# Ceramics and spatial analysis at the early Royal Manor of Leighton, alias La Grava

A reassessment of possible middle Saxon pottery and its affect on site dating

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This paper supplements the main site publication in CBA Research Report 167 (Baker 2013), drawing upon its Digital Supplement which contains Anna Slowikowski's [2013] full report. It discusses two related issues for the early history of the site: the dating of middle Saxon ceramic fabrics and the mathematical basis for site planning, using material that either could not be included in the main report or postdates it. Relevant references from the main report not re-published here are indicated in square brackets, e.g. [Baker 2013, fig.1.01].

#### The site

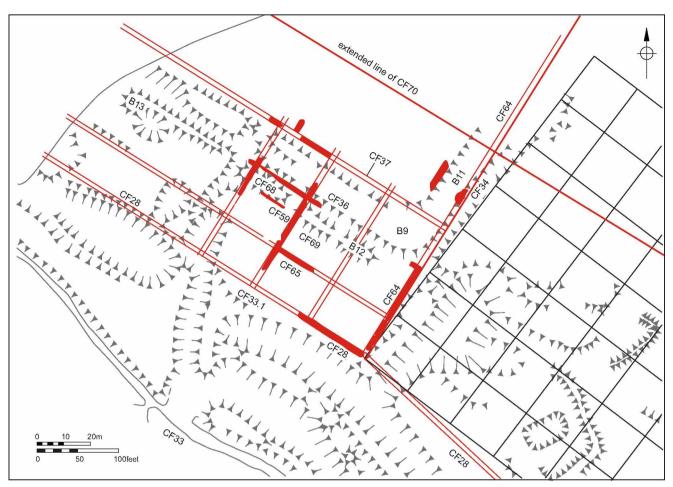
La Grava is the name given to a royal estate at Domesday, later granted to the Abbey of Fontevrault in Anjou. The settlement was set in a large block of royal land adjacent to Watling Street to the north and the River Ouzel to the south [Baker 2013, 16, fig.1.12]. There is evidence for a planned Romano-British layout and wide trading connections in the Anglo-Saxon period (Fig. 1). In middle Saxon times it had strong connections with the minster at Wing (Buckinghamshire) as one of two parts of a once much larger Saxon royal estate straddling what is now the county boundary. At times La Grava was within the Danelaw frontier (on the River Ouzel rather than Watling Street as generally thought), probably absorbed during the later 9th and early 10th centuries. An important treaty of AD 906 between Edward the Elder and Guthrum was signed only 500m away at Yttingaford where the ancient route to Wing, Thiodweg (God's Way), crossed the estate and the River Ouzel, at its southern border [Baker 2013, 48, fig.3.04]; for the most part traces of Danish and middle Saxon occupation are equally invisible (Edgeworth 2007, 96).

### Ceramic analysis

Artefactual evidence generally confirmed the relative dating of broad period divisions but seldom provided absolute anchors due to the uncertain limits of duration for many ceramic fabric types and long date ranges for other artefacts, together with familiar problems of residuality and intrusion. Differences in manorial and other site assemblages led Anna to believe there was more than one acquisition strategy employed in the locality (Slowikowski 2013, Section 58, 15). For instance, there was a dearth of shell tempered fabrics, but large quantities of sandy wares: the 'potter supplying [La Grava] ... need not have been the local person, but possibly one with tenurial or other connections which were more important than distance'; large quantities could have been supplied direct from the manufacturer in order to provide for influxes of great numbers of visitors, including royalty, from time to time. 'Small, lower-status settlements like [nearby] Stanbridge and Chelmscote would have got their pottery from the local potter or from the local market, probably in relatively small quantities.' Investigations at Stanbridge (gifted away from the main manor of Leighton in AD 1118) support this theory (Slowikowski 2010, 405-420).

Anna noted that two shell-tempered local fabrics, not recognised at La Grava, A11 and A12 (dated 9th to 10th century) gave way to fabrics B1 and B4, and 'some overlap is to be expected'. St Neots-ware pottery (B1) has been taken to indicate a late 10th-century date, though it appears in the late 11th to 12th century at La Grava, later than in Bedford. At Bedford Castle (probably founded in the mid-late 11th century) B1 occurred in both pre-Conquest and 12th-century contexts (in the original Bedfordshire Pottery

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**Figure 1.** The Romano-British planned site; earthworks survived best in the western part of the site. Ditches CF64 and CF70 are part of this early alignment.

Type Series, (BPTS): Baker and Hassall 1979), while it was particularly abundant during the 10th- and 11th-century pre-Conquest contexts at St Johns Street, Bedford (Hassall 1974). Stratton (Biggleswade, Albion Archaeology forthcoming) produced groups of middle Saxon (MS) sunken-floored-buildings and it has been suggested that the great upsurge of shelly wares could be associated with a Danish presence (Edgeworth 2007, 93).

The predominance of shelly wares in the north of the county and sandy wares in the south is as yet poorly understood and barely reflected in the County Type Series (BPTS). A similar north-south divide seems apparent in Buckinghamshire, emphasizing the need for more work in both counties to clarify the reasons for this apparent segregation. Given that the Leighton estate was probably the northern part of a much larger one extending well into Buckinghamshire, it would have been useful if the La Grava ceramics analysis could fully embrace Buckinghamshire material.

At La Grava pottery distribution indicated substantial pre-medieval occupation was largely obliterated by site clearance and landscaping in the 12th century, with the tantalising prospect that some might be middle Saxon. Taking away most rubbish

completely off site almost certainly removed fragile traces of timber structures – aggravated by the apparent custom of spreading rubbish, ditch clearings, manure, soiled bedding and surplus fodder over courtyards during the winter to break down, then scraping it up to fertilise fields (Lamond 1890). Figures [Baker 2013, 26, 29, figs. 2.03, 2.06] show the effect upon the whole southern court - copious Anglo-Saxon and Romano-British pottery but virtually no structures. Altogether Anna recorded 23,883 vessels, represented by 38,940 sherds, of which 427 were Romano-British and 1,634 Anglo-Saxon. The most difficult dating problems affected Period 3 (Tables 1 and 2). Allocation of some candidate buildings to the middle Saxon period lacked supporting finds evidence until other Bedfordshire sites, including the extensive excavations at Stratton, demonstrated that A16 (Mixed quartz) pottery, the most prolific Saxon ware, continued well into the middle Saxon period rather than ceasing in c. AD 600 (A. Slowikowski, pers. comm.) [Baker 2013, 9, fig.1.07]. The same Anglo-Saxon fabrics were recorded near Ampthill, (Bedfordshire) by Luke et al. (2010), and at Meppershall (Bedfordshire) (Wilson and Zeepvat 2010). This insight came too late (and it would have been too expensive) to 're-cast' the highly

Total. Total Total Total Period Period Period Period vessels vessels vessels vessels 1 2 3 4 58 377 588 112 No No No No **Fabric** % **Fabric** % **Fabric** % Fabric % vessels vessels vessels vessels 3 193 100 A165.2 A1643 38.4 A16 51.2 A16 17 A19 0 0 A19 7 6.2 A19 18.8 5 A19 10 1.7 C60 8 13.7 C60 17 15 C60 39 10.3 C60 305 52

**Table 1.** Data for three fabrics from Slowikowski [2013, table 57.01] in the Digital Supplement giving the number of vessels recovered from Periods 1 to 4.

complex main report and digital supplement other than to insert *caveats* where they were most needed. Readers can find Anna's extensive ceramic reports online (Slowikowski 2013: Digital Sections 51–59) as well as data used in the hard copy (Baker 2013).

