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Archaeological Fieldwork for the Earl Shilton Bypass, Leicestershire: Site A, off Elmesthorpe Lane, Elmesthorpe (SP 460 966)

Wayne Jarvis

ULAS Report No 2009-085

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Site A, off Elmesthorpe Lane, Elmesthorpe
SP 460 966

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For: Leicestershire County Council

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Archaeological Fieldwork for the Earl Shilton Bypass, Leicestershire: Site A, off Elmesthorpe Lane, Elmesthorpe (SP 460 966)

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Summary

A programme of archaeological fieldwork was carried out by ULAS between August 2007 and September 2008, in advance of, and during, work on the A47 Earl Shilton Bypass. Site A at Elmesthorpe (south of Earl Shilton) consisted of the Elmesthorpe manorial earthworks, including a series of fishponds. This work included trial trenching, photographic and field survey, auger surveying, excavation, recording and a watching brief. Trial trenching identified several truncated features of possible Roman, Saxon and medieval date, and a record of the 'wildfowl pond' embankment was made. Excavation of the main ponds did not identify any structural evidence to associate these with their use as fisheries, and confirmed their function as ornamental ponds, which can be associated with other features in the vicinity and being part of the grandiose pleasure grounds for the manorial site at Elmesthorpe. The work was carried out for Leicestershire County Council. Leicestershire Museums will hold the archives under the Accession number XA184 2007.

1 Introduction

A programme of archaeological fieldwork was carried out by ULAS between August 2007 and September 2008, in advance of and during work on the A47 Earl Shilton Bypass. This work included trial trenching, photographic and field survey, excavation and a watching brief. Work included two main sites, Site A (reported here) north of Elmesthorpe Lane, Elmesthorpe, and Site D between Mill Lane and Thurlaston Lane, Earl Shilton where prehistoric and Roman features were exposed (Jarvis 2009b). Site A, in addition to the earthwork remains of Elmesthorpe „Fishponds' (SP 460 966) , themselves also included fields to the north and west (Fig. 3). Additional evaluative work was undertaken on land at Breach Lane, and a watching brief was carried out on the other areas of the bypass line (Jarvis 2009a, b). The work on Site A was carried out for Leicestershire County Council. Leicestershire Museums will hold the archives under the Accession number XA184 2007.

2 Background

2.1 Location, Topography and Geology

The route of the proposed bypass runs from the A47 in the north-east (SP 476 991) across Thurlaston Lane then south-west rejoining the A47 at Carrs Hill (SP 453 964; Figs. 1, 2). The route crosses a series of agricultural fields, currently of mixed arable and pastoral use. The topography is varied, as the bypass transects a series of shallow east-west valleys. The ground level thus varies between *c.*88m aOD and 110m aOD. The solid geology of the area is Triassic Mercia Mudstone, with superficial deposits consisting of alluvium (valleys), sands and gravels, and glacial tills (Ordnance Survey Geological Survey of England & Wales, Coalville, sheet 155). The total length of the bypass is some 4.5km, and the total area within the easement is *c.*0.215km^2.

The fishponds lie south of Elmesthorpe Lane, Elmesthorpe, on a north-facing slope at a height of 106.7m aOD; to the north the land flattens out into a stream floodplain (and the „wildfowl pond'). To the south and west of the ponds the ground rises considerably adjacent to Church Farm, and then slopes away again southwards to Elmesthorpe Lane (B581). The ponds were holding standing water at the start of works, though only the north-west pond (Pond 1, pond

numbering on Fig. 5) always remained wet. The ponds were clearly watered from one or more natural springs that rise in the slope north of Church Farm, with water running freely through sandy layers in the natural substratum. At the start of works the ponds were covered with dense vegetation, including tree cover. All the ponds had some infill of modern rubbish, with the south-west pond (Pond 3) being the most full.

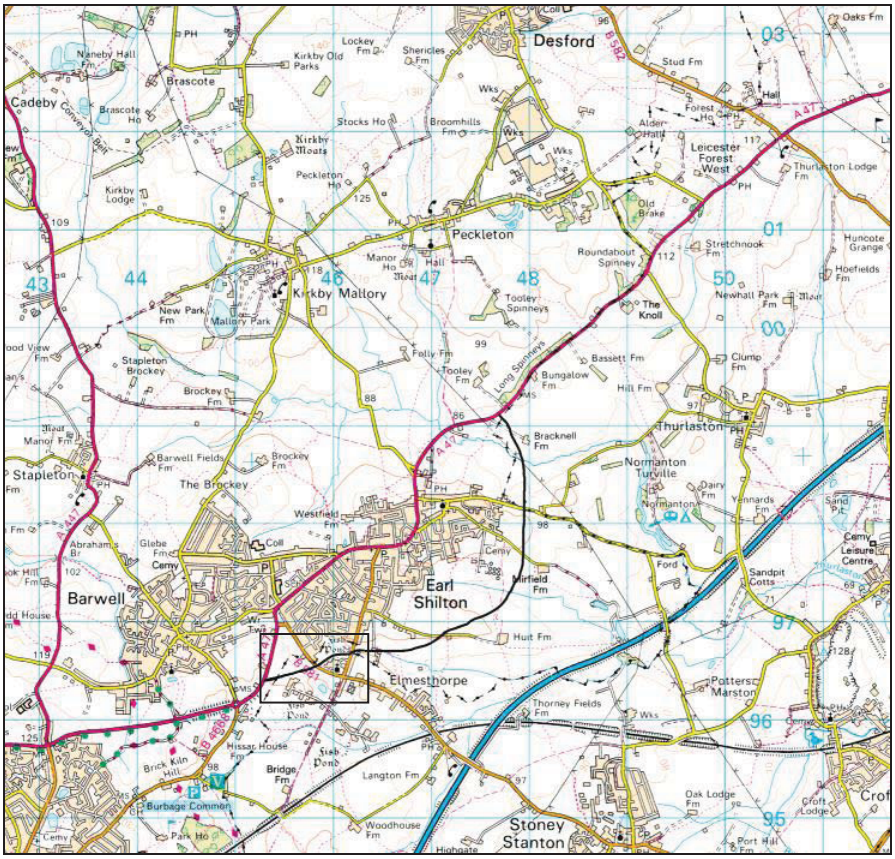


Fig. 1 Location of bypass. Location of Fig. 2 also shown. Reproduced from the Ordnance Survey 1:50000.O.S. Licence no.AL10009495

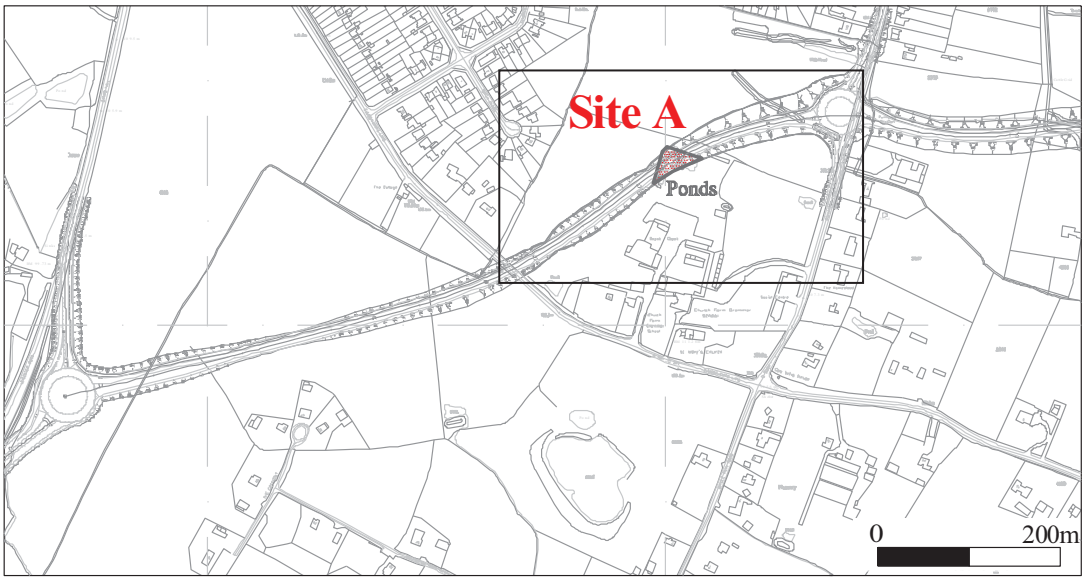


Fig. 2 South west section of roadline showing location of site A and ponds

2.2 General Historical and Archaeological Background for the Bypass Project

The following is based on updated information (supplied in July 2009) to that originally included in the cultural heritage assessment for the bypass (Challis 2001a). The study area contains known archaeological sites from the prehistoric, Romano-British, Anglo-Saxon, medieval and later periods. A total of 17 archaeological sites was originally referenced (Challis 2001a), and other records suggest further archaeological potential.

The prehistoric period is represented by a cropmark, possibly a Neolithic enclosure, close to the eastern edge of Earl Shilton village (SP 477 979; MLE9772. Cropmarks of ring-ditches (MLE2854, 3076) may be ploughed out Bronze Age round barrows or could be associated with later prehistoric settlement. Other cropmarks include pit-alignments (MLE3070, 347), enclosures (MLE3033, 3077) and linear cropmarks, which may represent Iron Age and Romano-British settlement sites and agricultural activity. A pottery kiln (MLE2855) and a possible villa site near to Mirfield Farm (MLE2863) may also be of Romano-British date.

The only known Anglo-Saxon evidence is the find of a 7th century gold sword pommel from Elmesthorpe (MLE6182). By contrast, there is considerable evidence for medieval and later settlement. This includes the settlement cores of Barwell and Earl Shilton and the manorial complex at Basset Farm (MLE337-340 inc.), agricultural earthworks at Alexander Avenue, Earl Shilton and Huit Farm and well-preserved manorial earthworks and fishponds at Elmesthorpe (MLE70). A series of linear cropmarks along the parish boundary between Earl Shilton and Tooley (MLE 3072, 351) may indicate the line of the former boundary hedges and most probably date from the post-medieval period.

2.3 Site A Historical and Archaeological Background

Site A, within the road line, consists of a series of fishponds, surviving as earthworks, thought to be of 16th or 17th century date, and considered to be part of the manorial hall of Elmesthorpe (Clark 2007b).

Nicholls wrote that "the ancient hall stood on an eminence, and was a very large and extensive building… From the traces which now remain of the extensive pleasure grounds, etc., it appears to have been a large and commodious residence.

Mr Thompson was the first tenant who lived at the present farm-house where the hall originally stood…There have been several fish-pools, from small ones to six or seven acres apiece" (Nicholls 1811, 605).

