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FOX AND HOUNDS, 18 HIGH STREET, KEMPSTON, BEDFORD, BEDFORDSHIRE

AN ARCHAEOLOGICAL EVALUATION

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District: Bedford		Site Code: AS1531	
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OASIS SUMMARY SHEET

Project details	
Project name	Fox and Hounds, 18 High Street, Kempston, Bedfordshire

In October 2012 Archaeological Solutions Ltd (AS) conducted an archaeological evaluation on land the Fox and Hounds, 18 High Street, Kempston, Bedford, Bedfordshire (NGR TL 02690 47488). The evaluation was required to comply a planning condition attached to planning approval for the construction of 12 flats with associated car parking and cycle storage (Bedford Borough Council Planning Reference 11/01054/MAF).

The site lies within an Area of Archaeological Interest as set out in the Local Plan, which identifies the postulated medieval settlement of Bell End (BHER 17019). The site therefore had a potential for significant Saxon, medieval and post-medieval archaeological remains.

Features were present in each trench, and they comprised pits and post holes. The majority of the features were post medieval / modern. Pit F1014 (Tr. 2) contained medieval (10th – 12th century) pottery and Pit F1007 (Tr. 3) contained seven residual medieval (12th – 13th century) pottery. Modern features were present but not in sufficient number to obscure earlier features if present.

Project dates (fieldwork)	October 2012				
Previous work (Y/N/?)	N	Future	e work	TBC	
P. number	P5016	Site co	ode	AS153	11
Type of project	An archaeol	logical e	valuation		
Site status	Within an A	rea of Ar	chaeological Ir	nterest	
Current land use	Former pub	lic house	e, car park and	gardens	
Planned development	12 Flats				
Main features (+dates)	Medieval (1	0 th to 12 ^t	th century) pit		
Significant finds (dates)	$10^{th} - 12^{th}$ c				
	$12^{th} - 13^{th} c$	entury (r	esidual) potter	У	
Project location					
County/ District/ Parish	Bedfordshire	9	Bedford		Kempston
HER/ SMR for area	Bedford Bor	ough Co	ouncil Historic E	Environmen	t Record
Post code (if known)	-	-			
Area of site	0.1ha				
NGR	TL 02690 47488				
Height AOD (max/ min)	c.28m AOD				
Project creators					
Brief issued by	Bedford Bo	rough C	ouncil (BBC)		
Project supervisor (PO)		Samuel Egan			
Funded by	Alan Brown Builders Ltd				
Full title	Fox and Hounds, 18 High Street, Kempston, Bedford, Bedfordshire. An Archaeological Evaluation				
Authors	Egan, S. (Edited by Mustchin, A.)				
- 10.0.1010	4166				
Report no.	1177				
Date (of report)	October 2012 (Revised January 2013)				

FOX AND HOUNDS, 18 HIGH STREET, KEMPSTON, BEDFORD, BEDFORDSHIRE

AN ARCHAEOLOGICAL EVALUATION

SUMMARY

In October 2012 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation on land adjacent to the Fox and Hounds public house, 18 High Street, Kempston, Bedford, Bedfordshire (NGR TL 02690 47488). The evaluation was required to comply with a planning condition attached to planning approval for the construction of 12 flats with associated car parking and cycle storage (Bedford Borough Council Planning Reference 11/01054/MAF).

The site lies within an Area of Archaeological Interest as set out in the Local Plan, which identifies the postulated medieval settlement of Bell End (BHER 17019). As such, the site had potential for significant Saxon, medieval and post-medieval archaeological remains.

Features, comprising pits and postholes, were present in each of the four trenches excavated. The majority of the features were post-medieval/ modern or undated. Pit F1014 (Tr. 2) contained medieval (10th to 12th century) pottery and Pit F1007 (Tr. 3) contained seven residual medieval (12th to 13th century) sherds. A small number of modern features were also present but did not obscure earlier features.

