

M62 Junction 6 Improvements Scheme

Archaeological Post Excavation Assessment Report on
Excavations in 2007

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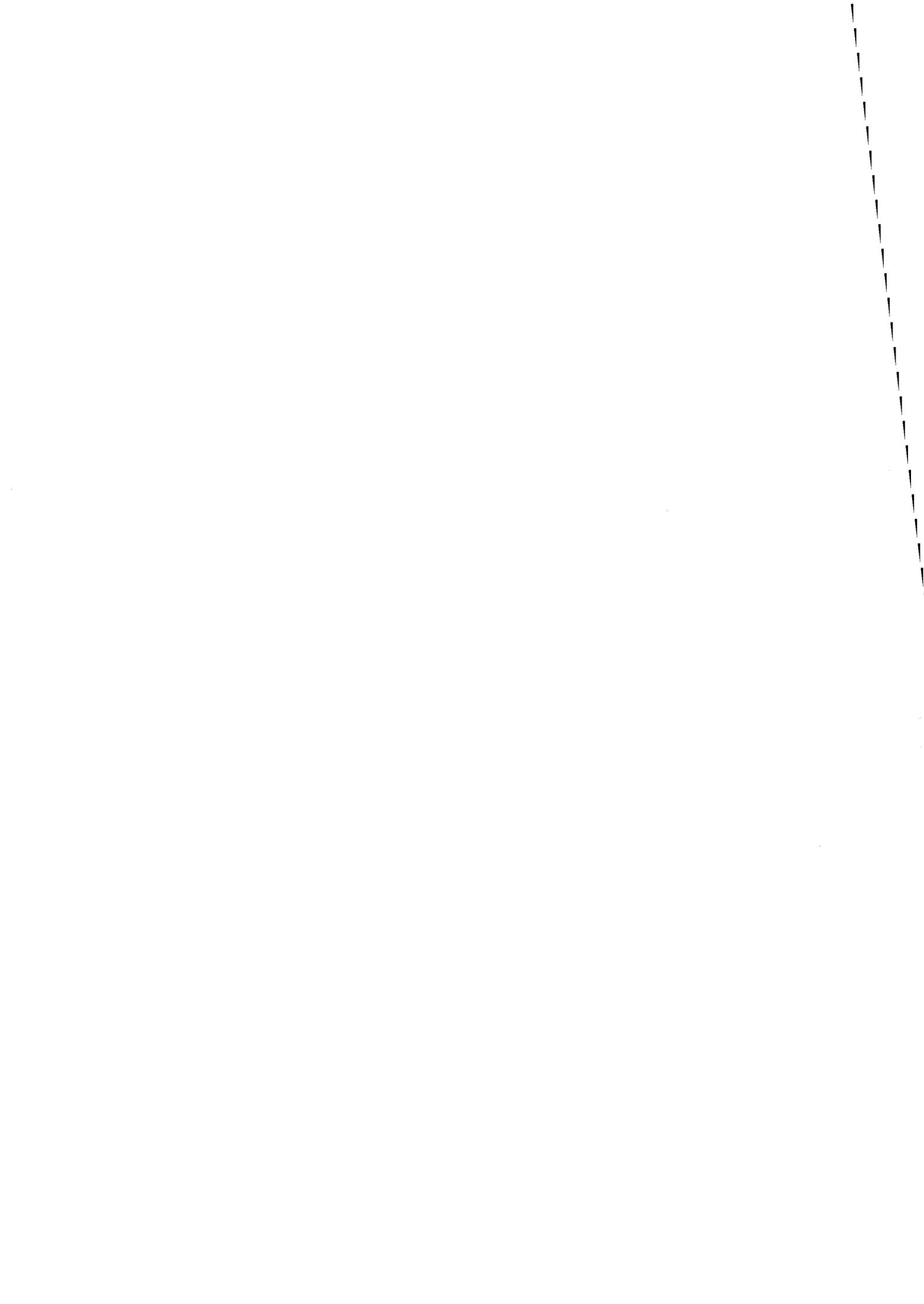


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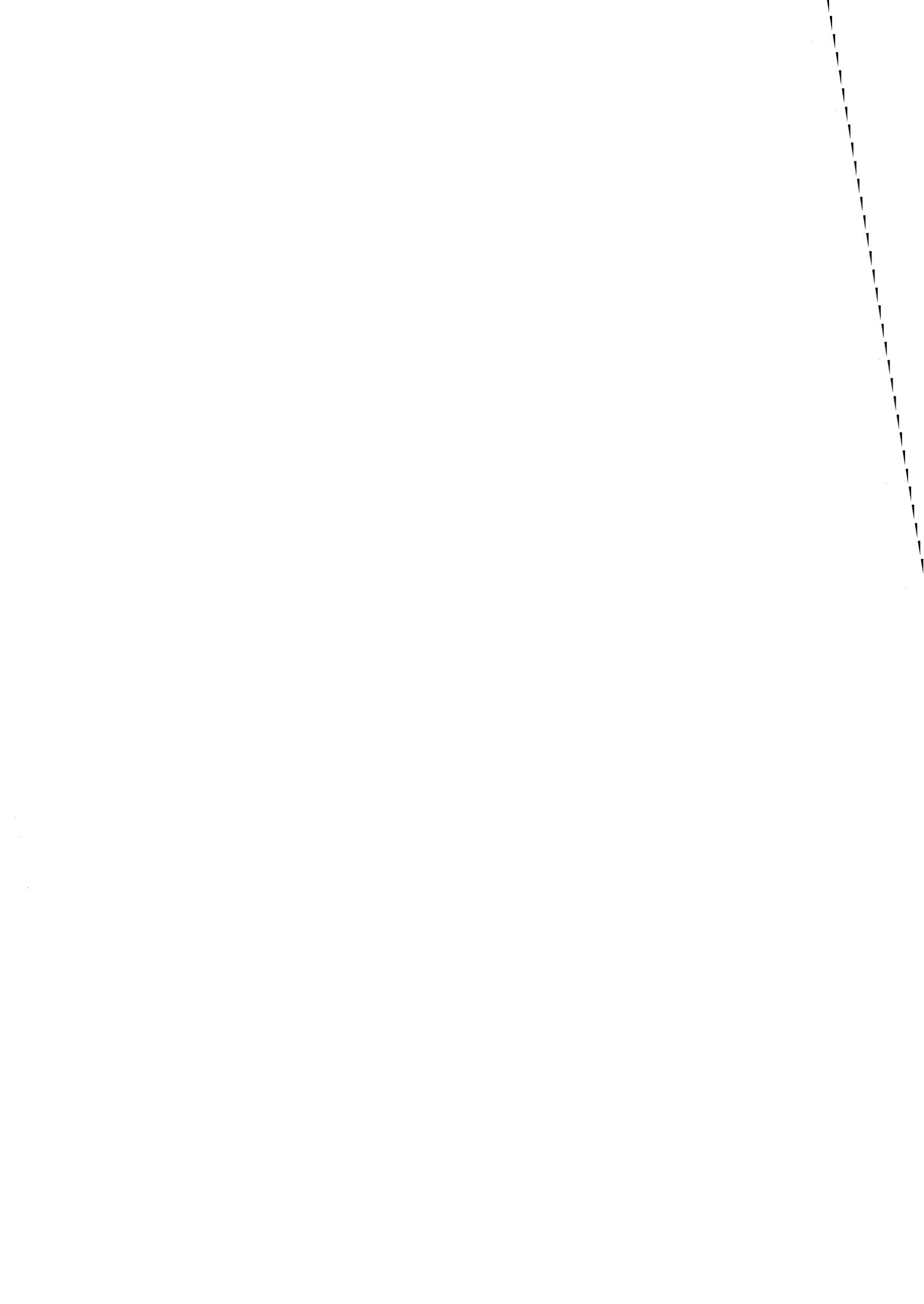
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Background to Excavations

Plans for redevelopment of the Junction 6 roundabout on the M62 at the Tarbock interchange (NGR SJ 462 891) resulted in three phases of archaeological investigation since 2005. The first two, which were intended to evaluate the importance of the archaeology suggested by an initial desk based implications report (Golder Associates 2006a), identified particularly the existence of evidence relating to the Romano-British (1st-5th centuries AD) and later medieval (c.1200-1500 AD) periods.

The results of the first two phases of archaeological evaluation undertaken in 2005 and 2006 (Cowell 2006a, 2006b) led to the current, more extensive, programme of work in 2007. This work was defined by a specification and seven main areas were identified as being archaeologically sensitive, designated in the planning phase as areas A, B, C, D, E, F and G (Golder Associates 2006b). In the event, work only took place in Areas A, B, C, D and G (Fig. 1), following various redesigns of the proposals. Excavation was carried out by a small team of archaeologists from National Museums Liverpool Field Archaeology Unit who worked on the site between April and August 2007, with further very limited interventions during late September and October 2007. All the archaeological work associated with the M62 Junction 6 Improvements was funded by the Highways Agency, through the Early Contract Involvement main contractor, Laing O'Rourke Infrastructure Ltd.

The report below does not result from an extensive and detailed correlation of stratigraphic analysis and artefact distributions as would be found in a final publication. In keeping with the archaeological specification (Golder Associates 2006b, para. 3.5.2) it represents the first stage in the production of the final archive and report. This report, therefore, represents the basic archive of the evidence recovered and assesses its relative importance so that further analysis need only be targeted at a range of selected evidence with the potential to significantly advance archaeological interpretation in the region. This is particularly the case for Area D which produced the most complex stratigraphy and the bulk of the finds. Some parts of the interpretation here, therefore, rely on more superficial understandings of these correlations and may be modified slightly once such detailed work is undertaken.



Excavations in Area A

Background

The 2007 excavations, in an area designated as 'A' in the planning stage, were located on a triangular piece of land between the junction of Ox Lane and Daggars Bridge Lane (NGR SJ 462 892). Near the junction of the two lanes lay the now destroyed Norwood Cottage, dating from the early 20th century (Golder 2006a, Site 21). A drainage leet ran north-west south-east across the north-eastern part of the trench and is shown on the 1839 title map. This is probably associated with a row of cottages to the north of the lane, outside the excavated area, which map evidence shows appeared between 1769 and 1839 (i.e. probably in the early 19th century) (Golder Associates 2006a, Site 22).

The area of excavation is close to the former Daggars Bridge Farm, located about 100m to the east, which was partially investigated in 1993 as part of the original roundabout construction (Philpot 2000a). The 18th century farm was shown to be Medieval in origin and lay adjacent to a Romano-British farm to the south of it. Daggars Bridge Lane is, therefore, assumed to be medieval in origin and could be earlier. Previous field walking produced a small scatter of Medieval pottery to the south-west of the site, a little outside the area designated for the new road corridor (Cowell 2000b).

On the west side of Area A trenches placed to the west of Ox Lane in 2006 had produced ambiguous evidence for identifying the origins of this lane but archaeological landscape interpretation suggests that it may have been an early landscape feature (Golder Associates 2006a, Site 25). The evaluations in 2005 and 2006 also showed that eastwards from the junction of Ox Lane and Daggars Bridge Lane to the drainage leet there is a band of ground adjacent to Daggars Bridge Lane which is heavily disturbed by activity associated with the construction of the M62 in 1975 (Cowell 2006a, 2006b). The excavations were carried out over a period of 20 days between 16th April and 11th May.

Aims and Objectives

The aims and objectives of the 2007 pre-construction excavations in Area A were both general and specific (Golder Associates 2006b, 14-15). The general objectives were to determine the date, nature, depth, extent and stratigraphic complexity of any archaeological deposits or features (of any date) that might be affected by the proposed road improvement scheme within the excavation area, to achieve "preservation by record"; to provide an assessment of the potential and significance of any identified archaeological deposits and features in a local, regional and (if necessary) national context; to contribute towards an assessment of the likely scope, cost and duration of any further post-excavation analysis that might be required to achieve "preservation by record" of the excavated remains; and to contribute positively to the national and regional heritage of the region through the dissemination of the results of the archaeological investigations.

The specific objectives were to identify any archaeological deposits and features associated with a number of known sites, namely a large scatter of mid to late 18th century pottery, industrial waste and brick found in this general area, possibly associated with the site of Norwood Farm and/or adjacent cottages; a scatter of medieval and 16th-17th century pottery recovered from the northern end of the field during previous fieldwalking; Ox Lane and its boundaries, and any predecessors to this alignment; and other activity noted during the previous phase of archaeological investigations carried out in this area. Other aims were to

determine whether Romano British activity associated with the farm excavated in 1993 spread this far west, and to identify the age of Daggerys Bridge Lane and Ox Lane in order to help understand the origins of the wider historic landscape in this northern part of Tarbock.

Summary of Results

The excavation trench lay on a mostly flat area between the two lanes and was divided into arbitrary sub-areas (AI to AIII) for ease of recording (Fig. 2). The topsoil [601] was stripped over ten days using a 15 ton, 360 degree bucket arm tracked excavator. It was c.0.2m depth beneath which was a post-Medieval plough soil [602] about 0.1m thick, overlying the boulder clay sub-surface [717]. The overburden produced a small amount of post-Medieval pottery associated with agricultural activities but also a small number of soft orange weathered ceramic fragments which are difficult to categorise but could potentially be Romano-British in date.

Possible pre-Medieval ditch and adjacent miscellaneous pits/hollows

The main features identified in Trench AII included a 1m wide ditch [773]c running for a distance of 25m north-west south-east, roughly parallel to Daggerys Bridge Lane at a distance of 20m south from it. A series of five sections were placed across the feature showing it to be approximately 0.3m deep by 1m wide (Figs. 2 and 2.6). The ditch included no finds other than a little metalwork debris.

There were also a series of discreet features in the area surrounding the ditch in Trench AII that were tested because of the incidence of potential Romano-British material in the topsoil. These included [778]c (fill [621]), [873]c (fill [631]), [765]c and [752]c (fill [642]), all features of uncertain date or nature. One of these features [682]c (fill [676]) was the best defined and contained a high concentration of stones, although it produced no finds, as was the case with all the others.

Tree root hollows

Many of the dark, clay-silt filled sub-circular features cut into the boulder clay surface in the trench were interpreted as tree hollows, as witnessed in other trenches in 2005 and 2006. Several of these, [866]c (fill [632]), [804]c (fill [647]), [830]c (fill [654]), [800]c (fill [688]) were tested by excavation.

At the western end of trench AIII seven of these features lay in an approximately square arrangement (Feature Group 1; Figs 2.1 and 2.2). Most of these were relatively shallow such as feature [864]c (fill [863]) and [831]c (fill [656]), although some were rather more substantial, such as [854]c (fill [853]) and [860]c (fill [859]). They were filled with a homogenous dark grey, slightly organic silt matrix, leading to the conclusion that a tree had rotted *in situ* rather than been blown over and left a root bole. The boulder clay surface [717] in the middle of the square, which was about 4m across, was devoid of any other features. The reason for such an arrangement is unclear and a number of the shallow features were sampled for environmental analysis.

Ox Lane

The western end of the main trench was extended by an area of c.7m by 3m to cut across Ox Lane (Trench AIV) and the existing open ditch [1069]c, which is 0.6m deep and 0.75m wide, running adjacent to it on the east. The line of the present lane was originally thought to be potentially Medieval in origin. However, the removal of sections of hedge on both sides of the

lane and the fills of the ditch all produced a humic unconsolidated fill that suggested that the lane in its latest form was about a hundred years old or less.

The makeup for the upper surface of the lane also confirms this. The upper layer [711], 0.20m thick, consisted of a horizon of cinders and compacted dark grey loamy soil with frequent finds of 19th century pottery (Fig. 2.3). Beneath the upper horizon in the lane is a second surface, recognised as a convex band of light brown sandy clay [713] about 0.19m thick. The section across the lane was excavated by machine and so finds were recovered from the spoil and are not strictly stratified. However, 18th century pottery came from the spoil associated with these two horizons and may relate either to the upper layer or perhaps this second surface. The 1769 Molyneux estate map shows the line of Ox Lane in its present position and the excavations suggest that this alignment may have been created not too long before.

At the base of the light brown clay [713], a number of thin linear gouges were visible in the underlying surface, which was partly natural boulder clay and partly dark grey silt loam. These are interpreted as use of the lane by wheeled traffic in a period pre-dating the mid 18th century, although by how much is not possible to say, however it does not appear that they and thus the present line of the lane are as old as the 14th century (see below).

Trenches AV and AVI were excavated to the west of the hedge line on the west side of the lane (Fig. 2) and revealed a ditch in the adjacent field, which had been filled with post-Medieval plough soil with a modern drain inserted. This probably is a ditch approximately contemporary with the open ditch [1069]c on the east, or perhaps a little earlier, that was subsequently replaced as a boundary by the existing hedge immediately to its east and turned over to farmland.

Ditch predating the post-Medieval lane

Immediately beneath the lane surface in trench AIV, cut into the natural clay, was a short section of a linear ditch [723]c (fill [714]). This ran north-west south-east, on a slightly oblique alignment to that of the present lane and was traced for a distance of approximately 2m in Trench AIV (Fig. 2.4). A second trench (AVII) was cut across Ox Lane about 15m to the south (Fig. 2.1), which showed a continuation of the ditch [723]c alignment [1027]c (fill [1033]) (Fig. 2.5).

Excavation of this ditch, which was 0.5m deep and 0.75m wide, produced one piece of medieval pottery. Such sparse evidence allows two alternative explanations. One is that the pottery could have found its way into the ditch fill by being re-deposited from a pre-existing surface when the ditch was cut; in this case that is likely to be at some time between c.1400 AD and c.1700 AD. This would mean that the present lane, which overlies the silted-up ditch, is likely to have been a post-Medieval creation. The second alternative is that the ditch was open during the period 1200-1400 AD, when this type of pottery was in use, and it became incorporated into the ditch as it silted up. This would still allow the present lane to have originated in the early post-Medieval period but it would also allow for a potentially earlier date *i.e.* closer to the period either side of c.1400 AD when this pottery went out of use. There is not enough evidence currently to be sure which of these two is the more likely.

Pond [1008]c below ditch [723]c/[1027]c under Ox Lane

In Trench AVII, close to the northern baulk, the potentially Medieval ditch fill [1016] apparently became wider on the surface. Excavation of this fill suggested that the ditch [1027]c was cut into a deeper feature (fills [1028], [1011] and [1028]) (Fig. 2.6). Excavation was curtailed by

water logging at a depth of about 0.75m although primary brown clay silt spreading down from the west side of the feature and partly across the base suggested that the natural clay surface may not have been too much lower than the water level.

However, after ceasing to excavate in accordance with the agreed work programme, monitoring of the construction machining stripping of the lane showed that the feature had been more extensive than the hand digging had suggested. Because of the narrowness and depth of the construction excavation, it was not possible to record in the trench and consequently the detail of the following observations is only approximate. The machine driver excavated part of the feature [1008]c in two large consolidated scoops and placed them to one side, from which it was possible to rescue a wide naturally compacted irregular 'monolith', held together by the silt clay nature of the fill that provides a rough record of the lower 0.8m or so of the fill [1059] and [1060].

The feature, which from the basic homogeneity of the fill, consisting of slight variations of mainly dark grey clay silt with occasional thin lenses of lighter coloured silt sand, appears to have been a pond, about 2m deep and 2m to 3m wide. No finds were recovered from the rescue phase but 70-80 litres of the fill have been retained for environmental analysis and potential finds processing.

Possible track earlier than Ox Lane

Sections recorded in the western baulk of the main trench (AIII) to the east of the open Ox Lane ditch (Fig. 2), showed a 0.15m thick buried surface of whitish clay [819], [825] and [840] of about 1.4m width beneath the post-Medieval plough soil [602] (Fig. 2.7). It also appeared in plan [718] across the width of the main trench in an intermittent strip running along the eastern side of the modern ditch cut. The sections also revealed in several areas a dark grey silt clay layer [820], [842] and [828], 0.22m at its thickest, probably a truncated buried soil, below the whitish clay.

The whitish clay [819], [825] and [840] appeared churned and very undulating in section in places. It had been truncated by post-Medieval ploughing sometime around the 18th century on its eastern side and by the 19th century ditch of Ox Lane on its western side. One sherd of late Medieval pottery came from its surface in the northern part of its alignment. It is suggested that the whitish clay represents a former surface, potentially a track that has been truncated by the 18th century or earlier lane on the west. Ditch [723]c/[1027]c under the post-Medieval surfaces of Ox Lane may potentially have marked the western edge of this earlier alignment. This argues for the slight movement westwards of the original track to cover the silted-up ditch [723]c/[1027]c, which itself had been dug across the silted-up pond [1008]c.

Hedge line

The interpretation of the white clay [819], [825] and [840] as being associated with the earlier line of Ox Lane is further supported by a line of dark grey silt clay fills of irregular moderate sized pits or hollows [740], [733]c and [799] and possibly [796]c (fill [795]) and [738]. that run parallel to the present lane along the eastern boundary of the whitish clay [816] and the grey silt buried soil layer underneath (Figure 2.1). These could represent a former hedge line, which if so, is in the right alignment to potentially mark the eastern side of the suggested track line marked by the whitish clay surface [718].

Daggers Bridge Lane

In the north-east part of Trench A1, Daggers Bridge Lane was also investigated. It was not possible to record a section across the lane as the latter was not to be disturbed by the road construction programme. It was only possible, therefore, to record the less useful section (248, see archive) running along the southern edge of the lane in the northern baulk of the trench (Fig. 2).

Under the present tarmac road surface was a 0.27m thick layer of cinders and coal-rich orange brown loamy clay [874]. This lay on top of a clay loam [876], 0.2m deep, which overlay a post-Medieval plough soil [875], 0.25m deep, directly over the natural boulder clay surface [717]. There were a series of 19th century small features cut into the boulder clay alongside the lane, probably associated with the row of 19th century cottages that once stood to the north of Daggers Bridge Lane.

At a depth of about 0.7m below the present road surface a shallow, 7.6m wide, linear hollow [878] ran for 27m along the southern edge of Daggers Bridge Lane. This was filled with post-Medieval plough soil [602]. The plough soil was much greyer here and lay above a very hard and compact layer of grey purplish sandy clay [877]. This linear hollow may be related to an earlier phase of the lane as the 1769 Molyneux estate map suggests that it was much wider than the current width.

A 25m long open drainage leet, 10m to the south of the lane, shown on the 1839 Tithe map, was also sectioned, using a machine to clear the modern humic material out. As this was the only fill encountered this suggests that this feature also is of 19th century date and it seems possible that this contained the activity associated with the 19th century cottages on the north side of the lane.

Post-Medieval Agricultural features

Two linear features [797]c (fill [630]) and [844]c (fill [652]) ran roughly parallel east-west across the centre of trench A11, below the post-Medieval plough soil [602] (Fig. 2). Three sections were placed at intervals along the northern linear feature [797]c. The shallow, irregular profile in several places suggests it may have been a former hedge line although some of the sections had a more ditch-like profile (see archive). An organic clay fill [730] seems to support the interpretation of a hedge line. No finds were recovered to date this feature.

The linear feature to the south [844]c was filled with post-Medieval plough soil [602] and had formed through a series of conjoined wide plough furrows. Although no finds were recovered to date this feature, it is probably pre-19th century in date as it contrasts with the form of 19th century plough furrows from previous evaluations (see archive).

Drains:

A number of linear field drains were uncovered below the topsoil, of various construction and date. The most common were constructed of red sandstone, e.g. [680] and [666], which were cut through the post-Medieval plough soil (see archive). The second type was orange clay packed, e.g. [851]c, which is also later than the post-Medieval plough soil. A third type was of modern construction which included a ceramic clay pipe within a soft silt loam.

Geological:

A number of narrow linear and irregular gullies filled with fine brown, green mottled sand occurred in some areas of the trench. Some, such as [681]c (fill [781]) and [758]c (fill [623]), appeared to be defining oval or curvilinear areas and were consequently tested through excavation to ensure they were not structural features (see archive). These were interpreted from their form and fill as natural glacial sands running through the clay.

Factual Data

Quantity of structural records

Contexts: 362
Drawings: 11 Plans, 27 Sections
Photos: 170

Artefactual evidence

i) Quantity of material

Finds were generally quite sparse in this trench.

Lithics: 2

Ceramics total: 140 consisting of

Potential Romano-British ceramics (1 brick fragment, 2 pot sherds, 9 tile fragments)

Medieval pot sherds 13

Post-Medieval pot sherds 101

Other ceramic fragments 14

Industrial waste fragments: 13

Glass fragments: 2

ii) Provenance and range and variety

Lithics: One was found within the fill of a tree root [734] ([733]c) near Ox Lane (Fig. 2.1), the other from the natural boulder clay surface [717] in trench All.

Pottery and Ceramics: Most of the potential Roman and Medieval ceramics identified were associated with a layer of post-Medieval plough soil [602] underneath the topsoil, with the exception of material from the upper layers of Ox Lane.

One medieval sherd (Find Number 340) came from fill [1033] (same as [1028]) the final silting of the stratigraphically pre-18th century ditch [1027]c under Ox Lane, and another (319) from a buried soil layer [718] next to Ox Lane representing a potential pre-post-Medieval track alignment (Fig. 2.1).

During machine stripping of the topsoil 19th and 20th century ceramics, glass bottles and a few pieces of possible 18th century pot were recovered. Most of the sherds of dark wares and other post-Medieval pottery came from upper layers of sections through Ox Lane and Dagers Bridge Lane.

Industrial waste: Most was unstratified. One piece came from the post-Medieval plough soil [602] and two from a ditch or hedge line fill [630] (cut [797]c), which on form is probably post-Medieval (Fig 2).

Palaeoecological evidence

i) Quantity of material

Nineteen whole earth bulk samples were taken, totalling 299 litres.

ii) Provenance

Samples were taken from the following structural groups:

Free-standing ditch [773], potentially pre-Medieval

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assessed
105	A2	790	773	30	Ditch	Secondary fill 0.15m thick	YES
111	A2	791	773	20	Ditch	Primary fill 0.1m thick	

Ditch [723] under 18th century or earlier surface of Ox Lane

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assessed
101	A4	726	723	4	Ditch	Primary fill, 0.18m thick	YES
103	A4	741		10	Ditch	Secondary fill 0.35m thick	
102	A4	741		4	Ditch		

Pond [1014] final fills cut by ditch [723] under surface of Ox Lane

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assessed
129	A7	1006	1015	1	Pond	Final fill within ditch, cutting pond	
130	A7	1011	1014	15		Final fill of pond	
131	A7	1021	1014	10		Secondary fill of pond	
128	A7	1021	1014	30			
138	A7	1059	1014	30		Lower secondary fill	
139	A7	1060	1014	60		Primary fill	
205	A7	1060	1014	8		Lower primary fill sub sample of 139	YES
206	A7	1060	1014	8		Upper primary fill ample of 139	YES

Tree hollows

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assessed
112	A2	623	758	10	Tree bole	0.16m thick	
104	A3	632	866	10	Tree bole	0.22m thick	
108	A3	656	831	10	Tree bole	Possible hedge line, 0.08m thick	
107	A3	863	864	10	Tree bole	Possible hedge line, 0.12m thick	

Miscellaneous Pits

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assessed
110	A3	601	734	10	Potential pit	0.94m depth. 1 flint from this context	

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	DETAILS	Assesed
109	A3	601	734	10	Potential pit		

iii) Range and variety

The following text has been provided by Palaeoecological Services on the four samples above that they have assessed. (Schmidl *et al.* 2007)

Context 790 [fill of free standing possible pre-medieval ditch [773]; section 217]

Sample 105/T (3 kg/3 litres sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Dry, light to mid yellowish-brown to dark brown (with some small ginger patches to approximately 5 mm), brittle (in lumps) to unconsolidated to crumbly (working crumbly and slightly plastic in places), slightly humic, slightly sandy clay silt. Stones (2 to 6 mm and 20 to 60 mm) were present.

There was a small washover (~40 ml) of sand and modern rootlets, with a little charcoal (to 5 mm) and coal (to 5 mm).

The small residue (dry weight 0.392 kg) was mainly sand, with some stones (to 30mm) and a small amount of mineralised charcoal (to 6 mm; <1 g).

Context 726 [lower fill of possible pre-medieval ditch [723] under Ox Lane; section 201]

Sample 101/T (2 kg/2.5 litres sieved to 300 microns with washover; approximately 2 litres of unprocessed sediment remain)

Moist, light to mid grey-brown to dark brown (with an olive cast and some traces of black), crumbly to soft (working more crumbly and slightly soft), slightly humic, slightly clay sandy silt.

The small washover (~10 ml) was of sand, modern rootlets and charcoal (to 5 mm), with an occasional fragment of unidentified insect (?beetle) cuticle (small, very chemically eroded fragments only).

The small residue (dry weight 0.286 kg) consisted of sand, with some stones (to 20 mm) and a trace of charcoal (to 7 mm; <1 g).