The series of earthworks are interpreted as the remains of a grand 17th century formal garden scheme associated with Elmesthorpe Hall, since demolished (Hartley 1989, 2008,16). A plan published in Hartley (1989) shows the pond complex set within a larger series of earthworks (Fig. 5), The ponds appear to consist of four basins, the eastern two being linked, and broadly in a two by two grid. Additionally the north-east pond has a channel or gap through the north earthwork leading out into the field to the north, which along with the field to the west has remnant ridge and furrow. Ridge and furrow is absent from the ground south of the ponds, which is now partly developed, but this absence is most likely explained by the landscaping associated with the manor of Elmesthorpe situated to the south. The manor was one of the residencies of Sir William Cokayne, sheriff of London from 1609, and Lord Mayor of London (1619-1620), and the first governor posted to Ulster where he directed the establishment of Londonderry. Sir William Cokayne was buried at St. Paul's Cathedral in 1649 (Worldroots Genealogy Archive 2009).

2.4 Previous Fieldwork for the Bypass

Initial fieldwork in 2001 and 2002 over the area of the proposed Earl Shilton bypass comprised non-intrusive fieldwalking, metal-detecting, auger and geophysical surveys. Few significant finds were recovered during the fieldwalking and metal–detecting, other than

small assemblages of medieval pottery and worked flint. The auger survey revealed indications of alluviation close to the existing streams. Little of significance was located in the course of magnetic susceptibility and gradiometer surveys.

A measured survey was undertaken of the earthworks of the Elmesthorpe manorial complex in the area to be affected by the proposed bypass (Browning et al 2002, 1). Follow-up resistivity survey was carried out in fields north of Church Farm, Elmesthorpe, targeting land thought to be part of the Elmesthorpe manor (Butler 2003). Although most of the resistivity anomalies were attributed to either modern activity or a geological or hydrological origin, medieval ridge and furrow and a possible demolished building were identified. The latter feature was outside the area of the final road line, however. Further fieldwork was identified as necessary, including a scheme of trial trenching and survey and investigation at Elmesthorpe fishponds (Clark 2007a, b).

2.5 Aims and Methodology

The main aims of the archaeological work, depending on the dating of the ponds, was to contribute to the research into potential fish farming (Lewis 2006, 208; Monckton 2006, 281) and garden development (Courtney 2008, 222).

The specific objectives were:

- To ascertain whether any significant archaeological remains are present and characterise their nature within the area to be developed.
- To establish the form function and chronological development of the earthwork remains with particular attention paid to the potential for survival of economic and environmental data.

An initial „brief' outlining the scope of the required site wide works was produced by the Leicestershire County Council Senior Planning Archaeologist (Clark 2007a), with a further „brief' including further survey, evaluation and recording specific to the Site A ponds (Clark 2007b; hereinafter the „Brief'). Subsequent to this Brief, a Design Specification was produced by ULAS for the works (see 8.4). The methodology followed the „Brief' and included trial trenching of Site A (Elmesthorpe) to clarify the results of the initial resistivity survey (ULAS Rep. 2003/001; Butler 2003). This was to include a total of *c*. 450m^2 of trenching (10m x 25m trenches). A programme of full archaeological investigation and recording of the fishponds in impacted on by the development, was to comprise three stages:

a. Clearance – removal of existing scrub and previously tipped waste, etc., by machine/hand under archaeological control and supervision. Provision will be made for prior assessment of the tipped waste to meet appropriate COSHH requirements. The presence of newts within the vicinity required appropriate initial assessment of the ponds and where applicable adoption of suitable working methods.

b. Further topographic Survey of surviving earthworks, following a above,

c. Excavation of the complex as advised by 3b/c above. The excavation will commence with an initial site strip under full archaeological control and supervision, followed by further assessment of the detailed recording strategy. Provision will be made for appropriate palaeoenvironmental sampling and analysis. The excavation will include the full extent of ponds 3 and 4 currently within the yard area to the south of Field 22.

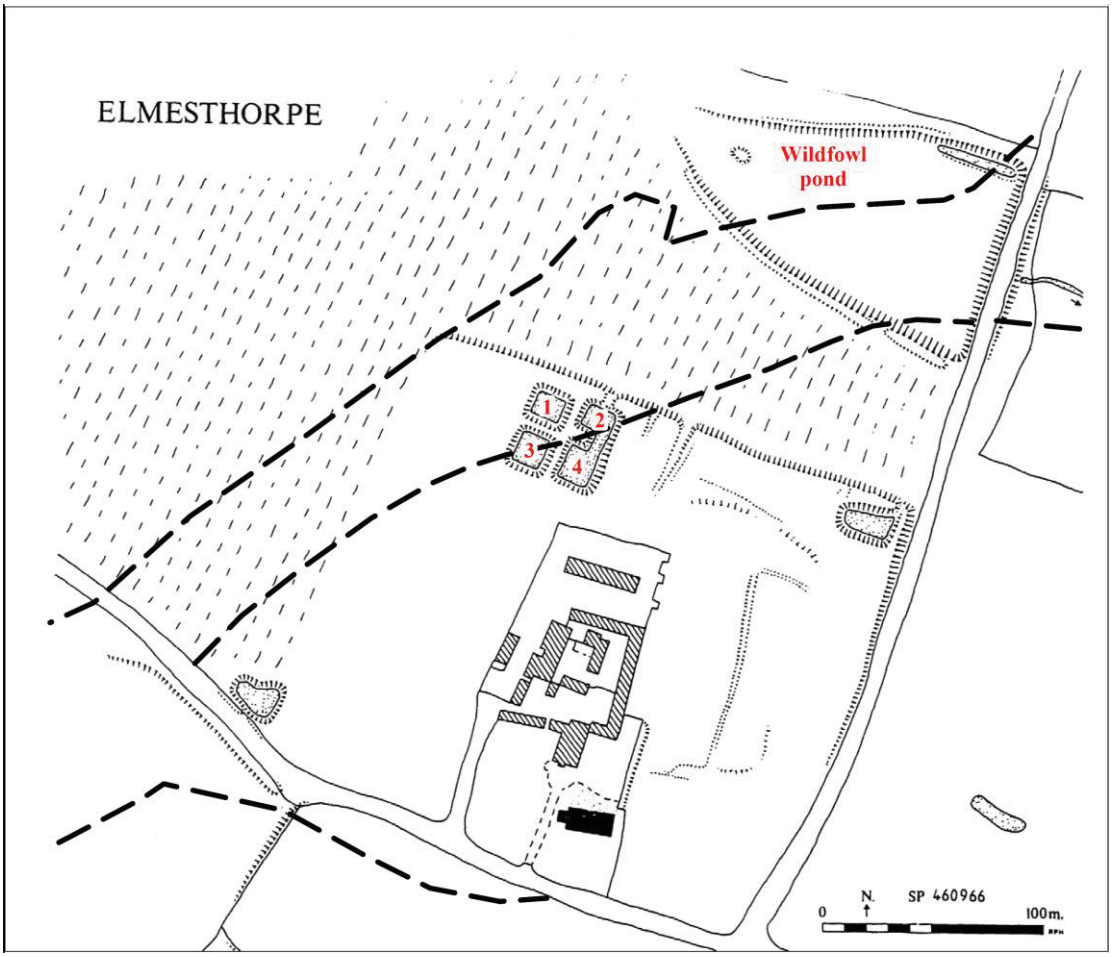


Fig. 3 Previous plan of Elmesthorpe earthworks with roadline overlaid (dashed). Note also pond numbers and 'wildfowl pond'. Background plan after Hartley (1989).

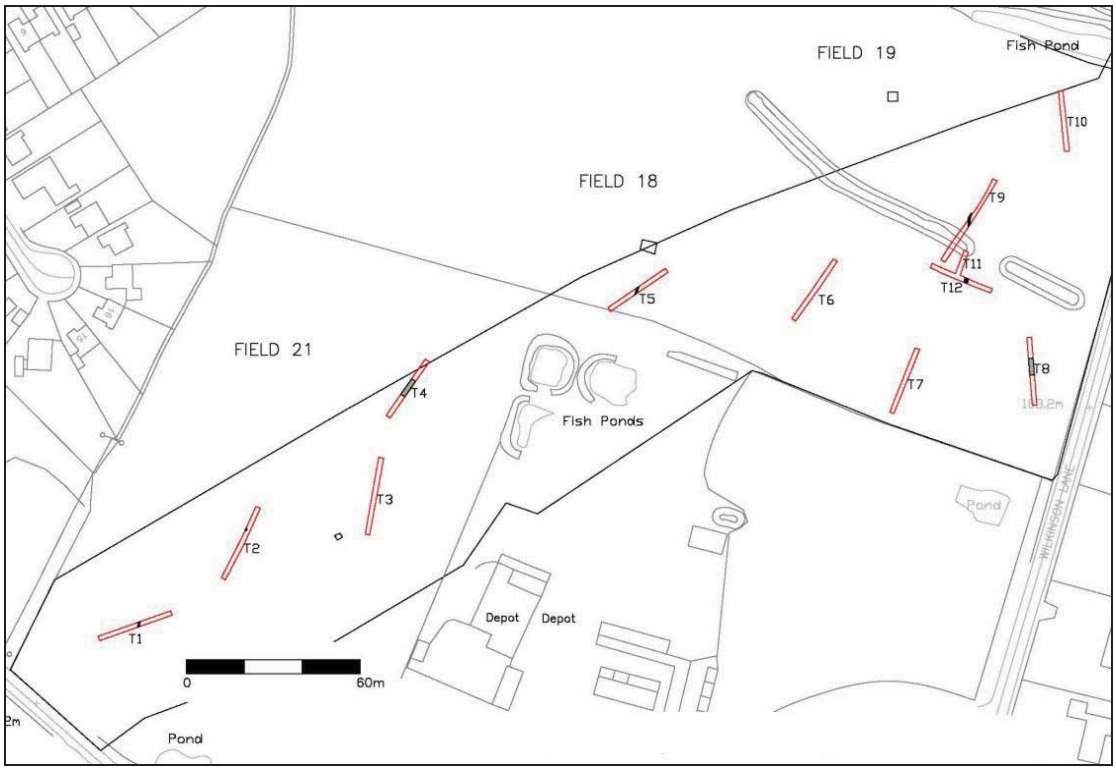


Fig. 4 Trial trench location. Bypass line shown by heavy lines.

The methodology for excavation was to include the removal, under continuous archaeological control and supervision, all refuse and overburden within the study area. The machinery employed was to be appropriate for the requirements of the task, and to be operated so as to minimise damage to archaeological deposits (tracking across exposed or unprotected archaeological deposits was to be avoided, and a bladed ditching bucket was to be used).

A topographic survey of the earthwork complex was to be prepared to supplement the previous survey undertaken prior to the removal of scrub and the infilled refuse. This was to equate to a Level 3 survey as defined by RCHME (1999).

Following the survey and overburden removal the monument was to be selectively excavated to determine its form, function, character, dating and development. Attention would be given to identifying structural elements such as supply and outlet channels, overflow leats and sluices for water management. Evidence for internal temporary features such as pens, tanks, etc. was to be identified and appropriately investigated. Environmental and other sampling would be undertaken to address coherent research objectives, for example where deposits associated with the use of the fishpond are identified. Where datable organic deposits were identified consideration was to be given to their appropriate sampling. The investigation will be undertaken using a combination of hand and machine excavation.

