

POTS, CROPS, LIVESTOCK AND LIME

The Economic Development of a Medieval Rural Landscape at Bishopstone Road, Stone

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Regional research priorities regarding medieval rural sites include the character and chronological development of field systems and their relationship with rural settlements and the use of different cereal grains within medieval agriculture (Munby with Allen 2014, 256). Additional economic considerations include the identification of quarry sites and investigating the 'variety and quality of pottery usage' (ibid, 259–60). Guided by these central themes, this paper presents the findings of a recent excavation at Bishopstone Road, Stone. This village edge site yielded significant evidence of medieval economy and land use, including local cereal agriculture geared towards high-status consumption, sheep husbandry and the quarrying of limestone.

INTRODUCTION

Between May and August 2016, Archaeological Solutions Ltd carried out an archaeological excavation at land adjacent to the recreation ground, Bishopstone Road, Stone, Buckinghamshire (NGR SP 7855 1224; Fig 1). The project was commissioned by Vanderbilt Homes in compliance with a planning condition attached to planning approval for residential development. The application area constitutes approximately 1ha of common land and had previously been subject to a magnetometer survey and archaeological trial trench evaluation, carried out by Museum of London Archaeology Northampton (Finn 2015; Ladocha & Walford 2014). The excavation encountered evidence of occupation activity spanning the late Mesolithic/early Neolithic to post-medieval era with a clear emphasis on Saxo-Norman to high medieval land use.

THE SITE

The nucleated village of Stone is located some 3.7km to the south-west of Aylesbury, within 1.5km of the river Thame (Fig 1). The site occupies common land on the south-eastern edge of the

medieval settlement core, a short distance from the parish church of St John the Baptist. The village is located at the highest point in the parish at a crossroads of the Thame to Aylesbury highroad and a lesser road linking Bishopstone and Eythrope, a deserted medieval settlement (Page 1908). The surrounding landscape of Aylesbury Vale is characterised by undulating farmland within easy reach of the Chiltern Hills and the headwaters of the Thames.

The site sits on a gentle south-facing slope (at approximately 104m AOD) at the confluence of two distinct geological zones; comprising limestone of the Purbeck Group, bounded to the north by sandstone of the Whitchurch Sand Formation (<http://mapapps.bgs.ac.uk/geology-of-britain/home.html>). The local soils are those of the Aberford Association, well suited to cereal cultivation and limited permanent pasture, while better quality grazing is supported to the north and south of the village on clays of the Denchworth and Evesham 2 Associations (Soil Survey of England and Wales 1983). These outlying areas also support cereal agriculture and present a valuable local resource, close to the Thame and one of its tributaries (Fig 1).

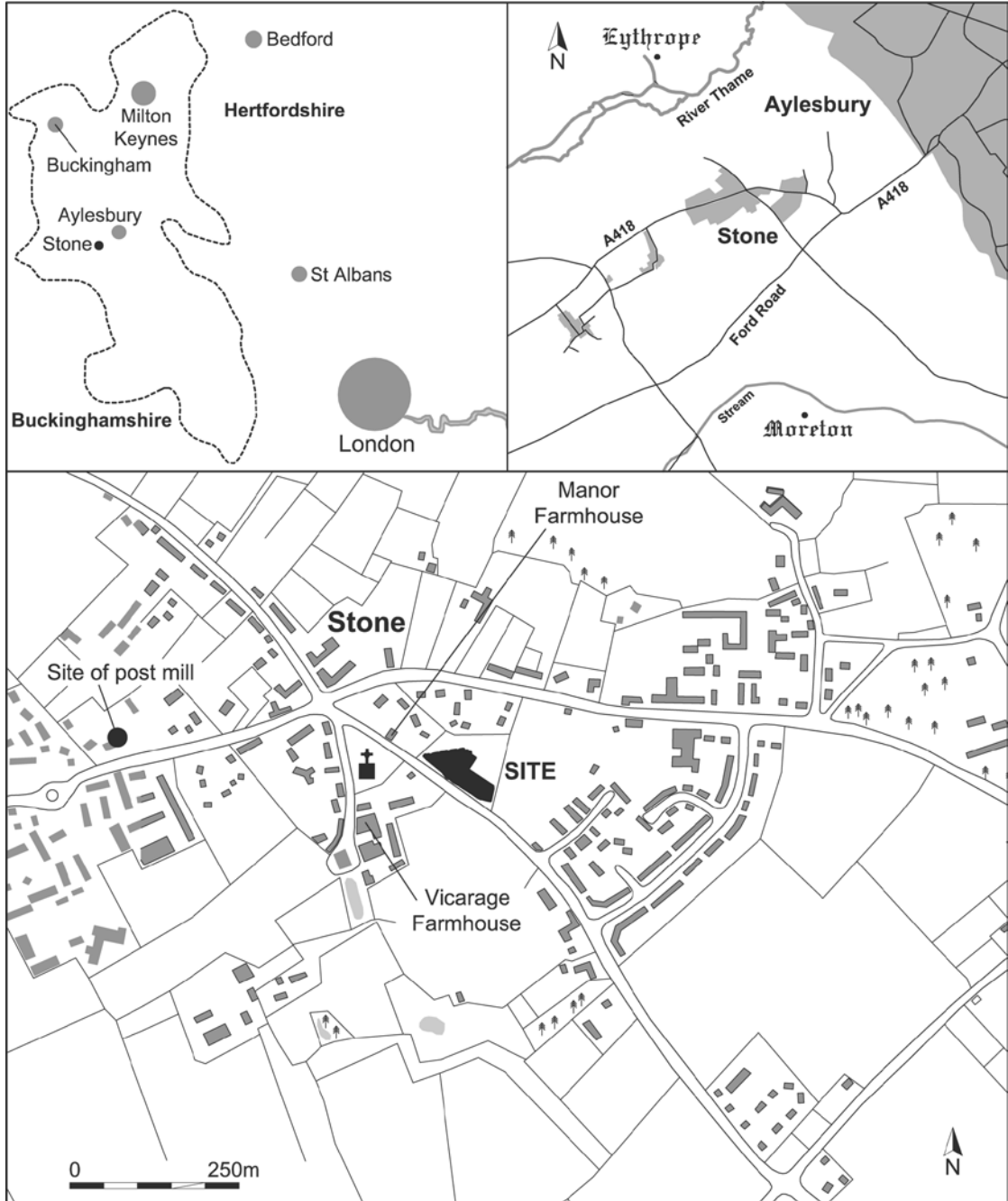


FIGURE 1 Site location

ARCHAEOLOGICAL AND HISTORICAL CONTEXT

At Domesday, Stone constituted a substantial settlement of some 46 households with extensive 'ploughlands' and meadow (<http://opendomesday.org/>). The economic prosperity of the medieval village would have been closely tied to that of Aylesbury, the nearest market town, while the majority of lands were divided between two medieval manors, Bracey's Manor and St Cleres Manor (Page 1908). During the reign of Henry I (1100–1135), however, the parish church – originally part of Bracey's Manor – was granted to Osney Abbey in Oxfordshire, while additional lands and the village mill were similarly bequeathed at a later date (*ibid.*).

Besides the fabric of the parish church – the nave of which dates from the Norman period (Buckinghamshire Historic Environment Record MBC2308–10; Pevsner & Williamson 1994, 658) – medieval evidence from the immediate vicinity of the site constitutes ridge and furrow cultivation (after Finn 2015, fig 3). The excavated evidence (presented below) is largely agricultural in nature and it is safe to assume that the medieval economy of Stone was almost exclusively tied up in farming; a pattern that persisted into the early modern era. In his *History and Topography of Buckinghamshire* (1862), Sheahan notes market gardening as being of prime economic importance.

THE EXCAVATION

Dating Evidence

The project revealed a complex agricultural landscape spanning the Saxo-Norman to High medieval period (11th to 13th/14th century AD). Dating of the medieval site was based on the recovered pottery assemblage, principally made up of domestic 'kitchen' waste. The assemblage was dominated by medieval limestone wares. Cooking pots, many of which displayed sooting, were the most abundant form type, while jugs and bowls were present in lesser numbers. Fine wares were generally lacking, with only 17 glazed sherds present and decoration was rare. Additional dating evidence was sparse.

Besides medieval features and finds, the site contained limited evidence of earlier activity, including a modest assemblage of late Mesolithic to early Neolithic struck flint, all residual within

later contexts (Peachey 2017), and two pits of late Romano-British (3rd to 4th century AD) date. Residual Roman pottery and eight coins, dating AD 260–402 (Henry 2017), were also recovered. The coins include two House of Theodosius *nummi*; a rare occurrence within such a small assemblage (*ibid.*). A modest array of residual Saxon pottery was recovered. Post-medieval evidence was limited to a small number of boundary ditches and a low linear earthwork, the alignments of which respect that of modern Bishopstone Road (Figs 1 & 2). Full project outcomes, including specialist analyses and data are presented in the research archive report (Mustchin & Monahan 2017), deposited with Buckinghamshire County Museum.

The Medieval Landscape

Introduction

The Saxo-Norman to high medieval period was the principal episode of past activity at Bishopstone Road. At this time, the site comprised farmland to the immediate south-east of the parish church and the probable core of the medieval village. Nucleated settlements of this type are typical of valleys and vales across the region (Munby 2014, 237) and the site's location, close to the church, might suggest that it formed part of Bracey's Manor, one of two medieval manors in the parish and the original custodian of the church building. It is also possible that the site constituted part of a hide of land granted by this manor to Osney Abbey in the 12th century (Page 1908). Under a complex feudal system (Sivéry 1999), however, it is difficult to determine whether any change in ownership, if such occurred, would have directly influenced farming practice.

