Northamptonshire County Council

Northamptonshire Archaeology

An archaeological excavation

at King William Road

Kempston, Bedfordshire

August 2005

Charlotte Walker & Anthony Maull

December

Report 05/146

Northamptonshire Archaeology
2 Bolton House
Wootton Hall Park
Northampton NN4 8BE
w. www.northantsarchaeology.co.uk
t. 01604 700493/4
f. 01604 702822
e. sparry@northamptonshire.gov.uk

REGISTERED IFA ORGANISATION

NORTHAMPTONSHIRE COUNTY COUNCIL
NORTHAMPTONSHIRE ARCHAEOLOGY
DECEMBER 2005

AN ARCHAEOLOGICAL EXCAVATION AT KING WILLIAM ROAD KEMPSTON, BEDFORDSHIRE AUGUST 2005

STAFF

Project Manager	Anthony Maull, Cert. Archaeol.
Text	Charlotte Walker BSc, AIFA and Anthony Maull
Fieldwork	Anthony Maull Ben Pears MSc
Flint	Andy Chapman BSc, MIFA
Pottery	Anna Slowikowski
Environmental Analysis	Val Fryor
Animal Bone	Karen Deighton MSc
Illustrations	Carol Simmonds BA AAI&S and Charlotte Walker

QUALITY CONTROL

	Print name	Signed	Date
Checked by	Pat Chapman		
Verified by	Ant Maull		
Approved by	Andy Chapman		

OASIS REPORT FORM

PROJECT DETAILS		
Project name	An Archaeological Excavation at King William Road, Kempston, Bedfordshire	
Short description (250 words maximum)	*Northamptonshire Archaeology excavated a small open area to the rear of 1 King William Road, Kempston, Bedfordshire. The work was conducted on behalf of CgMs Consulting, prior to the construction of housing. Previous evaluation work had revealed what appeared to be late Saxon property boundaries and the excavation aimed to examine the nature of these features more fully.* *The excavation unexpectedly revealed a large Roman ditch dated to the 1st to 2nd centuries AD, probably an enclosure ditch. No other Roman features were revealed, but it seems likely that there would have been some sort of activity within the enclosed area, to the west and south-west of the site. The late Saxon ditches traversed the whole width of the area and appear to have formed a plot boundary system. Further gullies, pits and postholes were also revealed, which reinforced the suggestion that the area was situated to the rear of tenement plots. A number of post-medieval and Victorian features were found which related to back-yard activities and included construction trenches for a small building and at least one well. At the eastern extent of the site the metalled surface of the old lane linking Kempston High Street to the corn mill adjacent to the River Great Ouse was seen.*	
Project type (eg DBA, evaluation etc)	Excavation	
Site status (none, NT, SAM etc)	None	
Previous work (SMR numbers etc)	Evaluation	
Current Land use	Housing Development	
Future work (yes, no, unknown)	No	
Monument type/ period	Roman, late Saxon and post-medieval features	
Significant finds (artefact type and period)	The presence of rare rivet wheat (*T. turgidum*) type rachis nodes from fills of Saxo-Norman features are a significant find.	
PROJECT LOCATION		
County	Bedfordshire	
Site address (including postcode)	1 King William Road, Kempston	
Study area (sq.m or ha)	271 sq.m	
OS Easting & Northing (use grid sq. numbers)	30245 54739	
Height OD	28m OD	
PROJECT CREATORS		
Organisation	CgMs Consulting; Northamptonshire Archaeology	
Project brief originator		
Project Design originator	Mike Dawson MA MIFA	
Director/Supervisor	Anthony Maull Cert Arch	
Project Manager	Anthony Maull	
Sponsor or funding body	O'Neill Homes	
PROJECT DATE		
Start date	August 2005	
End date	October 2005	
ARCHIVES	**Location (Accession no.)**	**Content (eg pottery, animal bone etc)**
Physical	Bedford Museum BEDFM 2004.136	Ceramics, Bone, Flint, Environmental flots, Site Context Records, Plans and Sections, Photographic Record
Paper		
Digital	Bedford Museum BEDFM 2004.136	Mapinfo Trench Plots and Client report
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (NA report)	
Title	An Archaeological Excavation at King William Road, Kempston, Bedfordshire	
Serial title & volume		
Author(s)	Charlotte Walker and Anthony Maull	
Page numbers		
Date	15/11/05	

Contents

Tables

Figures

Plates

AN ARCHAEOLOGICAL EXCAVATION AT KING WILLIAM ROAD KEMPSTON, BEDFORDSHIRE, AUGUST 2005

Abstract

Northamptonshire Archaeology excavated a small open area to the rear of 1 King William Road, Kempston, Bedfordshire. The work was conducted on behalf of CgMs Consulting, prior to the construction of housing. Previous evaluation work had revealed what appeared to be late Saxon property boundaries and the excavation aimed to examine the nature of these features more fully.

The excavation unexpectedly revealed a large Roman ditch dated to the 1st to 2nd centuries AD, probably an enclosure ditch. No other Roman features were revealed, but it seems likely that there would have been some sort of activity within the enclosed area, to the west and south-west of the site. The late Saxon ditches traversed the whole width of the area and appear to have formed a plot boundary system. Further gullies, pits and postholes were also revealed, which reinforced the suggestion that the area was situated to the rear of tenement plots. A number of post-medieval and Victorian features were found which related to back-yard activities and included construction trenches for a small building and at least one well. At the eastern extent of the site the metalled surface of the old lane linking Kempston High Street to the corn mill adjacent to the River Great Ouse was seen.

1 INTRODUCTION

An archaeological excavation was carried out by Northamptonshire Archaeology in August 2005 to the rear of 1 King William Road, Kempston, Bedfordshire (NGR TL 0245 4739; Fig 1). The work was commissioned by CgMs Consulting on behalf of O'Neill Homes. The excavation was undertaken as part of the mitigation strategy fulfilling a condition placed on planning permission for a small housing development on the site (Planning Application No 04/210/Ful). A brief issued in April 2004 (Mather 2004) outlined a staged approach to the archaeological investigation of the site comprising an initial field evaluation which would assess whether further work was required. The field evaluation was undertaken in June 2004 by Northamptonshire Archaeology on behalf of CgMs Consulting (CgMs 2004). This demonstrated the survival in the area of archaeology dating from the late Saxon to the post-medieval periods.

Due to the potential of the archaeological deposits revealed by the evaluation stage, a project design was prepared detailing the scope of works necessary to fulfil the condition attached to the planning permission (NA 2005). All works were approved by the Bedfordshire County Archaeological Officer prior to excavation commencing.

The archive will be prepared to the guidelines of the Bedford Museum and arrangements for depositing the archive with the Bedford Museum have been agreed (Accession No. BEDFM 2004.136).

2 BACKGROUND

2.1 Archaeological and historical background

The development site lies within the north-west part of Kempston bounded by residential properties in King William Road and the High Street. Although the site was not known to contain any archaeological remains, it had been defined as being located within an area of significant archaeological interest (Mather 2004).

