

Marches Archaeology

Hill Street/Bullock's Row Walsall West Midlands

Report on an archaeological watching brief

April 2004

Marches Archaeology Series 333

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Hill Street/Bullock's Row
Walsall
West Midlands

Report on an archaeological watching brief

NGR: SP 0173 9830

Report by
Richard Stone and Adrian F. Nash

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Report on an archaeological watching brief

Summary

During a visit to the development site the Borough's Archaeological Advisor found that a substantial oak artefact, then thought possibly to be a logboat, had been discovered. Marches Archaeology was commissioned to undertake a watching brief on the site. The watching brief found other wooden artefacts that formed a structure with an industrial purpose. The oak artefact was examined by a specialist who identified it as a trough and speculated, based on a residue of bark chips within the trough, that it might have been associated to leather tanning. The trough was dated to the late medieval period and is likely to have been associated with the other wooden artefacts found.

Below the level of the wooden structural artefacts were two features cut into the natural. Analysis of plant macrofossils, pollen and insect remains showed that these two features are likely to have been constructed before the town developed or within a rural enclave. An earlier feature [309] was situated in a largely wooded and grassy environment, while a later feature [106] indicates an arable and pastoral landscape with localised woodland, orchard or hedgerow in the immediate vicinity. Both features held standing water, and in the latter case may have been a fishpond or livestock watering pond.

1 Introduction

Planning permission was granted by the local planning authority to develop a site at the junction of Hill Street and Bullock's Row (ref. 02/1286). The site is situated at NGR: SP 0173 9830. Work on the site commenced prior to the formal issuing of permission but it was understood that the permission included a condition requiring a programme of archaeological works.

The site lies within the historic core of Walsall on a relatively steep slope that runs downhill from the medieval church to Ablewell Street. The site was subject to an archaeological evaluation in April 2003, consisting of a single trench 10m x 4.5m which indicated that the archaeological resource was limited. When development works commenced limestone walls were noted in the side of the site and, when the site was visited by M. Shaw, the Local Planning Authority's Archaeological Advisor, two wooden artefacts, possibly including a boat, were also noted. He requested that an archaeological presence be maintained to investigate these and any other items of archaeological interest, though no Brief had at that point been set. Marches Archaeology was commissioned by Mr K. Towe (the client) to carry

out these works and met M. Shaw on site to discuss the extent of works, which were then undertaken. A site meeting was held between Marches Archaeology, the Local Planning Authority's Archaeological Advisor and the English Heritage Regional Science Advisor to discuss sampling strategies and specialist involvement.

The Local Planning Authority's Archaeology Advisor subsequently produced a "Draft Brief for archaeological work at Hill Street/Bullock's Row, Walsall" which was provided after site works were completed. A retrospective project proposal was produced with regard to the site work. It was based on the Brief and followed its stipulations.

2 Aims and objectives

A site meeting between the local authority's archaeological advisor and Marches Archaeology determined what archaeological works were required on site. Section 3 of the Brief set out the scope of the project. In summary archaeological work was required on the following:

- the *ex situ* wooden artefact provisionally identified as a boat, sled or trough
- the *ex situ* wooden pipe or conduit
- the *in situ* wooden pipe or conduit
- the large feature tentatively identified as a pool or pond and an earlier feature to its south
- the southern edge (section) of the site with the limestone walls

The Institute of Field Archaeologists defines the purpose of an archaeological watching brief as:

‘to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works’

and:

‘to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support a treatment to a satisfactory and proper standard’.

The objectives of this watching brief, based on the above stated aim, were

- to identify the date and function of the wooden objects and to interpret their significance
- to identify the nature of the local environment and land use indicated by the large hollow feature and to comment on the dating evidence
- to record the evidence for limestone walling and interpret its significance

3 Methodology

Fieldwork

Observations of groundbreaking activity in association with the development and appropriate recording were undertaken.

The recording system includes written, drawn and photographic data. Context numbers were allocated and context record sheets completed. Plans were drawn showing the location of the trenches with detail plans of archaeological features drawn at 1:20, sections were drawn at 1:10 or 1:20. The photographic record consists of black and white negative and colour transparency film. The sequence allocated to context record sheets continues from the previous evaluation.

Office work

On completion of fieldwork a site archive was prepared. The written, drawn and photographic data was catalogued and cross-referenced and a summary produced. The artefactual data was processed, catalogued and cross-referenced and this report was compiled.

4 Archaeological and historical background

Recent discoveries of archaeological sites in the Borough of Walsall have yielded some interesting finds including a scatter of Mesolithic flints and a group of Bronze Age burnt mounds. Roman finds consist of coins and other miscellaneous objects that have been found near to the church. The place name evidence for Walsall suggests a Welsh origin. The Royal Manor of Walsall was granted to William Ruffus in 1159. By the end of the 12th century a small planned market town had developed around the church, and urban expansion continued throughout the Medieval period with mandates being issued in 1373 by Edward III and in 1399 by Henry IV.

The site of the proposed development lies within 'Church lands' indicted on a map of 1679. A map of 1763 indicates that the site was still empty although this may be because the land was ignored by early cartographers because it was owned by the church, of no strategic value, and exempt from taxation. Bullocks Row is not mentioned until the 18th century when it first appears on a map of 1782. On this map buildings are indicated at the junction of Hill Street and Bullocks Row, and lime workings are indicated to the west of Ablewell Street, suggesting the existence of a quarry which would have taken advantage of the natural limestone outcrop that forms the Church Hill.

A map of 1821 shows the continued development of the site with structures along either side of Bullock's Row at its southern end. The general area of the lime works can be seen to the north of Hill Street with property boundaries backing onto its southern edge. The Ordnance Survey of 1885 shows that the area is substantially built up with terrace housing and a courtyard. Industrial buildings can be seen to the north. The site of the lime workings is still an open space but a retaining wall has been built to the rear of the courtyard and terrace housing.

5 The watching brief and excavation

During the course of site clearance the Council's Conservation Officer noted limestone walls in a trench edge. Mike Shaw, the Black Country Archaeologist, made a site visit and noticed that a large hollowed out wooden artefact had also been discovered. This was postulated variously as a boat, sled or trough. On discovery it was suggested that this could be prehistoric. A mechanical excavator had pulled the wooden artefact out of its original location before Mike Shaw saw it. Marches Archaeology was then commissioned to carry out an archaeological watching brief on the site. During the course of the watching brief the English Heritage Regional Science Advisor visited the site to discuss the research agenda and to assist with the formulation of sampling and scientific dating strategies.

Nigel Nayling of the University of Wales, Lampeter, visited the site and interpreted the wooden artefact as a trough (Fig. 2) (Plates 1-5). A residue in the trough was sampled (sample 4) (Fig. 2a). Dr Nayling noted that this was oak bark and suggested that this was typical of the tanning industry. Dendrochronology on the artefact has revealed that the tree used to create the artefact wall was felled in the late medieval period (Fig. 2e; Table 1).

A further hollowed wooden artefact, with both ends open (i.e. like a conduit) was also removed (Plate 2). The artefact was 2.94m long and was 0.36m at one end whilst it was 0.46m at the other. The log was 0.21m thick and had most of the wood removed to leave a square cut 0.13m deep. Dr Nayling could not identify the function of this with any certainty.

The original position of these two artefacts is not precisely known, but there is consensus among those who were on site at the time it was discovered and moved that it came from a boggy area where a lorry had got stuck and that was then surrounded by traffic cones to avoid further such incidents. Archaeological observation and recording of mechanical extraction was subsequently carried out in this area, with some hand excavation and detailed recording. There were no modern holes or levelling such as would indicate that the artefacts had been dug out from deeper than the ground level seen by the archaeologists.

