



University of
Leicester

Archaeological Services

**An Archaeological Evaluation
on Land at Lutterworth Road,
Lutterworth, Leicestershire
(SP 5487 8399)**




Roger Kipling

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Lutterworth, Leicestershire
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Roger Kipling

For: CgMs Consulting

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Summary

An archaeological trial trench evaluation was undertaken in October 2014 at Lutterworth Road, Lutterworth, Leicestershire, by University of Leicester Archaeological Services on behalf of CgMs Consulting. The fieldwork was undertaken to inform the outline planning application for commercial development in order to assess its potential impact on any archaeological remains that might be present, following the findings of a desk-based assessment and fieldwalking.

As anticipated, the archaeological evaluation at Lutterworth Road, Lutterworth, produced evidence for the medieval mill leat associated with the medieval St. John's Hospital to the west of the site in the form of several shallow parallel linear features. Post-medieval/modern dating evidence from these channels supports cartographic evidence for this feature continuing as an open water channel into the post-medieval modern period, with environmental evidence suggesting possible food preparation activity in the vicinity. There were no further indications of archaeological activity present on the site. As with most lithic scatters no earthfast features were present associated with the material recovered from the fieldwalking

The site archive will be deposited with Leicestershire County Council under accession reference number X.A142.2014.

Introduction

An archaeological evaluation was undertaken on land to the north of Lutterworth Road and west of the M1 at Lutterworth, Leicestershire. A desk-based assessment had previously been prepared for the area (Bourn 2013). The Leicestershire and Rutland Historic Environment Record indicates that the proposed development lies in a rich archaeological landscape, with extensive evidence from lithic scatters of Mesolithic, Neolithic and Bronze Age. A relatively large quantity of prehistoric flint material (c.200 pieces) was recovered from fieldwalking by the Lutterworth Fieldwork Group within the application area which suggested activity during these

periods. Geophysical anomalies and cropmarks suggest Iron Age-Roman enclosures in the vicinity while the north of the site is crossed by a mill leat leading to the former St Johns Mill to the west. Fieldwalking also recovered numerous post-medieval clay pipe fragments. There was therefore some potential for archaeological remains of these periods to be present within the application area.

In consequence the planning authority recommended the need for a programme of evaluation trenching. The investigation was required in order to provide an adequate sample of the development area and to assess the likely archaeological impact of the development proposals, consisting of the construction of buildings and an access routes and ponds. The agreed scheme was set out in a Written Scheme of Investigation (WSI; ULAS 2014).

The fieldwork specified was intended to provide further indications of the character and extent of any buried archaeological remains in order that the potential impact of the development on such remains might be assessed. Fieldwork was carried out in October 2014 and involved the machine excavation of six trial trenches in order to provide the 2% sample of the development area stipulated in the brief.

The archaeological evaluation was undertaken in accordance with National Planning Policy Framework Section 12: Conserving and Enhancing the Historic Environment (DCLG March 2012). All archaeological work was in accordance with the Institute for Archaeologists (IfA) Code of Conduct (2010) and adhered to their *Standard and Guidance for Archaeological Field Evaluation* (2008). The LCC *Guidelines and Procedures for Archaeological work Leicestershire and Rutland* (1997) was also adhered to.

Site Description, Topography and Geology

The proposed development comprises is located off the Lutterworth Road, west of Lutterworth, within the district of Harborough. The proposed development area consists of agricultural land. The British Geological Survey notes that the solid geology for the Site is Blue Formation and Charmouth Mudstone Formation, which comprises Mudstone (British Geological Survey Sheet 170, 1969). The site is overlain with areas of Alluvium (consisting of Clay, Silt, Sand and Gravel) and River Terrace Deposits, 1 (consisting of Sand and Gravel) and Till, Mid Pleistocene (consisting of Diamicton) (http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html). The site lies at a height of c.110m O.D. on land gently sloping northwards to the River Swift.

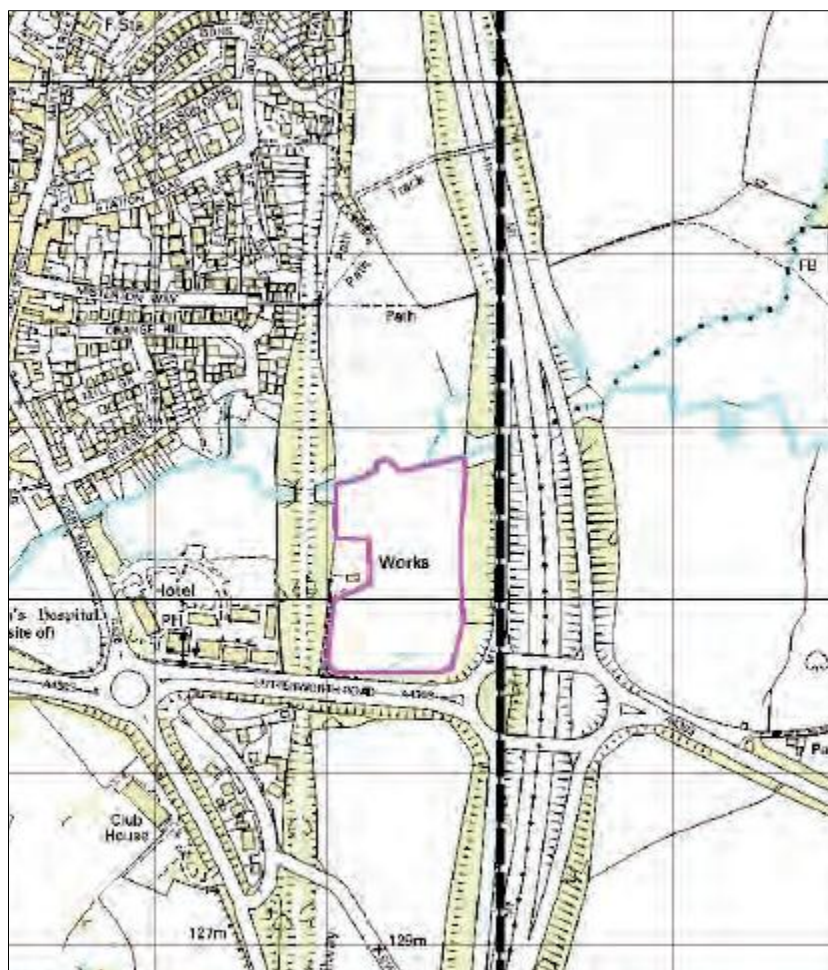


Figure 1: Site Location (Scale 1:50 000)

