



SEDGEFORD HISTORICAL AND ARCHAEOLOGICAL RESEARCH PROJECT

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INTERIM REPORT 2001

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SHARP PERSONNEL 2001

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INTERIM REPORT 2001

CONTENTS

	PAGE
<u>EDITORS' FOREWORD</u> by Gareth Davies and Rik Hoggett	02
 <u>BONEYARD AND THE REEDDAM</u>	
BONEYARD: OLD TRENCH by Ruth Panes and Tegwen Roberts	03
REEDDAM: THE SAXON PHASE by Gareth Davies, Graham Perry and Charlotte Burrill	06
REEDDAM: THE IRON AGE PHASE by Katie Pack	07
PHASING BONEYARD by Gareth Davies	08
DATING BONEYARD by Neil Faulkner	12
COMPARATIVE ASSEMBLAGES by Ray Ludford	15
 <u>OSTEOLOGICAL RESEARCH</u>	
INTERIM REPORT ON HUMAN REMAINS by Patricia Reid	16
PALAEODIETARY ANALYSIS by Lorna Corr	20
 <u>ARCHAEO-ENVIRONMENTAL RESEARCH</u>	
ARCHAEO-ENVIRONMENTAL SAMPLING by Liz Wilson	23
COUNTING SHEEP (AND OTHER ANIMALS) by Ray Thirkettle	24
PLANT MACROFOSSILS AND OTHER REMAINS FROM 1998-2000 by Val Fryer	25
WHAT DOES THE ARCHAEO-ENVIRONMENTAL SAMPLING TELL US? by Liz Wilson	27
 <u>THE BONEYARD/REEDDAM ENVIRONS</u>	
LOCAL GEOLOGY & THE REEDDAM II TRENCH by Dominic Andrews & Stuart Calow	29
EXCAVATIONS IN CHALK PIT by Marion McCabe	31
THE SITE SURVEY 2001 by Naomi Payne	32
 <u>LATER MEDIEVAL SEDGEFORD</u>	
SMITHDON HUNDRED LOCAL HISTORY FORUM - REPORT 2000/1 by Janet Hammond	35
GEOPHYSICAL SURVEY OF ST. MARY'S CHURCHYARD by Rik Hoggett and Jackie Heath	36
WHAT CAN WILLS TELL US ABOUT ST. MARY'S CHURCH? by Pauline Fogarty	38
THE MANORS OF MEDIEVAL SEDGEFORD by Pauline Fogarty	39
 <u>CONFERENCE PAPERS</u>	
A CONTEXT FOR SAXON SEDGEFORD by Sophie Cabot	40
EDUCATION AND ARCHAEOLOGY 2001 by Sophie Cabot and Andrea Cox	42
 <u>SHARP 2002</u>	 45

EDITORS' FOREWORD

By Gareth Davies and Rik Hoggett

This year has been another successful one for SHARP. Building on the successes of previous years we have increased our range of on-site courses in archaeology, developing close links with the University of East Anglia's Continuing Education Department, which now accredits several of our courses. We have also continued our popular series of Tuesday evening lectures, Thursday public meetings, Friday site tours, and open days. This year culminated in a very well received conference on 'The Origins of the Anglo-Saxon Church' in Sedgeford's new village hall, attended by interested amateurs and professionals alike, both locally based and from further afield. Over the course of the summer we have also strengthened our links with the Smithdon Hundred Local History Forum who have been very active in and around Sedgeford, and have kindly provided a summary of their work from the past year for inclusion here.

Increasingly the SHARP summer season, eight weeks long this year, is becoming a year-round

activity. Before and after this season, members of the Project team have been giving papers at the Society for Medieval Archaeology's Conference in Cardiff, the Interpreting Stratigraphy Conference, York, and the Council for British Archaeology (CBA) Education Conference, York, as well as to local societies and educational groups, from Burnham Market to Colchester and beyond! This has been a deliberate attempt to get SHARP acknowledged in both academic and public forums, as we move towards our first major publication at the end of 2002. In addition, from 2002 our Easter Season will be expanded to four weeks, increasing the opportunity to do fieldwalking, geophysics and earthwork survey. It truly is a fantastic time to be involved with the Project!

The printing of this year's Interim Report has been funded by a generous publication grant of £1,000 from the CBA's East Anglia branch, to whom SHARP are extremely grateful.

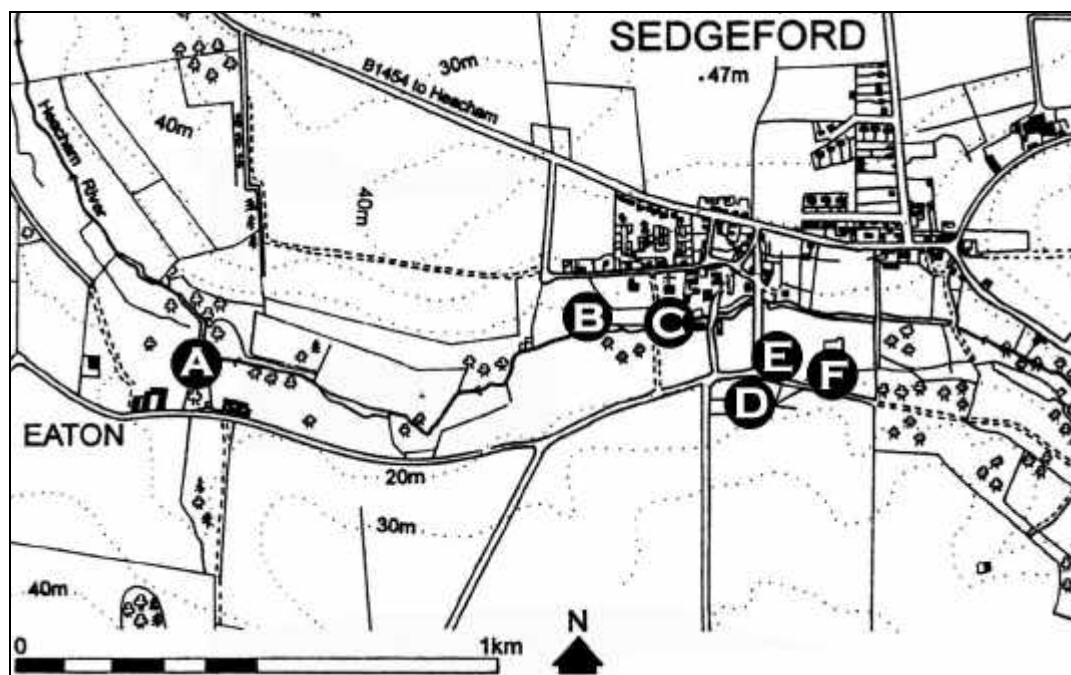


Figure 1. The village of Sedgeford highlighting the places mentioned in the text. **A**-Eaton; **B**-Ladywell; **C**-West Hall/St. Mary's Church; **D**-Chalk Pit; **E**-Reeddam II; **F**-Boneyard/Reeddam.

Boneyard and The Reeddam

by Ruth Panes, Tegwen Roberts, Gareth Davies, Graham Perry, Charlotte Burrill,
Katie Pack, Neil Faulkner and Ray Ludford.

This year the work on the Boneyard excavation falls into three main categories. Firstly, the ongoing excavation of Middle-Late Saxon settlement and cemetery archaeology in the main area (now the 'Old Trench'). Secondly, the completion of Middle Saxon burial excavation, and sampling of Iron Age deposits in the Reeddam at the northern extent of the excavation. Thirdly, the ongoing post-excavation phasing and dating of the Middle-Late Saxon settlement and cemetery. This year also saw the commencement of our second 'five year' project, with a large area opened to the west of the current Boneyard excavations. Over the coming years, this area will identify the exact location of Peter Jewell's excavations from 1958 and also add a great deal of new archaeology to SHARP's results.

BONEYARD: OLD TRENCH 2001

by Ruth Panes and Tegwen Roberts

The 2001 summer season in the Boneyard Old Trench was possibly our most successful so far. Through a combined approach of targeted investigation and reinvestigation of certain areas, we have managed to consolidate work from previous seasons, clarifying a number of very important stratigraphic relationships (which have not previously been fully understood) and linking up different areas and phases of the site.

The South-eastern Ditch Sequence (Number 1, Figure 2)

In the south-east corner of the Boneyard Old Trench a series of intercutting ditches, initially investigated in 1996, were further excavated and the sequence clarified. The earliest features are two north-south running gullies in the far south-east corner of the site. These features are truncated by the south-eastern extent of a large ditch running north-west/south-east. This ditch is approximately 2m wide, and may represent a substantial boundary. This (?) boundary appears to have been regularly sustained, or at least had repeated periods of use and re-use, with evidence of up to 14 re-cuts in places. The upper fills of some of the later re-cuts have produced substantial amounts of Middle Saxon Ipswich Ware pottery.

The latest major re-cutting of the ditch cuts two north-south running gullies, which are possibly the same as two gullies recognised immediately to the south in 1996. These gullies both truncate two further gullies which run north-west/south-east in plan. This area remains to be investigated further during the 2002 season.

The stratigraphically latest feature in this sequence is another large ditch, in this case running north-south, again initially recognised in 1996. This ditch has an irregular profile and runs the length of the slope, following the edge of the eastern baulk, occasionally underlying it. At the base of the slope it serves as a useful stratigraphic marker for the later part of the Boneyard sequence.

