LATE SAXON EVIDENCE FROM NORSE ROAD, BEDFORD, BEDFORDSHIRE

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LATE SAXON SETTLEMENT EVIDENCE FROM NORSE ROAD, BEDFORD

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SUMMARY

During April and May 2010, Albion Archaeology undertook a series of archaeological excavations to the north of the Norse Road Cemetery in Bedford, on land earmarked for the cemetery's expansion. An initial evaluation of the area in 2006 had identified areas of archaeological potential dating from the Iron Age to the medieval period, and the excavations targeted three areas of potential Roman ditches and a possible hearth.

Although the excavations did reveal a small number of Roman ditches and evidence for medieval agriculture, most of the features dated to the late Saxon period. These consisted of an area of concentrated pitting, probably located at the periphery of a small settlement. The pits were backfilled with a variety of burnt and unburnt deposits containing domestic refuse, as well as waste products from craft activities such as smithing and brewing.

INTRODUCTION

A programme of archaeological investigation was undertaken by Albion Archaeology on land between Bushy Close Spinney and a bridleway that runs along the north side of Norse Road Cemetery, Norse Road, Bedford (Fig. 1). The land was part of Bedford Borough Council's intended extension of the cemetery, and the investigations were undertaken as a condition of planning consent.

The land was evaluated in 2006 (in conjunction with an area of proposed housing to the south-west) by means of a desk-based assessment (Browning 2006), geophysical survey (Smalley 2006) and trial trenching (Albion Archaeology 2006). The geophysical survey initially comprised topsoil magnetic susceptibility survey, leading to detailed magnetometry targeted on areas of enhanced magnetic susceptibility that were suggestive of archaeological remains. Trial trenches were then used to target the geophysical anomalies revealed by detailed magnetometry, while also providing coverage of the remaining area, subject to constraints imposed by modern land-use.

The most significant remains identified within the cemetery extension by the evaluation were interpreted as late Iron Age / Roman ditches and a possible hearth; they were revealed in some of the trial trenches that lay outside the area of detailed magnetometry. These were targeted by three small open-area excavations in April and May 2010, collectively measuring 1,100m^2. Removal of the overburden, however, revealed that the linear remains identified during trial trenching accounted for a relatively small proportion of what was present. Most of the features, including the possible hearth, were pits, which excavation soon made clear were late Saxon, or possibly Saxo-Norman in date. This led to a change of focus during post-excavation analysis, and this article thus concentrates on these late Saxon remains.

Site location and geology

The development area is centred on TL 0889 5233 in the parish of Renhold, *c*. 500m south of the parish Church of All Saints and to the immediate north of Norse Road, Bedford. It covers an area of *c.* 8ha, which comprised open agricultural land at the time of fieldwork, bounded to the east by a tributary to the Renhold Brook which itself flows into the River Great Ouse less than a mile to the south. The site lies at *c.* 40m OD, on land that slopes gradually downwards to the south; there is a marked rise in local topography from the floodplain of the River Great Ouse to the slightly higher land at Norse Road. The underlying geological deposits comprise Oxford clay overlain by boulder clay.

Archaeological and historical background

The landscape surrounding the development area is rich in archaeological remains. This is particularly true for the Iron Age and the Roman periods, when the catchment area of the Great Ouse Valley was characterised by a proliferation of small settlements with, or adjacent to, limited enclosure systems, with a repeated re-occupation of preferred sites (Dawson 2000). An Iron Age–Romano-British farmstead consisting of enclosures, droveways and boundary ditches was excavated *c*. 800m to the south in 1996 (Edgeworth 2001), while excavations in the southern half of the development area revealed a small mid-Iron Age settlement consisting of animal enclosures and pit clusters (Albion Archaeology 2011).

In contrast to the high number of known Iron Age and Romano-British settlements, the visibility of rural Saxon and Saxo-Norman sites in the area is much lower. Less is known of their density and settlement patterns, perhaps because Saxon settlers made use of existing Roman field systems rather than constructing their own. Settlements mainly consisted of dispersed hamlets, represented by the numerous 'End' place-names, which in the later 9th–11th centuries came together into more nucleated villages with a corresponding rearrangement of field systems (Edgeworth 2007, 93). There are several 'Ends' clustered around the modern village of Renhold, most notably Salph End, Church End and Workhouse End. Most manors in the area are post-Conquest foundations: Renhold itself, for example, is not mentioned in historical records until 1227–8 when it was part of the Barony of Bedford. Salph End, 0.7 miles west of the development area, is the only estate in the vicinity recorded in Domesday Book, as a manor held by Hugh of Beauchamp that was worth five hides. This suggests that a sizable estate existed here in the late Saxon period.

RESULTS (Fig. 2)

Roman field system

Fragmentary remnants of a possible rectilinear field system were identified in Area 2. It was defined by ditch G4, which produced a small quantity of Roman pottery and was truncated by the late Saxon pitting. North–south ditch G1 in Area 1 may also have formed part of the same field system; it was similar in size and profile to G4, but produced no artefactual dating evidence.