The medieval site was characterised by a system of ditched rectilinear enclosures, numbering 11 within the excavated area. The remains of four earth-fast structures – probably livestock pens – were present within the enclosures, while numerous pits were also encountered. These included a number of intercutting pit clusters, including probable quarry pits, and several dispersed quarry-type features. The stratigraphic relationships displayed by some of the clustered pits suggest that quarrying activity at the site largely post-dated the infilling of the medieval enclosure ditches and the opening up of the agricultural landscape. Rich environmental samples, particularly from pit fills, attest to an

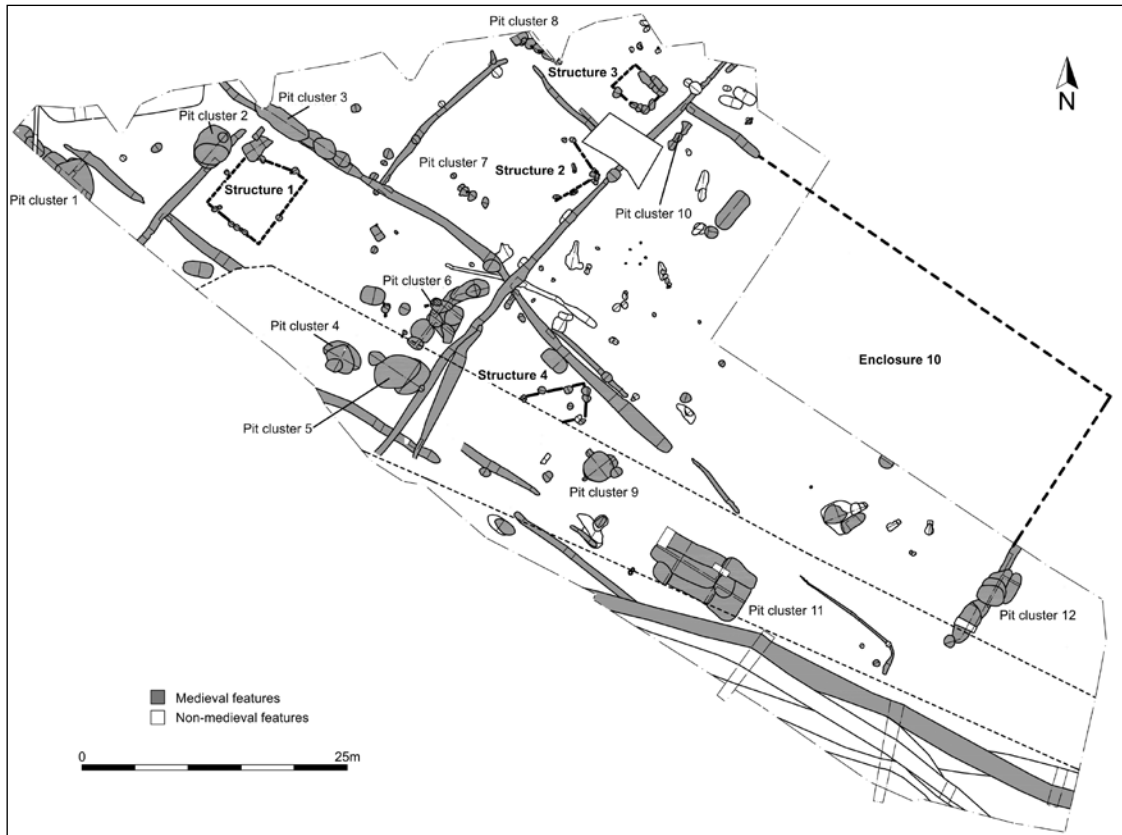


FIGURE 2 The excavated site

arable economy based primarily on the production and processing of bread wheat, while the remains of sheep/goat dominate the recovered animal bone assemblage. Evidence of iron production/manufacture was also encountered. The slag assemblage is uniformly derived from iron-working processes, while the presence of smithing hearth bottoms and fragmentary or possible pieces of the same is indicative of bloom refining and smithing activities (Newton 2017). However, based on the quantities of material present, it appears likely that iron-working did not occur within the excavated area (*ibid.*). The medieval finds assemblage includes a broad variety of agricultural implements, domestic and personal items, while objects of particular note include two fragments of decorated bone inlay and part of a lead pilgrim flask or ampulla.

The Enclosures

Eighteen medieval ditches and gullies were encountered. These ranged in width between 0.30m and 1.68m (mean = 0.76m) and in depth between just 0.07m and 0.54m (mean = 0.22m), and ran either north-west to south-east or north-east to south-west. While these alignments appear to respect Bishopstone Road (Fig 2), that part bounding the site did not exist prior to the late 18th century (based on the Enclosure Acts and Awards of 1776). It is conceivable, however, that the route of the modern road was preceded by an earlier boundary or trackway which acted as a point of reference for the enclosure of adjacent land (*cf.* Mustchin *et al* 2015, 3). The medieval boundaries formed a system of 11 rectilinear enclosures (Table 1; Fig 2), ranging in size between at least 44m² and 1385m², based on extrapolated data, and extending beyond the excavated area in almost all directions.

It is clear, therefore, that the site formed just part of a wider enclosed landscape at this time. A lack of recutting or maintenance of individual boundaries is notable and suggests that the enclosures represent a just single episode of land use. All of the ditches/gullies also contained single fills, indicative of discrete, possibly rapid backfilling. Pottery discard at the site does not appear to have extended much beyond the 13th century AD, and it is very possible that the enclosure system was abandoned around this time.

Regional examples of medieval enclosures include two at Ashendon (Slatcher & Samuels 2004) and one at Broughton North (Thompson & Zeevat 2013), all of which are interpreted as animal enclosures. The Broughton North example lacked evidence of cultivation, while one of the Ashendon enclosures included structural remains. Parallel alignments of postholes to the north of the Broughton enclosure may have represented a fenced stock enclosure, separated from the larger enclosure by a possible trackway (*ibid.*, 57–8 & fig 7). Field systems, probably akin to the Stone enclosures, also form parts of a number of deserted medieval settlements throughout Aylesbury Vale, including the Hamlet of Littlecote, a scheduled monument located *c.*13km to the north-east of Stone (<https://historicengland.org.uk/listing/the-list/list-entry/018008>). Earthworks of similar fields are also

known at Eythrope, less than 2km to the north of Stone and Moreton, some 2.5km to the south-east (Fig 1).

Evidence of Activity

Medieval activity, some of which appears to have been directly associated with the ditched enclosures, was dominated by pit digging. One hundred and sixty-two medieval pits and postholes were encountered (Fig 2). While a large number of these contained diagnostic pottery, many were dated based on stratigraphic evidence and/or spatial patterning. However, a significant number of the dated pits formed elements of four possible earth-fast structures, interpreted as livestock pens (Figs 2 & 3), or parts of 12 intercutting pit clusters (Figs 2 & 4). For purposes of analysis and discussion, pit clusters are defined as groups of three or more intercutting pits. Forty-two dispersed medieval pits/postholes were also recorded.

The Livestock Pens

Four earth-fast structures were present within the medieval enclosure system. At least two of these closely mirrored the alignments of adjacent boundary ditches (Fig 2). Earth-fast construction, although more prevalent prior to the introduction of cruck construction and the blanket availability of bricks in the late medieval and post-medieval

TABLE 1 Summary of the medieval enclosures

<i>Number</i>	<i>Approximate Internal Area (m²)</i>	<i>Entrance present (Y/N)</i>
1	44*	Y
2	124*	Y
3	23*	N
4	430	Y
5	145*	Y
6	230	Y
7	118*	Y
8	70*	Y
9	666*	Y
10	820* (1385)	Y
11	53*	Y

* = minimum internal area; () = extrapolated internal area

periods (Crabtree 2000, 77), persisted in use in Britain – particularly in poorer dwellings and outbuildings – well into the 19th century (Meeson & Welch 1993). Construction of this type is documented in two 11th to 13th-century buildings at Tattenhoe, Bucks (Ivens *et al* 1995), less than 25km from Stone. The Bishopstone Road structures ranged in size between approximately 10m² and 52m², and comprised between eight and 14 individual features. Two of the structural outlines (Structures 2 and 4) appear incomplete, possibly indicating a degree of later truncation and the loss of evidence. However, Browning and Higgins (2003, 75) note that medieval structural remains can be ‘notoriously insubstantial’. Structure 1 (Fig 3) was the best surviving of the four and, like Structures 2 and 3, occupied the corner of its respective enclosure (Fig 2). This clear spatial patterning strongly suggests the contemporaneity of structures and enclosures at the site, and implies an agricultural use for the former, such as live-stock pens. Unlike surrounding land, no evidence of ridge and furrow cultivation was present within the excavated area.

The medieval animal bone assemblage displayed a clear dominance of sheep/goat followed by cattle (see below), while the local landscape – which included meadows by the late 11th century (<http://opendomesday.org/>) – is well suited to pastoral exploitation, particularly soils to the north and south of the village. However, any pastoral system would also have required ‘infield’ areas, close to farmyards and almost certainly including livestock pens for activities such as shearing and, possibly, putting ewes to the ram (Page 2003, 147). This strongly suggests that the excavated structures represent small sheepfolds or similar. Sheep pens of varying size and character are known from across medieval England, including Roystone Grange (Derbyshire), Iwade (Kent) and regional sites such as Broughton North (Greene 2005, 143; Jorgensen 2012, 5–7 & fig 4; Thompson & Zeevat 2013). Contemporary pictorial evidence for the penning of sheep using hurdles is also recorded in manuscripts including the Luttrell Psalter, a devotional book of the mid-1300’s (after Kalof 2007, 49–50). The location of the current site, close to ‘Manor Farmhouse’, a short distance to the north-west (Fig 1) strongly suggests that it lay near to a manorial farm, perhaps that of Bracey’s Manor. ‘Vicarage Farmhouse’ and ‘Stonethorpe Farm’ also lay

within 200m of the site, to the south-west (Fig 1); this area is labelled ‘Farm Close’ on the 18th century Enclosure map.

The Quarry Pits

Medieval activity was dominated by pit digging, at least some of which was contemporary with the excavated enclosures. Of particular note, however, were 12 intercutting pit clusters, several of which post-dated the infilling of boundary ditches. These were mostly concentrated in the south-western half of the site and many were large (Figs 2 & 4), strongly suggesting their use as limestone quarries. All were dug into the site’s natural limestone geology which lay within *c.* 1m of the modern ground surface. Quantification of pits exceeding 0.50m in both maximum diameter and depth identified at least 34 possible quarry pits, while many others were large (in plan) but shallow, and may have represented ephemeral or abandoned quarrying activity.

The identified quarries varied greatly in diameter between 0.74m and 6.28m (mean = 2.38m), although were more uniform in depth, ranging between 0.50m and 1.00m (mean = 0.66m). Only nine quarry pits (just 26.5%) displayed depths of 0.70m or more. This uniformity of depth might reflect several factors, possibly including the technology used to dig the pits and/or the ease with which limestone could be effectively extracted. Associated fills numbered between one and five, although only 11 pits (32.4%) contained three or more fills. This may suggest that the majority were short-lived and/or rapidly backfilled. Some refuse disposal was also apparent, at least as a secondary function of these features.

Several pit clusters (Nos 2, 3, 5 and 12) and two dispersed quarry pits were stratigraphically later than the medieval enclosures, while the spatial patterning displayed by certain clusters, e.g. Nos 4, 5 and 6 (Fig 2) suggests their contemporaneity. These relationships indicate that some, if not most of the pit clusters (and several dispersed pits) post-dated the enclosed landscape, thus reflecting a wholesale reordering of the site characterised by the abandonment of enclosures and increased pit digging. Similar changes in medieval land use, largely reflecting shifting social and/or economic circumstances, have been noted elsewhere (cf. Mustchin *et al* 2015, 12).