1 INTRODUCTION

- 1.1 In October 2012 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation on land adjacent to the Fox and Hounds public house, 18 High Street, Kempston, Bedford, Bedfordshire (NGR TL 02690 47488). The evaluation was required to comply with a planning condition attached to planning approval for the construction of 12 flats with associated car parking and cycle storage (Bedford Borough Council Planning Reference 11/01054/MAF).
- 1.2 The project was undertaken in accordance with a brief issued by Bedford Borough Council (BBC), dated September 2012, and a specification prepared by AS (dated 04/10/12), approved by BBC. It complied with the Institute for Archaeologists' (IfA) Standard and Guidance for Archaeological Evaluations (revised 2008), and adhered to Gurney (2003) Standards for Field Archaeology in the East of England.
- 1.3 The general aims and objectives of the evaluation were:
 - ➤ to determine the location, extent, nature and date of any archaeological features or deposits that may be present; and
 - ➤ to provide information on the integrity and state of preservation of any archaeological features or deposits that may be present

1.4 The specific aims and objectives were:

- to examine the date, nature significance and extent of activity or occupation in the development site;
- to examine the relationship of any remains found to the surrounding contemporary landscape(s);
- > to examine the potential for the recovery of artefacts to assist in the development of type series within the region;
- to examine the potential for palaeo-environmental remains to determine local environmental conditions;
- to examine the impact upon any surviving archaeological remains from the construction of former buildings on the site; and
- to inform any future excavation strategy

Planning policy context

- 1.5 The National Planning Policy Framework (NPPF 2012) states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The NPPF aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. The NPPF requires applications to describe the significance of any heritage asset, including its setting that may be affected in proportion to the asset's importance and the potential impact of the proposal.
- 1.6 The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE (Figs. 1 and 2)

2.1 The site lies on the northern side of the High Street, Kempston, and is bounded to the west by Judith Gardens. It comprises the existing (vacant) Fox and Hounds public house, with car park and beer garden, and extends to some 0.1ha. Geologically, the site lies on the junction of limestone and mudstone solid deposits,

overlain by terrace sand, gravel and head deposits (British Geological Survey 1979; Soil Survey of England and Wales 1083).

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 The site lies within an Area of Archaeological Interest as set out in the Local Plan, which identifies the postulated medieval settlement of Bell End (BHER 17019). A number of investigations have been carried out in the settlement area, revealing remains of varying date. An evaluation at 1 King William Road (EBD93) reported a plot boundary system formed by late Saxon ditches, along with further gullies, pits and postholes suggestive of rear tenement plots. A Roman enclosure ditch of 1st/2nd century AD was also recorded, indicating earlier activity in the area. Post-medieval and Victorian features were also recorded, including a small building and one or more wells. The eastern part of the site contained the surface of the old lane from Kempston High Street to a corn mill by the river Great Ouse. Inhumations of late Saxon date have been excavated at 6 Brook Drive (EBB682), which probably form part of a larger 10th/11th century cemetery. They possibly related to an early settlement pattern influenced by the Danelaw and thus predating the establishment of the late Saxon estate.
- 3.2 Probable high-status manorial structures of Saxo-Norman date have been excavated at the Manor at the north-eastern end of Bell End (EBD251). Encountered features were well-preserved beneath deposits of a more recent and substantial made ground.
- 3.3 Excavations by Hertfordshire Archaeological Trust (HAT; now AS) in 2002 at Kempston Mill revealed Saxo-Norman and medieval (late 9th to late 13th century) occupation, with a number of ditches forming a field boundary/ drainage system (EBD26). Much of the site had been disturbed by later development but pits, including one containing over 13kg of mid-9th to 12th century pottery, and an undated limestone structural foundation were recorded.
- 3.4 The Bedford Borough HER has been consulted. In summary:

Extensive middle Bronze Age field systems and human/ animal burials have been identified at the Biddenham Loop to the north of the site (MBB18916). An Iron Age or Romano-British cemetery is recorded on the north side of the Bedford to Kempston Road (BHER 256), while an Anglo-Saxon cemetery of 5th to 7th century date is situated on the south side (BHER 258).