In common with other river valley locations, the area around the site is rich in prehistoric and Roman settlement and activity. Many chance finds of prehistoric flint tools have been made in the vicinity and there is crop mark evidence for the existence of possible Bronze Age round barrows to the west of the site. Iron Age and Roman finds from the area indicate a densely occupied region taken up by multiple small farmsteads and settlements. To the west of the current site an excavation was carried out on what may exemplify a planned Roman village, with a gridded network of roads and remains of farm buildings (Dawson 1999). There is some evidence of a villa having existed at Kempston Church End to the north-west. The existence of a Roman ford to the north of the site is disputed, the probability being that the ford is, in fact, modern in origin. An excavation undertaken in 1985-7 at King Williams Close to the north-east of the current site found a Palaeolithic handaxe, Neolithic and Bronze Age pottery, as well as Roman to medieval ditches, gullies and post-pits (CBA South Midlands 1986).

Dawson (1999b) stated that the origins of the parish may have followed a model in which an Anglo-Saxon palace (or villa regalis), which was supported by a number of hamlets, grew out of a Roman estate. Kempston was situated just within King Alfred's territory when the Danelaw was defined in the 9th century. By the late 10th century Kempston was at the centre of an estate held by earl Tostig, which was later seized by Edward the Confessor. The manor of Kempston was held by Countess Judith, niece of King William, by the time of the Domesday Survey in 1086. In addition to the estate centre, there were, according to Domesday records, two thegns resident at Church End, Box End or Hardwick (ibid).

Excavation at Kempston Manor, to the east of the site, has identified evidence of probable high-status, manorial Saxo-Norman structures. These are possibly part of Countess Judith's holding

(Crick and Dawson 1996). A medieval cemetery, dating to the 11th and 12th centuries, was excavated in the 1860s at Up End, near the manor site. A further cemetery dating to the same period was recovered and subsequently investigated in Brook Drive, to the south-east of the site. Thought to be situated too far from the manor complex, it was suggested that the site represented an early settlement pattern, probably the graveyard of a previously unknown missionary chapel.

2.2 Topography and geology

Kempston is situated on the south bank of a prominent bend of the River Great Ouse which flows from west to east towards the county town of Bedford. The geology of the area consists predominantly of Oxford Clay and Kelloway Beds (www.bgs.ac.uk/magazine/geology/home.html). The site lies in the part of Kempston known as Bell End. The area of application encompasses *c* 906 sq m comprising waste ground and part of a lawn currently attached to 1 King William Road. It is bounded on all sides by residential development with the High Street located to the south (Fig 1).

The development lies approximately 300m south of the present river course on the first gravel terrace at about 28m OD. The soil profile encountered on site included a horizon of alluvial silty clay interspersed with patches of river borne gravel through which features were cut, and similar horizontal deposits of subsoil and topsoil. The topsoil was humus-rich which was derived from its previous use as an orchard.

3 OBJECTIVES AND METHODOLOGY

The main objectives of the excavation were in essence to further determine the nature, character and date of the archaeological features discovered on the site during the evaluation phase. Several broad themes were to be addressed regarding population, settlement and agricultural production during the Saxon and medieval periods.

The site was stripped of topsoil and subsoil, under archaeological supervision, using a 360° excavator fitted with a toothless ditching bucket to reveal significant archaeological deposits, or where these were absent, the natural substrate. The area excavated was a broad L-shape in plan; using the north-western part of the site for spoil storage. All archaeological recording was carried out in accordance with standard procedures. A metal detector survey was undertaken by Steve Critchley during the excavation.

4 THE EXCAVATED EVIDENCE

4.1 Summary of chronology

A number of Neolithic worked flints were found as residual items in later features, which attest to a human presence in the area at this period.

The corner segment of a large Roman ditch lay in the eastern part of the excavated area (Fig 2). The ditch was probably part of an enclosure, which may have enclosed a small settlement such as a farmstead. The relative lack of finds and ecofactual evidence suggests that any settlement activity was not in the immediate vicinity of the site.

A pair of parallel, late Saxon ditches which had been recorded in the evaluation were further investigated. The ditches were aligned east to west and probably formed some sort of boundary, possibly demarking the rear of peasant tenement plots aligned along what became Kempston High Street. Although the southern ditch was interrupted, both ditches continued across the whole width of the excavation. The pottery assemblage recovered from the ditches was primarily 10th to 11th century in date, although 13th, 15th and 16th century sherds were also recovered. This suggests that although the boundary was in origin late Saxon it remained in use until much later. A fairly large quantity of domestic debris was recovered from the fills of the ditches, including one or more dumps of refuse destroyed by fire, suggesting domestic activity was taking place close to the site.

Several pits were also dated to the Saxo-Norman period. There was part of a possible timber structure to the north-east of the site.

A number of post-medieval and modern features were also found including the remains of a small structure, one, or possibly two, wells and a number of pits.

4.2 The Roman enclosure ditch

A broad ditch [194] was initially aligned east to west and turned sharply to a north-south alignment (Fig 2). The ditch measured up to 2.80m wide to the north, but was narrower to the south at *c* 1.30m wide. It was consistently 0.83m deep. The primary and secondary fills, (190) and (165), generally consisted of firmly compacted greyish brown clay silts with occasional inclusions (Fig 3; Section 2). A segment of the ditch was excavated close to the corner and the primary fill here was partly made up of limestone fragments and irregular shaped rocks. It is possible that this debris was derived from a nearby structure. Both of these fills had clearly defined boundaries with the

surrounding natural. The uppermost fill (164), however, was very similar to the light orange brown clay silt natural and it was for this reason that the ditch had not been identified in the evaluation stage of the investigation. The pottery found in the ditch fills was all early Roman in date and mainly of local origin.

4.3 The late Saxon and medieval features

There were two parallel late Saxon ditches aligned east to west (Fig 2; Plates 1 & 2). Within the excavation the southern ditch was made up of three separate segments, [163], [168] and [147]. The ditch terminated to the east and beyond this the alignment was defined by two elongated pits, [108] and [174]. Less substantial than its northern counterpart, this ditch measured up to 0.75m wide and 0.25m deep, with a wide U-shaped profile. It appeared that much of this ditch had been used for rubbish deposal, possibly long-term, but it more probably represented a single episode at a change of use. To the west, possible faecal concretions were found in the fill, suggesting it was close to domestic areas. Many of the samples taken on this site were from this ditch, and the material found seems to have been derived from at least one batch of semi-processed grain that had been destroyed by fire.

A dump of fired clay/daub was found in one of excavated segments of this ditch and the presence of wattle impressions on two of the fragments suggests that it was derived from some sort of structure, although there was too little evidence to say whether this was a building or something less substantial such as an oven or boundary wall. It is possible that the fired clay/daub was the result of the same fire that had destroyed the grain. Two limestone tiles were also recovered which may indicate that there was a relatively substantial structure in the vicinity. A largely complete St Neots ware jar was found in the terminal end of this ditch, [147], and probably dated to the 11th century.