Anna's table (Slowikowski 2013, table 57.01) gives 58 vessels from prehistoric **Period 1**, of which *A16* had only three; ubiquitous *C60* (Hertfordshire-type greyware) already accounted for 13.7% or 8 vessels (Table 1) and continued to distort the ceramics profile well into the late medieval and post-medieval periods: notably there is a built-in bias towards dating since where a context spans more than one phase the latest phase was taken.

Romano-British **Period 2** had 112 vessels; 38.4% of these, 43 vessels were of *A16*, and 6.2% or 7 vessels of *A19* (Quartz and organic); these 50 *A* wares were more than three times *C60*.

In Period 3, 377 vessels were recovered; 51.2% or 193 vessels were A16, A19 5%, 5 vessels; this was over

five times the amount of C60.

**Period 4** saw 588 vessels recovered. At this point A-wares give way to dominant C60 vessels, since the mid 11th century appears to be the time when C60 properly starts. Even so, 17% or 100 vessels were A16 which appears to be a larger number than might be expected as residual, on a site with few pits or other inter-cutting features.

This raised the possibility that some structural evidence of Period 4 should be dated earlier, and equally, some Period 3 contexts could have an extended life-span, bridging the gap between the two (Tables 2A and B). This arose from detailed data in the light of the Flixborough report (Loveluck 2007) and Anna Slowikowski's later findings at La Grava [Baker 2013, 363–4, table 11.04].

In the three earliest periods only a small proportion of *C60* was recovered, and was of course intrusive. Perhaps more significant for this discussion, the comparatively small Period 4 pottery assemblage

**Table 2A.** Part of the original phasing as derived mainly by A. Harris and A. Slowikowski [Baker 2013, 363–4, table 11.04].

A									
	A - Original phasing used for pottery report								
	2	3	4	5.1					
	Romano- British	6th to mid 8th century	? Mid 11th century	Early-mid 12th to late 12th century					

**Table 2B.** The same phasing sequence revised and extended by Baker.

В								
	B – sub-divided and extended phasing							
2	3.1	3.2	3.3	4.1	4.2	4.3	5.1	
Romano- British	Earlier 6th century	Later 6th mid 8th century	? Middle Saxon	? Mid 11th century	Late 11th century	Early 12th century	Early-mid 12th to late 12th century	

was not initially subdivided into its three structural phases, nor Period 3 extended, thus making it difficult to distinguish amounts of different wares appearing at different stages in areas of the site throughout that time (Tables 2 A and B and 3). This work was done later by the present writer.

Despite this drawback, general trends had been established; site and post-excavation records, including the artefactual database, enabled recovery of some significant detail subsequently. Period 4 did not produce large quantities of finds, but 211 sherds were Anglo-Saxon wares, half of which were A16. This seems too large a proportion to have found its way into later contexts entirely through residuality processes in a stripped zone; its revised lifespan and presence in this quantity casts doubt on whether it all belongs to the early middle Saxon period. Slightly earlier than C60, fabrics C59A and C59B (Coarse and Fine sandy) contributed only 50 (9%) sherds and 8.6% of vessels (Tables 3 and 4) [Baker 2013, 74, 80, table 3.28, fig. 4.03]. The number of C59 wares is tiny compared with the omnipresent C60. This pottery was identified by Brine within the primary motte at nearby Chalgrave (Brine 1988). It was therefore suggested that C60 should be dated to the 11th century, phase 4.1, the earliest part of its currently allotted life.

Maxey ware overlaps with coarse St Neots ware in the 9th century, suggesting a possible development from one to the other. No Maxey, Thetford or Ipswich wares were recognised from the unusually complete and extensive excavation at La Grava, although an isolated sherd of Ipswich ware had been found within the manor at nearby Billington [Baker 2013, 16, fig. 1.12] (Hudspith 2004). Perhaps this should not be surprising since the 1985-86 excavations at Walton in Buckinghamshire produced only three sherds of Ipswich ware out of 986 possibly middle Saxon sherds. and middle Saxon sites in Essex, Hertfordshire and Cambridgeshire identified by the presence of Ipswich ware, are rare (Wade 1997). Evans' report (1989, 167-178) on Walton Street, Aylesbury, Buckinghamshire, itemised only five objects, three of which were slag fragments, with one fragmentary antler comb and a portion of glass bead. This site produced only 7.7% of St Neots ware in the overall assemblage, a ratio not dissimilar to that at La Grava (Stone 2009, 20, 21, 25). Maxey type wares were recorded only in the north of Buckinghamshire, at Chicheley, about 20 miles north of La Grava (Farley 1980), Great Linford (Mynard 1992) and apparently at Wolverton. Those excavations, like La Grava but unlike Flixborough, did not produce copious numbers of recognisable Anglo-Saxon artefacts; Holly Duncan (Baker 2013, 25) reported from La Grava 27 Roman and Saxon artefacts, mostly residual.

Recognising, and then dating, middle Saxon

**Table 3.** Selected pottery fabrics presented as the original and revised date ranges. Since most *A* wares were considered to be early middle Saxon they were taken to be residual in Period 4 contexts.

	Selected fabrics: original time spans at La Grava (after Slowikowski 2013)							
Fabric Type		Date range	Revised date range	Periods/phases revision				
A22	now F01A	Early Iron Age ?	Mid-late Iron Age	2				
A17	now F06B	Romano-British		2				
RB	Romano-British	1st-4th century	Late 4th-early 5th century	2				
A01	Organic	7th-?mid 8th century	6th-9th century >>> middle Saxon	3 .2, 3.3, 4.1				
A16	Mixed quartz (was A04)	?6th-?7th century	6th-9th century >>> middle Saxon	3.2, 3.3, 4.1				
A18	Fine quartz (was A02)	?6th-?7th century	7th-8th century >>> middle Saxon	3.2, 3.3, 4.1				
A19	Quartz and organic	?6th-?7th century	7th-8th century >>> middle Saxon	3.2, 3.3, 4.1				
A23	Sandstone	?6th-?7th century	6th-7th-8th century >>>	3.1, 3.2				
B01	St Neots Type	Late 11th-12th century (S14, 9-12)	?Middle Saxon, late 9th-11th century >>>>	4.2, 5.2				
C59A	Coarse sandy	Late 11th-late 12th century	Mid 11th century >>>>	4.1, 5.1				
C59B	Fine sandy	Late 11th-mid 12th century	Mid 11th century >>>>	4.1, 5.1				
C60	Hertfordshire-type greyware	Early 12th-14th century	Mid 11th century >>>>	4.1, 5.1 >>>>				

**Table 4.** Time spans for selected pottery fabrics by Period and phase (by percentage). Dark grey shows their original dating while pale grey indicates later revisions including sub-divisions of periods.