An archaeological evaluation to the north-west of the site at 1 King William Road encountered a Roman (1st/ 2nd century AD) enclosure ditch. Also revealed was a plot boundary system formed by late Saxon ditches, along with further gullies, pits and postholes suggestive of rear tenement plots (EBD93; BHER 17019, BHER 9724). Post-medieval and Victorian features were also recorded. The eastern part of the site contained the surface of the old lane from Kempston High Street to a corn mill by the Great Ouse. An evaluation by HAT on land at Kempston Mill to the west of the site, identified a late Iron Age/ early Roman ditch and sparse early medieval features that may have related to medieval mills. A follow up excavation revealed

evidence of Saxo-Norman and medieval (late 9th to late 13th century) occupation, and a number of ditches forming a field boundary/ drainage system (EBD26; BHER 4544). A number of pits, including one containing 13kg of mid-9th to 12th century pottery, and an undated limestone foundation were also found. Later development had disturbed much of the site. A possible moat is also located at Kempston Mill (BHER 5828).

A triangular medieval moated site, including evidence of Saxo-Norman occupation, is located to the north of the site close to the Great Ouse (BHER 3396). Probable high status manorial structures of Saxo-Norman date were also excavated at the north-eastern end of Bell End (EBD251; 17019).

The Manor, located nearby, is a Grade II listed 19th century Neo-Classical building (BHER 5484). To the east of the site, another area of medieval settlement at Up End has been completely enveloped by the post-medieval growth of Kempston (BHER 17020).

The closest HER points to the site are the location of an engineering works at Judith Gardens (BHER 17346), a 20th century garage at 28 High Street (BHER 17346), and a poultry appliance manufacture site at 50 High Street (BHER 17263). The site of two demolished blacksmiths, documented between 1804 and 1876, is indicated at Gwyles Close (BHER 11576).

4 METHODOLOGY

- 4.1 Four trenches, each measuring 10 x 1.60m were excavated using a tracked 360°mechanical excavator fitted with a 1.6m wide toothless ditching bucket (Fig. 2). The trench locations were approved by BBC.
- 4.2 Undifferentiated topsoil and overburden was removed under close archaeological supervision. Thereafter, investigation was undertaken by hand. Exposed surfaces were cleaned and examined for archaeological features and finds. Features and deposits were recorded using *pro forma* recording sheets, drawn to scale and photographed as appropriate.

5 DESCRIPTION OF RESULTS

Individual trench descriptions are presented below:

Trench 1 (Figs. 2 and 3)

Sample section 1A: NE end, SE facing			
0.00 = 28.50 m AOD			
0.00 - 0.10m	L1000	Tarmac	
0.10 – 0.36m	L1001	Leveling Layer. Mid brown, compact, silty clay with frequent CBM	
0.36 – 56m	L1002	Subsoil. Mid brown, firm, silty clay.	
56m+	L1011	Natural. Mid yellow / orange, firm, sandy clay with sparse small stones	

Sample section 1B: SW end, SW facing			
0.00 = 28.34m AOD			
0.00 – 0.08m L1000 Tarmac. As above.			
0.08 – 0.30m L1001 Leveling Layer. As above.			
0.30 – 0.58m L1002 Subsoil. As above.			
0.58m+ L1011 Natural. As above.			

Description: Trench 1 contained four undated postholes of which two, F1016 and F1018, were excavated. It also contained a modern pipe.

Posthole F1016 was circular (0.30 x 0.11m) with steep sides and a flattish base. Its fill (L1017) was a mid grey brown, firm clay with sparse gravel. It contained no finds.

Posthole F1018 was circular (0.30 x 0.16m) with steep sides and a flattish base. Its fill (L1019) was a mid grey brown, firm clay. It contained no finds.

Postholes F1016 and F1018 were similar to Posthole F1012 (Tr.2) and possibly formed part of a fenceline.

Trench 2 (Figs. 2 and 3)

Sample section 2A: SE end, SW facing 0.00 = 28.45m AOD				
0.00 – 0.09m	0.00 – 0.09m L1000 Tarmac. As above Tr.1.			
0.09 - 0.32m	L1001	_1001 Leveling Layer. As above Tr.1.		
0.32 – 0.62m L1002 Subsoil. As above Tr.1.				
0.62m+ L1011 Natural. As above Tr.1.				

Sample section 2B: NW end, SW facing 0.00 = 28.46m AOD				
0.00 – 0.08m L1000 Tarmac. As above Tr.1.				
0.08 - 0.36m L1001 Leveling Layer. As above Tr.1.				
0.36 - 0.64m	L1002	2 Subsoil. As above Tr.1.		
0.64m+ L1011 Natural. As above Tr.1.				