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Archaeological and Historical Background

The Leicestershire and Rutland Historic Environment Record indicates that the proposed development lies in a rich archaeological landscape, with extensive evidence from lithic scatters of Mesolithic, Neolithic and Bronze Age. A large quantity of prehistoric flint material (*c.*200 pieces) was recovered from fieldwalking by the Lutterworth Fieldwork Group within the application area, which suggests activity during these periods. Geophysical anomalies and cropmarks suggest Iron Age-Roman enclosures in the vicinity while the north of the site is crossed by a mill leat leading to the former St Johns Mill to the west. Fieldwalking has also recovered numerous post-medieval clay pipe fragments. There is therefore some potential for archaeological remains of these periods to be present within the application area.

Aims and Objectives

The archaeological evaluation had the potential to contribute to the following research aims.

Mesolithic, Neolithic and Early Middle Bronze Age (Myers 2006; Clay 2006; Knight et al 2012; English Heritage 2010)

- There is evidence of Mesolithic, and Neolithic-Bronze Age activity from the area and the vicinity. Fieldwalking surveys of the Swift valley by the Lutterworth fieldwork group have located high density lithic scatters in the vicinity (Clay 2002, 85-103).

The Iron Age and Roman Periods (Taylor 2006; Knight et al 2012; English Heritage 2012)

- There are cropmarks and geophysical anomalies of enclosures of likely Iron Age and Roman period within the vicinity. The evaluation offered the possibility of contributing to knowledge on Iron Age – Roman transitions in rural settlement, landscape and society. Artefacts may have identified trade links and economy.

Medieval (Lewis 2006; Knight et al 2012)

- The area is crossed by a mill leat leading to the former St Johns mill. Fieldwalking has recovered numerous clay pipe fragments. It was anticipated that the evaluation may contribute towards research into the development of milling (Knight et al 2012 Research Agenda 6.9.7.2).

The general aims of the evaluation were as follows:

- To determine the location, extent, date, character, condition, significance and quality of any archaeological remains within the development site
- To assess vulnerability/sensitivity of any exposed remains
- To provide sufficient information on the archaeological potential of the site to enable the archaeological implications of the proposed development to be assessed
- To assess the impact of previous land use on the site
- To inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains
- To produce a site archive for deposition with an appropriate museum and to provide information for accession to the Leicestershire HER.

Specific evaluation aims were to:-

- Seek to establish the nature of the geophysical anomalies and to determine if they are of archaeological significance

The evaluation was undertaken in order to enable reasoned and informed recommendations to be made to the local planning authority and, if appropriate, a suitable mitigation strategy for the proposed development to be formulated.

The design specification conforms to the requirements of the National Planning Policy Framework (2012). It has been designed in accordance with current best archaeological practice and the appropriate national standards and guidelines including:

- *Management of Archaeological Projects* (English Heritage, 1991);

- *Model Briefs and Specifications for Archaeological Assessments and Field Evaluations* (Association of County Archaeological Officers, 1994);
- *Code of Conduct* (Institute for Archaeologists, 2010);
- *Standard and Guidance for Archaeological Field Evaluations* (Institute for Archaeologists, 2010);
- *Standards for Field Archaeology in the East of England* (Association of Local Government Officers, 2003);
- *Guidelines and Procedures for Archaeological work in Leicestershire and Rutland* (Leicestershire County Council 1997)

Methodology

Archaeological Trial Trenches

Prior to the commencement of works an Accession Code was obtained and the required archive deposition forms completed. An OASIS online record was initiated and the key fields completed on Details, Location and Creator forms.

Following recommendations from the Planning Archaeologist, a programme of evaluation trenching was undertaken. A 2% sample of the area of development was excavated, comprising *c.300m²* of six 40m x 1.80m trenches. Trench locations were in accordance with plans set out in the brief, targeting the proposed footprint of the building, access roads and pond (Figure 2) and geophysical anomalies.