	Tir	ne-spans for	selected po	ttery from l	La Grava (a	fter Slowi	kowski 201	(3) and late	r revisions		
		Period 3 extended		Period 4 sub-divided							
Original Periods & Phases		P1	P2	Ph3.1	Ph3.2	Ph3.3	Ph4.1	Ph4.2	Ph4.3	Ph5.1E	Ph5.1L
Fabric	Original date	Prehistoric	Romano- British	Early Anglo- Saxon 6th century	Anglo- Saxon 6th- 8th century	Middle Saxon	Mid 11th century	Late 11th century	Early 12th century	Early/ mid 12th- 12th century	Mid-late 12th century
Prehistoric		77.7	17	10.6			9			0.3	
Romano- British	<<1st- 4th century		13.9	4.5			1.3			0.4	
A19	7th-8th century		6.2	5			1.7			0.6	
A16	6th-8th century	5.2	38.4	51.2	>>	>>	17			1.5	
A01	6th- early 7th century			3.4	>>	>>	0.7			0.6	
A18	6th- early 9th century		2	9.3	>>	>>	4.4			0.6	
A23	6th- early 7th century			0.3							
C02	11th- 13th century			0.3			0.2				
C59A	Late 11th-late 12th century		0.9	0.8			6.6	<<	<<	7.3	
C59B	Late 11th-mid 12th century	1.7	3.5	1.3			2	<<	<<	3.7	
C60	Early 12th- 14th century	13.7	15	10.3			52	>>	>>	79.1	
B01	Late 11th- 12th century					}	?	?	?	0.7	
C63	12th century			0.3						0.7	

pottery are major issues when fabrics can be longlived like A16, demonstrating broad continuity with earlier ones. Distinguishing early-middle from middle Anglo-Saxon pottery is a continuing problem (Mellor 1994, 36-37). Edgeworth (2007, 89) believes this may extend to both Iron Age and Romano-British coarse wares, and Vince found a similar difficulty with some prehistoric and Anglo-Saxon wares. Pottery at Mucking, sorted into separate petrological types, was shown to have joining sherds (Hamerow 1993, 27; Blinkhorn 2000, 118). Liddle (1982) cited the 'inability to identify pottery of the middle Saxon period despite considerable effort.' Some middle Saxon finds from Lincolnshire were originally thought to be Iron Age. Bedfordshire has pottery with both Iron Age and Anglo-Saxon characteristics from Thurleigh Castle (Baker, Devereux and Simco et al. unpublished). A general time-span of early-to-middle Saxon has to be the default dating for lack of association with otherwise datable objects. Work needs to be done on ubiquitous regional types, such as quartz-tempered wares, to see whether this is due to trade, or to some form of uniform but low-level domestic manufacture across regions. Then there is the possibility that some middle Saxon sites may have been in effect aceramic; certainly their settlements are hard to find, and there is a marked increase in ceramics of the late Anglo-Saxons (Pestell, 2004). Certain types of settlement may not be as discernible as others, especially sites lower down the social scale, leaving us with those that bias research toward wealthier, higher status activity.

Table 4 shows that A16 is already at 38.4% in Period 2, perhaps reflecting the general difficulty of distinguishing Iron Age/Romano-British fabrics from Saxon. The 51.2% recognised in Period 3 takes no account of being spread over three phases. The relatively small proportion of 17% in Period 4 is significant but takes no account of re-adjusted context dating moving the ceramics and buildings from Period 4 to a putative middle Saxon phase 3.3. Nevertheless, that proportion of 17% is nearly four times the quantities of the second largest 'A' ware 'A18' (4.4%); it is also second highest in Period 3 as a whole. A01, A16, A18 and A19 were listed as 'Saxon' at Wilshamsted (Wells 2010b, Appendix 1: BPTS, 233); but A01, A16, A18, A19 and A23 from that Phase 3 were dated c. AD 450-850 (ibid, 201-202). Fabric B01 is dated to the 9th to 11th century at Wilstead (Wells 2010a, 163).

All 'A'-wares from La Grava had been dated to between the 6th century and probably mid-8th century rather than later. Anna subsequently intimated that three La Grava fabrics (A01, A16 and A18) were probably dated too early or within a too-restrictive time span. It is not suggested that all A16 sherds were middle rather than early-middle Saxon, but had any of these later dates been available during structural analysis they would have greatly influenced the phasing of some of the early buildings, perhaps

constructed earlier than the date ascribed to Period 4 (Table 4).

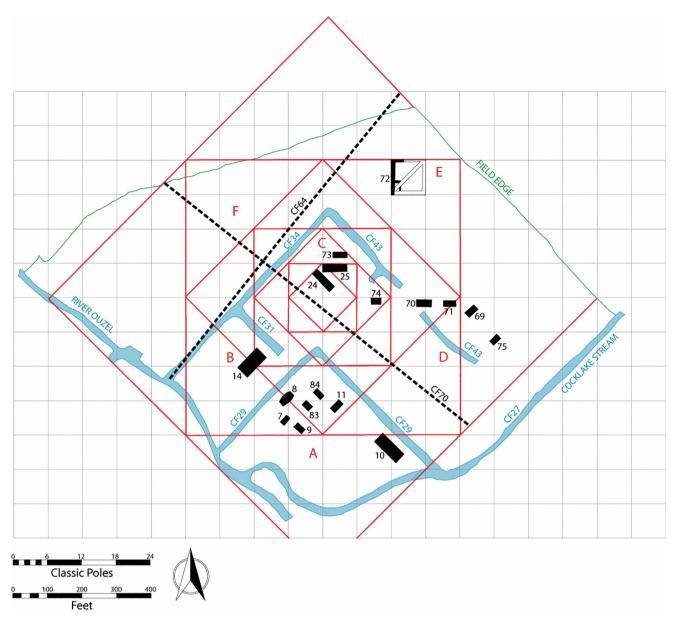
In re-assessing early-appearing fabrics, C02 (Red quartz-tempered) is anomalous in that it appears most strongly in Period 3, albeit in tiny quantities. C59A and C59B are both shown strongly in early Phase 5.1, yet C59A is only 0.7% lower in Period 4, raising the issue of whether the real start date should be somewhere in Period 4 [Baker 2013, 74, table 3.28]. C60 is dominant – omnipresent –even reaching 13.7% intrusive in Period 1; yet it was already at 52% in Period 4 when it probably started. This seems to be supported by pottery from nearby Chalgrave cited above (Brine 1988) [Baker 2013, 53, fig.3.07] which recovered C59B and C60 in the primary construction of an early motte just the other side of Watling Street, presumably scraped up from the vicinity. The equivalent La Grava phases were 4.1 or 4.2 (mid-late 11th century: Table 4).

The possibility that middle Saxon occupation continued beyond the 6th to 8th centuries has become far more credible due to recent work in Bedfordshire and the wider region. Middle Saxon A-wares have been identified at several Bedfordshire sites, such as Wootton by Abrams et al. (2005); Great Barford (Abrams 2005); Willington (Keir 2006, 17); Westoning (Keir 2010); and Leighton Buzzard, Linslade 5th to 9th-century occupation and pottery (Foard-Colby 2009). Fabrics A16 and A18 were dated to AD 450-850 at Hill Field, Wilshamstead (Wells 2010b, 201), and A18 to early-mid Saxon in Bedford. Fabric B01 was dated to 9th to 11th centuries at Shefford (Wells 2010a, 163). At Hinxton, Cambridgeshire, (Slowikowski 2002) quantities of A01, A16 and A18 were dated to c. 400–850.