The Flint Scatter and Associated Features (Number 2, Figure 2)

The second area to receive attention in 2001 was the flint scatter across the top half of the Boneyard Old Trench site. It was recognised this season that this flint spread probably represented an area of flint clearance from the west of the area. It may also have acted as an area of hard standing, possibly even used as a trackway. Some of the flints show wear patterns and a number may in fact have been dressed, suggesting re-use of Roman material. Again this is something which will be further investigated during the 2002 season.

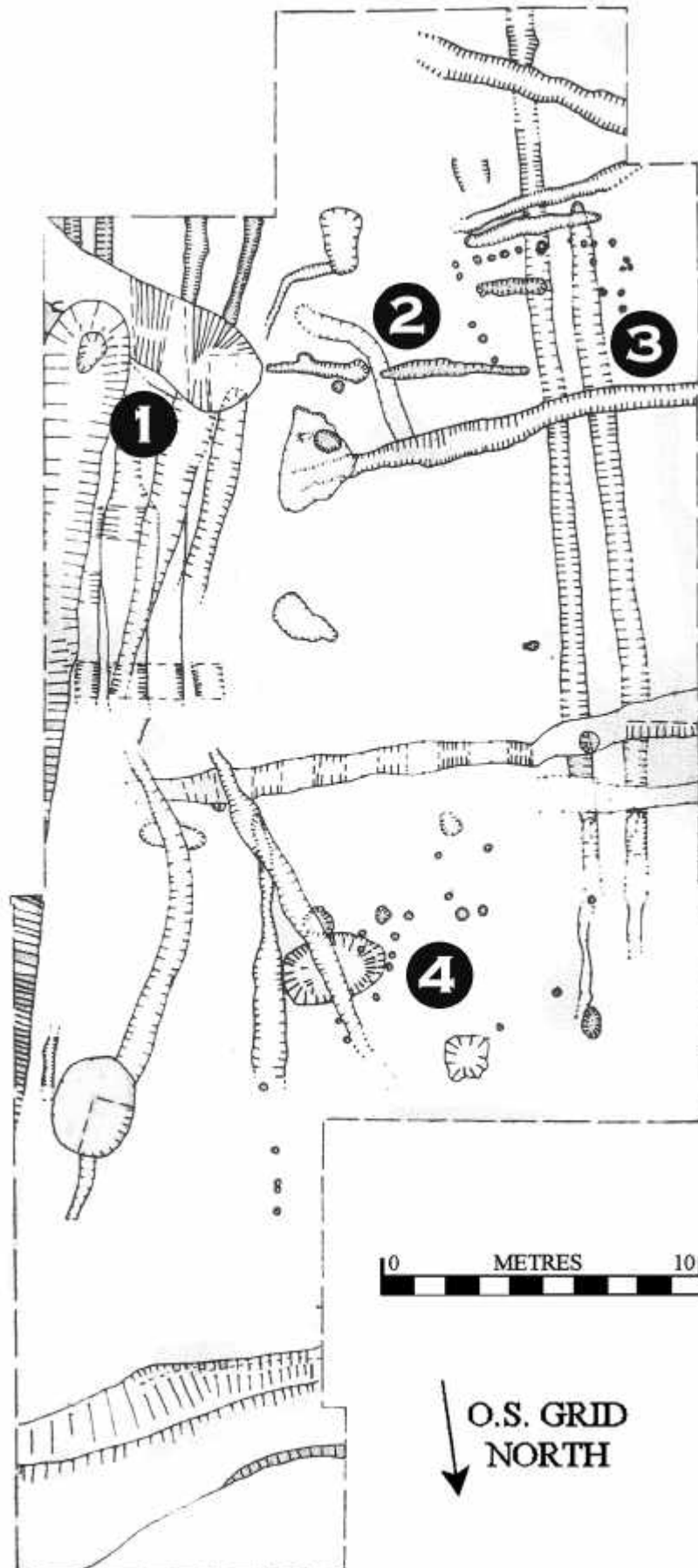


Figure 2. The current plan of the Boneyard Old Trench. The burials are not shown and neither is the Reeddam Trench. Areas of the trench referred to in the text are marked with corresponding numbers.

Across the top of the slope there are several later features associated with the flint scatter. A shallow pit was excavated, which contained no finds and is thought to represent natural silt accumulation within a hollow. A possible posthole was also discovered. There was also an irregular S-shaped gully, the fills of which again may represent silt 'run-off' into a natural dip. However, this gully had apparently been utilised, or manipulated, at some point, as a part of the fill contained a clay 'dump' showing evidence of tool-marks was discovered. This S-shaped gully was cut by a later north-south gully and an east-west ditch.

Approximately 6m north of this east-west ditch there were two further features which also cut the flints. These may be the bases of two postholes, although they are very shallow and may equally represent accumulations of silt in depressions, or hollows, within the western extent of the scatter.

To clarify the profile of the flint scatter, a section was dug across the southern end of it towards the end of the season. This section took a full north-east/south-west profile, and established that the flints were sitting within a hollow. It is as yet unclear as to whether this hollow is natural or man-made (another job for 2002). However, some of the flints at least appear to be part of a deliberate clearance. A number of cut features or disturbances were also recognised in section, cut from the level of the flints, including a possible posthole and areas of slump or tipping.

The South-west Corner (Number 3, Figure 2)

Work in the south-west corner of the site this season means that we are now able to recognise three phases: two main phases of cut features and an intervening phase of inhumations.

The most important features excavated in this area this season were the twin north-south gullies discussed above. These appear to be the earliest features in this area so far, and are

useful stratigraphic indicators: linking up the top and bottom of the Boneyard slope for the first time (see below). They may also represent the western boundary of the flint clearance, also discussed above. The second phase in this area is represented by the burials, excavated out in previous seasons, which presumably cut into the top of the north-south gullies. Phase three is represented by a number of later structural features: a series of postholes, excavated in 1998/9; and three potentially associated gullies, which excavations this year have shown extend further to the south-west than previously thought.

The Lower Slope (Number 4, Figure 2)

This season also saw further work towards the bottom of the Boneyard slope, with particular emphasis on producing an overall stratigraphic sequence linking areas which have in the past remained effectively separate.

The most important features in this respect are the two north-south gullies already mentioned. At the top of the slope these gullies appear to be the earliest features in the sequence, but at the bottom of the slope these early features truncate an even earlier ditch running east-west across the width of the trench. The north-south gullies contain later re-cuts which are charcoal-filled and seem to respect the line of the flints. A second east-west linear feature runs parallel to the earlier ditch, cutting both of the north-south gullies, and is defined by a gap in the background flint scatter of the lower slope (which itself may be the earliest context yet recognised in the western half of the Boneyard Old Trench). The lower slope is then truncated by the later flood events, or marsh action, in evidence in the very north-west corner of the trench.

It also became apparent through the course of the season that the two flint scatters (upper slope and lower slope) are not the same. The one in the southern part of the site (the possible trackway) appears to be slightly later in date. They do however overlap somewhat,

and the upper appears to 'tip' into the southern extent of the lower, providing another useful stratigraphic relationship which may merit further investigation in 2002.

The Burials

Although in comparison with previous years relatively little attention was paid to the excavation of burials this season (as most of the new work was done at a higher stratigraphic level), three new inhumations were excavated. These burials (S0107, S0108 and S0109) were of particular interest because of the varying funerary rites associated with them, and may eventually contribute greatly to our understanding of burial practices on the site.

The burials were tightly packed, with S0108 cutting the edge of both S0107 and S0109, and unlike the burials higher up the slope, the soil conditions in this area meant that grave cuts were visible in all three cases (although the edges were obscured somewhat by their close proximity).

S0107 was the first undisturbed coffin burial recorded at Sedgford, with four brackets associated with the lower part of the coffin (giving a definite width and idea of construction), and an iron hook, presumably *in situ*, recorded in the top of the grave fill. S0108 was another possible coffin burial, judging by the positioning of the body (with legs and feet slightly splayed, and a separation of upper and lower arm bones suggesting that the body had space to move around during the initial period of decay), although no coffin furniture was recovered. The burial also contained an amount of charnel, and some pottery fragments.

In contrast to S0107 and S0108, S0109 was a shroud burial, with a small bronze pin in situ on the pelvis (small finds no. 793).

It may be suggested that, in this sequence at least, the two coffin burials are later than the shroud (although there was no direct

stratigraphic relationship between S0109 and S0107), but the significance of this can only be judged with the recovery of more burials in seasons to come. More significant is the relationship between these burials and other features, something that has so far rarely been seen on Boneyard.

Later Features

The burials were truncated by two north-south drainage gullies, one to the west cutting burial S0107, and one to the east which cut burial S0108. The first of these gullies truncates a large pit-like feature to the north which appears to have been structural in origin, and is probably part of a Sunken Feature Building. This pit was recognised in 2000, but excavations were only completed with the investigation of the southern half this season. There was a posthole cut into the base of this southern half, and finds recovered have so far included a large amount of processed animal bone and Ipswich Ware pottery.

The second drainage gully is also associated with a second similar pit to the east, however in this case the structure appears to be later than the gully. A section was taken through the pit to clarify what turned out to be an extremely complex series of relationships.

Also excavated this season were five postholes running along the base of the slope in a north-south alignment. These postholes are stratigraphically later than the other structural features in this part of the site. Not much of them appears to survive and they were relatively insubstantial and ephemeral, probably representing only the truncated bases of the original features.

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REEDDAM: THE SAXON PHASE

by Gareth Davies, Graham Perry and Charlotte Burrill.

The burial sequence in the Reeddam has now been fully excavated, with 67 burials lifted.