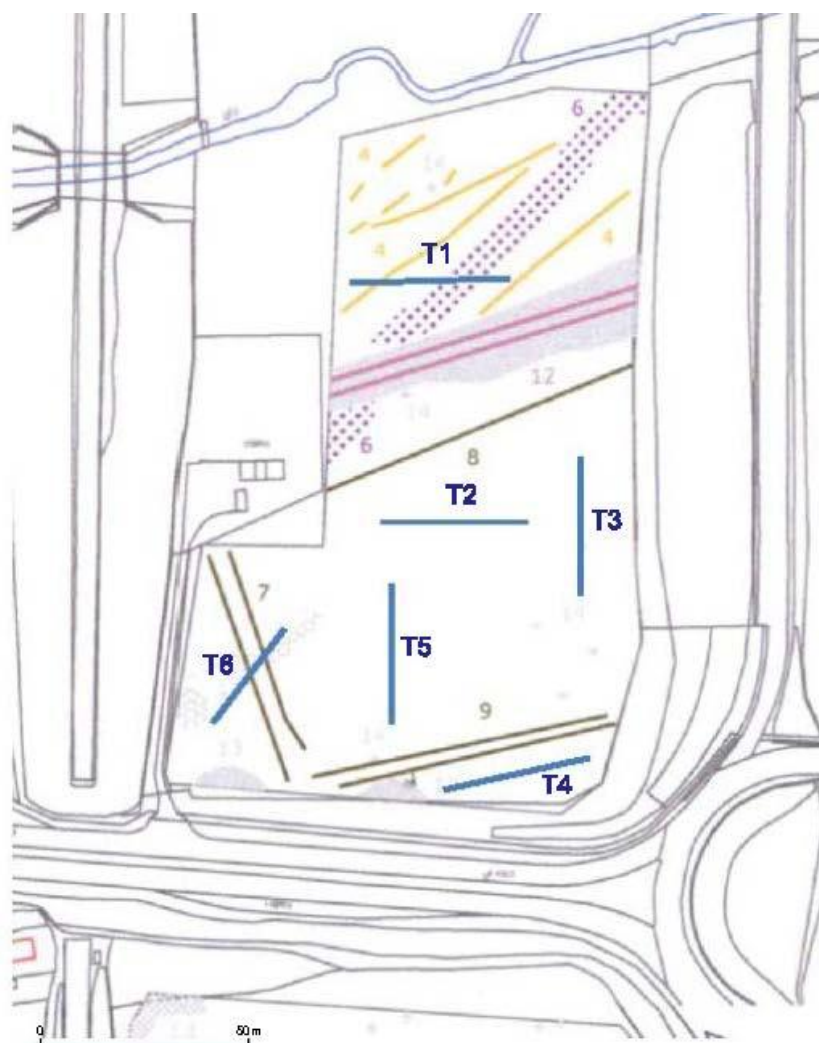


Figure 2: Trench location plan overlain on the geophysical survey results (provided by client)

Topsoil and overburden was removed by a mechanical excavator using a toothless ditching bucket (*c.*2.1m wide), under archaeological supervision. The spoil generated during the evaluation was mounded away from the edges of each trench. Topsoil and subsoil was stored separately. Mechanical excavation ceased at undisturbed natural deposits.

The trenches were recorded at an appropriate scale by measured drawing and photography and were located to Ordnance Survey National Grid. A photographic record, utilising black and white negative film, supplemented by high resolution digital data capture, was maintained during the course of the fieldwork and included:

- the site prior to commencement of fieldwork;
- the site during work, showing specific stages of fieldwork;

Upon completion of the evaluation trenching, the excavated trenches were backfilled and loosely compacted.

Results

A 2% sample of the area of development was excavated, comprising *c.*300m² of six trenches measuring 40m x 1.80m. Trenches were positioned in accordance with plans

set out in the brief, targeting the proposed footprint of the building, access roads and pond and geophysical anomalies.

Excavation was undertaken using a JCB mechanical excavator fitted with a 1.80m wide toothless ditching bucket, with topsoil and overburden removed carefully in level spits, under continuous archaeological supervision.

Table 1 Details of trenches

TRENCH	ORIENTATION	LENGTH AND WIDTH (metres)	DESCRIPTION	DEPTH (MIN-MAX metres)
1	E-W	40 x 1.80	Topsoil 0.24-0.32m, subsoil 0.20-0.44m. Linears [01], [05], [09], [12], pit [06]	0.52-0.79
2	E-W	40 X 1.80	Topsoil 0.15-0.35m, subsoil 0.07-0.19m. No archaeological finds or features.	0.50-0.61
3	N-S	40 x 1.80	Topsoil 0.21-0.30m, subsoil 0.10-0.28m. No archaeological finds or features.	0.439-0.64
4	SSE-NNW	40 x 1.80	Topsoil 0.24-0.40m, subsoil 0.26m. No archaeological finds or features.	0.37-0.49
5	N-S	40 x 1.80	Topsoil 0.19-0.32m, subsoil 0.14-0.29m. No archaeological finds or deposits.	0.42-0.57
6	SW-NE	40 x 1.80	Topsoil 0.20-0.30m, subsoil 0.15-0.30m. No archaeological finds or deposits.	0.40-0.55

Trench 1

The northernmost trench (1) targeted the area of the proposed balancing pond and the likely location of the course of the medieval mill leat and was the single trench of the six to produce archaeological evidence. The removal of 0.24-0.35m of a dark grey sandy clay loam plough soil and underlying 0.07-0.21m of mid orange-brown sandy silt subsoil revealed several archaeological features cutting the pale/mid yellow-brown mixed silty clay/sand natural.

Mill Leat [12] (13)(14)

Figures 3, 5-8

The most substantial archaeological feature consisted of a shallow linear [12] (13) crossing the trench on a south-western to north-eastern alignment *c.*20m midway along its 30m length. The broad, shallow and open cut measured 4m wide and 0.35m deep, its 45° sides falling to a slightly concave base. The single mid bluish-grey silty-clay fill (13) with 10% rounded pebbles produced two fragments of post-medieval/modern earthenware ceramic roof tile (Appendix 2) in addition to small quantities of bread wheat grain and weed seeds (*ibid.*). The underlying natural clay was heavily stained a bright bluish-grey from leaching of material from the channel. The feature was overlain by a 0.29m thick deposit (14) comprising laminations of sand and yellow-brown silt likely representing waterborne material deposited by the overflowing channel. The deposit produced a single complete freshwater mussel, suggestive of less favourable habitats such as cold or soft water shell (Appendix 2).

The location and alignment of this linear feature appeared to tally with the strong geophysical signal from the geophysical survey (Figure 3) and, coupled with its characteristics of form and fill, strongly suggest that this represents the leat feeding the medieval mill to the south-west.