Description: Trench 2 contained Posthole F1012 and Pit F1014.

Posthole F1012 was circular $(0.51 \times 0.27m)$ with steep sides and a flattish base. Its fill (L1013) was a mid blue grey, firm clay with sparse gravel. The remains of a post were evident. It also contained fragments of tarmac. F1012 was similar to Posthole F1016 (Tr.1) and they possibly formed part of a fenceline.

Pit F1014 was rectangular (? X 0.71m x 0.47m) with steep sides and a concave base. Its fill (L1015) was a mid yellow grey, firm clay with sparse gravel. It contained medieval (10th to 12th century) pottery (36g) and animal bone (20g).

Trench 3 (Figs. 2 and 4)

Sample section 3A: SE end, NE facing 0.00 = 28.31m AOD				
0.00 – 0.32m L1000 Tarmac. As above Tr.1.				
0.32 - 0.54m L1001 Leveling Layer. As above Tr.1.				
0.54 - 0.79m	L1002	Subsoil. As above Tr.1.		
0.79 – 1.29m L1008 Fill of F1007				

Sample section 3B: NW end, NE facing 0.00 = 28.16m AOD			
0.00 - 0.16m	0.00 – 0.16m L1000 Tarmac. As above Tr.1.		
0.16 - 0.57m	0.16 - 0.57m L1001 Leveling Layer. As above Tr.1.		
0.57 – 0.83m L1002 Subsoil. As above Tr.1.			
0.83m+ L1011 Natural. As above Tr.1.			

Description: Trench 3 contained Pits F1007 and F1009, and a modern wall.

Pit F1007 was sub-circular in plan (1+ x 0.72+ x 0.70m) with moderately sloping sides and a concave base. Its fill (L1008) was a light grey brown, firm silty clay with sparse charcoal flecks and gravel. It contained modern (19th to mid-20th century) and residual medieval (12th to 13th century) pottery (224g) and animal bone (87g). F1007 was adjacent to Pit F1009 (to the west).

Pit F1009 was sub-circular in plan $(0.90 \times 0.30 \times 0.20m)$ with moderately sloping sides and a flattish base. Its fill (L1010) was a dark grey brown, firm silty clay with sparse charcoal flecks and gravel. It contained modern (late 18^{th} to 19^{th} century) pottery (155g), CBM (129g) and animal bone (5g). F1009 was adjacent to Pit F1007 (to the east).

Trench 4 (Figs. 2 and 4)

Sample section 4A: SW end, NW facing 0.00 = 28.35m AOD			
0.00 - 0.09m L1000 Tarmac. As above Tr.1.			
0.09 - 0.50m L1001 Leveling Layer. As above Tr.1.			
0.50 – 1.10m L1002 Subsoil. As above Tr.1.			
1.10 – 1.20m L1006 Fill of F1005			

Sample section 4B: NE end, NW facing 0.00 = 28.42m AOD			
0.00 - 20.42III AC	ענ		
0.00 - 0.13m	0.00 – 0.13m L1000 Tarmac. As above Tr.1.		
0.13 – 0.51m L1001 Leveling Layer. As above Tr.1.			
0.51 – 1.07m L1002 Subsoil. As above Tr.1.			
1.07m+ L1011 Natural. As above Tr.1.			

Description: Trench 4 contained Pits F1003 and F1005. It also contained a modern layer and modern services.

Pit F1003 was sub-circular in plan (? x 0.80 x 0.17m) with steep sides and a flattish base. Its fill (L1004) was a mid grey brown, firm silty clay with sparse charcoal flecks. It contained modern (mid 19th to 20th century) pottery (185g).

Pit F1005 was sub-circular in plan (? x 0.78 x 0.10m) with moderately sloping sides and a flattish base. Its fill (L1006) was a mid grey brown, firm silty clay with sparse charcoal flecks. It contained post-medieval/ modern (18th to 19th century) CBM (74g) and animal bone (956g).

6 CONFIDENCE RATING

6.1 It is not felt that any factors inhibited the recognition of archaeological features or finds. Modern features were present but did not obscure earlier features.