Late Saxon settlement activity

Activity in the late Saxon period is represented primarily by intensive pit-digging in Area 2 (Fig. 3: Photograph 2). Thirty-seven pits were identified, several of which were intercutting, indicating that a sequence of pitting activity occurred. Some of the pits contained burnt material, while others have been grouped together according to their size and/or spatial location; Table 1 provides a summary of their size, shape and contents. Although many of the pits were used for the disposal of refuse, it is uncertain whether this was their primary or secondary function.

Group	No. of pits	Length	Depth	Profile	Finds
G5	5	1.8–2.9m	0.15–0.5m	Concave sides and flattish base	263g pottery, 54g animal bone, 0.2g hammerscale
G6	1	1.3m	0.42m	Steep, concave sides and concave base	271g pottery, 133g animal bone, 47g fired clay
G7	3	1.4–1.6m	0.32–0.4m	Steep, concave sides and slightly concave base	41g pottery, 69g animal bone, 154g fired clay, 0.001g hammerscale
G8	4	2–3m	0.2–0.4m	Concave sides and flat base	499g pottery, 70g animal bone, 367g fired clay, 0.01g hammerscale
G9	1	6m	0.4	Steep, concave sides and slightly concave base	299g pottery, 18g fired clay
G10	2	2.2–3.1m	0.8–0.9m	Concave sides and flat base	84g pottery, 5g animal bone
G11	5	1–1.6m	0.35–0.65m	Concave sides and concave or flat base	175g pottery, 16g fired clay
G12	3	0.9–1.5m	0.4–0.45m	Concave sides and flat base	30g pottery, 173g animal bone
G13	4	1.1–1.5m	0.4–0.5m	Steep, concave sides and concave base	208g pottery, 125g animal bone, 15g fired clay
G14	4	1.2–1.25m	0.22–0.3m	Concave sides and flat base	13g pottery, 0.05g hammerscale
G15	6	1.6–2m	0.15–0.52m	Concave sides and flattish base	282g pottery, 123g animal bone, 43g fired clay, 0.01g hammerscale

Table 1: Dimensions and morphology of the late Saxon pits

Pits containing burnt debris

Seven pits in Area 2 contained burnt waste material (Fig. 3: Photograph 1), which an absence of *in situ* burning suggests was dumped from elsewhere. The four pits in G8 were larger than the three in G7 (Fig. 2: a), but it is unclear whether this difference was significant in terms of indicating a different function. Artefacts were recovered from all of the pits, including late Saxon pottery, fired clay, a bone box lid mount with an iron rivet, and part of an iron blade.

Other pits

Thirty pits in Area 2 contained no significant quantity of burnt deposits, although a range of artefacts was still recovered from them (Tables 1 and 3). Sixteen of these were less than 1.6m in diameter — G11, G12 and G13 in the western half of the area, and G14 in the eastern half. A further pit G6 was recorded in Area 3 that was similar to G11–G14 in terms of its size, profile and finds assemblage.

Elongated oval pit G9 was the largest complete pit to be identified; eleven other large pits G5 and G15 were 1.6–2.9m in diameter and up to 0.5m deep. There was some evidence for a sequence of activity, with two of the pits in G15 intercutting. Some of these large pits may have been used for water collection — though G9 is perhaps more likely to have been a quarry pit — before their secondary use for the disposal of domestic debris. Two large, probably oval pits G10 that extended beyond the western edge of Area 2 are the most plausible candidates for water pits (Fig. 2: b), with less evidence of rubbish disposal.

Post-holes
Three circular post-holes G3 were located in Area 2 on the northern edge of the zone of pitting. They measured 0.55–0.65m in diameter and survived to a depth of no more than 0.1m. A small quantity of late Saxon pottery was recovered from them, and it is possible that they defined, or partially defined a small structure that was contemporary with the pits.

Medieval / post-medieval agriculture
Remnants of ridge-and-furrow cultivation were identified in Area 2 (G16) and extensively throughout the trial trenches (Albion Archaeology 2006). Their stratigraphic relationships with the late Saxon pits in Area 2 indicate that they were created after that period, but their date is otherwise uncertain: this type of farming continued in use into the post-medieval period, though it was at its peak in the 12th–13th centuries. Ditch G2 cut across one of the furrows in Area 2; this suggests a post-medieval date for it, though the pottery it contained was only residual late Saxon material.

THE FINDS
All specialist reports have been abridged and edited for this article. Full versions of each report can be found in the project archive.

Pottery
Jackie Wells

The investigations produced 397 pottery sherds, weighing 2.3kg. The majority of the assemblage dates from the late Saxon period and is associated with pit clusters G5–G15 (Table 2), with a further six sherds (87g) occurring as residual finds in furrows G16 and post-medieval field boundary G2. Two abraded Roman sherds (25g) derived from the field boundary ditch G4.

Group	Description	Sherd No.	Weight (g)
G3	Post-holes	7	28
G5	Large unburnt pits	47	263
G6	Circular pit	47	271
G7	Burnt pits	10	41
G8	Large burnt pits	67	499
G9	Large elongated pit	52	300
G10	Large water pits	17	84
G11	Small unburnt pits	53	175
G12	Small unburnt pits	5	30
G13	Small unburnt pits	40	208
G14	Small unburnt pits	6	13
G15	Large unburnt pits	38	282
		389	**2,194**

Table 2: Pottery quantification from the late Saxon pits

The pottery survives in very poor condition, with a high incidence of abrasion and leaching. Its fragmentary nature is indicated by a low vessel to sherd ratio, and average sherd weight of less than 5g. Diagnostic forms include bowls with inturned and hammerhead rims, and a single spouted example. Thumbed decoration occurs on one bowl. Everted-rim jars of varying size and diameter are present, as well as a single lid-seated 'top-hat' jar. Vessel wall thickness ranges between 3mm and 10mm. Use of vessels as cooking pots is indicated by the presence of sooting on the exterior surfaces of a number of jars.