The archaeological investigation also identified a large feature [106], some 7m wide and at least 14m long, which was physically below the area in which the wooden artefacts were found (Figs. 3, 4, 5 & 6) (Plates 6, 7, 8, 9 and 10). The fills of this were pebbly loams, becoming increasingly pebbly near the bottom [101, 102, 103, 104, 207] with a humic organic rich layer [105] at the base (Fig. 4). A soil sample (no. 2) was taken from this for environmental remains. Directly overlying this, in two separate places, were single sherds of pottery of mid-13th to 14th century date recovered from the overlying layer of fill [104]. No other artefacts were noted.

The large feature [106] cut a feature [309] to its south (Figs. 3, 4 and 7) (Plate 7). It is not clear whether this was a pit or a linear feature. It was 1.7m wide at its widest point and extended for at least 2.8m north-south. There was no artefactual evidence to date this, but stratigraphically it pre-dated the large feature to its north. Based on the nature of the soils, it is likely to be medieval rather than significantly earlier. A sample (no. 5) was taken from one of the humic fills [305] of this.

Above the fills of the large feature [106] a series of timber artefacts [402, 403 & 404] were found in association with one another (Figs. 8, 9 and 10) (Plates 11 and 12). The principal object was a hollowed trunk [402], which was placed upside down and laid on timber

planking (Figs. 8 and 10). Cut into the top of the artefact was a 2cm square cut groove (Fig. 8). To either side of the hollowed trunk were planks [403], but there was no evidence of any timber below it, apart from some transverse timbers that either supported and divided the planks or the narrow edge of the planks was resting on these blocks [404] (Fig. 9) (Plate 12). In between the planks and also within the hollowed area of timber [402] was pale brown sand [401]. Near to the edges of the cut [405] was grey silt that may have been the decayed remains of vertically placed timber planking. This timber structure is provisionally interpreted as a conduit or soakaway. This interpretation carries the problem that there was no apparent base to the conduit, hence the consideration that it may have had a soakaway function.

Directly to the south of this area two or three vertically aligned small plank fragments were seen in the top of the area first observed archaeologically. The importance of these was not recognised at the time and a mechanical excavator was allowed to remove them so that a broader understanding of the site could be achieved. With the benefit of hindsight it is apparent that these were a continuation of this timber structure and a further transverse timber was seen in this area at the correct level to complement those further north.

It is possible that the hollowed log with open ends, which was *ex situ* when seen by archaeologists, could have come from this position. This remains speculative as the movement of vehicles over the site and earthmoving operations had obscured the stratigraphy and possibly redeposited material in this area. An alternative interpretation is that any log/trunk that may have formed the continuation of the 'conduit' was removed in antiquity.

The trench section initially seen by the Council's Conservation Officer did have limestone walls [502] but these were associated to the cellars that had been previously seen during the evaluation (Fig. 11). A layer of red brown sandy loam [503] below the cellars had survived above the natural. Pottery sherds from a single vessel identified this as a medieval soil layer.

6 Pottery report by Stephanie Rátkai

Context 103 Date: late 13th-14th c

1 x White ware baluster jug sherd. Badly abraded. Some external copper coloured lead glaze. Trace of incised wavy line decoration. The fabric is the same as fabric WW2 from Sandford Street, Lichfield (Rátkai in press). This type of jug is illustrated in Wrathmell and Wrathmell (1976-77)

1 x Buff ware jug sherd. External yellowish olive glaze with dark copper mottles. There is no exact parallel for this fabric in the Lichfield type series. Its closest parallel is fabric cm3.

Context 503 Date: 14th c

1 x whiteware jug sherds (one vessel). Pale olive glaze, Trace of incised decoration. This fabric is probably the same as fabric WW3 from Sandford Street, Lichfield.

All three sherds are of local South Staffordshire manufacture and made from the Coal Measure Clays.

7 **Dendrochronological spot date report** by *Dr Nigel Nayling*

Site Name/Code: Hill St, Walsall

Report Date: 13 November, 2003

Compiled by: Nigel Nayling, HARP, University of Wales Lampeter

Table 1: Samples

Sample code	Conversion	Species	Ring count	Sap wood	Average Ring Width (mm)	Date	Felling Date Range
HILLSTW1	Half	Oak	98	H/S?	3.26	AD1372-AD1469	AD1479-1515

Notes

The single sample, a wedge from the end of the trough has been dated through correlation with a range of dated regional tree-ring chronologies and site masters from dated buildings in Britain.

8 **The environmental analysis** by *Elizabeth Pearson. With contributions by Emma Tetlow, David Smith and Ralph Fyfe*

Project parameters

The environmental project conforms to relevant sections of the *Standard and guidance for an archaeological watching brief* (IFA 1999); *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2002).

8.1 Methods

Fieldwork and sampling policy

Samples were taken by the excavator from deposits considered to be of high potential for the recovery of environmental remains. A total of 3 samples were taken from the site from the following contexts:

- Context [105], sample 2, organic fill at the base of feature [106]. A sample of 20 litres was taken from this context.
- Context [305], sample 5, humic fill of feature (pit/linear) [309]. A sample of 20 litres was taken from this context.
- Bark in oak trough, sample 4. A sample of approximately 2 litres was taken from this artefact.

8.2 Results

8.2.1 Plant macrofossil remains

Processing and analysis

From samples 2 and 5 sub-samples of 500ml, and from sample 4 a sub-sample of 250ml, were processed by the wash-over technique as follows. The sub-samples were broken up in a bowl of water to separate the light organic remains from the mineral fraction and heavier residue. The water, with the light organic fraction was decanted onto a 300µ sieve and the residue checked for artefacts or ecofacts before discarding. The remainder of the bulk samples from samples 2 and 5 were retained for further analysis.

The flots were scanned using a low power EMT stereo-light microscope and plant remains identified using modern reference collections maintained by the Service, and a seed identification manual (Beijerinck 1947). Nomenclature for the plant remains follows the Flora of the British Isles, 3rd edition (Clapham, Tutin and Moore 1989).

Context [305] (humic fill of feature [309])

Plant remains (Table 3) were well preserved, presumably as a result of waterlogging as the feature evidently contained standing water vegetated by pondweed (*Potamogeton* sp), while rush (*Juncus* sp) is likely to have been growing in or around the feature. There is some evidence that trees or shrubby vegetation grew in the near vicinity as hazelnut shell (*Corylus avellana*), sloe (*Prunus spinosa*), elderberry (*Sambucus nigra*) and bramble/blackberry (*Rubus fruticosus* agg) seeds or fruit stones are unlikely to have been transported far by natural means. Other plants are likely to have formed either an understory to the woody or shrubby vegetation or were growing in a grassy habitat, for example, red campion (*Silene* cf *dioica*), common nettle (*Urtica dioica*), rough chervil (*Chaerophyllum temulentum*), hedge woundwort (*Stachys sylvatica*) and field mouse-ear chickweed (*Cerastium* cf *arvense*). The presence of great burdock (*Arctium lappa*) is the only sign of open cultivated, or disturbed ground.

Context [105] (humic fill of feature [106])

The fill of this feature was particularly organic, the deposit being more peaty than silty. As above, it also contained standing water vegetated with pondweed (*Potamogeton* sp) while rushes (*Juncus* sp) and water-pepper (*Polygonum hydropiper*) were growing in or around the feature. It appears to have been well vegetated in the immediate vicinity as fairly sturdy leaf fragments were particularly abundant, with occasional thorns, which probably came from woody or shrubby vegetation. A fragment of hazelnut shell (*Corylus avellana*) and seeds or fruits of birch (*Betula pendula*), blackberry/bramble (*Rubus fruticosus* agg), elderberry (*Sambucus nigra*) and hedge woundwort (*Stachys sylvatica*) provide some additional indication of either a woody or shrubby and overgrown habitat. Whether this merely fringed the feature or covered a wider area is uncertain. Stem fragments from herbaceous plants were also abundant, while grasses (Gramineae sp), common nettle (*Urtica dioica*), cow parsnip (cf *Heracleum sphondylium*) and hemp-nettle (*Galeopsis tetrahit*), for example also indicate grassy areas.