Little more than a metre to the east a pit, [174] was 1.35m long and contained a yellow brown clay silt fill similar to [163]. A further 2.50m to the east another was another pit [108]. This ditch continued into the eastern edge of excavation and appeared to be curving slightly to the south. It, again, was an insubstantial feature with a wide U-shaped base. The gap between the ditch segments may have formed an entrance into the plot. If so the northern and southern boundary ditches would have had to have been of different phases. The latest ditch [145] in the sequence truncated [163] and was a more substantial boundary. The ditch was 1.30m deep and had an odd asymmetrical profile; the northern edge was almost vertical, while the southern edge was much shallower. This suggests that the southern edge had been subject to more erosion, perhaps by stock being kept in the area. The primary fill (144) was made up of dark grey brown silty clay with a fairly large amount of flint and some organic material. The secondary and tertiary fills of the ditch were much the same,

although the uppermost fill had a larger organic component. All the segments of this boundary were 10th or 11th century in date.

The northern ditch [150] extended through the entire length of the excavated area. It was 1.45m wide and 0.48m deep to the west, but only 1.03m wide and 0.18m deep to the east. To the west the fills consisted of dark grey black silty clays with a large organic content mostly composed of charcoal lumps and flecks. This indicates dumping of refuse, possibly from hearths, which may point to the presence of buildings nearby. To the east the ditch fill was, similarly, a dark grey black silty clay, but without the organic content. Pottery retrieved from the fills of the ditch is generally dated to the 10th or 11th centuries, although at the eastern end the pottery appeared to consist of 13th century material, with residual sherds of 11th century pottery and to the east 15th and 16th century sherds were found. At the western edge of the site the ditch cut a large pit or ditch terminus, [161] (Fig 3; Section 1). The feature was 1.10m deep and 0.80m wide and had a wide U-shaped profile. The fills of the pit were made up of successive periods of natural in wash caused by weathering of the pit edges, interspersed with episodic dumping of organic material. The relatively large number of different fills in the pit suggests that it may have been open for a long time. To the east the ditch cut a small gully [104], which may represent an earlier phase of the boundary system. Both these features were late Saxon in date.

There were a number of scattered pits and postholes on either side of the boundary system. The pits were all fairly similar in terms of size and fill make-up. None had a diameter of more than 1.30m. Pits [131] and [124] were fairly shallow, while [113] and [118] were more substantial, being up to 0.56m deep. Pits [113] and [118] were 10th or 11th century in date, while pit [124] was 15th to 16th century.

Three of the postholes may have formed part of some form of structure. They were dated by a single sherd of late Saxon pottery. They were up to 0.33m in diameter and 0.09m deep. Posthole [185] was found to the south and was the same size with a similar mid brown grey silty clay fill. The rest of the possible structure may have continued beyond the edge of excavation to the north-east. There was a single posthole to the south-east. Similar features may have been truncated by Victorian features.

There was a very heavily truncated curvilinear gully [170] to the south-east. About 4.20m long, it was 0.35m wide and 0.08m deep. Its function was unclear. It contained pottery of 15th century date.

4.4 The post-medieval and modern features

Two parallel slots, [120] and [126], at the western edge of excavation (Fig 2; Plate 1) lay 1.50m apart and were 0.45m wide by 0.17m deep with vertical sides and flat bases. There was a posthole [129] in the base of slot [126]. The slots would have supported a small structure that may have had an open end, possibly an animal shelter or some such. The fill of the slots and posthole was devoid of any inclusions, which suggests that the structure was dismantled rather than being left to rot *in situ*. The structure was probably late 18th century in date.

Three postholes of post-medieval date were possibly the remains of a fence-line, [122], [183] and [141]. They were clearly contemporary, since the profiles and fills were uniform. There were a number of post-medieval pits, two of which were intercutting, [136] and [139], were dated to the 18th or 19th century, the others remained undated. A brick-lined well [183] and associated pit or unlined well [180] found at the south-eastern corner of the site were 18th or 19th century in date. The remains of Mill Lane, the former lane leading from Kempston High Street to the corn mill on the River Great Ouse to the north, were seen in section to the east of the site.

5 THE FINDS

5.1 The Worked Flint by Andy Chapman

A total of ten pieces of flint were recovered as residual items in features of Roman or later date. The raw material is typically a brown or grey vitreous flint, with a pale brown cortex. The group contains two irregular shattered pieces and a single core. Of the four flakes, one is notched and another has a retouched edge. Of the three blades, a fragment from a small blade has been retouched along one edge and a blade from a well-prepared core has been partly pressure flaked on both surfaces. It appears to have been abandoned, probably as a result of breakage, whilst being worked into a leaf-shaped arrowhead.

While this is a very small group, the presence of three blades, one of which was in the process of being worked as a leaf-shaped arrowhead, suggests that the material is at least predominantly of Neolithic date and perhaps specifically dating to the early to middle Neolithic.

5.2 The Pottery by Anna Slowikowski

A total of 187 sherds, weighing 0.886 kg, were recovered from the site. The ceramics were recorded by context and fabric type, and quantified by sherd count and weight. A note was kept of

all forms, decoration and evidence of use. Much of the assemblage was unwashed so smaller fragments could only be identified with difficulty. The fabric codes are those used in the Bedfordshire Ceramic Type Series. The pottery was recorded on an Access database.

Roman pottery

Although some contexts contained the odd residual sherd of Roman pottery, only the ditch [194] could be securely dated to the Roman period from the absence of any other pottery. This assemblage is probably early Roman in date, from the absence of any diagnostically late pottery.

The earliest pottery is a sherd of possibly 1st century grog and shell tempered fabric. It was found with fully Roman pottery and is probably residual. The Roman assemblage is small and comprises largely of grey and orange wares, which are likely to be local. Regional or continental imports are present in the form of a sherd of Verulamium region ware and central Gaulish samian, possibly from Les Martres de Veyre. A single Roman sherd was sooted externally.

Late Saxon and medieval pottery

The bulk of the assemblage is medieval in date. The medieval pottery ranges in date from the late Saxon period (10th-11th centuries) to the late medieval period (15th-16th centuries), with the late Saxon pottery predominant.

This was generally a poor, abraded and very fragmentary assemblage, although the lower fired shelly wares naturally abrade more than the harder sandy wares. Average sherd weight is only 4.74g.

The largest part of the site assemblage dates to the Saxo-Norman period and comprises mainly St Neots ware or its variants, although a small sherd of Stamford ware was identifed. This St Neots pottery is particularly fragmentary and abraded, although there is one substantially surviving jar, made up of 28 sherds, weighing 295g, from the upper fill of ditch [147]. It is probably of 11th century date.

A smaller part of the assemblage could be dated to the 12th to 14th centuries, although all this pottery appears to have been residual in later contexts. Among the fragments are sherds of medieval shelly, Potterspury and Hedingham wares, as well as a number of medieval sandy wares. Only the Hedingham sherd is glazed and comes from a jug.

Two features [124] and [170] contained assemblages which could be dated to the late medieval period from the presence of 15th or 16th century pottery: late medieval oxidised and reduced wares. The fill of pit [124] also contained residual late Saxon pottery.

All the pottery of whatever date, is likely to be domestic in nature, although there is little in the way of evidence for use surviving. Among the St Neots wares, pitting on the interior, an internal white residue and a sooted exterior may be found on single sherds.

