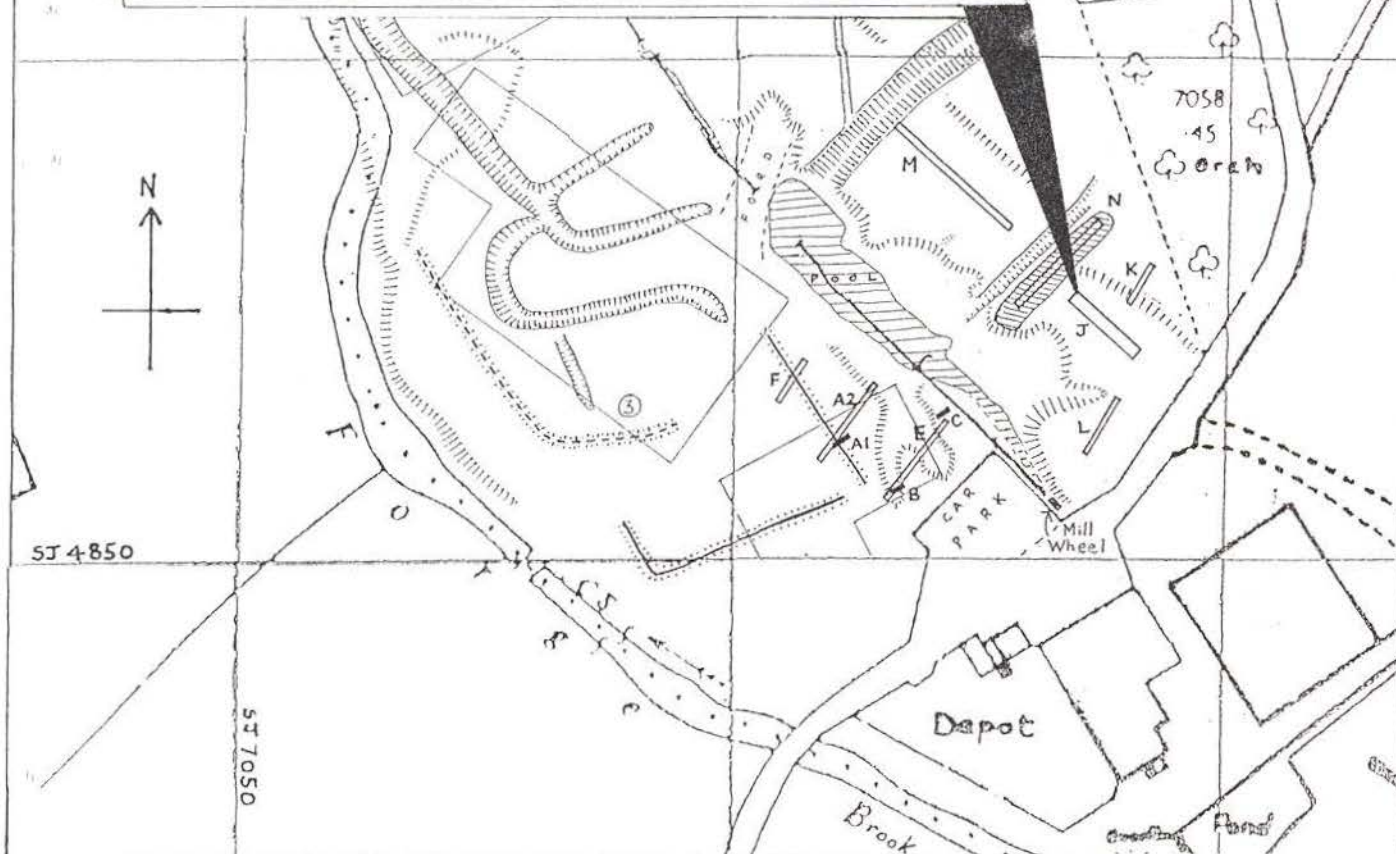
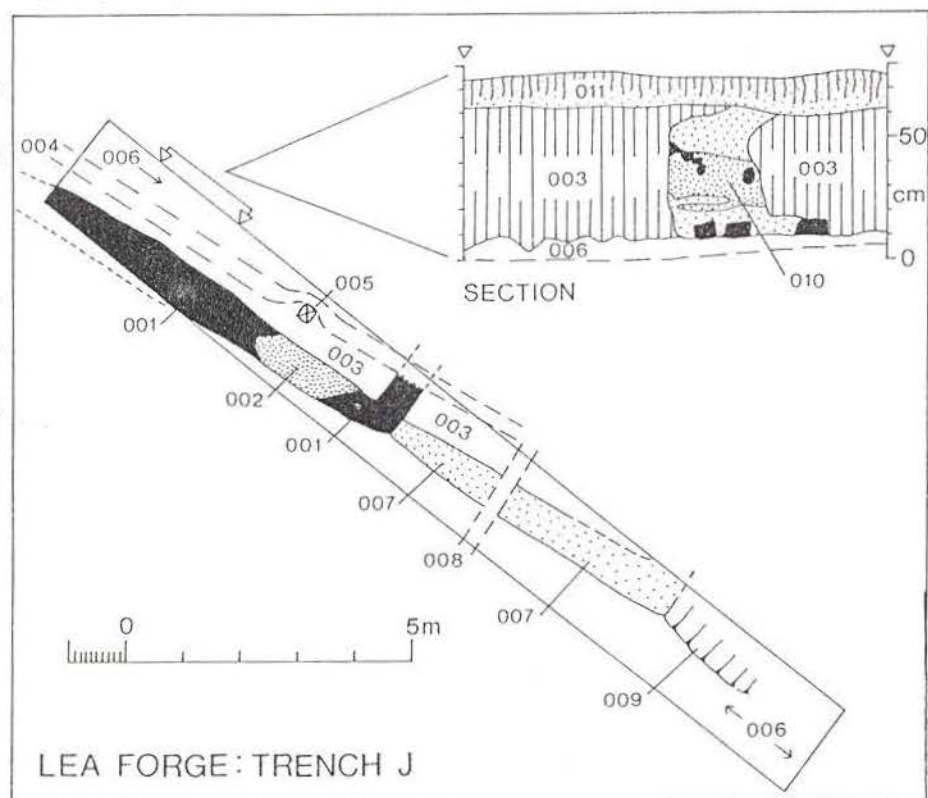


LEA FORGE, HOUGH MILL, WYBUNBURY, CHESHIRE : ARCHIVE SOURCES

BLUE : MAP OF THE TOWNSHIP OF LEA 1762
[APPROX. ONLY]

RED : ORDNANCE SURVEY 1880

0 50 100 M



LEA FORGE, HOUGH MILL, WYBUNBURY, CHESHIRE : ARCHAEOLOGICAL FEATURES

001, 002, 007 : FOUNDATION AND ROBBER
& 010 TRENCHES
004 & 008 : LAND DRAINS
003 : CHARCOAL DEBRIS
005 : WOODEN POST STUMP

006 : NATURAL SILTY-SAND DEPOSITS
009 : PIT ?
011 : HUMIC SAND TOPSOIL



LEA FORGE, HOUGH MILL, WYBUNBURY, CHESHIRE : ARCHAEOLOGICAL REMAINS



AREA OF PROVEN
ARCHAEOLOGICAL REMAINS
ASSOCIATED WITH FORGE

0 50 100 M