Context 1060 [lower fill of pond [1014] under possible medieval ditch [723]; section 281]

Sample 205/T (2 kg/1.5 litres sieved to 300 microns with washover; approximately 2 litres of unprocessed sediment remain)

Just moist, mid grey-brown to very dark greyish-brown (with a slight reddish cast throughout), soft to plastic and slightly sticky (working soft and crumbly), very humic, slightly sandy clay silt, with a fairly large component of amorphous organic material. This sample was described by the excavator as being the lower fill (lower 10 cm) with noticeably more sand at the base.

The small washover (~20 ml) was of sand, modern rootlets and unidentifiable plant fibres, with a little charcoal (to 5 mm) and a few insect remains. Some of the last were well-preserved, and were almost certainly modern contaminants, whereas others (far more numerous) were very heavily fragmented and little more than 'filmy' scraps of cuticle and more likely to be of 'ancient' origin. The latter were largely unidentifiable but did include some staphylinid (rove beetle) elytral fragments. The identifiable component of the plant assemblage was dominated by well-

preserved waterlogged fruits of sweet-grass (*Glyceria*) which grows in wet habitats; such as at the edges of ponds and wet ditches. In addition, remains of the aquatic species pondweed (*Potamogeton*) were present and indicated standing water at the time of the formation of this deposit.

The very small residue (dry weight 0.032 kg) was of stones (to 8 mm), with a small proportion of sand.

Context 1060 [primary fill of pond [1014] upper part of [1060]; section 281]

Sample 206/T (3 kg/2 litres sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, very dark grey to very dark grey-brown (with traces of orange), soft to plastic (with some slightly stiff patches, and working plastic, slightly crumbly and slightly sticky), moderately humic, slightly sandy clay silt, with an appreciable amorphous organic component.

The small washover (~30 ml) was mainly sand and unidentifiable plant fibres (predominately modern rootlets), with some small fragments of insect remains (heavily fragmented, very chemically eroded and not identifiable but including remains of beetle sclerites) and a few fragments of charcoal (to 5 mm). The identifiable component of the plant assemblage was dominated by a moderate number of well-preserved waterlogged seeds and fruits of wild species which would have favoured damp and wet places, such as branched bur-reed (*Sparganium erectum* L.), rush (*Juncus*), sedge family (Cyperaceae) and water-plantain (*Alisma*). In addition, remains of blackberry (*Rubus fruticosus* L. agg.) and elder (*Sambucus nigra* L.) could indicate hedgerow nearby.

The small residue (dry weight 0.061 kg) consisted of stones (to 12 mm) and sand.

iv) Condition, storage and conservation

All samples were collected by hand excavation and placed in 10 litre sample bags or buckets, with the exception of fills [1059] and [1060] (sample 139) which was excavated with the help of a mechanical digger. Samples are stored in plastic environmental sample buckets in a dark dry store at NML. Four samples are with Palaeoecology Ltd, Shildon, Co. Durham (see above).

Summary Statement of Potential

Structural evidence

The main structural features of importance from this area relate to potentially early landscape features such as the ditch [773]c in trench All, Ox Lane and the ditch [723/1037]c and pond [1008]c under the lane, although the relationships between them all is not clear.

The present line of Ox Lane dates back to an unknown period before the earlier part of the 18th century. Whether this stretches back into the later medieval period is currently difficult to say. The fact that there appears to have been a track immediately to the east earlier than the post-Medieval lane, however, suggests the possibility that a lane may well have played a role in the development of the agricultural landscape of this part of Tarbock dating back to the period round about 1200-1400 AD. This is mainly of local importance.

What may have a wider importance is the fact that the ditch [723]c under the post-Medieval lane, which could have been open as early as the late Medieval period, overlies an in-filled pond

[1008]c. This pond appears to have been filled in by, and therefore is earlier than, the early post-Medieval period, probably before about 1500-1600 AD, and depending on which interpretation for the date of the ditch is correct, it could be even earlier than about 1200-1400 AD.

The final structural feature in this trench may in some way be related to this process of the development of an early agricultural landscape. Ditch [773]c in trench All produced no finds from five sections, which would argue that it is not post-Medieval and may even be pre-Medieval, as a thin scatter of medieval pottery did come from the trench even from small samples such as in the ditch under Ox Lane in Trench AVII.

Artefactual evidence

The range and type of finds and their re-deposited provenance means that the few finds play a minor role in the interpretation of the key features in the trench.

Palaeoecological evidence

As the artefactual evidence is limited in the context of this trench, the environmental evidence, although itself not of high quality becomes potentially more important as it is the only evidence that can help further understanding of the most important features in the trench; ie. the pond [1008]c and the ditch [723/1037]c under Ox Lane.

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The main features from this trench are the free standing ditch [773]c in trench All, the ditch under Ox Lane [723]/[1037]c and the pond [1008]c above which the latter lies. The fact that none of these features is associated with finds provides, in the circumstances the best, though not totally reliable, indication of their date; in that their absence suggests the features may date prior to the post-Medieval period. On stratigraphic grounds and one associated artefact, ditch [723]c may be late Medieval in date, while the pond [1008]c which underlies this ditch is therefore possibly late Medieval or earlier.

The fact that the present Ox Lane overlies a ditch, presumably marking a boundary of some kind, which itself cuts through the only pond found in the excavation of an area of more than 2000 sq metres points to an interesting set of relationships. These may say something about continuity and development between different periods of agricultural landscape change. This is potentially important not only because of the indications that certain features in the landscape acted as markers for subsequent change but also because of the possible date of these developments. There is a dispersed Romano-British and late Medieval farm within 200m of this trench, while the intervening period is all but invisible in the North West because of a lack of associated finds evidence. So these features may be part of the developing agricultural landscape at some point during this long span of time between c.100 and 1400 AD.

For the later part of this period, the Medieval Settlement Research Group agenda suggests that research should include, amongst other topics, the significance of dispersed settlement, the study of settlements within their estates and a focus on periods of transition (Wrathmell 2003). To one degree or another trying to extract the maximum evidence possible from the three features in Trench A could bear on some of these topics, for either Medieval settlement in Tarbock or the periods preceding it, which would consequently be of value in the region in giving a glimpse of the chronological development of the landscape in the Medieval or periods leading

up to it. Evidence bearing on the origins of the Medieval landscape in this trench has also to be seen within the results from Trench D, which also is part of the Daggers Bridge Farm Medieval estate.

Assuming that the lack of finds from these features is because they belong to a period from which there is negligible survival of artefacts and is not purely a feature of the limited nature of the finds sampling process, then other considerations may apply. Archaeological features unrelated to obvious structures and not associated with finds are often disregarded and thought not worth pursuing in research terms because of the expected likely poor return in understanding. This view can obviously be a severe restriction in recovering evidence from features belonging to artefact poor periods, such as the almost currently invisible post-Roman period. In this context, however, just to identify that activity of this period *exists* in a particular area is a big development and can be a valuable first step in devising subsequent research programmes to refine targeting of elements of the associated archaeology. The local Medieval and Romano-British settlement and landscape context for this trench, and the stratigraphic relationships present between two of the excavated features, may mean that some further investiture in trying to develop understanding of the excavated evidence is worthwhile, given that any potential return is likely to have an impact on current understanding.

The main information needed to realise this potential is to improve the dating of these features, most particularly the pond [1008]c as it is potentially the earliest. The palaeoecologist reports that the pond fills have given a reasonably good picture of the local environment around the feature and the well preserved waterlogged seeds and grasses suggest there is potential to acquire dates for the period during which the pond was open. There are also about 100 litres or so of pond deposit samples remaining and sieving them provides a chance to increase the sample size to further test the presence or absence of artefacts from the fill; this was not possible on site because of the particular circumstances associated with its excavation.

The environmental samples from the two ditches ([723]/[1037]c and [773]c have produced similar negative palaeoenvironmental results that suggest that potential for radiometric dating is low. Neither do they provide vegetational evidence about the surrounding landscape at whatever period the ditches belong to. However, there are over 50 litres of sediment left for these two features and it would be worthwhile to sieve these also to ensure a better sampling ratio on which to base conclusions in the final report, with the possibility of the occasional artefact being present that might provide some guide to their date. These features were not wet sieved on site as they were fairly clay based which would have been too time consuming.

Although there was unstratified Medieval and possibly Romano-British material from this trench, there are no other structural elements that can be firmly associated with these periods. Little would be gained by attempting further work on the environmental samples to try to link the occasional pit found to the unstratified artefactual evidence, as even the most optimistic result scenario would only attest to the presence of some unknown form of activity at whatever period might be forthcoming. If the best that can be hoped for from further work is to confirm the presence of some kind of landscape activity prior to the Medieval period, then the categories of structural evidence mentioned above probably have more potential than the pits. The various groups of tree hollows would also have the same limitations as the pits.

Excavations in Area B

Background

This excavation was approximately 860m² in area and was located to the west of Ox lane (NGR SJ 460 890). It extended the area of Trench C14 excavated in 2006, and lay on the western side of a small, extremely slight, high point in a generally featureless field (Fig. 3). The eastern side of this slight eminence, with the ground falling most noticeably, but still almost imperceptibly, to the north and south-east, had been tested in 2006. It had produced two large shallow hollows of uncertain origin which had been cut by post-Medieval drains in one of which was a small amount of pre-Medieval ceramic and possibly pottery evidence (Cowell 2006b). The trench was excavated over 10 frequently rain interrupted days between 8th May and 18th May. The topsoil was removed by a 15 ton, 360 degree bucket arm tracked excavator.

Aims and Objectives

The aims and objectives of the 2007 pre-construction excavations in Area B were both general and specific (Golder Associates 2006b, 14-15). The general objectives were the same as those stated above, for Area A (see above). The specific objectives were to identify any archaeological deposits and features associated with previous prehistoric and Romano-British activity identified in this area during the previous phases of archaeological investigations (Cowell 2006a, 2006b).

Summary of Results

The natural orange yellow boulder clay [717] lay directly underneath the topsoil [601]. The post-Medieval plough soil layer found elsewhere on this site was not present in this trench. The natural boulder clay surface [717] was crossed by a series of narrow irregular roughly curvilinear features, the fills of which were fine, clean mottled sand, which from excavation in Area A of similar features suggests a glacial origin for them (see archive).

The most prominent feature in this trench is the linear hollow/ditch [930]c (fill [923]) running east to west through the trench (Fig. 3). This represents the westward continuation of a feature identified in trench C14 in 2006. This had produced a little potentially pre-Medieval fired clay and pottery although it had been cut into by two post-Medieval field drains. Ditch [930] widens in the last third (west side) of the excavated area as it runs into a natural, roughly u-shaped, shallow gully at the western side of the trench. Its fill [923] consisted of dark grey homogenous clay silt. The upper part of this fill contained post-Medieval pottery, although the insertion of two post-Medieval drains into its base makes it unclear exactly where the edges of the cuts for the drains were in the dark fill.

Two sections were placed across the ditch; one through the wider western end and one through the eastern end (see archive). No finds came from these sections. Each section produced evidence of the drains, one made of sandstone [950] and one with a ceramic pipe [940]. Both of these were on slightly different alignments to the original ditch [930]. The date of the initial ditch, perhaps draining the natural hollow to the east, is uncertain but it was subsequently re-used in the late post-Medieval period.

Also found in this trench were two pits [942]c (fill [922]) and [961]c (fill [956]) cut into the boulder clay (Fig. 3.1). They each contained evidence of burning and small quantities of burnt bone

(Finds numbers (369), (370) and (371)). These were sampled for environmental evidence (Sample numbers (113), (115) and (120)).

There are at least 12 tree hollows, recognised by their dark silt fills and irregular shape and/or profile, which were spread across the trench. The hollows ranged in size from around 1m by 1.7m [968]c (fill [920]) at the largest to 0.46m by 0.35m [957] at the smallest. Each was between 0.1m and 0.3m deep. Five features were completely excavated; [962]c (fill [912]), [967]c (fill [918]), [932]c (fill [919]), [968]c (fill [920]) (see archive) and [928]c (fill [911]) (Fig. 3.1).

Another feature found in this trench was a regularly cut, deep slot [926] c. 0.68m wide and 2.5m long filled with crushed sandstone and orange clay [966] (see archive). The function of this feature is not clear although its form and the nature of its fill suggest that it is post-Medieval. There is no immediate settlement context for it; it appears to have existed in an expanse of fields with the nearest building hundreds of metres away. It may have an agricultural function associated with far flung fields. Perhaps a slightly more likely alternative function, for which isolation would be a benefit, is as part of a WWII bombing decoy for which there is documentary and local oral evidence in the area (Norah Read, pers comm).

The remaining features relate to agriculture over the last 100-200 years or so. Several field drains cross the trench both in an east to west and north to south direction, most of which were not excavated. There are also plough marks throughout the trench on the same alignments as the field drains (see archive).

Factual Data

Quantity of structural records

Contexts: 65
Drawings: 9 Plans, 3 Sections
Digital photos: 24

Artefactual evidence

i) Quantity of material

There were 13 finds from this trench, consisting of

Lithics: 5
Ceramics: 8
 Romano British? (tile fragment) 1
 Post-Medieval 7

ii) Provenance

Lithics:

Potentially worked prehistoric flint chips (finds numbers (326) and (368) for the other four chips). These were from the fill [911] of a tree hollow [928]c (Fig. 3).

Pottery and Ceramics:

Sample 115/T (3 kg/3 litres sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Moist, mid to dark greyish-olive to dark brown (with some mid to dark yellowish-brown, mid to dark yellowish-grey, mid brown and black – possibly humic – layers), soft to crumbly (working to plastic and crumbly, with some slight stickiness), slightly humic, sandy clay silt. Stones (2 to 6 mm) were present.

There was a fairly small washover (135 g, dried) of sand and undisaggregated sediment lumps, with some charcoal (to 10 mm) and a few modern rootlets. There were also a few remains of knotgrass which were not charred but these almost certainly reflect modern intrusions into the deposit.

The small residue (dry weight 0.3 kg) consisted largely of sand, with some lumps of indurated sediment (to 13 mm), some stones (to 30 mm) and a trace of mineralised charcoal (to 15 mm; 1g).

iv) Condition, storage and conservation

All samples were collected by hand excavation and placed in 10 litre sample bags or buckets in which they are stored in a dark dry store at NML. Three are stored with Palaeoecology Ltd, Shilden, Co. Durham (see above).

Summary Statement of Potential

Structural evidence

No structures were identified in the excavation trench. The main evidence relates to a thin scatter of apparently random tree hollows and two pits [942]c and [961]c. It is not possible to say if the two groups are associated. On their own, the former are the only evidence of the natural landscape at some time in the past. The nature of the fills and the form of the two pits suggest a different origin, which could accordingly result from human activity.

The natural gully [930]c may have been the focus for what human activity there was in the area, although there are no stratigraphic relationships between the various groups, and the feature was disturbed by post-Medieval drains that limit its usefulness as a source of evidence.

Artefactual evidence

The lithic pieces are too small and too few for their analysis to be of great significance. Their main use is that they exist here and imply there has been human activity of some sort at some time in the prehistoric period in the vicinity.

The ceramics are primarily post-Medieval and therefore relate to later activity on the site associated with agriculture. A fragment of red brick recovered from the topsoil may be of Roman manufacture. However, even if this could be certified, in isolation it has no potential to improve understanding of activity on the site.

Palaeoecological evidence

The very small quantities of charred plant remains from context [922] (possible fire pit [942]c) include cereal grains and together with the burnt probable animal bone fragments, which were also recovered from context [956] (pit [961]c) provide the only evidence for food waste and agricultural activity at the site.

The charred cereal grains recovered from context [922] would provide sufficient suitable material for radiocarbon dating (via AMS), if required.

On the evidence reported here, and seen from previous evaluations (Akeret *et al.* 2005; Carrott and Gardner 2006), it is unlikely that any future excavations in these areas will encounter deposits with assemblages of ancient biological remains of sufficient size to provide information of value for site interpretation.

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The main result from this trench is the confirmation of the uncertain evidence for early activity recovered in the 2006 excavations with the recovery of the pit [942]c with burnt bone and charred cereals, a possible minor flint working event associated with a tree hollow and a piece of unstratified possible Roman tile. Although not highlighted in the environmental assessment, the second pit [961] also produced bone from excavation. In addition, the two previous adjacent evaluations produced a later prehistoric worked flint (100), a piece of pre-medieval, probably non-Roman pottery, a little fired clay and a piece of probable Roman tile in a small pit. Two pieces of Romano-British oxidised ware came from field walking to the south of this area in 2000 and a couple of struck flints from evaluation trenches to the north in 2005 (Cowell 2000b, 2006a).

The two pits with burnt bone ([942]c and [961]c), so far of unknown date, seem to be part therefore of this non-intensive settlement or landuse activity spread thinly across a large area. An alternative is that they could lie on the edge of relatively more intensive activity centred outside the excavated area. There is, however, no easily discernable topographic feature in the vicinity of the trench that could have potentially provided such a focus. This trench in fact occupies the greater part of the only slight topographic elevation in this part of the field, with the natural linear hollow leading to a slight fall of ground to the east. On balance, it would seem that any settlement or land use activity is spread thinly over a large area of landscape and is associated with occasional small pits. The naturally disposed tree hollows may have provided occasional *foci* for similar kinds of activity.

The lack of finds associated with the features themselves makes dating of this activity problematic. The little material there is from the vicinity suggests the most likely contexts might be Romano-British and prehistoric, perhaps somewhere around the second millennium BC. Iron Age and post-Roman activity though is generally invisible because of the lack of associated finds in this region, thus making it impossible to narrow down the period represented by this activity on the current evidence by analogy.

However, although the evidence may be limited in comparison to other parts of the country, it may be typical of great swathes particularly of prehistoric activity in this region; isolated pits lacking associated finds may account for much archaeology in this area because much prehistoric activity was structured in this way. If this kind of evidence is always down-played as not being important because there is so little of it and there are no associated finds, there is a danger of failing to record a stratum of regional prehistoric settlement and landuse that was relatively important in real terms and is necessary for understanding the settlement systems as a whole, or regional variations within it. On these terms, therefore, it is suggested that more

work is done on the relatively limited evidence from this trench. The residue from the main pit [942]c with burnt cereals and bone should be processed in case it contains the odd find, but it is probable that radiometric dating from the charred cereals will be a more realistic way of providing such evidence. In many ways, whatever the result, it could be seen as providing some new insight into the understanding of the local archaeology.

Circumstantially, the nearest analogy for this kind of evidence, i.e. burnt stones, bone and cereals in a pit, would be the cooking pits or burnt mounds of either Bronze Age or post-Roman date, which are usually interpreted as being associated with transient mobile activity. There is a Bronze Age flint scatter recovered from fieldwalking about a kilometre or so to the east of this trench and an excavated dated Bronze Age site associated with burnt stones in a ditch with radiocarbon dates centred on the 19th century BC, about 500m to the south of that (Philpott 2000b, 120-122). The evaluations of 2005 and 2006 to the east and north of Trench B produced the occasional flint tool, which although difficult to date on their own would not be precluded from being of this date (Cowell 2006a, 2006b). Elsewhere, the pattern produced by lithic scatters appears to support a land use based to a large degree on mobility in some parts of the region (Cowell 2000b; Middleton *et al* 1995).

This work would also be enhanced in that it can be seen within a wider research context, as another potential Neolithic/Bronze Age site c.20kms to the east in north Cheshire at Southworth, of similar character, has been investigated within the same research framework; i.e. dispersed pits and tree hollows. Here, fieldwalking of c.60 ha around a 10ha site evaluated by excavation has produced a lithic distribution pattern that can be related to the more detailed work from the evaluations (Cowell 2004). Although seemingly unexciting, this type of result is becoming so common that to ignore it because of its character is becoming less defensible when interpreting the archaeology of this region. Such results could be of use in developing understanding of a regional identity based on characteristics directly applicable to this region, rather than through analogy with the more visible evidence from other regions, which may not be totally relevant.

Should the activity be dated to other periods then the evidence would currently be less useful as local contexts of settlement and land use are perhaps even less developed than for the prehistoric. But, given the dearth of dated evidence for many periods in the region, they would still contribute to making small steps towards a broader understanding, which in turn might help future research aims.

If, for example, the activity was shown to be of the post-Roman (Dark Age) period then this could fit into discussions about regional burnt mound and associated land use (Hodder and Barfield 1991). It would also be only the second date for this area, after a 9th century AD one for a timber stake from the Romano-British farmstead of Court Farm, c.2.5kms to the south-west (Adams in prep).

If the activity is associated with the Romano-British period, then the few pits and a thin spread of finds would be an interesting complement to the nature of settlement and land use for this period when seen in the context of excavations in Area D on the farmstead with its adjoining industrial areas (see below). Such activity, including the pit with the tile from 2005, suggests a different type of land use in this part of Tarbock, as fieldwalking and evaluation strongly suggests there is not a farm in the vicinity.

If the activity were shown to be Iron Age then this would place it currently in something of a void for this area, as evidence for this period is as hard to find from surface material as is the post-Roman period. Only four Iron Age settlements have been excavated within a 40kms radius of Tarbock (Cowell 2005b). However, there are two Romano-British farmsteads within less than

3kms radius of the site and neither appears to have earlier, Iron Age antecedents. The implication of this is that after the arrival of the Roman army there was an expansion of settlement into previously unoccupied areas, potentially in response to the increased need for agricultural production created by the occupation (Philpott 2000c). The 1st century AD coins from Area D suggest that this might not be the case. However, if they had been in use for 50 or so years or more they could have found their way to the site in the Romano-British period. Better dated evidence of the late Iron Age for example, would add to this debate.

The fact that Tarbock is probably the most extensively studied township in the region will also add to the value of the results. A range of work encompassing fieldwalking, excavation and documentary study has produced a good range of researched sites and landscapes stretching from the Mesolithic to the post-Medieval (Cowell 2000a, 2000b, 2002). To be able to produce a description of a surprisingly (for this region) full and evolving landscape over such a long time will be of academic use for regional research, but it will also provide a wealth of little expected and fascinating material for a local lay audience that could be reproduced in a popular format.

Excavations in Area C

Background

This area of excavation lay across Ox Lane 230m to the south of Area A and was designated Area C (NGR SJ 462 888). The area of the trench was 214 square metres (Fig. 4). On the west side of Ox Lane, a little to the north of this location, evaluation trenches were dug in 2006 to help identify the origins of the lane, which archaeological landscape interpretation suggests may have been an early landscape feature (Cowell 2006b). The results from these trenches were inconclusive. Eleven days between 23rd May and 7th June were spent on this trench in 2007. The topsoil was removed by a 15 ton, 360 degree bucket arm tracked excavator.

Aims and Objectives

The aims and objectives of the 2007 pre-construction excavations in Area C were both general and specific (Golder Associates 2006b, 14-15). The general objectives were the same as those stated above, for Area A (see above). The specific objectives were to identify any archaeological deposits and features associated with Ox Lane and its boundaries, and any predecessors to the alignment, in order to help understand the origins of the wider historic landscape in this part of Tarbock.

Summary of Results

Section 282 showed a similar upper stratigraphy through the lane to that recorded in Trench AIV (Fig. 4.1). The uppermost layer [1035] comprised a closely compacted layer of gravel and cinder. Below this, layer [1036] consisted of a large amount of crushed ceramic material, laid perhaps to form a consolidation layer for [1035]. Below this is a layer of sandy gravel [1038]. Below [1038] is a clay-like layer [1037], a moderately compacted mix of yellow clay and sand. These layers all contained 19th-20th century finds and reflect the late post-Medieval consolidation of the lane surface.

Ox Lane is flanked by two ditches. The eastern one [1069]c remained open at the time of the excavation and is tree lined. It seems to have been cleared out several times and contains a large amount of modern debris. An earlier ditch [1063]c on the west side cuts through the 18th/19th century layer [1037] and precedes surfacing of the lane with cinder metalling. It contained only post-Medieval finds, which included black-glazed pottery, modern glass and china. The east bank adjacent to Ox Lane has been reinforced with large stones [1461] which are similar to those forming the early field boundary [1064] (see below).

Wheel Ruts

Below the upper horizons of the lane the sandy layers did not seem to have been deliberately laid, rather they seem to have formed over time through natural accumulation. A grey sand layer [1054] was cut by a series of c.0.22m wide, V- sectioned linear features that appear to be wheel ruts [1042] (cut [1053]), [1059] (cut [1060] [1093] (cut [1098] and [1101] (Fig. 4). They run in a north-south direction across the trench and their fills comprise a pale grey sand with small rounded pebbles, occasional flecks of coal and minute pieces of soft weathered orange brown fired clay, too small to retrieve. The distance between [1042] and [1093], of c 1.8m suggests a potential width for the axle length of a cart cutting through a soft or wet road surface prior to the 19th century.

Buried Soil

All of the above features lay over the lowest layer [1039] of the lane surface, which is dark silty sand, probably representing an ancient land surface, perhaps an old turf line or buried soil, which overlies the natural sand and clay subsurface [1040] and [1041] (Fig. 4.1). No dateable artefacts came from this layer but six samples (183-188) were taken from this context. Layer [1039] spread 12m north/south and 3m east/west across the trench and in parts had been cut by furrows [1058] which are potentially pre-Roman in date (see below).

Field Bank or Boundary

The curvilinear shape of this shallow gully feature [1143]c was most likely influenced by later ploughing and may originally have been more linear (Fig. 4). The fill [1064] was extremely dark and organic. It contained a large amount of large river cobbles [1061] up to 0.30m in diameter plus a fragment of a probable saddle quern (Find number 772), which was well stratified. All had been used in what appeared to be a low wall or a bank which may have robbed or ploughed out (Fig. 4.2).

Lattice type furrows

Three groups of dark grey silt filled furrows [1100], [1057] (cut [1058]) and [1135] with a width of between 0.20m and 0.40m and a depth of between 0.10m and 0.35m cut each other at right angles in a north-east south-west direction (Fig. 4). The best preserved group [1058]c were stratified below the boundary feature fill [1064] (Fig. 4.2). The dark grey sandy silt fill [1040] which is identical in texture to layer [1039], which is the potential buried soil. Furrow group [1135] covered an area 1m by 0.8m and lay below features [1087] and [1091] (see below). Furrow group [1100] consisted of several short lengths cutting the probable natural gully [1137] (see above).

Plough soils

To either side of the lane and the adjacent ditch [1069]c, the modern topsoil [1133], a grey/brown sandy clay loam, reached depths of c.0.5m. It contained occasional post-Medieval china and glass. There was little survival of a lower plough soil as found in other trenches in the majority of the trench (see archive). In that part of the trench to the west of the line of Ox Lane the lowest layer [1134], a mid-brown clay sand to a depth of 0.16m, probably represents this feature. This means that the cross ploughing and early field bank seen under the lane has been destroyed by post-Medieval and modern ploughing to either side of it.

Tree hollows

In that part of the trench excavated to the east of the modern ditch [1069]c were three irregular shaped features interpreted as tree root hollows. Features [1144] [1145] and [1146] had widths of between 0.57m and 0.87m, with lengths from 0.69m to 1.43m. The fills all had a dark grey silty clay slightly organic matrix. A further two possible tree hollows [1164] and [1165] were excavated which lay close by but had much smaller dimensions and lighter fills and may have been natural (see archive). All the above had no dateable evidence from finds.

Plough marks

Plough marks [1148] and [1151] were recorded in the part of the trench east of ditch [1034]. They were between 0.4m and 0.75m wide and continued into the east baulk of the trench. These are very similar in dimension, fills and appearance to the 19th possibly even 20th century plough marks which were widespread in Trench A (see archive).

Modern

A feature [1169] adjacent to the western edge of Ox Lane consisted of a patch of orange builder's sand with a circular area [1170] of sandy clay. The latter [1170] was part-excavated to a depth of 0.4m and produced a square section with a width of 0.3m (see archive). A similar feature was found in Trench B which has been interpreted as the potential remains of a World War II decoy light or beacon.

A further post-hole [1172] was situated 2m to the east of [1169]. This had a similar fill and dimension to [1170]. A lower fill [1174] was much darker, with charcoal pieces which may be the remains of a wooden post. These two features are most likely associated with each other and are probably post WWII (see archive).

Glacial and natural layers

At the base of the stratigraphy the natural boulder clay [1071] contained a series of irregular narrow, fine sand-filled gullies [1163]. These have been interpreted as glacial fissures. Two were investigated. The first [1137] was a dark brown sand within the yellow orange natural clay [1041]. The second [1163] was a red-brown sandy clay within the light brown natural sand [1040] subsurface (see archive).

Factual Data

Quantity of structural records

Contexts: 87
Drawings: 5 Plans, 4 Sections
Colour Prints: 17
Digital photos: 42

Artefactual evidence

i) Quantity of material

Lithics: 1
Ceramics total: 172
 Roman? ceramics (3 tile fragments)
 Medieval pot sherds (1 pot lid fragment)
 Post-Medieval pot sherds (144)
 Other ceramic fragments (3 post-Medieval brick, 1 tile fragment, 2 ceramic drain fragments)
Industrial waste fragments: 7
Glass fragments 4

ii) Provenance

Lithics:

1 flint debitage piece 361 from layer [1041] the natural clay at the base of the field boundary [1064] (Fig. 4.2).