The late Saxon vessels occur in a limited range of shell-tempered, wheel-thrown fabrics in the St Neots-ware tradition (type B01 — Bedfordshire Ceramic Type Series) and its variants (types B01A/B/C and B04). St Neots-type ware ranges in date from the mid-9th to 12th centuries, peaking during the 10th–11th centuries.

Non-ceramic Artefacts
Holly Duncan

Nine objects and some 2,063.6g of ironworking by-products were recovered from the investigations (Table 3). This small assemblage of non-ceramic artefacts was restricted to deposits of late Saxon and medieval date, coming mostly from the late Saxon pits.

Domestic artefacts

A small component of finds from the Saxon pits can be classed as domestic in nature, comprising heavily abraded fragments of lava, presumably deriving from rotary querns; an iron triangular-sectioned fragment, possibly from a knife or shears blade; and a thin, perforated bone strip thought to be part of box lid mount. Two nail shanks were also recovered. None of the items are closely datable. The small fragments of abraded lava, a total of 44.4g, may be either Roman or late Saxon in origin, the importation of lava from the continent experiencing a hiatus during the earlier Saxon period (King 1986, 99). Bone mounted boxes were in use in England from the Roman period, continuing in popularity into the 12th century (MacGregor 1985, 197).

		Material			
Group	**Description**	**Bone**	**Flint**	**Iron**	**Stone**
G5	Large unburnt pits			Nail shank	Quern
G6	Circular pit			Nail shank	
G8	Large burnt pits	Box lid		Blade (knife/shears) fragment	
G9	Large elongated pit				Quern
G15	Large unburnt pits		Core		
G16	Medieval furrows		Flake	Hasp	

Table 3: Non-ceramic artefacts assemblage

Furrows G16 yielded an iron looped hasp of figure-eight shape. Hasps were used to hold closed gates and doors on buildings and to fasten the lids of coffers and chests. Similar hasps are fairly common in the medieval period and are also known from mid-9th to 11th-century deposits, *e.g.* at Coppergate, Thetford and Winchester (Ottaway 1992, 643–5; Goodall 1984; fig. 131; Goodall 1990, 975 nos. 3471–3477). This example may well have derived from the previous late Saxon activity, as indicated by the associated pottery and the fact that the furrow truncated pit groups G5 and G8.

Slag and hammerscale

The majority of the assemblage comprises redeposited ironworking by-products. Both smithing and smelting activities are represented, although in both cases in small quantities (Table 4). The former is evidenced by the remains of an oval, bowl-shaped hearth-bottom and flake hammerscale. The hammerscale occurred in six pits, but in very small quantities (six or fewer flake fragments) and in only one instance occurring alongside slag. This could suggest that some of the hammerscale was windborne.

Group	**Pit**	**Smithing**	**Undiagnostic**	**Smelting**
G5	3132	Flake hammerscale	16.6g	
G5	3043	Hearth bottom 1,166g		Fayalitic run 13g
G5	3089			Slag cake 21g
G7	3023	Flake hammerscale		
G8	3086	Flake hammerscale		
G8	3083	Flake hammerscale		
G8	3155		1g	
G9	3037			Slag cake 424g
G10	3026	58g		
G10	3033			Dense slag 364g
G14	3153	Flake hammerscale		
G15	3129	Flake hammerscale		
TOTAL		**1,224g**	**17.6g**	**822g**

Table 4: Ironworking evidence from the late Saxon pits

Smelting is indicated by the presence of two fragments of 'slag cakes', formed when slag solidifies in the base of a furnace. A single pit G10 pit yielded a small quantity of dense ironworking slag, formed when larger masses of smelting slag fragment upon cooling (Starley 2008). Part of a fayalitic run was also identified within G5. Such slag drips have been known to form on experimental smithing hearths (Starley 2008), but they are more commonly associated with the smelting process.

Discussion

It is difficult to draw conclusions regarding the intensity of ironworking activities, as only a small area was investigated. The distribution of the pits suggests that further examples lay to the west and south of Area 2, while the pottery assemblage also suggests some form of domestic occupation in the vicinity. The small quantities of ironworking by-products could reflect small-scale craft activity, but could equally be the result of partial evidence.

The occurrence of both domestic (*e.g.* pottery) and industrial waste within the same deposits suggests that the ironworking debris was 'twice removed' from its place of origin, initially deposited on a rubbish tip along with household waste, and subsequently removed to infill the pits.

Animal Bone

Jennifer Browning

Introduction

A small faunal assemblage was recovered both by hand-collection and the sorting of sieved residues (5.6mm). The assemblage is heavily fragmented, whole bones are rare, and both old and modern breaks are present. The condition of the bones is variable; while some surfaces are well preserved, enabling examination for butchery and other modifications, many bones are eroded and exhibit evidence for root-etching. No bones are sufficiently intact to permit length measurements, but breadth measurements were made for a small number of teeth and bones and are included in the archive. Signs of gnawing occur rarely in the assemblage, suggesting that bones were rapidly buried.