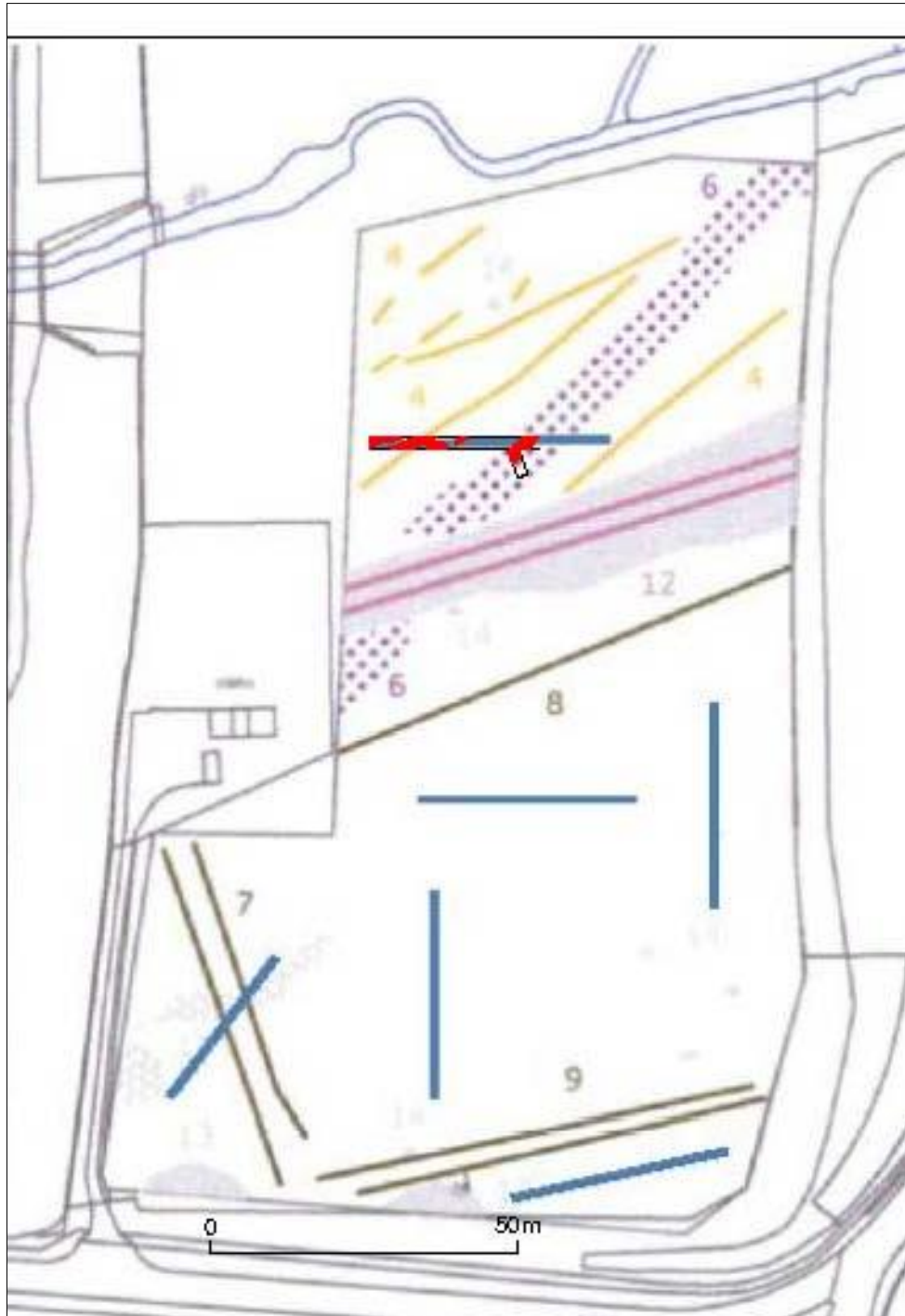


Figure 3: Trench 1 with features overlaid on geophysical survey results



Figure 4: Trench 1: general view east (2m scale)



Figure 5: Trench 1: leat [12]: view south-west (1m scale)



Figure 6: Mill leat [12]; view south-west (2m & 1m scales)