The ponds had the potential to preserve temporary structural evidence, e.g pens, tanks and important palaeo-environmental remains including evidence of the final phase of the pond's use and disuse and of the area's wider palaeoecology. Structural features: all the internal surfaces of the pond banks (spinal banks and the northern retaining dam) were to be machine and/or hand cleaned as appropriate. Evidence for sluices, leats, inflow and/or overflow channels were to be investigated and appropriately recorded.

3 Results

3.1 Initial Work Site A

Initial work for site A comprised trial trenching in fields adjacent to (to the west and north of) the ponds, a machined section through the „wildfowl pond' south bank and recording of this section, initial topographic and photographic survey of the ponds and clearance of vegetation in the ponds. This fieldwork began 23/07/07.

3.1.1 Trial trenching adjacent to the ponds

A dispersed and somewhat mixed assemblage of finds and features was recorded during the evaluation (see Figs. 3, 4). All features were truncated to some extent, presumably by medieval (and later) ploughing in the north field by the „wildfowl pond' („Field 19'), although some areas had been sealed by hillwash on the north and south slopes adjacent to Church Farm (see Figs. 3, 4).

Trench 1 in the far south of the area identified a north-south aligned gully (16) [17] (Fig 4) over >1.8m long, 0.6m wide and 0.27m deep, with a grey sandy leached fill. This produced a small sherd of hand-made pottery, most probably Anglo-Saxon in date (below p.21).

Trench 2 exposed a shallow scoop-like feature (3) [4] (0.9m diameter, 0.06m deep) and just below shallow overburden (Fig 4). This feature consisted of a large quantity of charcoal, undated, but most likely modern due in date. Forty sherds of medieval pottery, dating *c.*13th century, and tile fragments were recovered from the subsoil in trench 4.

Trench 5 exposed a south to north horseshoe drain (10) [11] running from the fishponds area to the presumably modern drinking pool in the centre of the field (Fig. 4, Plate 1).

Trenches 3-4, 6-8 and 10 provided no definite evidence for features, although unstratified lithic and ceramic finds (e.g. in the subsoil) suggest some activity of prehistoric, Roman, medieval and modern date. Trench 10 in the northernmost field („field 19') had very shallow

overburden on to a level surface. This area was clearly truncated, most likely due to the landscaping works for the „wildfowl pond' here.

Trenches 9, 11 and 12 contained identifiable features and finds suggesting a greater concentration of activity. In trench 9 a north-south aligned ditch (cut [8] fills (6) (7)) was recorded, although this was truncated and very shallow (*c.*0.18m max), measuring 1m wide, and over 4m long (Fig 4, Plate 2). The linear feature had two fills, only the upper of which (6) produced pottery, ceramic building material (CBM) and animal bone. Pottery included oxidised and Black Burnished wares of 2nd century AD date (or slightly later), and also a sherd of 12th-13th century Coventry D ware. Medieval pottery from this feature and this area in general, indicates some disturbance of deposits. There is a possibility that the Romano-British material is residual, although this seems unlikely in view of the sherd size and count.

Trenches 11 and 12 were excavated in an attempt to trace ditch [8] into the adjacent field („field 18'; Fig 4). Unstratified material included Potters Marston ware, slate, brick and tile; some of these building materials may be Roman in date. In Trench 11 there was no evidence for a continuation of ditch [8], although two probably natural features were identified, both filled with subsoil-like material, an orangey brown clayey silt with occasional small rounded stones. One was a north-south linear feature, on the same alignment as [8] but otherwise totally dissimilar. Just to the south of this was a shallow scoop (*c.*0.7m diameter, 0.07m deep). Trench 12 also exposed several probable natural features here, although they may be medieval or post–medieval furrow bases, as probable furrows from strip field systems were identified in this field during geophysical survey (Butler 2003). Additionally, a shallow elongated scoop (or truncated pit) [22], measuring 1.5m north-south, 1.2m east-west and *c.*0.15m deep was recorded, the upper fill (20) of which contained a sherd of Potters Marston ware and some fragments of fired clay. The lower fill (21) was mostly charcoal. Subsequent watching brief work in this area did not identify further features, although further medieval finds were recovered during reduced level works on the Wilkinson Lane/ Station Road works just to the east (Jarvis 2009a).

3.1.2 Recording of „wildfowl pond' embankment

A machine cut section was excavated through the south bank of the wildfowl pond (trench 9, see Figs. 3, 4) to allow observation of its structure and sequence. The bank consisted of a series of substantial layers of earth, with no evidence for any revetment (plate 3).

3.1.3 Initial Topographic and Photographic Survey, Clearance of Vegetation

Initial topographic survey was carried out using a Topcon GPS and Total Station EDM (see Fig. 6), with the resultant survey being reduced to the Ordnance Survey grid. Initial survey identified the major features and their break of slope, and also recorded standing water and modern infill. The latter prevented a full survey at this stage, however intensive topographic survey was carried out on areas that would be machined out later for the earthwork section recording (cf. Figs. 6, 7). Prior to clearance and machining an initial photographic survey was also carried out. Clearance of vegetation in the pond area then took place with supervision of the contractors machining prior to and during these works. Additionally samples were taken by the contractors, Sir Alfred McAlpine Ltd, from pond fills for assessment of contamination levels.

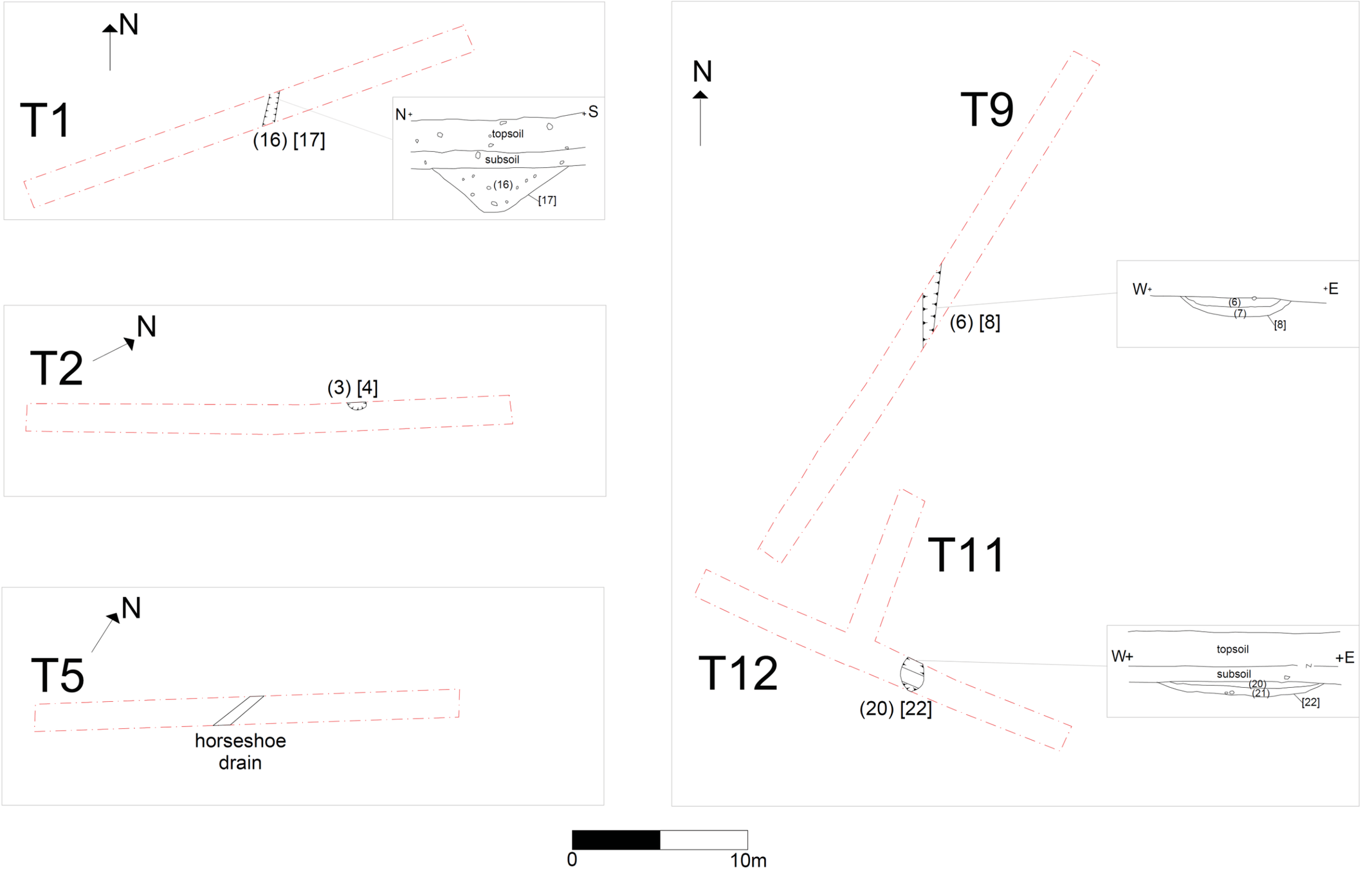


Fig. 5 Trial trenches with features (sections scale x10). Trench locations shown on Fig. 4

3.2 Results of Follow up Work (after machining)

Machining was carried out with a 360 tracked excavator. Initially ground vegetation was removed, followed by obvious modern overburden. The modern infill in the ponds was also excavated, prior to any excavation of trenches into the ponds. Some 300 tonnes of modern backfill was removed, primarily from Pond 3 (see Fig. 3, for pond numbers), but also from the other ponds where they were within the easement (i.e. all of Pond 1, majority of Pond 2, north-west corner of Pond 4).

3.2.1 Follow up Photographic and Topographic Survey

Follow up photographic and topographic surveys were carried out pre- and post-trenching, adding to the pre-clearance record (3.1.3). The photographic record included views of the general layout of the ponds, their earthworks, and additional features (e.g. potential channels/gaps/sluices) were taken (plates 6, 7 and 8).

Plate 1, Land drain [11] seen north of ponds, running south to north. Note mixture of re-used material

3.2.2 Pond Machining, Exploratory Trenches and Auger Survey

Pond trenches P1, P7 and P8 were located inside the pond earthworks to identify any internal structures and silting episodes (see Fig. 7 for pond numbers and pond trench numbers). The only internal feature identified in the pond basins was an east-west horseshoe drain seen in Pond 3. This drain was in-situ in pond trench P1, and at a depth of *c.*3m below the current ground level. This carried running water, and because of this and the vicinity of the modern „landfill' on the south edge, after recording the deeper section of this trench was backfilled and no further work was carried out. Silting was also identified within this pond, however it was not possible to differentiate this from modern infill and contamination in the main area of the pond. Trenches P7 and P8 were excavated in Pond 2 through a depth of c.0.3 to 0.4m of pond fills on to natural bluey red clays. The majority of these pond silts were clearly very late (they produced modern material), and no sequence of earlier silting episodes was identified.