Pottery and Ceramics:

a) *?Roman ceramics*: 1 tile fragment (581), was found in layer [1034], part of a 19th/20th century ditch. A further tile fragment came from a probable furrow [1091] associated with the lane and one was unstratified.

b) *Medieval ceramics*: 1 Medieval sherd (490) was recovered from [1041] the natural clay found at the base of the trench.

c) *Post-Medieval ceramics*: One hundred and forty four post-Medieval pottery sherds were found, 31 of which were unstratified. Thirty five pieces came from [1140] a continuation of the 19th century surface to the west of the western ditch [1063]c of Ox Lane. Three pieces come from [1062] and [1079] which are both primary fills in the ditch to the west of Ox Lane (see archive). Thirty three came from fill [1034] in the modern ditch to the east of Ox Lane. Two came from [1035], the final layer of the lane. Fifteen came from the underlying layer [1036] and 13 from [1037] which appears to be the initial clay surface of the lane (Fig. 4.1). One piece is from the early field bank feature [1064] and one piece is from [1039] the early soil layer. Both of these pieces could have been deposited by later use of the lane. The earliest piece of pottery seems to be 18th century in date. Thirty eight pieces were unglazed, 14 were black glaze ware, 49 were white/colour glazed and 3 were blue and white glazed.

d) *Other ceramic fragments*: One piece of glazed bathroom tile came from [1035] the top surface of Ox Lane, three brick fragments came from the underlying layer [1036]. Two fragments of a ceramic modern drain were also found in [1036].

Industrial waste:

Seven pieces of metal working waste were recovered, six from [1034] the final fill of ditch [1069]c. The remaining piece came from layer [1037] which underlies the 19th century surface [1035] of Ox Lane (Fig. 4.2).

Glass:

Three fragments of 19th/20th century glass were unstratified. A further fragment came from [1091] which is a furrow from the early lane surface (Fig. 4).

Quern stone:

A fragment (772) of what could be an early saddle quern was found well stratified within the large stones [1061] of the possible early field bank [1143]c, which overlies the lattice furrows [1058]c.

Palaeoecological evidence

i) Quantity of material

Twelve whole earth bulk samples were taken, totalling 37.5 litres. A number of these were quite small samples because of the nature of the small narrow features that had survived under the lane.

ii) Provenance

The samples were taken from the following contexts.

Buried soil under Ox Lane track make up layers

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessed
188	C1	1039	1085	1	Buried land surface underlying road - eastern extent	
187	C1	1039	1085	1	Buried land surface underlying road- central section	
186	C1	1039	1085	1	Buried land surface underlying road- upper interface	
185	C1	1039	1085	1	Buried land surface underlying road- centre	
184	C1	1039	1085	1	Buried land surface- lower interface between 1039 and 1040	
183	C1	1039	1085	1	Buried land surface- western	YES

Ditch by Ox Lane

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessed
126	C1	1034	1069	10	Ditch fill	

Latticework arrangement of furrows

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessed
137	C1	1057	1058	1	Furrow from cross ploughing	
136	C1	1057	1058	1	Furrow from cross ploughing	
135	C1	1057	1058	1	Furrow from cross ploughing	

Shallow ditch part of possible field bank

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessed
134	C1	1064	1143	10	fill of boundary/ structure	
133	C1	1064	1143	10	fill of boundary/ structure	YES

iii) Range and variety

The following text has been provided by Palaeoecological Services on the two above submitted samples (Schmidl et al. 2007).

Context 1039 [deposit from a buried soil; section 282, Fig. 4.1)

Sample 183/T (0.9 kg/1 litre sieved to 300 microns with washover; no unprocessed sediment remains)

Just moist, mid to dark brown, crumbly (working soft and slightly plastic), slightly clay silty sand (more clay in places), with stones (6 to 20 mm) present.

The tiny washover (6 g, dried) was of sand, with some small lumps of undisaggregated sediment, charcoal (to 5 mm) and a few modern rootlets.

The very small residue (dry weight 0.099 kg) was sand, with some stones (to 22 mm).

Context 1064 [deposit from a buried soil under stone bank, part of ploughmark fill; section 285, Fig. 4.2)

Sample 133/T (3 kg/3 litres sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Just moist, mid orangeish-yellow-brown to dark brown (with some patches of greyish-brown, mid to dark reddish-brown, yellow and dark grey), crumbly to unconsolidated, silty sand.

The small washover (~30 ml) was mostly of sand and undisaggregated mineralised sediment lumps, with some charcoal (to 10 mm), modern rootlets and a little coal (to 5 mm).

The small residue (dry weight 0.455 kg) was mostly sand, with some stones (to 28 mm) and a trace of charcoal (to 9 mm; <1 g).

iv) Condition, storage and conservation

All environmental samples taken from Area C are stored in plastic environmental sample buckets in a dark and dry store at NML. One ten litre sample from the buried soil under the 18th century lane surface and one other smaller sample are with Palaeoecology Services, Co Durham (see above).

Summary Statement of Potential

Structural evidence

Post-Medieval Lane and Ditch

The ditch [1069]c and associated upper lane surfaces [1035], [1036], [1038] and [1037] are both post-Medieval in date from the related finds. The current course of Ox Lane probably reflects the line of the lane shown in 1769 on the Molyneux estate map. Evidence for an earlier, adjacent late Medieval line, as was potentially the case in Trench AVII to the north, was not evident here. Modern ploughing to the east and the west of the lane in the vicinity of Area C was relatively deep and would have removed any evidence that may once have existed. This element of the excavations, therefore, is of local interest only and requires little further work.

Buried soil

The current lane surface overlaid what is probably an earlier land surface [1039] that may represent a former ploughsoil or turfline, pre-dating the 18th-19th century road surface. By how much earlier the buried soil is than the lane surface is unclear. Finds have not been recovered from the soil and palaeoenvironmental samples are not likely to produce material that could be securely associated with the soil rather than later disturbance created by the use of the lane.

Field boundary

Within the buried soil is the possible field boundary or bank [1143]c, consisting of large waterworn pebbles set over a shallow gully. This feature is difficult to date absolutely as the only find was a fragment of a saddle quern which was well stratified within the stone packing [1061]. This could be of possible Romano-British date, although it can not be absolutely discounted that there is a lengthy time gap between the use of the stone and its incorporation into the wall.

Cross-ploughing furrows

The possible early field boundary [1143]c overlies groups of furrows [1058]c made by cross ploughing. However, with the same type of ard plough being used for 4000 years until the Romans introduced the coulter plough, which left a much different pattern in the ground, they are impossible to date accurately. The furrows and the overlying bank may not be too far apart in date and have the potential to be early given the style of ploughing. As such, this is an interesting development that in other circumstances could have wider significance but its true potential here is limited by having been separated from its original context by later agricultural activity.

Miscellaneous

To the south of the trench, west of Ox Lane is a feature [1169] similar to that in Trench B, for which the most plausible explanation seems to be part of a WWII decoy. This is of local interest only.

Artefactual evidence

Finds, other than the post-Medieval pottery associated with the lane surfaces, are very limited and there is little scope for further study of the material. The main value of the latter is in providing a good context for the date of the lane but in its own right it is typical of the many small rural assemblages known from this area.

Palaeoecological evidence

Neither of the palaeoenvironmental samples has provided any evidence of value either for environmental reconstruction or for dating purposes.

Integrated Assessment Report

The main interest in this trench is due to the potentially early cross-ploughing and the subsequent fairly rudimentary gully and large pebble wall overlying the furrows. This is potentially significant in its own right, as no other pre-medieval agricultural activity has been reported on in the lowlands of the region. In its current state, however, its true value can not be appreciated. There are two main limitations; late post-Medieval ploughing to either side of the lane has left only a four metre wide band of this early agricultural landscape surviving and it can only be dated on form to a fairly broad potential date range. The ability to improve this is limited, however, as environmental samples from under the stones would not appear to have potential for improving understanding of the surrounding environment or dating.

The fragmentary nature of the remains also limits their usefulness as it makes it difficult to link them to any known settlement. Fairly intensive fieldwalking has taken place in this northern area of Tarbock and has not suggested a potential settlement context for such ploughing (Cowell 2000b), although it is extremely unlikely that fieldwalking will provide obvious evidence of settlement outside the Romano-British period i.e. either later prehistoric or post-Roman date. It is not possible to say categorically therefore that such settlement sites do not lie in the vicinity of Trench C.

The occurrence of such ploughing, however, is still worthy of reporting on in its own right in a regional context to allow comparative work in the future should better dated occurrences come to light from further work elsewhere.

Excavations in Area D

Background

Area D was located adjacent to the west of the slip road from the A5300 leading onto the Junction 6 roundabout (Fig. 1). The total area of excavation was approximately 2100m². A small part of the southern part of Area D had been evaluated in 2005 and 2006 (Cowell 2006a, 2006b). This work had taken place because of the area's topographic setting, a gently sloping valley side, which overlooked a Romano-British farmstead that had been excavated in 1993 which now lay under the line of the A5300, close to the Junction 6 interchange roundabout. The main interest in the farm was that it also produced tile, some of which could be shown to have been destined for the 20th legion, stationed in Chester (Philpott 2000a). Subsequent fieldwalking to the west of the 1993 road construction produced tile debris, some of which included kiln material in the field between the Motorway slip road and Dagers Bridge Lane, although it did not spread into the field that was to be developed as part of the 2007 road construction (Cowell 2000b).

The previous evaluations had produced enough evidence to suggest that this area needed to be more intensively excavated prior to construction of the new road. A piece of stamped tile that showed a legionary link suggested that Area D may indeed have some connection with the tile making activity associated with the farm. They also produced a small amount of probable Mesolithic flint work and a pit which was radiocarbon dated to c.5000 BC and additionally metal working debris of probable pre-Medieval date. It was also intended to investigate the possibility of a buried palaeochannel running north-south through the trench towards Ochre Brook, as some deposits in the evaluations appeared as if they may have been related to alluvial environments. A total of 45 days between 11th June and August 10th 2007 was spent in this area.

Aims and Objectives

The aims and objectives of the 2007 pre-construction excavations in Area D were both general and specific (Golder Associates 2006b, 14-15). The general objectives were the same as those stated above, for Area A (see above). The specific objectives were to identify any archaeological deposits and features associated with prehistoric and Romano-British activity identified at depth during the previous phases of archaeological investigations and during previous fieldwalking.

Summary of Excavations

Area D (NGR SJ 464 888) was divided into two trenches by an east-west hedge; DI in the south and DII in the north (Fig. 5). The topsoil was stripped over ten days using a 15 ton, 360 degree bucket arm tracked excavator. From previous excavations the depth of the overburden on this slope was known to consist of topsoil of 0.25m to 0.3m depth, a post-Medieval plough soil [1205] beneath this between 0.15m to 0.3m deep, and a colluvial layer [1223] below representing another 0.3m to 0.5m. In 2007 most of this overburden was removed by machine. On the upper western slope this overlay a surface of fine weathered Triassic sandstone. Some areas of the colluvium were left, however, to facilitate hand excavation for finds retrieval and environmental sampling. The colluvial layers increase in depth towards the base of slope and had obscured the profile of the palaeochannel to a large extent. This ran from Trench DII in the north along the eastern edge of Trench DI before formerly running down to meet the Ochre

Brook, although this last part of its alignment had been truncated by the construction of the A5300 in 1993 (Fig. 5).

Palaeochannel

Eight sections were cut either through or partially into the line of the channel, all except one in Trench DII. Four of the larger sections were excavated by machine but four were hand excavated to allow for finds recovery and environmental sampling. The standard stratigraphic sequence was one of up to 0.5m of colluvial material overlying up to 0.4m of alluvium. Initial conclusions are that the lower colluvium [1223] contained flintwork, metalworking debris, weathered tile fragments and later Medieval pottery. The alluvial layers contained metalworking debris and larger but often still weathered tile, but appear to have silted up before the Medieval period.

Terrace in Trench DI

Beneath the mid slope colluvium [1223] on the southwest side of the trench lay a small sloping ledge or cliff of sandstone [1207], which backed onto a sandy terrace [1218] and [1219] to the north and east. This terrace ran down to the edge of the channel (Fig. 5).

At the south-eastern edge of the terrace, cut into the natural sand were a series of small conjoined pits [1377] (group number) filled with alluvial silt [1257], metalworking debris and occasional tile fragments, which were spread over an area of c.5m by 5.5m (Figs. 5 and 5.1). South of section 338/9 the alluvial layers were more extensive and spread higher up the terrace, perhaps deliberately arranged to assist in the activity associated with the small hollows. These hollows also contained small amounts of fine hammerscale flakes suggesting that smithing was taking place somewhere in the vicinity. On the highest part of the terrace there was a large pit [1249]c, with metalworking debris and the occasional piece of tile but with larger amounts of hammerscale debris in the fill [1235] (Figs. 5 and 5.1).

Adjacent to the latter pit was another pit [1345]c, partially excavated in 2006, which had produced hazelnuts that were radiocarbon dated to c.5000BC (Cowell 2006b). The continued excavation of this pit in 2007 revealed the remains of burnt branches or roots, with evidence that there were probably several phases to its infilling. The excavation of the sandy layers of the terrace [1218] and [1219] adjacent to this pit produced a flint scatter over an area of approximately 25m², although no flint came from the pit itself.

Trench DII

Trench DII on the northern side of the palaeochannel produced a number of potential features below the colluvium [1185]. Here it was approximately 0.3m thick on the slope down into the channel [911], where it was thicker. Outside the channel large sections of this deposit were taken off by hand onto the underlying boulder clay. Finds from the colluvium beyond the channel included frequent fragments of Romano British tile and the occasional piece of Roman pottery. Beneath the colluvium there was a pebbled area [1285] approximately 4m by 2.3m in area on the edge of the channel although there was no firm indication that this represented structural activity. Several small pits or hollows were also excavated [969], [1281], [1288], [1289] in the northern part of the slope, although there were no associated artefacts and not all could be absolutely identified as being of human origin.

Cutting through the colluvium was a large east–west aligned grey sandstone lined drain [1181] that had been set into the southern side of the channel. Later drains [971], [974], [978], [986],

[993] and [994] had been set into the colluvial layer above this, mainly running at approximate right angles to it although one lay on the same alignment almost directly over the sandstone drain. Late post-Medieval pottery was associated with this latter drain. This heavily drained area at the southern end of the buried channel made it difficult to excavate here as it was impossible to strip the colluvium without breaking drains, which in a very wet summer led to constant inundation of the excavated areas.

The channel [911] excavated in Trench DII showed a good alluvial sequence, which was sampled with a core monolith. Large pieces of un-weathered tile were common at the base of the channel here and frequent large pieces continued to be found both in the upper machine stripped colluvium and from the lower hand dug horizons in sections to the south. Towards the central part of the channel the alluvial sequence was a little different, with less blue silt and with the layers tending to pinky light brown sand [1275] but still containing frequent pieces of relatively large tile.

Factual Data

Quantity of structural records

Contexts: 322
Drawings: 23 Plans, 19 Sections
Colour slides: 233
Colour Prints: 58 with digital backups
Digital photos: 253

Artefactual evidence

i) Quantity of material

Lithics: 237
Ceramics total: 1102
 Romano British 13 pot sherds, 982 tile frags
 Medieval pot sherds 27
 Post-Medieval pot sherds 44
 Other ceramic fragments 36
Industrial waste fragments: 635
Metalwork: 20
Glass fragments: 3

ii) Provenance

Lithics:

This is an average sized assemblage for this part of the region, exclusively from Trench DI. The flints come from the topsoil and general unstratified contexts, the medieval colluvium [1214], [1215] and [1223] and underlying layers of sand [1217], [1218], [1219] and [1220]. The sand layers have provisionally been interpreted as reflecting truncated soil profiles developed on a sandy substratum. There is evidence that there may have been some movement of these pieces downslope from the core area although whether this represents prehistoric or later soil creep is presently unclear.

The potentially prehistoric sand layers were sealed by medieval colluvium and so have avoided the most damaging effects of historic ploughing, which confers a certain amount of importance on the nature of the assemblage. However, it is not clear to what extent Romano-British and possibly pre-Norman Conquest ploughing may have affected the prehistoric soil level without more comparative analysis between the artefactual record and the stratigraphy. Some lithic material also is associated with colluvial deposits in the channel although apparently not in the alluvial deposits associated with the metalwork debris.

Industrial waste:

Most of this class of material comes from colluvial and alluvial deposits in and around the southern third of the buried channel in Trench DI. The main other type of material in these layers is prehistoric flint, suggesting mixing of prehistoric soil layers with later activity dating to either the Romano-British or post-Roman periods.

Some metalworking debris was also recovered from a series of small 0.05m to 0.1m deep conjoined pits [1377] under the medieval colluvium, over an area approximately 5m by 5m next to the channel and in the large excavated pit [1249] on the upper part of the sandy terrace. These were cut into prehistoric layers and affected by an as yet undetermined level of subsequent ploughing.

Metalwork:

Most of the metal finds came from metal detection of excavated areas and spoil. They are mostly unstratified or from colluvial layers adjacent to the channel and can only be useful for dating activity generally in the vicinity of the site rather than with any specific activity taking place around the channel.

Pottery and Ceramics

a) Romano-British tile:

The stratified Romano-British tile from Area D came from colluvial layers surrounding the channel and alluvial layers in the channel such as [1261]. It was not directly related to any clearly Roman features other than the pit [1249] and the small area of hollows on the terrace [1377]. The balance of Interpretation of the latter is towards this resulting from rubbish disposal rather than being an industrial activity zone.

b) Romano-British pot:

The Romano British pottery fragments found in Area D were not associated with any features. They come mainly from the shallower medieval colluvium layer in Trench DII, which implies that they have been derived from earlier soil layers and incorporated into later ploughsoil. Most of the pottery comes from the northern side of the channel probably because this is closer to the Romano-British farmstead that was excavated in 1993.

c) Medieval pottery:

No medieval features were identified on the site other than a yellow clay bank [1216] on the western side of the channel in the extreme south of the trench (Fig. 5), which on stratigraphic grounds was later than the alluvial layers which contained Romano-British metalwork debris. However, because of its location and relationships with other layers this was not investigated in

any detail. The greatest part of the medieval assemblage comes from the colluvium and mainly helps date this particular phase of activity whilst providing a useful relationship to other stratigraphically associated layers.

d) Post-Medieval ceramics:

The post-Medieval pottery assemblage comes from the upper colluvial layers and modern plough soil, as well as several drains, particularly in Trench DII.

iii) Range and variety

Lithics:

The assemblage mainly consists of small knapping debitage, resulting from the final stages of working of either the pebble cores or tool blanks and tools. There are a few cores and tools here, about six of each, which suggests the original flint *nucleii* and the tools have been taken to other sites in the landscape. The range of raw materials is fairly unique to this site in this part of the region in that it does not consist mainly of local boulder clay flint types, as is found for example at a number of other sites in the south of the township (Cowell 2000b). Some of the material also appears circumstantially to be similar to assemblages from the Pennines (Cowell 2005a), which would be significant if it proved to be so on further analysis.

As there are so few tools, dating of the assemblage is not easy, but the one microlith is of a form that is consistent with the late Mesolithic radiocarbon dates associated with the nearby pit [1345]c and much of the microdebitage is of a type that appears as if it also could be associated with small blade tools and blanks. One group of material, numbering about 23 pieces, possibly representing a single knapping event or group stay, is based on a distinctive local boulder clay source and appears technologically different from the other material. One tool suggests a late Neolithic date and two or three large thinning flakes could belong to flint axe manufacture.

Industrial waste (Dr M Adams):

The ferrous corrosion products show that this material derives from ferrous metallurgy. In general the material is of relatively low density which suggests a vesicular slag, though in the absence of clean surfaces it is impossible to confirm this and it may be a result of corrosion. The vast majority is non-diagnostic of process, but given the relatively small size of the fragments is likely to derive from smithing. A small group of slag is much darker in colour and relatively dense (e.g. SF398, Context 630) and is from modern contexts and likely to result from a different process.

The only diagnostic pieces noted were near complete fragments of iron smithing hearth bottom represented as plano-convex cakes of slag c.60-80 mm thick and 150-300 mm across, for example SF765 (Context 1280). These pieces are relatively uncorroded and dense. No obvious signs of the fuel used (e.g. coal inclusions or charcoal impressions) are present.

In addition there is a single piece of vitrified clay (SF736, Context 1284) which may be a fragment of crucible, having what appears to be a short section of rim. However, this piece is small (c.40 mm across) and incomplete and may be a section of hearth lining.

In addition to industrial waste the assemblage includes fragments of coal or burnt shale (e.g. SF 727, Context 1282) and haematite (SF 782, Context 1219). However, the latter is not present in

sufficient quantities to suggest its use as an ore. In addition the industrial waste is more likely to result from smithing than smelting.

Two samples of residues from sieving were tested with a magnet for hammerscale. Sample 199, Context 1432 was from the shallow 'scoops' described above [1377] and contained very small quantities of hammer scale (<0.1g). Sample 167, Context 1235, from the Romano-British pit, contained a significantly greater quantity of hammerscale (c.0.5-1g) and small droplets of slag ('spatter').

Metalwork:

A true assessment of this relies to a degree on the condition report (see below) as a number of pieces would need cleaning and conserving before their true form and significance could be judged. The material covers seven coins, which may be the most useful category for site interpretation; two of these appear to be late Celtic and the rest may be Romano-British. In addition, there is a knife, six large headed nails, two horseshoes and 13 miscellaneous pieces, including material probably of medieval and post-Medieval date including two spindle whorls and a lead seal.

Pottery and Ceramics

a) Romano-British tile (J. Speakman):

These include a few good examples of *tegula* and *imbrex*. The assemblage, however, is mostly weathered soft medium and small sized lumps with some harder more highly fired fabrics similar to the 0335 type found at the excavations at the Ochre Brook farmstead site in 1993 (Speakman 2000). None have been identified in the assessment as being stamped.

b) Romano-British pot (J. Speakman):

The Romano British pottery fragments are much abraded but are mainly the standard local orange oxidised fabric type, with the exception of two fragments which could potentially be Black Burnished ware [734] and [500]. One abraded piece could potentially be mortarium [745].

c) Medieval pot (J. Speakman):

The medieval pottery is typical local ware consisting of an orange surface and dark core, sandy to gritty ware, mostly unglazed which is thought to belong to the period from around 1200 -1400 AD. There are no diagnostic forms in the small assemblage, which consists of small body fragments.

d) Post-Medieval ceramics (J. Speakman):

The post-Medieval pottery assemblage mainly consists of the common late dark glazed wares, including several rims and was selectively collected on site. Twenty five sherds date to the 17th century, including two pieces of splash glazed pot of 15th or 16th century date.

iv) Condition

Industrial waste:

The vast majority of the material consists of rounded to sub-angular fragments of fayalitic(?) slag c.20-80 mm across. Most surfaces are crusted with what appears to be iron corrosion

product but are in reasonably stable condition. Most of the assemblage needs cleaning more thoroughly.

Metalwork

The York Archaeological Trust Conservation Section x-rayed and reported on the condition and conservation needs of the metal objects (Panter 2008). Their findings as outlined in their assessment report are shown below.

In summary, of the coins three are probably too far mineralised to warrant further work or identify, four are probably identifiable, including the late Iron Age ones, three of which need further conservation work before identification is possible. None of the other pieces require further work as they are moderately stable.

X-ray No	RF	Context	Object	Assessment
6895	413	1223	Possible bar fragment	encrusted with dense orange/brown corrosion. Fractures present but object appears stable. Mineral preserved organic material present near one end appears to be random and probably derived from the burial environment. X-ray shows substantial core of metal remaining. Overall condition good. Recommendation: no further work required.
6895	595	1219	Uncertain	X-ray confirms as confirm. Recommendation: show to archaeometallurgist.
6895	619	1257	Uncertain	X-ray confirms as confirm. Recommendation: show to archaeometallurgist.
6895	711	987/995	Doesn't appear to be a nail.	Object covered in bulky orange/brown corrosion products, stable and X-ray shows some metal surviving. Condition fair. Recommendation: no further work required
6894	1013	u/s	Broad bladed knife	severe pitting to surface suggesting previous active corrosion before burial. Spots of active corrosion present, object is not stable. X-ray shows substantial metal core in tang. Recommendation: no further investigation required, but object should be stored in a dry environment if it is to be retained.
6895	1021	1376	Uncertain	Three fragments of soil and iron corrosion products, X-ray image very faint suggesting that either object is completely mineralised or consists of fragments of soil and iron panning. Recommendation: no further work required.
6895	1024	u/s	Nail	minimal soil with dark oxide surface beneath, stable. X-ray shows substantial metallic core remaining, although pitted along edges. Overall condition good. Recommendation: no further work required.
6895	1025	u/s	Nail	minimal soil with dark oxide surface beneath, stable. X-ray shows substantial metallic core remaining, although mineralised at broken end of shank. Overall condition good. Recommendation: no further work required.
6895	1026	u/s	Nail	encrusted with soil and dense orange/brown corrosion products. Several fractures present, and one area flaking, but nail appears stable. X-ray shows substantial metallic core present, although pitted along edges. Condition good. Recommendation: no further work required.
6895	1027	u/s	Nail	covered in soil beneath which is a dark oxide surface. X-ray shows substantial metallic core remaining, and object is stable. Condition good. Recommendation: no further work required.
6895	1028	u/s	Large nail or possible tool	encrusted in soil with dark oxide surface visible. Nail is stable and X-ray shows substantial metallic core remaining. Condition good. Recommendation: no further work required.

X-ray No	RF	Context	Object	Assessment
6894	1029	u/s	Possible nail shank	Encrusted with soil and orange/brown corrosion products. X-ray reveals complete mineralisation and voiding. Condition poor. Recommendation: no further work required.
6894	1030	u/s	Horseshoe fragment	minimal soil with dark oxide layer beneath. Stable. X-ray shows substantial core of metal present. Overall condition good. Recommendation: no further work required.
6895	1031	u/s	Horseshoe	active corrosion with flakes detaching from object. X-ray shows solid metallic core present, although mineralised along edges. Recommendation: no further work required but store in dry environment.
6894	459	1279	Incomplete thimble	covered in a green stable patinated surface, no signs of active corrosion. X-ray shows some metal present. Overall condition is fair. Recommendation: no further work required.
6894	817	u/s	Coin	minimal soil above a stable patinated surface. Head visible. X-ray suggests some metal survives, otherwise mineralised. Overall condition fair. Recommendation: further investigation to clarify head and ascertain whether any legend on reverse survives. 1 hr
6894	818	u/s	Possible coin	in poor condition. Encrusted with a hard green corrosion layer and no legend visible. X-ray shows complete mineralisation. Recommendation: given the condition of the coin it is unlikely that further investigation will reveal anything more.
6894	911	u/s	Coin	minimal soil beneath which appears to be a light green patinated surface which is stable. Traces of legend visible. X-ray suggests mineralisation, but overall condition is fair. Recommendation: further investigation to reveal detail and assist with identification. 1 hr
6894	912	u/s	Possible coin	in poor condition. No details/legend visible and surfaces appear very eroded or worn. X-ray suggests complete mineralisation and no detail visible. Recommendation: given the condition of the coin it is unlikely that further investigation will reveal anything more.
6894	918	u/s	Coin	dark patinated surface and minimal soil. Legend visible. X-ray shows coin to be mineralised and head visible. Stable and in a good condition. Recommendation: further investigation required to aid identification. 1 hr.
6894	974	u/s	Object with 5 CuA coils/springs in side	X-ray suggests high lead content in alloy. Presence of green copper corrosion products on outer surface. Appears stable, good condition. Recommendation: no further work required.
6894	975	u/s	Possible coin	in a poor condition. Dark green patina which is very worn and eroded with no detail visible. X-ray shows complete mineralisation. Recommendation: given the condition of the coin it is unlikely that further investigation will reveal anything more.
6894	998	u/s	Coin	with eroded and worn red cuprite surface with patches of green corrosion. Feint trace of legend. X-ray shows complete mineralisation, overall condition poor but stable. Recommendation: due to worn nature of surface, further investigation is unlikely to reveal any further detail.
6894	1019	u/s	Uncertain	poor condition with areas of powdery green corrosion and bare metal visible. X-ray shows some metal survives. Recommendation: no further work required but maintain in dry environment if object is to be retained.
6894	1020	u/s	Possible fitting	has a dark green patinated surface, stable and X-ray shows that a metallic core survives. Overall condition good. Recommendation: no further work required

X-ray No	RF	Context	Object	Assessment
6894	1034	u/s	pin in a rolled CuA sheet	No corrosion, metal has a dull brass appearance. Stable, and X-ray shows substantial metal present. Good condition. Recommendation: no further work required
	976	u/s	Uncertain	Object in good condition. Patches of white carbonate corrosion visible, but object appears stable. Recommendation: no further work required
	999	u/s	Uncertain	Object has a dull grey/white appearance and appears stable. Recommendation: no further work required
	1033	u/s	Uncertain	mottled brown surface. Possible mineralised organic material within object. Overall good condition and stable. Recommendation: no further work required.
	1035	u/s	Possible seal?	Has dull grey surface and appears stable. Overall condition fair. Recommendation: no further work required.
	1036	u/s	Possible weight	In good condition, with minimal soil covering above a grey/black oxide layer. Markings present, many of which appear to be old cut marks. Recommendation: no further work required.
6894	1037	u/s	Coin	X-ray confirms as lead. Stable. Recommendation: no further work required.