Before this extension of the ceramic dating structure, types that may have been 11th century or earlier had been suspected. There was a related difficulty, the lack of positively identifiable finds from the mid/late Saxon and early Norman periods that could intrinsically be closely dated (but see Walton above). The finds database for La Grava lists over 200 items that could date after AD 800 and before AD 1200; 118 have an earliest date prior to AD 1100, but an unknown percentage must belong to a later phase. Publication of the site at Flixborough with its multitude of Anglo-Saxon buildings facilitated new comparisons. The conclusion must be that there was probably some degree of continuity at La Grava from the 7th or 8th century onwards; the origins and development of the Royal Manor of Leighton stretched further back into Anglo-Saxon times than had originally been envisaged.

## Grid planning – spatial analysis

'Plato's Square' or 'rotating square' appears to be the key to the whole of the second, post Romano-British, stage of planning to the eastern part of the



**Figure 2.** Grid plan using the Classic rod pole and perch in rotated squares. Each grey square measures 6 poles or 6 x 5.029m.

site; Structure 72 seems to have a pivotal role (Fig. 2) [Baker 2013, 334, fig.10.05]. Spatial analysis has helped with reconstructing incomplete buildings and with site planning/phasing. Not seeking to be one of the lunatic fringe seeing patterns where there are none, at an early stage I discussed my evidence for grid planning with Peter Kidson, who immediately re-assured me. The metrology of La Grava is crucial; measurements used in the overall planning are early according to Kidson (pers. comm.) because they are based on the classic 5.029m (16½ ft, 5.5 yds) rod, pole or perch, from Roman pertica, French perche or (measuring) stick.

The *Statutum de Admensuratione* assigned to Edward I lays down that:

'the Iron Yard of our Lord the King containeth three feet and no more ... a foot ought to contain

12 inches ... to wit the thirty-sixth part of this yard rightly measured, maketh an inch ... and five yards and a half make one perch, that is sixteen feet and a half, measured by the aforesaid Iron Yard ...' (Kidson 1990, 14)

and it could have been at least a royal architect's measure in the time of Henry I (AD 1100–1135). With regard to the classic pole:

There is no doubt about the reading ... And it is therefore particularly gratifying that it is the one which can actually be identified. It is just 3mm more than the English perch – a negligible difference ... Most would conclude, as I do, that the English perch and this Carolingian pertica (Codex Gudianus 9th century AD) were one and the same measure, and that before it became 16½

English feet, it was reckoned as 17 Roman feet.' (Kidson 1990, 25, 85)

The length of the La Grava pole and its date are issues of some debate since at that time measurements were not standardised. There is further support for the 5.03m pole being early: in his British Archaeological Association lecture of November 2009 (The Reginald Taylor and Lord Fletcher Prize Essay) H. Sunley (2009) noted that Peter Huggins and Warwick Rodwell had observed a recurrent measure of 5.03m between post centres in the grid plans of Anglo-Saxon buildings. Eric Fernie noted that the 5.03m perch equals 17 Roman pes and was evident in the 9th century; 1/15 pole or 335.3mm formed the Anglo-Saxon manupes (hand-foot). The now obsolete surveyors' imperial measurements were: 16.5ft = 1 pole; 4 poles = 66ft = 1 chain; 80 chains = 1 mile. From this it would appear that La Grava's unit of measurement sits happily in Anglo-Saxon, middle Saxon and Anglo-Norman contexts.

#### Planned enclosures (ditches = cut features: CF)

Areas enclosed by water-courses (closes) are labelled A to F. The Romano-British phase of grid planning was to the west of CF34 (Close F), with clear surviving earthworks [Baker 2013, 3, fig. 1.01]. It was not completely excavated. This planning may once have covered the eastern part of the site also, since CF70 was clearly related to the Romano-British layout (Figs 1 and 2), perpendicular to the earlier grid, between CF29 and CF43. Similarly Romano-British CF64 began at the same junction with CF33 as the later CF34 (Table 4). CF34 was probably endeavouring to re-instate the former grid but with a surveying error that diverged it by several degrees. The groups of early buildings re-assessed to test whether or not they might be middle Saxon in date are shown in Table 5. Sunken floored buildings S1, S2 and S3 were probably a later insertion into Close F (S. Oosthuizen, pers. comm.). The level part of Close F had been ploughed out in the 1940s. A case can be made that extant western earthworks from the Romano-British period at La Grava were re-occupied in early-middle Anglo-Saxon, then sustained in the middle Saxon and Saxo-Norman periods, and a pattern of ditches established further

Figure 2 shows the shape of the eastern part of the site with the planned limits based on a square; the north-east side of the largest square was still operational as the field edge. The southern side skirts the major natural watercourses CF27 and CF33, with the south-east point mirroring the curve of the stream. This is then used as the 'Rotating Square', a device known from classical times for easily reducing or enlarging areas. The plan is self-explicit in that the measurements within the reducing squares are based on a series of grids, each 6 poles by 6 poles (6

x = 5.029 m = 30.174 m), the dimensions of Structure 72. The man-made watercourses and buildings fit the grid pattern too well to be coincidental. Structure 72, possibly an enclosure in Close E, was independently reconstructed as having sides of 29 to 30m [Baker 2013, 344, fig.10.05]. It coincides with the first square rotation at 45° and one extended line coincides with the third rotation, eventually crossing CF29 to cut Structure 10. The other side hits the junction between CF29 and the natural watercourse CF27 between Closes A and D. Structure 72 lay beneath the remains of medieval ridge and furrow, damaged by a fruitless attempt to plough stony land during World War II. No finds were recovered, but single and double drystone walls bonded with earth were recorded, together with areas of gravel thought to be floor surfaces.

Close A was within the bend of the River Ouzel CF33 and the Cocklake Stream CF27. Restricted by right-angled CF29 it contained Structures 2, 7, 8, 11, 83 and 84 and a much larger building Structure 10. These may belong to an interim phase between Periods 3 and 4. Predating them were the truncated remains of timber buildings Structures 98, 99, 100 and 105 [Baker 2013, 29, fig.2.06]. An ostensibly random distribution of 258 sherds of Romano-British and 1,101 of Anglo-Saxon pottery were recorded within the angle of CF29, mostly not attributable to specific buildings [Baker 2013, 26, fig.2.03].

The smallest area Close B contained a single trench-built hall Structure 14, lying parallel to CF34 and CF29. Remnants of two buildings, Structures 12 and 97 lay in a gap between Closes B and C. Close C contained Structures 24, 25 and 73, perpendicular to, or at 45° from, the grid, enclosed within CF31, CF34 and CF43.