The silts were sitting on the natural clay which appeared to be flat, undisturbed and possibly even levelled relatively recently (a late cleaning out episode?). No structures were identified.

Plate 2, North-south truncated gully [8] seen north of „wildfowl pond' embankment (Trench 9)

Plate 3, „Wildfowl pond' embankment looking north-east (Trench 9)

Plate 4, Main ponds (right) looking east along east-west ditch line („quarry scoop'), prior to clearance

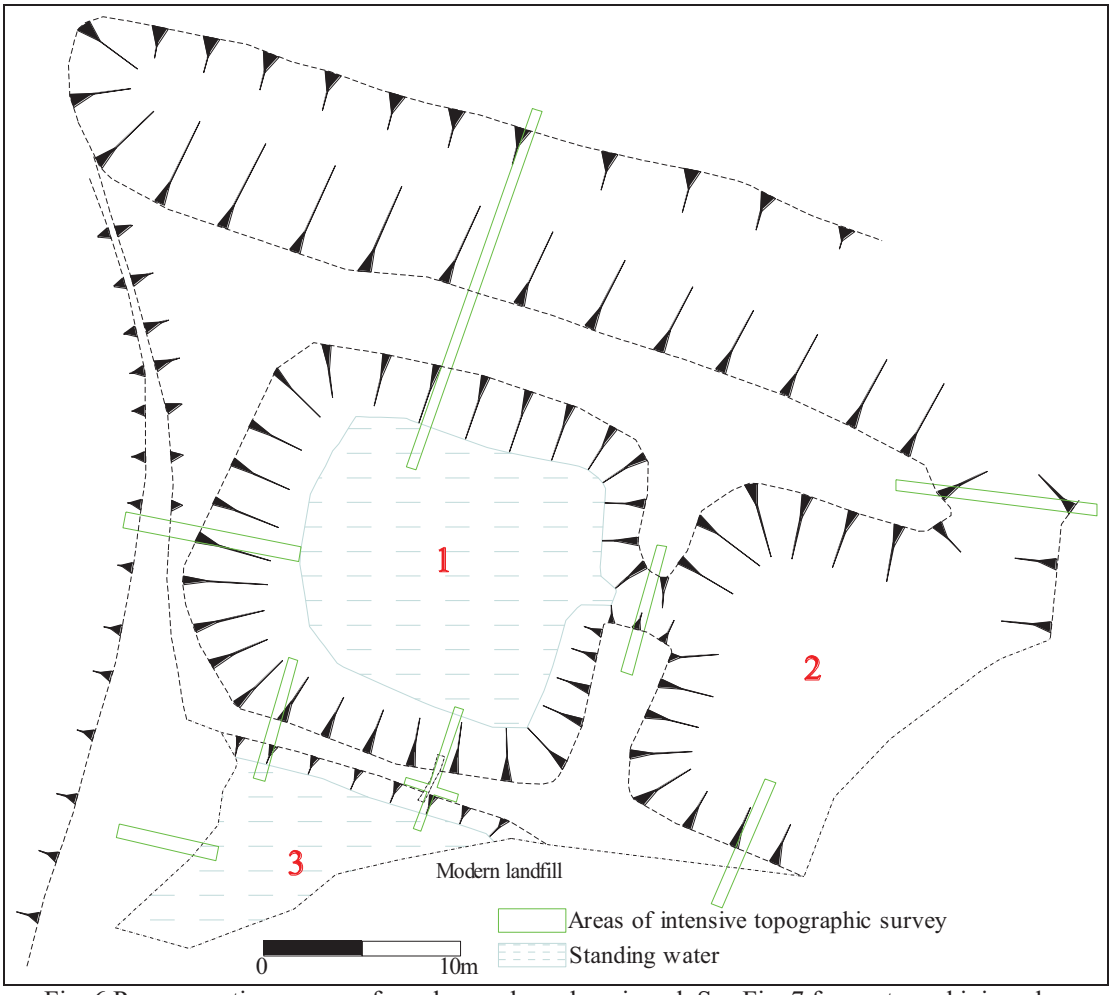


Fig. 6 Pre-excavation survey of ponds, pond numbers in red. See Fig. 7 for post-machining plan and levels after removal of overburden.

Pond trenches P1-6 and P9 (Fig. 7) were excavated to assess the construction techniques of the earthworks, including any evidence for phasing. These provided some good evidence for the construction of the banks, and possibly different construction between the external and internal banks (see Fig. 8 for sections). The bank material generally consisted of several substantial layers up to 0.55m thick of re-deposited local soils. Although more or less clayey in nature no attempt seems to have been made to use pure impermeable natural clays, with a mixture of material being used including subsoils. Residual finds included occasional sherds of Romano-British and medieval pottery (1st century calcite gritted ware; 12-13th century Potters Marston ware). No evidence for bank revetting in any form was observed. The external banks were more massive in make up and height (over a metre of bank material) than the internal partitions (*c.*0.8m). Each pond compartment measured up to 20m across, and with a depth from bank to base of up to 1.5m.

A possible buried soil (or hillwash) layer was identified at the base of the construction sequence, which provided pottery of 12th-13th century date (e.g. glazed Fine Stamford Ware ST1 from (35)). This layer of material is comparable to that seen slightly upslope in evaluation trench 4 (above, 3.1.1), and provides only a broad *terminus post quem* for the pond construction. Pond trenches P4 and P9 were further extended northwards into the ‚quarry scoop' which is actually a substantial east-west ditch, and waterlogged at the base (see plate 4). This is the same earthwork recorded on Hartley's plan (Hartley 1989) that originally continued *c.*50m to the west beyond the ponds, and could also be seen during the watching brief in section in the west constructional V ditch. On the original Hartley plan this feature was shown more as a ‚terrace' down from the ponds, but it was clearly a substantial ditch feature. Additionally, trench P9 identified a series of ceramic land drains running both away from and along the north edge of the earthworks. These are linked to the land drain in the field to the north (identified in evaluation trench 5), and probably also that seen in the base of Pond 3, and may indicate reworking of drainage and perhaps the ponds themselves – hence the gap through the north bank of Pond 2. These drains included a mixture of re-used medieval floor and roof tiles, and horseshoe drains.

Augering was carried out in two areas (see Fig. 7); the small channel joining Ponds 1 and 3, and the larger gap in the bank between Ponds 1 and 2. This was carried out to record any evidence for structures (e.g. sluices), and to assess the possibility that these gaps were of historical origin. The antiquity of these gaps was already questionable as neither was recorded on the original plan (Hartley 1989), and indeed the auger results indicated no evidence for their antiquity or for any structures within these features. Furthermore, Hartley's plan indicates that Ponds 2 and 4 were joined, although this could not be ascertained on site as this area had been infilled and was outside the easement.

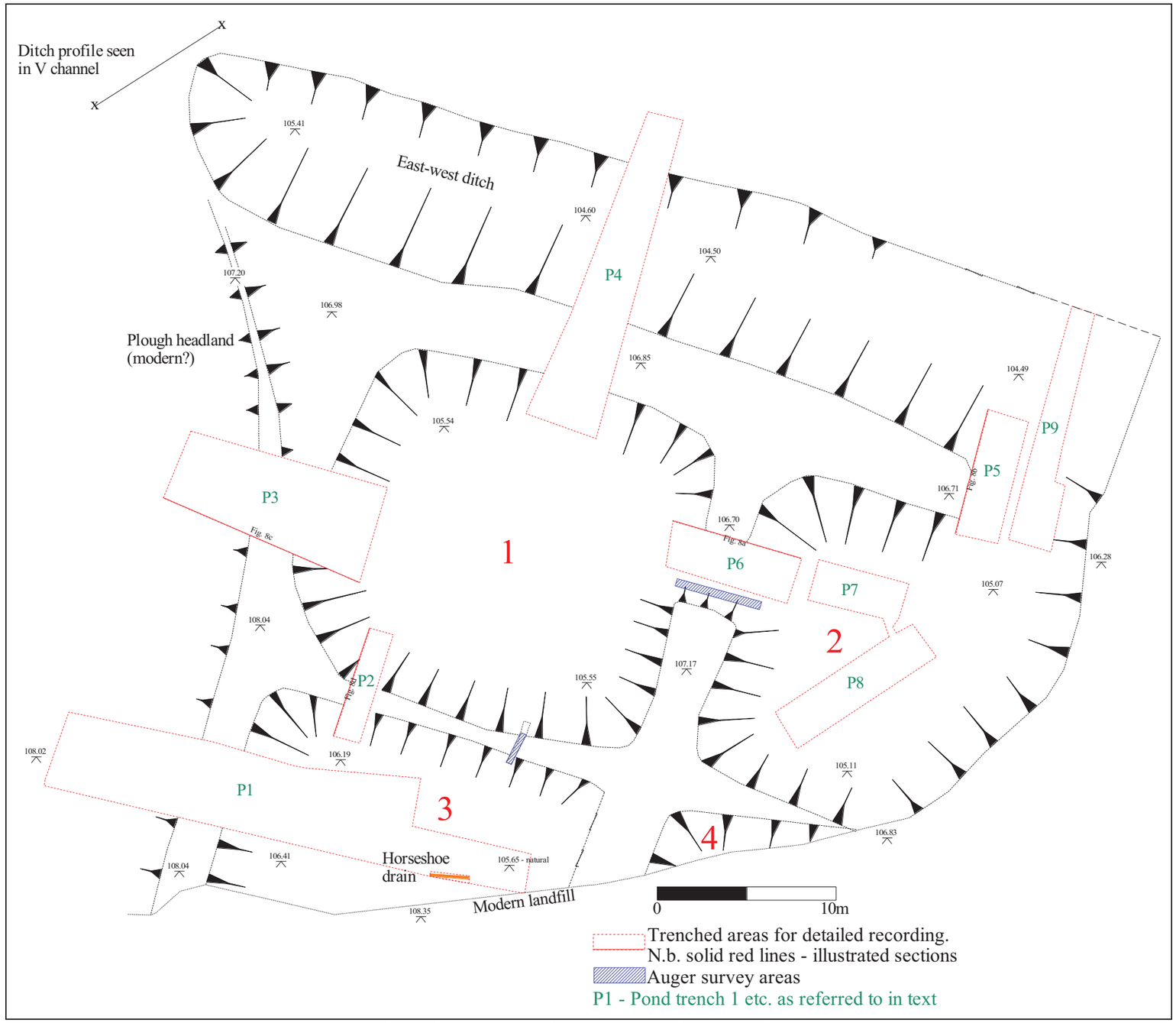
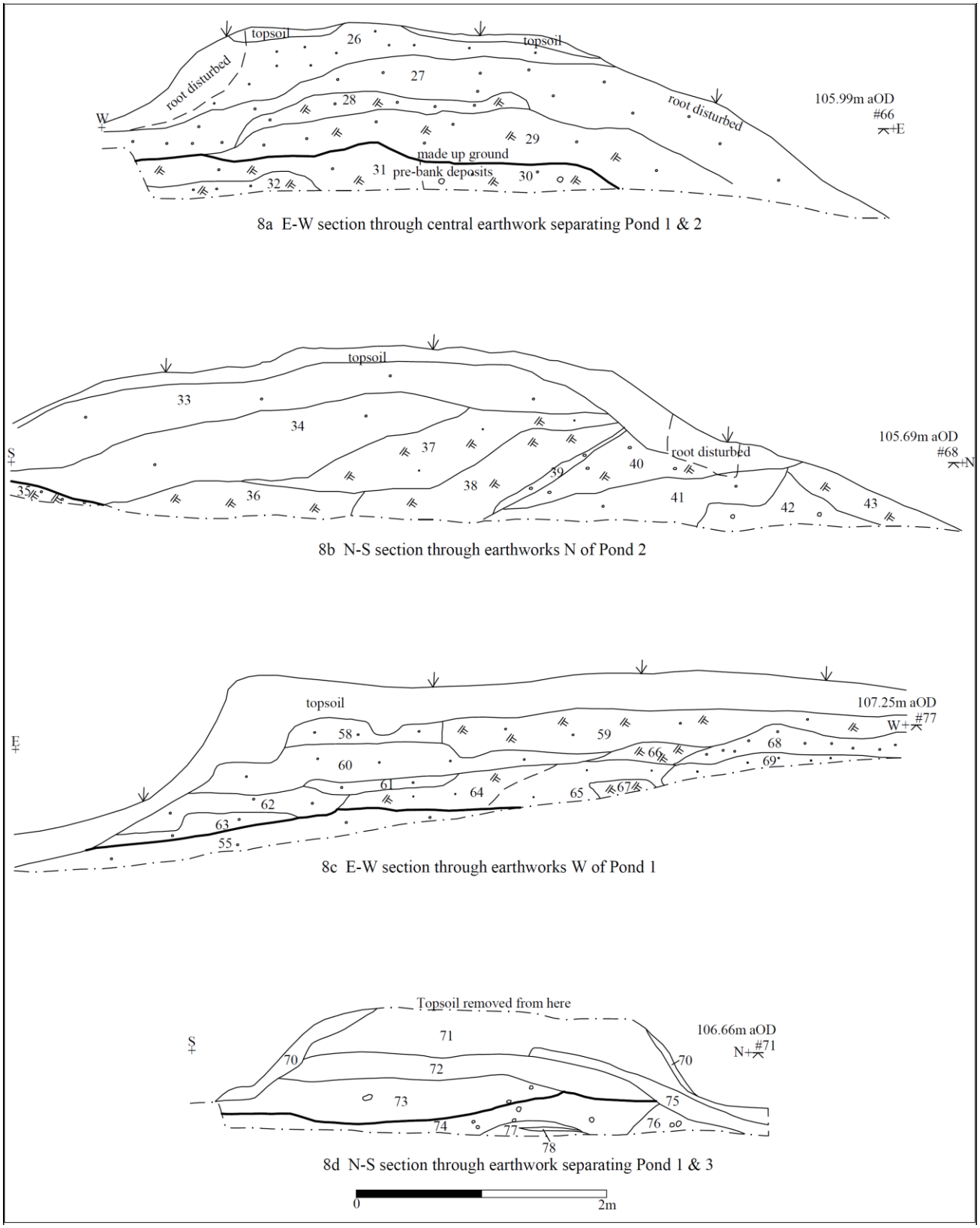