7 DEPOSIT MODEL

7.1 The encountered stratigraphy was uniform across the site. Uppermost was modern Tarmac L1000, sealing Levelling Layer L1001. In turn, L1001 sealed Subsoil L1002, a mid brown, firm, silty clay (0.20 – 0.60m thick). L1002 overlay Natural L1011, a mid yellow/ orange, firm sandy clay present at 0.56 to 1.07m below modern surface level.

8 DISCUSSION

8.1 Features were recorded in Trenches 1 - 4 and are tabulated below:

Trench	context	Description	Date
1	F1016	Posthole	Modern
	F1018	Posthole	Modern
	Unexcavated	Posthole	Modern
	Unexcavated	Posthole	Modern
2	F1012	Posthole	Modern
	F1014	Pit	Medieval (10 th to 12 th century)
3	F1007	Pit	Modern
	F1009	Pit	Post-medieval/ modern
4	F1003	Pit	Modern
	F1005	Pit	Post medieval/ modern

- 8.2 The site lies within an Area of Archaeological Interest as set out the Local Plan, which identifies the postulated medieval settlement of Bell End (BHER 17019). The site therefore had a potential for significant Saxon, medieval and post-medieval archaeological remains.
- 8.3 Encountered features comprised pits and postholes. The majority of the features were post medieval/ modern or undated. Pit F1014 (Tr. 2) contained medieval (10th to 12th century) pottery and Pit F1007 (Tr. 3) contained seven residual medieval (12th to 13th century) sherds.

8.4 Research agendas for Bedfordshire have been put forward by Oake *et al.* (2007). Although few medieval settlements have been investigated in the county, some notable examples have highlighted the potential for investigating the origins and development of villages (Oake *et al.* 2007, 14). Although small, the current site has the continued potential to contribute to our knowledge of medieval settlement in the area.

DEPOSITION OF THE ARCHIVE

Archive records, with an inventory, will be deposited with any donated finds from the site at Bedford Museum (Accession No. BEDFM: 2012.61). The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. In addition to the overall site summary, it will be necessary to produce a summary of the artefactual and ecofactual data.

ACKNOWLEDGEMENTS

Archaeological Solutions Ltd (AS) would like to thank Alan Brown Builders Ltd for funding the project, and for their assistance.

AS is pleased to acknowledge the advice, assistance and input of Mr Geoff Saunders and Ms Vanessa Clarke of Bedford Borough Council.

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APPENDIX 1 CONCORDANCE OF FINDS

Feature	Context	Trench	Feature Context Trench Description	Spot Date	Pottery	CBM (g)	CBM (g) Animal Bone (g) Other	Other
1003	1004	4	Fill of Pit	Mid 19 th to 20 th century	(2) 185g			
1005	1006	4	Fill of Pit			74	926	
1007	1008	3	Fill of Pit	19 th to mid-20 th century (14) 224g	(14) 224g		28	Glass (1) 3g
							Bird Bone - <1g	Shell - 17g
								Slate - 6g
								Worked Stone - 150g
1009	1010	3	Fill of Pit	Late 18 th to 19 th century	(13) 155g 129	129	2	Fe Frag (1) - 33g
1012	1013	2	Fill of Posthole			49		Fe Frag (2) - 25g
								Post-packing material - 132g
1014	1015	2	Fill of Pit	10 th to 12 th century	(7) 36g		20	

APPENDIX 2 SPECIALIST REPORTS

The Pottery

Peter Thompson

The evaluation recovered 34 sherds weighing 411g from four pits. The pottery has been quantified by context below (Table 1).

Pit F1014 (L1015) contained five abraded sherds of St Neots ware indicating a 10th to 12th century date range. An everted bowl rim with internal lid seating or groove is the only rim sherd present, but the inner surface is heavily abraded masking the exact form.

Pit F1007 (L1008) contained 13 sherds including seven residual medieval coarsewares in three fabrics. Five reduced sandy coarse sherds with grey or greybrown surfaces and orange-brown margins bear similarities to Fabric C6 found in Bedford and thought to be local to the town, although no associated kiln site is known (Baker et al. 1979, 172). The diagnostic sherds comprise a strap handle with thumb impression near where the handle was attached and a decorative central groove, and sagging cooking pot base. A small sherd with orange surfaces and containing abundant shell is similar in appearance to St Neots ware and is also a local product. However, the shell is coarser and there is a small amount of limestone present, suggesting the sherd could be classed as a B2 or B4 fabric (Baker et al. 1979, 165-167). A small mid-grey (?B6) sherd containing shell, limestone and occasional medium quartz grains is probably related to Lyveden wares from Northamptonshire. A 12th to 13th century date would suit the medieval pottery as a group. However, the presence of factory made white earthenware, including an example with transfer printing, English Porcelain and Yellow ware, indicates a 19th century date or later for the feature.