Sample 4: from centre of oak bark trough

Only humified bark was found on processing this sample. Although this has been interpreted as being a structure used in the tanning industry, there was no other evidence for this in the form of phosphate concretions, or mineralised organic remains which may have come from

urine or faeces commonly used in the tanning process. The absence of these remains does not negate the link of this structure to the tanning industry as the survival of mineralised material can be very variable, depending on soil conditions and overall chemical composition of the components of the deposit. Variable survival of cess waste, for example, has been shown on similarly sandy soils in Lichfield (Pearson 2004).

8.2.3 Pollen

Pollen analysis was undertaken from a single sample from context [105] (sample 2). The context is described as a humic rich layer from the base of a feature whose function is unclear from excavation.

Methods

Pollen preparation followed standard procedures (Faegri and Iversen 1989). Pollen and spores were identified using the keys in Moore *et al* (1991), Andrew (1984) and the University of Exeter collection, to a sum of 300 land pollen grains. Results are shown as a percentage of total land pollen. Pollen nomenclature follows Bennett (1994); differentiation of Poaceae and cereal types follows Andersen (1978). In addition, non-pollen microfossils encountered during pollen analysis were identified and recorded using the descriptions in van Geel (1978) and van Geel *et al* (1981, 1983).

Results and interpretation

Results of the analysis are given in Table 4. Around two-thirds of the pollen recorded are from herbaceous species, indicating a significant amount of open ground around the feature. Poaceae (grasses) are the dominant pollen type in the sample, which suggests significant grassy areas. This is confirmed by the presence of a number of taxa indicative of grassy habitats, including *Plantago lanceolata* (ribwort plantain), *Rhinanthus* (yellow rattle), *Rumex acetosa* (common sorrel) and *R. acetosella* (sheep's sorrel).

In addition to evidence of grassy habitats, there is clear indication of arable landuse in the vicinity of the feature. *Avena/Triticum* type (oats or wheat) constitutes 15.9% of pollen recorded; *Secale cereale* (rye) is also present in the sample. The production and dispersal of pollen from cereals is low, and it is unusual to record cereals in levels above 5% TLP (total land pollen) unless they are either being grown in the immediate vicinity or crop processing is taking place around the site. Within the herbaceous taxa recorded, several are indicative of open or disturbed ground, including *Artemisia* (mugwort) and *Urtica urens* (small nettle) both of which are recorded at significant levels in the sample, which may indicate that cereals are being grown in close proximity of the site. Alternatively, these taxa may represent a patch of waste ground close to the site.

Tree pollen counts for around a third of the taxa recorded from the sample. The main types are *Corylus avellana* (hazel), *Alnus glutinosa* (alder) and *Quercus* (oak). Other taxa are recorded in low levels, but are unlikely to represent species growing in the immediate vicinity of the site. It is clear from the level of open grassland and arable indicators that the majority of the area surrounding the feature was cleared of woodland and open; however, some woodland persisted. It is possible that these taxa represent hedgerows or field boundary trees in the area, and the occurrence of *Lonicera* (honeysuckle) and Rosaceae undiff (the rose family) may support this interpretation. Alternatively, they may represent a small stand of woodland close to the site, or possibly a larger stand more distant from the site. The pollen

taxa *Potamogeton* (pondweed) and a number of non-pollen microfossils recorded during pollen analysis are useful in that they allude to the conditions during which the initial sedimentation of the feature occurred. There were clearly macrophytes within standing or slow-flowing water at the site (the pondweed), and several of the non-pollen microfossil types suggest emergent or semi-aquatic vegetation (for example, sedges), including type 4a (*Anthostomella fuegiana*). Type 58 represent Zygnemataceae, which produce spores in spring in stagnant, shallow and mesotrophic fresh water: the feature must therefore have had these conditions at least in the spring. Type 72a is the postabdomina of the cladocera *Alona rustica* – these occur in the most part within stagnant water.

Conclusions from the pollen analysis

1. Both arable and pastoral landuses are represented within the sample, and an unusually high level of cereal types suggest either cultivation in close proximity of the site, or some element of crop processing near the site.
2. Woodland taxa are recorded from the sample. These may represent hedge banks or field boundary trees: the presence of herbaceous types indicative of these habitats would support this hypothesis.
3. The non-pollen microfossils indicate that the organic material accumulated in slow-moving or stagnant shallow water.
4. No firm age indication is present from the pollen biostratigraphy.

8.2.3 Insect remains by Emma Tetlow and David Smith

The insect remains discussed are from a single context within the fill of a feature [105].

It was hoped that an assessment of the insect remains from these samples would provide information on the following:

1. If there were insects present? And if so, are the faunas of interpretative value?
2. Do any of the insects present suggest that human settlement was nearby?
3. Do the insect remains from these channels and ditches provide information on the nature of the environment and land use of the area around the ditch at the time of the deposits formation?
4. What were the flow regime and water conditions within the feature?
5. Would the insects present provide information on how these deposits formed, in particular was this material dump into the feature?

Methods

A single sample of compressed peat, which contained abundant hazelnuts, was processed, the weight of which was 6.4 kilograms and the volume approximately 8 litres.

The samples were processed using the standard method of paraffin flotation as outlined in Kenward *et al.* (1980). This paraffin flot was then sorted and identified where possible under a binocular microscope. The system for “scanning” faunas as outlined by Kenward *et al.* (1985) was followed in this assessment.

When discussing the faunas recovered, two considerations should be taken into account:

- 1) The identifications of the insects present are provisional. In addition, many of the taxa present could be identified down to species level during a full analysis, producing more detailed information. As a result, these faunas should be regarded as incomplete and possibly biased.
- 2) The various proportions of insects suggested are very notional and subjective.

Results

The insect taxa recovered from the flots are listed in Table 5. The taxonomy used for the Coleoptera (beetles) follows that of Lucht (1987). A number of Dipterous (fly) puparia and Trichopteran (Caddis) remains were found.

8.2.3.1 Discussion

Interpretative value

A large, diverse and well-preserved insect fauna was recovered from this sample. It was mainly composed of the remains of Coleoptera (beetles) but also contained numbers of Diptera (flies) and caddis flies (Trichoptera). It clearly has interpretative value.

Evidence of the presence of human settlement

There are few indicators for the presence of human habitation recovered in this fauna. There are no, or a limited number of members of the grouping of insects that Hall and Kenward (1990) as labelled as the 'house fauna' which indicate human settlement. It therefore seems unlikely that this fauna was derived from settlement refuse.

The environment surrounding the feature

A number of the insect species present suggest that around the banks of the feature was an area of open, weedy grassland. Broad indicators of grassland include the Curculionidae such as *Apion* and *Sitona*, as does the Chrysomelid *Lema* spp. Several species indicate plants of disturbed and waste ground, the Nitidulidae *Brachypterus urticae* and the Curculionid *Cidnorhinus quadrimaculatus* are both found on nettle (Bullock 1993). The presence of the dung beetles *Aphodius* may also suggest that animals were folded or that a small area of pasture was close by.

The banks of the ditch itself were well vegetated with a variety of aquatic and waterside plants: *Plateumaris* and *Dromius longiceps* both suggest tall, emergent vegetation as does *Notaris acridulus*, which feeds on reed sweet grass. *Phaedon* are associated with waterside plants such as watercress and brooklime.