Fig. 7 The ponds after trenching. Compare with Fig. 6. See Fig. 8 for sections.



Figs. 8a-d Sections through pond earthworks cf. Fig. 7.
Heavy lines indicate probable original ground level.

Plate 5, Interior of ponds looking east along partition between pond 1 (left) and Pond 3 (right), prior to clearance.

Plate 6, As plate 5, post-clearance and overburden removal. A gap can be seen in the bank at left between Pond 1 and Pond 2. Pond 3 on the right.

Plate 7 The ponds after clearance and removal of modern landfill, looking north-east. Foreground Pond 3 (flooded), left Pond 1.

Plate 8 Pond 3 during machine excavation, showing sections through banks and partition and depth of fill. Looking north-east

4 Discussion and Conclusions

4.1 The ponds in context by Leon Hunt, Wayne Jarvis

Ponds have formed an important part of food production and of garden ornamentation in England since the early medieval period, and few English villages do not include ponds as part of their form. They also formed an integral part of monastic life. Clearly ponds served various purposes, and often had multiple functions in any one case. Hartley (1988) has surveyed the evidence for medieval fisheries and ponds in Leicestershire. As archaeological features ponds are often overlooked in favour of more tangible and datable features such as building remains. Ponds are often dated purely by association to nearby remains without confirmation by excavation or sampling. The fact that ponds were regularly cleaned out also means that even when excavated dating evidence is often sparse or non-existent and this paucity of dating evidence is often complicated by their being used over long periods of time and their change of use throughout their life. Ponds which may have been used for food production on an estate during the medieval period may be re-shaped and retained as ornamental ponds during later periods. However, when good dating evidence and the availability of sampling for fish, mollusc and plant remains is possible, ponds can provide archaeologists with environmental data of great significance (Aston 1988).

During the medieval and post-medieval periods fish formed an important part of the diet of much of the population, with the possible exception during the medieval period of the very poorest peasants. Much of this fish would come from sea fishing, and attained from markets would have been available throughout the land, even in very inland areas. Lichfield, for instance had a thriving fish market during the medieval period (Dyer 1988). The study of fish bones in archaeological contexts makes it clear that both sea and river fish were very important in the diets of the majority of people during the medieval and post-medieval periods (Aston 1988). However there is little direct evidence of this from the county. Where there is evidence of fish being part of medieval diet, e.g. at the Austin Friars site in Leicester, there appears to be a preference fore marine fish as no bones of purely freshwater species were recovered (Thawley 1981; Hartley 1988). However there are common references to poaching of streams and ponds in historical documents, indicating that freshwater fish certainly formed part of the diet, so it is likely that freshwater species were significant, but are under-represented archaeologically. Medieval fisheries in rivers and streams are recorded near to Elmesthorpe at Croft (1437) and Narborough (1247), and ponds as part of the mill works were fished close by at Potters Marston (Hartley 1988). Direct evidence of medieval fisheries has been recorded near the confluence of the Rivers Trent, Derwent and Soar, some 30km to the north (Cooper 2003)

Although ponds were likely to exist in most villages, these were more likely used for watering stock, and the construction of ponds for the raising of freshwater fish species was largely an aristocratic pursuit with most well-engineered and highly maintained fishponds being associated with manorial sites. The acquisition of a variety of fish for breeding, the rearing of young in separate ponds (redds), the hiring of skilled staff to maintain the ponds and the kinds of skills needed to excavate and construct ponds, including the building of dams and sluices would only be within the reach of the rich (Dyer 1988). Many of the fishponds still extant today, as archaeological remains, are therefore largely „high status' features. This connection between freshwater fish and the aristocracy is also exemplified by the abundance of documentary evidence for poaching and the use of fish as gifts to kings and high-ranking officials; records from Leicester in 1346 show that the mayor of Leicester made a gift of a dozen pike, bream, lampreys, eels and salmon to the earl of Lancaster (Bateson 1901). There are also many sources from the medieval period, such as household accounts that record that most fish consumed by aristocrats came from their own estates. Both Croft and Broughton Astley nearby to Elmesthorpe had vivaries attached to their manorial sites, and Evington, Leicester has good surviving examples (Hartley 1988).

The shape, size and form of ponds are, of course, very varied. In all cases a natural supply of freshwater is of paramount importance, therefore the vast majority of ponds are located near streams or springs (Roberts 1988). Ponds may be located on areas that naturally become waterlogged and therefore would be of little use for arable farming. The shape of ponds may be governed by the local environment or on what the manager or owner had set out to achieve. The Redds (rearing beds) may be far smaller than the main ponds from which the fish are harvested („stews'). Ponds may also be deliberately rectangular to facilitate netting. A series of ponds used for fish rearing and harvesting would naturally have to be connected by small channels, and sluices would have to be incorporated to stem the flow of water from the natural inlet source and between co-joined ponds, mainly to facilitate cleaning. Ponds were often „puddled' at the base with a layer of clay, or in some cases charred planking or even tar (Roberts 1988), although the use would vary depending on the local sub-strata. There would often be a system in place to control flooding; normally a sluice to return overflow to the water source or to other ponds. Ponds were often contained by unrevetted clay banks, and it is normally these that survive as extant earthworks. Many ponds are very simple in structure and are merely formed of stews, which would be continually re-stocked from an external source. Further ponds may have been added at a later date when needed. Simple ponds would also be constructed under a spring line leading the ponds to be filled from the base of the pond, and negating the need for more sophisticated damming and sluicing (Chambers and Gray 1988), as is the case at Elmesthorpe.

Throughout the medieval period the documentary evidence shows that aristocratic households became slowly more dependent upon the market for their fish. Estate ponds were often leased to tenant farmers who consumed or sold on the harvested fish from manorial ponds. Enterprising lords would also sell surplus fish at markets. Therefore, throughout the latter part of the medieval period into the post-medieval period, the burgeoning middle-classes aped their aristocratic lords and the consumption of fresh-water fish from managed ponds spread to the lower classes (Dyer 1988). During the late 16th century through to the early 18th century the popularity of fish producing ponds grew, due in some part to new manuals and treatises on the subject, but by the 19th century household management books show that there was a decline in the popularity of privately managed fish ponds (Chambers and Gray 1988). Additionally during the 16th to 18th centuries ponds became a „must have' feature in formal pleasure gardens (Taylor 1983), and associated with other landscaping and water features. Ponds of the 17th century are generally formal in pattern and geometric in shape, although more informal naturalised features eventually became popular in the 18th century. Other comparable post-medieval garden ponds survive in the county at Kirby Bellars and Stoke Golding for example (Hartley 1988).

4.2 Form and Function of the ponds

The survey and excavation appears to confirm that the ponds are not evidence of medieval fish farming but are ornamental ponds associated with Elmesthorpe Hall probably dating from the 17th century. No evidence for structures such as revetting, sluices, compartments etc. was identified during the fieldwork, with the ponds being made up purely of earthen banks. This appears to confirm that the ponds were ornamental in nature. Additionally, the „two by two' grid geometric nature of the Elmesthorpe ponds compares closely with other garden ponds of 17th century date (Taylor 1983). Certainly the outer bank is wide and substantial compared to the inner partitions and may have served as a walkway from which the partitioned ponds could have been admired. The excavation of the east-west ditch in front of the ponds adds to our understanding of the context of these earthworks. This feature could have formed a canal of open water fronting the formal ponds, as canals were a regular feature of 17th century pleasure gardens. At Lyveden New Bield, Northamptonshire, such canals were a part of the grand garden scheme begun in 1597 by Sir Thomas Tresham (Taylor 1983). The Elmesthorpe feature additionally served as a boundary (both physically and symbolically) between the more formal pattern close to the manorial site and the low-lying wildfowl pond area to the north, and perhaps is a precursor to the ha-ha feature proper that was to become fashionable in this period. If an 18th century date is accepted for the ceramic land drains that were excavated in association with the ponds, then this might suggest a reworking of earlier, 17th century earthworks, the date suggested from historical references (above, 2.3). Re-use of building materials was definitely employed in the construction of these drains and perhaps the earthworks too had an earlier form, although no definite evidence for different structural phases could be identified.