The following discussion relates to the assemblage retrieved from the late Saxon pits, which accounted for the majority of the overall assemblage (83%).

Results

The animal bones were recovered from pits G5–G15 in Area 2 (Table 5). Amongst the hand-collected material, 25% was identified to species. This fairly low percentage is predominantly due to extensive fragmentation, as well as the variable preservation of the assemblage. Pig bones are the most frequent, but sheep/goat is almost as well represented. One of the two horse bones recovered is an articulated unit comprising a fused astragalus, calcaneum and tarsals (see below). The pig bones are mostly post-cranial fragments, with several metapodials represented.

Group	Cattle	Sheep/ goat	Pig	?Dog	Horse	Domestic fowl	Large mammal	Medium mammal	Indeterminate	Total
5	(1)	2	2				1	1	(7)	**6 (8)**
6	1		5 (2)				4	28 (29)		**38 (31)**
7									(1)	**(1)**
8	1 (1)	1	1	(1)		1	7	6	6 (21)	**23 (23)**
10	1				1			1		**3**
11	1							1		**2**
12			1		1					**2**
13		3					1	4	2 (4)	**10 (4)**
15		3					3	6	*1 (1)*	***13 (1)***
Total	**4 (2)**	**8**	**9 (2)**	**(1)**	**2**	**1**	**16**	**47 (29)**	**9 (34)**	**97 (68)**

Numbers in brackets refer to sieved fragments retrieved from soil samples

Table 5: Hand-collected animal bones from the late Saxon pits

Age

The assemblage provides very little information on the age of the animals represented, as few bones retain their articular ends, and teeth are rare. No mandible wear stages were obtained. Where it is possible to tell, all cattle, sheep/goat and horse bones are fused. By contrast, the pig bones are mostly unfused, including distal metapodials — indicating the presence of animals of less than 27 months — and proximal tibia and proximal ulna, which fuse before 42 months of age (Silver 1969). This is not unusual for pigs, which are generally slaughtered at a younger age than cattle and sheep, as they are usually raised primarily for meat rather than for any secondary products.

Butchery

Five bones have been butchered, three of which are vertebrae from large or medium mammals. None has been split sagitally through the body; in one case the lateral process has been chopped off and two other bones have been chopped transversely, suggesting that the spine was chopped into sections. Such marks are not indicative of the presence of professional butchering facilities and suggest that carcasses were processed on the ground rather than hoisted (Seetah 2006, 111). A sheep/goat scapula has a cut mark on the neck, suggesting filleting of the meat from the bones.

Burning

Five burnt bones were recovered in total from G5, G11 and G15, comprising different elements belonging to sheep/goat, cattle and medium mammal. All these bones are charred rather than calcined, suggesting that they were exposed to temperatures around 350–400˚C, such as might be found in a normal hearth fire (Gilchrist and Mytum 1986, 31).

Pathologies
Spavin was observed on an equine hock from a pit in G12, fusing together the tarsals, including the astragalus and calcaneum. This is a common condition in horses and occasionally cattle, and is a type of osteoarthritis in which exostoses form and eventually render the joint immobile. Causes are thought to include hereditary factors, concussion, and working on hard surfaces (Baker and Brothwell 1980, 117–8). The animal may have become slightly lame, but once the joint had ankylosed, it would still have been capable of slow work (Baker and Brothwell 1980, 119). In addition to the fused equine hock, two pig bones have abnormal pathology: a metacarpal shaft is abnormally enlarged at the distal end, and a rib fragment has some exostosis.

Discussion
The late Saxon pits produced an assemblage in which cattle, sheep/goat, pig, horse and domestic fowl were identified, but no wild species. Most of the bones are likely to represent domestic refuse, such as the waste products of processing and consumption. Factors of fragmentation and preservation have reduced the number of identifiable bones, however, and the small sample size does not support detailed analysis or discussion of animal husbandry regimes at the site.

A review of animal bones from 9th–13th-century sites excavated in Bedfordshire up to 1977 (Grant 1979 and quoted in Oake *et al.* 2007, 111) suggests that sheep were usually the dominant species followed by cattle and then pig. Few bones could be identified in the Norse Road assemblage, but pig is the most common species apparent, and it is also possible that pig bones are underrepresented: most are from immature animals, and unfused bones tend to survive less well than those from adults. This is significant, since pigs are thought to have been of considerable economic importance in the Saxon period (Albarella 206, 73). Whilst the assemblage is unlikely to contribute to regional or national research frameworks due to its small size, it does provide information of local interest to aid in the interpretation of the site.

Charred Plant Remains
Angela Monckton

Introduction
Thirteen soil samples were taken from late Saxon pits G5–G15, all of which produced charred plant remains. Samples 2007, 2013 and 2009 from three pits in G8 were very productive, and sample 2006 from G11 was exceptionally so, containing predominantly oat grains. The results are summarized in Table 6, with the charred plant remains from the most productive samples described in Table 7.