Palaeoecological evidence

i) Quantity of material

Forty-four whole earth bulk samples were taken, totalling 351 litres.

ii) Provenance

The features sampled can be divided into six main groups.

Prehistoric pit [1345]

At the western upper end of the terrace adjacent to the small sandstone ledge was the main prehistoric pit [1345]c, which had been dated in 2006 to c.5000 BC. It lay under a 0.4m thick band of Medieval colluvium [1223]. The pit, which possibly had been recut, was 1m by 0.8m wide and 0.4m deep. Several samples were taken from the various layers (see below), although none were sent for assessment as the potential of this feature can be reasonably judged from previous work.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
149	D1	1323	1345	1	south section through Mesolithic feature	
148	D1	1323	1345	1	south section through Mesolithic feature	
165	D1	1323	1345	1	Mesolithic feature, south sector east facing - charcoal rich deposit	
150	D1	1325	1345	1	North section Mesolithic feature, charcoal rich lower deposit	
175	D1	1325	1345	1	Mesolithic feature- grey sand with high charcoal volume overlying 1336	
163	D1	1325	1345	3	Mesolithic feature, charcoal rich grey layer	

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
152	D1	1326	1345	1	North section Mesolithic feature deposit	
162	D1	1326	1345	2	Mesolithic feature, redeposited natural overlying 1325	
164	D1	1327	1345	1	Mesolithic feature, redeposited natural overlying grey-east facing section southern sector,	
161	D1	1329	1345	1	Mesolithic feature 3rd deposit	
170	D1	1334	1345	7	Mesolithic feature, redeposited natural overlying 1325	
154	D1	1335	1345	20	sample of spit 2 - (1335) Mesolithic feature	
169	D1	1336	1345		Mesolithic feature, loose large pieces of charcoal within 1336	

Features associated with ironworking debris

These pits, group number [1377], were located in an area next to the channel, after post-Medieval plough soil and Medieval colluvium had been removed. They formed a band of small hollows, fills [1220], [1399] and [1388] close to the channel in an area measuring 5m by 5m, being on average 5cm to 10cm across. They were filled by a sandy alluvial deposit, probably formed by flooding of the channel. Two samples were sent for assessment.

The one large pit [1249]c, in an area higher up the terrace, contained similar metalworking debris. It measured 1m by 1.5m in area and was 0.40m deep. This feature was sealed by the colluvial layer and had a different set of non-alluvial fills to the conjoined hollows. One sample was sent for assessment from this feature.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
141	D1	1200	1249	10	Poss. industrial waste pit	
167	D1	1235	1249	10	metal working pit	YES
168	D1	1235	1232	10	sand below (1200) pit, 1235 same as 1200	
189	D1 (III)	1257	1377	1	Multiple hollows, near channel -metal working debris	
190	D1 (III)	1388		1	Multiple hollows of silt and metal working debris	
191	D1 (III)	1388		1	Multiple hollows -Grey silt sand from within hollows	
192	D1	1421		6	Multiple hollows with silt and metalworking debris	YES
196	D1 (II)	1399	1411	10	Multiple hollows grey silt/ sand filled hollows	
199	D1	1432		4	Multiple hollows with silt and metalworking debris	YES

Buried palaeochannel

Samples from the channel were mainly whole earth bulk samples from discrete layers beneath the Medieval colluvium. However, two 0.5m long monoliths were also taken, one at the northern end of the channel in Trench DII and the second at the southern end (Fig. 5.2; Section 338/339). The channel was generally c.1.5m deep, although the upper part 0.5m deep generally consisted of colluvial fill.

The bulk samples included one layer [1433] on the western edge of the channel (Fig. 5.2) that did not appear to belong to either the main alluvial sequence or to the colluvial build up, although it did not appear particularly alluvial in texture and colour. It was sent for assessment to see if it could potentially be prehistoric. This layer is also included in the second monolith in relation to layers above and below it. The main alluvial layers, consisting of the lower one metre

of channel sediments generally, appear to have been accumulating during the Romano-British period when the metalwork and tile was in circulation, although how much earlier than this it originated is not clear presently.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
194	D1 (II)	1392		20	Metal rich layer nr. Channel	YES
195	D1 (III)	1392		10	Metal rich layer nr. Channel	
221	DI (III)	1392		10	alluvial deposit of river channel above context 1445	YES
200	D1 (II)	1433		8	Medium grey silt sand palaeochannel deposit	YES
171	D2	1175	1180	1	Palaeochannel silt	
172	D2	1176	1180	1	Palaeochannel silt	
173	D2	1177	1180	1	Palaeochannel - sandy/ silt / loam	
179	D2	1188	1189	1	Palaeochannel deposit – clay	
182	D2	1194		1	Palaeochannel deposit – clay	

Miscellaneous postholes / pits

These pits or possible postholes were located higher up the slope in Trench DI on the edge of the sandy terrace and further north of the sandy cliff. They are possibly post-Medieval in date. As a result of this they are not seen as a priority.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
140	D2N	1282		10	square feature / fire pit	
143	D1	1304	1303	1	deposit within pos. post hole containing charcoal and industrial waste	
144	D1	1305	1306	1	base of pos. stake or posthole	
147	D1	1317	1322	1	100% of pos. stake hole	
166	D1	1355	1359	1	fill of possible feature, charcoal rich	
181	D1	1355	1359	1	charcoal rich fill of feature disturbed by bioturbation	
201	D1	1446	1437	10	Primary deposit within feature	
202	D1	1435	1437	6	Primary deposit within small pit	

Possible Roman and Prehistoric layers

The sandy layers of the terrace on the western side of the channel produced prehistoric flint work and also Romano British tile fragments.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
157	D1	1229		20		
156	D1 (III)	1218		100	wet sieved from spoil heap where mounded	

Tree hollows

The features interpreted as tree root hollows were located in a thin scatter in Trench D1 and sealed by colluvium.

SAM	TRENCH	CTXT	CUT	LITRES	FEATURE	Assessment
142	D1	1227		1	pos. tree throw	
160	D1	1273		7	dark grey clay/silt patch pos. decayed tree root	
159	D1	1273		1	dark grey clay/silt patch pos. decayed tree root	
158	D1	1273		1	Dark/grey clay/silt patch, pos. decayed tree root	

iii) Range and Variety

The following text has been provided by Palaeoecological Services on the six submitted samples above (Schmidl et al. 2007).

Context 1433 [lower alluvial deposit of river channel; section 338, Fig. 5.2]

Sample 200/T (3 kg/2 litres sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Waterlogged, mid reddish-brown to mid to dark reddish-brown (with a pinkish/mid yellow cast), soft to crumbly (working sticky), slightly silty sand.

The tiny washover (~10 ml) was mostly of unidentifiable plant fibres, sand and charcoal (to 1 mm), with a single charred fragment of hazel (*Corylus avellana* L.) nutshell.

The medium-sized residue (dry weight 1.120 kg) was mostly sand, with some stones (to 28 mm).

Context 1385 [upper alluvial deposit of river channel; section 338, Fig. 5.2]

Sample 192/T (3 kg/2.5 litres sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Dry, mid orangeish-brown to mid to dark brown (with orange and black patches), crumbly to unconsolidated, slightly silty sand. Stones (6 to 60 mm) were present.

The small washover (39g, dried) was of sand, with some undisaggregated sediment lumps and very silted charcoal (orange-coloured; to 5 mm).

The small residue (dry weight 1 kg) consisted of stones (to 60 mm), sand, and mineralised sediment concretions (to 55 mm; not separated), with a little pottery (to 17 mm; 1 g) and mineralised charcoal (to 9 mm; 1 g).

Context 1392 [alluvial deposit of river channel above context 1445; section 338, Fig. 5.2]

Sample 221/T (3 kg/2.5 litres sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Moist, mid greyish-brown to dark brown-orange (with some patches of dark reddish-brown), crumbly to slightly soft and sticky, very silty sand.

The small washover (12 g, dried) contained sand and undisaggregated sediment lumps, with some charcoal (probably mineralised; to 5 mm).

The medium-sized residue (dry weight 1.2 kg) was mainly sand, with mineralised rootlets (to 22 mm; not separated), some stones (to 12 mm) and traces of charcoal (to 8 mm; <1g).

Context 1235 [fill of Romano-British pit [1249]; section 327, Fig 5.1]

Sample 167/T (10 litres processed by the excavator to 300 microns with washover; residue dried in fractions)

The tiny washover (5g, dried) was mostly fine silted charcoal (to 3 mm), with a little sand.

The dry residue (two fractions: 2 to 4 mm – 72 g and 1 to 2 mm – 3 g) was mostly of stones (to 20 mm) and undisaggregated sediment lumps, with some charcoal (to 10 mm) and a little sand and modern rootlet.

Context 1421 [fill of a metal-working hollow [1377]; section 342, Fig. 5.1]

Sample 192/T (3 kg/3 litres sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Just moist, light to mid pinkish-brown to mid to dark reddish-brown (with some patches of dark brown), crumbly to unconsolidated, silty sand. Stones (2 to 6 mm) were present.

The small washover (110 g, dried) was mostly sand and undisaggregated sediment lumps, with some mineralised charcoal (to 15 mm) and a trace of coal. Some of the larger pieces of charcoal could be identified as alder/birch/hazel (*Alnus/Betula/Corylus*) or poplar/willow (*Populus/Salix*). Waterlogged seeds of orache/goosefoot (*Atriplex/Chenopodium*) and knotgrass were present but almost certainly represent modern contaminants.

The small residue (dry weight 1 kg) consisted of sand, with some mineralised material (to 38 mm; 28 g), including charcoal (to 10 mm; <1 g), and a few stones (to 40 mm).

Context 1432 [fill of a metal-working hollow [1377]; section 342, Fig. 5.1]

Sample 199/T (10 litres processed by the excavator to 300 microns with washover; residue dried in fractions)

The small washover (8 g, dried) was mostly of sand and fine silted charcoal (to 5 mm), with a few modern rootlets and a single charred achene of knotweed (*Persicaria*).

The dry residue (two fractions: 2 to 4 mm – 54 g; 1 to 2 mm – 11 g) was mostly of sand, stones (to 25 mm) and undisaggregated sediment lumps, with some silted charcoal (to 10 mm). [Inorganic material was discarded by the excavator prior to submission to PRS]

iv) Condition, storage and conservation

A small selection of unprocessed samples sent for expert assessment is stored at the laboratory (see above). The rest remain in a dark, dry store at NML in 10 litre plastic sample buckets.

Summary Statement of Potential

Structural evidence

Structural evidence was relatively limited in Area D. Many of the deposits are related to landscape processes and a large proportion of the artefacts from the trench are derived, i.e found in contexts that do not relate to their original use and discard. There are two main processes involved. The later one reflects phases of ploughing in the early post-Medieval and medieval periods, causing downslope movement and the accumulation of ploughsoil as

colluvium. This led to the infilling of an earlier natural channel that runs the length of the trench, which had been open in the Romano-British period. The potential of the channel deposits is treated in the section for Palaeoecological evidence below, although the channel itself is related directly to various kinds of human activity identified in the trench.

Prehistoric period

It is possible that, at the date in the prehistoric period suggested by the flint and radiocarbon evidence, the nature of the occupation at this site may have been such that it left no significant structural traces. Consequently the archaeological potential for this period would normally be expected to be confined to the flint assemblage (see Artefactual evidence section below).

The fact that not all the prehistoric layers had necessarily been ploughed out in the Romano-British or later periods means that a proportion of the prehistoric ground surface is potentially *in situ* representing the remnants of a truncated prehistoric ground surface. If so, this would be significant. However, the scale of such an occurrence is not clear at the present level of understanding. More detailed classification of the flint and other finds with cross referencing to the stratigraphic record is necessary before this becomes clearer.

Some lithic material is also associated with colluvial deposits in the channel although apparently not in the alluvial deposits associated with the metalwork debris, and the relationship between these groups of contexts needs to be analysed in more detail. The relevance of context [1433], which may be the only prehistoric alluvial layer, needs clarifying in this context also. There is evidence that there may have been some movement of the flint downslope and more work is needed to decide whether this represents prehistoric or later soil creep.

The one structural exception to this is the pit [1345]c at the head of the sandy terrace adjacent to the channel. Careful excavation of this area revealed no certain evidence of further features, although the pit may have been re-dug on several occasions. No prehistoric finds came from the pit, although the radiocarbon dates acquired previously (Cowell 2006b) show that it contained hazelnuts that were burnt at a time that is in accord with the stylistic tendencies of a large proportion of the flintwork found adjacent to it on the terrace.

Romano-British and historic period

Romano-British tile in Area D reflects the discard of material into the channel in the Romano-British period and later the transport of material downslope into the vicinity of the channel through ploughing. The distribution of this material suggests that industrial activity connected with tile making lay in the northern part of the site but that it lay outside the trench. The southern part of the channel was associated with iron smithing, again mostly outside the trench but the area around the channel banks was used for discarding the debris. This activity is most probably connected with the adjacent farmstead excavated in 1993 (Cowell and Philpott 2000).

Any structural features that did originally exist within the excavated area associated with the Romano-British phase have largely been destroyed by later agricultural activity, with the possible exception outlined above for the metalworking.

Artefactual evidence

The Flint

The worked flint uncovered in Area D will provide most evidence for the activity here in the prehistoric period. Although small, in this part of the region this is an average sized assemblage. Although not associated directly with the pit [1345]c and hence the radiocarbon dates, a proportion of the assemblage would on stylistic grounds alone be dated to the period around 5000 to 3000 BC. The proximity of the flint scatter to the pit does, therefore, suggest that a link with some of the flint knapping at this location is likely and although not representing a totally secure association, the evidence will give the current best indication of dated Mesolithic flint knapping activity in the lowlands of the region.

The detailed cataloguing of the material and the drawing of a selection of it will make available significant new information based on distribution plots of the material against a refined stratigraphic sequence on the site (see Structural Evidence section above). Analysis of the quantified data will produce several features of value: it will allow firmer indications of how many different occupations might be represented; it will help to determine the balance between activity representing the final stages of the flint knapping process and other functions, such as for example 'domestic'; and it will allow better indications of how the site fits into the broader pattern of landuse from quantification of the raw materials and comparison with other lowland and upland assemblages held or previously studied by NML.

The Metalwork

Three of the seven coins are too corroded to be of assistance to interpretation on the site. Roman coins in general and particularly the two pre-Roman coins are so rare in this region that the other four do warrant further work in cleaning and identification for research and potentially display purposes.

The date of two of the coins, which in their uncleaned form appear as if they may be 4th century AD in date, will potentially add significantly to the understanding of the length of occupation on the excavated Ochre Brook settlement, which could only be dated to the later 2nd century AD (Philpott 2000a). If the two potentially Iron Age coins can be definitively identified as such, this will provide important evidence to help understand the nature of coin use and contact between regions in the years around the conquest of the North, and may imply that the 2nd century AD settlement might have had pre-Roman Conquest origins.

Other aspects of the metalwork have less significant implications for research in the region but the spindle whorls, nails, seal and medieval knife all add something of importance to the Romano-British and late Medieval artefact assemblages from the site, and could be used in future Museum displays to illustrate the range of material culture in the region at these periods that is generally relatively scarce.

This group of material should, therefore, be cleaned, conserved where necessary and reported on by Romano-British and Medieval specialists. There are 14 other objects of fair condition but uncertain function that it would also be worth submitting to the specialists to get a definitive identification to ensure that no obviously significant artefacts are being overlooked.

Industrial waste

In general, the assemblage appears to be representative of iron smithing debris of a type which occurs from the Iron Age to Early Medieval periods, and on its own is impossible to date more accurately. However, stratigraphic associations indicate that most of the assemblage is contemporary with pre-Medieval layers and most probably is associated with the Romano-British tile. Most of the assemblage is very fragmentary and is likely to have been deposited in secondary contexts and is indicative of iron working in the general area rather than in the context within which it was found. The shallow 'scoops' from which many of the fragments were recovered superficially resemble 'bowl hearths'. However, none exhibited obvious signs of *in situ* burning or firing which would be expected if this was their origin. The very small quantities of hammerscale recovered from this area provide further evidence that these features do not relate directly to metallurgy. It is more likely that the pit [1249] was closer to the working area.

In regional terms, the industrial waste assemblage is similar in size and form to those recovered from Romano-British settlement sites at Irby (Philpott and Adams in prep.) and Court Farm (Adams in prep.), though there appear to be some subtle differences in its composition. For example the smithing hearth bases appear to be slightly larger on average than those found at Irby and Court Farm.

More detailed cataloguing is necessary of a 20% sample to allow a more accurate assessment to be made of the nature of the assemblage, which will be of value in comparative terms with other Romano-British sites in the region. The extensive evidence of corrosion and the fragmentary nature of the assemblage suggest that analytical work such as sectioning would be of very limited value, and so none is proposed.

Romano British tile

In its own right the study of the tile can add little to the understanding of the site. The most important elements of the tile assemblage from the 1993 excavations were the stamped pieces dateable to the late 160s AD, which show a direct link to the 20th legion at Chester (Philpott 2000a). No further stamped pieces were recovered in 2007, although one unpublished piece was found in the 2006 evaluation in Area D (Cowell 2006b).

Much of the current assemblage consists of relatively incomplete, weathered pieces of soft fired material. It is most useful for the light it can throw on the post-depositional circumstances of the site in aiding the interpretation of the stratigraphic sequence in the trench. There are some pieces, more complete and of harder fabric, that are of a quality for potential display but in general the main research potential is limited on the tile itself.

This would warrant nothing more than checking the fabrics against the 1993 type series and producing a detailed catalogue of the complete examples, with group cataloguing for the weathered pieces.

Romano British, Medieval and post-Medieval pottery

The same considerations are relevant to the potential of most of these classes of pottery, which are few in number and not particularly distinctive pieces that add anything to artefact research in the region.

The Romano-British pottery types should be cross referenced to the 1993 fabric types and forms and the few rims in the assemblage should be drawn.

The medieval pottery requires a basic catalogue of the small assemblage, along with the few other pieces of this type recovered from the 2005 evaluation.

Most of the post-Medieval pottery types in the assemblage are very common, other than a few 17th century examples. The catalogue for most of this material need only be at a basic documentation level, although the 25 earlier pieces which represent an assemblage of a type that is not overly common in this region should be catalogued in more detail and reported on, along with the small group of this type of material from the two previous evaluations.

Palaeoecological evidence

On the evidence reported here and seen from previous evaluations (Akeret *et al.* 2005; Carrott and Gardner 2006), it is unlikely that any further work will produce an assemblage of ancient biological remains of sufficient size to provide information of value for site interpretation.

The limited results from the current assessment relate to only the charred hazelnut shell recovered from Context [1433] and possibly the charred achene from Context [1432], which would provide sufficient suitable material for radiocarbon dating (via AMS), if required.

Integrated Assessment Report

Prehistoric research

The main potential for this part of the site relates to the study of the small flint assemblage in relation to the potential truncated prehistoric soil layer and the adjacent palaeochannel. Indirectly, this is associated with the use of the pit [1345]c on the sandy terrace, which includes hazelnut shells. There is currently not enough evidence to prove that the channel was present in the Mesolithic, although the location of the flintwork in relation to a channel that was open in the Romano-British period makes it seem more than likely that the prehistoric occupations took place next to a channel. The only possible channel layer [1433] that did not contain Romano-British artefacts included struck flint and one hazelnut shell, and is the main hope for providing stronger evidence of prehistoric waterside occupation (Fig. 5.2). This should entail stratigraphic analysis of the monolith from the channel where context [1433] underlies the Romano-British channel fills to identify any differences in composition of the two. Limited further sieving of the sample left from this layer should also be undertaken to ensure no fine knapping debris is present and to recover more hazelnut shells for research and display purposes.

Few sites of this date have been dug in the lowlands of the North West, none of which have associated radiocarbon dates, structural or palaeoenvironmental evidence. Three sites have been excavated 4km to the south in the Ditton Brook (Cowell 2000a) and another at Croxteth Park about 8km to the north-west (Cowell in prep.) with two other more removed sites, c.20kms to the north, at Lathom (Cowell 2007) and 5kms to the east of that at Mawdsley, West Lancashire (R Jacobi pers comm.). On the Wirral, a small site on the coast at Hoylake has also been excavated (Cowell in prep.) and at Irby a residual Mesolithic flint assemblage came from the excavation of a Romano-British farmstead (Philpott and Adams in prep.).

This group of sites though does provide a series of useful local flint assemblages against which to compare that recovered from Area D. The main potential of this assemblage is in fact its seeming difference from many of the former, with a greater range of raw material types, some of which appear to be more usually found in upland sites. The implications of this are that there is also potential for the site to be of relevance in discussions of the nature of settlement at the larger scale. Much discussion of Mesolithic land use patterns emphasises the role of mobility in

relation to seasonal wild resources. The traditional theory looks to an upland / lowland pattern, which currently is largely based on evidence of the movement of distinctive raw materials between the east Pennines and the eastern lowlands. This is coming under scrutiny as being too simplistic and new theories are being investigated (Spikins 1999). However, there is little indication presently from the excavated sites in the lowland North West mentioned above that these sites have a link with other sites in the western Pennines on the basis of similarities in raw material use. The site in Trench D could therefore be extremely significant in this regard.

The lithic assemblage and the probably related radiocarbon dates from Area D thus provide the best current evidence for dated Mesolithic activity in the lowlands of the North West. Additionally, the colluvial build-up over the prehistoric site has preserved the best indications in the region for the micro-topographical setting of one of these sites, although the lack of associated palaeoenvironmental evidence restricts the value of this to some extent. However, regardless of such limitations, if the suggested programme of analysis (see below) were to take place, this would be the first site to be referenced in any discussion of later Mesolithic settlement in the lowlands. It may also be of significance in adding to the debate about the nature of Mesolithic mobility on the larger regional scale.

Romano-British research

The main potential for evidence of this period relates to how it links into the bigger settlement and land use patterns. There are no Romano-British features in the trench, other than one pit [1249]c and a series of hollows [1377]c that may be related to industrial waste metal disposal. Most of the Romano-British artefacts are in derived contexts, although some of the metalworking debris in the small hollows may be indirectly associated with them and the tile and metalworking debris in the lower channel deposits represents contemporary use of the channel for discard. A proportion, though, is associated with later colluvium.

However, the presence of this material attests to Romano-British industrial activity and its patterning suggests that such activities lay in separate zones. The distribution of the tile suggests that industrial activity connected with tile making lay in the northern part of the site but that it lay outside the trench. The excavated evidence strengthens that recovered from fieldwalking to the north of Trench DII, which suggested that this area may have been the focus of the *in situ* tile making activity (Cowell 2000b).

The metalworking appears to have been taking place in the south of the trench. There is no evidence that this occurred in the excavated area, which appears mainly to have been associated with the disposal of waste. There may be some evidence that the channel might have been linked directly with the metalworking activity as there did appear to have been potential damming and ponding of the channel immediately adjacent to the hollows. This needs more careful stratigraphic and finds analysis, however.

This evidence, therefore, when taken in conjunction with that from the Romano-British farm excavated in 1993, which was restricted to the farm enclosure, extends our understanding of the organisation of a farmstead of this period. Some classes of evidence, such as the coins, may further refine understanding of the longevity of the occupation at this location. Further, the Iron Age coins could open debate about the nature of contacts between regions in the earliest phases of the Roman conquest of the North, which might be made more intriguing given the unique nature of the farmstead's military contacts within the region in the 2nd century AD.

A number of excavated rural settlements of this period exist in the region. Rectilinear enclosures have been investigated at Irby, Wirral (Philpott and Adams in prep.) and Ochre Brook, Tarbock

(Philpott 2000a), and an enclosure at Southworth Hall Farm c.20kms to the east has been evaluated and shown to be Romano-British in date (Philpott *et al* 1993). Open settlements are known at Brunt Boggart, Tarbock (Philpott 2000b) and in the adjoining township, Court Farm, Halewood (Adams in prep.) and further to the north at Lathom in West Lancashire (Cowell 2005b). There is also less cohesive structural evidence of Romano-British settlement phases on Iron Age sites at Brook House Farm, Halewood (Cowell 2000c) and c.20kms to the east at Great Woolden Hall in north Cheshire (Nevell 1999). To the south of the Mersey another Romano-British settlement has been excavated near Tarporley, c.45km away (Fairburn 2002).

Most of these excavations have concentrated mainly on the dwelling areas of the settlements. Only at Court Farm, Halewood has an extensive area around the living area been excavated, covering a total of several hectares. This site is probably the best comparison with the farmstead at Ochre Brook (of which Trench D is an adjunct) for the size and internal organisation of Romano-British farms in this region. The fact that they are within a few kilometres of each other also is of benefit in trying to understand the nature of the local Romano-British landscape more generally.

Later period research

The later history of the site is related to the incorporation of the valley into agricultural systems. The fact that the lower Romano-British and prehistoric surfaces were not scoured by Medieval ridge and furrow ploughing suggests the possibility that the colluvium may have started forming a little later; the pottery suggests that this could perhaps be dated to the 16th century, which closer stratigraphic analysis may help refine. If this were the case, the medieval pottery may have been associated with activities other than farming, although it will not be possible to develop this further on the existing evidence. The Medieval pottery in these horizons may be associated with the Medieval Daggers Bridge Farm, which lay a little to the north-east (Philpott 2000a).

On its own, the evidence is fairly limited in its value, but it does add a small pottery assemblage to the small corpus of such evidence from the area (see Area G Pottery Summary Statement of Potential), which at a general level helps supplement the wider patterns of Medieval agriculture, landscape and settlement in the area.

Limited as this is currently, there are only two excavated Medieval rural sites in the lowlands of this part of the region (Philpott 2000b; Cowell 2007), the evidence is better developed in Tarbock township and surrounding area than any other part of the county. Excavations in Areas A and G both produced new landscape information and in the case of the latter, a more significant pottery assemblage than in Area D, to add to landscape studies in the township and surrounding areas (Cowell 2002) and the excavation of a Medieval settlement at Brunt Boggart c.2kms to the south in 1993 (Philpott 2000b). It is also a feature of the Medieval period that, with a few exceptions, evidence of this period is often of mainly local significance although, when combined with other regional sites, general trends of medieval clearance settlement and industrial production can be compared with other regions to understand how the character and chronology of national patterns developed (see Area G for more detailed discussion).

Excavations in Area G

Background

Work here took the form of a watching brief during the construction programme with limited time allowed for investigation of features identified. Area G lies to the north of the Junction 6 interchange roundabout, in the ancient township of Whiston, where a road link was cut from the south bound M57 across the southern edge of the Village Hotel car park, crossing the now disused Windy Arbor Brow lane to join the east bound M62 to the east of Windy Arbor Road, under which it runs (Fig. 6). The area was divided into two sections, G east and G west, with the sandstone wall of the historic Halsnead Park marking the boundary (Fig. 6.1).

The development site lay on the lower slopes of Windy Arbor Brow Lane, at a height of c. 23m OD, close to its original crossing of Chapel Brook, although this part of the brook was culverted and much disturbed by the creation of the M62 in 1975. A farm once existed on the western side of the lane in this approximate area (Golder Associates 2006a, Site 12), although 20th century developments associated with the Motorway, hotel and modern services along the lane had destroyed all traces of this. The area allocated for investigation was necessarily confined to the new road corridor in a strip c.120m long and 30m wide. In the western area it was wider as here there was a similar width given over to tree planting adjacent to the line of the road on the south.

The new link road runs a little under 400m to the south of the small late post-Medieval hamlet of Windy Arbor, which lies at the top of the slope, at a height of c. 31m OD (Fig. 6). This is just south of the junction of Windy Arbor Brow Lane and Windy Arbor Road, the latter being constructed in the 1970s as part of the Motorway construction in this area. Although some distance from the current hamlet, the watching brief was intended to ensure that no earlier settlement lay closer to the stream should the present hamlet represent settlement drift through the post-Medieval period from an earlier core nearer the stream; which had subsequently decayed. Medieval documents also suggest that there was a small estate in this area, lying between Tarbock and Whiston, called Ridgate, in which there was a so far unlocated chapel and leper hospital (Golder Associates 2006a, Site 14).