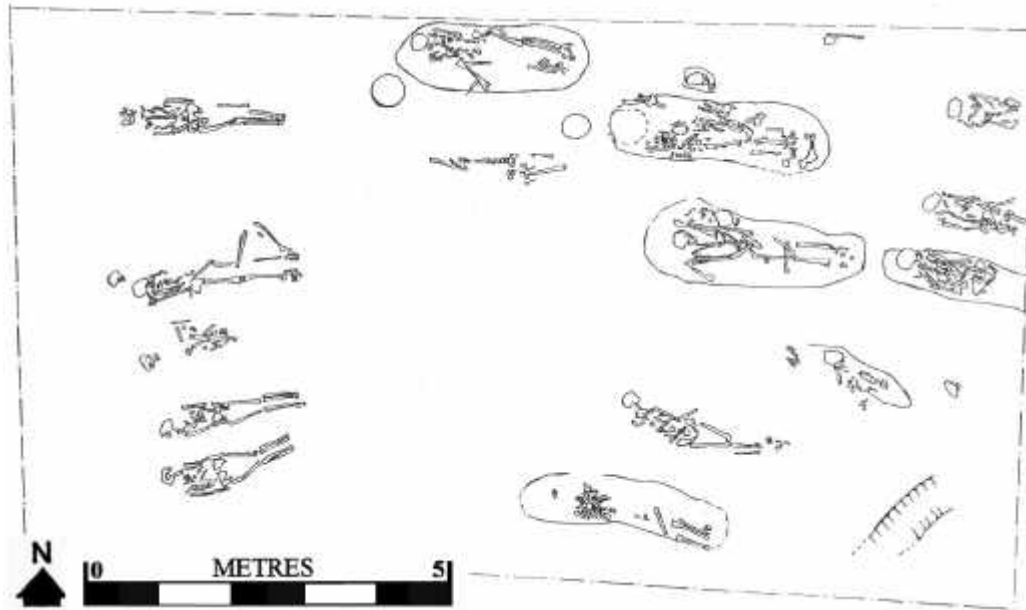


Figure 3. The first phase of burials in the Reeddam Trench.

This must represent one of the most utilised areas in an extensive cemetery, perhaps even an initial focus that was re-used.

Although excavation of this burial sequence has only just finished, we can already observe some interesting phases of cemetery use. The initial phases are less uniformly planned and respect a number of features such as a possible boundary gully and, interestingly, some tree bowls (Figure 3). The later burial phases are concentrated to the east of the area, and are on a much more uniform orientation, and in noticeable rows. This consistency of burial alignment has often been seen as reflecting the orientation of burials towards a building or distinct boundary, and it is interesting to hypothesise that the later burials in this area were aligned to a different focus. Ultimately, however, the work on this phasing serves only to highlight the disadvantages of analysing an incomplete sample of a site.

* * *

REEDDAM: THE IRON AGE PHASE

by Katie Pack

In the Reeddam trench during the 2001 season the excavation of the Saxon cemetery archaeology was completed. The trench

remained waterlogged and required constant pumping out. To minimise erosion of the archaeological deposits, areas of the trench were cleaned and excavated in turn. Plank walkways were used to avoid disturbance while work was undertaken. Beneath the Saxon cemetery deposits, features dating to the Iron Age period were present, cut into the natural sand.

Iron age pottery had been discovered in Reeddam in previous seasons, in the surrounding valley, and also at the southern extent of the Boneyard Old Trench excavations. However, the density of confidently dated Iron Age features found in 2001 had not been revealed at the site before. A number of gullies were present, with a stratigraphic sequence apparent between these gullies. Extending from the southern boundary of the Reeddam trench was a curvilinear gully. To the north-west another gully was present, orientated east-west. Both of these gullies were truncated by a north-south orientated gully at the point where they may have met; evidence of their stratigraphic relationship was destroyed by later features. Iron Age pottery, worked and struck flint, and burnt flint came from these gullies, with a tusk awl being excavated from the fill of one of the gullies. Two postholes were also excavated in proximity to these gullies, as

were two small intercutting pits to the east that contained Iron Age pottery, animal bone and flint flakes, and a fragment of slag and crucible.

In the north-eastern corner of the trench a large east-west aligned ditch terminus was revealed, extending from the eastern boundary of the Reeddam trench. This ditch was of significant size, being 1.7m in width and containing five fills. The finds assemblage from the fills was of a different character from the gullies, with little pot or bone and less flint. The lower fills appear to have slumped into the ditch from the northern side, possibly indicating that the associated bank was on the north of the ditch.

Within the arc of the ditch were two tree throws approximately 1m in diameter. The relationship between these features is uncertain, as root disturbance was evident below the gully fill but may have grown through later. Therefore we could not be conclusive as to whether the trees had been cleared prior to the Iron Age activity or later.

The Iron Age features from Reeddam 2001 give firm evidence of Iron Age occupation at the site. The full character of the features has not been clarified as the size of the Reeddam trench is limited. The gullies, postholes and pits may be evidence of Iron Age working enclosures or even part of a round house. Similar deposits were excavated at the A149 Snettisham bypass (Flitcroft, 2001).

Reference

Flitcroft, M. 2001. *Excavation of a Romano-British Settlement on the A149 Snettisham Bypass*. EAA 93.

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PHASING BONEYARD

by Gareth Davies

Work on the phase plans is complete up to the 2000 season. This has involved plotting all the archaeological features, firstly on an 'all features' plan, but then on separate plans by

archaeological phase. The figures below give an indication of what the site phases are, but results need to be constantly adjusted in the light of new discoveries. For example, this year a north-south gully pre-dating burials was excavated, which will alter the relative phasing of both later burials, and previously excavated gullies that post-date burials. The phasing will only be drawn to a conclusion when the excavation of the 'Old Trench' is complete.

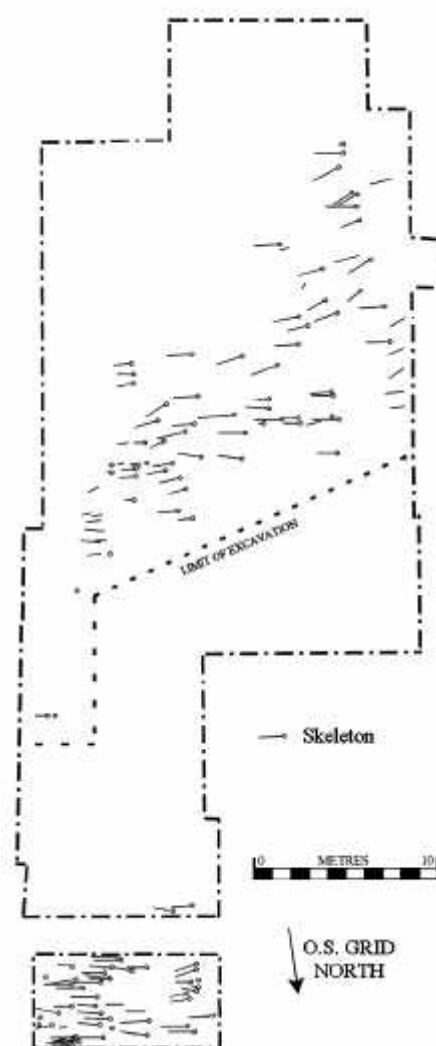


Figure 4. The Middle Saxon Cemetery Phase.

It is important to note that an archaeological phase does not represent a single moment in time, it just shows material that shares similar relationships. For example, the features of the Later Middle Saxon Phase (Figure 5) all cut through one earlier feature, but were not all necessarily in use at the same time. One recurrent problem with site phasing often

appears when one group of features that can be related (e.g. one ditch cuts through one gully which, in turn, cuts through a burial) cannot be directly related to the next group of features (e.g. another ditch cutting through a burial). Because of this problem it is sometimes hard to know which phase to attribute a particular feature to. As the excavation of the 'old trench' nears completion we will be able to arrive at more satisfactory phasing based on spatial relationships of features (see 'structural hot-spots' referred to below), as opposed to purely sequential phasing.

Phasing has already given an indication of the dynamic cemetery and settlement sequence. The earliest phase is represented by large quantities of residual Late Iron Age pottery (Belgic-type wares) and some other features. As yet this phase remains enigmatic. After this phase of land use, the site seems to have been abandoned for some time.

The earliest significant Saxon phase consists of 161 *in situ* inhumation burials of varying degrees of completeness. These burials are on an east-west orientation without grave goods, strongly suggesting that they were Christian burials. As can be seen in Figure 4 this phase is still under excavation. The arm positions of the burials often suggest shroud burial, but to the east of the excavation are some coffin burials, with some iron coffin brackets still *in situ*.

By far the most concentrated area of burial is in the northern portion of the site near the river and on flat ground. Although we have not fully defined the extent of the cemetery, it seems that this area to the north represents one of the most utilised areas in an extensive cemetery; certainly this area was reused for burial a number of times, whereas burials further up the slope are a lot more dispersed and rarely intercut each other.

These burials are technically undated artefactually (with the exception of residual Iron Age pot). However, an initial radiocarbon date from a burial early in the

sequence has provided a calibrated date of AD 662-881. It would appear that this phase is therefore Middle Saxon, a date significantly earlier than that suggested by the 1950s excavations, but a date range that will only be further clarified by a systematic programme of radiocarbon dating.