	Group	**5**	**7**	**7**	**8**	**8**	**11**	**14**
	Sample	**2011**	**2003**	**2009**	**2007**	**2013**	**2006**	**2112**
Cereal grains								
Triticum free-threshing grains	Free-threshing wheat	27	12	44	43	54	5	9
Triticum sp grains	Wheat	3	-	2	5	3	-	-
Hordeum vulgare L. grains	Barley	2	3	3	16	2	10	1
Avena sp. grains	Oat	1	2	1	1	1	467	-
Cereal grains	Cereal	23	7	38	31	37	33	5
Cereal/Poaceae grains	Oat/grass	3	6	3	7	6	137	1
Cereal chaff								
Triticum turgidum/durum rachis	Rivet wheat	-	-	3	5	2?	-	-
Triticum aestivum s.l. rachis	Bread wheat	2	1	57	8	11	-	-
Triticum free-threshing rachis	Free-threshing wheat	2	-	31	4	9	-	-
Cereal rachis	Cereal	-	-	-	3	5	-	-
Culm nodes, large	Straw	-	-	4	2	1	-	-
Collected								
Corylus avellana L.	Hazel nutshell	2	2	3	1	2	2	1
Legumes								
Vicia/Pisum	Bean/pea	2	-	-	1	2	-	-
Pisum/Vicia sativa L.	?Cultivated vetch	-	-	-	-	-	1	-
Wild plants								
Urtica dioica L.	Nettles	-	-	-	2	-	-	-
Chenopodium sp.	Goosefoot	-	-	-	3	1	1	1
Ranunculus subgen. *Ranunculus*	Buttercup	-	-	-	3	-	-	-
Rumex sp	Docks	-	1	1	1	1	3	-
Polygonum sp	Knotweed	-	-	1	-	-	-	-
Brassicaceae, small	Cabbage family	-	-	-	-	-	5	-
Vicia sp.	Vetch	4	-	-	-	1	-	-
Vicia/Lathyrus	Vetches/tares	-	-	-	2	-	2	-
Medicago/Melilotus/Trifolium	Clover type	-	-	1	3	-	-	-
Lamiaceae	Dead-nettle family	-	-	-	-	-	2	-

		Group	5	7	7	8	8	11	14
		Sample	2011	2003	2009	2007	2013	2006	2112
Cirsium sp.	Thistle		-	-	-	1	-	-	-
Plantago sp.	Plantain		-	-	-	-	1	-	-
Galium aparine L.	Cleavers		-	-	-	-	-	6	-
Crepis sp.	Hawks-beard		-	-	-	-	-	1	-
Anthemis cotula L.	Stinking mayweed		3	-	6	6	-	5	-
Carex sp.	Sedges		-	-	-	1	-	-	-
Bromus sp	Brome grass		3	-	-	1	-	2	-
Poaceae (large)	Grasses large		2	1	2	-	5	-	3
Indeterminate seeds	Indeterminate seeds		4	1	6	8	-	3	-
Thorns	Thorns		-	-	-	1	-	-	-
Woody buds	Woody buds		2	2	-	-	5	-	1
Total			**85**	**38**	**206**	**159**	**146**	**644**	**22**
Sample volume (l)			10	8	10	10	10	10	10
Flot volume (ml)			30	55	111*	160*	300*	90*	25
items per litre of sediment			8.5	4.75	82.4	63.6	58.4	257	2.2

Key: Remains are seeds in the broad sense unless stated.
u = uncharred, possibly waterlogged; * = 25% of flot sorted

Table 6: Charred plant remains

Results

Cereals

Most of the identified grains are of wheat (*Triticum* sp), mainly of the characteristic short, broad shape of free-threshing wheat. Wheat chaff fragments (rachis segments which form the central axis of the cereal ear) were found, some of which can be identified as bread wheat (*Triticum aestivum* s.l.), while others are of a second type of free-threshing wheat known as rivet wheat (*Triticum turgidum* type). These were found together in most of the samples and were particularly abundant in two of the samples from pits G7 and G8. Occasional barley grains (*Hordeum vulgare*) were recovered, but in much smaller quantities than wheat.

Sample	Group	Sample vol. (l)	Flot vol. (ml)	Chc	Gr Ch	Cf Ch	Se Ch	Oth Ch	Se un	i/L	Plant remains
Bnt P											
2002	G7.2	8	15	++	12	-	4	1	-	2.12	Wheat and oats, docks and sedge seeds
2003	G7.2	8	55	++	30	1	3	2n 2b	-	4.75	Wheat and oats, few barley. Bread wheat chaff x1. Dock, Large grass seeds. Nutshell. #
2007	G8.2	10	160	+++	+++	+	++	+	-	63.6	Wheat and barley, few oats. Chaff of rivet and bread wheat. Seeds. #
2008	G8.2	10	100	++	++	+	+	+	-	-	Wheat with few oats and barley. Few chaff frags bread wheat, few seeds. Nutshell and half bean. Scan only
2013	G8.2	10	130	+++	+++	+	+	+	-	58.4	Mostly wheat, few barley and oat. Chaff of rivet and bread wheat. Nutshell and legume frags. Roundwood chc. #
2009	G8.2	10	125	+++	++	++	+	+	-	82.4	Mostly wheat, few barley and oat. Chaff of bread wheat numerous, few of rivet. Nutshell and straw. #
Sm U											
2006	G11.2	10	90	+	+++	+	+	+	-	257	Many oats, some germinated. Few wheat and barley. Seeds and nutshell. #
2005	G11.2	9	10	+	-	-	-	1n	-	0.1	One small nutshell frag. Modern straw
2004	G13.1	9	20	+	++	+	+	-	-	-	Mostly wheat grains, few oat and barley. Few bread wheat chaff frags. Few seeds including cornsalad. Scan only
2012	G14.2	10	25	++	16	-	4	1n 1b	-	2.2	Few wheat grains with barley and seeds. #
Lg U											
2011	G5.2	10	30	++	59	4	20	2n 2Le	-	8.7	Wheat grains with few oat and barley. Bread wheat chaff, few seeds, nuthell and a legume. #
2010	G15.2	9	7	+	30	1	3	-	-	3.7	Mostly wheat with one barley grain. A bread wheat chaff frag, few seeds
Isol											
2001	G6.2	9	15	+	2	-	-	1Le	1	0.33	Cereal frags, a bean frag, an uncharred thistle seed