Structures 69, 70, 71, 75 were beyond CF43 in Close E; Structure 74 was in Close D; Structure 73 was in Close C, parallel to Structure 25. At a similar angle were three fragmentary buildings Structures 70, 71 and 74 running in a diagonal line through an intentional gap in CF43. Structures 69 and 75 lay parallel to the main grid. They were all integral to the grid pattern so may be contemporary. If they are middle Saxon they are unexplained oddities since Structures 70, 72, 73 and 75 had traces of stone footings, drystone or earth-bonded, with organic roofs, their footprints marked by gravel floors. Structure 71 was a timber building, possibly with walls on sill beams and a gravel floor; Structure 69 had footings bonded with clay loam, and it may be anomalous within the group. Uncertainty surrounds building Structures 69– 75 (reconstructed using spatial analysis) [Baker 2013, 334, fig.10.05], and it is possible that they belong to the early to mid-12th century though adhering to the pattern. Structures 70, 71, 69 and 75 lay beyond CF43 but within a later extension to the close system formed by CF38 [Baker 2013, 3, fig.1.01]. Most had drystone footings and organic roofs. They may well represent more than one group of buildings dating later than the Romano-British layout to the west, but pre-dating the main structures of Phase 4.3 onwards; these are roughly grouped in Fig. 2.

**Table 5.** Groups of early buildings by Close location, re-assessed to test whether or not they might be middle Saxon.

Group	Location	Structures
1	Close A	4, 7, 8, 9, 10, 11, 82, 83, 84
2	Close B	Hall 14
3	Close B/C	97 then 12
4	Close C	5, 6, 87, 91
5	Close C	24, 25; ?73
6	Closes C /D/E	71, 74
7	Close C/D/E	69, 70, 75
8	Close E	72
9	Close F	1, 2, 3, 89, 101
Ditches		CF29, CF34, CF64

If there are differences in time as suspected, they all nevertheless adhere to the overall plan; the finds evidence was reviewed in conjunction with structural evidence in case it could elucidate the dilemma. A number of buildings were constructed on the same footprint. The eastern part of Close D was mainly quarried away.

## A combined re-appraisal of structural and finds evidence

(Based on pottery analysis by Anna Slowikowski)

Structures and groups of structures are presented in alphabetical Close order; revised phasing given. All Flixborough references are to Loveluck (2007).

#### Structure 7 (Phase 4.2-L5.1), Close A

Timber Structure 7: cut into alluvial deposits, dated to the late 11th century because of the preponderance of *C60*, *C59A* and *C59B*. These did not appear until Phase 4.2. Structure 7 had been extended to the west, the hearth renewed and major posts replaced before demolition to make way for Structure 20. Structure 7 was a long-lived, much altered building possibly surviving well into the 12th century [Baker 2013, 68, 70, 78, figs 3.21, 3.22, 4.01]

Ground surface into which the original posts were cut: 1 x A01, 1 x A19, 1 x C60

**4.2 Construction:**  $1 \times A01$ ,  $1 \times A16$ ,  $1 \times C60$ 

Associated: 10 x Romano-British, 19 x Anglo-Saxon

**4.2–5.1:** 5 x C59A, 1 x C59B

**L5.1 Destruction:** 30 x C60 backfill of gully, 1 x B05, 1 x C05

The miniscule amount of the dominant *C60* in the construction and occupation phases of the building must be significant; it otherwise appears only at destruction

Building Parallels: North Elmham 'Building T' late 11th century (Wade-Martins 1980); North Elmham 'Building AD', 11th century (Wade-Martins 1980); West Stow had several houses of almost identical size (West 1985); Flixborough 'Building 16', 7th century; Flixborough 'Building 21' late 7th century to mid 8th century; buildings of mid 8th to 9th century were repaired or showed repeated re-building.

A 7th- or 8th-century date may be too early; the building was likely to have been constructed between Period 3 and the start of Period 4, perhaps in the 10th or 11th century. It underwent final demolition in about the mid 12th century [Baker 2013, 66, 68, figs 3.18, 3.20, 3.21].

Structures 4, 98, 99, 100, 105 (Phase ?3.1–3.3), Close A [Baker 2013, 25–6, 29, 36, figs 2.02–03, 2.06, 2.09] 258 x Romano-British; 1101 x Anglo-Saxon

Structures 98, 99, 100, 105 truncated clusters of stake holes and post pits

174 x Romano-British, 392 x Anglo-Saxon, 3 x medieval intrusive

**Structure 4**: sunken featured house (SFH) was cut into alluvial deposits close to CF27

Occupation: 34 x Romano-British, 116 x Anglo-Saxon of which 80% were A16, 10 x intrusive medieval

Associated: 33 x Romano-British, 364 x Anglo-Saxon, of which 82% were A16

It is probable that Structure 4 belonged to the early middle Saxon period. There were similar features in Northampton dating to the 10th century. The remainder could belong to Period 2 and/or phase 3.1.

**Structures 8 and 88** (Phase 3.3–4.1 or 4.2), **Close A** [Baker 2013, 64, fig. 3.16]

Incomplete trench-built structure(s) with bowed sides; large internal posts and slight vertical posts outside. Interpreted as 2 consecutive buildings; John Blair (pers. comm. 2015) suggested that Structures 8 and 88 are a single building with slight external vertical posts supporting a veranda like Brandon (Northants).

Contemporary yard surface: 1 x A16, 1 x A18

Sealing the remnants of the building:  $1 \times A01$ ,  $2 \times A19$ ,  $4 \times A16$ ,  $4 \times A18$ ,  $2 \times C60$ 

Post-dating:  $1 \times A19$ ,  $1 \times A16$ ,  $3 \times C60$ 

**Building Parallels:** Structure 8/88 had possible Scandinavian characteristics.

North Elmham 'House T' and 'House AJ' mid 11th to early 12th century were allocated to Period IV, late

11th century. 'Building A' and incomplete 'Building AO' to the mid 11th century (Wade-Martins 1980).

Both Structures 8/88 probably predated Structure 7, now thought to belong to the late 10th or early 11th century. La Grava was periodically on the Scandinavian side of the Danelaw in the 10th century. The building(s) may belong to the very start of Period 4 or slightly earlier, possibly late middle Saxon.

**Structure 9** (Phase ?3.3-L5.1), **Close A** [Baker 2013, 58, fig. 3.10]

Structure 9 was cut into Periods 2 and 3 levels; likely to have been constructed before *c*. mid 11th century. Slight, post-built with diagonal fence, severely truncated by 12th-century landscaping:

**Phase 3.2:** 9 x Romano-British and earlier from the surface into which the posts of the building were cut,  $2 \times A16$ 

**Period 4:** 56 x Romano-British and earlier; 67 x Anglo-Saxon of which 44 (66%) were *A16* 

General association: 170 sherds; 57 x prehistoric (34%), 19 x Romano-British, 79 x Anglo-Saxon (47%) of which 56 x A16 (71%), 15 x intrusive

Pierced weight in Niedermendig lava from the Rhineland; decorated bone handle close to Structure 9, parallels at Winchester dated to the 11th to 12th century

Building Parallels: Flixborough similar but smaller buildings are dated to the 7th to mid 8th century (Loveluck 2007); North Elmham 'Building AN', mid 11th century with diagonal fence line (Wade-Martins 1980).

The huilding was associated with quantities of Anglo-Saxon and earlier wares, mainly A16. It seems likely that Structure 9 may belong to the latter part of the middle Saxon period. There was no C60 present.