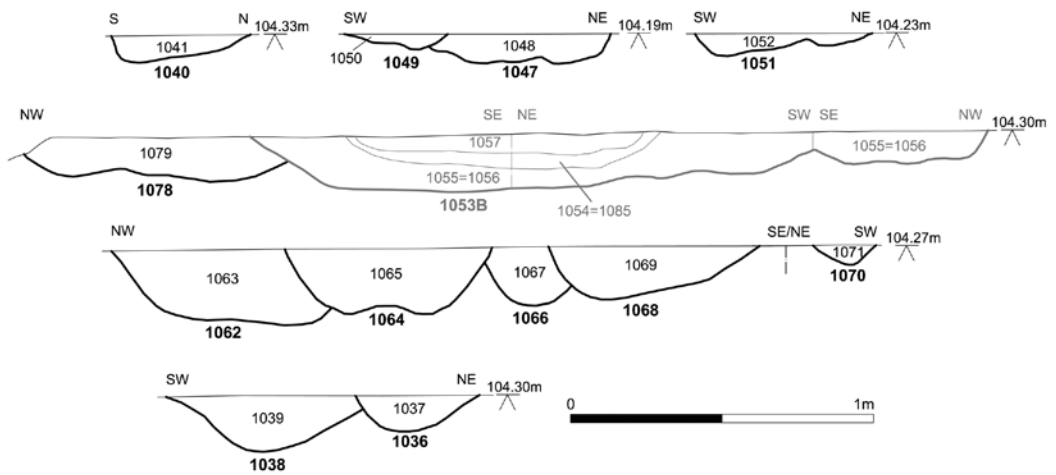
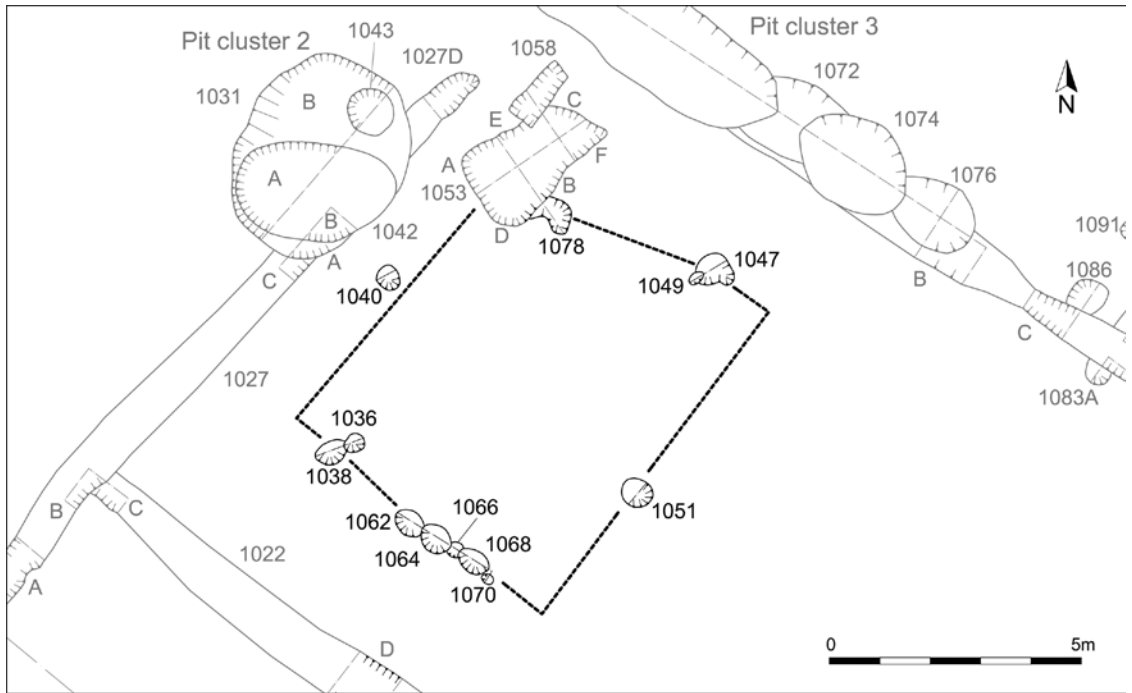


FIGURE 3 Structure 1

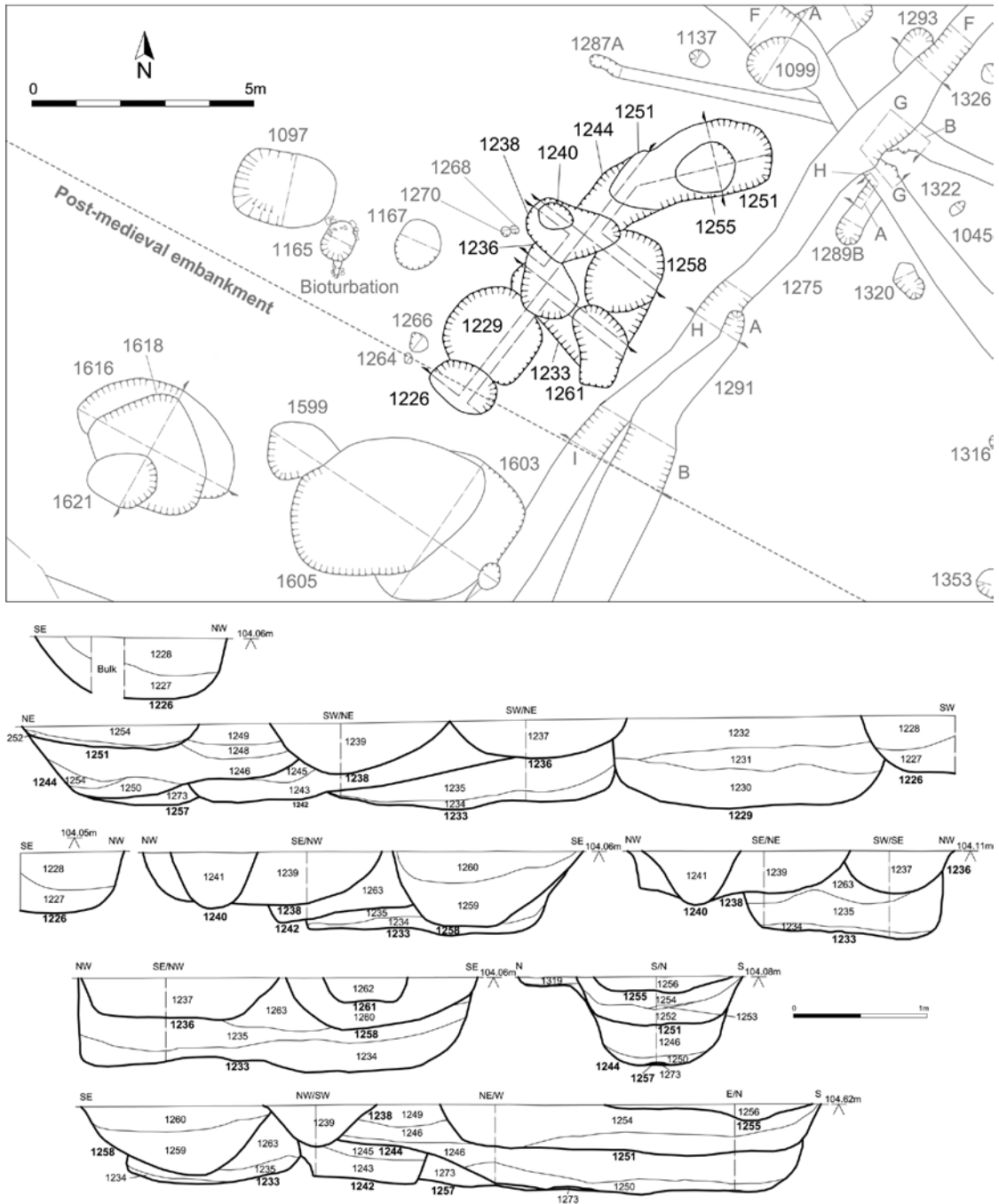


FIGURE 4 Pit Cluster 6

THE FINDS AND ENVIRONMENTAL EVIDENCE

Pottery

by Peter Thompson (with thanks to Berni Sudds of Pre-Construct Archaeology for advice on fabrics and forms)

Introduction

The post-Roman assemblage constitutes 4,152 sherds (33,716g), mostly of medieval (11th to 13th/early 14th century) date but including a small number of residual Saxon sherds (not discussed further here). The majority of the pottery is from pits and is generally in a moderately abraded condition. Ten pits contained over 100 sherds apiece, amounting to over 80% of the site total. Groups from these pits are compositionally similar, being dominated by limestone wares. Each pit also contained at least one glazed sherd, which was rare on the site.

Sherds were examined at x35 magnification and recorded in accordance with the *Post-Roman Pottery Research Group* guidelines (Slowikowski *et al* 2001). Fabric codes are those of the Milton Keynes Archaeological Unit Type-Series (Mynard & Zeepvat 1992) or where appropriate, those of the Oxford Region Type-Series (Mellor 1994). All fabrics have been assigned a number (1–22) for ease of reference.

Fabrics

The earliest medieval pottery comprises 81 sherds of St Neots ware (Fabric 1) making up less than 2% of the assemblage. This fabric includes a large fragment of cooking pot with external sooting (Fig 5.1). Other shelly wares (Fabrics 2 and 3) most probably derive from the Ouse Valley, some 30km to the north of Stone (Mynard & Zeepvat 1992, 249 and 251), while Fabrics 4 and 5 belong to a broad group of unprovenanced shelly limestone wares identified from Walton, Aylesbury.

The vast majority of the medieval assemblage (over 52%) is made up of limestone-tempered wares, with Fabrics 6 and 7 (Table 2) possibly representing variations of the same group (Figs 5.2–6.10). Regional limestone wares include Cotswold Ware (OXAC), dating to the 9th/10th century, and Medieval East Wiltshire Ware (OXAQ) produced to the south of Swindon (Blinkhorn 2007). However, the current sherds best resemble pottery from Temple

Farm, Brill (c. 13km to the west), dating between the late 12th and mid-13th centuries (Farley 1982, 111; Jope & Ivens 1981, 35). The Brill assemblage was made up of large cooking pots or storage jars with everted rims and sagging bases, some of which were glazed (Farley 1982, 111). While similar to the Brill wares, slight variations in the Bishopstone Road fabrics and their sheer abundance at the site may suggest more local manufacture.

Unprovenanced sherds with flint and sand temper (Fabrics 8 and 9) make up less than 1% of the assemblage. Flint tempered industries are known from South Buckinghamshire, for example, quartz-with-flint tempered pottery, sometimes with scoring or comb decoration was produced at Rush Green, Denham (Farley & Leach 1988, 72–4). However, the relatively restricted distribution of such mundane vessels (Farley & Hurman 2015, 162) would tend to suggest a more local source for the current sherds.