Post-medieval pottery

Post-medieval pottery ranges from the 17th to the 19th centuries.

Table 1: Pottery quantification and fabric types

Fabric code	Common name/description	Sherds	Weight g
Late Iron Age/Early Roman			
F05	Grog and shell	2	26
Roman			
R01	Samian	1	12
R03A	Verulamium region ware	2	2
R05A	Orange sandy	1	2
R06C	Grey ware (fine)	4	14
R06D	Grey ware (micaceous)	1	22
Saxo-Norman			
B01	St Neots	21	15
B01A	St Neots (fine mauve)	57	410
B01B	St Neots (orange)	64	185
C12	Stamford ware	1	1
Medieval			
B07	Medieval shelly	3	5
C01	Early medieval sandy	2	8
C03	Fine sandy	1	5
C10	Potterspury	2	7
C17	Hedingham	1	1
C53	Coarse sandy	1	1
Late Medieval			
E01	Late medieval reduced	4	8
E02	Late medieval oxidised	3	77
Post-medieval			
P01	Glazed red earthenware	1	14
P03	Black glazed earthenware	1	6
P03A	Red-slipped black glazed earthenware	3	40
P30	Staffordshire slipware	1	2
P38	Cream ware	3	14
P39	Mocha ware	1	3
MOD	Modern	1	1
UNID	Unidentified	5	5

5.3 The Ceramic Building Material by Anna Slowikowski

A small quantity of ceramic building material was recovered. This was mainly fired clay/daub, although seven fragments from at least two modern bricks, and four fragments from roof tiles were also found.

Table 2: Ceramic building material types

Fabric code	Common name/description	Sherds	Weight g
1C	Vitrified	2	10
9	Vesicular	9	555
	Fired clay/daub	43	125

With the exception of the two small fragments from context (163) all the rest of the fired clay/daub comes from a single context, (167), from ditch segment (168). This is dated by the pottery to the 11th or 12th centuries. The presence of two wattle impressions, 10mm and 20mm in diameter, confirms that this was daub, although it is uncertain whether it was used as part of a building or another structure, such as a boundary wall or oven. The fabric is coarse and sandy with abundant quartz, moderate quantities of red iron ore and flint, and calcareous inclusions particularly obvious to the naked eye. The uniformity of fabric suggests it all came from the same structure.

5.4 Miscellaneous Artefacts by Anna Slowikowski

A small number of non-ceramic finds was also recovered. The clay pipe stem fragment is not closely dated although it comes from the possible well (180) dated to the 18th or 19th centuries. Two fragments of stone may come from roof tiles: one of them, from pit (153) has the remains of mortar, the other was found in ditch (168).

6 THE FAUNAL AND ENVIRONMENTAL EVIDENCE

6.1 The environmental evidence by Val Fryor

The samples were bulk floated by Northamptonshire Archaeology, and the flots were collected in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted were listed (Appendix 2, Tables 1 and 2). Nomenclature within the tables follows Stace (1997). All plant remains were charred. Modern contaminants including fibrous and woody roots, seeds and arthropod remains were present throughout.

Results

Plant macrofossils

Cereal grains/chaff and seeds of common weeds were present at varying densities in all eleven samples. Preservation was very variable; some macrofossils were extremely well preserved, while others appear to have been subjected to extremely high temperatures during combustion, resulting in severely puffed and distorted grains and seeds.

Oat (*Avena* sp.), barley (*Hordeum* sp.), rye (*Secale cereale*) and wheat (*Triticum* sp.) grains were recorded, with wheat being predominant in the fills of all but pit [118] and ditch [166]. Chaff was not common (possibly due to the high temperatures of combustion which may have destroyed many of the more delicate chaff elements), but rachis nodes of bread wheat (*T. aestivum/compactum*) type were recorded from most samples. Of particular note was the presence of rare rivet wheat (*T. turgidum*) type rachis nodes within the fills of ditch [163], ditch [168], ditch [145], ditch [145] and ditch [161]. Although rivet wheat has now been recorded from early medieval deposits throughout the eastern region, records remain comparatively rare and it has yet to be determined whether free-threshing tetraploid wheats were a pre- or post-Conquest introduction. Oat grains were common within [145] and [161], and were the principal grain recorded from pit [118]. However, only a single floret base was recorded (from [161]), and as this lacked the diagnostic basal abscission scar, it is not possible to ascertain whether wild or cultivated species are present. Remains of other food plants were extremely sparse, although fragmentary large pulse (Fabaceae) cotyledons were noted within fills of ditch [150] and ditch [168].

Weed seeds were recorded throughout at a low to moderate density. Segetal taxa occurred most frequently and included corn cockle (*Agrostemma githago*), brome (*Bromus* sp.), indeterminate small legumes (Fabaceae), black bindweed (*Fallopia convolvulus*), goosegrass (*Galium aparine*), small grasses (Poaceae), wild radish (*Raphanus raphanistrum*), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.). The occurrence of seeds of stinking mayweed (*Anthemis cotula*) in all but three samples may indicate that most crops were being grown on the local clay soils. Wetland plant macrofossils comprising sedge (*Carex* sp.) and spike-rush (*Eleocharis* sp.) nutlets and bur-reed (*Sparganium* sp.) fruits, were only recorded as single specimens within three samples (pit [118] and ditches [168] and [145]).

Charcoal fragments were abundant throughout along with small pieces of charred root or stem. Other plant macrofossils were exceedingly rare, but indeterminate culm nodes and inflorescence fragments were noted within four samples (ditches [163], [168], [145] and [161]).

Other materials

The fragments of black porous and tarry material noted within all assemblages are probably mostly residues of the combustion of organic remains (including cereal grains) at extremely high temperatures. However, some fragments had the appearance of porous fuel residues (?coke) and may be modern in origin. Other remains were rare, although small pieces of coal occurred in most assemblages, and possible faecal concretions were noted within sample 7.

Discussion

Samples from the Roman ditch fills (Appendix 1: Table 1)

Two samples are from fills within a Roman ditch. Although a small number of grains and weed seeds are present within both samples, the assemblages are primarily composed of black porous and tarry concretions, some of which have the appearance of modern coke. It would appear most likely that both assemblages contain high densities of modern intrusive material and, as a result, it is not possible to state with any certainty whether the remaining macrofossils are contemporary with the ditch cut or not. However, the low density of charred plant remains recorded may indicate that this ditch was peripheral to any main centre of activity during the Roman period.

Samples from the late Saxon features (Appendix 1: Table 2)

The remaining nine assemblages are all from features of late Saxon date. Cereal grains are common or abundant in all nine samples along with chaff and weed seeds, the latter two possibly indicating that the material is derived from at least one batch of semi-processed grain. As a high density of the recorded weed seeds (for example the corn cockle, brome, black bindweed and wild radish) are of a similar size to the grains, this may suggest that processing was at an advanced stage. Many of the smaller seeds and much of the chaff would have been removed by winnowing, but these larger specimens would persist until removed by hand at the end of the cleaning process. As wheat is predominant in all but one assemblage (pit [118]), it is assumed that this was the staple crop, with the oats, barley, rye and the large pulses probably being present as either main crop contaminants or possibly relicts of earlier cropping regimes. The abundance of small legume seeds within the assemblages is interesting, as it may be indicative of the rotational cropping of the fields with plants with nitrogen fixing capabilities, a practise which became widespread from the thirteenth century as soils became nitrogen depleted due to prolonged use.