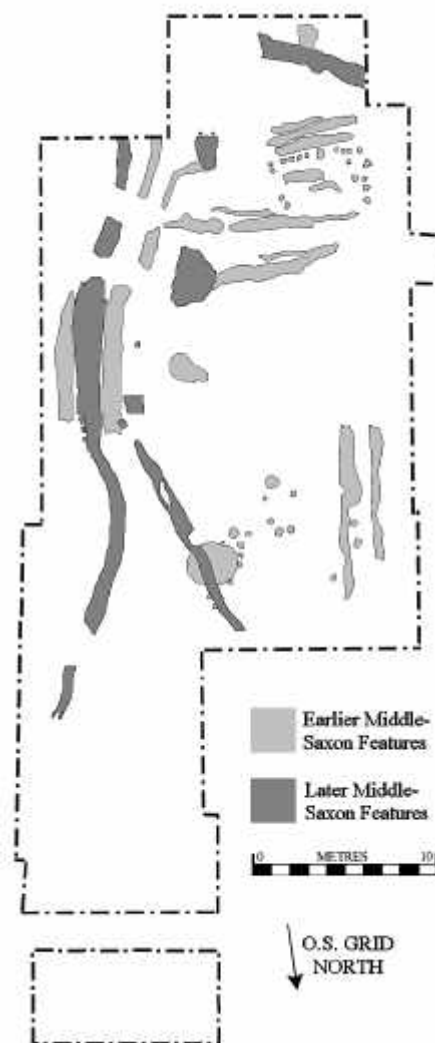


Figure 5. The Middle Saxon Phases.

A Middle Saxon date for the cemetery, possibly as early as the 8th century, is one supported by the artefactual evidence from the later settlement phases. The majority of the small finds date to the eighth and ninth centuries providing, a useful *terminus ante quem* for the burials.

After the cemetery went out of use there were a number of different phases of land use and settlement features on the Boneyard site.

The Earlier and Later Middle Saxon Features (Figure 5) represent the immediate post cemetery phases. The 'Later' features truncate earlier settlement features whilst the 'Earlier' features do not. The features are all very similar artefactually and are dated by quantities of both Ipswich ware (produced from the early eighth to mid-ninth centuries) and Thetford-type wares (produced from the late ninth to late eleventh centuries). Associated post-cemetery layers have produced artefacts predominantly of the eighth and ninth centuries. For example, bone comb fragments, dress pins and an Anglian silver penny of King Eadwald (AD 796-798). We also have styli and decorated vessel glass from these post-cemetery layers.

However, some features in the supposed later phase contain only the earlier Ipswich ware, which in isolation would lead the excavator to a Middle Saxon date. Yet, because these features are stratigraphically later than gullies containing both styles of pottery our dating cannot be any tighter. Within all of these features the proportions of the two types of pottery is approximately two thirds in favour of the later Thetford ware (within largely homogeneous fills) possibly suggesting a date for some fills later in the Saxon period (see *Dating Boneyard* below). Our Ipswich Ware assemblage is relatively large (around 2000 sherds) and further excavation to the south of our site may show that much of our Thetford wares are derived from a later nucleus there. However, until we demonstrate where the Thetford ware derives from it is not possible to date these phases more closely than 'Middle-Late Saxon'.

What we appear to have in our initial Earlier Middle Saxon Phase are elements of severely truncated structures and north-south drainage gullies. The structural evidence has been highly disturbed but clearly falls into two 'hotspots'.

Firstly, at the south of the site there is a relatively flat, possibly terraced area. Here are two east-west gullies, the northernmost of

which has four probable post-depressions within it. There are also an associated 22 small postholes. The features to the north appear to have been truncated by erosion or deep ploughing. We may be looking at part of a timber hall structure or surviving elements of different rebuilds of the same structure. The 22 postholes seem too small to be fully weight-bearing, and may represent the remains of an internal division in a larger building, the gullies themselves being the beam slots.

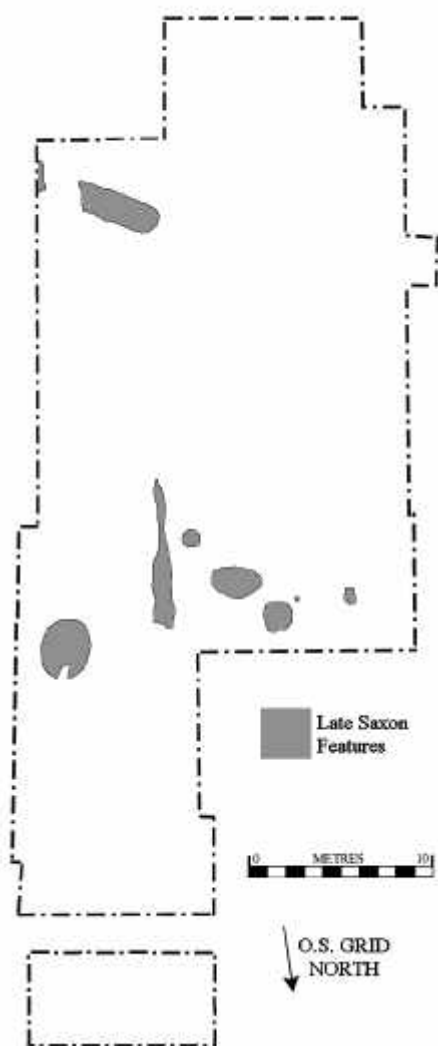


Figure 6. The Late Saxon Phase.

It is interesting to note that this 'structure' area seems to be devoid of flint as if it has been cleared, whereas other areas contain dense flint concentrations. This possible structure, although severely truncated to negative features, fits well into the 'timber hall' type and is closely paralleled in Norfolk

at sites such as Tasburgh or Middle Harling (Rogerson, 1995).

The second 'structural hot spot' consists of a shallow pit-like feature and a number of scattered post holes. It is possible that this shallow pit represents a structural feature such as a hollow somewhat like those associated with Sunken Featured Buildings, but at one end of a hall-type structure instead. This structural area remains enigmatic but potentially Middle Saxon, as the 'pit' contains only Ipswich ware.

It seems likely that the ditch complex to the east of the site has a drainage function; the later gullies are almost riverine in appearance. These gullies also provide us with a useful stratigraphic indicator as they directly truncate burials. After the Middle-Late Saxon phase this area seems to have once again changed character and function, possibly becoming a marginal area within a larger Late Saxon set-up.

Deposits associated with this phase contain vast quantities of animal bone (lots butchered), and mixed Late Saxon pottery: an archetypal midden. The two extensive features here consist of cobbling layers (possibly 'hardcore' for an increasingly waterlogged area), and pits containing large amounts of burnt clay (possibly oven linings or rake-out).

It is possible that these pits represent an informal industrial process, and it is interesting to note that our only evidence for bread wheat comes from this phase. It appears that we are looking at a further shift in the nucleus of activity in this last settlement phase, to somewhere out of our current excavation. One tantalising glimpse of the scale of the settlement activity is which ditch terminal, which is about 1.5m wide and the same in depth. This ditch has fourteen re-cuts and clearly relates to a much used, well kept part of the later Saxon settlement.

Finally, there are a number of Saxo-Norman or medieval features (Figure 7). A large north-

south ditch truncates all other features but may still in theory be Late Saxon (just stratigraphically very late).

The cut and re-cut at the north of the area represents the boundary of the marshy area that was used to cultivate reeds after the 13th century (these cuts truncate burials). The dotted line represents a large natural cut that occurs due to marsh/flood action after the Saxon period. This cut may well truncate negative features that might otherwise have given more detail to the 'Middle-Late' Saxon structural features.

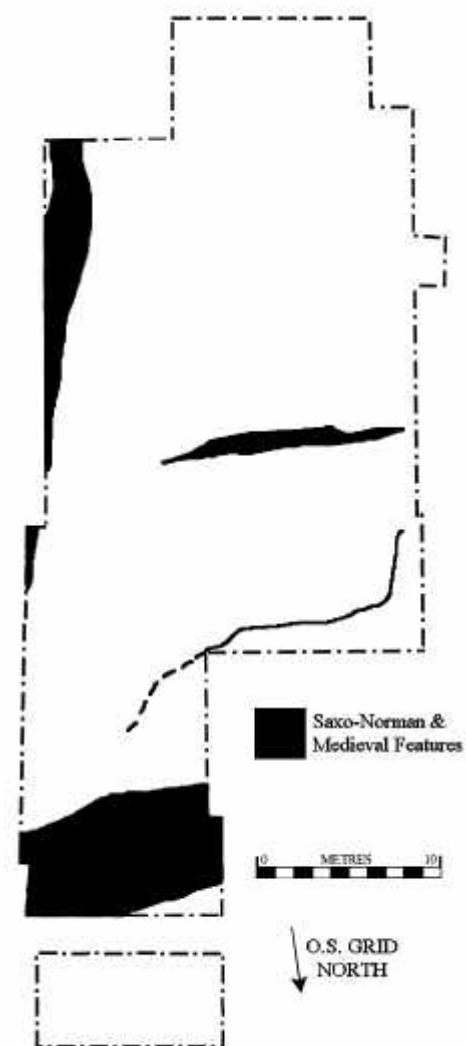


Figure 7. Saxo-Norman and Medieval Features.

In summary we can observe three main phases: 1. Middle Saxon Christian burial, 2. ephemeral Middle-Late Saxon structural and drainage features, 3. a Late Saxon midden and

area possibly relating to an informal industrial process.

The next major step, once the phasing of the site has been completed, is to study the main groups of artefacts and ecofacts from each phase to see if they show any patterns. For example, can the sequence of events in the old trench be as short as the overall pottery assemblage suggests (see below)? What happens if a feature that occurs very early in our sequence of phases has a very late pottery date? It may mean that certain portions of the site will have to be dated later than we originally thought. This could then have a knock-on effect that may have implications for the settlement pattern in the whole river valley. How much of a shift to the west of our current excavation is there in the Late Saxon period? How many of our pottery finds were actually deliberately discarded on our excavation site, and how many were derived from later settlement further to the south of the current excavation?