Sandy wares account for 13 different fabric groups from the site (Fabrics 10–22; Table 2; Fig 6.11–23). Although largely unprovenanced, some of these may derive from the Great Missenden kilns (16km south-east of Stone), which produced several different sandy fabrics (Ashworth 1983, 155). Other known sources include Great Brickhill in Buckinghamshire (Farley & Hurman 2015, 162) and locations around Bedfordshire, which produced sandy grey wares. However, Oxfordshire wares or Brill/Boarstall Wares, produced to the west of Stone, account for most of the sandy ware fabrics. Late Saxon to Early Medieval Oxford Ware (OXY) was manufactured between the mid-11th and late 13th centuries (Mellor 1994, 66 and 71). Typical Brill wares (OXAM) date from the mid-13th century, with a coarser predecessor (OXAW) which is very similar to OXY (Mellor 1994, 111). Fabric 16 from Bishopstone Road displays characteristics in common with imported Oxfordshire wares and includes cooking pots with rounded/expanded rims (Fig 6.12–20); a further 11 sherds exhibit a thin green glaze.

Of the sandy wares, 110 sherds (918g) in Fabric 19 are similar to Fabric 16 (OXY), but were classed as OXAW – early Brill – mainly based on colour and the absence of flattened rims. Fabric 18 was similarly classed (Table 2). OXAW is thought to date between the late 12th and mid-14th centuries (Mynard 1994, 28). A further four sherds (32g) are in the more familiar later Brill (OXAM)

TABLE 2 Quantification of medieval pottery fabrics

<i>Fabric No.</i>	<i>Description</i>	<i>Code</i>	<i>Date</i>	<i>Sherd No.</i>	<i>Weight (g)</i>
1	St Neots Ware <i>(Mellor 1994)</i>	SNC1	10 th – late 12 th	81	772
2	Medieval Shelly Ware <i>(fabric similar St Neots but coarser)</i>	MCW1	11 th –13 th	9	65
3	Medieval Sandy and Shelly ware <i>(fine to medium sand and coarse white platy shell)</i>	MSC1	11 th –13 th	9	55
4	Medieval Quartz and Limestone <i>(moderate to abundant medium sub-rounded to rounded quartz with sparse to moderate limestone with occasional fine shell)</i>	MSC1	11 th –13 th	301	2871
5	Medieval Quartz and sparse limestone <i>(similar to Fabric 4 but less calcareous)</i>	MQLW	11 th –13 th	61	521
6	Medieval Limestone Ware <i>(moderate to abundant coarse rounded limestone, also may contain sparse hard angular limestone, and occasional other inclusions such as flint or rounded quartz)</i>	(OXAC)	11 th –13 th	1451	10,889
7	Medieval limestone Ware with Flint and Sand <i>(sparse to common rounded white limestone, with varying combinations of coarse to very coarse, angular flint and fine to medium sand; can also contain sparse, angular hard white limestone)</i>	(OXAC)	11 th –13 th	705	5816
8	Medieval Gritty Sand and Flint Ware <i>(Medium to coarse sub-rounded to rounded quartz and moderate flint)</i>	MS29	?12 th –13 th	6	37
9	Medieval Flint Gritted Ware <i>(moderate to abundant flint and chert with parse or moderate fine to medium sub-rounded quartz)</i>	MS29	?12 th –13 th	15	94
10	Medieval Coarse Ware1 <i>(sand with clay pellets), (medium sub-rounded quartz with sparse coarse rounded reddish or brown clay pellets or grog)</i>	MCW1	11 th –13 th	19	120
11	Medieval Coarse Ware2 <i>(sand with red iron oxide), (fine to medium well sorted sub-rounded grey quartz with sparse to moderate red iron oxide)</i>	MCW2	11 th –13 th	5	36
12	Medieval Fine Grey Sandy Ware <i>(fine sand), (Fine sub-rounded quartz with no or few other inclusions, smooth, grey surfaces)</i>	MS38	11 th –13 th	30	284

<i>Fabric No.</i>	<i>Description</i>	<i>Code</i>	<i>Date</i>	<i>Sherd No.</i>	<i>Weight (g)</i>
13	Medieval Grey Sandy Ware (medium sandy ware), (fine to medium sub-angular to sub-rounded quartz with occasional other inclusions such as flint, calcareous or iron oxides)	MS3	11 th –14 th	470	3177
14	Medieval Coarse Sandy Ware1 (medium to coarse sub-rounded to rounded quartz, occasional other inclusions such as red-brown clay pellets/grog)	MS2	11 th –14 th	89	1166
15	Medieval Coarse Sandy Ware2 (medium to coarse sub-rounded to rounded red quartz)	MS2	11 th –14 th	62	574
16	Late Saxon to Medieval Oxford Ware (Mellor 1994)	OXY	Mid 11 th –mid 13 th	541	4727
17	Glazed Medieval Oxford Ware (as OXY)	OXY	Mid 11 th –mid 13 th	11	117
18	Brill-type ware (Mellor 1994)	MS9 (OXAW1)	Late 12 th –mid 14 th	129	1202
19	Brill-type Ware (Mellor 1994)	MS9 (OXAW)	Late 12 th –mid 14 th	110	918
20	Brill Ware (Mellor 1994)	MS9 (OXAM)	Early 13 th –15 th +	4	32
21	Glazed Brill Ware (Mellor 1994)	MS9 (OXAM)	Early 13 th –15 th +	6	33
22	Potterspury type ware (Mellor 1994)	MS6	13 th +	6	63
<i>Total</i>				<i>4,120</i>	<i>33,569</i>

fabrics, while another six Brill sherds (33g; Fabric 21) are glazed. Six body sherds (63g) generally with dark grey cores and pale orange to cream surfaces (Fabric 22), are similar to Northamptonshire Potterspury ware, located to the north-west of Milton Keynes, and may be early products or precursors of that industry.

Forms

Identifiable medieval rim forms comprise 283 cooking pots, 45 bowls and 38 jugs. Frequent sooting and charcoal residue on cooking pots indicates an emphasis on domestic 'kitchen' waste. One bowl in Fabric 16 exhibits internal sooting and may have been used as a curfew (Berni Sudds

pers. comm.). The majority of the cooking pot rims are between 16cm and 24cm in diameter, although a few are larger (Figs 5.8 & 6.13). Most are fairly simple and either upright or a little out-turned (133 sherds), although many are slightly thickened (Figs 5.3, 5.7, 6.10 & 6.13) and a further 62 rims are similar but more out-turned or everted (Fig 5.4, 5.8 & 6.11). A further 69 rims are beaded or expanded and usually everted (Fig 6.14–17 & 19). Few jar rims are of a more 'developed' form and there is little evidence of rims characteristic of Brill-type ware (Mellor 1994, 112, 5–8). The exception is a squared bowl rim in Fabric 16 which has been folded inwards, rather than outwards (Fig 6.20).

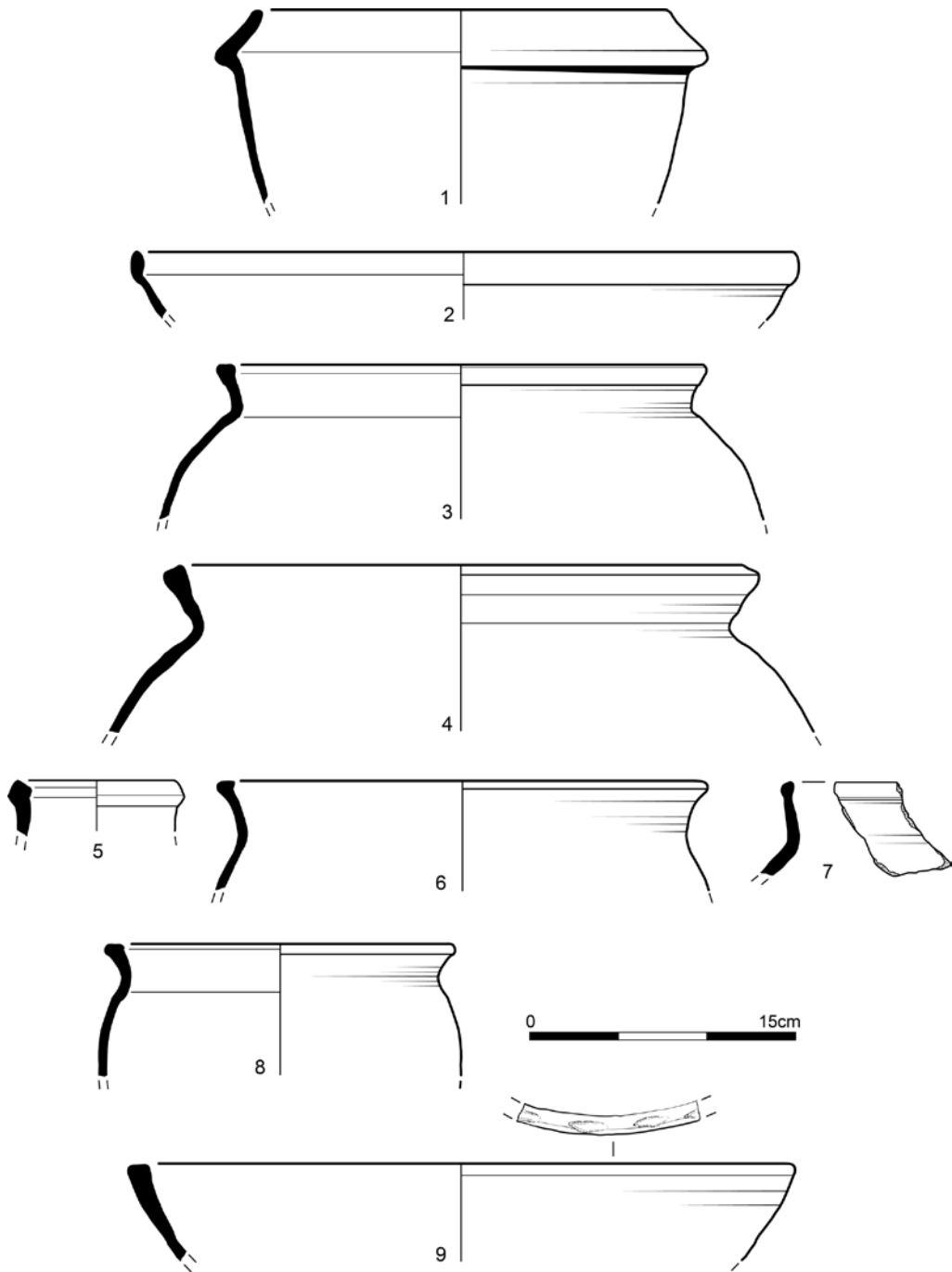


FIGURE 5 Selected pottery illustrations, 1-9 (scale 1:4)