Conclusions

In summary, the assemblages from the Roman ditch give little indication about the day to day functioning of the site during this period. However, the samples from the Saxo-Norman features strongly suggest that the production and processing of cereals was of considerable importance to the local economy during the earlier medieval period. Wheat was almost certainly the staple crop, as it

was best suited to production on the local clay soils, and there may be evidence that some soils were being improved by rotational cropping with leguminous plants. Hexaploid wheat varieties appear to have been grown most frequently, although new tetraploid varieties were slowly being introduced, and the assemblages provide an important additional record of the early post-Conquest cultivation of rivet type wheat. Although the original provenance of the material is unclear, it would appear most likely that the assemblages are derived from batches of stored grain, which were destroyed during one or more catastrophic fires, the residues from these fires being dumped within any available open feature.

Although the assemblages the late Saxon features are relatively small, they may contain evidence of an early occurrence of rivet type wheat within the Bedfordshire area and, as a result, are important.

6.2 The animal bone by Karen Deighton

474 grams of animal bone were collected from a range of contexts during excavation and from sieved samples (mesh sizes 1mm, 3.4mm. sample sizes 20 litres). Bone was only found in the late Saxon and medieval features. This material was examined using standard zooarchaeological methods (Stace 1997).

Results

Fragmentation was fairly heavy with most bones in the form of shaft cylinders or shaft splinters. Surface abrasion was low which could suggest that bone was buried rapidly after deposition. Only four examples of canid gnawing were noted. No evidence of butchery was seen. Small burned fragments were noted from [148], a ditch. A single ovicaprid neonatal element was noted from [142].

Discussion

The assemblage largely represents the common domesticates i.e. cattle, sheep/goat (no distinctions are made here due to the fragmentation and paucity of the material) and pig (Schmid 1972). The presence of the amphibian and the vole remains could be intrusive as both taxa have burrowing habits. Beyond this, discussion and interpretation of the assemblage are precluded owing to its size and condition.

Taxonomic distribution

Table 3 Species by context

Context Number/ Feature number	Bos	Ovicaprid	Sus	Ovicap/cap	L.ungulate	S.ungulate	S.mam	Mic.	Amphibian
	Cattle	Sheep/goat	pig	Sheep/goat/roe	l.hoof	S.hoof		Vole	Toad/frog
107/ 108							1		
111/113	1	1			1				
135/136		1		2					
142/145		1	1						
143/145			1						
144/145		2							
148/150						1			
158/161									
162/163	1							1	
Total	2	5	2	2	1	1	1	1	1

Key Ovic/cap= ovicaprid/capreolus, L. =large, S=small S.mam =small mammal, Mic. =Microtus sp.

7 DISCUSSION

The small excavation in this part of Kempston has provided further evidence of the continuity of settlement throughout the area. The small amount of flint tools recovered attest to some degree of human activity in this area in the Neolithic period, although, given that all the flint tools were residual finds in later contexts, the nature of the activity cannot be deduced.

The large Roman ditch probably formed part of an enclosure in use in the late 1st and 2nd centuries AD. No other structural evidence from this period was recovered, so it is not possible to define the character of the remains. Evidence from the environmental remains, however, suggests that the area of the excavation was situated away from any main centre of activity. The small pottery assemblage would tend to agree with this conclusion. The discovery of Roman features attests to the density of occupation in the Roman period in this area in general.

The nature of the late Saxon and medieval occupation is poorly defined since the excavation only revealed lengths of ditch and some pits, but some form of settlement would have been located in the immediate vicinity of the current site, given the amount of rubbish recovered from the ditches and pits.

A major reorganisation of the landscape is evident in many places in the late Saxon period, associated with the process of manorialization and foundation of what were to become in the medieval period, villages. The 10th and 11th century ditches found at King William Road, Kempston probably relate to this process, forming a boundary which, from the evidence of the domestic

rubbish, probably marked the rear of a row of tenement plots established along the northern side of the High Street. That the formation of this site coincides with the first phase of structural evidence found at the manorial complex to the north-east, is further evidence of a major reorganisation of the late Saxon landscape. The extensively excavated site at Tempsford exhibited similar expansion and reorganisation in the 9th and 10th centuries with the formation of an extensive system of regular rectangular plots, which formed the basis of settlement for the next three hundred (Maull and Chapman 2005).

The environmental data from the site provides evidence for the growth in population that is thought to have taken place during the late Saxon period and into the medieval period, since the presence of stinking mayweed seeds shows that the less productive local clay soils were being utilised for cultivation. It also appears from the environmental evidence that the inhabitants of this area were practising a rotational cropping system, indicating the establishment of a common field system. The evidence for an early occurrence of rivet type wheat adds important information to the corpus of knowledge regarding Saxo-Norman agriculture in Bedfordshire.

The post-medieval and modern features found during the excavation relate to a backyard activities, with the construction of wells, a small structure which may have been used for storage or for penning livestock and the excavation of pits for the disposal of domestic refuse.

BIBLIOGRAPHY

Binford, L.1981 *Bones: Ancient man and modern myths* New York: Academy press

Brown, T, and Foard, G, 2004 The Anglo-Saxon Period, in Tingle, M, 78-101

Brown, N, and Glazebrook, J, (eds) 2000 *Research and Archaeology: a framework for the Eastern Counties 2: Research Agenda and Strategy*, East Anglian Occasional Paper, **8**

CgMs, 2004 *Land at 1 King William Road, Kempston, Bedfordshire: Archaeological Trial Trench Evaluation*, CgMs client report

Crick, J and Dawson, M, 1996 Archaeological Excavations at Kempston Manor, 1994 *Bedfordshire Archaeol*, **22**, 67-95

Dawson, M, (ed) 1999 *Prehistoric, Roman, and Post-Roman Landscapes of the Great Ouse Valley*, CBA Res Rep, **119**

Dawson, M, 1999b A medieval cemetery at Brook Drive, Kempston *Bedfordshire Archaeol*, **23**, 111-117

Maull, A and Chapman, A, 2005 *A Medieval Moated Enclosure in Tempsford Park*

Northamptonshire Archaeology, 2005 *Project design for archaeological excavation to the rear of 1King William Road, Kempston, Bedfordshire*

Mather, L, A, 2004 *Brief for a programme of Archaeological Excavation,Recording, Analysis and Publication of Land rear of 1 King William Road, Bedfordshire*

Schmid, E. 1972 *Atlas of Animal bones* London: Elsevier

Stace, C., 1997 *New Flora of the British Isles*. Second edition. Cambridge University Press

Northamptonshire Archaeology

a service of Northamptonshire County Council 12 December 2005

APPENDICES

A.1: Context spotdates based on pottery evidence by Anna Slowikowski

An overall spotdate was allocated to each context, based on the dateable pottery present in the assemblage. The latest pottery normally provided the date unless there was obvious intrusion into the assemblage. The condition of the pottery in the context was noted as follows: F – fair; G – good; P – poor. Most assemblages were recorded as fair, with those in particularly good condition recorded as good, and those that were particularly battered and abraded recorded as poor (Table 1).