**Structures 10** (?Phase 3.3-L5.1) [Baker 2013, 65, fig. 3.17] and **40** (Phase 5.3-5.6), **Close A** 

Structure 10: large, complex timber structure, built on a sand island used in the Mesolithic period for flint knapping.

**Structure 40:** succeeded Structure 10; slight remains of a timber building on post-pads and dwarf stone walls; use could have contaminated earlier contexts

Contexts probably between Structures 10, 40: 1 x Romano-British, 13 x A16, 1 x C60

Structure 40 Occupation: (22 sherds of which 72% are Anglo-Saxon): 1 x Romano-British, 1 x A01, 13 x A16 (59%), 1 x A18, 1 x A19, 5 x E01

**Structure 40 Demolition:** 38 x *A16* (56%), 3 x *A18*, 4 x *C60*, 21 x *E01* (31%), 1 x *P30* 

**Building Parallels:** If Structure 10 is middle Saxon then it was a high status hall. Parallels are difficult to find for such a large, early building with a complicated and unusual plan; Pudding Lane 'Building PDN3' 11th

century (Vince 1998); Flixborough mid 10th century (Loveluck 2007).

Structure 40 was tentatively allocated to around the late 12th century but could be later Saxon, but it lay in a yard where there was late dumping. It is suggested that most pottery recovered from it may have derived from Structure 10 which could be a middle Saxon hall.

**Structure 11** (Phase ?3.3-L5.1), **Close A** [Baker 2013, 78, fig. 4.01]

Cut into Period 3, sealed by phase 5.1 and 5.2 deposits, partially destroyed by landscaping and burials. It was stratigraphically ambiguous, but orientation relates to CF29 and Structure 10.

Structure 11 and its immediate area: 99 sherds of which; 53 x prehistoric or Romano-British, 43 from Periods 1 to 4 truncated features; 27 x Anglo-Saxon Presidual, 19 x medieval.

**Period 3:** 17 Anglo Saxon sherds: 10 x *A16*, 4 x *A01*, 2 x *A18*, 1 x *A19* 

Period 4: 10 x A16, 18 x medieval, late medieval

Building Parallels: Buildings 'AS25' and 'AS38b' at Catholme (Losco-Bradley and Kinsley 2002, 92); Northampton, c. 8th century (Williams et al. 1985); Flixborough has buildings similar to those of the 7th to mid 8th century, but are smaller.

Structures 9, 11 and possibly 10 were considered to be contemporary. It is suggested that this building should be reallocated between Phase 3.2 and Phase 4.1.

**Structures** 97 (Phase ?3.3) and 12 (Phase L3.3), between Closes A and B [Baker 2013. 58, 66, figs 3.10, 3.18]

Fragmentary remains of two short-lived successive timber buildings levelled for Phase 4.3 building Structure 13; broadly contemporary with Structure 14, Structure(s) 8/88. In between Closes B and C. May partially bridge the gap between Period 3 and the mid 11th-century phase 4.1. Contained: 8 x Romano-British, 55 x Anglo-Saxon of which: 22 x A01, 23 x A16

**Building Parallels:** Flixborough similarities between Structure 97 and the small 7th- to mid 8th-century buildings (Loveluck 2007)

These fragments could be reallocated to between Phases 3.2 and L3.3.

**Structure 14** (Phase ?3.3–4.2), **Close B** [Baker 2013, 62, 66, figs 3.14, 3.18]

Continuous trench-built structure with opposing doors in the long sides, probably a high-status hall within a separate enclosure; succeeded by Structure 18 on same footprint

Periods 1 to 3 surface into which the building was cut: 128 sherds of which; 19 x Romano-British (15%), 101 x Anglo-Saxon (79%) of which, 54 x A16, 25 x A01, 6 x A18, 16 x A19, 5 x C59B, 3 x C60

Phase 4.1 Occupation: (total sherds 113): 17 x Romano-British (15%), 96 x Anglo-Saxon (85%): 73 x A16 (76%)

General association: 86 x Romano-British, 263 x Anglo-Saxon, 16 x medieval including C59A, C59B (12%)

An almost total absence of the omnipresent *C60* is significant. Later wares could have been introduced by intensive building activities on the same footprint. An anthropomorphic bone pin with Scandinavian characteristics from Structure 18 may have originated in Structure 14

Building Parallels: Sutton Courtenay 'Trench 4' (Hamerow et al. 2008) partial timber hall slightly larger than Structure 14, seemingly plank-built compared with the indications of posts in Structure 14. Produced 39 sherds of handmade pottery dated early – middle Anglo-Saxon. Cotter (2007) observed that the high incidence of organic tempered wares and virtual absence of sand tempered wares might indicate a 7thcentury date, although organic wares also probably continued into the middle Saxon period. Previous excavations found halls of varying dimensions and a fragment of Niedermendig stone either Roman or mid to late Anglo-Saxon. Flixborough buildings 7 and 12 dated to the early to mid 10th century. Continuous trench containing posts and no strengthening at the corners. North Elmham Park: 'Building Z2': 8th and 9th centuries, 'Building U': 10th century (Wade-Martins 1980) from residual Roman tile, 1 x Thetford ware and 2 x intrusive medieval; 'Building S1' was earlier, late 8th or early 9th century; 2 sherds of Ipswich ware and 1 intrusive fragment of Thetford ware. Wickham Bonhunt (Essex): 7th to 10th centuries (Wade-Martins 1980).

Since the early 11th-century buildings at North Elmham were slighter and irregularly shaped, in comparison with La Grava, it is possible that an earlier date should be proposed for the La Grava ones, bridging at least part of the perceived gap between Periods 3 and 4.

**Structure 18** (Phase 5.1E), **Close B** [Baker 2013, 78, fig. 4.01]

Successor to Structures 14; probably disturbed pottery from the earlier building since quantities of Anglo-Saxon and Romano-British wares were retrieved from its contexts: 17 x Romano-British (also one sesterce), 20 x Anglo-Saxon sherds, 1 x B1, 16 x C59B 236 x sherds of mineral tempered wares:

Anthropomorphic bone pin with Scandinavian characteristics possibly from Structure 14

218 x C60 (92%), half derived from a single vessel outside the structure; most of the other sherds were not directly associated

Structure 18 may belong to the early 12th century, possibly late 11th century. Succeeded by Structure 86.

**Structure 86** (Phase L5.1), **Close B** [Baker 2013, 78, fig. 4.10]

Structure 86 was more contaminated than its predecessors

Construction and occupation: 2 x Romano-British, 3 x A16, 2 x C59B, 4 x C60

**Destruction:** 12 x late medieval and post-medieval sherds. Deposits were mixed, including probable intrusions from successor Structure 23

Structure 86 should perhaps be reassigned to late Period 4.

**Structure 13** (Phase 4.2-L5.1), **between Closes B and** C [Baker 2013, 71, 78, 89, figs 3.23, 4.01, 4.10]

Constructed over remnants of Structures 12 and 97

Occupation: (5 vessels): 2 x Romano-British one from possible floor level,  $1 \times A01$ ,  $1 \times A18$ ,  $1 \times C60$  (intrusive)

Destruction: 68 x C60

Associated: 12 x C60 (long-lived yard)

Building Parallels: Flixborough 'Building 7' similar in size and construction, early to mid 10th century; Catholme 'AS43' (Losco-Bradley 2002)

Structure 13 may belong to the beginning of Period 4, dating Structures 12 and 97 before phase 4.1 within an extended Period 3.