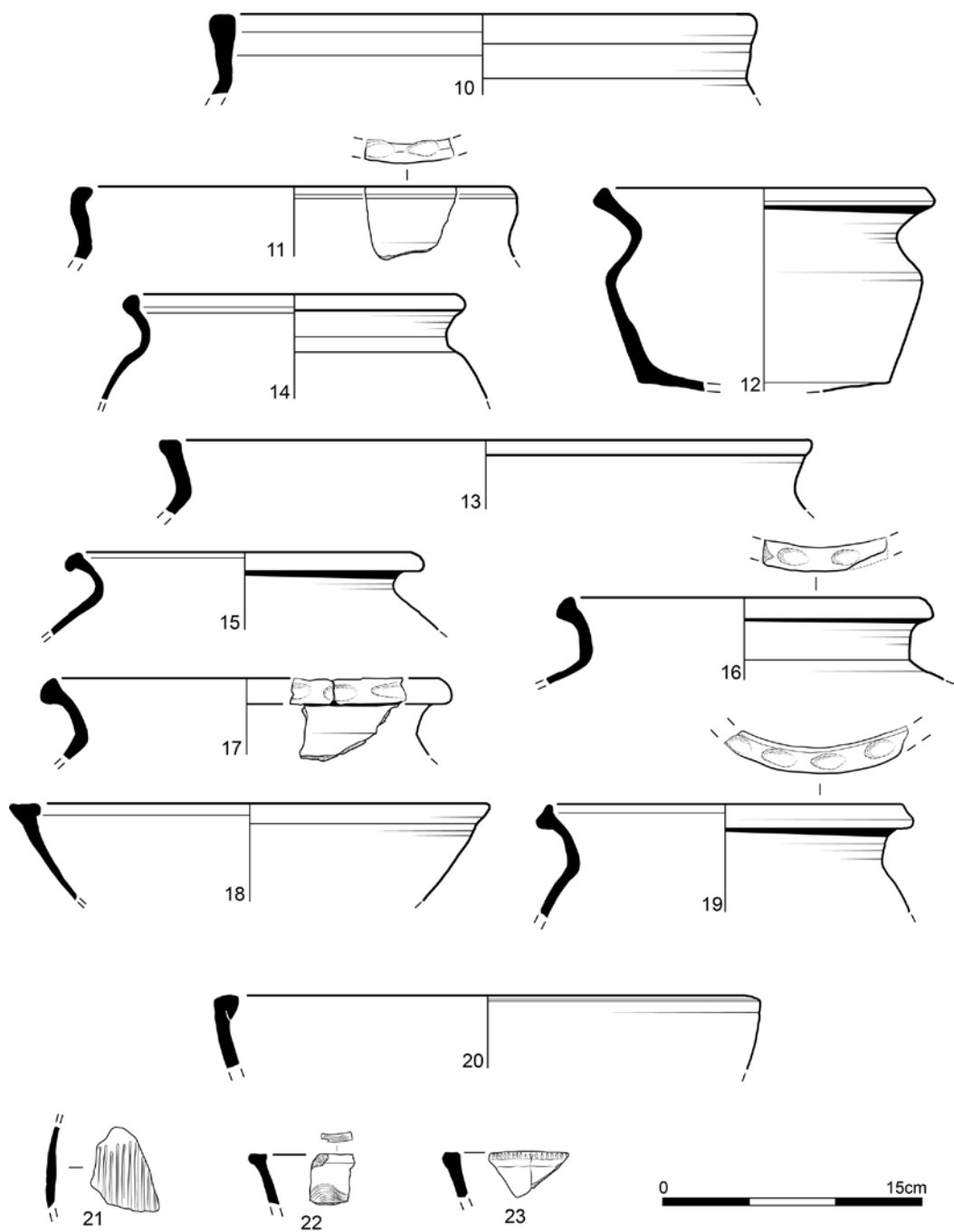


FIGURE 6 Selected pottery illustrations, 10–23 (scale 1:4)

TABLE 3 Measurable cooking pot rim diameters

<i>Fabric</i>	<i>12-15cm</i>	<i>16-19cm</i>	<i>20-24cm</i>	<i>25-30cm</i>	<i>31-36cm</i>	<i>>36cm</i>
1			3			
2		1	1			
3		1				
4		6	16			
5		1	7			
6		11	42	10	3	
7	1	14	35	4	1	1
8				1		
9			2			
10			1			
12			1			
13	1	5	22	4		
14			8			
15		2	3			
16		6 (+1 glazed)	42	7		1
18		3	2			
19		1	7			
<i>Total</i>	<i>2</i>	<i>51 (+1)</i>	<i>192</i>	<i>26</i>	<i>4</i>	<i>2</i>

Decoration

The assemblage includes few decorated sherds, with generally faint impressions on cooking pot rims being the most abundant form (43 occurrences). Nineteen Fabric 16 OXY type cooking-pot rims include decoration of this type. However, the faintness of the impressions might suggest that they are the result of pressing the rims down to flatten them, as much as intended decoration. Combing or scoring to body sherds is the next most frequent form of decoration, and is more evenly applied to limestone and sandy wares (Fig 6.21).

There are just 17 glazed sherds in OXY and Brill ware (Fabric 21). Eleven green glazed sherds are in OXY and include two bowl rims, one with rouletting on its outer lip and a second with combed wavy line decoration (Fig 6.22). The six Brill ware sherds include a green-glazed jug sherd with a faint line of triangular rouletting and a brown-glazed bowl rim with rouletting on the lip (Fig 6.23).

Discussion

The assemblage is dominated by pottery heavily tempered with limestone (Fabrics 6 and 7). This group comprises a mixture of handmade vessels (usually with wheel-finished rims) and entirely wheel-made vessels. Rims are generally earlier medieval in character, comprising simple, thickened and beaded forms. This group does not relate to the Milton Keynes fabric type-series, and while it cannot be classed as Cotswold ware it may be one of the broader regional styles that come under the fabric group OXAC (Mellor 194, 44).

The low occurrence of St Neots ware suggests that it was coming to the end of its production and being replaced by the limestone wares (Fabrics 6 and 7). At Walton, Aylesbury, St Neots ware occurring alone was thought to indicate a 10th-century horizon, while in the 11th century it appeared alongside other fabrics. Pottery similar to Fabrics 6 and 7 was also found at Walton and during later

excavations at Walton Street (Farley 1976, 239–40; Thompson 2011). These limestone fabrics appear to have persisted into the 13th century at Stone (although some residuality is possible) as they appear alongside the OXY and Brill wares. Furthermore, the wheel-thrown vessels probably indicate a 13th-century date (Farley & Hurman 2015, 161); similar limestone fabrics were produced at Brill around the late 12th to mid-13th century.

The Early Medieval Oxfordshire wares (Fabric 16) indicated mainly by their distinctive rounded/expanded cooking pot rims, make up over 13% of the medieval pottery total, and the Brill-type products (Fabrics 18–21) make up a further 6%. Along with the six sherds of Potterspury-type ware (Fabric 22) which probably began production in the early 13th century (Mynard 1994, 45), these are potentially the latest sherds from the site. The earliest reference for potters at Brill is for a land transaction dated *c.* 1210–1220 (Farley & Hurman 2015, 181). The majority of sherds from Stone appear to be ‘early’ Brill fabrics; there are none of the characteristic folded and undercut rims of the mid-13th century (Ivens 1982, 161–3). Furthermore, the ten later Brill sherds are all in buff or pale grey colours suggested by Yeoman (1983, 22) as indicative of the mid-13th to early 14th century, and not the later pink to red fabrics. As such, there is little evidence from the assemblage to indicate that the latest pottery dates much beyond the 13th century, and that pottery deposition may have ceased before this time.

Conclusion

The medieval pottery assemblage is a homogeneous group reflecting domestic waste deposited primarily in pits. Cooking pots are predominant, and many display charcoal residue. While bowls and jugs are also present, there is little evidence for other forms such as spouted pitchers, storage jars or pipkins. Overall, the assemblage might be described as being of only moderate status. However, a dearth of finer glazed vessels might suggest that wealth and status were displayed through mediums other than pottery.

List of Illustrated Sherds

Fig. 5.1 Pit F1599 (L1600) (F1) St Neots ware bowl, (*wheel-made, grey core, pale orange with sooting on outer surface*)

Fig. 5.2 Pit F1316 (L1318) (F5) bowl rim with 38cm rim diameter, (*wheel-made, grey core, pale orange- brown surfaces, sooting on outer surface*)

Fig. 5.3 Pit F1610 (L1611) (F6) Cooking pot, rim diameter 28cm, (*handmade with wheel-finished rim, grey core, orange-brown surfaces with sooting on outer surface*)

Fig. 5.4 Pit F1610 (L1612) (F6) cooking pot rim diameter 34cm, (*wheel-made, mid grey core pale grey inner surface, mid brown outer surface with patches of sooting*)

Fig. 5.5 Pit F1610 (L1612) (F6) jug rim 10cm diameter, (*wheel-made, grey core, orange surfaces mottled with dark grey*)

Fig. 5.6 Pit F1605 (L1607) (F6) cooking pot rim, rim diameter 28cm (*wheel-made, dark grey core, grey surfaces, sooting on inner lip*)

Fig. 5.7 Pit F1621 (L1623) (F7) cooking pot rim (*wheel-made, grey core, pale brown surfaces, slight sooting to neck*)

Fig. 5.8 Pit F1244 (L1246) (F7) cooking pot, rim diameter 20cm, (*wheel-made, dark grey core, mid grey surfaces with some mottling with darker grey and pale orange brown, sooting on outer surface*)

Fig. 5.9 Pit F1590 (L1592) (F7) bowl with impressed decorated 38cm diameter rim, (*wheel-made, grey core, pale brown inner surface, dark grey outer surface with charcoal residue*)

Fig. 6.10 Pit F1624 (L1627) (F7) cooking pot rim 32cm diameter, (*wheel-made, grey core, pale brown inner surface, mid brown outer surface*)

Fig. 6.11 Pit F1462 (L1464) (F14) cooking pot, rim diameter 20cm, (*wheel-made, pale grey core, red-brown inner surface, red-brown outer surface mottled with pale grey and dark grey, sooting on outer surface*)

Fig. 6.12 Pit F1593 (L1595) (F16) jar rim 26cm in diameter, with impressed decoration (*wheel-made, red-brown core with buff margins, and dark grey surfaces*)

Fig. 6.13 Pit F1628 (L1630) (F16) cooking pot rim 38cm diameter, (*wheel-made, pale grey/buff core, dark grey inner surface, red-brown outer surface*)

- Fig. 6.14 Pit F1624 (L1625) (F16) cooking pot rim 20cm in diameter, (*wheel-made, pale grey/buff core, dark grey inner surface, pale grey/buff outer surface*)
- Fig. 6.15 Pit F1610 (L1611) (F16) cooking pot rim 21cm in diameter, (*wheel-made, pale grey/buff core, pale orange-brown surfaces, external sooting*)
- Fig. 6.16 Pit F1624 (L1625) (F16) cooking pot rim with 22cm rim diameter, impressed decoration (*wheel-made, pale grey/buff core, pale orange surfaces with dark grey mottled patches*)
- Fig. 6.17 Pit F1610 (L1612) (F16) cooking pot, 24cm diameter with impressed decoration (*wheel-made, pale grey/buff core, pale orange surfaces with dark grey mottled patches*)
- Fig. 6.18 Pit F1316 (L1318) (F16) bowl with 26cm diameter rim, (*handmade with wheel-finished rim, pale grey/buff core, pale brown surfaces, sooting on both surfaces but mainly the outer one*)
- Fig. 6.19 Pit F1610 (L1611) (F16) cooking pot with 22cm diameter rim with impressed decoration, (*wheel-made, pale grey/buff core, dark grey inner surface mottled with pale orange, pale orange outer surfaces mottled with dark grey*)
- Fig. 6.20 Pit F1610 (L1611) (F16) bowl rim 32cm in diameter, (*wheel-made, pale grey/buff core, mid grey surfaces, with dark grey mottling, sooting on outer surface*)
- Fig. 6.21 Pit F1610 (L1611) (F16) decorated body sherd (*handmade, pale grey core, pale brown inner surface, red-brown outer surface, patches of sooting on outer surface*)
- Fig. 6.22 Pit F1624 (L1625) (F17) glazed and comb decorated bowl rim (*wheel-made, pale grey throughout, patchy green glaze on outer surface*)
- Fig. 6.23 Pit F1610 (L1612) (F21) glazed jug rim with roulette decoration (*wheel-made, pale grey core, red-brown margins, and surfaces, patchy brown glaze on rim and outer surface*)

Selected Small Finds

by Nicholas J Cooper (ULAS)
with Antony R R Mustchin

Summary

A total of 111 finds were recovered from the site, 52 of which were recovered unstratified, using a metal detector. Of the stratified finds 45 were of iron, eight of copper alloy, two of lead and four of worked bone.