Several species indicate trees nearby, *Scolytus rugulosus* is found on fruit trees particularly pear, apple and blackthorn, *Leperisinus varius* is found on ash and *Cetonia aurata*, the Rose Chafer on the blossom of hawthorn, elder and rose (Bullock 1993).

Flow regime and water conditions within the ditch

The aquatic beetles such as *Hydraena testacea*, *Coelostoma orbiculare* and *Hydrobius fuscipes* suggest that the ditch was filled with stagnant, standing or slow moving water. There is however one notable exception a single specimen of *Elmis aenea*, a 'riffle' beetle that lives in running waters was found. It seems likely that the remains of this beetle was

derived from further upstream suggesting that the ditch was fed by faster flowing waters further ‘upstream’.

The formation of the ditch deposit

It is clear that this deposit does not represent a single dump deposit of housing waste or stable matter. The insects present are derived from a wide range of natural environments and ecological zones. It would appear that this well functioned as a large “pit fall” trap collecting insects from the habitats surrounding the ditch during the time of the deposition of this material.

8.3 Discussion

Analysis of plant macrofossil remains from an early feature suggests that it was surrounded by a mosaic of woodland and grassland. The feature held standing water vegetated by pondweed and rushes. Analyses of plant macrofossil, pollen and insect remains from a later feature suggest that this was also located in a rural setting, in which pasture and arable land may have been equally prevalent, and that localised woodland or hedgerow existed, probably fringing the feature.

Each analysis emphasises different aspects of the environment. The pollen results highlight the likelihood of either cereal cultivation (wheat, oats and rye) or crop processing in the near vicinity. This aspect barely registered in the plant macrofossil and insect assemblages, although a small quantity of grass or cereal straw was noted. It is difficult to determine whether this represents cultivation, or merely processing. As woodland was not particularly dominant in either the pollen or insect assemblages, it seems likely that the corresponding macrofossil remains derive from very localised woodland or hedgerow nearby. The presence of insect species that fed on fruit trees is of interest, and suggests that this may have been an orchard. The feature itself, appears to have contained either stagnant or slow-flowing water, although a single “riffle” beetle suggests that it may at times have been fed by running water. There is a lack of evidence for occupation nearby (house fauna), and as it seems to be set within an agricultural environment, it is most likely to be either a boundary feature, or pond. Although it seems unlikely that a pond would have been constructed in a predominantly sandy deposit, it evidently did contain standing water (perhaps collecting water from upslope). A pond in this environment may have been a fishpond, or merely for watering livestock.

Both features are most likely to have been constructed in a rural environment before the small planned town had developed around the church, that is, by the end of the 12th century (Jeffrey 2003). If it had been constructed after this development, then it must have been situated within a “green” enclave of reasonable size. The pebbly sandy layers above [105] (104 and 205) may represent slumping of colluvial material down slope into the feature resulting from increasing disturbance of the land during development of the town in the medieval period. This area evidently became wet and boggy subsequently, as a bark trough (interpreted as a structure used in the tanning industry) was recovered from a peaty layer above this feature. Although processing of a sample of the fill of this trough produced no further evidence of tanning, this does not preclude the possibility of such an activity having taken place at this location.

Table 2: List of environmental samples

Context	Sample	Context type	Description	Period	Phase	Sample vol	Vol processed	Res assessed	Flot assessed
	4	misc	bark trough	PMED		2	0.25	Y	Y
105	2	layer		?MED		20	0.5	Y	Y
305	5	layer		?MED		20	0.5	Y	Y

Table 3: Plant remains from selected samples

Latin name	Family	Common name	Habitat	105	305
Waterlogged plant remains					
Gramineae sp indet grain	Gramineae	grass	AF	+++	+
Gramineae sp indet culm node	Gramineae	grasses	AF	+	
<i>Silene cf dioica</i>	Caryophyllaceae	red campion	C		+++
<i>Cerastium cf arvense</i>	Caryophyllaceae	field mouse-ear chickweed	BD		+
<i>Stellaria media</i>	Caryophyllaceae	chickweed	AB	+	
<i>Stellaria graminea</i>	Caryophyllaceae	lesser stitchwort	CD		+
<i>Atriplex</i> sp	Chenopodiaceae	orache	AB	+	
<i>Rubus fruticosus</i> agg	Rosaceae	blackberry/bramble	CD	+	+++
<i>Prunus spinosa</i>	Rosaceae	sloe	C		+
<i>Epilobium</i> sp	Onagraceae	Willow-herb	ABCDE	++	
<i>Chaerophyllum temulentum</i>	Umbelliferae	rough chervil	CD		+
<i>Conium maculatum</i>	Umbelliferae	hemlock	BC		+
<i>cf Heracleum sphondylium</i>	Umbelliferae	cow parsnip/hogweed	CD	+	
<i>Polygonum aviculare</i> agg	Polygonaceae	knotgrass	AB	+	
<i>Polygonum persicaria</i>	Polygonaceae	red shank	ABE	+	
<i>Polygonum hydropiper</i>	Polygonaceae	water-pepper	E	++	
<i>Rumex</i> sp	Polygonaceae	dock	ABCD	+	+
<i>Urtica dioica</i>	Urticaceae	common nettle	CD	++	+++
<i>Betula pendula</i>	Betulaceae	silver birch	C	+	
<i>Corylus avellana</i> shell frag	Coryllaceae	hazel, cob-nut.	C	+	+
<i>Solanum nigrum</i>	Solanaceae	black nightshade	AB	+	
<i>Stachys sylvatica</i>	Labiatae	hedge woundwort	C	+	+
<i>Galeopsis tetrahit</i>	Labiatae	common hemp-nettle	ACD	+	
<i>Plantago major</i>	Plantaginaceae	plantain	AB	+	
<i>Sambucus nigra</i>	Caprifoliaceae	Elder	BC	+	+
<i>Arctium lappa</i>	Compositae	great burdock	AB		++
<i>Cirsium</i> sp	Compositae	thistle	ABCD	+	
<i>Sonchus asper</i>	Compositae	spiny milk/sow thistle	AB	+	
<i>Potamogeton</i> sp	Potamogetonaceae	pondweed	E	++	+
<i>Juncus</i> sp	Juncaceae	rush	CDE	++	++
unidentified herbaceous stem fragments	Unidentified			++++	
unidentified thorn	Unidentified			+	
unidentified leaf fragments	Unidentified			++++	

Key:

Category of remains	Quantity	Category of remains	Quantity
A= cultivated ground	+ = 1 - 10	C= woodlands, hedgerows, scrub etc	+++ = 51 -100
B= disturbed ground	++ = 11- 50	D = grasslands, meadows and heathland	++++ = 101+

Table 4: Pollen percentages of all species recorded in context [105], sample 2.

Values are expressed as percentage land pollen (sum of trees, shrubs and herbs). Non-pollen microfossils recorded are listed at the base of the table.