Key: Gr = cereal grain; Cf = chaff; Se = seed; ch = charred; un = uncharred; Chc = charcoal; fl = flecks; frags = fragments; n = nutshell of hazel; b = woody buds; Le = legumes; i/L = items per litre of soil processed
+ = present; ++ = moderate amount; +++ = abundant; # = see Table 6

Bnt P = Burnt pits, Sm U = small unburnt pits, Lg U = Large unburnt pits, Isol = isolated pit

Table 7: Remains from flots

Oat grains (*Avena* sp.) were very numerous in Sample 2006 from pit group G11. Some of the grains are small in size, possibly including some weedy species, but more probably small grains of cultivated oats. Many of the grains have evidence of germination, from traces of the cereal sprouts or the pitted and sunken appearance of the grains. There are also occasional fragments of chaff. Occasional oat grains were present in the rest of the samples; some identified as cereal or grasses may include small oat grains. Rye (*Secale cereale*) was present very sparsely as a possible additional cereal on the site.

Other food plants

Legumes were present in the samples, though not numerous, perhaps because legumes do not require parching in their processing. These include probable beans (*Vicia faba*) of small size, while some fragments were identifiable only as either peas or beans (*Vicia/Pisum*). Cultivated vetch (*Vicia sativa*) was possibly present, although a few fragments may be small peas. This crop was usually used as fodder. The presence of legumes suggests that crop rotation may have been carried out. A few fragments of hazelnut shells were also present, showing that hazelnuts (*Corylus avellana*) were gathered and used as food.

Wild plants

The few charred weed seeds that were recovered are mainly from disturbed ground or arable land, including stinking mayweed (*Anthemis cotula*), which was common in medieval times and is a plant of heavy and poorly drained soils. Weeds that are particularly associated with autumn-sown cereals, such as wheat, include cleavers (*Galium aparine*). Other weeds of disturbed ground, such as that found in settlements, garden-type cultivation or of spring sown crops, include goosefoots (*Chenopodium* sp) and docks (*Rumex* sp). Leguminous plants include vetches or vetchling (*Vicia*/*Lathyrus*) and clover-type plants (*Medicago*, *Melilotus* or *Trifolium*), which can occur as arable weeds but also grow on grassland. Plants of damp or wet ground are sparsely represented by sedges (*Carex* sp), perhaps from poorly drained areas of the fields or from ditch sides. Seeds of the large grasses were recovered (Poaceae), including brome grass (*Bromus* sp.) which was a common arable weed, and most of the plants here can occur in cultivated fields as arable weeds.

Discussion

Samples from the late Saxon pits show that the crops included wheat and oats, with a little barley. Bread wheat is more abundant than rivet wheat from the evidence of the identifiable chaff. Other cultivated foods are represented by beans, with hazelnuts present as a gathered food. The most common weed is stinking mayweed, thought to be associated with cultivation using the mould-board plough. The weeds suggest that wheat was autumn-sown, but weeds of garden and spring-sown crops such as oats are also present. All these plants have also been found in similarly dated samples elsewhere in the region such as at Long Causeway, Peterborough (Monckton 1996).

Cereal remains include cereal-cleaning waste of chaff and weed seeds, with charred cereal grains of free-threshing wheat including bread wheat and rivet wheat, plus a few barley and oat grains. Rivet wheat was possibly present in Bedford by the time of the Norman Conquest; the evidence from Norse Road adds to that from Castle Lane, Bedford, where it was found in Saxo-Norman deposits (Hill 2009), and is similar to evidence from Northamptonshire (Moffett 2001). The presence of a high ratio of chaff to grains may indicate the local cultivation and processing of both types of wheat, with cereals brought to the site from local fields to be cleaned from contaminants for use, while there was also widespread evidence among the samples for domestic waste from food-preparation. Other food remains were of charred legumes, including possibly beans, while hazelnut shells are the only evidence for the consumption of gathered food.

Oats were very abundant in one sample. Oat was roasted during the preparation of malt; at least half the grains from this sample show some evidence of germination, so they may represent waste from malting or brewing, although there was no evidence of where this was carried out.

No evidence of standing water was found in any of the samples to support the idea that some of the pits may originally have been used for collecting water.