As we will see over the coming seasons, the post-excavation of Boneyard is just as much a process of discovery as the excavation itself. It is very rewarding to begin to see so many disparate 'islands of data' gradually nestling in position to compliment each other and allow us to tell their story.

Reference

Rogerson, A. 1995. *A Late Neolithic, Saxon and Medieval site at Middle Harling, Norfolk*. EAA 74.

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DATING BONEYARD

by Neil Faulkner

Fieldwork in Sedgeford since the 1950s has established the presence of an extensive Anglo-Saxon settlement in the parish. Fieldwalking evidence suggests that it extended from somewhere in the woods east of Boneyard Field for about half a kilometre down the river valley to the West Hall area and perhaps beyond. In places it formed a

band at least 100m wide. The precise boundaries of the spread are unclear, especially north of the river, but the overall extent of it is impressive. Moreover, the areas that have been dug intensively - mainly, of course, the Boneyard-Reeddam site - show a considerable build-up of Anglo-Saxon layers, features and occupation debris: evidence of intensive activity on the site. Anglo-Saxon Sedgeford was a major settlement.

But when was it occupied? When was the village founded, and when did the big changes in land-use within the settlement area take place - notably the abandonment of the Boneyard-Reeddam site, which we know ceased to be part of Sedgeford village and was turned into arable or pasture at a very early date? At first we thought in terms of a Saxo-Norman cemetery. We now think this is wrong. I would argue that nothing of significance on the site is likely to be as late as this (i.e. 11th and 12th century). My current hypothesis - it is only that - is that the Boneyard-Reeddam site, both settlement and cemetery, form a single main period of use dated roughly AD 750-950. What is my evidence?

Radiocarbon dates.

We have three radiocarbon dates from human bone at Sedgeford: a Reeddam skeleton came out at Cal AD 662-881 (95% probability); a lump of disarticulated bone from Boneyard at Cal AD 689-887 (95% probability); and the skeleton from West Hall at Cal AD 1010-1180 (95% probability). This is not much to go on, and we need to do more radiocarbon dates. But it is a start. On this evidence, it looks as if people were being buried in the Boneyard-Reeddam cemetery some time between the late 7th and the late 9th centuries, and at West Hall from some time after the beginning of the 11th.

Metalwork, bone combs, beads and coins.

During fieldwork on or close to Boneyard during 1996-2000, many small finds were recovered. Ray Ludford, our small finds

specialist, has identified them for us. Some were not datable at all, some were not Anglo-Saxon, and some were datable only to the Anglo-Saxon period in general. If, however, we restrict our attention to small finds datable to the Early, Middle or Late Anglo-Saxon periods, we have the following: one Early Saxon brooch, three Middle Saxon ones, and one of 9th century date; 20 Middle Saxon pins; two Middle Saxon styli (writing implements); 21 Middle Saxon comb fragments, and three of 9th or 10th century date; one 9th century strap-end; one Middle Saxon bucket-handle; two probably Middle Saxon tweezer-arms; one Middle Saxon spatula; one possible Middle Saxon bead, and another either Middle or Late Saxon; three Middle Saxon glass fragments; and two coins, one a sceatta of AD 730-750, the other a silver penny of King Eadwald dated AD 796-798. So, of 63 artefacts datable within the Anglo-Saxon period, one is Early Saxon, 53 are definitely Middle Saxon, four more might be Middle Saxon, two are 9th century, three are 9th or 10th century, and one other is possibly Late Saxon. With only one Early Saxon find, we clearly do not have enough for a site. And, given that we have not recovered a single small find which has to be 10th century, and not even possibilities for the 11th, Boneyard does not look remotely Saxo-Norman. The small finds give an overwhelmingly Middle Saxon signal.

Pottery

Several aspects of the pottery assemblage may also have chronological significance. First, we seem to lack Saxon levels on the site predating the introduction of Ipswich ware (probably in the years after c. AD 720). There is probably no handmade Saxon pottery on the site, all of our Saxon levels seem to have Ipswich ware in them, and earlier levels without this pottery all seem to be Iron Age. No evidence here, then, for 7th or very early 8th century activity.

Secondly, though we have some Saxon contexts containing Ipswich ware (c. AD 720-7850+) but no Thetford ware (c. AD 7850-1075/1100+), these are very much a minority.

Of ceramically-dated Saxon and later contexts, 23% are dated by Ipswich, and 61% by Thetford or other late Saxon fabrics, the rest being post-Saxon (out of a sample of 332 contexts). But these figures overstate the Middle Saxon case, since a majority of these contexts contain fewer than ten sherds; a Late Saxon context may sometimes contain only one or two sherds of Ipswich and nothing else. If we limit ourselves to ceramically-dated Saxon and later contexts containing at least ten sherds, only 6% are dated by Ipswich ware (out of 87 contexts sampled). In this case, however, the Middle Saxon case is probably understated, because some contexts may have been wrongly dated by one or two intrusive sherds of later pottery. So the truth probably lies somewhere in between: taking into account the Saxon layers on Boneyard-Reeddam as a whole, we can say that between 6% and 23% predate the introduction of Thetford ware in c. AD 850.

On the face of it, this looks like a site which is predominantly Late Saxon. But other pottery data cut against this interpretation. A third key factor for me is the overall proportion of Ipswich ware to Thetford ware: this comes out at 29% to 63% - just over two to one in favour of Thetford (1996-1998 contexts only). Now this is a very good showing by Ipswich. Generally speaking, on Saxon sites, a similar level of activity is represented by very much smaller quantities of Ipswich ware compared with Thetford; the former was produced in limited amounts, the latter in vast quantities. At North Elmham, a major Middle and Late Saxon site in Norfolk, 160 sherds of Ipswich were recovered compared with well over 4116 sherds of Thetford (Wade 1980, 418, 427). At Norwich - a mainly Late Saxon site, but still with significant Middle Saxon levels - around 400 Ipswich sherds must stand comparison with tens of thousands of Thetford ones (Brian Ayres, pers. comm.). So a little bit of Ipswich goes a long way. We have a relatively very high Ipswich ware sherd-count. In other words, Boneyard has loads of 'Middle Saxon' pots, despite not having many 'Middle Saxon' deposits. How can this be?

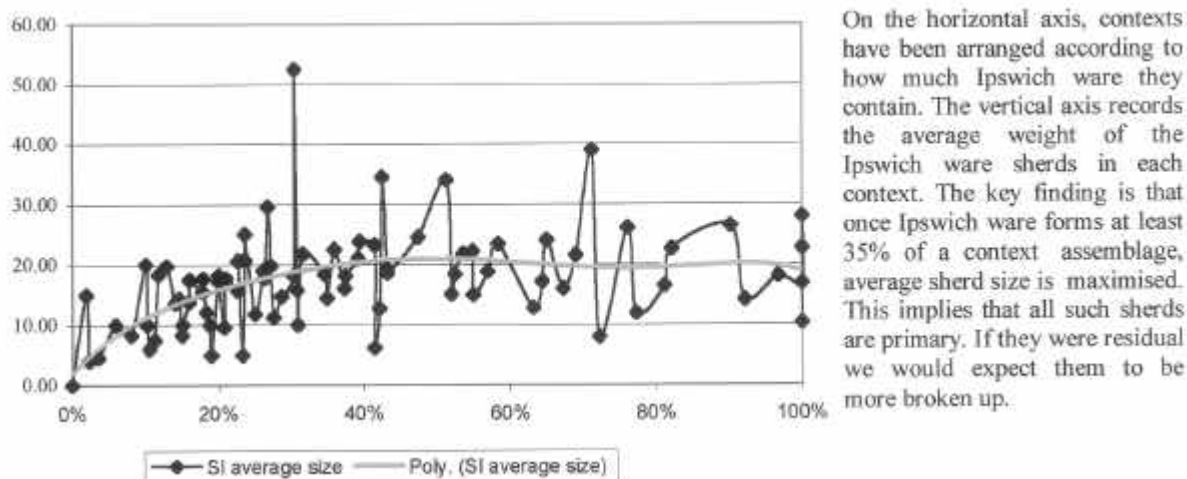


Figure 8. Average size of Ipswich ware sherds in relation to the proportion of Ipswich ware to Thetford ware in contexts with at least ten sherds excavated between 1996 and 1999.

A fourth consideration comes into play: an analysis of ceramic residuality carried out by me and Hilary Snelling using her pottery database for the site. The idea was to look at the proportions of Ipswich ware as against Thetford in mixed contexts, to compare these proportions with the degree of brokenness of Ipswich sherds (using average sherd weight as the measure), and to try to come to some conclusions about whether the Ipswich in mixed contexts was actually residual (i.e. left over from an earlier period), or instead contemporary with the Thetford (i.e. in use at the same time). Put bluntly: is there an Ipswich-Thetford pottery 'overlap' at Sedgeford? Provisional results strongly suggest that there is. Our key finding was this: when the proportion of Ipswich ware in a mixed context was 35% or more, the average size of the Ipswich sherds was the same as that in Ipswich-only contexts (based on 1996-1999 contexts with ten or more sherds). In other words, once Ipswich ware makes up at least a third of the pottery in a deposit, the sherds no longer look residual - they are big primary sherds likely to be contemporary with the other ('later') sherds in the assemblage. Other pottery workers also report an Ipswich-Thetford overlap of this kind (Sue Anderson and Paul Blinkhorn, pers. comm.). So, a working hypothesis is that we have a site whose peak is in the ninth century - when both Ipswich and Thetford ware vessels might

have been supplied to Sedgeford at the same time and been used side by side.