The assemblage presents a good range of male and female dress accessories, mainly belt fittings, dating between the 13th-15th centuries, together with hooked tags of 12th-century date and a 14th-century dress pin. A number of medieval horseshoes and associated shoe nails, and two rumbler bells indicate the presence of domestic livestock, in keeping with the site's agricultural character. Of particular significance, however, is a lead pilgrim flask or ampulla associated with the cult of Saint John Schorn and two pieces of worked bone inlay, possibly from a stringed musical instrument and a box or casket. Otherwise there is a range of household objects such as knives and weights, and structural fittings. A full catalogue of small finds is included within the research archive report (Cooper with Addison 2017).

The Pilgrim Flask

Lead pilgrim flask found close to Pit Cluster 6 (Fig 7.1). Lower half decorated with scalloped design on reverse surface and, on the front lower part of design, what looks like a boot. Incomplete length 28mm. Given the location of the site it is likely that this flask was associated with the cult of John Schorn.

Decorated Bone Inlay

Small Find No. 2. Decorated bone inlay from Pit F1496 (L1498), Pit Cluster 9 (Fig 7.2): fragment of rectangular bone sheet inlay, broken transversely across one of two circular cut-outs. The sheet is subdivided into squares, defined by three incised parallel lines with a cut-out at the centre of each. Broken length 34mm; width 21mm; diameter of perforation 8mm. A similar piece with regularly spaced perforations (of 6.4mm diameter) comes from Winchester, possibly a reinforcing plate accommodating tuning pegs from a stringed instrument such as a harp (Biddle & Hinton 1990, 784, fig 227.2422).

Small Find No. 8. Decorated bone inlay from Pit F1610 (L1612), Pit Cluster 11 (Fig 7.3): fragment of rectangular bone sheet inlay, with one corner intact. Decorated with two rows of closely-spaced ring and dot motifs comprising three concentric rings. Broken length 62mm, broken width 16mm. Such strips were used to decorate reliquaries and other fine caskets, and a number of similarly-decorated examples come from Winchester (Biddle & Hinton 1990, 782, fig 226.2419).

Discussion

While the vast majority of finds from the Bishopstone Road site are utilitarian in nature, reflecting the day-to-day domestic and agricultural activity of the local medieval population, several, including the bone inlay and pilgrim flask described above, indicate high-status activity. Such finds could have derived from one of the local medieval manors (see above) or perhaps the church, being discarded at the site along with other waste. Certainly, the pilgrim flask or ampulla associated with the cult of John Schorn has clear religious affiliations.

John Schorn is an unofficial saint based at Windsor and North Marston, and was the rector

of the latter during the high medieval period (died AD 1314) (Crabtree 2000, 254; Webb 2001, 128). He was famed as an exorcist and is depicted on badges of the period (and later) holding a boot into which he had just conjured the devil (ibid.). Saint John Schorn's Holy Well still exists in the village of North Marston, a medieval pilgrimage site some 10km to the north of Stone. Given this close proximity, it is highly likely that the flask from the current site was brought from North Marston containing water from the well. While this object may be a high-status item, the juxtaposition of North Marston and Stone suggests that individuals of any class could have easily made the pilgrimage.

Animal Bone

with Julie Curl (Sylvanus) and Julia E M Cussans

Animal bone, totalling 1616 elements (over 12.8kg) was mostly recovered from medieval pits. All major farmyard domesticates are represented, while sheep/goat (*Ovis aries/Capra hircus*) are dominant (Table 4); no positively identified instances of goat were recorded. Cattle (*Bos taurus*) are the next most abundant species, although are consider-

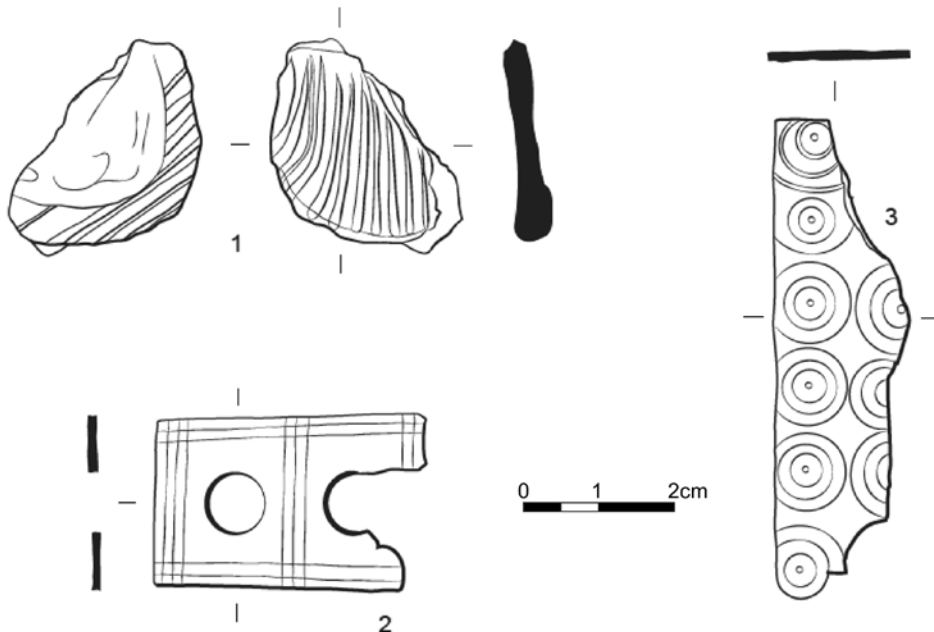


FIGURE 7 Small finds (scale 1:1)

ably outnumbered by sheep, while pig (*Sus scrofa*) and horse (*Equus caballus*) are present in fewer numbers still. Full quantification and analysis of the animal bone assemblage is presented in the research archive report (Curl with Cussans 2017). Sheep are largely represented by adult remains, with occasional juvenile and neonatal bones indicating local breeding and a range of uses. Although minimal, tooth wear evidence suggests the presence of older individuals, almost certainly utilised for their wool, an important medieval commodity. Indeed, the increasing economic importance of wool led to widespread settlement depopulation from the later medieval period, evidence for which can be found throughout Aylesbury Vale (see below). The occurrence of young animals may indicate dairying, while rearing for meat is also evidenced.

Cattle remains chiefly comprise the prime meat-bearing elements, with butchering for meat production and consumption apparent. Recorded pathologies include arthritic growth and a small

lesion, most probably indicating traction-related strain. This may well be related to their use for ploughing as part of the local arable economy (Bennett 1956, 45; Langdon 1982).

Pig is the third most abundant species, and is predominantly represented by juveniles. The dominance of this age category is typical of a species primarily bred for meat and by-products. Horses/ponies were probably kept for riding – especially by the higher social classes – while some secondary utilisation for skins and possibly meat was also noted.

Of the remaining species, several wild fauna are of note. A single adult curlew (*Numenius arquata*) is present from Pit Cluster 9 and, despite lacking evidence of butchering, is likely to reflect human consumption. Remains of a merlin (*Falco columbarius*) were recovered from Pit Cluster 11, and may derive from a bird kept for falconry. Medieval falconry was a ‘mark of social prestige’, at least for those who did not practice it for a living, and a 15th century list of falconry – part of *The Booke of St. Albans* – marks merlin as being suitable for ladies (after Oggins 2004, 109–10 & 115). This association with women – also remarked upon by Cummins (1988) – strongly suggests that the merlin from Stone represents a pet bird or status symbol. Medieval women rarely practiced hunting with hawks, although falconry provided the opportunity for women to ‘engage in courtly sport’ (Oggins 2004, 118). Also of interest is a single tench (*Tinca tinca*) vertebra from Pit Cluster 11. Fish were a popular addition to the medieval diet, particularly on fasting days, although fresh water species were typically the reserve of the noble and/or wealthy (Lakin 2008, 67). This example is also of potential interest as a study from Leicestershire notes that fish are rare on medieval village sites (Monckton 2015, 6).