There was some evidence for earlier activity in the area in the form of two worked flints from Trench 3, Roman pottery and an associated ditch in Trench 9, a gully with Anglo-Saxon pottery in Trench 1 and unstratified medieval pottery in most trenches. No further clarification of this activity was possible from a subsequent watching brief.

4.3 Conclusions

Excavation of the ponds at Elmesthorpe has indicated that they were substantial earthworks in themselves, but also part of a larger scheme of works. They were most likely constructed for an ornamental rather than a strictly „economic' purpose, with no structural evidence for their use as fishponds, and their form conforms to that of other pleasure ground earthworks of similar date. They can also be associated with the adjacent canal-like east-west ditch, and the „wildfowl pond' in the low-lying area also to the north, and being part of the ornamental landscaping of the grounds associated with the manor at Elmesthorpe. This large scale and

grandiose landscaping was very likely directed by the wealthy manorial owner of Elmesthorpe, Sir William Cokayne (1559-1626).

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7 Archive

Leicestershire Museums, Arts and Records Service will hold the finds and documentary archive under the Accession number XA184 2007 (Site A, includes watching brief on Wilkinson Lane). The archive consists of:-

1 box finds
CD of 193 digital photographs and associated contact prints,
326 black and white negatives and associated contact prints (including record shots),
9 A4 WB sheets plus + 1 A3 plan for WB. 37 A4 site indices/record sheets, 22 A5 context sheets, 8 A2 + 1 A4 permagraph plan drawings,
Survey data on CD and hardcopy.

8 Appendices

8.1 The Post Roman Pottery, Ceramic Building Material and Miscellaneous Finds by Deborah Sawday

The pottery, 82 sherds, weighing 840 grams, was catalogued with reference to the ULAS fabric Series (Connor and Buckley 1999). The results are shown below (table 1). Medieval pottery, dating predominantly from the 12th and early 13th centuries, was the most common find, in Potters Marston, Stamford and Coventry wares. A slightly later sherd, dating from the mid-13th or 14th centuries was in Chilvers Coton ware, from Nuneaton, in Warwickshire. All four sites were major pottery production centres in the medieval period, and Potters Marston, which lies only approximately 3 km to the east, provided the bulk of the medieval material. The source of the Oxidised Sandy ware is uncertain but, as with most medieval pottery, is probably fairly local in origin. A few sherds of Roman, Saxon and post-medieval date were also recovered.

Table 1: The Roman and later pottery totals by fabric, sherd numbers and weight (grams).

Fabric/Ware	Nos	Weight (grams)	% of total by sherd nos.
Roman			
CGIA – Calcite Gritted ware IA	1	4	
BB1 – Black Burnished ware 1	5	19	
OW2 – Oxidised ware 2	12	117	
CG – Calcite Gritted ware	1	4	
Roman Totals	**19**	**144**	**23.1**
Saxon			
SX- Saxon ware	1	5	
Saxon Totals	**1**	**5**	**1.2**
Medieval			
ST1 – Very Fine Stamford ware	1	6	
PM – Potters Marston ware	51	677	
CO1 – Coventry D ware	1	1	
CO2 – Coventry A ware	1	17	
OS1 – Oxidised Sandy ware 1	1	2	
CC2 – Chilvers Coton C ware	1	2	
Medieval Totals	**56**	**705**	**68.2**
Post medieval/Modern			
EA2 – Earthenware2/Pancheon ware	6	86	
Post Medieval/Modern Totals	**6**	**86**	**7.3**
Pottery Totals	82	840	99.8

The ceramic building material included an inlaid medieval floor tile and 39 fragments of brick and tile. Some of the latter was possibly Roman but mostly consisted of post-medieval flat roofing tile. A horseshoe land drain of post medieval or modern date was also recovered from the ponds.

Table 2: The Finds by context (grams).

Site/Parish: Area A Earl Shilton By Pass	Submitter: W. Jarvis
Acc. No: XA184 2007	Identifier: D. Sawday
Doc. Ref: earl shilton5.doc	Date of Id: 21.8.2008
Material: Pot, CBM etc.	Method of recovery: Eval/Excavation
Site Type: Fishponds, pasture	Job No: 08/658

Context		Nos.	Grams	Comments
5 - T4 sub-soil	PM – Potters Marston	38	519	Includes complex jug rim & 2 jar rims, later 12th/e13th C, abraded/leached surfaces.
5	C02 – Coventry A ware	1	17	Bowl rim – 12th-13th C+
5	CC2 – Chilvers Coton C ware	1	2	Rouletted dec, c.1250-14th C
6 (8) - T9	?BB1 – Black Burnished ware 1	5	19	No evidence of burnishing – abrasion? Flat rim bowl, c.120-200 AD.
6 (8)	OW2 – Oxidised ware 2	12	117	Jar base, probably 2nd C. AD if not slightly later.
6 (8)	CO1 – Coventry D ware	1	1	?intrusive, c.1150-c.1250
9	CGIA - Calcite Gritted	1	4	Early Roman – mid – late 1st C AD.
16 [17]	SX – Saxon ware	1	5	Abraded, everted rim, no evidence of burnishing. ?Early – middle Saxon *c*.400/450-650+

19	PM	2	2	Very thin walled, pos. late 11th – 12th C, abraded/leached surfaces.
23 – T8 sub soil	PM	3	32	*c*.1100-c.1300 – abraded/leached surfaces.
25	CG – Calcite Gritted ware	1	4	Roman, ist century
29	PM – Potters Marston	2	31	12th – 13th C
29	OS1	1	2	Medieval
34	PM	1	2	12th – 13th C
35	ST1 – Fine Stamford ware	1	6	Glazed, 1150+
53	PM	1	8	12th – 13th C
U/S Pond 3	PM	1	59	Thumbed applied clay strip, 12th -13th C.
U/S near section 50.1	PM	1	4	12th – 13th C
U/S – T9	PM	2	20	
U/S – T9	EA2 – Earthenware 2	5	65	Post-med/modern
U/S – T10	EA2	1	21	Post-med/modern
MEDIEVAL FLOOR TILE				
10 [11] – T5	CC – Chilvers Coton	1	64	Inlaid medieval floor tile, ?14th C.
CERAMIC BUILDING MATERIAL				
1 [2] – T2	EA - Earthenware	1	1	Tiny fragment, undatable
5 – T4	EA	1	1	Tiny fragment, undatable
6 – T9	EA	2	93	Pos Roman tile
6 [8] – T9	EA	6	26	Tiny fragment, undatable
10 [11]	EA	4	629	Medieval/post medieval flat roofing tile – possibly nib or peg, but no evidence of peg holes or nibs.
10 [11]	EA	3	129	Tile/brick –? Late med/post med?
10 [11]	EA	1	108	Modern tile
24 – T4	EA	5	180	Possibly all Roman tile
24 – T4	EA	1	43	Medieval/post medieval flat roofing tile
57	EA	1	635	Reduced hard fired, possible early post-med EA1
U/S – T9	EA	3	112	?Medieval/post medieval flat roofing tile
U/S – T9	EA	2	121	?Roman &/or post med tile/brick
U/S – T10	EA	1	40	?Post med tile/brick
U/S – T10	EA	5	600	Medieval/post medieval flat roofing tile, 2 with evidence of nibs
U/S – T10	EA	1	168	Post med brick
U/S – T10	EA	2	20	Misc. tile/brick frags - undatable
U/S	EA	1	1769	Horseshoe, land drain
MISC				
24 T4	Glass	1		Modern
U/S T9	Roofing slate	2		With bored holes ?Roman
14 (15) T3	Flint	1		worked
U/S T3	Flint	1		Worked - ?scraper
5 - T4	Industrial Residue	1	154	
20 [22]	Industrial residue	2	7	
20 [22]	?Fired Clay	3	3	

6 [8]	bone	3		

8.2 Context Index

Contexts

Context	Cut	Feat Type	Area	Description
0	0			Context 0 - for UNSTRATIFIED FINDS
1	2	PH	T2	Fill shallow poss PH, small frag CBM?/fired clay
2	2	PH	T2	Cut shallow poss PH
3	4	Pit?	T2	Fill poss charcoal feature
4	4	Pit?	T2	Cut poss charcoal feature
5		Layer	T4	Layer Subsoil with redep'd Med pot, undated CBM, & slag
6	8	Linear feature	T9	fill N-S linear feature, RB midway T9, has pot, ?RB CBM, Animal bone
7	8	Linear feature	T9	fill N-S linear feature, RB midway T9
8	8	Linear feature	T9	Cut N-S linear feature, RB midway T9
9	0	Layer	T8	Layer of mineralisation, odd, 1 sherd early RB
10	11	Linear feature Drain	T5	Fill Drain, Modern = horseshoe drain & reused Med/PMed tile inc. flat rooftile used for drain structure
11	11	Linear feature Drain	T5	Cut Drain, Modern = horseshoe drain & reused Med/Pmed tile in 10
12	13	Linear feature	T5	Fill Linear feature, c.E-W
13	13	Linear feature	T5	Fill Linear feature, c.E-W
14	15	Pit?	T3	Pit? Fill, Flint?
15	15	Pit?	T3	Pit? Cut
16	17	Linear feature	T1	Cut c.E-W Linear feature, handmade pot - AS
17	17	Linear feature	T1	Fill c.E-W Linear feature, handmade pot - AS
18	13	Linear feature	T5	Linear feature Fill, c.E-W
19		Layer	T9	Pre-earthwork (E-W Pond bank) Layer, 11-12thC pot
20	22	Pit/scoop	T12	Upper clay fill Pit/scoop, Fired clay
21	22	Pit/Scoop	T12	Lower # fill Pit/scoop
22	22	Pit/Scoop	T12	Cut of Pit/scoop
23		Layer	T8?	Subsoil layer, had Med pot
24		Layer	T4	Subsoil-like layer, had CBM (Med/Pmed flat rooftile, + poss RB) & Modern glass
25		Layer	Pond 2	# for pot in Pond 2, W bank, =29, 1 sherd RB
26		Layer	Ponds 1 & 2	Layer in S501, =A. See section Fig
27		Layer	Ponds 1 & 2	Layer in S501, =B. See section Fig
28		Layer	Ponds 1 & 2	Layer in S501, =C. See section Fig
29		Layer	Ponds 1 & 2	Layer in S501, =D, was =25, Med pot. See section Fig
30		Layer	Ponds 1 & 2	Layer in S501, =E, poss variation in natural. See section Fig
31		Layer	Ponds 1 & 2	Layer in S501, =F. Pre earthworks(?), See section Fig
32		Layer	Ponds 1 & 2	Layer in S501, =G. Pre earthworks(?), See section Fig
33		Layer	Pond 2	Layer in S601, bank NE of pond 2, =A. See section Fig
34		Layer	Pond 2	Layer in S601, bank NE of pond 2, =B, Med pot. See section Fig
35		Layer	Pond 2	Layer in S601, bank NE of pond 2, =C, pot=1150+. Pre earthwork(?). See section Fig
36		Layer	Pond 2	Layer in S601, bank NE of pond 2, =D. See section Fig
37		Layer	Pond 2	Layer in S601, bank NE of pond 2, =E. See section Fig
38		Layer	Pond 2	Layer in S601, bank NE of pond 2, =F. See section Fig
39		Layer	Pond 2	Layer in S601, bank NE of pond 2, =G. See section Fig
40		Layer	Pond 2	Layer in S601, bank NE of pond 2, =H. See section Fig
41		Layer	Pond 2	Layer in S601, bank NE of pond 2, =I. See section Fig