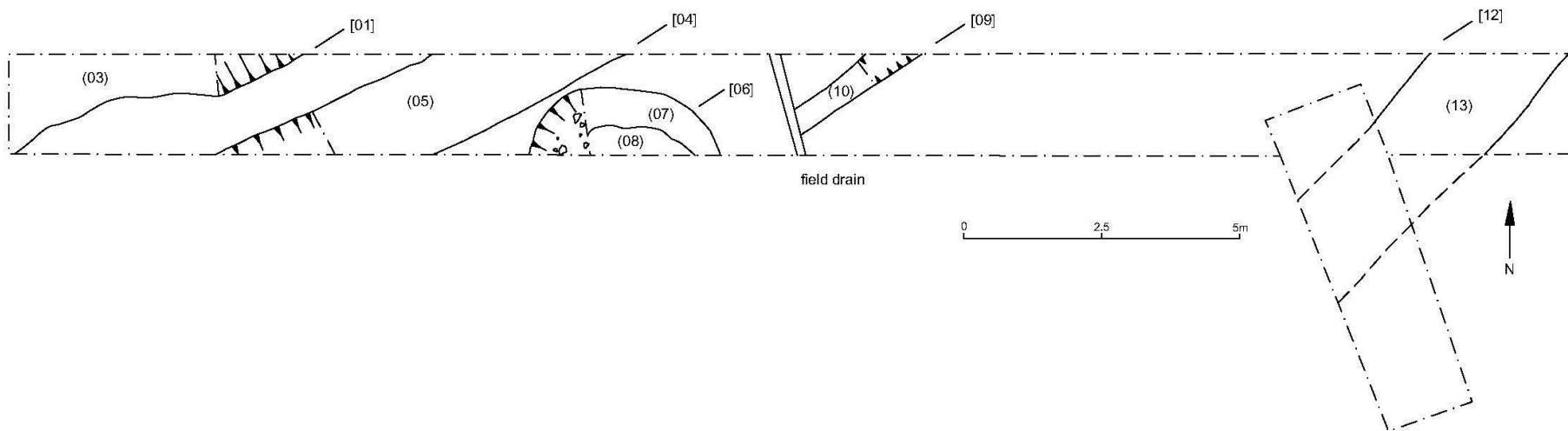


Figure 7: Trench 1 (west end): general plan

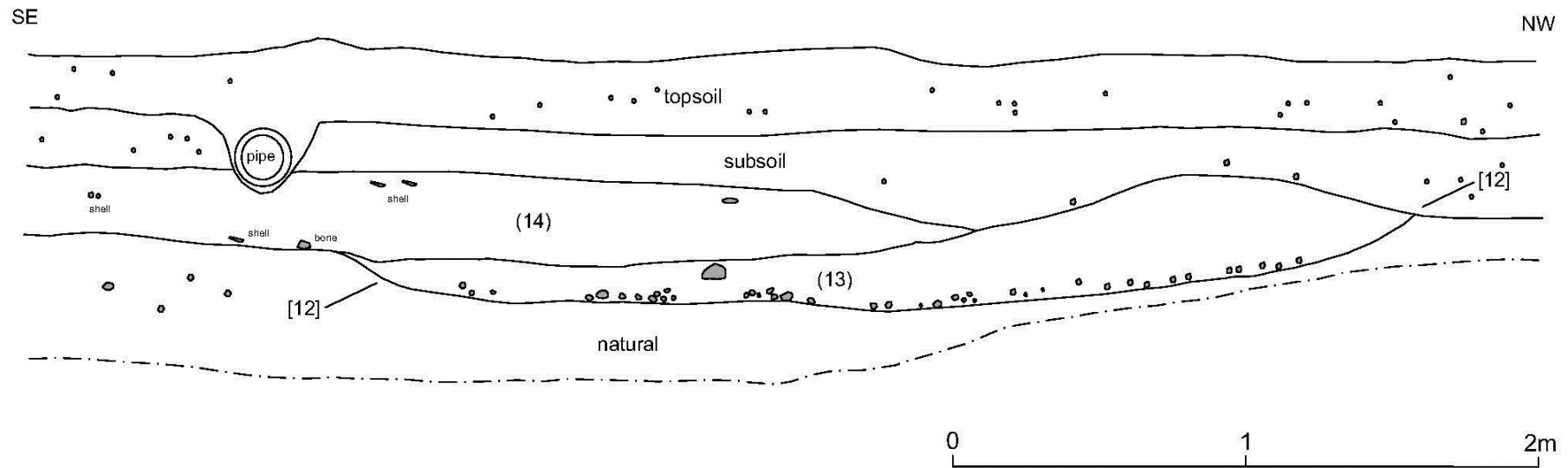


Figure 8: Trench 1: mill leat [12] section

Leat [04] (05)

Figures 3, 7, 9 & 10

A second smaller linear feature [04] (05) was located *c.*5m from the west end of the trench, again tallying with a geophysical survey anomaly (Figure 3). The 1m wide feature had 45° sides and of 0.32m+ depth and the same northeast-southeast alignment as its neighbour and hence may represent a subsidiary channel of the leat. Its single pale bluish grey silty clay fill (05) produced no finds.

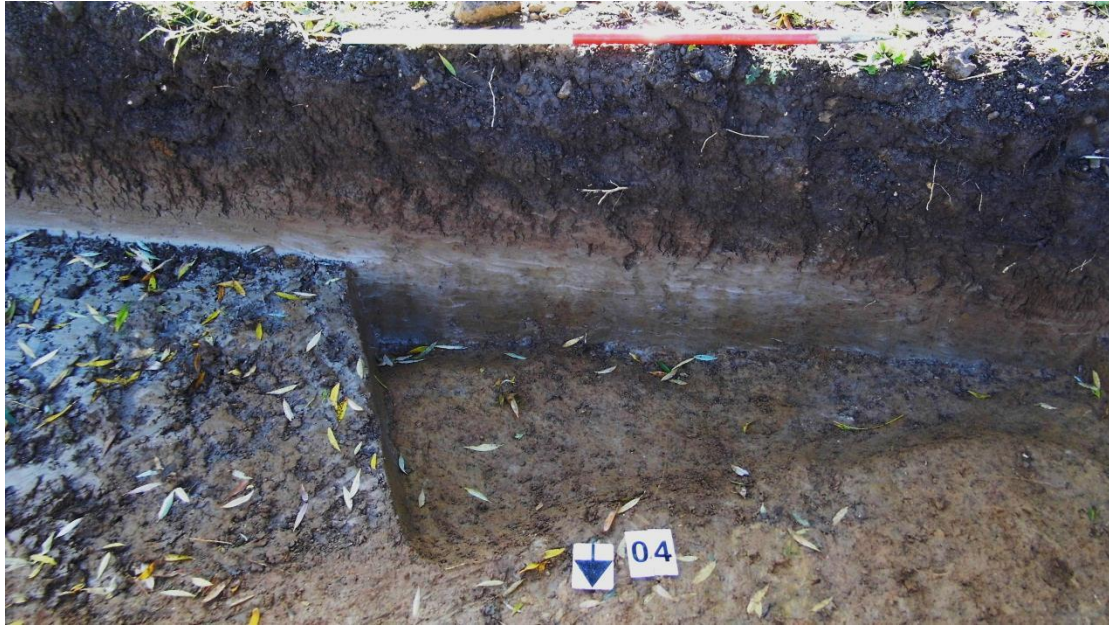


Figure 9: possible leat [04]; view south (1m scale)

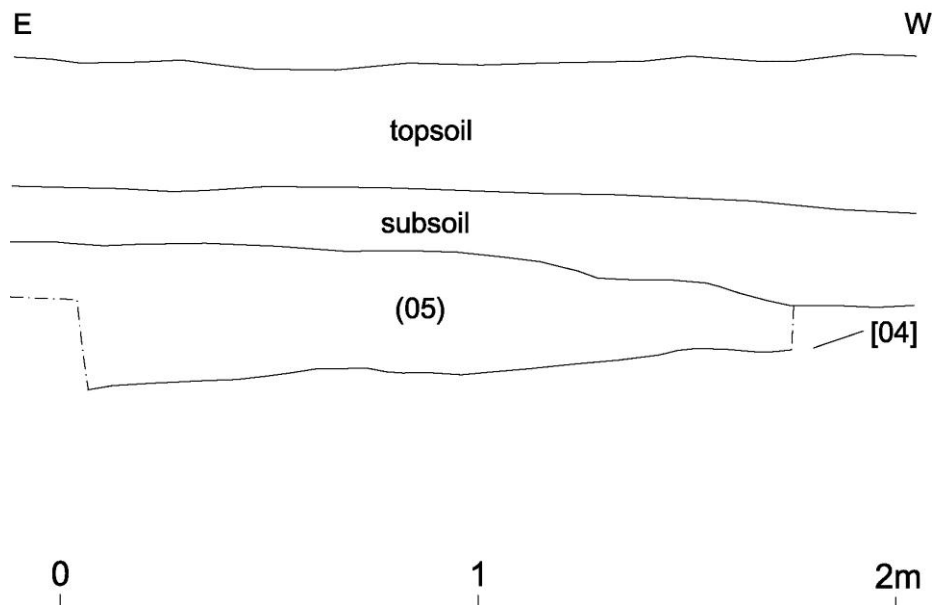


Figure 10: Possible leat [04] section

Linear [09] (10) (11)

Figures 7, 11 & 12

A third, smaller-scale linear [09] was located 5m east of [04]. The shallow feature shared the same south-west to northeast alignment as its neighbours and measured 1.20m wide and 0.15m deep with 45° sides to a flattish base. It was sealed by the subsoil. The single fill (10) shared the same greyish blue silty clay character as that of [04]. An overlying 0.21m thick mid blue-grey sandy clay deposit (11) possibly represented a secondary fill or overflow deposit. The feature may represent a smaller leat channel, one which was not detected by the geophysical survey. The feature did not produce any dating evidence.