Environmental Evidence

by John R Summers

Introduction

The excavation included a targeted programme of environmental bulk sampling for flotation. A number of medieval boundary ditches, pits and structural features produced rich samples of carbonised plant material. Cereal remains were well represented, with an overall ubiquity (percentage presence) of over 87% (Fig 8). This

TABLE 4 Quantification of animal bone (NISP)

<i>Species</i>	<i>NISP</i>
Sheep/goat	202
Cattle	87
Pig	63
Horse	15
Dog	75
Roe Deer	1
Unidentified Mammal	1081
Fowl	16
Goose	11
Curlew	1
Merlin	1
<i>Turdus</i> sp.	1
Miscellaneous	8
Unidentified Bird	1
Tench	1
Herpetofuana	2
<i>Total</i>	<i>1566</i>

NISP = number of identified specimens

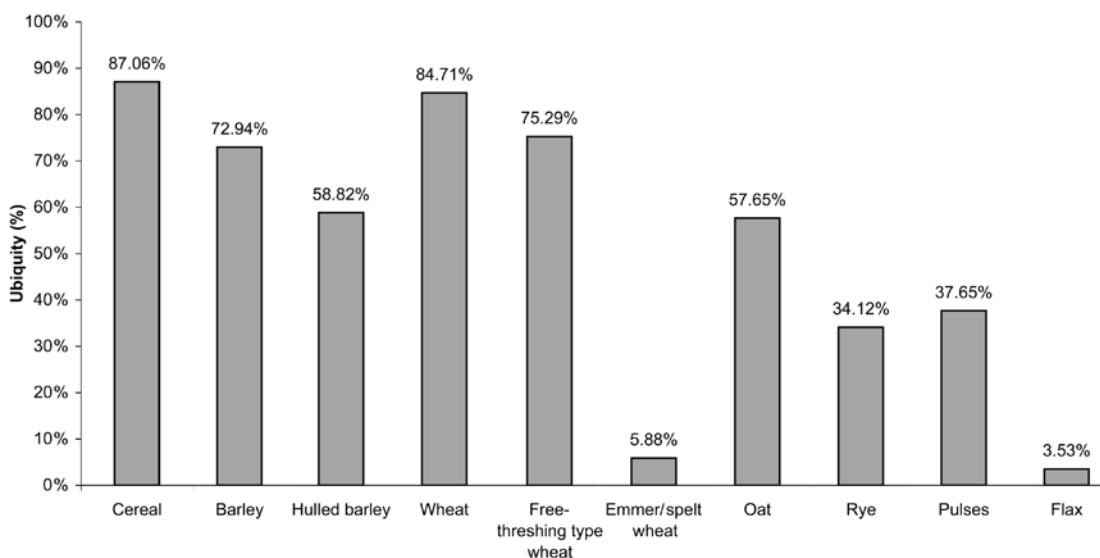


FIGURE 8 Ubiquity of the main medieval crop taxa (N=85)

value is high and indicates the frequent use, carbonisation and deposition of cereals. Wheat was the most commonly encountered crop taxa, present in almost 85% of samples. Free-threshing type wheat grains (*Triticum aestivum/turgidum* type) predominated, while the only diagnostic chaff elements were bread wheat (*T. aestivum*), indicating that this was the dominant cereal cultivar.

Barley (*Hordeum* sp.) was recorded in almost 73% of samples, with only hulled grains identifiable. Further cereals comprised oat (*Avena* sp.), present in over 57% of samples and rye (*Secale cereale*) in over 34%. It is likely that both oat and rye were grown as part of a mixed arable economy. A low incidence of glume wheat in the medieval assemblage is thought to represent either a low-level weed contaminant or residual material from earlier activity. Additional cultivated species included pulses (Fabaceae) and flax (*Linum usitatissimum*), while possible foraged foods comprise dog rose (*Rosa* cf. *canina*), sloe (*Prunus spinosa*) and possibly oraches (*Atriplex* sp.), a relative of spinach. Stinking chamomile (*Anthemis cotula*) – a common plant on heavier, fertile soils – dominated the weed assemblage.

The Arable Economy

The environmental evidence attests to an intensive cereal-based economy focussed on the excavated

site and its environs. Bread wheat formed the basis of this economy, with some large concentrations of grain indicating the bulk handling of cereals. An economic focus on free-threshing type wheat and bread wheat in particular, is common across medieval Britain where suitable soils are present. Bread wheat was important in milling for flour and bread production, and, to a lesser extent, the brewing of ale (Moffett 2011, 47; Stone 2011, 13). Local markets for grain and other produce are likely to have included Aylesbury, Haddenham and Whitchurch, all of which are within 10km of Stone. It is reasonable to suggest that a significant proportion of surplus produce was diverted to one or more of these markets with local production being geared towards their demands.

Barley was predominantly represented by large, plump grains, while a small number of asymmetric grains suggest the cultivation of hulled, six-row barley (*Hordeum vulgare* var. *vulgare*). In medieval economies, barley was considered the best grain for ale, although a range of species, including oat, were also employed (Stone 2011, 13). Frequently spring barley and oats were grown as a maslin (simultaneous sowing of a dual crop) known as *dredge*, which was also commonly used in brewing (ibid.). The current assemblage did not provide any clear evidence for maslin cultivation, with barley frequently outnumbering oat in

many samples. It is likely that the mixing of these grains resulted from post-depositional processes, although maslins are difficult to detect archaeobotanically (Jones & Halstead 1995; Moffett 2011, 50–1; van der Veen 1995). The same is true for *mixtil*, a dual winter-sowing of barley and wheat (Stone 2011, 13); evidence of this crop type was again absent within the Stone assemblage. While barley could have constituted a fodder crop at the current site, it is more probable that oats and perhaps some pulses (see below) fulfilled this role.

Although the exact species of oat could not be determined, it is probable that a cultivated species was present. Oats tolerate a range of conditions and can be an important fodder resource, as well as contributing to human diet in pottages and ale (e.g. Stone 2011, 13; Straker *et al* 2007, 886). The Shapwick Area Project found that oats were significantly under-represented archaeobotanically compared with known cultivation records (Straker *et al* 2007, 886), demonstrating inherent biases in the analysis of carbonised plant macrofossils. The oats from Shapwick were predominantly sent to Glastonbury Abbey, where they are likely to have been used to feed horses, while much of the remainder was malted for ale (*ibid.*). Crops that do not require kiln drying, such as those destined for fodder or pottages, have lower contact with fire during their processing and preparation, which can lead to their under-representation within assemblages of carbonised grain. The same may well be true at Stone where oats almost certainly formed part of the peasant diet, as well as constituting a high quality fodder for local horses.

Rye was a relatively common medieval crop, grown as a winter cereal, often as a maslin with free-threshing wheat (e.g. Stone 2011, 12–13). It was frequently used to make low-status, poorer quality bread (Campbell & Overston 1993, 57–8; Stone 2011, 13), although is scarce in the current assemblage. In fact it appears that rye made little contribution to the local arable economy. The lack of wheat-rye maslin implies little attempt to mitigate against crop failure or poorer harvests, and might indicate demesne farming as opposed to peasant-type subsistence practices (cf. Stone 2011, 17–20).

Most samples were dominated by carbonised cereal grains over chaff or non-cereal weeds. This indicates that cereals were predominantly being dealt with at the site following bulk processing

(threshing, winnowing and sieving), which may have been carried out elsewhere. It is also likely that processing by-products (straw, chaff and weeds) were being used for other purposes, such as animal fodder, and were not becoming carbonised at the site (e.g. van der Veen 1999). A small number of samples contained proportions of wheat rachis remains in proportions suggestive of un-threshed ears of wheat. These could represent material carbonised prior to processing (whole ears) or mixed material from various sources, including crop processing debris. It has been noted that chaff, straw and weed seeds could originate from thatch, perhaps being carbonised as sweepings from floors (e.g. de Moulins 2007). In this instance, however, the high density of the sampled deposits would tend to suggest discrete dumps of material from a single event, such as a grain-drying accident. Another possibility is the use of chaff remains as fuel within drying kilns, a common practice during the Romano-British period (e.g. van der Veen 1989) but poorly represented at medieval sites.

The high incidence of stinking chamomile in the assemblage – a prolific and troublesome medieval weed (Straker *et al* 2007, 885) – suggests the common cultivation of heavy loam and clay soils (e.g. Monckton 2012, 159; Straker *et al* 2007, 885). Soils of these types, which are best suited to bread wheat cultivation, are widespread to the north and south of Stone, while the site itself occupies freely draining lime-rich loamy soils. Overall, the non-cereal taxa are indicative of fertile, well managed soils, with little evidence of soil depletion. The use of leguminous crops as part of a rotation system may have helped to maintain soil fertility over time.

The two identified pulses, probable horse bean (cf. *Vicia faba* var. *minor*) and pea (*Pisum sativum*), are the most commonly recorded leguminous crops for the medieval period and may have formed part of a crop rotation system at the current site, helping to fix nitrogen and maintain soil fertility. Pulses were most commonly consumed as pottages but were also ground for low-quality loaves, often mixed with cereals, as well as contributing to fodder (Stone 2011).

Flax, grown at this time primarily for its fibres, may have been raised in garden areas (Dyer 2011, 29). Although scarce in this instance, flax is commonly under-represented in carbonised assemblages.

The Scale and Character of Production

The identified range of crops and the apparent scale of bulk handling of cereals at Stone, in particular the highest status and most desirable wheat crop, suggests the activities of a large-scale agricultural site. It is possible that the material was generated by a manorial farm associated with either Bracey's Manor or St Cleres Manor (Page 1908, 307–11). The location of 'Manor Farmhouse' to the immediate north of the site may well be indicative of the historical presence of manorial farm workings in the near vicinity. Most estates required their tenants to devote time to working the estate's farms and gardens (demesne), which would have been responsible for a significant proportion of the manor's income, although in some places these obligations were being commuted to a monetary payment by the 13th century (Roden 1969, 10). Furthermore, most tenants would have paid their rent in produce, usually grain, which may also have ended up at the manorial farm for processing, storage or redistribution. While other regional sites show a similar range of cereal taxa, e.g. Chicheley Hall, Broughton North and Wolverton Mill (Carruthers 2011; Hill 2013; Monckton 2012), the densities are lower, which makes the current site stand out as containing debris from the bulk handling of cereals, most likely associated with a large farm.

Much of the wheat grain assemblage appears to have been dried in a fully processed state. It has been hypothesised that routine drying of cereal crops for storage would have been an unnecessary expenditure of time and resources in favourable climates where air drying would have sufficed (Moffett 2011, 51–2). As such, it is perhaps most likely that the grain was being dried in preparation for milling at the village post mill, the site of which lies *c.* 500m west of the present site. The production of wheat flour would have been for the highest quality bread, which was probably for consumption by higher status individuals, most likely occupants of the manor and their visitors, rather than representing the day-to-day peasant diet.

Patterns of Deposition

Deposition of carbonised material was clearly focussed primarily on pit features in the south and west of the site. The highest density samples came from Pit Clusters 2, 9, 11, 12 and surrounding features. However, significant deposits of carbonised remains were recovered from the majority

of the major pit clusters in this part of the site (Nos 2, 3, 4, 5, 6, 9, 11 and 12). Further from this area, the intensity of deposition is significantly reduced. The concentration on these pit features, which appear to post-date the medieval enclosures, suggests that high intensity cereal processing and use corresponded with the later use of the site. In a few cases, ditch features were also receiving large deposits of carbonised material, which may reflect their deliberate infilling or expedient use for refuse disposal, marking the end of their use as enclosure boundaries.

In the majority of instances, the carbonised remains recovered from the numerous bulk samples do not reflect the original function of the features from which they derived. Instead, they are considered to have entered the deposits as part of refuse disposal and the use of rubbish to deliberately infill open features. This indicates that the crop processing and handling activities represented were not taking place directly in the vicinity of the excavated features, but rather that such activities and burning events, probably associated with large kilns and hearths, were occurring beyond the excavated area, albeit in the very near vicinity.

DISCUSSION

Topographical, Geological and Geographical Setting

The layout and development of the medieval site was no doubt heavily influenced by its location, on fertile land close to the centre of a nucleated village. The local soils are well suited to wheat cultivation, particularly those to the north and south of the site. These areas also provide good access to water – essential for the grazing of livestock, particularly cattle (Dryden 2008, 121, fig 8.4; Miller 1979, 209–10) – that to the north being the river Thames (Fig 1). The Victoria County History (Page 1908) notes that the village of Stone is 'well-watered' by the Thames and its tributaries, including a spring at Sedrup, some 1.5km to the south-east of the site.