The fifth thing to bear in mind is the pottery not present on Boneyard - or at least not in the quantities necessary to indicate a site. Four types deserve comment. Grimston ware - the standard medieval pottery of the area - makes up only a tiny proportion of the ceramic assemblage: 0.11% of the 1996-1998 total. This is merely 'background noise' (probably the result of manuring spreads on what had become arable land). So the Boneyard settlement had definitely gone out of use by the later 12th century. Also missing in any quantity are local handmade medieval wares (0.18% of 1996-1998 contexts), whereas we might expect an 11th century site to yield a fair amount. Then there is Stamford ware, of which we have a tiny amount: 8 sherds. This is not much to go on, but it may be significant that none of ours is glazed. After c. AD 950 about 10% of Stamford ware was glazed, and after c. AD 1050 it was about 20% (Kilmurry 1980, 133-135). So our little group, as far as it goes, looks early. Finally, there are the late Saxon shelly wares from St. Neots and Lincolnshire. We have 57 sherds, and it should be possible to establish a) whether they are St. Neots or Lincolnshire, and b) an approximate date within the late Saxon period for the assemblage. This, though, is a matter of work in progress. It will be a useful test of

the hypothesis: does the small Saxon shelly ware assemblage from Sedgeford also turn out to be early rather than late?

If I am right about the dating, we have something very interesting going on. For one thing, the site would then be ending much sooner than we had thought, and this will change the focus of our attempts to explain the event. It may still be related to the building of a dam and the flooding of Reeddam, but this event would now shift backwards in time to the 10th century. Major landscape changes at this time? Perhaps associated with a major shift in land-ownership - and therefore in political control? Could the late Saxon 'reconquest' of East Anglia from the Danes in AD 917 provide a broad context for the changes we are seeing? After all, Sedgeford is likely to have been part of the late Saxon royal estate, and I cannot help wondering whether it perhaps changed hands in or around AD 917, and that it was shortly after this that major changes in land use under new royal administrators took place.

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COMPARATIVE ASSEMBLAGES

by Ray Ludford

The majority of the small finds from the Boneyard excavations date from the Middle Saxon period. Many of these objects are comparable with finds from Brandon, Suffolk. The Brandon settlement site is dated by radiocarbon dating as commencing AD 640+/-70 and AD 660+/-80, with probable desertion in the last quarter of the ninth century (Carr, Tester and Murphy 1988). Brandon is only about fifty miles by sea and

river from Sedgeford, and contact by trading is very likely.

In general the Middle Saxon small finds from Sedgeford could be placed with the finds from Brandon, Southampton or any other Middle Saxon assemblage around England without anything looking out of place. Trade with Ipswich is accepted considering the large amount of Ipswich ware pottery from the site. The Series R sceatta from a possible mint at Ipswich would also indicate trade with this emporium. The existence of a possible emporia at Ely should show itself in some of the finds when they are published for comparison.

One group of objects could prove interesting to link with other sites. These are the safety-pin brooches with ring-and-dot decoration. All three of our examples have a similar layout of ring-and-dot, but only one of the nine safety-pin brooches from Flixborough, Humberside, have this design. The only brooch of this type from Brandon has similar decoration to the Sedgeford brooches. No other brooches of this type have been found in Norfolk despite the excellent relationship between metal detector users and archaeologists. This may indicate a source for these brooches from outside the county, or a very limited distribution from a local production site. There are none of these brooches recorded from Ipswich, but we have obvious links with Ipswich in the Ipswich ware pottery and as the source of the Series R sceatta.

The Romano-British small finds and coins found on the site are either residual, possibly from the Romano-British site two kilometres to the south, or they may have been handed down as curiosities from generation to generation, or used as perfectly serviceable brooches.

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OSTEOLOGICAL RESEARCH

by Patricia Reid and Lorna Corr

*Since 1996 180 skeletons have been uncovered on the Boneyard site. 150 have been lifted and 30 remain in situ. A further 22, lifted in 1958 during the Jewell excavations and carefully mapped, reside in the Duckworth collection at Pembroke College, Cambridge, and were fully recorded by us in the 2000 season. Thanks to good preservation conditions, especially in the waterlogged Reeddam trench, SHARP now has an exceptionally rich archive of human remains from which much can be learned about the people they once were. This section provides a summary of the human remains work conducted to date, as well as discussing future avenues of research, and includes a report on the palaeodietary analysis currently being conducted at the University of Bristol. **References in bold are to members of the SHARP team.***

INTERIM REPORT ON HUMAN REMAINS

by Patricia Reid

Fewer burials were excavated this year than in the past, the outcome of archaeological priorities. This season did, however, see the excavation of the last burials from the Reeddam trench, revealing for the first time oval grave cuts dug into the natural surface around 0.6 to 0.7 metres below the present day ground level. At the same time, 7 burials have been revealed in the south-east corner of the New Trench: these have been carefully covered over and left to an archaeologically appropriate time in the future.

YEAR	BONEYARD	REEDDAM
1996	16	n/a
1997	15	22
1998	30	n/a
1999	6	27
2000	7	19
2001	3	6

Table 1. The number of skeletons recovered from Boneyard and Reeddam so far, by year.

The easing back of excavation pressures this year has enabled the Human Remains team to catch up on the backlog of recording from previous years and to start inputting data on a large scale into the excellent new database designed between seasons by Hilary Snelling. The on-site location of the archive and teaching room enabled the daily use of volunteers to help with cleaning, labelling and packing, and gave them a much appreciated opportunity to widen their experience in handling ancient human remains. The on-site location also

promoted a much closer integration with Excavation, Finds and Animal Bones teams. Most welcome of all this season has been the opportunity to build on previous research (in the past, limited by time constraints) and to open up some new avenues in liaison with the rest of the SHARP team.

In spring 2001, the Human Remains team met to draw up a 5-year research plan, at the request of the Directors. This was to be flexible and broad, yet give some direction to our activities. Picking up on the on-going speculative discussion about Saxon Sedgeford as a possible high status settlement, we set out as the central questions: Were these a privileged people? Does their life experience, as inferred from their skeletal remains, suggest enjoyment of a superior lifestyle? Obviously, the critical question then becomes: In relation to whom? i.e. comparative studies are essential. Before this can be done effectively, however, certain avenues need fully to be explored for our own people.

It seemed to us that two main areas needed investigating. One, involving the physical anthropology, health status and activity-based skeletal modification was already well established. The other, related to variation in burial practice, had not been focused upon before, although often mentioned in informal discussions. Both of these areas were explored this summer and are discussed below.

The Evidence of Osteology

a) Physical Anthropology

This season saw the full recording of another 20 skeletons, and the completion of a number of others. The additional information confirmed patterns already observed: the last articulated skeleton out of Reeddam was a tall, robust male of a familiar type. Table 2 shows the distribution of stature in the population, subdivided for male/female. Most women fell into the 156-170cm range, most men into the 171-181cm, with marked sexual dimorphism. This is similar to the modern population of the area, and taller than the preceding Romano-British and later medieval populations. The bones of males and females are robust and many show strong muscle markings: on one of the conventional measures for inferring sex - using the diameter of the femoral neck - many Sedgeford women come out as borderline 'male' and the men as very male.

HEIGHT	MALE	FEMALE	UNSEXED
151-155cm	1	2	0
156-160cm	0	11	1
161-165cm	3	20	0
166-170cm	9	8	2
171-175cm	12	4	3
176-180cm	25	0	0
181-185cm	7	0	0
186-190cm	1	0	0
Unknown	7	9	23

Table 2. Height of individuals, by sex.

Estimating age at death of adults is notoriously difficult, as recent studies have shown (e.g. Molleson & Cox 1993:167-172). This year we have begun to rely more heavily on estimates developed by Miles (1963) and Brothwell (1981) based on rates of tooth wear during life. The sample populations used by Miles and Brothwell were very similar to our population in genetic and lifestyle terms. Until we have been able to revise all of our adult records, the estimates must be seen as provisional; even then our toothless individuals will remain uncertain. Nevertheless we can be reasonably sure that at least 50% of our population survived until their later 40s, some of them even longer, with men and women having an equal chance of survival.

At the other end of the age range, although there are a number of juvenile burials (7-12

year olds) there are few adolescents and no infants under three. Although the absence of adolescents could plausibly be explained by a relatively low death rate, this is not likely for the infants. Possibly the infants were buried in a part of the cemetery not yet excavated: there are hints of juvenile and infant burials in the unexcavated east central part of the Boneyard Old Trench. Investigation of this will have to await the future, but we have this season made special efforts to train volunteer excavators in the recognition of infant remains and will continue to do so next season.

b) Health Status

For some years, we have been aware that the commonest osteologically visible health problems for the Sedgeford Saxons were dental infections (abscesses) and osteophytic conditions of the spine. Both of these conditions can be associated with lifestyle, the latter more arguably.

Dental abscesses are detectable as holes in the mandible and/or maxilla, most commonly associated with the first molars. These people had robust, orthodontically splendid jaws, fully developed through heavy chewing of a coarse diet, but the abrasive action of that same diet wore down teeth like sandpaper. The presence of fine stone powder in flour from the querns was probably a major contributory factor. At a certain point, the wear reaches the pulp cavity and the tooth disintegrates. In some cases infection results, which may be a cause of death through septicaemia. (Larsen 1997: 245-7, Whitaker 2000: 87) A small-scale research project this season involving 14 individuals suggested a higher incidence of abscesses in men than in women and this will be investigated further next summer (**Gerardo Astobiza Aguado**).