Trees

<i>Alnus glutinosa</i>	alder	9.6
<i>Betula</i>	birch	0.7
<i>Corylus avellana</i> type	hazel	14.9
<i>Fagus sylvatica</i>	beech	0.3
<i>Fraxinus excelsior</i>	ash	0.3
<i>Quercus</i>	oak	5.0
<i>Tilia cordata</i>	lime	0.3
Total trees:		31.2%

Shrubs and dwarf shrubs

<i>Calluna vulgaris</i>	heather	1.7
<i>Lonicera</i>	honeysuckle	0.3
<i>Salix</i>	willow	0.7
Total shrubs and dwarf shrubs		2.7%

Herbs

<i>Artemisia</i>	mugwort	1.7
Asteraceae sub family Asteroideae	daisy family	0.3
<i>Avena/Triticum</i> type	oat/wheat	16.0
<i>Brassicaceae</i>	cabbage family	2.0
Caryophyllaceae (<i>Lychnis flos-cuculi</i>)	pink family	0.3
Cyperaceae	sedge family	0.3
<i>Plantago lanceolata</i>	ribwort plantain	0.6
Poaceae <35 microns	grass family	30.6
<i>Rhinanthus</i> type	rattle species	0.3
Rosaceae undiff	rose family	1.7
<i>Rumex acetosa</i>	common sorrel	0.6
<i>Rumex acetosella</i>	sheep's sorrel	0.6
<i>Rumex sanguineus</i> type	red-veined dock	0.6
<i>Secale cereale</i>	rye	1.7
<i>Stachys</i> type	woundwort etc	0.3
<i>Urtica urens</i>	small nettle	8.3
Total herbaceous		66.1%

Aquatics and spores

<i>Potamogeton</i>	pondweed	1.6
<i>Polypodium</i>		1.0
<i>Pteridium</i>	bracken	0.6
<i>Pteropsida (monolete) undiff</i>		1.0

Non-pollen microfossils (presence)

Type 4	Type 72a
Type 10	Type 315a
Type 55a	
Type 58	
Type 65	

Table 5: Insect remains from context 105

Species	MNI	Species	MNI
COLEOPTERA (beetles)		Dryopidae	
Carabidae (ground beetles)		<i>Dryops</i> spp.	**
<i>Elaphrus uliginosus</i> F.	**	<i>Elmis aenea</i> (Mull.)	*
<i>Bembidion</i> spp.	**		
<i>Pterostichus madidus</i> (F.)	*	Elateridae (disk beetles)	
<i>Pterostichus</i> spp.	**	<i>Agriotes</i> spp.	*
<i>Amara</i> spp.	**	<i>Melanotus</i> spp.	*
<i>Dromius longiceps</i> Dej.,	*	<i>Athous</i> spp.	*
Gyrinidae (whirligig beetles)		Nitidulidae (pollen beetles)	
<i>Gyrinus</i> spp.	**	<i>Brachypterus urticae</i> (F.)	**
Dytiscidae (predaceous diving beetles)		Lathridiidae (mould beetles)	
<i>Hydroporus</i> spp.	***	<i>Enicmus minutus</i> (L.)	**
<i>Graptodytes</i> spp.	**	<i>Corticaria</i> spp.	*
<i>Agabus</i> spp.	*		
<i>Colymbetes fuscus</i> (L.)	*	Anobiidae	
		<i>Anobium punctatum</i> (Geer.)	***
Hydraenidae			
<i>Hydaena testacea</i> Curt.	*	Scarabaeidae (dung beetles)	
<i>Hydraena</i> spp.	**	<i>Aphodius granarius</i> (L.)	*
<i>Limnebius</i> spp.	****	<i>Aphodius</i> spp.	**
<i>Octhebius minimus</i> (F.)	*	<i>Cetonia aurata</i> (L.)	*
<i>Octhebius</i> spp.	****		
<i>Helophorus</i> spp.	****	Chrysomelidae (leaf/flea beetles)	
		<i>Plateumaris</i> spp.	*
Hydrophilidae (water scavenger beetles)		<i>Lema</i> spp.	*
<i>Coelostoma obiculare</i> (F., 1775)	**	<i>Phaedon</i> spp.	**
<i>Cercyon</i> spp.	**	<i>Chaetocnema concinna</i> (Marsh.)	**
<i>Megasternum boletophagum</i> (Marsh.)	*	<i>Chaetocnema</i> spp.	*
<i>Cryptopleurum minutum</i> (F.)	*	<i>Phyllotreta</i> spp.	***
<i>Hydrobius fuscipes</i> Leach	**	<i>Haltica</i> spp.	**
<i>Laccobius</i> spp.	***		
		Scolytidae (bark beetles)	
Staphylinidae (rove beetles)		<i>Scolytus rugulosus</i> (Mull.)	*
<i>Lesteva</i> spp.	*	<i>Scolytus</i> spp.	**
<i>Lesteva longelytrata</i> (Goeze)	****	<i>Leperisinus varius</i> F.	**
<i>Trogophloeus</i> spp.	*		
<i>Oxytelus sculptus</i> Grav.	*	Curculionidae (weevils/snout beetles)	
<i>Oxytelus rugosus</i> (F.)	**	<i>Apion violaceum</i> Kirby.	***
<i>Oxytelus nitidulus</i> Grav.	**	<i>Apion</i> spp.	**
<i>Oxytelus</i> spp.	**	<i>Phyllobius</i> spp.	*
<i>Platystethus arenarius</i> (Fourcr.)	**	<i>Sitona</i> spp.	**
<i>Stenus</i> spp.	**	<i>Notaris acridulus</i> L.	**
<i>Philonthus</i> spp.	**	<i>Leiosoma deflexum</i> Panz.	*
<i>Quedius</i> spp.	*	<i>Ceutorhynchus</i> spp.	*
<i>Xantholinus</i> spp.	**	<i>Cidnorhinus quadriamaculatus</i> (L.)	**
<i>Tachyporus</i> spp.	**	<i>Gymnetron</i> spp.	*
<i>Tachinus rufipes</i> (Geer.)	**		
<i>Tachinus</i> spp.	***	DIPTERA (flies)	****
<i>Aleocharinae</i> gen. & spp. <i>Indet.</i>	****	TRICHOPTERA (caddis flies)	***

Key: The numbers of individuals is estimated using the following scale: * = 1-2 ** = 2-5
 *** = 5-10 **** = 10+. The taxonomy used for Coleoptera (beetles) follows Lucht 1987.

9 Discussion

The earliest feature on the site [309] was not exposed sufficiently during the watching brief to understand fully its function and a later feature truncated part of it. The macrofossil remains indicate that the feature held standing water vegetated by pondweed and rushes, and that the surrounding area was a mosaic of woodland and grassland. Without fully determining the extent of the feature its difficult to say what it could have been. Its narrow linear shape may suggest that the feature was a boundary ditch that had become filled with water running down the slope. However, this was seen in only a localised area and may have been a pool or pond. The feature may date to period before the town's development at the end of 12th century.

Feature [106], which truncated [309], has had various postulations regarding its function. It could be a boundary ditch, but seems to be too large for this. It is unlikely to have a defensive function as it was too shallow and flat bottomed for most of its width. Moreover, one end of the feature was found, not on the line of any medieval street layout, so this does not appear to be part of a defensive circuit. The environmental evidence indicates that the feature contained either stagnant or slow-flowing water, which may at times have been fed by running water. From this evidence it seems most likely that the feature was a pond though this is surprising as the feature was constructed in a predominantly sandy deposit, though bands of clay below could have provided some degree of water retention. The environmental evidence also indicates the feature was located in a rural setting with no nearby housing. It seems likely that the feature was either a fish-pond, which may fit in with lands designation as church land in the 18th century or it was merely a water source for livestock. The surrounding area again included wooded areas with grassland and possibly cereal crop production.

The date of both features was not determined though a *terminus post quem* from the pottery evidence from layer [103], which sealed the pond deposits in [106] indicates that this feature was no longer in use sometime in the late 13th-14th centuries. It is possible that the pond was either constructed before the small planned town had developed at the end of the 12th century or that it was constructed within the existing development as a "green" enclave. Evidence to support that the site was within an enclosed open rural area may be substantiated through the cartographic evidence. Though the map evidence is of much later date, the 1679 plan of Walsall shows the site as undeveloped and is described as church land (Jeffery, 2003, Fig. 2). If the map is correct and that the site was not just missed on the survey then this is a large open area, maybe large enough to support the findings from the environmental analysis.