The landscape of Aylesbury Vale is rich in resources attractive to past settlement. Historical exploitation of the region's limestone quarries for building stone is well attested, while the local calcareous clays are 'suitable for marl and the formation of building and boundary walls' (Buxton 2015, 40). River terraces provide gravel and building sand (*ibid.*), while timber, reeds and

fowl would have been available from the river margins and other habitats within easy reach of the current site. The chalk uplands of the Chiltern Hills, approximately 7km to the south-east have also been historically utilised for a variety of farming activities including open grazing (Rodén 1969).

Patterns of medieval settlement and economy would also have been shaped by the quality of local infrastructure, including the region's river network. Aylesbury and its riverine connections – via the Thame – are clearly depicted on the Gough Map of *c.* AD 1360 (<http://www.goughmap.org/map/>) while *The Parliamentary Gazetteer* of 1843 states that the river was navigable from the town of Thame. However, the river did not form part of England's [major] medieval transport network (Edwards 1987, fig 14.1; Unwin 1990, 145, fig 5.5) and its historical commercial importance to the site remains questionable. Nevertheless, effective transportation of goods would have been possible by road, connecting Stone to both local/regional market centres and the upper reaches of the Thames. The river Thames is navigable from Lechlade, while medieval accounts of Abingdon Abbey, some 32km to the south-west of Stone, document contemporary river traffic (Thacker 1914, 13).

Rural Settlement, Landscape and Land Use

The medieval site formed part of a rural nucleated settlement including two manors and [from the 12th century] limited church lands. While environmental determinism appears to underlie the majority of the economic evidence from the site, with access to different local environments and resources affecting the activities which took place there, other influences, including the 'political and economic factors of land-ownership' (Munby with Allen 2014, 255) are also apparent, with arable production appearing to reflect a demesne system. In the first instance, this was based within a clearly delineated series of ditched enclosures with good regional parallels. The enclosures, four of which included livestock pens, are thought to have represented part of an infield zone close to a large, possibly manorial farmstead or other centre of agricultural activity. The recovered animal bone assemblage demonstrates a clear dominance of sheep, which were exploited for a number of purposes, while associated finds include rumbler

bells and other farming paraphernalia.

The carbonised plant remains demonstrate a significant level of arable production in the local area, perhaps relating to production on the demesne lands of one of the medieval manors. Large-scale dumps of carbonised material representing predominantly cleaned wheat crops most likely relate to the kiln drying of bread wheat prior to milling. The concentration on a relatively pure wheat crop reflects a degree of status in the final product (high-quality wheaten bread), which is likely to have been destined for consumption by the occupants of the manor(s) and their visitors, or export to one of several local markets. High-status consumption is also hinted at by the occurrence of curlew and tench in the animal bone assemblage.

Weeds characteristic of heavy, fertile soils indicate the cultivation of the surrounding claylands and the frequent occurrence of pulses is probably indicative of a crop rotation system. There is some evidence of garden cultivation in the form of flax, although a wide range of other field and horticultural crops is likely to have been cultivated, for which evidence in the carbonised macrofossil assemblage is lacking.

The medieval enclosures appear to have been superseded by limestone quarrying, best represented in the south-western half of the excavated site (Fig 1). At least 34 possible quarries were identified, many of which were intercutting and may represent discrete episodes of extraction activity. The site overlies limestone of the Purbeck group which was extensively used for local building (Clark *et al* 2011, 1; Pevsner & Williamson 1994, 26). However, the general lack of surviving medieval stone buildings within the village might suggest that most were of more modest, timber construction. Beresford & St Joseph (1979, 254) note that medieval stone quarrying was inhibited in many areas of lowland England due to the great depth at which good quality building stone occurs. As a result, peasant houses were 'perforce' built of timber and wattle-and-daub (*ibid.*), as is highly likely in this instance. Better quality stone for grander structures, could have been imported from larger regional quarries such as Totternhoe, some 23km to the north-east (Curran 2005).

If not employed for building, local limestone may well have been used for the manufacture of quicklime or its less volatile form, slackened quicklime. The application of lime as a soil improver is a prac-

tice which became common from the late Middle Ages (Conyers 2006, 1034; Tschen-Emmons 2017, 50), while quicklime can also be used in the manufacture of mortar (Johnston 2011, 657). Slackened quicklime, produced through the addition of water, has applications in the tanning process and as whitewash (Tschen-Emmons 2017 49–50). Although medieval lime kilns are not recorded locally, a possible post-medieval lime kiln is recorded some 230m to the south of the site (after Finn 2015).

Material Culture and Society

The medieval pottery assemblage is of a relatively modest character, including few glazed or decorated sherds. However, the imported Oxford type and later Brill wares are quite well made, with the former representing a regional import, or possibly a more local copy of this industry. There is a strong bias towards mundane, limestone tempered fabrics – probably produced locally – and cooking pots are the most commonly occurring form. Frequent sooting and charcoal residue on cooking pots indicates an emphasis on domestic ‘kitchen’ waste.

The generally modest character of the recovered pottery is mirrored to some extent by the small finds assemblage, much of which comprises utilitarian domestic and agricultural items. However, a good range of dress accessories and other personal items were also recovered, in addition to several apparently high-status items, probably derived from one of the local manors or, possibly, the church. Two of these are fragments of decorated bone inlay, respectively from a box or casket and a stringed instrument such as a harp (Fig 6), while the third is a piece of lead pilgrim flask. The latter is thought to portray John Schorn and, as such, most probably derives from Saint John Schorn’s Holy Well at North Marston, a pilgrimage site some 10km distant. Additional markers of wealth include the bones of curlew and tench, thought to represent elements of high-status diet, and the remains of a merlin, the smallest of the British falcons and one associated with women during the medieval period (Cummins 1988; Oggins 2004). Together with the environmental evidence, which strongly suggests arable production geared towards the manufacture of high-quality wheaten bread, this scant but credible evidence of status-related consumption and displays of personal wealth provides a tantalising insight into the lives of the village’s medieval elite.

Chronology and Development of the Medieval Site

At some point during the medieval ‘occupation’ of the site there was a fundamental shift in land use, characterised by an abandonment of enclosures and the resultant opening up of the immediate landscape. While the enclosed site appears to have been used, at least to some extent, for the corraling of livestock, subsequent activity was focussed largely on the quarrying of limestone, most notably within the south-western half of the excavation. Pottery from the quarry pits suggests that this shift may have occurred around the mid-13th century, possibly as late as the early 14th century. However, the assemblage also includes earlier sherds, and was most probably introduced to the site from one or more areas of primary deposition, e.g. domestic middens. The quarry pits also yielded the greatest concentration of carbonised plant remains, notably from Pit Clusters 2, 9, 11 and 12, directly relating to high-intensity cereal processing and use in the near vicinity. Based on the excavated evidence it does not appear, however, that the site itself was under the plough.

The duration of quarrying activity at the site is difficult to quantify. There is little to suggest that it was a prolonged undertaking, although the scale and speed of extraction remains obscure. Nonetheless, the distinct clustering of quarry features may relate to discrete, possibly sequential episodes of quarrying. As previously stated, datable material from the fills of the pits suggests a possible cessation of this activity at some point around the mid-13th to early 14th centuries, after which time it is likely that the site became relatively unenclosed agricultural land, similar to its post-medieval use (Aylesbury Vale District Council 2013, 9).

Catalysts of Change

Developments in land use at the site may have been brought about by a number of causal factors. Overarching influences might include the worsening climate from c. 1300 and subsequent population decline due to the Black Death. The latest dating evidence from the site straddles the interface between the *Medieval Warm Period* (dating c. AD 950–1250) and the *Little Ice Age* (c. AD 1300–1850), with worsening conditions from this time resulting in cooler, wetter summers and a restricted growing season (Fagan 2000; Grove 2004, 419, table 15.3; Mann *et al* 2009). Indeed, the *Nonarum Inquisi-*

tiones of 1342 records that ‘...land lay untilled in scores of parishes in...Buckinghamshire because of declining village populations, the impoverishment of the tenants, a shortage of seed corn, and inadequate numbers of plough animals’ (after Campbell 1990, 97). Subsequent social upheaval and population decline linked to the arrival of the Black Death in 1348 (Gottfried 1985, 58; Platt 1997; Ziegler 1982, 122) also led to the abandonment and/or reordering of the rural landscape around villages, and has been discussed as the possible cause of economic change at a number of medieval sites (e.g. Mustchin *et al* 2015; Newton & Sparrow 2009).

Local economic pressures associated with landscape change include the increasing economic importance of sheep grazing, which resulted in widespread settlement depopulation from the later medieval period, evidence for which can be found throughout Aylesbury Vale. The nearby medieval settlement of Burston, some 8.6km to the north-east of Stone, was turned over entirely to sheep grazing in 1488 when John Swafield, a freeholder, evicted 60 tenants (Beresford & St Joseph 1979, 123). Similarly depopulated settlements include Cottersloe, Creslow, Fleet Marston and Littlecote (*ibid.*). Unlike these settlements, however, the village of Stone was never completely abandoned. It is nonetheless possible that the increasing economic attractiveness of wool from the later medieval period contributed to a change in land use and organisation around the fringes of the village.

CONCLUSIONS

The excavation results from Bishopstone Road, Stone provide a valuable insight into the economic development of a medieval village edge site in Buckinghamshire, as well as providing some limited insight into the lives of the contemporary population. In the first instance, the site comprised a series of ditched enclosures – perhaps an area of infield activities close to a manorial farm – associated with livestock husbandry. These were latterly abandoned in favour of a more open agricultural landscape including a number of limestone quarries. While a shift in local land use might have been influenced by a number of causal factors, including the onset of the Little Ice Age and the arrival of the Black Death, no firm conclusions can be drawn in this instance. However, unlike so many of its

neighbours the village of Stone was never subject to complete depopulation.

Following the abandonment of the medieval enclosures, cereal agriculture continued to play a major part in the site’s economy. The focus on a fully cleaned bread wheat product with only limited occurrences of other cereal crops suggests a direct link to the milling of flour, the dietary requirements of one of the local manors and, possibly, the production of surpluses for export. The material from Stone and its likely association with demesne agricultural production represents an important archaeobotanical assemblage from Buckinghamshire. The potential to compare and contrast this material with other agricultural sites in the region, as well as urban consumption centres is significant and will add to a broader understanding of medieval agriculture, diet and economy in southern England.

Although not low-status *per se*, the substantial medieval pottery assemblage is dominated by cooking pots of a relatively modest quality. This is potentially interesting given the clear focus of the site’s arable economy towards the manufacture of high quality wheaten bread and other potential indicators of status within the finds and animal bone assemblages. However, it is possible that pottery played only a minor role in terms of conspicuous wealth. Alternatively, higher status vessels may have been disposed of elsewhere around the village.

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