The main route corridor was traversed by an east-west running terrace, about 2m high, which originally probably marked the edge of the flood plain of the Chapel Brook (Fig. 6.2). The topography was very gently sloping to the north of the terrace, in Field 1, and flat to the south of it in Field 2. The area to the north consisted of a narrow field while the lower area to the south had formerly been taken up largely by now demolished tennis courts. A mature wood fringed pond also lay here at the foot of the terrace near the eastern end of Area G West, which was 20th century in date.

Area G East lay to the east of the sandstone wall marking the boundary of Halsnead Park, in the only surviving area of mature woodland that originally flanked the edge of the former park. The terrace bank was lower in this section marking the northern edge of the route as it ran across the former flood plain.

The topsoil was stripped off the length of the route by the contractors and time was left to record any features in the sub surface boulder clay. A metal detector survey was also carried out along the line of the link and the adjacent area to the north. In Area G East the mature trees had first to be removed, some of which were subsequently replanted in the southern part of Area G West for wildlife conservation purposes. A total of 10 days were spent on the watching brief by a team of up to three people, between 28th August and 28th September 2007.

Aims and Objectives

The aims and objectives of the 2007 watching brief work in Area G were both general and specific (Golder Associates 2006b, 14-16). The general objectives were the same as those stated above, for Area A (see above). The specific objectives were to identify any archaeological deposits and features associated with the medieval and later alignment of Windy Arbor Brow.

Summary of Results

Area G West

On the upper terrace the main area of excavation revealed a vaguely rectangular spread of red mottled clay [1505] c.4m by 1.6m, about 15m to the east of the now disused lane. Several trenches were cut across this feature which proved to be extremely shallow and not of regular profile. The difference between the matrix of this clay and the natural boulder clay was strong enough to argue that it represents human activity of some kind, perhaps most likely associated with a structure that had a clay floor or walling, although having been extremely truncated by later ploughing it is difficult to know how substantial a feature it may once have been.

No finds came from the sections cut across the feature. The main finds from the stripped area of this part of the route to the north of the terrace bank consisted of a very thin spread of occasional, weathered late Medieval pottery which occurred along the full length of the strip, perhaps a little more strongly in the eastern half, while a Romano-British coin came from the topsoil spoil about mid way along.

The line of the terrace had previously been marked by a hedge with a few mature trees spread along it at intervals. Where these were removed the root systems had created large areas of disturbance. Many of the post-Medieval pottery pieces recovered in the watching brief came from under the line of this hedge.

At the base of the terrace, at roughly the same distance to the east of the lane as feature [1505], there was a yellow brown clayey sand layer [1523] to the west of one of these disturbed areas. It was spread over an area c.3m by 5m and was roughly 0.2m deep. On excavation it produced a relatively large assemblage, for this region, of late Medieval pottery. Also, a small proportion of this consisted of fairly unweathered large pieces. The position and texture of this layer suggests it probably represents a colluvial layer resulting from soil movement downslope from the upper terrace. The unweathered pottery suggests that this occurred fairly soon after the latter's discard on the upper terrace.

An association with feature [1505] cannot be proved and the latter should be regarded as undated, but the pottery and the feature are in almost exact alignment with each other in relation to the lane, either side of the terrace, which perhaps suggests the possibility that the two may once have been associated.

On the southern edge of this layer was a 12m length of wide, substantial footings to a sandstone wall [1522]. This cut through layer [1523], which must have accumulated some time before c.1400 AD. The northern, southern and eastern sides of the wall had all been truncated by modern disturbance leaving this section isolated and difficult to interpret. The footings were 0.48m deep and 0.4m wide and consisted of grey sandstone, with faint traces of brick and mortar in the upper surface. The most likely context for this is the destroyed farm to the west of

Windy Arbor Brow Lane. However, no structure is shown on the eastern side of the lane on the Tithe map of Whiston, dated 1838, and so it is presumed that its demolition precedes that date.

On the lower terrace, the area to the east of the wall had been extensively damaged by levelling for the tennis courts with a crushed brick platform beneath the topsoil in a disturbed surface about 0.2m thick. Extensive modern drainage ran across this area, associated either with the tennis courts or probably more likely the construction of the adjacent M62. Nothing of archaeological significance was recorded in this stretch.

Section 354 cut across Windy Arbor Brow Lane showed that there had been extensive damage, up to c.10m east of the lane, associated with service trenches for water and electricity. Under the modern tarmac there was evidence of an earlier cobbled surface [1530] at a depth of c.0.7m, which had a slight concave profile on its eastern side, probably for drainage, suggesting that the eastern side of the earlier lane mirrored that of the 20th century alignment. The cobbles lay directly on the glacial clay subsurface [1502] suggesting that this was the original alignment in this form. There were no finds to identify how old this cobbled surface might be, but the documentary evidence and its form suggest that it is likely to be earlier than the 19th century.

Where the development corridor cut through the wall marking the former Halsnead Park it was removed to the base of its footings [1529]. These proved to be nearly 2m deep, suggesting a monumental effort for building the park wall which was originally more than four miles in circumference. The stone used was the light grey sandstone, from which the township of Whiston gained its name, 'white' 'stan' or stone and which was quarried from the north of the township. Dating for the origins of the park is not clear, although it is shown on the Tithe map of 1838, but the now destroyed Halsnead House, around which the park formerly lay, was rebuilt in neo-classical style in the 1780s and this may suggest a possible approximate date for the construction of the park wall itself (Golder Associates 2006a, Site 43). The standing part of the wall was recorded as a separate exercise prior to its partial demolition for the new slip road by Golder Associates.

The base of the footings for the wall was set on a blue-grey, silty clay [1521], probably alluvial, layer which may result from flooding of the Chapel Brook at some time in the past. A deep machine trench was dug in the area of the former tennis courts where the tree planting was to take place to test the nature of the stratigraphy (Fig. 6.2). This showed that the modern disturbance reached a depth of 0.7m and below that the alluvial layer was found about 0.25m thick (archive). A sample was taken of the blue alluvial clay silt from the trench.

Area G East

This area was restricted to essentially the width of the route, and was c.120m long. On its eastern end it was marked by the disturbance created by the construction of Windy Arbor Road in the 1970s. To the west of this the area consisted of mature woodland. The terrace found in the eastern development area continued through, though not as high, and it pre-dates the woodland. A ditch runs north-south through the eastern side of the woodland to meet the terrace only a few metres from the edge of the route corridor and also probably pre-dates the woodland and by implication the creation of the park (not necessarily the same thing as the current park wall), which appears most likely to have been in the late 18th century.

Recording work here was very difficult as the woodland along the route corridor had to be removed first, with much of it being replanted as dead wood in the southern part of Area G West. This also coincided with a number of wet days which essentially turned the surface into a quagmire, which was disturbed below the level of the upper sub surface by the removal of the

deep tree roots. Several traverses of the strip at intervals did not provide any evidence within the development area. The sections below, therefore, refer solely to the western area.

Factual Data (Area G West)

Quantity of structural records

Contexts: 18
Drawings: 2
Digital photos: 77

Artefactual evidence

i) Quantity of material

Ceramics total: 149
 Medieval pot sherds: 127
 Post-Medieval pottery: 22
Metalwork: 19

ii) Provenance

Pottery and Ceramics:

The pottery from the topsoil and from beneath the post-Medieval hedge along the terrace was all post-Medieval in date. The Medieval pottery came from layers [1523], [1526], [1527] and [1528], which were mainly associated with the matrix interpreted as a colluvial layer below the hedge at the base of the terrace, although a small proportion came from the boulder clay surface [1502] below the topsoil on the upper terrace.

Metalwork:

Most of the metalwork came from metal detecting spoil from the area of excavation and the pasture field to the north of the development strip and so is not stratified. However the specific spoil from different contexts was separated and detected, meaning that some finds can be loosely associated with the colluvial contexts [1526] and [1527] i.e. a cauldron foot (SF 1005), window lead (1006), spindle whorl (1007) and lead seal (1008).

iii) Range and variety

Pottery and Ceramics (J. Speakman):

The small post-Medieval pottery assemblage consists of fairly small and weathered pieces typical of the late glazed fabric types that are common components of assemblages of this type, with a small number of earlier 18th century types included.

The late Medieval assemblage consists of the typical local coarse sandy fabrics generally orange-brown to pale brown in surface colour, often with grey, reduced core. The occasional piece has the occasional splash of green glaze. A proportion of it is small, weathered pieces but there are also a small number of large and unweathered pieces, several of which are from relatively fine wares, although most of these pieces may be from only a few or even one vessel.

There are nine rims in the assemblage, four of which consist of between about a fifth to a third of the complete circumference of the vessel, with a few, more fragmentary, base profiles.

Metalwork:

Apart from some late post-Medieval metal finds from this area, including WWII shrapnel and cartridge casings, the most important metalwork related to later Medieval activity on the site. This included a buckle, a late medieval sword clasp (1004), a copper alloy cauldron foot (1005), lead spindle whorl (1007), two medieval coins (1000 and 1002) and a probable Romano-British coin (1003).

iv) Condition

Metalwork

Metal finds from Area G have been sent for specialist analysis by the York Archaeological Trust Conservation Section. Their findings as outlined in their assessment report (Panter 2008) are shown below:

X-ray No	RF	Context	Assessment
6894	1000	u/s	Silver coin having a darkened tarnished surface, legend visible. Stable and in a good condition. Recommendation: no further work required.
6894	1002	u/s	Silver coin having a tarnished surface, legend visible in places. Stable and in a good condition. Recommendation: investigate further to aid identification, if required. 1 hr.
6894	1003	u/s	Coin, minimal soil beneath which is a mottled surface, with faint traces of legend. X-ray shows almost complete mineralisation but coin is stable and in a fair condition. Recommendation: further investigation may help with identification. 1 hr.
6894	1004	u/s	Possible fitting, with green patinated surface, and one iron rivet in situ. Lower edge broken with remains of a second rivet hole. Appears stable. X-ray shows substantial amount of metal remaining. Good condition. Recommendation: no further work required.
6894	1005	1527	Fragment of cast copper alloy, broken surfaces show gas bubble voids. X-ray suggests high lead content to alloy. Overall good condition and stable. Recommendation: no further work required.
6894	1009	u/s	Surface of object mainly eroded to expose a cuprite layer but with patches of a patina remaining in places. Appears stable and X-ray shows some metal remaining. Overall poor condition. Recommendation: no further work required
6894	1015	u/s	Decorated CuA sheet, stable dark patina, and X-ray shows substantial metallic core remaining. Good condition. Recommendation: no further work required
6894	1016	u/s	Disc, red cuprite surface visible, obscured in places with hard green corrosion products. Stable, and X-ray shows no decoration or legend. Overall condition fair, probably not a coin. Recommendation: no further work required
6894	1019	u/s	Object, poor condition with areas of powdery green corrosion and bare metal visible. X-ray shows some metal survives. Recommendation: no further work required but maintain in dry environment if object is to be retained.

X-ray	RF	Context	Assessment
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No			
6894	1022	u/s	Complete thimble with stable dark green patinated surface, X-ray shows substantial metallic core. Condition good. Recommendation: no further work required
	1006	u/s	Possible casting runoff, iron stained on one surface, otherwise stable and in a good condition. Recommendation: no further work required
	1007	u/s	Object with areas of carbonate corrosion above a dull grey surface. Surfaces pitted with impressions of organic materials. Possible casting debris. Stable and fair condition. Recommendation: no further work required
6894	1010	u/s	Decorated sheet fragment, X-ray suggests lead alloy. Appears stable. Recommendation: no further work required.
	1011	u/s	Object, spots of red oxide above a stable dark surface. Good condition. Recommendation: no further work required.
	1012	u/s	Object appears stable and is in a good condition. Recommendation: no further work required.
	1014	u/s	Disc, possible weight. Has a dull grey/off white appearance and is stable. Feint trace of possible relief design Recommendation: investigate to aid identification. 1 hr.
	1017	u/s	Possible weight marked with an X and 0. Stable dull grey surface, in a good condition. Recommendation: no further work required.
	1018	u/s	Possible weight, appears stable and in a good condition. Recommendation: no further work required.

Palaeoecological evidence

i) Quantity of material

Two samples only were taken from this site, one of 10 litres and the other of one litre.

ii) Provenance

The smaller sample was taken from the clay spread on the upper terrace, mainly as an identification aid. The other came from below the disturbed area of the tennis courts on the lower terrace, in order to sample the alluvial layer [1521] that runs underneath this part of the site.

iii) Condition, storage and conservation

The potential palaeoecological sample is stored in a dark dry store at NML. It was not sent for assessment.

Summary Statement of Potential

Structural evidence

As excavation here was limited and dependent on the road construction programme, the structural evidence recovered is consequently limited. This was exacerbated by the fact that previous ground surfaces had largely already been destroyed through the construction of the M62, the nearby hotel, modern utility services along the lane and the construction of tennis courts.

Positive structural evidence was restricted to three features, none of which were totally understandable. The section through Windy Arbor Brow Lane showed that the surviving line of this local routeway, important in the early 19th century, appears to be post-Medieval in date, with the laying out of a cobbled surface [1530] on the natural boulder clay surface. It is interesting though that the other main feature, the clay spread [1505] as well as the late Medieval pottery assemblage from the adjacent colluvial layer, both lie about 15m to the east of the line of the post-Medieval lane. Much of this intervening area has been destroyed by trenches cut for utility services and motorway construction, so it is not possible to know whether these features originally marked the eastern end of now destroyed contexts or whether the distance is determined by the fact that they respected some former alignment.

Too little of the small clay spread feature survived in good enough condition to be able to identify its function, other than to suggest the possibility of it having formerly belonged to a structure of some kind. Neither can it be dated to the Medieval period; only a lack of post-Medieval pottery in the vicinity and the presence of the late Medieval pottery at the base of the terrace adjacent to the clay spread provide the far from conclusive indication that it may be of this date. The short section of sandstone wall footing [1522] to the south of the terrace is also of unknown function, although its form and the fact that it cut a layer that contained late Medieval pottery suggests that it was not connected to the lost Medieval chapel of Ridgate.

Artefactual evidence

The pottery

In the region generally, pottery dating is very limited and for the mid 13th to 14th centuries there is a bias to Cheshire and Cumbria, although no site anywhere is associated with independent dates. Cheshire is better understood than north of the Mersey with red firing wares in the 13th-14th centuries, while in the 14th century pink firing wares become common. These are rarely found north of Mersey, however. There are two excavated houses from Nantwich with good groups of late 12th century pottery and Norton Priory has also produced mid-late 12th century groups, although not fully published.

North of the Mersey the largest assemblages come from Lancaster, at Mitchell's Brewery and from Fishergate, Preston, excavated in 1989. The main rural assemblage comes from Inskip, north Lancashire. This may have been made at the one possible production site known in this part of the region, in north Lancashire at Ellel, south of Lancaster (Newman 2006).

Most assemblages from Greater Manchester, to the east of Whiston, are small and fragmentary, with the best groups from towns, with Manchester Hanging Ditch, and Wigan particularly providing a good group, and moated sites at Timperley Old Hall, near Altrincham (13th-16th century) and Denton, with a small 15th-16th century assemblage. Fabrics tend to be similar to those found in Merseyside (Newman 2006, 138-139), where quite coarse sandy wares are the common type.

The assemblage of 127 late Medieval sherds from Area G is therefore relatively significant in this context. It is the second largest assemblage in a local context, after the site at Brunt Boggart, about 3kms to the south-east (Philpott 2000b). Other smaller assemblages exist within a radius of about 10kms from excavations to the north in the Medieval town of Prescot (Holgate 1989), from a failed borough to the west at Roby (Philpott in prep.) and from a dispersed rural settlement at Fazakerley (Wright 1996). Small assemblages also come from high status sites slightly further away at West Derby Castle, Speke Hall and Eccleston Hall (Newman 2006). A

number of locations have also produced fieldwalking assemblages of twenty or thirty pieces in Tarbock, to the south (Cowell 2002, 148-149).

Not only is the assemblage moderately large in the local context but it also has some large pieces in fairly good condition with a number of well preserved rims and body sherds. In terms of advancing the meagre understanding of the nature of pottery production and exchange in the region, then the publication of this assemblage will provide a relatively useful body of data for future comparative studies.

The metalwork

There were 19 metal finds in Area G including five that are probably late Medieval, including coins and personal items. Arising from the relative lack of excavations of Medieval sites in the southern part of the region generally this provides a reasonably rare assemblage.

Among the post-Medieval metalwork perhaps the ones with most potential are the two pewter pipe bowls, which in themselves are quite rare, only six others being known from the region (D. Higgins, pers. comm.).

Palaeoecological evidence

This category of evidence, relating to the alluvial sample from the flood plain of the Chapel Brook, has no further potential given that it was not possible to associate this horizon with any of the excavated material and it is thus totally without context. Its main value probably lies in the identification of its existence so that should any further development take place in this area the possibility of large scale sampling with specific research aims could be considered as a mitigation factor.

Integrated Assessment Report

The results from this area were not able to fully meet the original aim of identifying whether late Medieval settlement existed near the foot of the slope close to the stream. The amount of damage to earlier ground surfaces in the road corridor meant that anything that had survived was very fragmentary. However, the relative abundance of pottery and metalwork of this date from the site imply that this may well have been connected with some late medieval settlement here, even if it cannot be characterised in structural terms. Even so, there is no indication whether this represents an isolated settlement or is part of a nucleation, which could either be associated with settlement drift from a Medieval core at Windy Arbor Brow or with the core of a medieval hamlet closer to the stream, which on balance would be the preferred option purely from landscape analysis.

Apart from the lack of clear locational and structural evidence from the site, the derived context of the pottery and the unstratified nature of the metalwork prevents the artefactual evidence from being significant in filling in the most pressing ceramic research question for the region; the dating of the production and use of this type of pottery. For example, the North West Regional Research Agenda states the need for 'well stratified occupation deposits and independent dating ...to identify time spans during which production centres were in use (Newman 2006, 137).

However, despite its lack of meaningful context, the size and range of the pottery assemblage, together with the small assemblage of metalwork, still amounts in illustrative terms to being one

of the better collections of this date in the region. This is of local and sub regional importance for community, research and potential display purposes.

Given the lack of excavated evidence currently available in the wider region it also marks a moderately important step in helping to build up a regional picture of the use of particular types of pottery that will be of benefit when more is understood about the chronology and distribution of pottery production. This will allow conclusions regarding exchange and interaction based on pottery distribution to be made. Currently, some broader patterns can be noted based on natural boundaries, such as the Mersey. Lancashire types are poorly researched but Ellel pottery types seem similar to those in Merseyside. And there are possible links between Greater Manchester and east of the Pennines. There also seems to be a lack of interchange of locally produced wares across the region as a whole.

The first excavated evidence for late Medieval activity in Whiston is also of some value to regional studies when seen in the context of the wider settlement and land use patterns in the township interpreted from documentary sources (Cowell 2002). Work in Tarbock to the south, which probably has the best understood Medieval landscape of any township in the county, also allows comparison of settlement and agricultural patterns across neighbouring townships. So when taking the Medieval results from the M62 excavations as a whole there are grounds for thinking that they may assist in improving the situation identified in the North West Archaeological Resource Assessment where it is stated that 'there has been little attempt to place settlements within their wider Medieval landscape or to examine the relationship between settlements and their agricultural systems'. Further it suggests that 'a territorial framework not only provides a context for understanding Medieval settlement but can provide the research structure within which a settlement or settlement pattern can be investigated' (Newman 2006, 116).

Further Work

There are two further pieces of work required to complete the archaeological investigations associated with this road improvement scheme. Both are required to be completed to fulfil the original specification for the work (Golder Associates 2006b; para 3.5.2). These pieces of work are:

- 1) further examination and analysis of a selection of the evidence that relates to the most important findings from the excavations leading to the publication of a final stand-alone archive report for the 2007 excavations; and
- 2) additional limited work to collate the results and assessments from all three phases of archaeological work associated with the road improvement scheme, to produce final publications (academic monograph and popular booklet).

2007 Archive Report

This Assessment Report constitutes the first stage in arriving at a final published technical report on the findings of the 2007 excavations. It includes only sufficient detail to allow an assessment to be made of the relative importance of the different classes of evidence recovered. It consequently makes the case for further more detailed work on those parts of the site considered the most significant before the final publication can be produced.

The sections in this Assessment Report covering the detailed evidence will form the basis for an updated and edited final Archive Report for the site, taking into account the varying amounts of further work undertaken as part of the analysis phase. This will complete all aspects of the archive narrative and will act as a basic record of the excavations, on a par with the evaluation reports of 2005 and 2006 (Cowell 2006a, 2006b). It will be lodged with the site archive and a further copy will be deposited in the Sites and Monuments Record

The final Archive Report narrative will not include drawings and detailed descriptions of features that are regarded as relatively minor, such as many tree hollows, geological features or small insignificant features whose origin or date cannot be understood, and many modern features. These will be referenced in the final archive narrative and shown on location plans, but will be cross referenced to the site archive field records for back-up detail in relation to section drawings and feature descriptions.

The justification for the following further work programme can be found in the relevant parts of the above Sections relating to 'Potential'.

Further work required on Area A material

- a) Records – further analysis:
 - careful stratigraphic analysis of a number of key records relating to the ditch and pond under Ox Lane. 2 days required.
- b) Finds - further analysis:
 - little scope for further study of the material in its own right. Group catalogue ceramic finds. 0.5 days required.
 - sieve remaining whole earth samples from pond, ditch under Ox Lane and free standing ditch to confirm lack of artefacts, or otherwise. 2 days required.

- c) Palaeoecological - further analysis:
- two AMS dates for the plant material from the initial silts of the pond.
- d) Final Archive Report:
- to update Assessment Report on the basis of the results of the analysis phase; to include final checked trench matrix, lists of contexts cross-referenced to finds, digitised drawings, environmental samples and photos, with edited narrative text for Final Archive Report. 3 days required.

Further work required on Area B material

- a) Finds - further analysis:
- little scope for further study of the material in its own right. Group catalogue post-Medieval pottery. 0.5 days required.
- b) Palaeoecological - further analysis:
- Sieve remaining whole earth samples from the two pits (c.10 litres) for potential finds. 1 day required.
 - Acquire two AMS radiocarbon dates from fill [922] from pit [942].
- c) Final Archive Report:
- to update Assessment Report on the basis of the results of the analysis phase; to include final checked trench matrix, lists of contexts cross-referenced to finds, digitised drawings, environmental samples and photos, with edited narrative text for Final Archive Report. 2 days required.

Further work required on Area C material

- a) Records - further analysis:
- No further work required.
- b) Finds - further analysis:
- little scope for further study of the material in its own right. Group catalogue ceramic finds. 0.5 days required.
- c) Palaeoecological - further analysis:
- No further work necessary.
- d) Final Archive Report:
- to update Assessment Report on the basis of the results of the analysis phase; to include final checked trench matrix, lists of contexts cross-referenced to finds, digitised drawings, environmental samples and photos, with edited narrative text for Final Archive Report. 1 day required.

Further work required on Area D material

- a) Records – further analysis:
- analyse stratigraphic records to arrive at firm site sequence. 4 days required.
- b) Finds - further analysis:

- little scope for further study of Romano-British tile, pottery, Medieval and post-Medieval pottery. Group catalogue only. 1.5 days required.
- c) Finds - further analysis: (lithics):
- detailed catalogue. 4 days required.
 - cross reference distribution of flint in association with other artefacts occurring in same layers to improve interpretation and dating of soil processes on site. 2 days required.
 - statistical analysis of assemblage. 2 days required.
 - Analyse patterns in order to identify particular chronological/spatial episodes of activity. 1 day required.
- d) Finds - further analysis: (industrial waste):
- a representative sample (c.20%) of the assemblage be washed to allow a more detailed examination to be made. 1 day required.
 - quantified by number of fragments and weight by context. 1 day required.
- e) Finds - further analysis: (metal artefacts):
- clean and conserve distinctive pieces of metalwork. 0.5 days external specialist required.
 - specialists to conclusively identify coins and metal artefacts. 0.5 days external specialist required.
- f) Palaeoecological: further analysis:
- float 5kgs of context [1433] to enhance evidence for potential prehistoric date of this context. 0.5 day required.
 - float 40kgs of material from pit from which radiocarbon dates already obtained, to ensure no fine flint knapping debris present and to recover more hazelnut shells for research and display purposes. 1 day required.
 - Liaison/sample transportation to specialist (for all Areas). 1 day required.

Stratigraphic analysis of monolith of channel taken where context [1433] underlies the Romano-British channel fills to identify any differences in composition of the two. 2 days external specialist required.

- g) Final Archive Report:
- to update Assessment Report on the basis of the results of the analysis phase; to include final checked trench matrix, lists of contexts cross-referenced to finds, digitised drawings, environmental samples and photos, with edited narrative text for Final Archive Report. 4 days required.

Further work required on Area G material

- a) Structural - further analysis:
- No further work required.
- b) Finds - further analysis:
- Medieval pottery: detailed catalogue. 2 days required.
 - post-Medieval pottery group catalogue. 0.5 days required.
 - Metalwork: clean/conservation; two coins, Romano-British coin, weight. 0.5 days external specialist required.

- specialist identifications for primarily (Medieval and Romano-British) coins, sword clasp 1004, cloth seal, lead sheet 1010, weight 1017, 1018, cauldron foot 1005, spindle whorl 1007, bell 1009. 0.5 days external specialist required.
- c) Palaeoecological - further analysis:
- No further work required.
- d) Final Archive Report:
- To update Assessment Report on the basis of the results of the analysis phase; to include final checked trench matrix, lists of contexts cross-referenced to finds, digitised drawings, environmental samples and photos, with edited narrative text for Final Archive Report. 2 days required.

Final Publications

The final published technical report will take the form of an academic monograph, and will be based on a selection of the more important evidence produced for the updated final Archive Report.

Some evidence from the excavations is not properly understood and no further analysis is likely to improve that situation. However, in some cases, this evidence has been judged as worthy of wider dissemination through publication, because it is either of a type that further work elsewhere in the region might eventually improve understanding of, or that it might serve as useful analogy for understanding other work elsewhere in the future, or that it has a strong local importance.

The more important elements of the Final Excavation Report, however, will be those classes of evidence that have been judged as being of regional importance, although in most cases more work on existing records, finds or samples is needed to fully realise its potential. The final report will also extract those related classes of evidence from the previous evaluation reports that need publication in their own right or to be integrated into the more complete evidence from the 2007 excavations.

It is also proposed that a popular publication be produced, emphasising the importance of the results in a local context of all the archaeological fieldwork undertaken for the road improvement scheme. This will largely represent a distilled and more generally expressed account summarised from the final publication text with the illustrative element relying more on images and reconstructions than plans and drawings. This publication is intended for the non-archaeological audience.

Work required for academic publication

Area A

- draw to publication standard: site plan, sections of the two early ditches, the potential early track; plans and sections of the tree hollows arranged in a square and the Ox Lane surfaces sections will be mainly referenced to the archive report. The records for the pond are not of a sufficient quality because of its method of discovery to require a similar treatment. 2 days required.
- edit final Archive Report narrative for publication report text. 2 days required.
- integrate report into results from 1993 excavation of Medieval and Romano-British farm at Ochre Brook and Tarbock landscape history. 1 day required.

Area B

- draw to publication standard; site plan, the two pit sections associated with burnt bone, tree hollow associated with flint, plan of surrounding relevant site evidence e.g. Bronze Age or Romano-British. 2 days required.
- edit final Archive Report text for publication report narrative. 1 days required.
- integrate into Assessment text the new results, the pits and finds from the evaluation reports of 2005 and 2006 and the relevant regional discussion. 1 day required.
- prepare discussion based on results of dating integrated into the local context with implications for regional understanding. 1 days required.

Area C

- draw to publication standard; site plan, section through early furrows and field bank. The Ox Lane surfaces sections will be referenced to the Archive Report. 2 days required.
- edit final Archive Report text for publication report narrative. 1 days required.
- research into forms of early ploughing and fields. 1 day required.

Area D

- draw to publication standard; site plan, two pit sections, five channel sections, three sections across settlement terrace, plan of Tarbock and known prehistoric sites, regional plan showing Tarbock site in context, plan of Romano-British farm and industrial areas, plan of Romano-British sites in the area. 6 days required.
- specialist analysis of lithics and metalwork. 2 days required.
- edit final Archive Report text for publication report narrative. 4 days required.
- integrate structural results and finds from 2005 and 2006 evaluations. 1 day required.
- integrate results from prehistoric site into the context of prehistoric evidence from Tarbock area. 2 days required.
- Integrate report into results from 1993 excavation of Romano-British farm at Ochre Brook. 1 day required.
- Flint drawings x 40, Romano-British Stamped tile. 6 days required.