Pit F1009 (L1010) contained a similar pottery grouping as the early modern or modern sherds from Pit F1007, and is of a broadly similar date or perhaps slightly earlier. Pit F1003 (L1004) contained a sherd of modern sewage pipe along with a glazed red earthenware bowl rim.

KEY:

SNEOT: St Neots ware 10th-12th

MSGW: Medieval sandy greyware 12th-14th MSHW: Medieval shelly ware 12th-14th

MSLW: Medieval shell and limestone ware 12th-13th/14th

GRE: Glazed red earthenware late 16th+ ENPO: English Porcelain mid 18th+

RWE: Refined factory made white earthenware late 18th+

YELL: Yellow ware mid 19th-20th SP: sewage pipe mid 19th+

Feature	Context	Type	Quantity	Date	Comment
1003	1004	Pit	1x33g GRE	Mid-19 th to 20 th	GRE: bowl rim 36 cm
			1x41g SP	century	diam. Folded out and
					squared rim, internal
					brown glaze
1007	1008	Pit	1x15g YELL	19 th to mid-20 th	MSHW: strap handle with
			4x32g RWE	century	central decorative groove
			1x1g ENPO		ending in thumb
			1x4g MSHW (B2/4)		impression, probably
			1x3g MSLW (B6?)		forming part of the handle
			5x149g MSGW (C6)		attachment
1009	1010	Pit	9x43g RWE	Late 18 th to 19 th	RWE: Transfer printing
			1x4g MOCH	century	including 'willow pattern'
			3x97g GRE		and green and brown
					underglaze painting
1014	1015	Pit	6x29g SNEOT (B1)	10 th to 12 th	SNEOT: bowl rim with lid
				century	seating or channel

Table 1: Quantification of sherds by context

References

Baker, D., Baker, E., Hassall, J. and Simco, A. 1979, 'Excavations in Bedford 1967-1977', *Bedfordshire Archaeological Journal* 13, 7-307

The Ceramic Building Materials

Andrew Peachey

The evaluation recovered six fragments (252g) of abraded post-medieval CBM. Pit F1009 (L1010) contained three fragments (129g) of peg tile in an orange-red, vesiculated, hard-fired fabric, while the remaining CBM from Pit F1005 (L1006) and Posthole F1012 (L1013) comprised non-diagnostic fragments of red brick in a comparable hard-fired fabric. It is likely that this CBM would have been produced in the 18th or 19th century.

The Environmental Samples

Dr John Summers

Introduction

A 10 litre bulk soil sample for environmental archaeological analysis was taken during the evaluation. It was from the fill of Pit F1014 (L1015), dated to the medieval period (10th to 12th century). This report presents the results from the analysis of the bulk sample light fraction.

Methods

The sample was processed by water flotation, with the light fraction washed onto a 250µm mesh and the heavy fraction retained in a 500µm mesh. The light fraction was sorted under a low-power stereomicroscope (x10-x30 magnification). Identifications were made using reference literature (Cappers *et al.* 2006; Jacomet 2006) and a reference collection of modern plant material.

Results

The material recovered from the sample was fully quantified and is presented in Table 2.

A range of cereal and non-cereal remains were present in the macrofossil assemblage. Grains of free-threshing type wheat (*T. aestivum/ compactum* type), hulled barley (*Hordeum* sp.) and oat (*Avena* sp.) were all present, along with a single grain of wheat/ rye (*Triticum/ Secale* sp.). Wheat remains were the most numerous, followed by oat and barley. In addition to the cereals, a single, broken cotyledon of pea/ bean (Fabaceae indet.) was recognised. Pulses may have been grown as garden crops, although the evidence here is limited.