**Structures 5, 6, 87 and 89** (Phase 3.1–3.2), pre-date Structures 24 and 25 in Close C [Baker 2013, 29, 35, figs 2.06, 2.08]

**In general association:** 64 x Romano-British; 78 x Anglo-Saxon

Structures 5 and 6 (Phase 3.1)

Timber slot and posthole structures cut by S35

Immediate surrounds produced: 3 x Romano-British, 14 x Anglo-Saxon of which; 9 x A19, 4 x A16, 1 x A01

Sufficient time elapsed for loamy soil to accumulate between the remains of Structures 24 and 25 before Structure 35 was built over them in the late 12th century. If the former do belong to the 10th century it would explain the long gap before Structure 35 was constructed. Both buildings appear to be aligned to the eastern grid. Structures 6 and 87 could be individual buildings or a single structure.

#### Structures 87 and 91 (Phase 3.2)

Sealed beneath Structures 24 and 25, badly damaged and not fully excavated; a series of large pits, probably SFHs, similar to those excavated by Matthews (pers comm) at Puddle Hill, Dunstable

Associated: 64 x Romano-British, 78 x Anglo-Saxon

These have been interpreted in two ways: as trenchbuilt; as a repaired post-built combination with posthole division.

Structures 5 and 6 might belong to the early middle Saxon period. However, they are contemporary with Structure 91 and on the same alignment as, or at 45° to, CF70 and Structures 87 and 91, and could be Romano-British. With near equal quantities of pottery, Structures 87 and 91 could be either Romano-British or Anglo-Saxon.

**Structures 24 and 25** (Phase E5.1–5.2), **Close C** [Baker 2013, 78, 217, figs 4.01, 6.12]

Over Structures 5, 6, 91 and 97; under barn Structure 35, Structures 24 and 25 were seriously damaged by subsequent activities and partially excavated. No finds from construction or occupation deposits; the associated boundary ditch yielded a single sherd of A19

The contemporary yard: 1 x Romano-British, 13 x Anglo-Saxon (mainly from disturbed deposits)

Associated:  $2 \times A16$  from external yard;  $2 \times A18$  from an adjacent post pit;  $1 \times Romano$ -British sherd (plus  $1 \times A19$  from occupation and floor levels of successor Structure 35)

Building Parallels: Structure 24 had a continuous trench 1m wide, part of which had rough masonry in its foundation that may only have been present to form a stable base on clay. Flixborough 'Building 7': early to mid 10th century, was similar to, but slightly smaller; Flixborough 'Building 12', early to mid 10th century was similar in size to Structure 25 which had a continuous trench but no stonework as a base.

Structures 24 and 25 could belong to the late Phase 3.3 or early 4.1.

**Structures 1, 2, 3** (Phase 3.1) **98, 101** (Phase ?3.1–3.2) **Close F** [Baker 2013, 29, fig.2.06]

Within a rectilinear pattern north-west of Romano-British ditch CF64

General association of which: 515 x Romano-British; 211 x Anglo-Saxon

**S89 and S101:** Associated with 460 x Romano-British **S1:** 17 x *A01*, 19 x *A16*, 1 x *A17* (Romano-British), 3 x *A18*, 13 x *A19*, 1 x *A20* (Romano-British), 2 x *A23*, 100 x *R* (2 vessels)

**S2** and **S3**: 52 x *A16*, 1 x *A19*, 1 x *A22* (? Early Iron Age)

Structures 1, 2, 3 were all SFH, and could date to the early middle Saxon period; the preponderance of A01, A16 and A18 may point to a middle Saxon date; Structures 89 and 101 were almost certainly Romano-British.

CF29 right-angled ditch enclosing Close A (Phase 4.1) [Baker 2013, 369, fig.11.05]

It cut the extended Romano-British ditch CF28 seen also in Close F. CF29 had been cut many times during its long lifetime, 83 mixed sherds were retrieved from its fill and vicinity, mostly A16

**Pre-dating; Period 2:** 2 x Romano-British, 1 x *A22* (mid-late Iron Age), 1 x *A01* 

Primary ditch fill phase 4.1: 49 sherds: 2 x A01, 43 x A16 (87%), 2 x A18, 2 x A19

Associated phases 4.1–4.2: 4 x *C59B*, 19 x *C60* (15%) Phase 4.2: 2 x *B01* 

Phase 4.3:  $2 \times B07$ ,  $10 \times C59A$ 

CF29 cut into Period 2 horizon. No C60 in primary ditch fill, but associated phases 4.1 and 4.2 had only 20 C wares; Phase 4.2 only 2 x B01; Phase 4.3 B07 intrusive. Evidence point to Phase 3.3. No finds recovered from CF34 and CF43, but CF43 cut Romano-British CF64.

#### Discussion

When discussing finds from Flixborough, Loveluck (2007) noted: 'Variable survival and discard of artefacts also have an impact on the archaeological visibility of objects from certain periods, notably the tenth-century, and this has huge implications for the identification of tenth to eleventh-century phases on settlements with unstratified artefact scatters.' Again, at Flixborough, with the numbers of finds diminishing, the occupation evidence also dwindled during the 10th century; however, later settlement produced the largest buildings and most conspicuous consumption of animal resources. Loveluck stated 'Ideas are unduly conditioned by the readiness to equate absence of surviving refuse deposits containing abundant artefacts, with a real scarcity of artefacts and resources on settlements'. Table 6 shows the proposed changes to structure dating from the evidence of the spatial analysis and the extended time spans for some of the pottery fabrics.

At La Grava the areas of most intense building and early pottery distributions were in Closes A, B and C (Baker 2013). Figure [Baker 2013, 26, fig. 2.03] shows building disturbance over all of these, and that a late quarry destroyed nearly all evidence in Close D and Close F, apart from the zone of extant earthworks containing Structures 1, 2, 3, 89 and 101 which had been ploughed out in the 1940s; the excavator, David Devereux, interpreted many slight features as

**Table 6.** Suggested changes to structure dating informed by spatial analysis and the extended time spans for some pottery fabrics.