Table 1: Context spotdates and condition of pottery assemblage

Context/ Feature No.	Spotdate	Condition
103 / 104	11th	P
105 / 106	13th (incl residual Saxo-Norman sherds)	P
107 / 108	10th-11th	F
109 / 110	10th-11th	F
111 / 113	10th-11th/mod	P
116 / 118	11th	F
119 / 120	L18th	F
123 / 124	15th-16th (incl residual Saxo-Norman sherds)	P
126 / 127	18th (incl residual Saxo-Norman sherds)	P
135 / 136	18th	P
136 / 136	L18th-19th	F
137 / 139	11th-12th	P
138 / 139	Modern	F
142 / 145	10th 11th	P
143 / 145	10th-11th	P
144 / 145	11th	F
146 / 147	11th	G
148 / 150	10th-11th	F
151 / 153	10th-11th/15th-16th (mixed date but the Saxo-Norman sherd is unabraded)	P
158 / 161	10th-11th	P
159 / 161	10th-11th	P
162 / 163	10th-11th (many tiny crumbs)	P
164 / 166	L1st	F
165 / 166	2nd	P
167 / 168	11th-12th?	F
169 / 170	15th	P
179 / 180	18th-19th (incl residual Saxo-Norman and medieval sherds)	F
190 / 166	ERB? (undiagnostic sherds)	F

APPENDIX 2: Tabulated results of environmental analysis by Val Fryor

Key to Tables

x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens

coty = cotyledon fg = fragment P/D = pit/ditch

Table 1: Samples from the Roman ditch fills

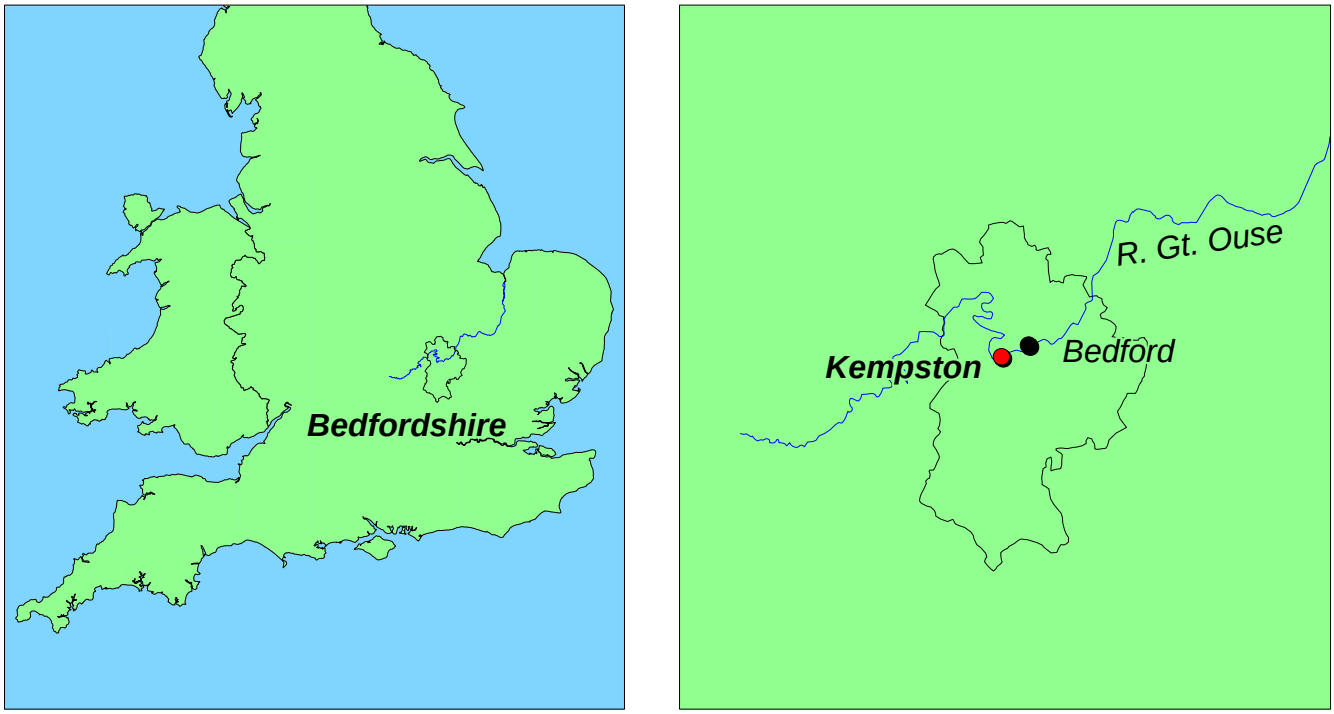
Sample No.	**5**	**11**
Context No. / Feature No.	**165 / 166**	**164 / 166**
Feature type	**Ditch**	**Ditch**
Cereals		
Avena sp. (grains)	x	
Cereal indet. (grains)	x	x
Herbs		
Anthemis cotula L.	x	
Bromus sp.		x
Fabaceae indet.		x
Other plant macrofossils		
Charcoal <2mm	xx	x
Other materials		
Black porous 'cokey' material		xxx
Black tarry material	xx	xxx
Small coal frags.	xx	xx
Small mammal/amphibian bones		x
Vitrified material		x
Sample volume (litres)	**10**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**

Table 2: Samples from the Saxo-Norman ditch fills

Sample No.	**1**	**2**	**3**	**4**	**6**	**7**	**8**	**9**	**10**
Context No. / Feature No.	**116 / 118**	**146 / 147**	**148 / 150**	**162 / 163**	**167 / 168**	**143 / 145**	**144 / 145**	**158 / 161**	**159 / 161**
Feature type	**Pit**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**P/D**	**P/D**
Cereals and other food plants									
Avena sp. (grains)	xxx	x	x	x	x	x	xx	xx	xx
(awn)				x	x				
(floret base)									x
Large Fabaceae indet.			xcoty		xcotyfg				
Hordeum sp. (grains)	xcf	x		xcf	x	x	x	x	
Hordeum/Secale cereale type (rachis nodes)					x	x	x	x	
Secale cereale L. (grains)		xcf			x			x	x
(rachis nodes)		xcf		xcf	x				
Triticum sp. (grains)		xxx	xx	xx	xxx	xxx	xx	xx	xx
(rachis node frags.)				x	x				