Also present were a range of non-cereal taxa. All of these could have grown as arable weeds amongst cereal crops and included goosefoot (*Chenopodium* sp.), corncockle (*Agrostemma githago*), dock (*Rumex* sp.), legumes (Fabaceae indet.), stinking chamomile (*Anthemis cotula*), brome grass (*Bromus* sp.), probable annual meadow-grass (*Poa* cf. *annua*) and other wild grasses (Poaceae indet.). Non-cereal taxa outnumbered cereal grains and cultivated pulses and it seems likely that an element of crop processing debris is represented within the sample.

Discussion

The sample from L1015 is quite rich considering the small volume of sediment processed. The range of cultivars is quite typical from sites of medieval date (e.g. Ballantyne 2005; Straker *et al.* 2007; Fryer and Summers forthcoming), with the dominance of free-threshing type wheat probably reflecting the staple cereal for human consumption. The sample is likely to represent mixed debris from a range of sources, but there is good evidence for the presence of crop processing debris in the form of arable weed taxa. In particular, corncockle and stinking chamomile were troublesome weeds during the medieval period. Stinking chamomile, which was by far the most abundant non-cereal taxon, is characteristic of the cultivation of heavy soils. Bread wheat (*T. aestivum*) is well adapted to such soil types (e.g. Moffett 2006) and these weeds probably grew amongst a wheat crop grown on clay soils. Kempston is surrounded by large areas of clay soils and it seems likely that the cereals present were grown locally.

Conclusions and statement of potential

The sample was quite rich and contained good evidence of crop processing activities. It is likely that the occupants of the site in the 10th to 12th century were using and processing cereals, which were probably also cultivated by the site's inhabitants.

The richness of the sample suggests that further excavation of medieval features at the site could provide an analytically viable assemblage of carbonised plant macrofossils.

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Site Code	AS1531
Sample number	1
Context number	1015
Feature number	1014
Feature type	Pit
	10th-12th
Spot date	С
Volume (litres)	10
Cereal grains:	
Indet. cereal grain frags	X
Cereal NFI	8
Hordeum sp Hulled barley	1
Triticum aestivum/ compactum type - Free-threshing	
type wheat	4
cf. Avena sp Oat	1
Avena sp Oat	2
cf. Secale cereale - Rye	1
Cereal indet. detached embryos	1
Other cultivars: Large Fabaceae indet Pea/ bean	1
Wild taxa:	
Chenopodium sp. L Goosefoot	2
Chenopodiaceae - Goosefoot family	3
Agrostemma githago L Corncockle	1
Rumex sp. L Dock	1
Fabaceae indet Pea family (medium)	1
Fabaceae indet Pea family (small)	1
Anthemis cotula L Stinking chamomile	12
Asteraceae indet Daisy family	2
Poa cf. annua L Annual meadow-grass	1
Bromus sp. L Brome grass	1
Poaceae indet Grass (medium)	2
Poaceae indet Grass (small)	3
Contaminants:	
Modern roots	X
Modern mollusc	X
Modern seeds	X
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X = present XX = common XXX = abundant

Table 2: Charred plant remains from bulk sample 1 (L1015)