After feature [106] and [309] had been backfilled or silted up the site was later utilised for an undetermined purpose though it has been suggested that it had something to do with tanning. The theory for tanning occurring on the site was based on the bark found in the oak trough though analysis of the bark has not substantiated this theory. Moreover, Mike Glasson of Walsall Leather Museum has provided several points of information which tend to make this theory less likely. Prior to the 19th century tanning was of little importance in Walsall, though present from the medieval period. The only known 16th century tannery being close to the Walsall Brook (probably on the present Safeway site) and there is no clear need for an object such as this trough within the tanning process. If the trough was not used in the tanning process then it is not clear what it was used for, though it seems more likely with the content of bark that it had some industrial purpose. In view of the later, post-medieval, use of

adjacent land for lime processing, an association with this industry cannot be ruled out, though no obvious function is apparent.

Running roughly north to south parallel to the slope of the hill above the site of the pond was a timber structure [402, 403, 404 and removed timbers]. The structure consisted of a series of hollowed out half log caps with plank sides resting on or divided by transverse timbers. The structure had no bottom to it so must have had a soakaway function. The purpose of the structure must have been associated with an industrial process but its nature is unknown.

The relationship between the trough and the other timber artefacts could not be established though, based on the position from which the trough came, it is highly likely that they were associated. If this is the case and the artefacts are contemporary then this phase of activity on the site would date to no earlier than the late 15th century or early 16th century based on the dendrochronological date of the trough.

10 Conclusions

The excavation of the linear feature and pond has provided invaluable information with regard to the early development of Walsall. The market town of Walsall was a planned town centred on the church of Saint Matthew that did not develop until the end of the 12th century. The early feature [309] on the site contained evidence that the feature was part of a rural landscape that was largely wooded and grassy. It is possible that this feature pre-dates the setting out of the town as it could be expected that woodland in the vicinity of the new town would have been cleared.

The evidence from the residues from the pond [106] reveals the area around the site had changed to an arable and pastoral landscape with only localised woodland, orchard or hedgerow in the immediate vicinity. It is possible that the pond is contemporary to the town's setting out at the end of the 12th century or that it was part of rural enclave within the town. The theory that the site was part of rural enclave is supported tentatively on later cartographic evidence as the land is designated as belonging to the church.

In the late 13th or 14th century the pond had silted up and was no longer in use. It is not until the end of the 15th century that we have any clues with regard to function of the site. The evidence in the form of the timber structures suggests that the site was being utilised for some form of industrial activity. The nature of this activity could not be fully substantiated but bark residue found within the oak trough has led to a postulation that it may have been used for tanning. There is no independent confirmation of this function, but it cannot be firmly ruled out.

It seems likely that the oak trough and capped conduits or soakaways were associated and they form a significant, if little understood, insight into industrial woodworking in the late medieval period.

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12 The archive

Marches Archaeology currently holds the archive that awaits transfer to Walsall Local History Centre and the finds to Walsall Museum.

The site archive consists of:

- 5 trench-recording sheets
- 18 context sheets
- 2 list of survey point sheets
- 1 index of drawings sheet
- 3 sheets of site drawings
- 4 photographic index sheets
- 2 film black and white photographic negatives
- 2 film colour photographic slides
- 1 index of samples sheets
- 5 sample sheets
- 2 finds recording sheets
- 3 Flot record sheets AS21
- 12 bags of sorted remains in glass tubes from flots in IMS (Industrial methylated spirits)
- 1 computer disk [CorelDraw, AutoCAD, Word 2000, matrix Bonn v.4.0]

This report

The Marches Archaeology site code was HSW03b

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Appendix 1:

List of Contexts			
Context	Trench	Description	Interpretation
101	T1	Grey sandy loam with some pebbles	Fill of 106
102	T1	Light brown loam with only occasional pebbles	Fill of 106
103	T1	Grey brown sandy loam with 40% inclusion of small to medium pebbles	Fill of 106
104	T1	Dark brown loam with 70-80% inclusion of pebbles. The pebbles are medium in size	Fill of 106
105	T1	Very dark brown humic layer located across the bottom of the trench	Fill of 106
106	T1	Truncated cut with angled sides and flat bottom	Medieval feature
107		Pale yellow sand with orange patches	Natural
108		Orange sand	Natural
109		Yellow brown clay with coal fragments	Natural
201	T2	Modern intrusion	Fill of 202
202	T2	Cut caused by heavy machinery moving across the site	Modern cut
203	T2	Same as [101]	
204	T2	Same as [102]	
205	T2	Same as [103]	
206	T2	Same as [105]	
207	T2	Grey brown loam with occasional pebbles	Fill of 106/208
208	T2	Same as [106]	
301	T3	Grey brown sandy loam with pebbles	Fill of 309
302	T3	Light brown sand	Fill of 309
303	T3	Yellow sand	Fill of 309
304	T3	Yellow sand	Fill of 309
305	T3	Black silt	Fill of 309
306	T3	Gravel	Fill of 309
307	T3	Grey sand	Fill of 309
308	T3	Black silt	Fill of 309
309	T3	Truncated feature with steep sides and a flat bottom	Linear ditch or sub-rectangular pit? Earlier than 106
401	T4	Pale brown sand	Fill of timber flue or shoot
402	T4	Timber artefact	Timber capping?
403	T4	Timber planks	Planks to form a channel
404	T4	Timber blocks	Dividers and supports for the planking
405	T4	Cut	Edges of the channel
406	T4	Grey silt against the edge of the cut	Decayed timber

Appendix 2: Brief for archaeological work at Hill Street/Bullock's Row

1. Introduction

- 1.1 Development work at Hill Street/Bullock's Row, Walsall uncovered a large wooden artefact of uncertain purpose. It may be a logboat, a sledge or sled or a trough. Also uncovered was a length of wood 'pipe'. Both objects were removed from their original location and stored at the corner of the site.
- 1.2 Investigation of the area from which the wooden artefact was uncovered identified various features: a further length of wooden 'pipe' or conduit; a backfilled Hollow and further feature to its south into which the 'pipe' was cut; and limestone walls and other layers revealed in the sides of the development trench.
- 1.3 The development is covered by a condition requiring archaeological work and this brief quantifies the work necessary to fulfill this condition.

2. Site Location and Description

- 2.1 The proposed development area covers an area of around 1700 square metres, centred on SP01739830 . The area lies around 500m south east of St Matthew's church, the original parish church of Walsall, which is likely to have been the focus of early settlement.
- 2.2 No houses are shown on the site on the earliest maps of Walsall, of 1679, where the area is described as 'Church Lands', nor on a map of 1763. Given its proximity to the church, however, earlier occupation is likely.
- 2.3 Buildings are shown at the south west corner of the site on a map of 1782 and a lime works is shown immediately to the east of the site.

3. Specific requirements

Wooden 'artefact'

- 3.1 'Artefact' to be examined by an expert on wooden objects with a view to determining its function – boat, sled or trough etc
- 3.2 Draw outline and section of 'artefact' to publication standard.
- 3.3 Take sample of 'bark deposit' from interior of 'artefact' and analyse.
- 3.4 Sample from boat to be dated by dendrochronology or radiocarbon.
- 3.5 'Artefact' to be stored in safety and kept wet pending decision on its ultimate resting place.

Wooden 'pipe'

- 3.6 Basic record drawing to be made
- 3.7 'Pipe' to be stored in safety and kept wet pending decision on its ultimate resting place.

Hollow, in situ pipe/conduit, and feature running off from Hollow to the south

- 3.8 Hollow, in situ pipe/conduit, and feature to south to be fully excavated by combination of machine and hand excavation to ascertain their shape and depth, and to attempt to ascertain their function and to obtain dating evidence.
- 3.9 Samples of the environmental deposit at the bottom of the pool/pond and of the southern feature to be taken and analysed to give information about the environment of the site and its surrounds. **Particular attention to be paid to plant remains and insect remains. Sampling should follow guidance given in the English Heritage document *Environmental Archaeology* (EH 2002). Assessment and analysis of the material should be undertaken by suitably qualified specialists.**

Recording of site section

- 3.10 Site section to be recorded by measured sketch section with cleaning where appropriate and attempt to obtain dating evidence
- 3.11 Particular attention to be paid to establishing levels at which limestone walls cut in from and any evidence of earlier deposits.