Figure 11: Possible leat [09]; view north (1m scale)

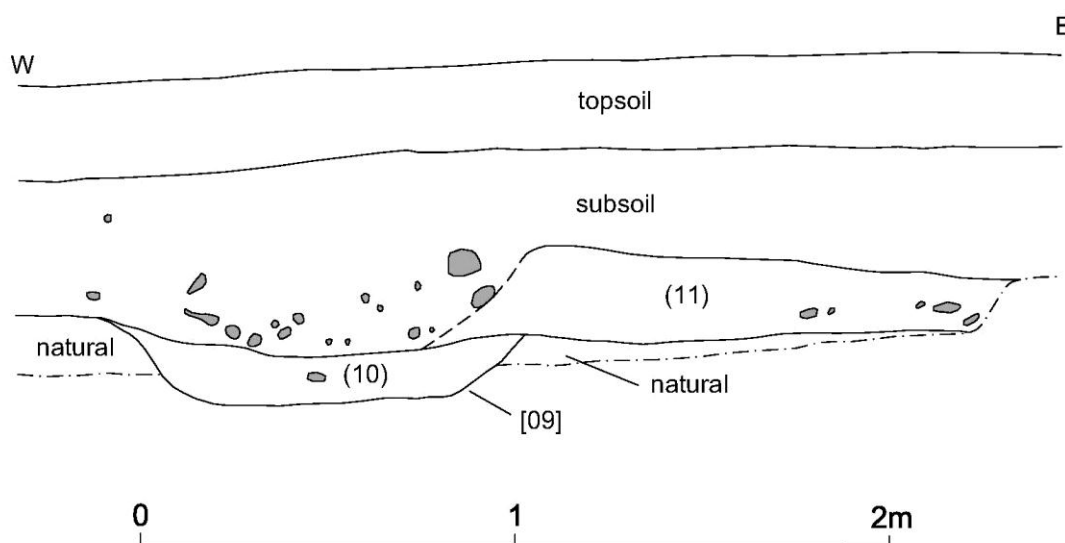


Figure 12: Possible leat [09]: section drawing

A possible fourth leat channel, [01] lay at the west end of the trench, comprising an uneven north-east to south-west aligned cut measuring 1m wide by 0.23m deep with 45° sides to an uneven base (Figure 13, Figure 14). The sandy clay fills (02), (03) contained rounded cobbles. Finally, a small possible pond feature [06] (07) adjacent to [04] contained the same blue-grey alluvial silty-clay fill with cobbles as its neighbours. Neither feature produced any finds.



Figure 13: Pit or pond feature [06]; view south-west (1m scale)

Trenches 2-6

Figures 14 & 15

The remaining five trenches, located to the south of Trench 1, produced no indications of archaeology. All were characterised by a shallow (0.15-0.35m deep) dark grey sandy clay loam plough soil and 0.07-0.28m thick orange-brown sandy clay silt subsoil with sparse gravel content. The natural substratum varied slightly between a patchy pale yellow and pale yellow-brown sand (Trenches 2-5), whilst Trench 6, located in the southwest corner of the site, showed a degree of gravel banding and manganese content.



Figure 14: Trench 2: view north (2m scale)



Figure 15: Trench 5: general view north-west (2m scale)

Discussion

As anticipated from the early mapping and geophysical survey results (Figure 3), the archaeological evaluation at Lutterworth Road, Lutterworth, appeared to produce evidence for the mill leat associated with the medieval St. John's Hospital situated some distance to the west of the site in the form of several shallow parallel linear features, likely representing open water channels, and as evidenced by freshwater molluscan evidence. No earthwork remains were visible. However, the recovery of post-medieval/modern century ceramic building material from one of these features suggests that much of the original medieval leat may not survive but rather that this feature was the subject of dredging and/or recuts as a functioning open water channel into the post-medieval and modern period. The appearance of the leat on the first edition Ordnance Survey map supports this conjecture. The recovery of bread wheat grain suggests food preparation in the vicinity. While most of the leat will not be impacted on by the proposals the attenuation ponds to the north will have some impact on part of its length (Figure 17).