Area G

- draw to publication standard; site plan, section through road, plan showing relationship to other medieval sites in immediate locality. 2 days required.
- Medieval pottery: draw to publication standard 12 rims, 4 bases. 2 days required.
- NML specialist to produce report on local and regional significance of pottery assemblage. 2 days required.
- Metalwork: external specialist to report on significance of assemblage. 0.5 days required.
- edit final Archive Report text for publication report. 2 days required.
- integrate into publication text the historical background for the adjacent post-Medieval and Medieval landscape of Whiston / Halsnead to the north of the site and Tarbock to the south. 1 day required.

General

- Late post-Medieval agricultural and other features will generally not be included in the publication report but will be left at the level of the final Archive Report.

Outline of academic publication (monograph)

Preface	Highways Agency	pp1
Contents		pp2
Figures & illustrations		pp2-3
Chapter 1: Introduction	Background to the HA work undertaken over three years on the scheme; overview of all other research work done previously in Tarbock; structure of report, short summary of evidence not to be covered in detail here (referenced to unpublished interims and archive), topography and geology.	pp4-8
Chapter 2: Trenches A & C evidence	Summary of evidence, referenced to detail in Archive Report, for development of Ox Lane (A and C), with earlier track, ditch under Ox Lane, pond and free standing ditch in area All dependant on current evidence being improved, if so the pond area will be presented in more detail; presentation of evidence for possible prehistoric ploughing in C. Drawings: trench A site plan, Trench C site plan, plan of early furrows. Photos (colour); general trench showing topography, cross ploughing, Ox Lane, pond	pp9-13 With option for 2-3 extra pages
Chapter 3: Trench B evidence	Detailed evidence for the two pits associated with bone, other possible pits, tree hollow associated with flint, four ambiguous tree hollows. Drawings: site plan, three pit sections.	Pp 14-16
Chapter 4: Trench D evidence	Detailed evidence for the structural history of Area D, of the channel, prehistoric terrace, and Romano-British pits. Drawings: site plan, two pit sections, six channel sections, three sections across settlement terrace. Photos (colour); general trench showing topography, channel, prehistoric terrace	Pp 17-29
Chapter 5: Trench G evidence	Summary of evidence for structural history of site; Windy Arbor Lane, wall segment, Medieval colluvium, Halsnead Park. Drawings: site plan, section through road. Photos (coloured): general trench showing topography, Halsnead Park wall footings.	Pp30-32

Chapter 5: Finds	<p><i>Lithics</i> Descriptions and statistical analysis of assemblage from Area D, plus description of other occasional finds from the test-pitting generally, to include tables, plus catalogue of illustrated finds. Drawings: <40-50 lithics Photo (colour); raw material types</p>	Pp33-39
	<p><i>Metalwork</i> Specialist reports on Romano-British and Medieval identifications from Areas D and G. Photos (colour): 2-6 coins, sword clasp, cloth seal, weight, cauldron foot, spindle whorl, bell.</p>	39-41
	<p><i>Metal waste</i> Quantified report on sample of assemblage from Area D.</p>	42
	<p><i>Pottery (medieval)</i> Specialist report on nature of the Medieval pottery assemblage from Area G and its regional significance, to include tables, catalogue of illustrated finds. Summary discussion of material from Areas D and A, including tables. Drawings: Rim and base forms.</p>	43-47
	<p><i>Tile</i> Specialist report on nature of the Romano-British tile assemblage from Area D. Drawings: stamped tile. Photo (colour); stamped tile</p>	48
	<p><i>Palaeoecological</i> Specialist report on channel deposit from D, pond from A and pits from B. Table of other sampled deposits.</p>	49
	<p><i>Radiocarbon dates</i> Table of dates with brief description of usefulness.</p>	

<p>Chapter 7: Thematic conclusions</p>	<p>Place evidence from sites into local and where relevant regional context highlighting significance of:</p> <p><i>Early prehistoric</i> Summarise Area D evidence, how it fits into local evidence and regional significance. Drawings: plan of Tarbock and known early prehistoric sites, regional plan showing Tarbock site in context of Pennines/Cheshire/Lancashire. Reconstruction drawing of site.</p> <p><i>Later prehistoric/Post-roman</i> Provisional, dependent on adequate dates for evidence from Areas B and A. Summarise Area B evidence if necessary, in relevant context; how it fits into thin scattering of local Bronze Age evidence and regional implications for nature of land use in this region</p> <p style="text-align: center;">or</p> <p>how it fits into development of Romano-British to pre-Medieval agricultural landscape in Tarbock. Highlight early ploughing in Area C in context of regional agriculture evidence. Drawings: plan of surrounding relevant site evidence e.g. Bronze Age or Romano-British</p> <p><i>Romano-British</i> Summarise Area D evidence, integrate into evidence from 1993 excavations of Romano-British farm at Ochre Brook, and any new evidence from Area A, regional significance and background of site will largely be as detailed in 1993 volume, with a few new developments e.g. late Celtic coins, layout and size of Romano-British farm. Drawings: plan of Ochre Brook farm and industrial areas, sub-regional map of Romano-British sites.</p> <p><i>Post-Roman</i> (Provisional, depending on further work).</p> <p><i>Medieval</i> Summarise Area G evidence, how it relates to medieval landscape of Whiston, compare with Medieval landscape of Tarbock in light of excavations. Drawings: map of Medieval Tarbock and Whiston</p> <p><i>Post Medieval</i> Summary of evidence from excavations and link to the landscape context detailed in the Medieval section, as difficult to separate out.</p>	<p>Pp 50-54</p> <p>55-56</p> <p>57-59</p> <p>60-64</p> <p>65</p>
<p>Acknowledgements</p>		<p>Pp 66</p>
<p>Bibliography</p>		<p>Pp67- 69</p>
<p>Glossary of terms</p>		<p>Pp70</p>

Work required for popular publication

- Text for popular publication. 5 days required
- Formatting and editing. 6 days required
- Publication liaison. 2 days required

Outline of popular publication (A5 glossy booklet)

Background pp1

- Background to excavations, etc.

Prehistoric pp 2-9

- Description of site at Area D; way of life of these earliest people in the region and their landscape, and other similar sites in Tarbock.
- Reconstruction drawing of general Mesolithic landscape; of site.
- Photos: site under excavation, flint tools, animals of time e.g. deer, wild pig, hazelnut shells.

Romano-British pp 10-14

- Description of Ochre Brook farm and industrial area at Area D; changes in landscape taken place, description of other similar sites in Tarbock.
- Reconstruction drawing of farm and industrial area.
- Photos: stamped Tile, coins.

Medieval pp15-22

- Description of Windy Arbor site from Area G. Nature of medieval farming landscape (arable fields, common, woodland, parks, manor houses etc) and where they are in today's Tarbock and Whiston, special mention of Ox Lane and Daggars Bridge Farm Medieval site.
- Reconstruction drawing of Medieval scene.
- Photos: Bit of Tarbock Medieval landscape today, pottery and metalwork from Area G.

Post-Medieval pp 23-26

- Windy Arbor settlement development in relation to the Medieval site.
- Ox Lane and why it was excavated and what it produced. How it shows continuation of some aspects of today's landscape over hundreds if not thousands of years (pond, also chance to show early cross-ploughing).
- Halsnead Park.
- Photos: Section through lane showing build up over last 300 years, pond, cross ploughing, 19th century OS map showing Ox Lane/Windy Arbor Brow before motorway, Halsnead Park wall / footings.

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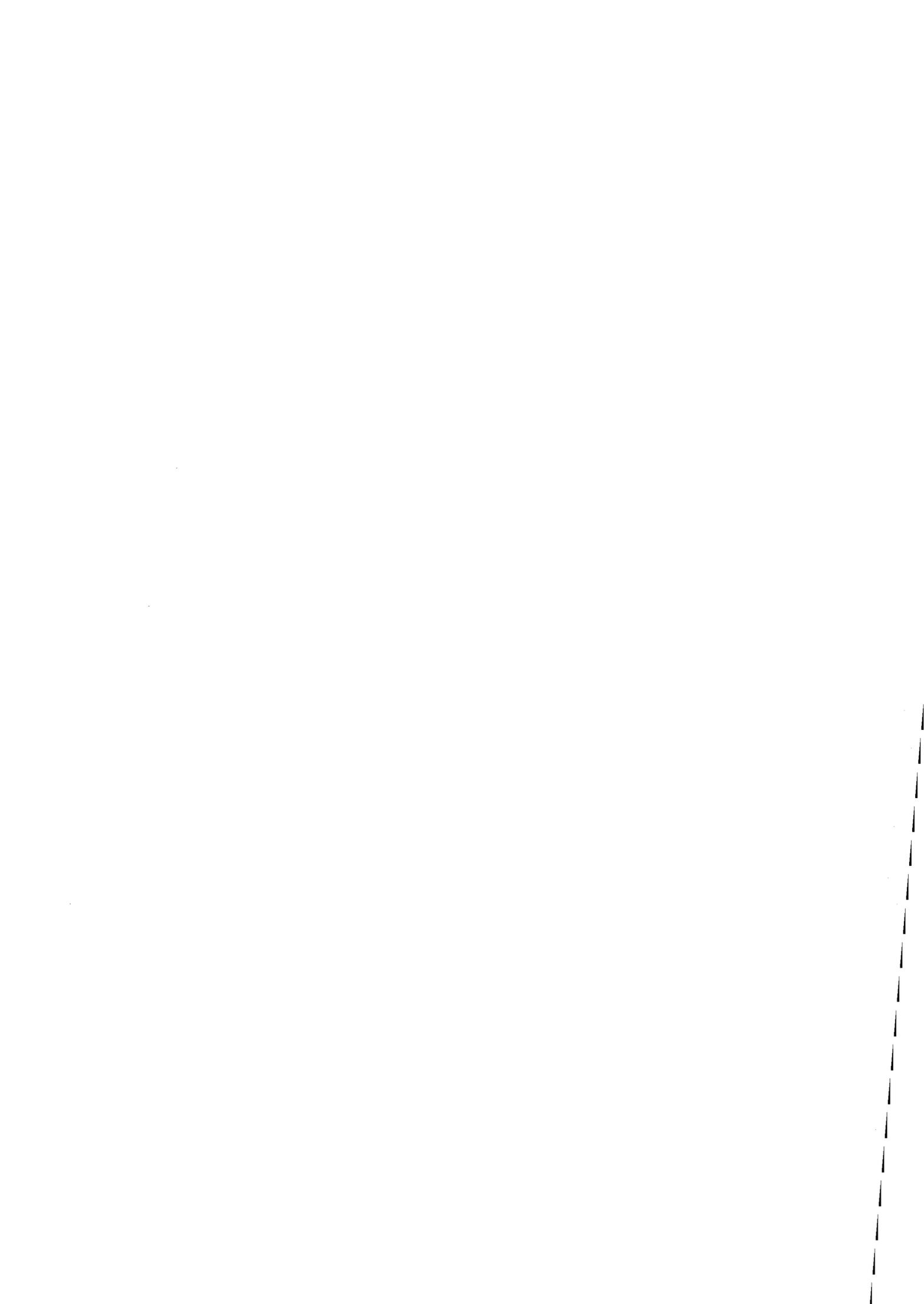
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Appendices



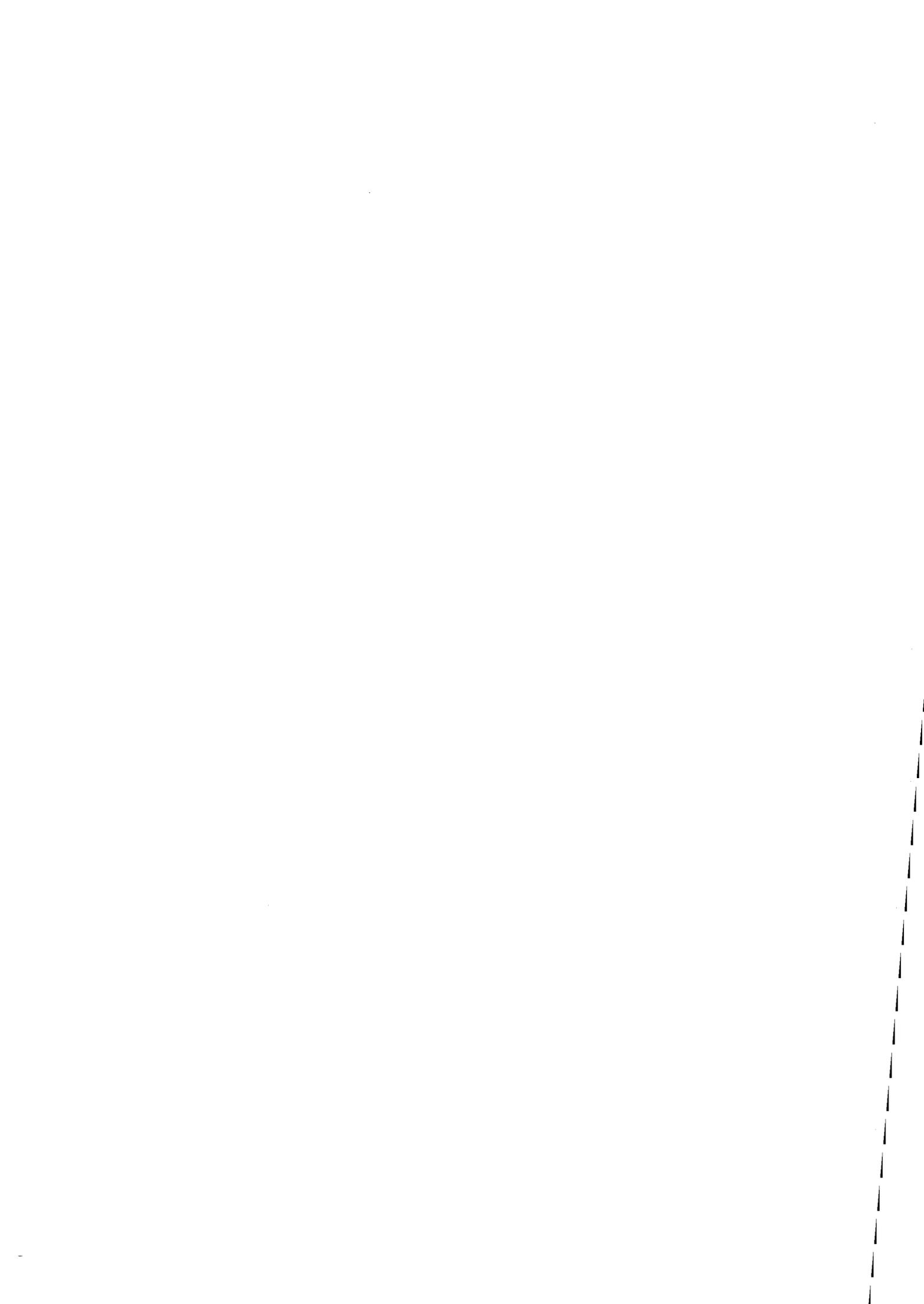
Appendix 1
Timetable for Production of M62 Junction 6 Archaeological
Publications
Further Analysis to complete Archive Report

Area A	Days	Staff	May 2009	June 2009	Jul 2009	Aug 2009	Sep 2009	October to November 2009
Records	2	RC		xxx				Already
Finds	0.5	LC	xxx					committed
Palaeoecological	2	LC	xxx					to other
Dates		EXT		xxx	xxx			fieldwork
Final Archive Report	3	RC				xxx		
Area B								
Finds	0.5	LC	xxx					
Palaeoecological	1	LC	xxx					
Dates		EXT		xxx	xxx			
Final Archive Report	2	RC				xxx		
Area C								
Finds	0.5	LC	xxx					
Final Archive Report	1	RC	xxx					
Area D								
Records	4	RC	xxx					
Finds	3	LC	xxx					
Lithics	9	RC	xxx	xxx				
Metalwork	1	EXT	xxx	xxx				
Palaeoecological	2.5	LC	xxx					
Stratigraphic Analysis	2	EXT	xxx	xxx				
Final Archive Report	4	RC			xxx			
Area G								
Finds	2.5	LC	xxx					
Metalwork	1	EXT	xxx	xxx				
Final Archive Report	2	RC			xxx			
Report review/ liaison		EXT				xxx	xxx	

Publications Timetable

	Days	Staff	October to November 2009	Dec 2009	Jan 2010	Feb 2010	Mar 2010	April 2010
Technical Report								
Area A			Already					
Artwork	2	RC/LC	committed			xxx		
Text	3	RC	to other			xxx		
Area B			fieldwork					
Artwork	2	RC/LC				xxx		
Text	3	RC				xxx		
Area C								
Artwork	2	RC/LC				xxx		
Text	2	RC				xxx		
Area D								
Artwork	6	RC/LC		xxx	xxx			
Drawings	6	EXT		xxx	xxx			
Text	8	RC		xxx	xxx			
Area G								
Artwork	2	RC/LC		xxx				
Drawings	2	EXT		xxx				
Non Lithics Finds Analysis	2.5	EXT		xxx	xxx			
Text	3	RC			xxx			
Publisher liaison	4	RC					xxx	
Draft Review		EXT				xxx	xxx	
Popular Booklet								
Text/Images	8	RC					xxx	
Publisher liaison	5	RC						xxx
Draft Review		EXT					xxx	xxx

Figures



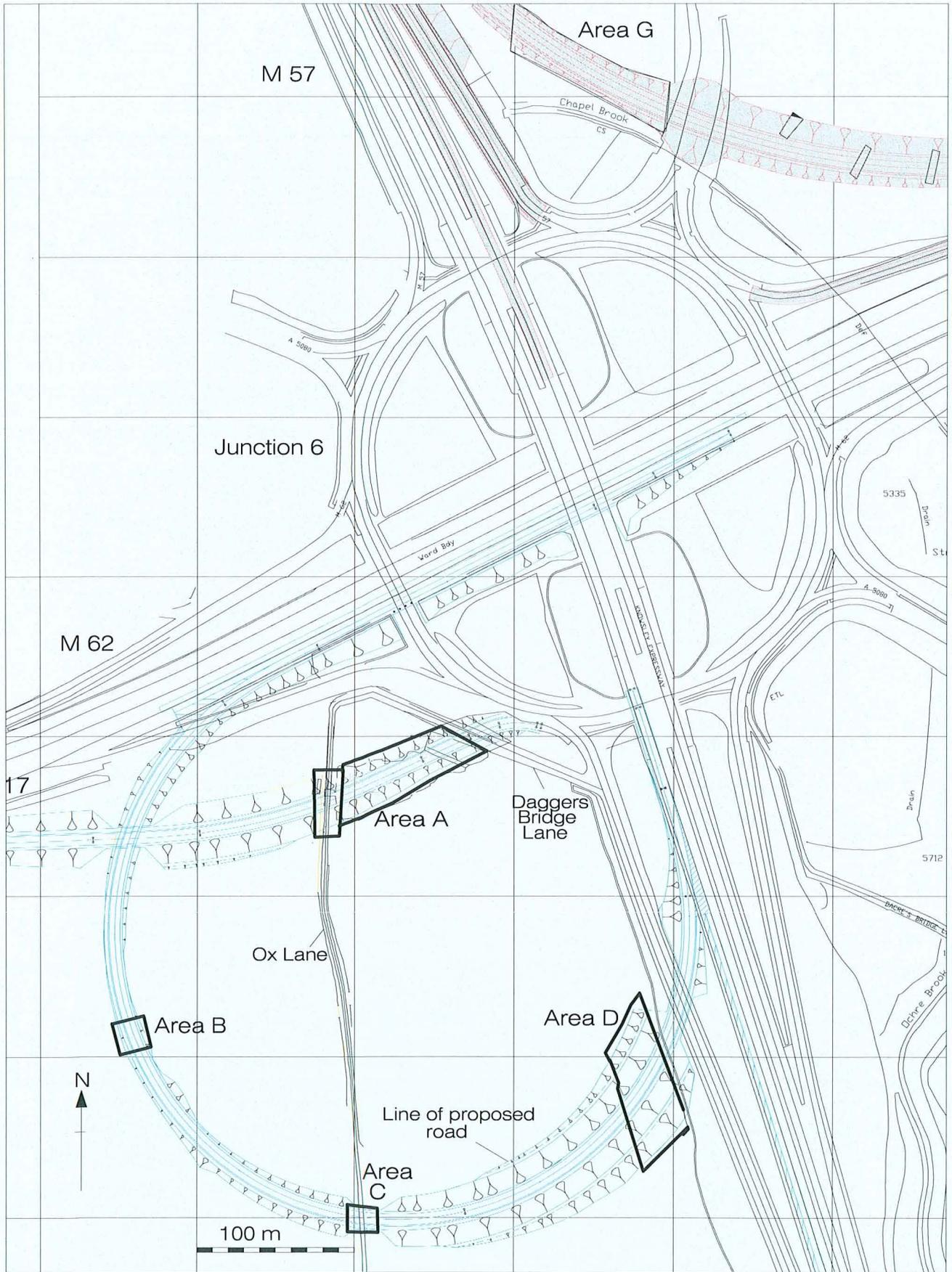


Figure 1: Trench Locations

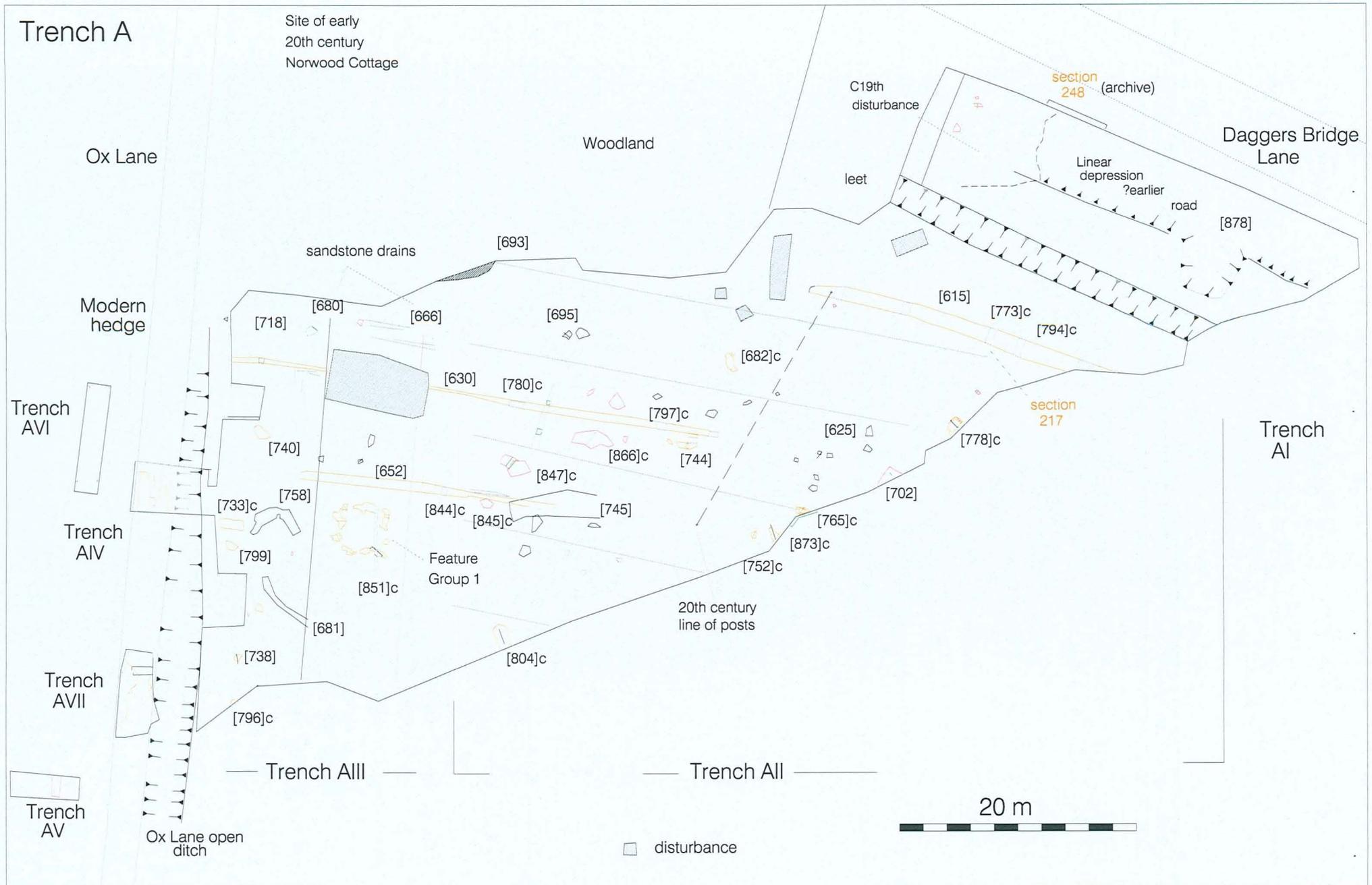
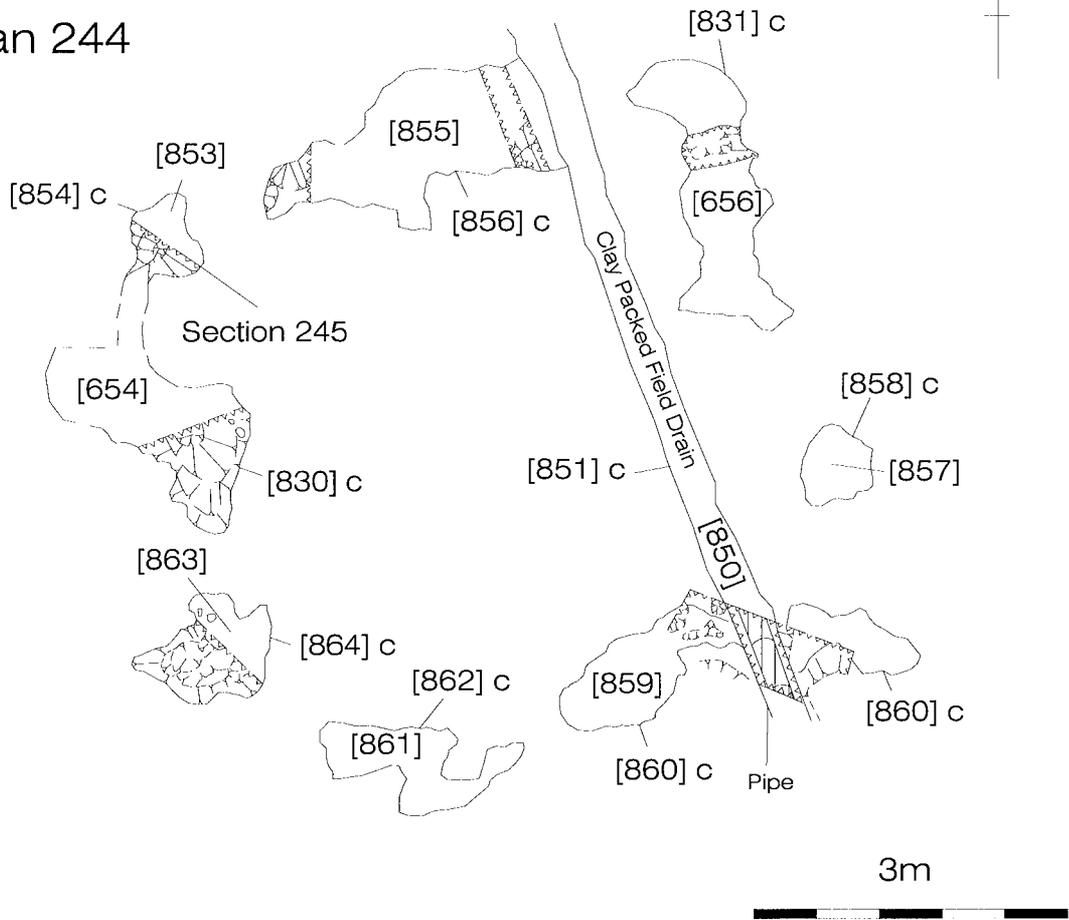