Photographs

- 3.12 Appropriate photographs to be taken of wooden artefacts and site features and deposits.

Analysis and Reporting

- 3.13 On completion of the work the data and finds recovered should be assessed in line with the recommendations of the *Management of Archaeological Projects* (English Heritage - 1991), *Model briefs and Specifications for Archaeological Assessments and Field Evaluations* (Association of County Archaeological Officers 1993), *Standard and Guidance for Archaeological Excavation* (Institute of Field Archaeologists - 1999) and the form and level of publication necessary should be agreed with the Black Country Archaeologist.

4. General conditions

- 4.1 The work should be undertaken by suitably qualified and experienced archaeological staff, preferably under the supervision of a Member of the Institute of Field Archaeologists. **The English Heritage archaeological science adviser should be consulted on scientific issues.**

- 4.2 An appropriate recording strategy should be used and the method and justification for this stated in the reports.
- 4.3 The code of conduct, standards and guidance of the Institute of Field Archaeologists should be adhered to.
- 4.4 On completion of the work the site archive should be deposited with an appropriate museum/public archive. The site owner is encouraged to deposit any finds with the archive. In this case archives should be deposited with the Walsall Local History Centre (01922 721305) and finds with Walsall Museum (01922 654324). Separate provisions may need to be made for the wooden artefacts.
- 4.5 Copies of all reports should be provided to the LPA, Walsall Local History Centre and the Black Country Sites and Monuments Record (preferably two copies). The report will normally become a publicly accessible part of the BCSMR within 6 months of completion. **It is intended that a small number of slides should be stored with the SMR. The contractor should therefore take an extra copy of the most vital photos and submit these together with the reports to the SMR.**
- 4.6 Reports should contain the following information:
- Location, aims and methodology
 - Results of documentary research
 - A written summary of the findings together with appropriate illustrations, which should be related to the national grid. Levels should be related to the Ordnance Datum.
 - An analytical summary of features and deposits
 - List of sources consulted and their full titles/reference numbers
 - A copy of the brief
- 4.7 On completion of the work a summary report should be sent for publication in West Midlands Archaeology and any other appropriate local or national archaeological journal.
- 4.8 Health and Safety
- It is the responsibility of the contractor to ensure that all work is carried out in accordance with relevant Health and Safety regulations.
- Site procedures should be in accordance with the guidance set out in the Health and Safety Manual of the Standing Conference of Archaeological Unit Managers
- 4.9 Monitoring
- The work will be monitored by the Black Country Archaeologist on behalf of the Planning Authority and provisions for monitoring should be agreed with him. At least

five working days notice of commencement of any fieldwork should be given to the Black Country Archaeologist.

Prepared on 9th October 2003 by Mike Shaw, Black Country Archaeologist, on behalf of Walsall MBC

Contact details for Mike Shaw: tel 01902 555493; e-mail mike.shaw@wolverhampton.gov.uk; fax 01902 555637; address Black Country Archaeologist, Wolverhampton City Council, Regeneration and Transportation, Civic Centre, St Peter's Square, Wolverhampton WV1 1RP