(rachis internode frags.)						x	x	x	x
T. aestivum/compactum type (rachis nodes)		x	x	x	xx	x	x	xx	x
T. turgidum type (rachis nodes)				xcffg	x	x	x	xcf	
Cereal indet. (grains)	x	xx	xx	xxx	xx	xx	xx	xx	xx
(rachis node frags.)		x		x					
(rachis internode frags.)		x							
(basal rachis nodes)						x	x		
(detached embryos)						x			
Herbs									
Agrostemma githago L.						x	x		x
Anthemis cotula L.		x	x	x	x	x	x		xx
Asteraceae indet.				x			x		
Bromus sp.	x				x	x			
Chenopodium album L.			x			x			
Chenopodiaceae indet.			x			x	x	x	x
Fabaceae indet.	x	x	x			x	x	xx	
Fallopia convolvulus (L.)A.Love	x	x					x		
Galium sp.		x			x				
G. aparine L.					x			x	x
Lapsana communis L.					x				
Lithospermum arvense L.									xfg
Medicago/Trifolium/Lotus sp.						x	x	x	
Plantago lanceolata L.					xcf				
Small Poaceae indet.			x	x	x	x	x	x	x
Polygonum aviculare L.				x	x				
Polygonaceae indet.		x							
Ranunculus acris/repens/bulbosus					x				
Raphanus raphanistrum L. (siliquae)				x	x				
Rumex sp.			x	x	x	x		x	x
Silene sp.					x				
Stellaria graminea L.									x
Vicia/Lathyrus sp.			x	x	x	xx	x	xx	xx
Wetland plants									
Carex sp.					xcf		x		
Eleocharis sp.					xcf				
Sparganium sp.	x								
Other plant macrofossils									
Charcoal <2mm	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx	xx
Charcoal >2mm	xx	xx	xx	xx	xx	x	xx	x	xx
Charred root/stem		x	x	x	x	x	x	x	
Indet.culm nodes					x	x		x	
Indet.inflorescence frags.				x	x				
Indet.seeds		x		x	x		x	x	x
Other materials									
Black porous 'cokey' material	xx	xxx	xxx	xxx	xx	xx	xx	xxx	xx
Black tarry material	x	xx	xx	xx	xx	x	xx	xx	x
Bone					x				

Mineralised/faecal concretions						x			
Small coal frags.	x	x	x			x	x		x
Small mammal/amphibian bones		x		x		x		x	
Vitrified material	x					x	x		
Sample volume (litres)	**20**	**20**	**20**	**20**	**10**	**20**	**20**	**10**	**10**
Volume of flot (litres)	**0.1**	**0.2**	**<0.1**	**0.2**	**0.2**	**0.1**	**0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**50%**	**100%**	**50%**	**50%**	**100%**	**100%**	**100%**	**100%**


Bedfordshire
R. Gt. Ouse
Kempston
Bedford

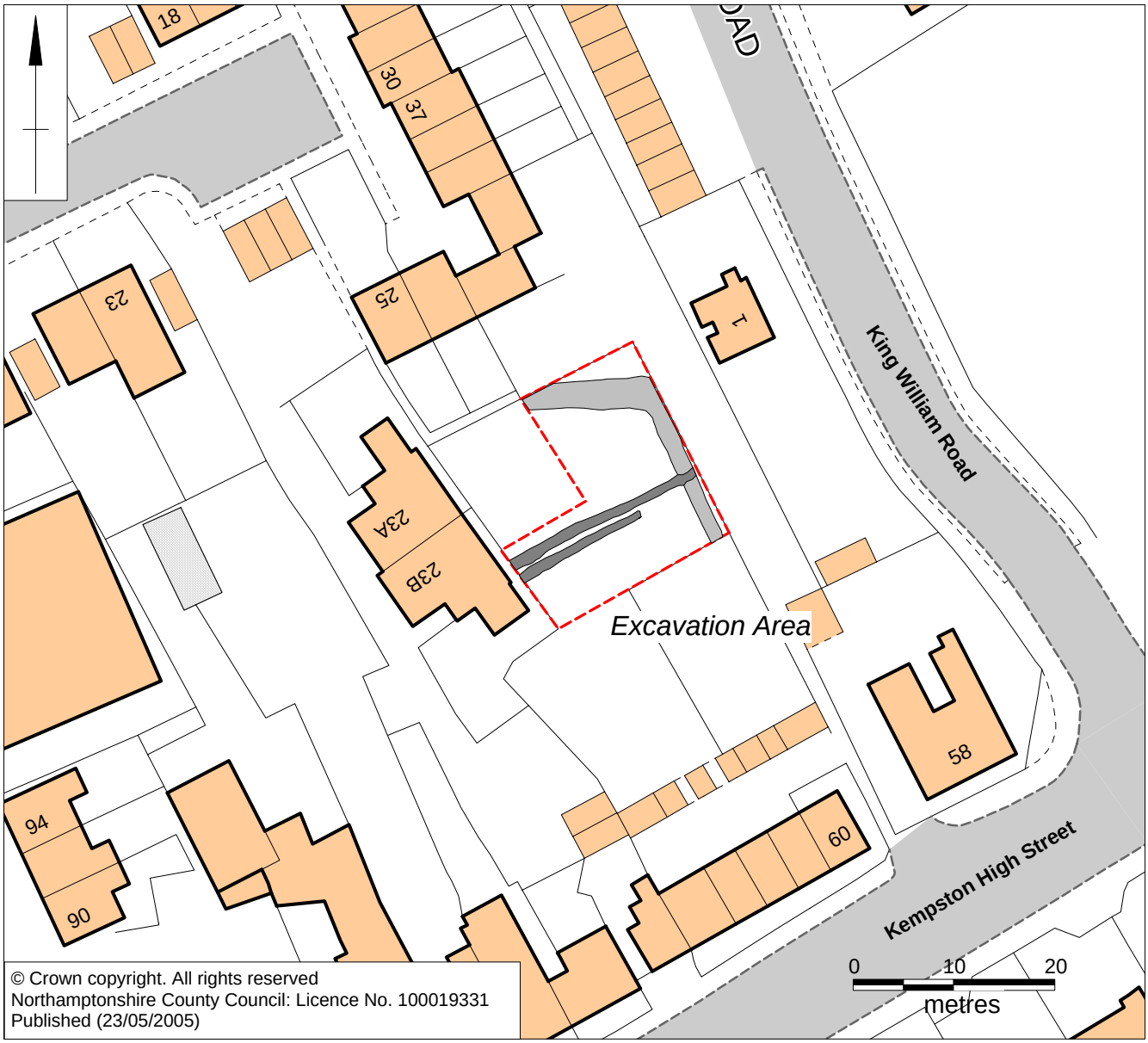
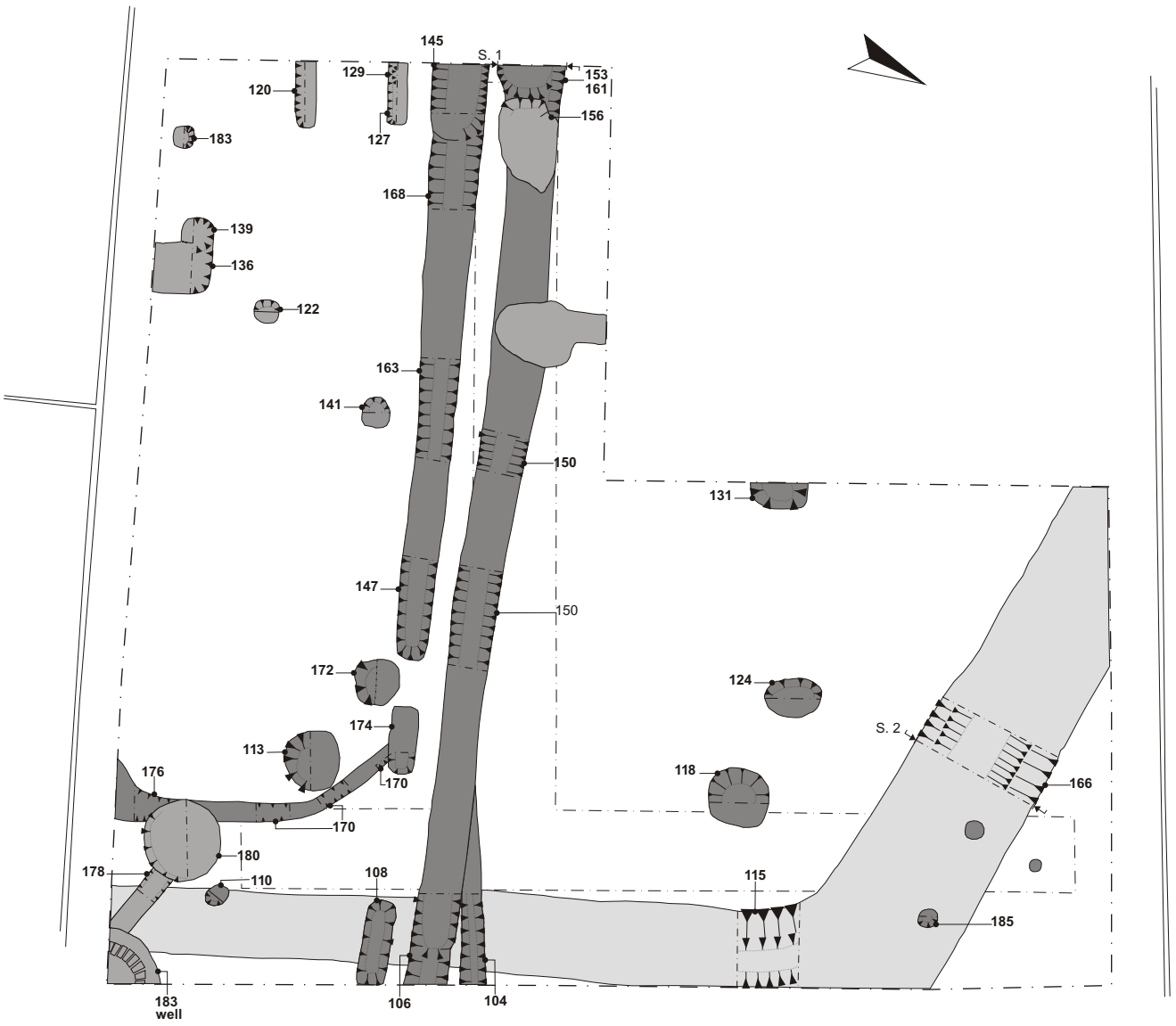