Charcoal

Graham Morgan

Most of the charcoal that was recovered came from the burnt pit fills. The species present are oak (*Quercus* spp.), field maple (*Acer campestre),* hazel (*Corylus avellana)* or alder (*Alnus* spp.), poplar (*Populus* spp.) or willow (*Salix* spp.),

ash (*Fraxinus excelsior),* hawthorn type (*Crataegus* spp.), and purging buckthorn (*Rhamnus cathartica).* The collection is fairly typical of hedgerow species and sizes, the only exception being the oak from G7, which seems to be from a much larger and more mature specimen.

DISCUSSION

The excavations at Norse Road revealed a concentration of late Saxon, or possibly Saxo-Norman pits, primarily in Area 2 (Fig. 2). Their spatial patterning suggests that the concentration extended beyond the west and south of Area 2, while their intercutting nature suggests that the site was used over a prolonged period of time. The pits are likely to have been dug at the periphery of a small settlement, the location of which is yet to be determined. Records in Domesday Book suggest that a Saxon settlement existed at Salph End, 0.7 miles to the west, while a rural Saxon settlement dating to the 9th–12th centuries was excavated a similar distance to the east at Water End (Timby *et al*. 2007), but these pits are more likely to have belonged to a currently unknown settlement in the more immediate vicinity.

Dating evidence for the pits comes primarily from their assemblage of St Neots-ware pottery, believed to have been manufactured from the mid-9th to 12th centuries. The pit complex truncated the fragmentary remains of a Roman field system, which might indicate that the pits and the settlement with which they were related were part of the reorganisation of the Saxon landscape in the 9th–11th centuries, when dispersed sites became nucleated into villages and new fields were laid out (Edgeworth 2007, 93).

Although most of the pits seem to have been used for the disposal of rubbish, it is unclear whether this was their original function. Some of the larger ones may have been used as water pits, but the lack of evidence for standing water from the archaeobotanical assemblage makes it unlikely that many were used for this.

Not enough evidence was recovered from the pits in order to draw any definite conclusions on the character of the presumed settlement with which they were associated, but the finds assemblage is consistent with what would be expected from a small rural settlement within an agrarian landscape. Most of the burnt debris is likely to have come from domestic hearths, and the presence of food waste, sooted cooking vessels and animal bone charred in normal hearth fires is more suggestive of domestic and craft activities such as food and grain-processing, malting, brewing and smithing, rather than larger-scale processes.

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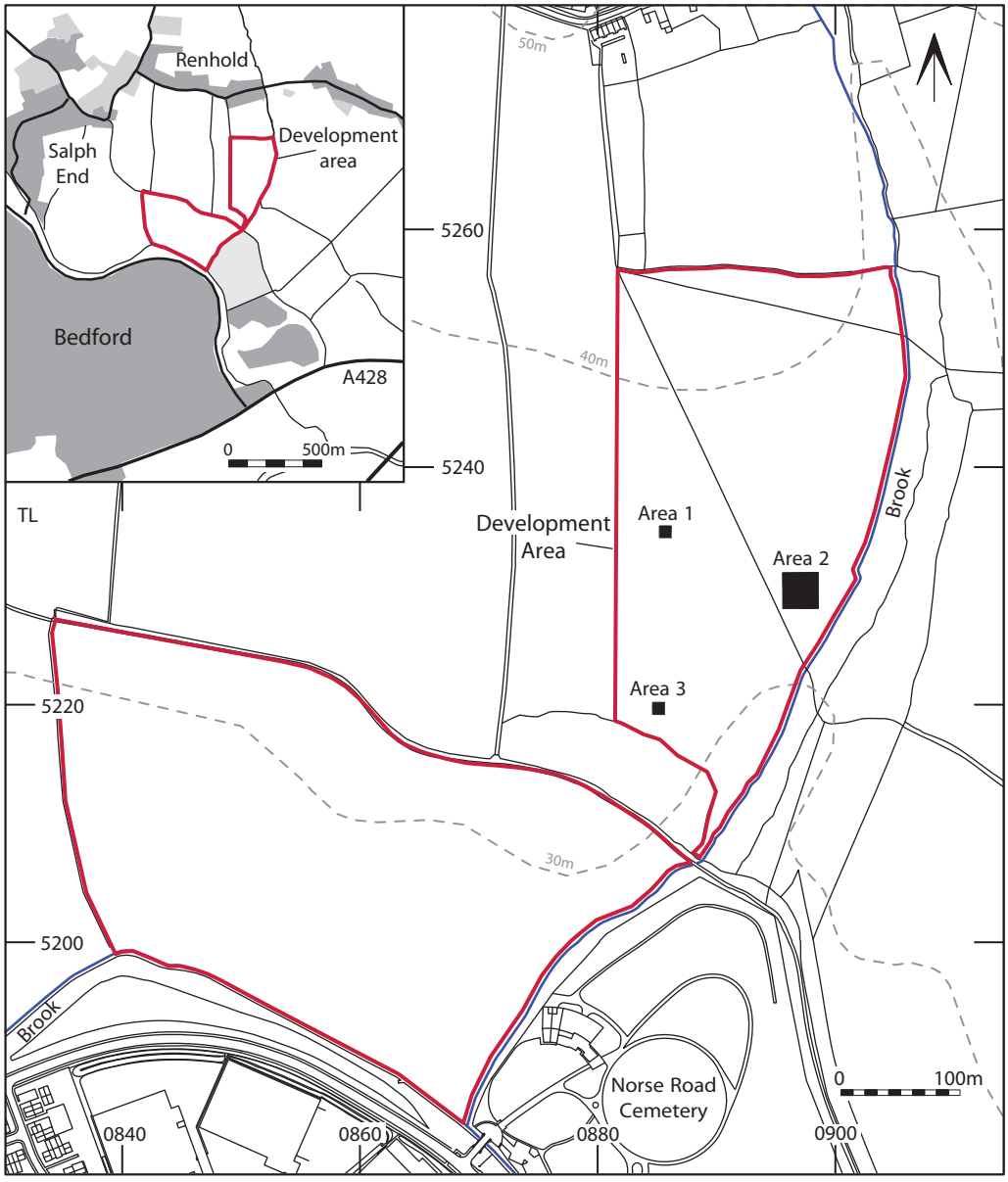