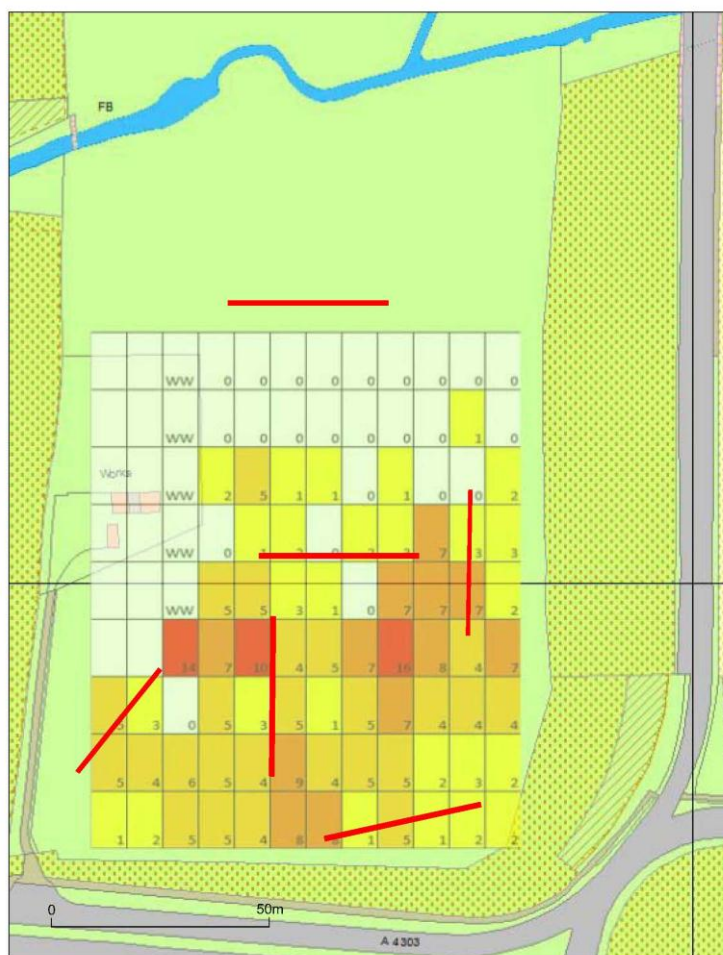


Figure 16: Trenches overlaid on fieldwalking flint artefactual data

In terms of earlier prehistoric activity, the recovery of relatively high density scatters of lithic material during fieldwalking surveys of the Swift valley had hinted at the possibility of Mesolithic and Neolithic/Bronze Age activity on the southern part of the evaluation area (Figure 16). However, the evaluation produced no such

archaeological evidence, suggesting that the material represents artefactual scatters in ploughsoil and that it is not indicative of surviving prehistoric structural evidence.

This is typical of most lithic scatters in Britain which have resulted from discard over long periods of time resulting in a ‘background noise’ of lithic material (Schofield 1991; English Heritage 2000). The Lutterworth Fieldwork Group have studied the Swift valley over the last 30 years and their collection methods are usually based on 80-100% of the surface being examined (Clay 2002, 85). In this context the lithic remains from the field are not of significant density although some concentrations may be discerned towards the centre of the southern half of the field (Figure 16). Earthfast features associated with lithic scatters are rare in plough zone areas such as Leicestershire (Clay 2006, 70).

Geophysical anomalies which were targeted by the trial trenching in Trench 6 did not show evidence of archaeological origins. Gravel and manganese banding may have resulted in these linear anomalies.

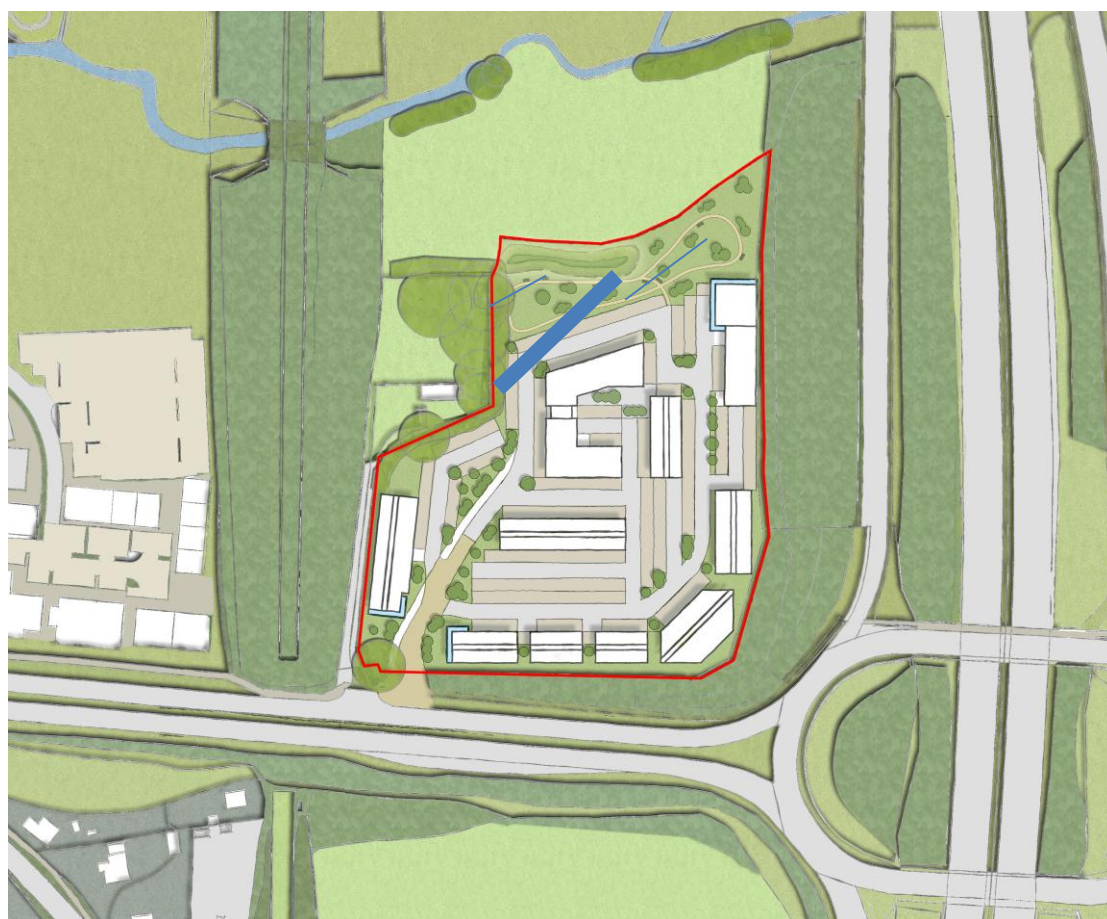


Figure 17: Plan of the proposals in relation to the archaeological features and geophysical anomalies relating to the former mill leat (blue)

Conclusion

Evidence of a mill leat of local significance was located which may be impacted on by the proposed attenuation pond. No evidence of prehistoric activity associated with the lithic scatter was located in the trenching which is typical of most lithic scatters in plough zone situations.

Archive and Publications

The site archive, consisting of paper and photographic records, will be deposited with Leicestershire Museums Service under Accession Reference Number X.A16.2014.