A detailed study of spinal osteo-arthritis (OA) has been carried out by **Lavinia Ferranti di Ruffano** and will be fully reported in the forthcoming SHARP publication. For now, interesting differences have been found between incidence in men and women, with an earlier onset age in men (25 onwards compared with 35 onwards) and a greater incidence of

cervical vertebra OA in women, with men suffering more in the thoracic area. OA conditions of the hip, knee and hands are almost unknown in this population: although this may be due simply to the shortage of older people, lifestyle factors may well contribute. Investigation of this will form an important part of the 5-year research plan.

Aggressive or accidental trauma is not common in this population. During this season, a total search was made for cranial trauma, and although no new examples of fatal sword/weapon injuries were found, a number of curious head markings came to light (**Ruth Buckley, Ben Stillwell**). These await analysis over the winter and will be reported on next year. Four further examples of accidental trauma were located, all in legs, and a more exhaustive scan is planned for next season. A detailed scan looking for harder-to-spot conditions such as tuberculosis, *cribra orbitalis* (anaemia) and leprosy was also begun and will be completed and reported on next season.

Finally, a study of the diet of the people of Saxon Sedgeford is currently the subject of a PhD at Bristol. Lorna Corr is working with bone samples and environmental evidence to reconstruct what these people ate. Her findings are awaited with great interest, and a progress report is included below.

Burial Practices

Sedgeford is identified as a Christian cemetery because of the dominantly east-west burial orientation and the absence of grave goods. Without questioning this basic interpretation, we have this season begun to look at the variability in burial practice within this little-understood early Christian historical context. Three main avenues have been followed - variations in orientation, variations in grave furnishings and patterns in groupings based on variables such as sex, age and familial traits.

a) Orientation

The map of burials in Figure 4 shows clearly the diversity in orientation, defined as the direction in which the feet are pointing in relation to the head. Degrees of divergence

from true east-west were measured, and ranged between 16 degrees north to 16 degrees south (**Ray Baldry**). In the lower Old Trench and Reeddam, the orientation was dominantly south, whereas in the upper Old Trench, the orientation is dominantly north. Two factors are possibly interacting here - sun and slope. The burials of the upper Old Trench do seem to be following the sweep of the contour around the valley side, running north-east. On the lower slopes, where the slope was not a factor, sunrise may well be the main orientation factor, with most burials taking place when sunrise is at its most southerly, i.e. in winter. Clearly, what is happening in the as yet unexcavated central area is of great interest.



Plate 1. The final skeleton from the Reeddam is recorded before lifting.

Another intriguing hint has been emerging from the sequencing work on burials from Reeddam. The earliest burials seem to show much greater variability in orientation than the later ones, which are more regular and orderly. Has a 'landmark' been constructed during this period so that solar orientation has been replaced by (say) orientation to the wall of a church? This is an area that justifies further investigation and plans are already in hand to compare the orientation variability with sunrise-sunset directions for the appropriate period (**Bill Wilcox**).

b) Grave furnishings

Although the people in this cemetery were not clothed or accompanied by personal possessions it has become increasingly clear that differentials were operating about the way people were prepared for the afterlife. Thus some were buried in coffins (evidence of metal

coffin fittings, probably hinges) some buried tightly shrouded (numerous multifaceted pins found on site). Burial posture provides more clues - thus although all burials are supine and extended, some have convergent arms and legs and are tightly compressed (shrouded?) and others have the limbs parallel, the torso less compressed and the head tucked down onto the shoulder (necessary when the coffin lid is placed on).

Finally, a scan of records was carried out to check associated finds (**Terry Baxter**). One female burial had a closely associated spindle whorl and another (male) had an iron ferrule. A juvenile burial had a single bead. It would seem that the custom of accompanied burial had not entirely disappeared. This research is being taken further at present as the subject of an MA dissertation by another researcher.

c) Groupings

On present evidence, sex does not seem to be a grouping variable in this cemetery. There are roughly equal numbers of each sex and they seem to be distributed evenly. Age patterns are, however, more distinctive. Most of the juvenile burials are in the eastern part of Reeddam, and do seem to be in a line. The only infant burial (see earlier comments) is close to the unexcavated area (central Old Trench), which has shown signs of containing a number of children's burials.

A study was also undertaken of the distribution of some possibly familial (non-metric) traits in the cemetery (**Jess Colmer**). *Metopic sutures* (an unfused joint on the forehead of the skull) seem to be randomly distributed and equally likely in males and females, but certain other traits, notably *parietal foramina* (a hole in the parietal bone) and *lambdoid ossicles* (extra bones along the lambdoid joint of the skull), showed marked clustering, suggesting family groupings. Again this is an area worth testing further and pursuing once the central area is opened up.

One final observation concerns the location in the cemetery of those who died from cranial wounds, all buried at the eastern end of

Reeddam. Two of these are so close and exactly matched in orientation that they seem to be a joint burial, although excavation conditions in Reeddam do not permit such an assertion to be made confidently. The two men are also very alike physically - robust men in early middle age. This is an intriguing association.

We have further confirmed the robustness and seeming good health of these people, considering the non-technological times in which they lived. Comparative work has suggested that the incidence of OA was greater than that for a Romano-British population at Cannington (**Lavinia Ferrante di Ruffano**) but less than contemporary East Anglian populations (although this may be due to the better preservation of Sedgeford skeletons allowing more precise diagnosis (**Hilary Snelling**)). We have instituted a search for incidence of more subtly detectable conditions, however; perhaps the 'good health' is an illusion and the robustness simply genetic. With burials, we have established internal variability in practice, with a minority of the population buried in wooden coffins with large metal fittings. A quick scan of comparative material from East Anglia suggests that such fittings are rare - a sign of wealth? We also have a hint, from the orientation variation, of the establishment of a 'landmark' building during the life of the cemetery.

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PALAEODIETARY ANALYSIS

by Lorna Corr

The specific objectives of this analysis are to use a multi-isotopic approach to assess: (i) the contribution of marine foods (fish and shellfish) in the diet; (ii) the possible seasonal nature of this exploitation; and (iii) the role of status, age and sex in dietary behaviour. Analysis will include human, animal and fish bones and oyster shells excavated at the site. The goal is to establish whether an analysis of the relative ratio of ^{12}C to ^{13}C (known as $\delta^{13}\text{C}$) in bone cholesterol, collagen and apatite can offer more precise information about the relative abundance of freshwater and marine foods in the diet than measuring collagen alone.

Carbon has three isotopic forms, ^{12}C , ^{13}C and ^{14}C , of which only the former two are stable. Most of carbon is comprised of ^{12}C (abundance 98.89%), while ^{13}C comprises 1.11%. However, this ratio is unstable and varies in different organisms due to fractionation by incorporation into living systems and by biochemical processing. Thus, food groups

bear characteristically different isotope ratios, and when these foods are eaten the isotopic value of the diet influences that of the consumer. Due to different carbon sources and pathways, marine fish and mammals have more enriched or positive $\delta^{13}\text{C}$ values than animals consuming a terrestrial diet (e.g. grasses, trees, fruit and vegetables). This 'signature' is incorporated into the carbon in the tissues and bones of humans when they consume either marine or terrestrial-based foods due to the biochemical fact that "you are what you eat". Plants and grasses in north European regions photosynthesise using a C_3 biosynthetic pathway and are known as C_3 plants. Humans who derive most of their dietary intake from C_3 plants have a mean bone collagen $\delta^{13}\text{C}$ value of -22‰ (parts per thousand) while those with high marine diets have a mean value of -17‰ and the large difference between these two sources allows us to investigate the relative contribution of each source in the diet.

Preliminary results for bone collagen and cholesterol $\delta^{13}\text{C}$ measurements are described here (Figure 9). Cholesterol is a good indicator of short-term whole diet whereas collagen

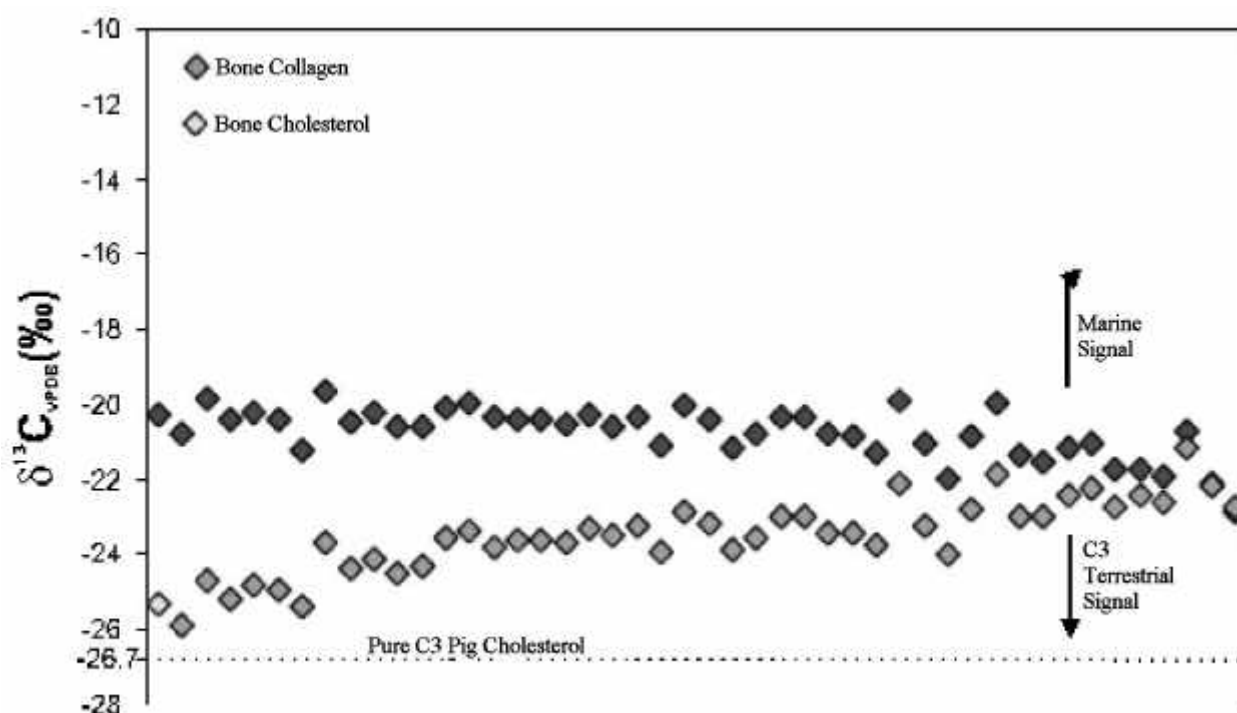


Figure 9. The bone collagen and cholesterol results from the Sedgeford samples.

provides an average of 10-15 years' diet and mainly reflects dietary protein.