Contexts

Context	Cut	Feat Type	Area	Description
42		Layer	Pond 2	Layer in S601, bank NE of pond 2, =J. See section Fig
43		Layer	Pond 2	Layer in S601, bank NE of pond 2, =K. See section Fig
44		Layer	Pond 1	Layer in S701, bank N of Pond 1, =A
45		Layer	Pond 1	Layer in S701, bank N of Pond 1, =B
46		Layer	Pond 1	Layer in S701, bank N of Pond 1, =C
47		Layer	Pond 1	Layer in S701, bank N of Pond 1, =D
48		Layer	Pond 1	Layer in S701, bank N of Pond 1, =E
49		Layer	Pond 1	Layer in S701, bank N of Pond 1, =F
50		Layer	Pond 1	Layer in S701, bank N of Pond 1, =G
51		Layer	Pond 1	Layer in S701, bank N of Pond 1, =H
52		Layer	Pond 1	Layer in S701, bank N of Pond 1, =I
53		Layer	Pond 1	Layer in S701, bank N of Pond 1, =J, Med pot (Potters Marston)
54		Layer	Pond 1	Layer in S701, bank N of Pond 1, =K
55		Layer	Pond 1	Layer of 'hillwash' into Pond 1, S901. Pre earthwork(?). See section Fig
56		Fill	PondTrench 4	E-W big drain ditch fill, N of Pond 1, # for finds, latest? Fill
57		Land Drain	PondTrench 9	Land drain in Pond trench9, drains NE of Pond 2
58		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =A. See section Fig
59		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =B. See section Fig
60		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =C. See section Fig
61		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =D. See section Fig
62		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =E. See section Fig
63		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =F. See section Fig
64		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =H. See section Fig
65		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =I. See section Fig
66		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =J. See section Fig
67		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =K. See section Fig
68		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =L. See section Fig
69		Layer	Pond 1	Ramp into W of Pond 1, Layer on S901, =M. See section Fig
70		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =A. See section Fig
71		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =B. See section Fig
72		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =C. See section Fig
73		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =D. See section Fig
74		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =E. Pre earthwork(?). See section Fig
75		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =F. See section Fig
76		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =G. Pre earthwork(?). See section Fig
77		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =H. Pre earthwork(?). See section Fig
78		Layer	Pond 3	Layer on S801, E facing S in N bank Pond 3, =I. Pre earthwork(?). See section Fig
79		Layer	WB Dam	Pond? Layer with tile finds
80		Layer	WB Dam	Dump of demolition, assoc'd with pond make ups?

8.3 Specification

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES
Design Specification for archaeological work (08-637)

Job title: Earl Shilton by-pass, Leicestershire

Site A Elmesthorpe Fishponds

NGR: SP 460 966

Client: Leicestershire County Council

Planning Authority: Leicestershire County Council

1 Introduction

1.1 Definition and scope of the specification
This document is a design specification for an archaeological excavation at the above site, in accordance with DOE Planning Policy Guidance note 16 (PPG16, Archaeology and Planning, para.30).

1.2 The definition of archaeological excavation, taken from the Institute of Field Archaeologists Standards and Guidance: for Archaeological Field Evaluation (IFA S&G) is a controlled programme of intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features, structures, and as appropriate, retrieves artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.

2. Background

2.1 ***Context of the Project***

2.1.1 The route of the proposed by-pass runs from the A47 Leicester Road (SP 453 964) to the south-west to Thurlaston Lane (SP 476 991) to the north-east. The route crosses a series of arable and pasture fields.

2.1.2 Archaeological survey and evaluation has been undertaken for parts of the route (ULAS Reports 2002-213; 2003-001, 2003-023 and 2003-068). A further walkover survey was undertaken in April 2007. Following further evaluative work at Site A in August 2007 an archaeological excavation has now been requested by the Senior Planning Archaeologist as detailed in the *Brief for Archaeological Excavation of the Elmesthorpe Fishponds. Land off Wilkinson Road, Elmesthorpe (Elmesthorpe) Leicestershire* (hereinafter the „Brief" 10.10.2007).

2.2 Archaeological and Historical Background

2.2.1 The area contains earthwork remains of fishponds believed to be of late 16th or early 17th century date (Hartley 1989 56; Fig 52).

2.2.2 The area is adjacent to a cropmark, possibly a Neolithic enclosure, close to the eastern edge of Earl Shilton village (SP 477 979). Other prehistoric material is known from the vicinity including a Neolithic macehead, a middle Bronze Age cremation burial and a bronze palstave. Cropmarks of ring-ditches may be ploughed out Bronze Age round barrows or could be associated with later prehistoric settlement while other cropmarks include a pit-alignment, enclosures and linear ditches which may represent Iron Age and Romano-British settlement and agricultural activity..

3. Archaeological Objectives

3.1 The main objectives of the archaeological work will be:

- To ascertain whether any significant archaeological remains are present and characterise their nature within the area to be developed.
- To establish the form function and chronological development of the earthwork remains with particular attention paid to the potential for survival of economic and environmental data.

4. Methodology

4.1 ***General Methodology and Standards***

4.1.1 All work will follow the Institute of Field Archaeologists (IFA) Code of Conduct and adhere to their *Standard and Guidance for Archaeological excavations* (1999).

4.1.2 Staffing, recording systems, health and safety provisions and insurance details are included below.

4.1.3 Internal monitoring procedures will be undertaken including visits to the site by the project manager. These will ensure that project targets are met and professional standards are maintained. Provision will be made for external monitoring meetings with the Senior Planning Archaeologist the Planning authority and the Client.

4.2 Open area excavation

4.4.1 Existing refuse and overburden will be removed by machine under full archaeological control and supervision (Brief 9.1.1) followed by a topographic survey of the earthworks to supplement previous survey (Brief 9.3.1) by EDM or GPS.

4.4.2 The earthworks will be selectively excavated to determine its form function, character and development (Brief 9.4.1). The topsoil will be removed in spits by machine with toothless ditching bucket (or similar) under supervision, until archaeological deposits or undisturbed substrata are encountered. The topsoil will be kept separate from the subsoil.

4.4.3 The archaeological deposits will be hand-cleaned by trowel or draw hoe.

4.4.4 The archaeological features exposed by the machine stripping will be planned and sample excavated to provide an adequate sample to address the objectives (3.1).

4.4.5 Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan of 1:100. All plans will be tied into the National Grid using a Total Station Electronic Distance Measurer (EDM). All excavated sections will be recorded and drawn at 1:10 or 1:20 scale, levelled and tied into the Ordnance Survey datum. Spot heights will be taken as appropriate.

4.4.6 The location of the excavation will be surveyed using a GPS or Total Station Electronic Distance Measurer (EDM) linked to a hand held computer.

4.4.7 Archaeological deposits will be excavated and recorded as appropriate to establishing the stratigraphic and chronological sequence of deposits, recognising and excavating structural evidence and recovering economic, artefactual and environmental evidence (Brief 9.4.4). Particular attention will be paid to the potential for and waterlogged deposits in consultation with ULAS's environmental officer.

4.4.8 Any human remains encountered will be initially left in situ, where appropriate the police and coroner shall be informed. Human remains will only be removed following appropriate liaison with the Ministry of Justice and in compliance with their requirements and in accordance with appropriate professional standards and guidance, as well as other relevant environmental health regulations. In all circumstances the developer and Leicestershire County Council, will be informed immediately upon the discovery of significant human remains.

4.4.9 Any material recovered which would be regarded as treasure following the Treasure Act 1996 will be reported to the coroner.

4.4.10 Internal monitoring procedures will be undertaken including visits to the site from the project manager. These will ensure that professional standards are being maintained. Provision will be made for monitoring visits with representatives of the main contractor (Alfred McAlpine Ltd), the developer (Leicestershire County Council Highways), Leicestershire County Council's Historic & Natural Environment Team and the planning authority.

4.4.11 In the event of significant archaeological remains being located during the fieldwork programme there may be the need for contingency time and finance to be provided to ensure adequate recording is undertaken. On the discovery of potentially significant remains the archaeologist will inform the developer, the Planning Archaeologist at Leicestershire County Council, HNET and the planning authority. If the archaeological remains are identified to be of significance additional contingent archaeological works will be required.

4.5 ***Recording Systems***

4.5.1 The ULAS recording manual will be used as a guide for all recording.

4.5.2 Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto pro-forma recording sheets.

4.5.3 A site location plan based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) will be prepared. This will be supplemented by a trench plan at appropriate scale, which will show the location of the areas investigated in relationship to the investigation area and OS grid.

4.5.4 A record of the full extent in plan of all archaeological deposits encountered will be made. Sections including the half-sections of individual layers of features will be drawn as necessary, typically at a scale of 1:10. The OD height of all principal strata and features will be recorded.

4.5.5 A photographic record of the investigations will be prepared illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include 'working shots' to illustrate more generally the nature of the archaeological operation mounted.

4.5.6 This record will be compiled and checked during the course of the excavations.

5. Finds and Samples

5.1 The IFA *Guidelines for Finds Work* will be adhered to.

5.2 Before commencing work on the site, a Site code/Accession number will be agreed with the Planning Archaeologist that will be used to identify all records and finds from the site.

5.3 During the fieldwork, different sampling strategies may be employed according to the perceived importance of the strata under investigation. Close attention will always be given to sampling for date, structure and environment. If significant archaeological features are sample excavated, the environmental sampling strategy is likely to include the following:

A range of features to represent all feature types, areas and phases will be selected on a judgmental basis. The criteria for selection will be that deposits are datable, well sealed and with little intrusive or residual material.

Any buried soils or well sealed deposits with concentrations of carbonised material present will be intensively sampled taking a known proportion of the deposit.