The archive consists of:

- 8 trench recording sheets
- Photographic record index
- 10 digital photographs
- 1 x A1 drawing sheet
- A risk assessment form

Publication

A version of the excavation summary (see above) will appear in due course in the *Transactions of the Leicestershire and Rutland Archaeological and Historical Society*.

Acknowledgements

Roger Kipling and Richard Huxley of ULAS undertook the archaeological evaluation on behalf of the CgMs. The project was managed by Patrick Clay.

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Oasis Information

Project Name	Land at Lutterworth Road, Lutterworth, Leicestershire
Project Type	Archaeological evaluation
Project Manager	Patrick Clay
Project Supervisor	Roger Kipling
Previous/Future work	Development
Current Land Use	Agricultural
Development Type	Residential
Reason for Investigation	NPPF
Position in the Planning Process	Pre-determination
Site Co ordinates	NGR SP 5487 8399
Start/end dates of field work	October 2014
Archive Recipient	Leicestershire Museums Service
Study Area	

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Appendix 1: The Ceramic Material*Deborah Sawday*

The finds were catalogued with reference to the guidelines set out by the Medieval Pottery Research Group, (MPRG 2001) and the ULAS fabric series (Sawday 2009).

A single sherd of post-medieval or modern earthenware or pancheon ware, fabric EA2 was recovered from the back-fill of context [12] layer 13 which is believed to be part of what was originally a medieval mill-lead. Two fragments of ceramic building material were found in the same context (table 1).

The dating of the ceramic building material, which includes at least one example of tile, is hampered by the lack of diagnostic features. These would include the dimensions of the tile and the presence of peg holes or nibs which are commonly associated with flat roof tile as at one possible medieval production centre, in Coventry, some 20km to the south-west (Ratkai and Woodfield 2005). However the tiles and or brick appear to be hand-made, that is made in sanded moulds, and both this and the fabric suggest a date somewhere between the 16th and the early/mid-18th century for these finds.

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Woodfield, C., 2005 *The Church of Our Lady of Mount Carmel and some Conventual Buildings at the Whitefriars, Coventry*, BAR British Series **389**.

Table 1: The pottery and ceramic building material by fabric, sherd number and weight (grams) by context.

Context	Fabric/Ware	No.	Gr.	Comments
POTTERY				
13 [12]	EA2 – Earthenware 2	1	3	Fragment only, post medieval/modern
CERAMIC BUILDING MATERIAL				
13 [12]	Earthenware	1	109	Part of a moulded flat roof tile, sanded underneath and on edge, fettled upper surface, c.15mm thick. Relatively fine red sandy fabric with sparse inclusions including red and black iron ore. Line of torching (mortar) along broken edge.
13 [12]	Earthenware	1	63	Moulded brick or tile fragment, sandy fabric with coarse red & black iron ore & quartz inclusions. Traces of fettling on upper surface & mortar on broken edge. The latter suggest that this tile has been re-used.

Appendix 2: The Charred Plant Remains*Rachel Small***Introduction**

Evaluation trenches were excavated off Lutterworth Road, Lutterworth. A leat, which would have fed water to a nearby mill, was present, and there was evidence for re-cutting the feature up to the modern period.

Three soil samples were taken from the leat to establish firstly if the contained charred plant remains a useful indicator of activities associated with crop processing. Secondly, other artefacts like molluscs which provide evidence of past environment.

Method

To start, one tub of each sample was wet-sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes; air dried and then sorted using an x10-40 stereo microscope. The charred plant remains were counted (table 1) and the names of identified species followed Stace (1991). The residues were air dried and the fractions over 4mm sorted for all finds.

Results (flots)

Charred plant remains were present in single numbers in all samples. Sieving multiple parts of samples would not have produced significant numbers for detailed analysis. Regarding taphonomy, preservation of the specimens was fair. Modern rootlets and seeds were present in samples 1 and 2 which may indicate a level of bio-disturbance.

Table 1: Charred plant remains present in the samples flots.

Context	14	13	10	
Sample	1	2	3	
Cereal chaff				
<i>Triticum aestivum</i> rachis		1		Bread wheat
Grain				
<i>Triticum</i> sp. free threshing grain		1		Free threshing wheat
Cereal/poaceae		2		Cereal/grasses
Wild seeds				
<i>Stellaria</i> sp.			1	Chickweed/stitchwort
<i>Chenopodium</i> spp.	1	3		Goosefoots
Indent.		1		Indeterminate
Total	1	8	1	
Litres	5	5	5	
Part Sorted	100%	100%	100%	

Grain was only present in sample 2 and one of the specimens was identified as free threshing grain. In this sample one piece of bread wheat (*Triticum aestivum*) rachis was identified.

Wilds seeds were present in all samples and two types were identified: stitchwort/chickweed (*Stellaria* sp.) a common arable weed, and goosefoots (*Chenopodium* spp.) which grow in disturbed, nitrogen-rich soils, as are found around manure heaps and human occupation (Jones et al 2004).

Fresh water clam shells were present in the flots of sample 1 and 2. These were of a small size 7mm – 1.5mm which is suggestive of *Pisidium* spp. (Ellis 1978). The shells were thin which is suggestive of less favourable habitats such as cold or soft water (Ellis 1978). Snail shells were also present in both of these samples and in sample 2 a small fish vertebra was present.

Results (coarse fractions)

A complete large fresh water mussel (sub order unionacea) was present in the coarse fraction of sample 1. Soil conditions had led to discolouration and degradation of the surface. These creatures live almost completely buried in the mud, sand in rivers, canals, lakes and large pods (Ellis 1978).

Other finds included two fragments of ceramic building material in sample 1 and pieces of charcoal were present in sample 1 and 2.

Discussion

It is likely the specimens leached into the leat from a nearby occupation area. The grain present could represent spilt food, such as pottage, made on a day to day basis. The rachis and weed seeds may have been contaminants of the cleaned grain, picked out during food preparation. The waste would have been burnt on the hearth and residue swept and disposed of in feature such as pits, with general scatters accumulating in open features.

Recommendations for further work

The charred plant remains were found in low numbers but were of a good preservation, other environmental evidence present included molluscs and fish remains. Therefore, if further work is carried out on site or in the surrounding area it is recommended that a soil sampling strategy is devised.

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