Fig 2. Site Plan of Trench A

Trench All

Plan 244



Section 245

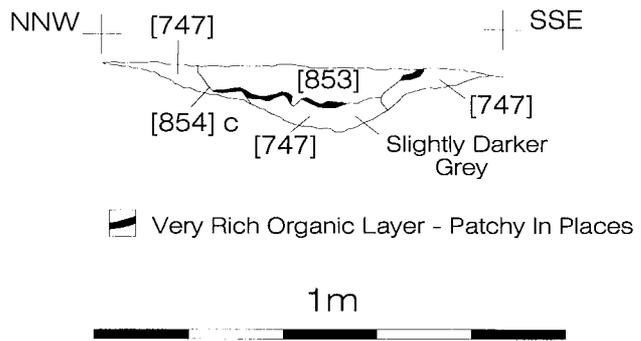


Figure 2.2. Plan of Feature Group 1

Trench AIV
Section 239

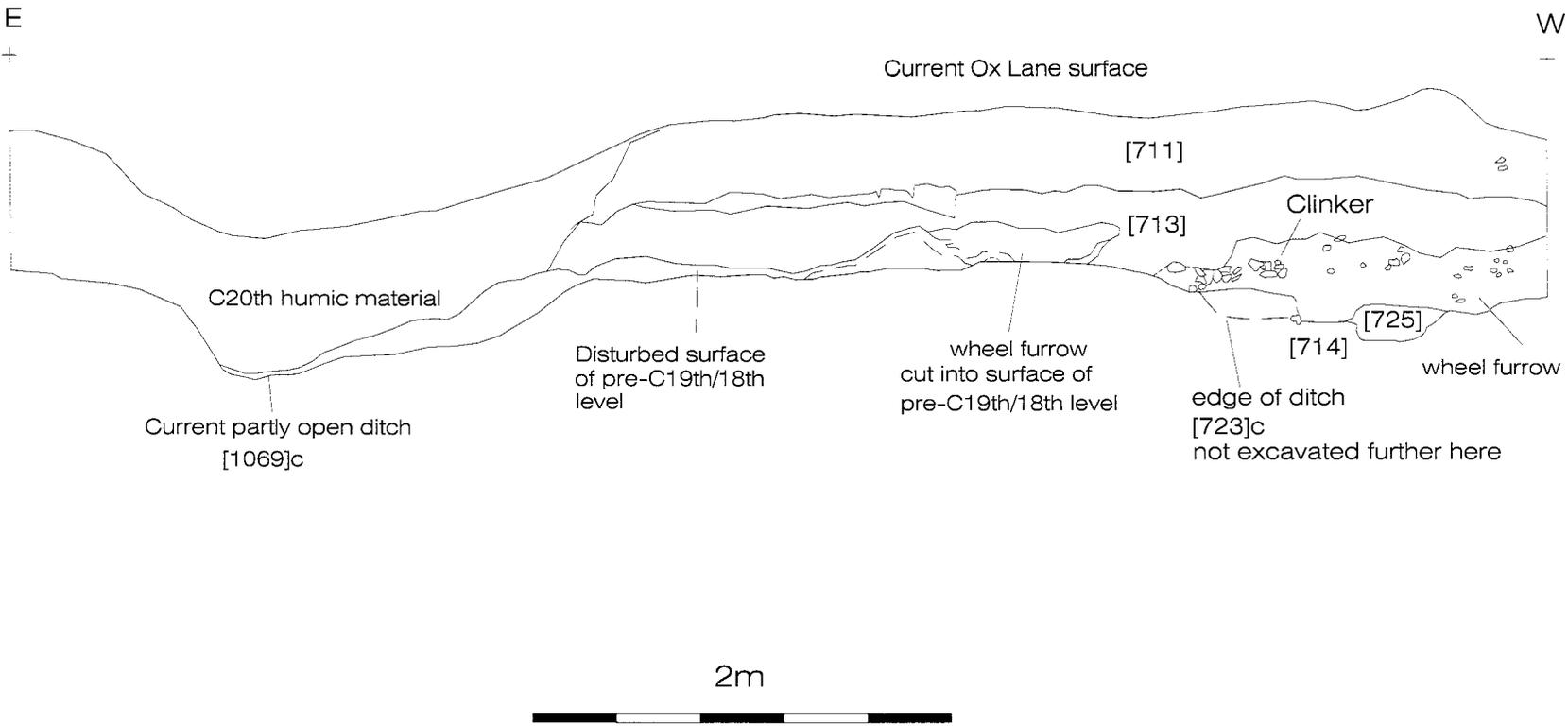


Figure 2.3. Trench AIV: Section through 18th-19th century surfaces of Ox Lane

Trench AIV

Plan 202

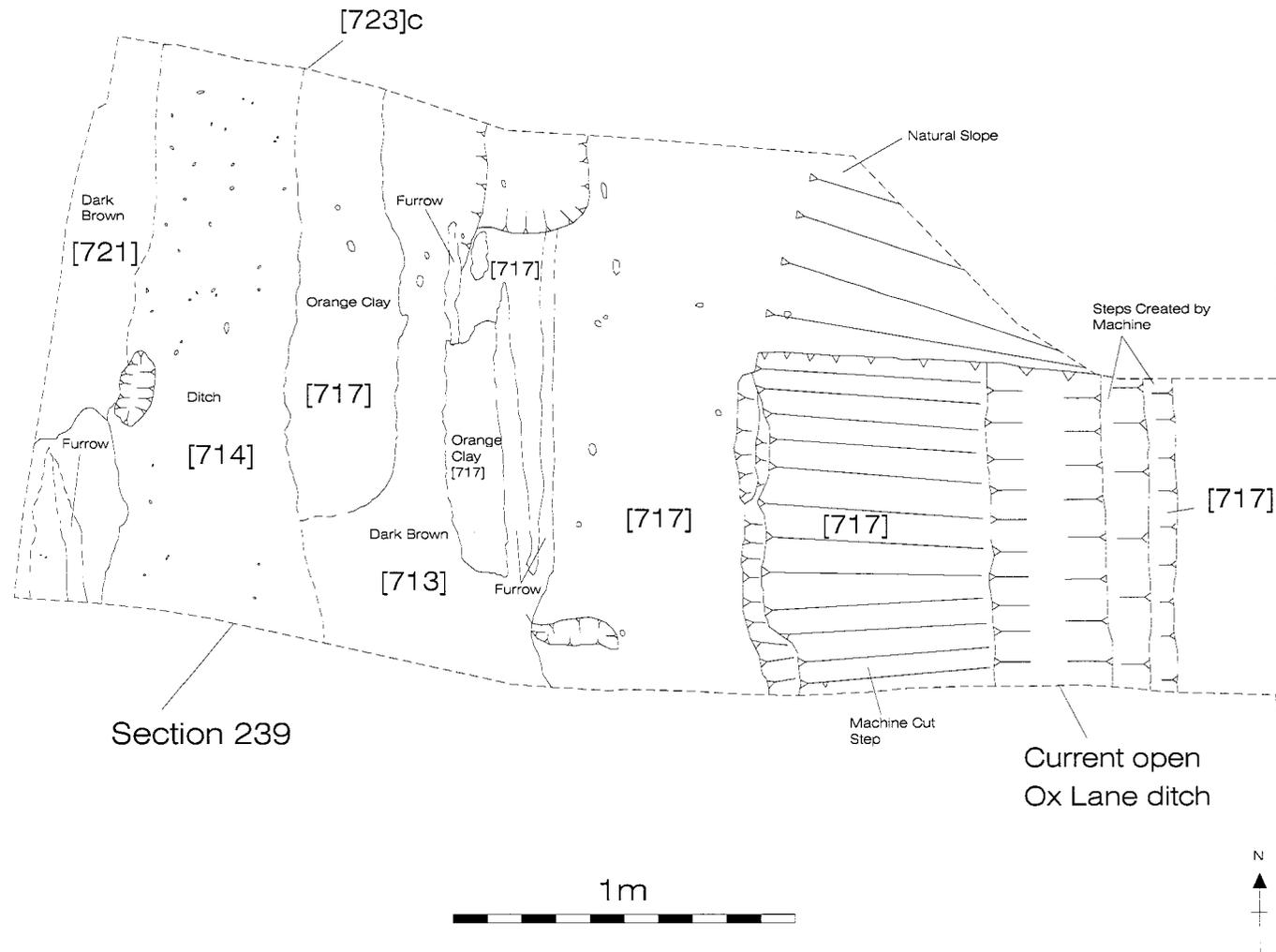


Figure 2.4. Trench AIV Plan: Pre-18th century surface under Ox Lane

Trench AVII

Plan 278

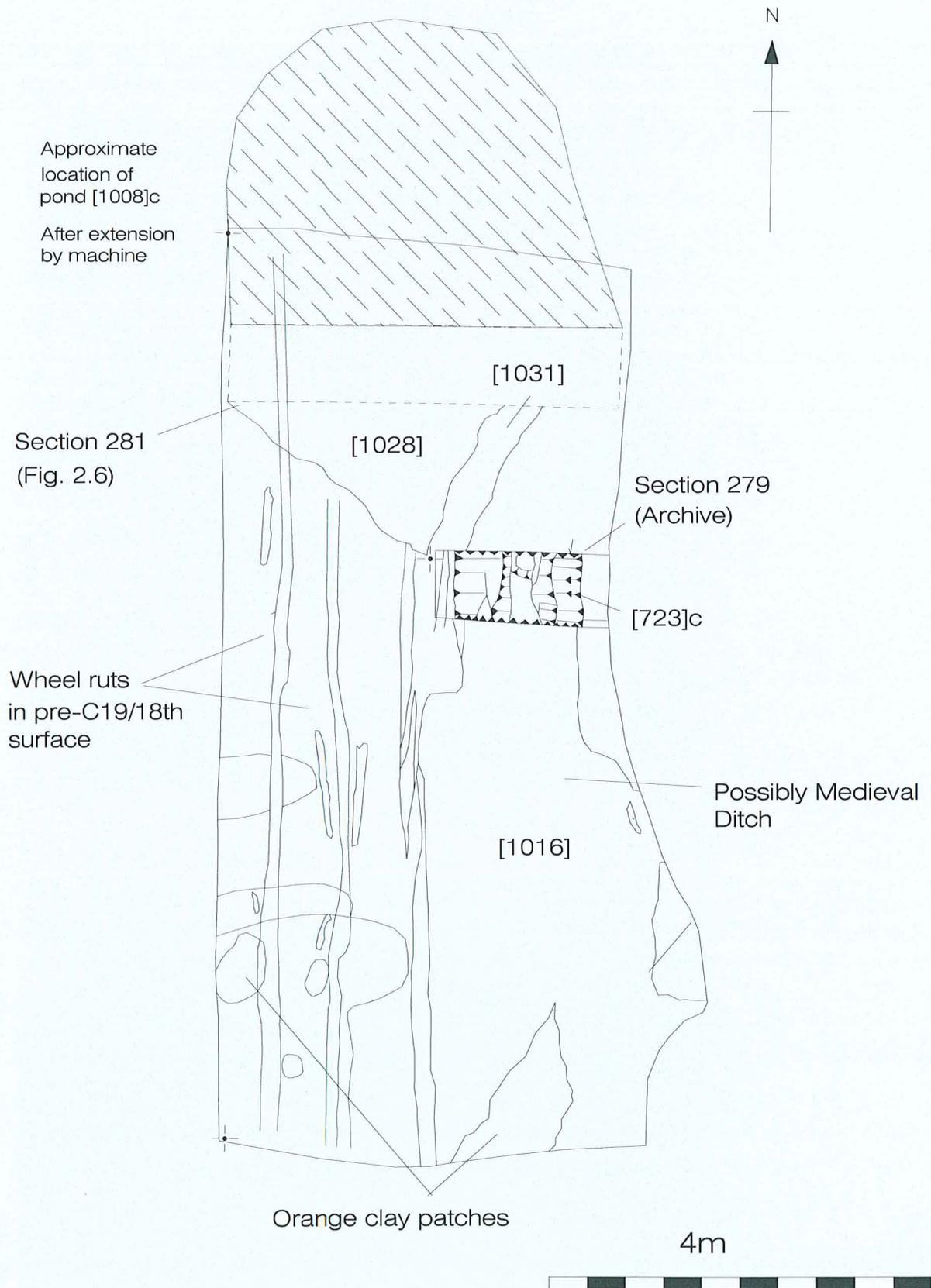


Fig 2.5 Trench AVII Plan of possible Medieval ditch overlying pond under Ox Lane

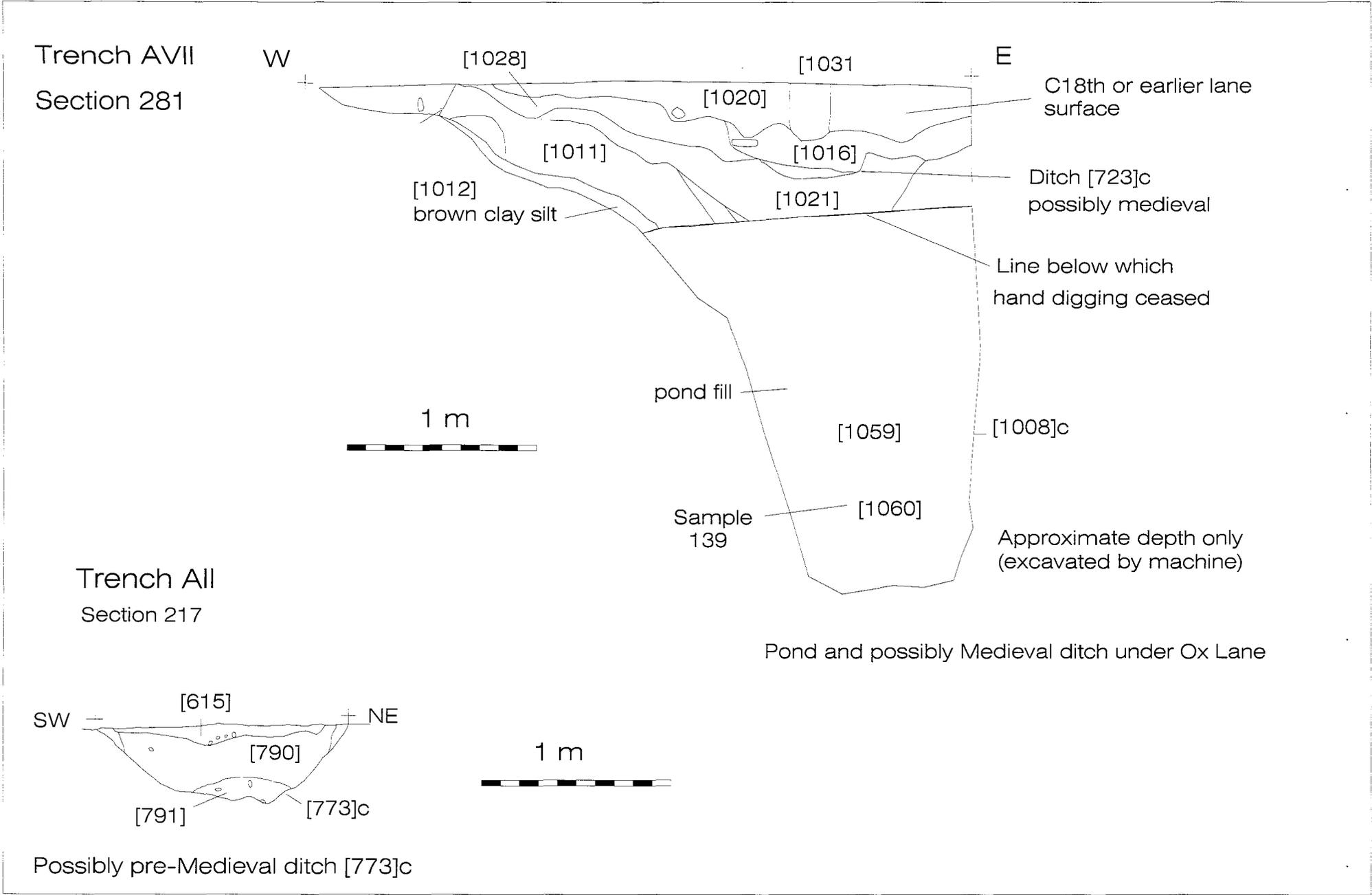
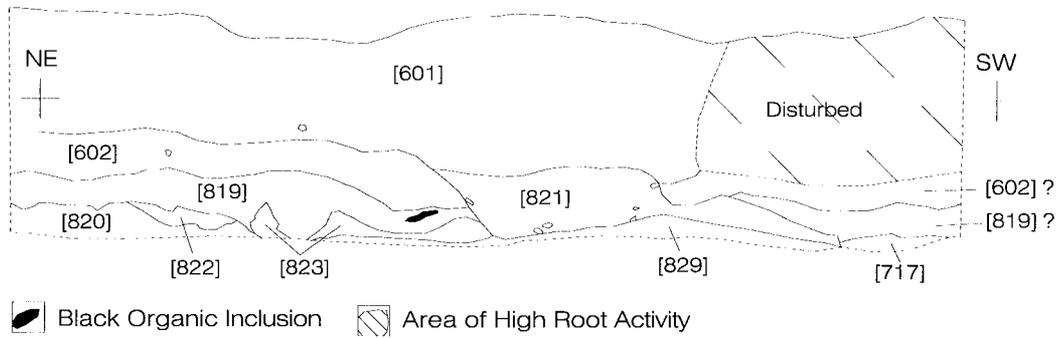


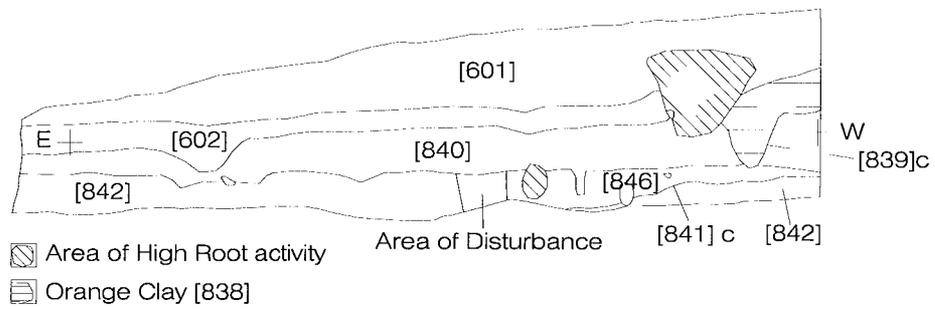
Fig 2.6. Trench A sections

Trench All

Section 231



Section 240



Section 234

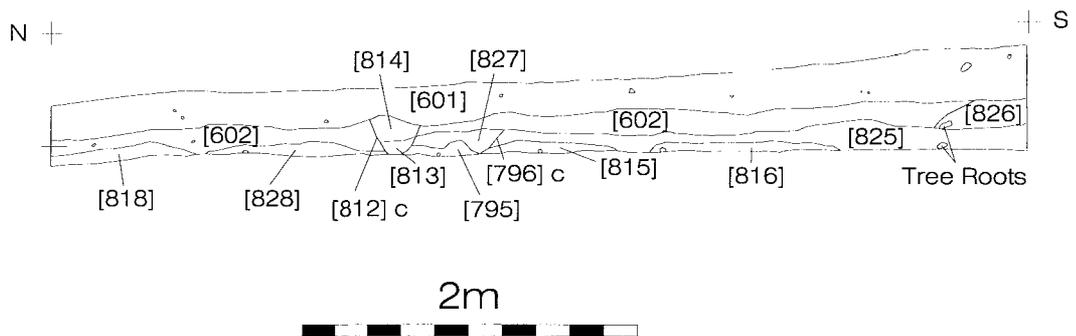


Figure 2.7. Trench All: Sections through possible early trackline

Area B Excavations



C13
(2006)

C3
(2005)

C14
(2006)

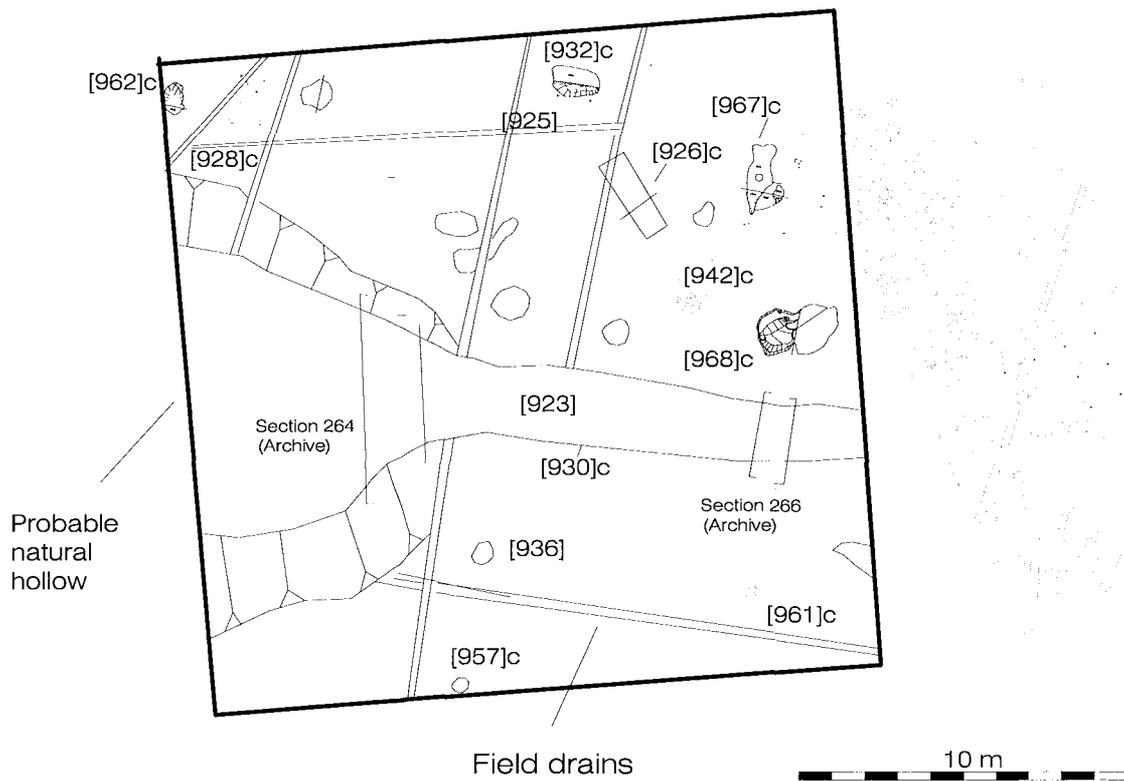


Fig 3 Trench B Plan in relation to previously excavated trenches from 2005 and 2006

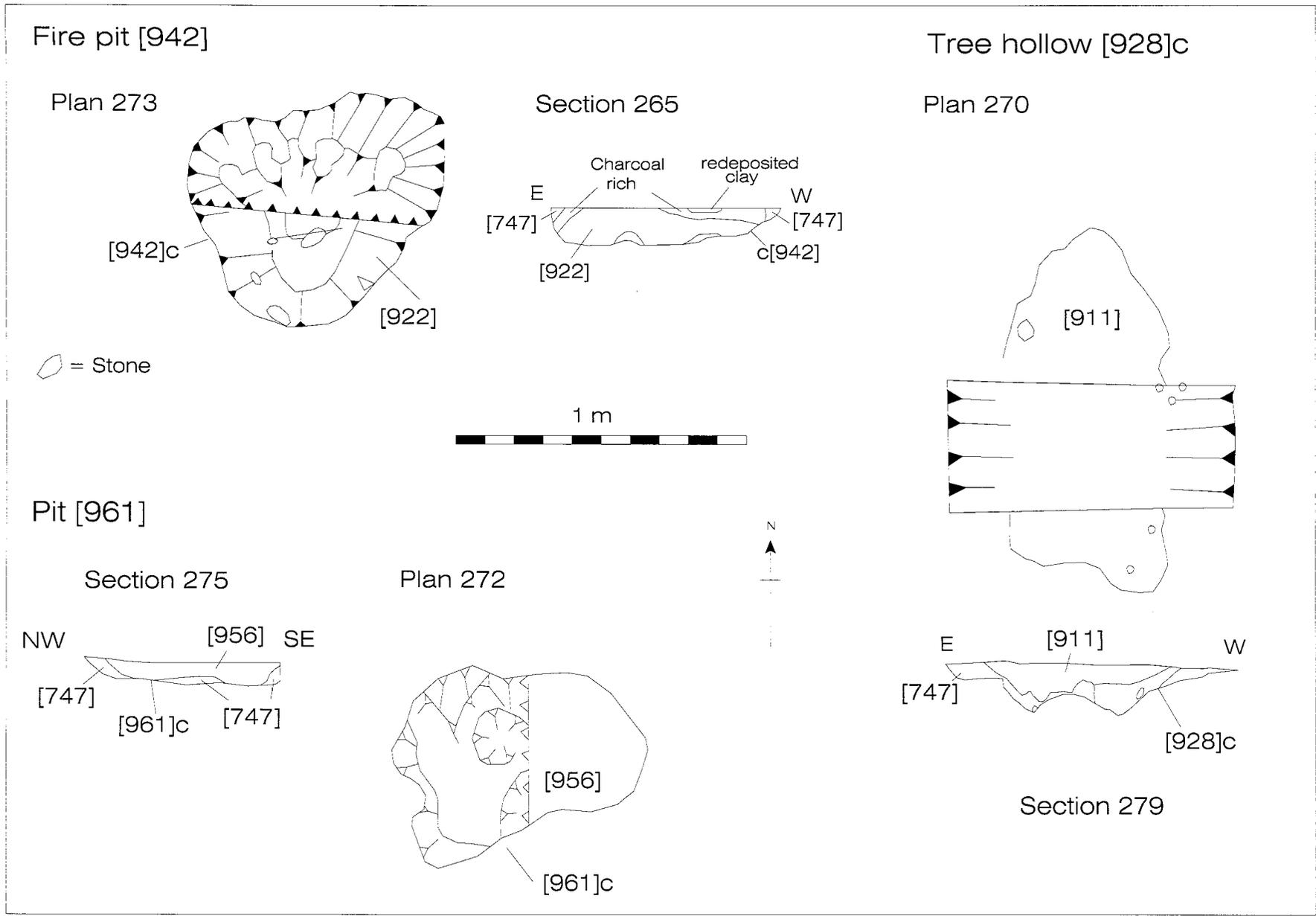
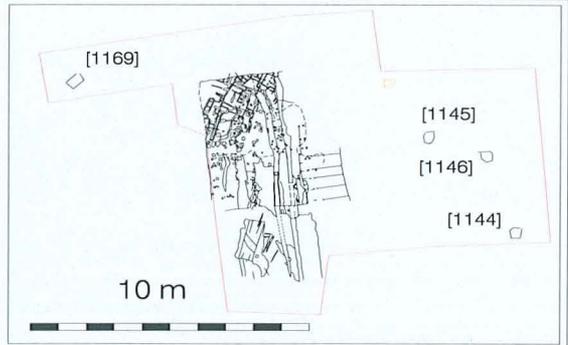