Spot samples will be taken where concentrations of environmental remains are located.

Waterlogged remains, if present, will be sampled for pollen, plant macrofossils, insect remains and radiocarbon dating provided that they are uncontaminated and datable. Consultation with the specialist will be undertaken.

5.4 All identified finds and artefacts are to be retained, although certain classes of building material will, in some circumstances, be discarded after recording with the approval of the Senior Planning Archaeologist. The IFA *Guidelines for Finds Work* will be adhered to.

5.5 All finds and samples will be treated in a proper manner. Where appropriate they will be cleaned, marked and receive remedial conservation in accordance with recognised best-practice. This will include the site code number, finds number and context number. Bulk finds will be bagged in clear self sealing plastic bags, again marked with site code, finds and context numbers and boxed by material in standard storage boxes (340mm x 270mm x 195mm). All materials will be fully labelled, catalogued and stored in appropriate containers.

6. Report and Archive

6.1 Following an Assessment in accordance with English heritage MORPHE 2006 will be prepared. This will indicate what further analysis, if any, is required. The assessment report will include:

6.2 Interim Report

6.2.1 This will include the aims and methods used, the nature, location, extent, date, significance and quality of data recovered with appropriate illustrative material. It will include an assessment of the effectiveness of the methodologies employed.

6.3 Factual Data

6.3.1. The quantity of material and data including provenance, provisional dating, evidence for contamination and residuality and means of data collection used.

6.3.2. The range and variety of material including any possible biases resulting from collection or sampling methods.

6.3.3. An assessment of the condition of the material including preservation bias and potential for long term storage.

8.3.4 The existence of primary sources or relevant data which may enhance the study of site data.

6.4 Site Assessment

6.4.1 On completion of the fieldwork the site archive will be prepared to ensure accessibility and an interim report prepared. All records will be updated during the assessment stage and all plans sections and photographs indexed.

6.4.2 On completion of the archive an assessment report of the site's potential for further analysis will be prepared incorporating the information from the finds and environmental assessments. Contact will be maintained between the specialists during the assessment stage.

6.5 Finds Assessment

6.5.1 Any pottery recovered will be sorted by form, fabric and decoration following ULAS type series. Sequences will be established where possible in conjunction with the site information. Spot dating will be provided if diagnostic elements are present.

6.5.2 Finds assessment reports will be prepared for each category of find encountered. Consultants will be contacted where necessary.

6.5.3 An assessment of the conservation requirements for material recovered will be undertaken in consultation with the Conservator at the University of Leicester School of Archaeology and Ancient History.

6.6 Environmental Assessment

6.6.1 Sieving and sorting of the coarse residues of sediment will be completed and recorded immediately following the fieldwork phase. The fine residues (0.5-4mm) will be prioritised for sorting and the flots packed and labelled. Any additional samples will have been recorded and stored.

6.6.2 During the assessment phase the following work will be carried out:

i) The prioritised fine residues (0.5-4mm) will be sorted.

ii) The flots will be scanned and prioritised. selected flots will have plant remains identified to assess the range, quantity, preservation and potential of the remains. Flots with potential for further analysis will be selected for sorting during the analysis stage.

iii) Any additional environmental materials will be assessed and considered for analysis.

iv) Samples of charcoal and cereal grains will be selected for possible C14 dating if from appropriate deposits.

v) Any additional samples will be assessed for further sieving.

vi) Sediment samples will be selected for phosphate analysis, magnetic susceptibility or sediment analysis as appropriate to assist with the interpretation of the site.

6.7 Potential

6.7.1 The data and material will be critically examined in the light of their potential to answer the research aims resulting from the fieldwork including local, regional and national priorities.

6.7.2 In addition each material category report will summarise any site specific questions posed in the project design which

6.7.3 The data and material will be critically examined in the light of their potential to answer the research aims resulting from the fieldwork including local, regional and national priorities.

6.8 Potential

6.8.1 The data and material will be critically examined in the light of their potential to answer the research aims and objectives resulting from the fieldwork including local, regional and national priorities.

7. Report and Archive

7.1 A report on the fieldwork will be provided following analysis of the records and materials.

7.2. The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

7.3 A full copy of the archive as defined in the 'Guidelines for the preparation of excavation archives for long-term storage' (UKIC 1990), and Standards in the Museum care of archaeological collections (MGC 1992) and 'Guidelines for the preparation of site archives and assessments for all finds (other than fired clay objects) (RFG/FRG 1993) will be presented to an appropriate registered museum within six months of the completion of analysis. This archive will include all written, disk-based, drawn and photographic records relating directly to the investigations undertaken.

7.4 On the completion of fieldwork the originating organisation should complete the on-line OASIS form at http://ads.ahds.ac.uk/project /oasis on completion of the fieldwork.

8. Acknowledgement and Publicity

8.1 ULAS shall acknowledge the contribution of the Client in any displays, broadcasts or publications relating to the site or in which the report may be included.

8.2 ULAS and the Client shall each ensure that a senior employee shall be responsible for dealing with any enquiries received from press, television and any other broadcasting media and

members of the public. All enquiries made to ULAS shall be directed to the Client for comment.

9. Copyright

9.1 The copyright of all original finished documents shall remain vested in ULAS and ULAS will be entitled as of right to publish any material in any form produced as a result of its investigations.

10. Timetable

10.1 The supervised removal of rubbish ahs been completed and the survey and excavation of Site A is scheduled to start during w.c 22.10.2007, initially with two staff.

10.2 Following the fieldwork the on-site director/supervisor will carry out the post-excavation work, with time allocated within the costing of the project for analysis of any artefacts found on the site by the relevant in-house specialists at ULAS.

11. Health and Safety

11.1 ULAS is covered by and adheres to the University of Leicester Archaeological Services Health and Safety Policy and Health and Safety manual with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is attached as Appendix 1. The relevant Health and Safety Executive guidelines will be adhered to as appropriate. The HSE has determined that archaeological investigations are exempt from CDM regulations.

11.2 A Risks assessment will be completed prior to work commencing on-site, and updated as necessary during the site works.

12. Insurance

12.1 All ULAS work is covered by the University of Leicester's Public Liability and Professional Indemnity Insurance. The Public Liability Insurance is with St Pauls Travellers Policy No. UCPOP3651237 while the Professional Indemnity Insurance is with Lloyds Underwriters (50%) and Brit Insurances (50%) Policy No. FUNK3605.

13. Monitoring arrangements

13.1 Unlimited access to monitor the project will be available to both the Client and his representatives and Planning Archaeologist subject to the health and safety requirements of the site. At least one weeks notice will be given to the LCC HNET Senior Planning Archaeologist before the commencement of the archaeological fieldwork in order that monitoring arrangements can be made.

13.2 All monitoring shall be carried out in accordance with the IFA *Standard and Guidance for Archaeological Field Evaluations, excavations* or *watching briefs* as appropriate.

13.3 Internal monitoring will be carried out by the ULAS project manager.

14. Contingencies and unforeseen circumstances

14.1 In the event that unforeseen archaeological discoveries are made during the project, ULAS shall inform the site agent/project manager, Client and the Planning Archaeologist and Planning Authority and prepare a short written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the Planning Archaeologist, ULAS shall, if required, implement an amended scheme of investigation on behalf of the client as appropriate.

15. Bibliography

Hartley, R.F 1989 *The Medieval Earthworks of central Leicestershire* LMARS

MAP 2 *The management of archaeological projects* 2nd edition English Heritage 1991

MGC 1992 *Standards in the Museum Care of Archaeological Collections* 1992 (Museums and Galleries Commission)

RFG/FRG 1993 *Guidelines for the preparation of site archives* (Roman Finds Group and Finds Research Group AD 700-1700 1993)

SMA 1993 *Selection, retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland 1993* (Society of Museum Archaeologists)

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APPENDIX 1

Draft Project Health and Safety Policy Statement

A risks assessment will be produced by on-site staff, which will be updated and amended during the course of the evaluation.

1. Nature of the work

1.1 Brief description of the work involved e.g.

The work will involve machine excavation by hymac or equivalent during daylight hours to reveal underlying archaeological deposits. Overall depth is likely to be *c.* 0.5 m with possible features excavated to a depth of another 1m. Trenches will not be excavated to a depth exceeding 1.2m. Spoil will be stockpiled no less than 1.5 m from the edge of the excavation, the topsoil and subsoil being kept separate. Remaining works will involve the examination of the exposed surface with hand tools (shovels, trowels etc) and excavation of archaeological features. Deeper features will be fenced with lamp irons and hazard tape. Three staff will be used on the evaluation.

2 Risks Assessment

2.1 ***Working on an excavation site***.

Precautions. Trenches to not be excavated to a depth exceeding 1.2m. Spoil will be kept 1.5m away from the edge of the excavated area to prevent falls of loose debris. Loose spoil heaps will not be walked on. Protective footwear will be worn at all times. Hard hats will be worn when working in deeper sections or with plant. First aid kit to be kept in site accommodation/vehicle. Vehicle and mobile phone to be kept on site in case of emergency.

2.2 ***Working with plant***.

Precautions. Archaeologists experienced in working with machines will supervise topsoil stripping at all times. Hard hats, protective footwear and hazard jackets will be worn at all times. Machine driver to be suitably qualified and insured. If services or wells are encountered machining will be halted until extent has been established by hand excavation or areas where it is safe to machine have been established. Overhead power lines are present to the south of the areas to be evaluated. The machine will maintain a distance of at least 10 m to the north of the powerlines.

2.3 ***Working within areas prone to waterlogging***.

If waterlogging occurs on site preventing work continuing it is proposed to excavate a sump, suitably fenced and clearly marked to enable the water to drain away. If this is insufficient a pump will be used. The sump will be covered when not in use and backfilled if no longer required. Protective clothing will be worn at all times and precautions taken to prevent contact with stagnant water which may carry Wiels disease or similar.

2.4 ***Working with chemicals.***

If chemicals are used to conserve or help lift archaeological material these will only be used by qualified personnel with protective clothing (i.e. a trained conservator) and will be removed from site immediately after use.

2.5 ***Other risks***

Precautions. If there is any suspicion of unforeseen hazards being encountered e.g. chemical contaminants, unexploded bombs, hazardous gases, work will cease immediately. The client and relevant public authorities will be informed immediately.

8.4 Oasis record

OASIS Record: XA184 2007 (Site A)

INFORMATION REQUIRED	
Project Name	Earl Shilton A47 bypass SITE A
Project Type	Evaluation and excavation, watching brief
Project Manager	Patrick Clay
Project Supervisor	Wayne Jarvis
Previous/Future work	Previous evaluation, survey
Current Land Use	Agricultural
Development Type	Road bypass
Reason for Investigation	PPG16
Position in the Planning Process	As a condition
Site Co ordinates	SP 460966
Start/end dates of field work	2007-2008
Archive Recipient	Leicestershire Museums, Arts and Records Service
Study Area	14800 sq. m.