			From Figure [1.08]			
Structure Close location		Original phasing	Possible revision	Comment S: Structure		
1	F	3.1	3.1-3.3	SFH		
2	F	3.1	3.1-3.3	SFH		
3	F	3.1	3.1–3.3	SFH		
4	A	3.1-3.3?	3.1–3.3	SFH		
5	С	3.1	3.1–3.3	SFH		
6	С	3.1	3.1–3.3	SFH		
7	A	?3.3-L5.1	3.3-5.1	Kitchen or hall		
8/88	A	?3.3-4.1	L3.3-E4.1	Bow-shaped hall(s)		
9	A	?3.3-L5.1	L3.3	?Domestic		
10	A	?3.3-L5.1	L3.3-E4.1	Hall or barn		
11	A	?3.3-L5.1	3.2-L3.3	Hall		
12	B/C	?3.3-4.2	E3.3	?Hall; over S97		
13	B/C	4.3?-L5.1	3.3-E4.1	Hall; over S12		
14	В	?3.3-4.2	3.3	Hall; under S18		
15	A/B	?3.3–5.1L	3.3	Bridge to S14		
18	В	E5.1	4.2-4.3	Workshop; under S86, over S14		
24	С	E5.1	L3.3-E4.1	?Hall or barn over \$5, \$6, \$87, \$91		
25	С	E5.1	L3.3-E4.1	?Hall or barn over \$5, \$6, \$87, \$91		
69	E	?3.3-E5.1	?4.1–4.3	Outlier within outer square		
70	E	?3.3-E5.1	?4.1–4.3	Outlier in gap in CF43		
71	E	?3.3-E5.1	?3.3	Outlier on diagonal of outer square		
72	E	?3.3-E5.1	?3.3-?4.1	Outlier on side of second square		
73	С	?3.3-E5.1	?4.1–4.3	Outlier // to S24, S25		
74	D	?3.3-E5.1	?3.3	Outlier on diagonal of outer square		
75	E	?3.3-E5.1	?3.3-4.1	Outlier within outer square		
82	A	?3.3-4.2	?4.1–4.3	Barn?		
83	A	?3.3-4.2	3.3	Barn ?		
84	A	?3.3-4.2	3.3	Barn ?		
86	В	L5.1	L4.3	Service; over S18		
87	С	3.2	2–3.1	Hall?		
89	F	?3.1–3.2	2–3.1	Large scatter post holes		
91	С	?3.1–3.2	2–3.1	Series of pits		
97	B/C	?3.3-4.1	L3.3	Under S12		
98	A	?3.1–3.2	2–3.1	Post holes		
99	A	?3.1–3.2	2–3.1	Post holes		
100	A	?3.1–3.2	2–3.1	Large scatter post holes		
101	F	?3.1–3.2	2–3.1	Post holes		
105	A	?3.1–3.2	2–3.1	Post holes		
CF29	AB/AD	4.1	3.3	Right-angled ditch		
CF34	BC/F	4.1	3.3	Cut CF64; western limit of 2nd layer		
CF64	B/F	2	2	Cut by CF34		

agricultural and Romano-British. This is reflected in pottery comprising 515 sherds of Romano-British and 211 sherds of Anglo-Saxon; Wingfield made a caveat that 'many aspects of material culture generally labelled as Anglo-Saxon e.g. Sunken Floored Huts may have been used by the British population too' (in Edgeworth 2007, 89).

A different scenario is seen in Close A where a total of 258 Romano-British and 1,101 Anglo-Saxon sherds were recovered. Near the Cocklake Stream were two major assemblages: associated with Structure 4 were 34 Romano-British sherds and 116 Anglo-Saxon; about 20m further west was a concentration of 33 sherds of Romano-British and 364 sherds of Anglo-Saxon wares with no discernible structural evidence. Enigmatic Structure 10 was indirectly associated with 70 sherds of Anglo-Saxon and only six Romano-British sherds, so the problem of dating seems not to arise. Further north near the western arm of CF29 was a dense scatter of pottery and buildings, but the area had suffered radical landscaping in the early 12th century, scraping the ground to form a raised area and banks. Close A produced another 621 sherds of Anglo-Saxon pottery found with 191 Romano-British.

Close B saw several building campaigns; it produced only 89 Romano-British but 286 Anglo-Saxon sherds. The most important of its buildings was Structure 14 with 197 Anglo-Saxon and only 36 Romano-British sherds. It fits well with a number of late Saxon buildings with opposing doors placed centrally in the long walls.

Close C saw at least three phases of construction, with a preponderance of Romano-British pottery, 41 sherds and 26 Anglo-Saxon sherds. Romano-British pottery was mainly associated with Structures 5, 6, 87 and 91, so they may be of that date. Structures 24 and 25 were built over them with Anglo-Saxon pottery only coming from yards. Structure 73 had no finds but had traces of dwarf stone walling. Structures 24 and 25 were not completely excavated and were seriously damaged in the late 12th century by the construction of a large and much altered barn Structure 35. A considerable build-up of soils between them and Structure 35 indicates a significant time gap. Looking at probabilities and possibilities, Structures 5, 6, 87 and 91 may be Romano-British or both Romano-British and early middle Saxon. Structures 24 with 25 may be late middle Saxon; a sprinkling of A wares was identified from phase 5.3 onwards.

It seems improbable that the coincidence of the rotating squares, buildings, natural watercourses and man-made features illustrated in Figure 2 are merely happenstance. The eastern part of the site was designed according to a mathematical blueprint recognised as early: the classic pole. All structures within that scheme were carefully placed accordingly, and thereby could be considered to be contemporary (Table 4). The structural evidence is partial, but nevertheless Structures 69, 70, 72, 73, 74 and 75

had traces of drystone masonry/gravel footings at a time when Saxon buildings were constructed overwhelmingly in timber, other than churches. The absence of stone or gravel footings generally (and at West Heslerton) has been used to suggest that these techniques were restricted to buildings of specific status. In fact, 'A whole range of buildings dating from the eighth to eleventh centuries have now been recognised which made use of stone or gravel footings ... not all connected with the upland region ... But all were monastic or had strong monastic connections.' (Hamerow 2012, 32–41) – as La Grava had with the 8th- and 9th-century minster at Wing.

The Research Framework for the East of England (Medlycott 2011, 58, 59) rightly points out that we need to know more about continuity of settlement from the Iron Age to Anglo-Saxon periods as appears at Clapham and Ivel Farm (Bedfordshire), and 'to what extent are Roman field systems re-used' - as appears to be the case at La Grava - also to elucidate the form of farms and building types and function. The Anglo-Saxon pottery industry is still not properly understood, and there is a need to find their settlement sites. Since the region's 'A' wares, and A16 in particular, seem to be long-lived, there is currently no certain mechanism (apart from intrinsically dated artefacts and unusually good stratigraphy) that can positively identify any La Grava middle Saxon buildings. Plainly more research on differentiating early middle and middle Saxon pottery is needed in the Bedfordshire region as well as nationally. Sadly Anna, the prime contender, is not here to undertake this difficult task.

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#### Résumé

Cet article complète la publication principale du site dans 'CBA Research Report' 167 (2013); il s'inspire du Supplément Numérique qui contient le rapport intégral d'Anna Slowikowski. Il traite de deux questions connexes sur l'histoire des débuts du site: la datation des pâtes à céramique de l'Age Moyen Saxon et la base mathématique pour la planification du site, en utilisant des matériaux qui ne pouvaient être inclus dans le rapport principal ou qui le postdatent.

#### Zusammenfassung

Dieser Aufsatz ergänzt die Veröffentlichung zur Hauptstätte im CBA Research Report 167 (2013), und stützt sich auf den digitalen Anhang (Digital Supplement), welcher Anna Slowikowskis vollständigen Bericht enthält. Er erörtert zwei für die Frühgeschichte der Stätte verwandte Aspekte: die Datierung mittelsächsischer Keramikstoffe und die mathematische Basis der Planung der Stätte. Der Beitrag basiert auf Material, das entweder nicht im Bericht berücksichtigt werden konnte, oder aber nachdatiert ist.