Figure 1: site location

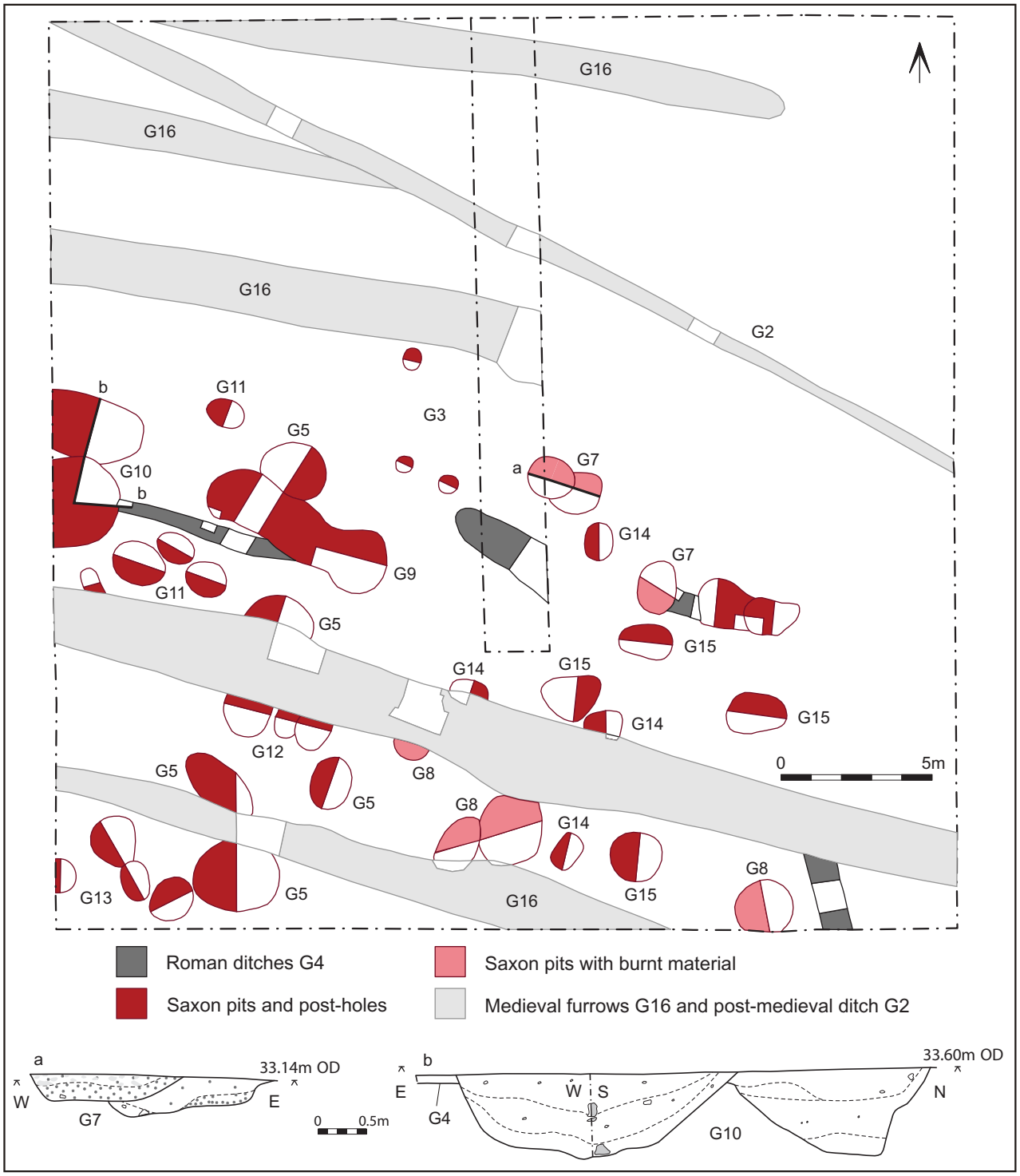

Figure 2: all-features plan

Photograph 1: burnt debris in G8 pit, looking east. Scale 1m

Photograph 2: general view of late Saxon pits, looking north towards Renhold village

Figure 3: selected photographs