18
30
37
25
23
1
King William Road
234
238
Excavation Area
58
94
90
60
Kempston High Street
0
10
20
metres
© Crown copyright. All rights reserved
Northamptonshire County Council: Licence No. 100019331
Published (23/05/2005)

Fig 1

King William Road, Kempston



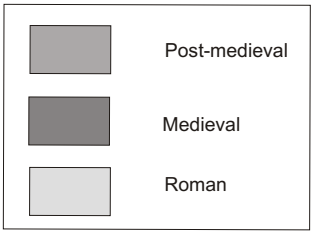
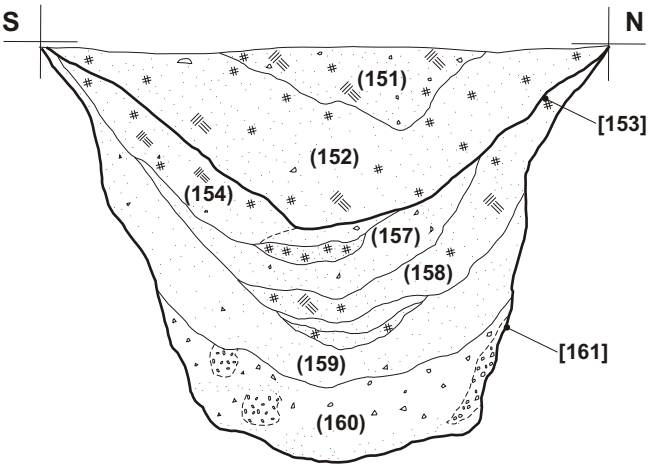


Fig 2

Section 1



Section 2

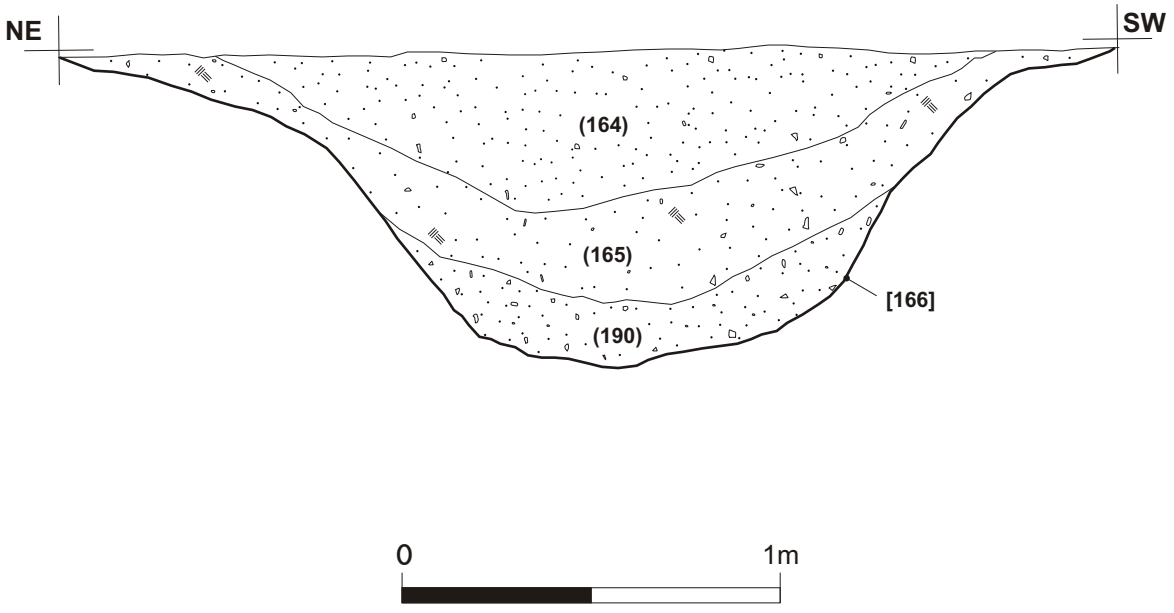


Plate 1

Plate 2