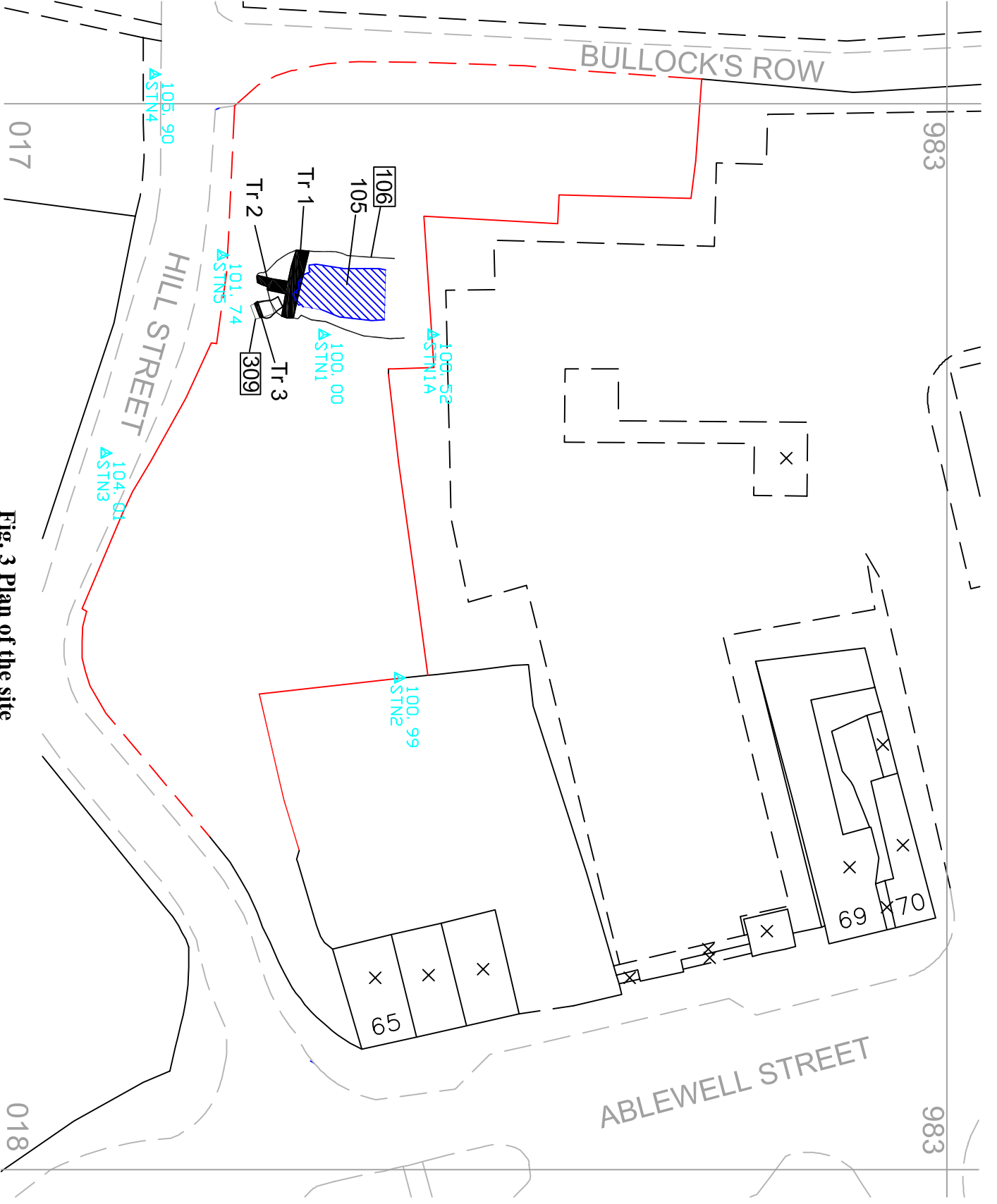


Fig. 3 Plan of the site

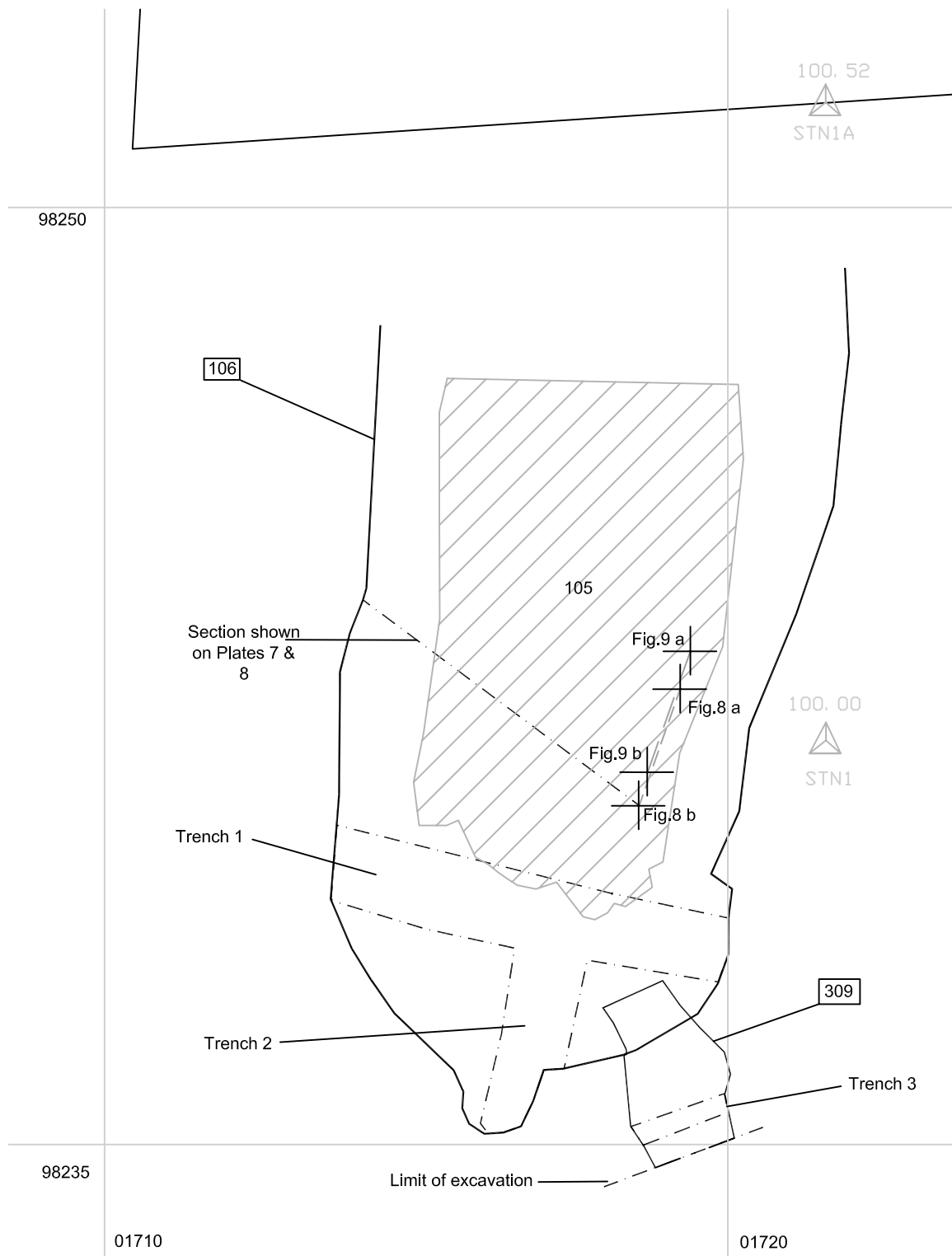


Fig. 4 Plan of the excavated features



Plate 1: The oak trough



Plate 2: The oak trough and hollowed wooden artefact

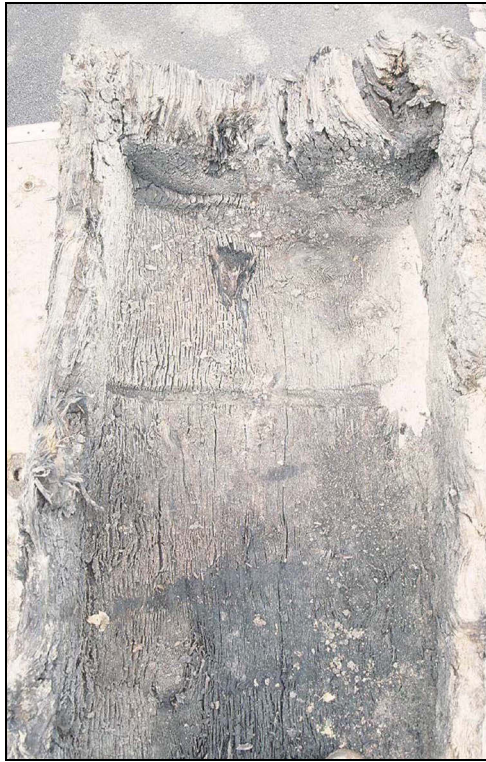


Plate 3: Detail of one end of the oak trough, note the groove



Plate 4: Detail of the opposite end of the oak trough



Plate 5: End and side profile of oak trough



Plate 6: Trench 1 and 2 across feature [106]



Plate 7: Post excavation shot of feature [106] and feature [309]

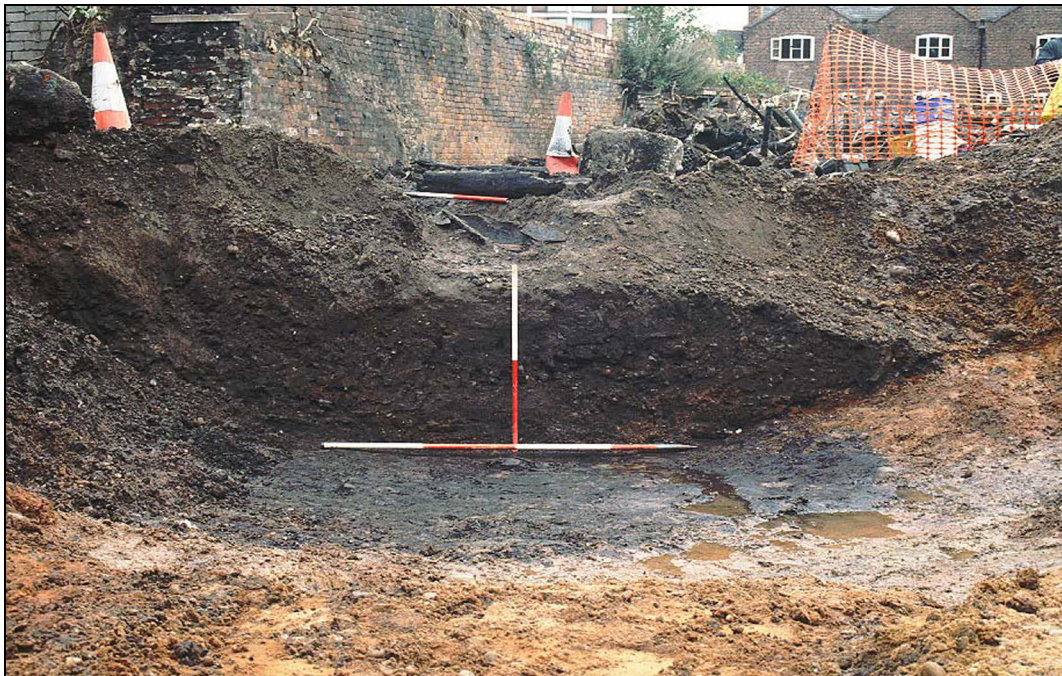


Plate 8: North section through feature [106], shows fill [105] in plan



Plate 9: Plan of feature [106] at top of natural



Plate 10: Plan of feature [106] at top of natural, after excavation



Plate 11: Timber feature [402]



Plate 12: Timber feature [402] removed and turned upside down (left) revealing planking and traverse timbers