PHOTOGRAPHIC INDEX



DP 1: Trench 4 with F1003 & F1005 taken from the SW



DP 3: F1012 in Trench 2 taken from the SW



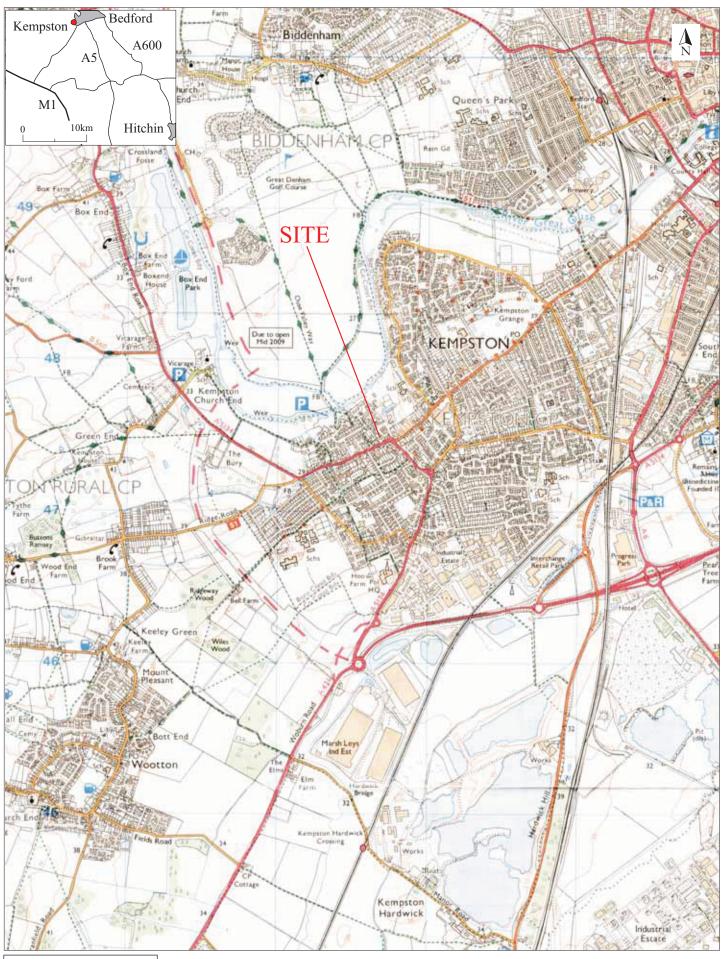
DP 5: F1018 in Trench 1 taken from the NE



DP 2: F1007 & F1009 in Trench 3 taken from the SW



DP 4: F1014 in Trench 2 taken from the SE



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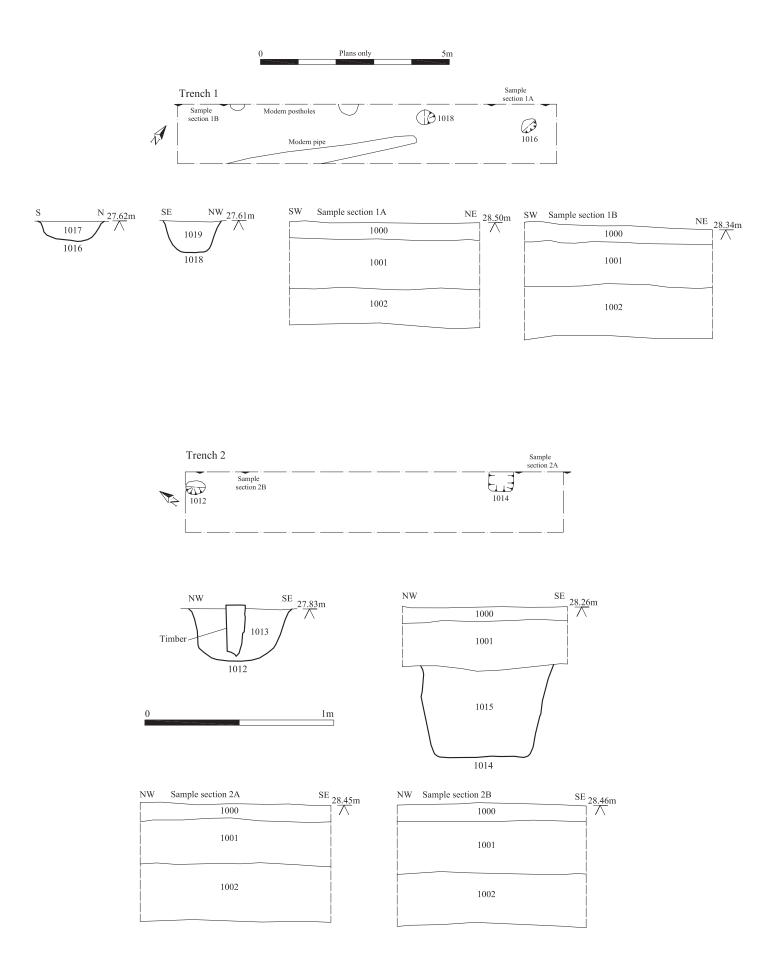
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Fig. 1 Site location plan
Scale 1:25,000 at A4



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Fig. 2 Detailed site location plan

Scale 1:500 at A4



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Fig. 3 Trench plans and sections

Scale 1:100 and 1:20 at A3