Fig 3.1 Plans and sections of main features in Trench B

Trench C

Plan 289

N



Section 282

2 m

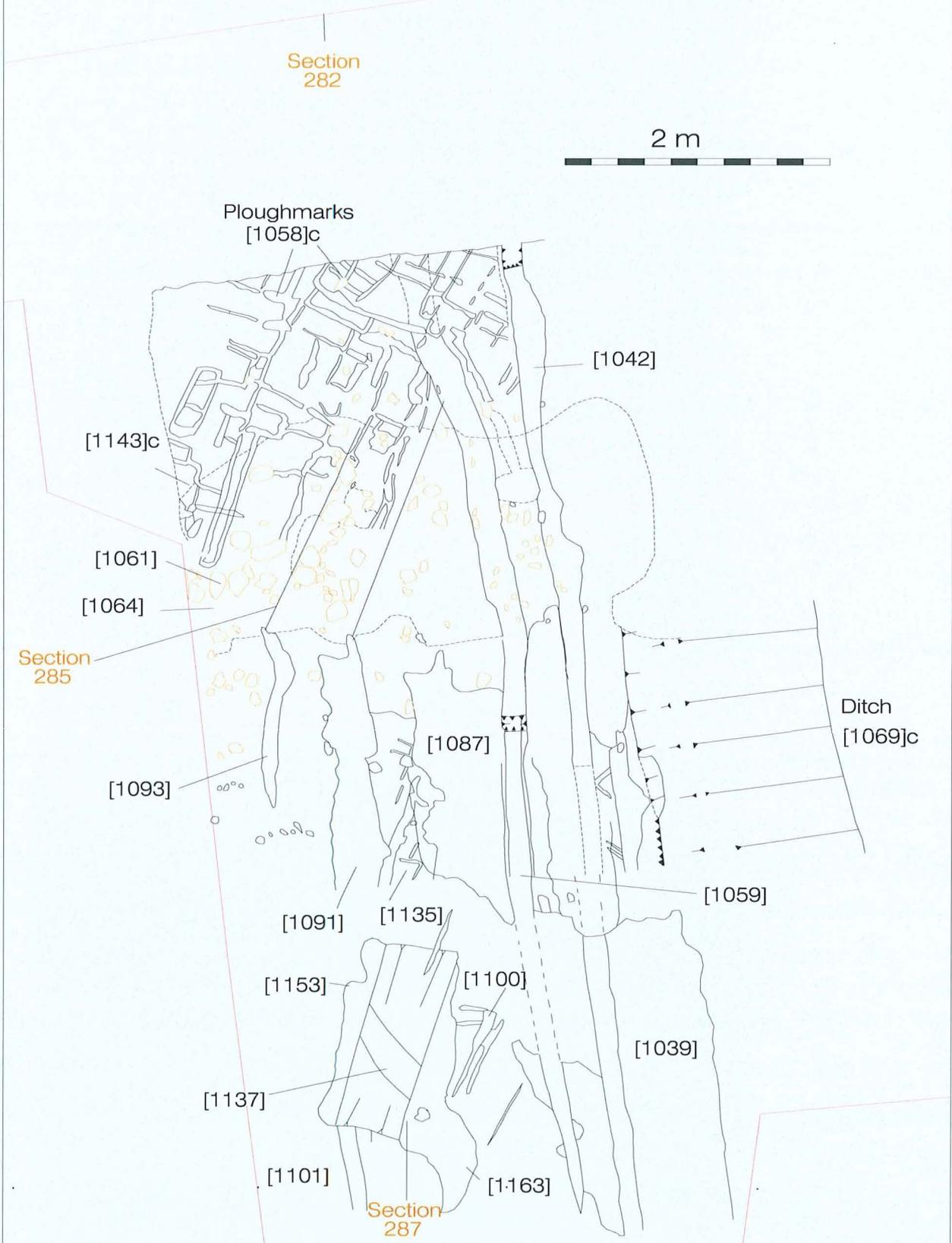


Fig 4 Trench C Plan

Section through Ox Lane surfaces

Section 282

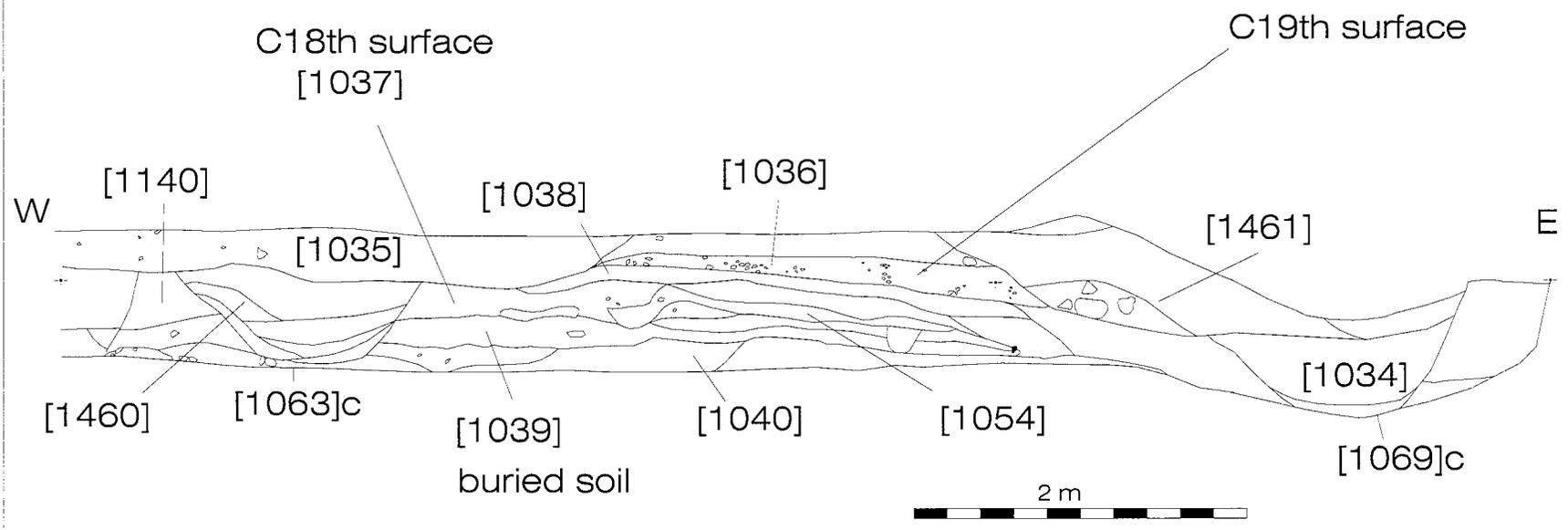


Fig 4.1 Section through Ox Lane at Trench C

Section 285

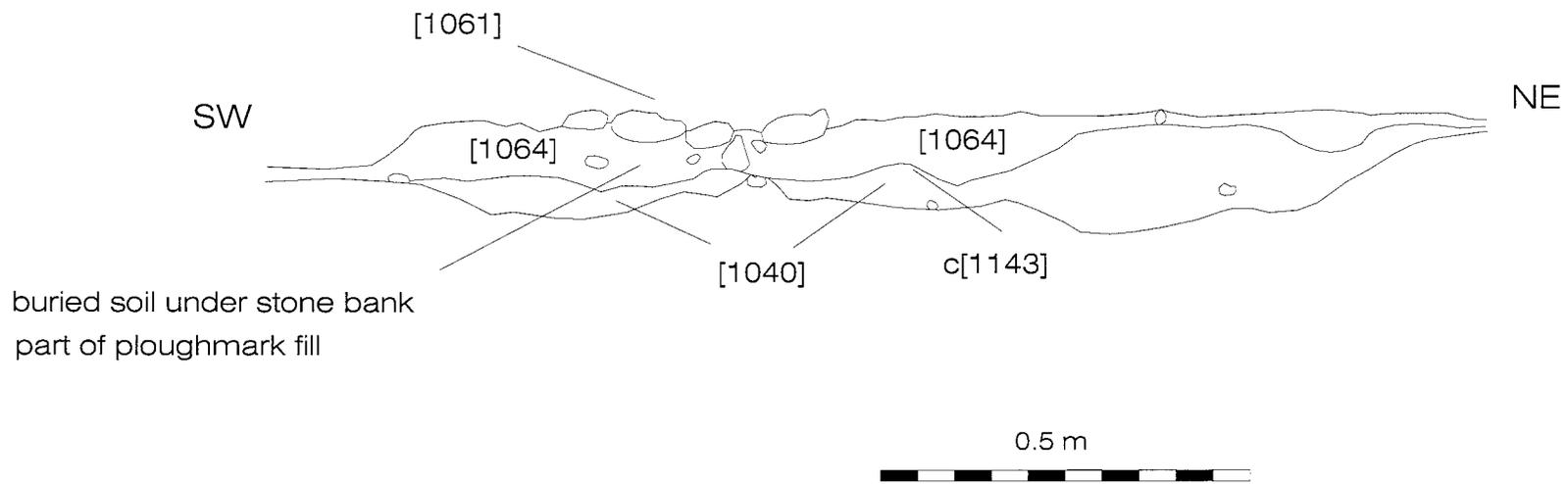


Fig 4.2 Section of ploughmarks and field bank under Ox Lane in Trench C

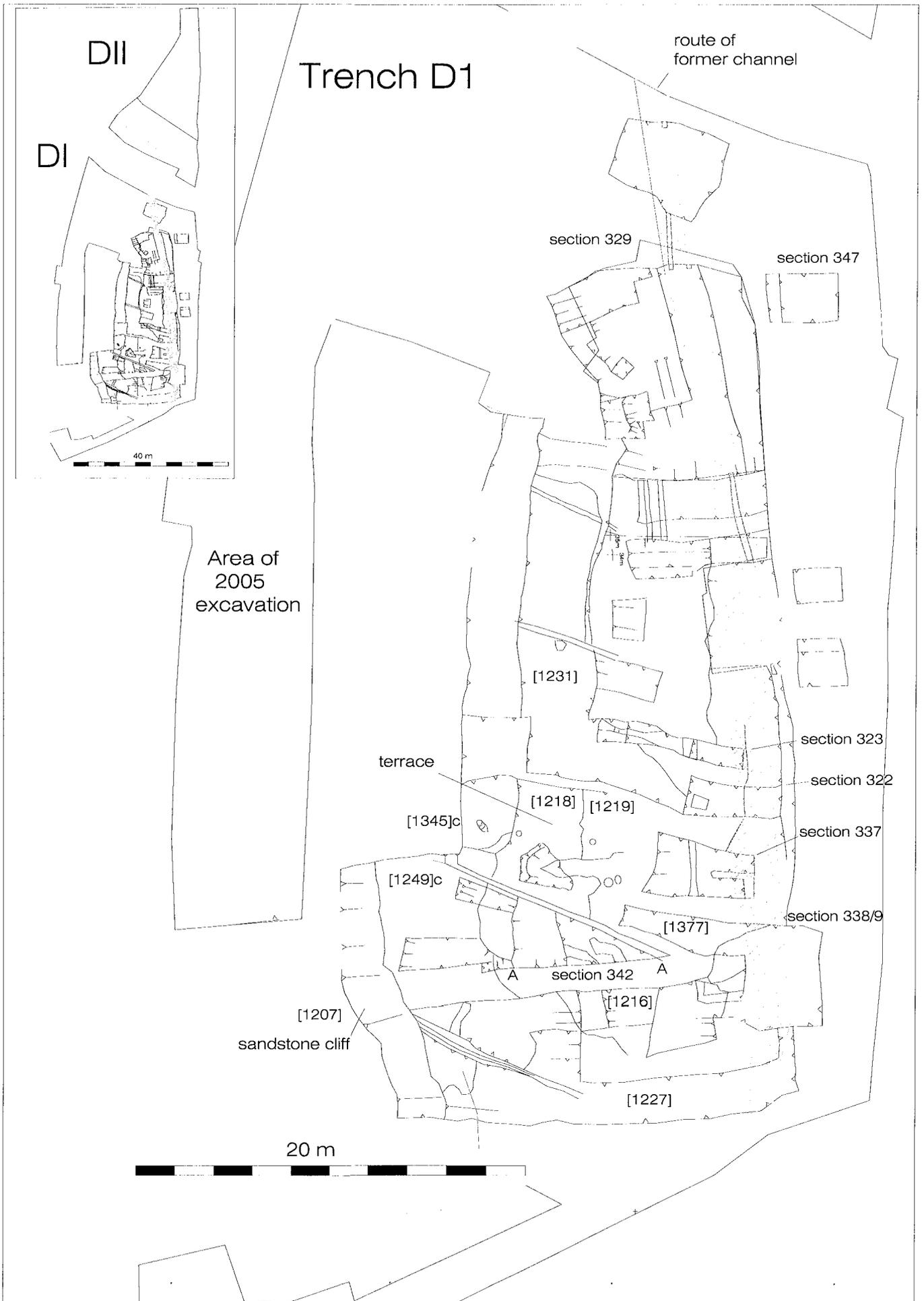
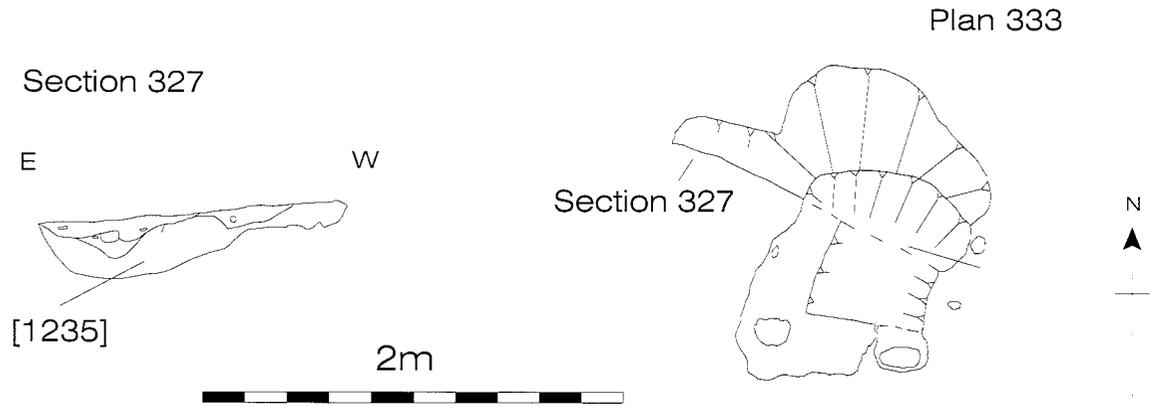


Fig 5. Trench D Plan

Plan and Section of pit [1249]



Section 342 A-A showing metal filled hollows [1377] next to channel

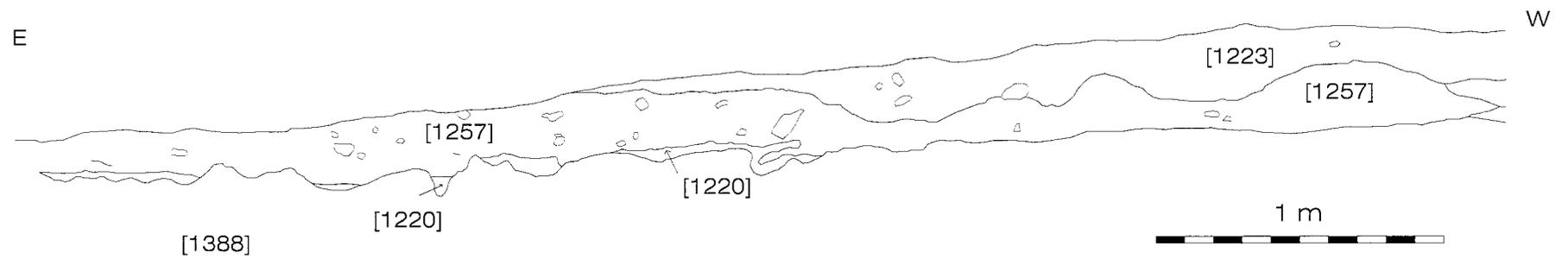


Fig 5.1 Sections of Romano British Features in Trench D1

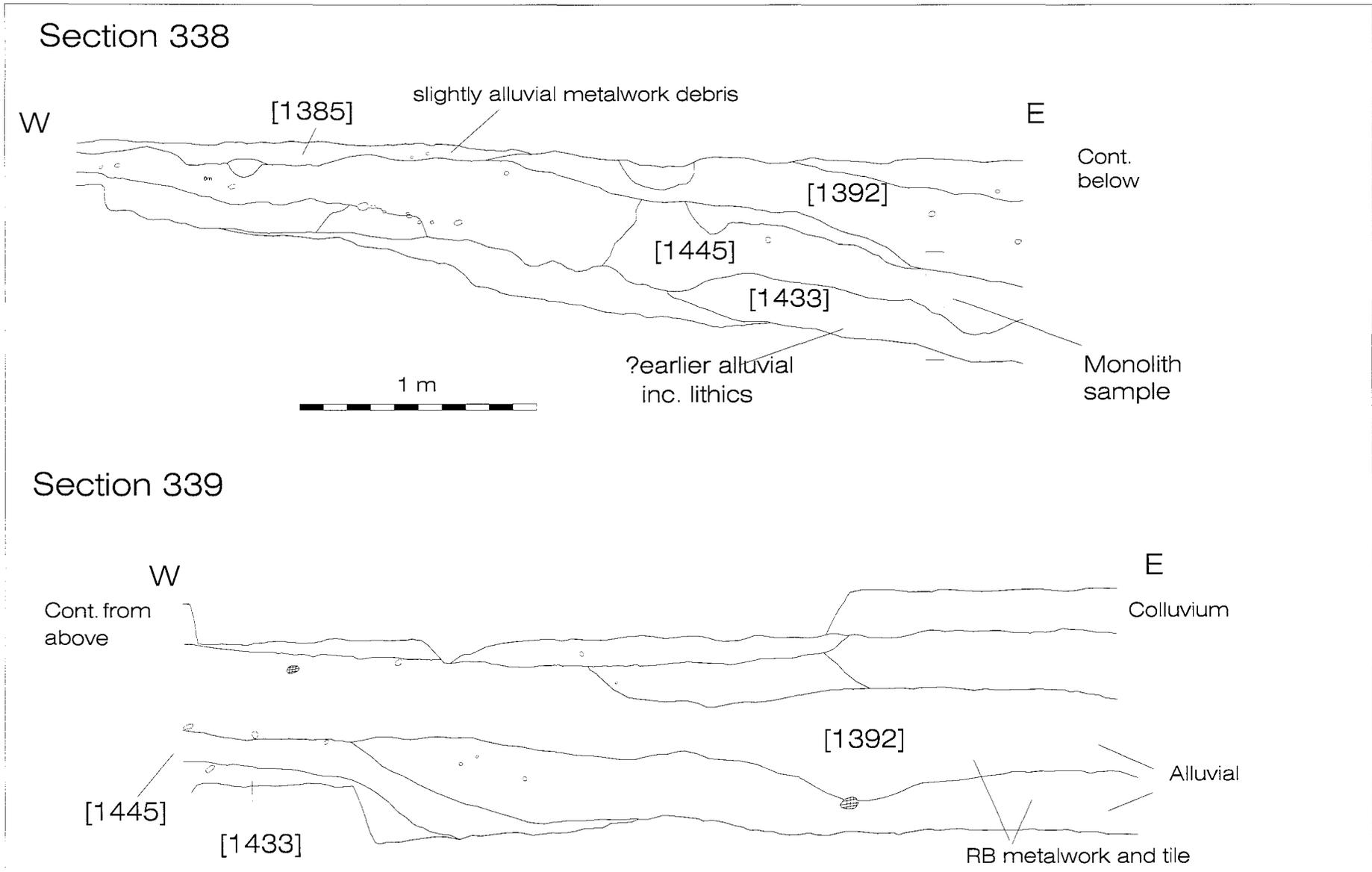


Fig 5.2 Section of Buried Channel,

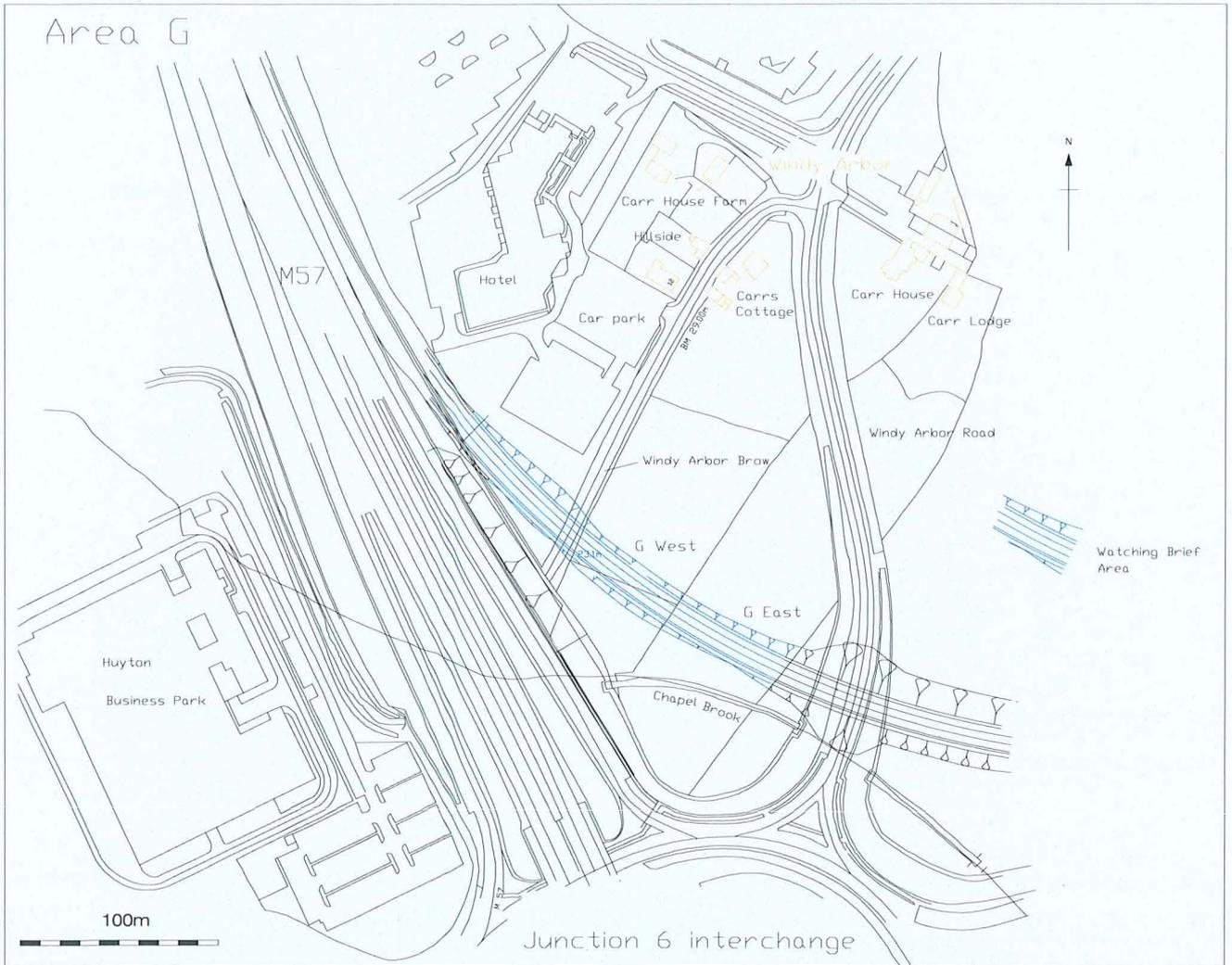


Fig. 6 Location of Area G Watching Brief

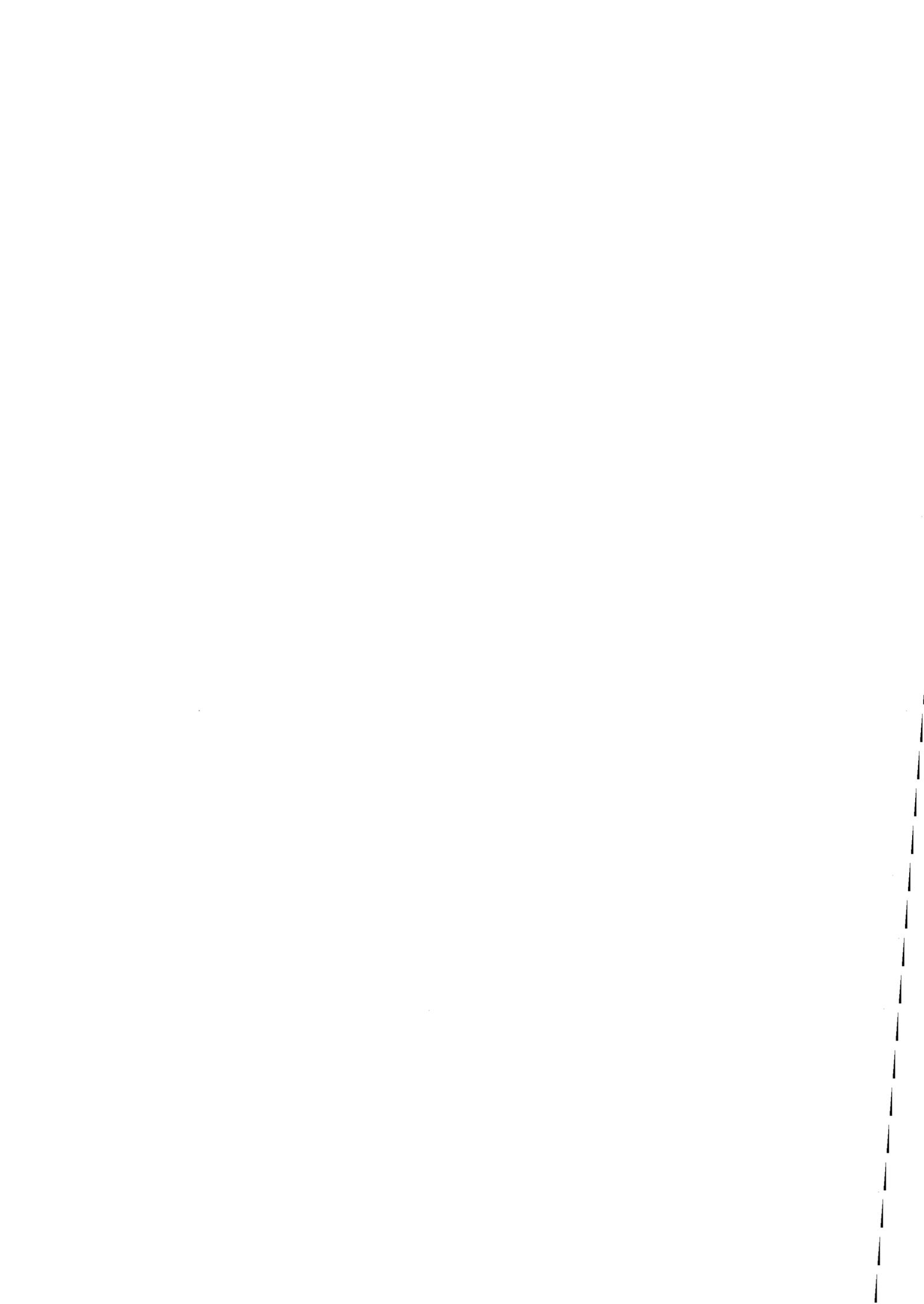




Fig. 6.1 Location of Watching Brief in Area G

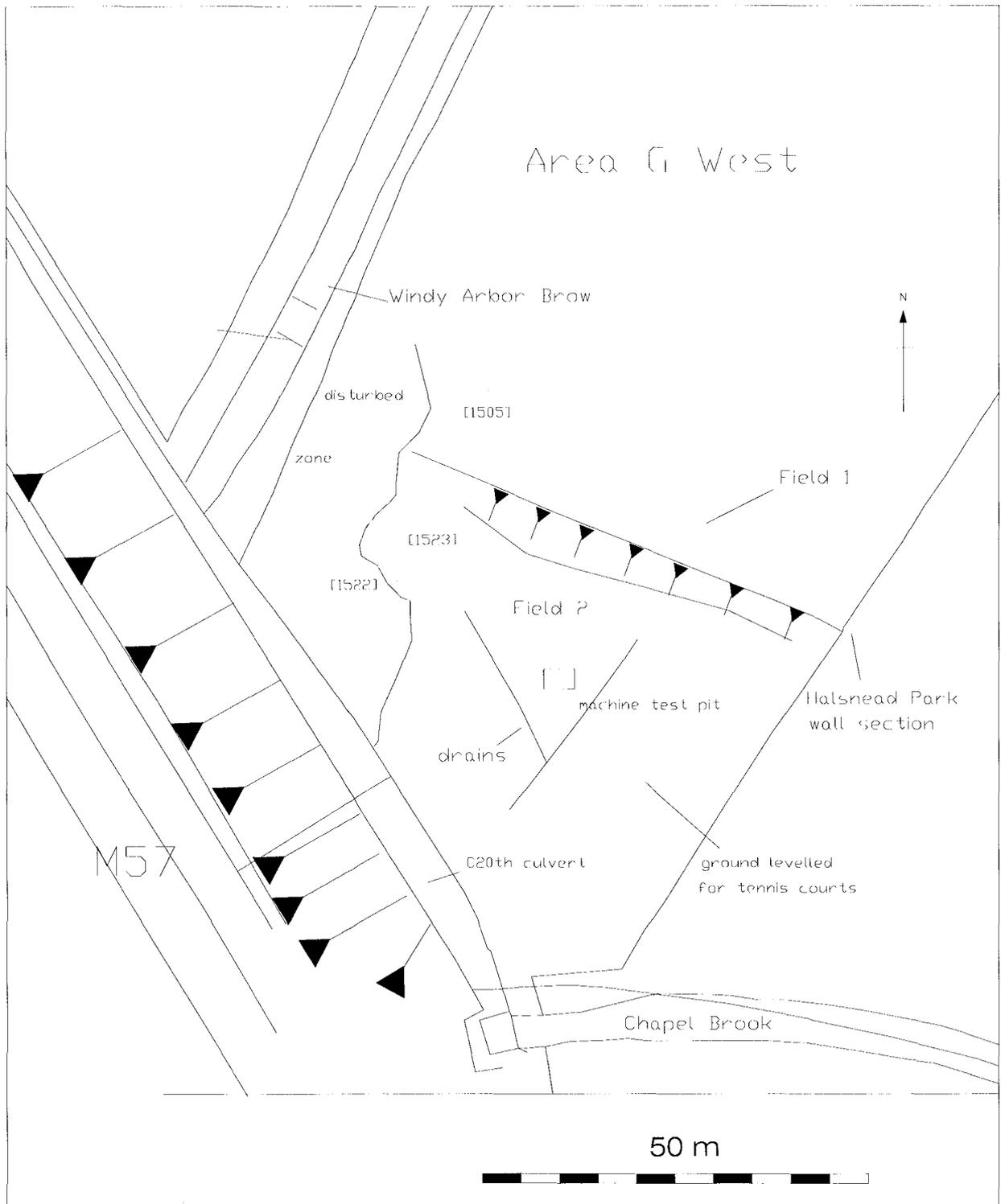


Fig. 6.2 Detail of Area G West Watching Brief Features

NATIONAL MUSEUMS **LIVERPOOL**

NML Field Archaeology Unit
Dock Traffic Office
Albert Dock
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