Collagen $\delta^{13}\text{C}$ values ranged from -22.8‰ to -19.6‰ with an average value of -20.7‰. This range is less enriched than one characteristic of a rich marine diet. For instance, human populations that obtain above 90% of their protein from marine sources have $\delta^{13}\text{C}$ values of approximately -12‰ (Richards et al. 1998). Bone collagen $\delta^{13}\text{C}$ values in British archaeological populations interpreted by the authors as showing marine input range from -20.17‰ to -18.17‰ in one Medieval period study (estimated to indicate 13 and 35% marine protein, respectively, Mays 1997). The average bone collagen value is -20.7‰, which is considerably more enriched than the average value of -21.8‰ for an inland Norwegian prehistoric population (Mays 1997); however, it does not provide the expected evidence that this coastal site was heavily exploiting marine resources for dietary protein. This result does, however, corroborate with the paucity of fish bones identified in environmental samples.

A significantly larger range of $\delta^{13}\text{C}$ values was obtained for bone cholesterol than was for collagen, with standard deviations of 1.1 and 0.7 respectively. Cholesterol $\delta^{13}\text{C}$ values ranged from -25.9‰ to -20.3‰ with a mean value of -23.4‰. The comparatively wide range (5.6 ‰) of values obtained is most likely representative of differences in the amount of marine food in the diet of this population, where more enriched values are related to increased marine input. The more depleted end of this range represents a diet of C_3 -fed animals (sheep, cows and pigs) and C_3 cereals.

There is little evidence for the intensity of marine exploitation in the Saxon period and even less on how an individual's sex, age and social or wealth status determined their access to this dietary source. An objective of this research is to get a clearer picture of diet and demography and this was built into the sampling strategy in that an effort was made to include an equal number of males and females and as large a sample of juveniles as possible.

A remarkably minute difference has been observed between the sexes for both collagen (mean value of -20.7‰ for males and -20.8‰ for females) and cholesterol (mean value of -23.7‰ for males and -23.2‰ for females) isotopic abundances in this population. Moreover collagen measurements reveal that children were also accorded similar diet status as their parents, as the mean juvenile value was -20.8‰. Juvenile cholesterol values show some deviation from this pattern, being slightly more enriched than adults (-22.8‰), possibly resulting from a trophic level effect.

This result is highly significant in terms of cultural processes in this Saxon settlement. There is debate amongst archaeologists about the status of this population: grave goods are helpful in assigning status to populations, but very few have been found at Sedgeford and other Christian cemeteries. More analysis has to be performed to refine our picture of the actual diet, but whatever this population was eating it is likely that men, women and children were obtaining identical sources of dietary protein and energy.

Similarly there do not seem to have been dietary differences between the major six age-groupings (Juvenile, Young Adult, Young-Mature Adult, Mature Adult, Mature-Older Adult and Older Adult) in bone collagen and cholesterol values. However, more variation in collagen-cholesterol spacings was observed in young and mature adults, and these spacings may also be affected where nutritional stress is present (e.g. anaemia, calcium deficiency).

No significant difference was observed in bone collagen values between the Reeddam and Boneyard areas of the site, which may be highly significant with regard to the issue of cultural homogeneity throughout the site. Bone cholesterol values were shown to differ between the two regions, the Reeddam skeletons attained more enriched values than the Boneyard site, normally indicative of a higher marine contribution to the diet. The mean $\delta^{13}\text{C}$ Reeddam-Boneyard value is 1.25‰ for cholesterol compared to 0.3‰ for collagen, and the ten most enriched cholesterol $\delta^{13}\text{C}$

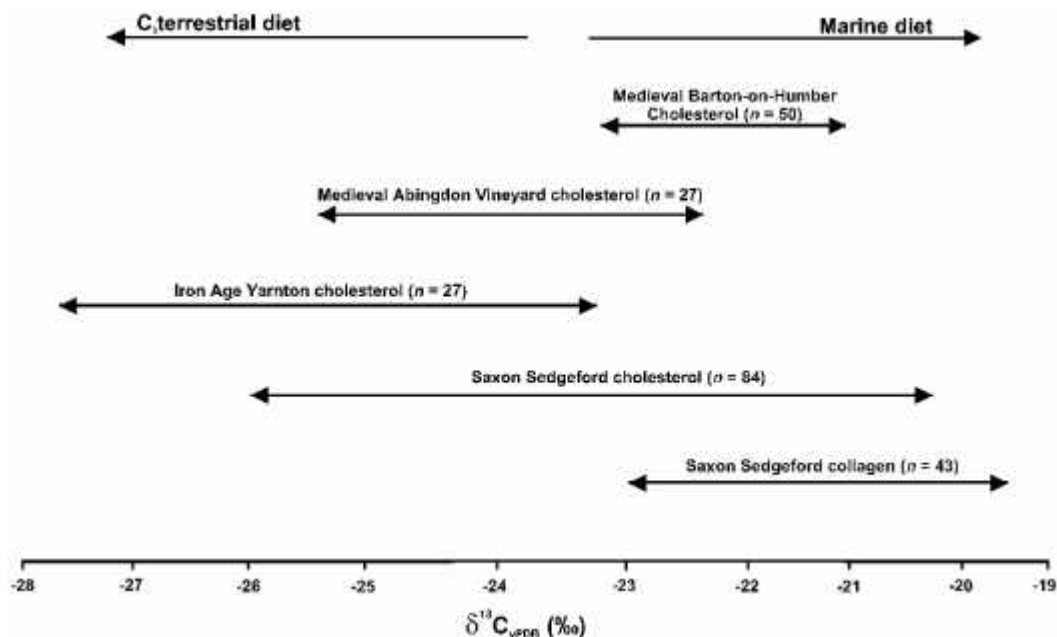


Figure 10. The range of bone collagen and cholesterol values from Sedgeford compared to values obtained for other English sites.

values for the whole population were buried in the Reeddam area. Though 1.25‰ is a small spacing it is significant relative to spacings obtained for other variables such as age and sex. More samples from this part of the site will be analysed in the future to investigate the potential susceptibility for enriched cholesterol $\delta^{13}C$ values in waterlogged burial environments.

Figure 10 displays the range of bone collagen and cholesterol $\delta^{13}C$ values from the Sedgeford population in the context of bone cholesterol values obtained for other English sites. The comparative data consist of the coastal Medieval site Barton-on-Humber (Jim 1996) and two inland populations, Iron Age Yarnton and Medieval Abingdon Vineyard (Jones 1998). Only a small inter-population range can be seen in collagen $\delta^{13}C$ values, where Barton-on-Humber has the most enriched or marine-like values (-18.9‰) and Sedgeford has the most depleted (-20.7‰). This was not expected as Sedgeford is a coastal site whereas Abingdon Vineyard and Yarnton are located far from the coast in the south Midlands. However, bone cholesterol values reveal a more interesting picture, where the most enriched mean value was obtained for Barton-on-Humber (-22.2‰) and other sites in descending order were Sedgeford (-23.4‰),

Abingdon Vineyard (-23.9‰) and Yarnton (-24.4‰). It is noteworthy that the range of values obtained for Sedgeford is larger than for any of the other sites and this observed large dietary range includes some individuals (the most enriched value is -20.3‰) with more enriched values than identified at all the other sites. The analysis of bone apatite and individual collagen amino acids will provide a more sensitive glimpse into the source of energy (fats and carbohydrates) and protein foods in the diet of the Saxon population living in Sedgeford.

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Archaeo-Environmental Research

by Liz Wilson, Ray Thirkettle and Val Fryer

Archaeo-environmental sampling is becoming increasingly more important to the research aims of the Project. For this reason a comprehensive strategy has been put into place. Archaeo-environmental samples are taken from sealed archaeological deposits. The sample must also be datable, either stratigraphically or through the analysis of its inclusions. Close analysis of these samples, both on-site and in the laboratory, can tell us a great deal about what the Sedgeford people were eating, what resources they were exploiting, and also inform us about their general environment. In this section a summary is given of the sampling methods employed on our sites, as well as discussion of the findings from analysis of the animal bones and plant macrofossils from previous years. It concludes with a look at what these results can contribute to the Project.

ARCHAEO-ENVIRONMENTAL SAMPLING

by Liz Wilson

Archaeo-environmental samples are taken from many different features, such as ditches, gullies, postholes, occupation levels, layers, pits. Control samples are also taken. Once a sample has been identified, it is recorded and excavated using clean tools and buckets. It is important to reduce the level of contamination at each stage of the processing. During excavation detailed records are made about the feature and its inclusions.

An Archaeo-environmental sample passes through many stages of analysis. Flotation of 40 litres of material is usually done first. At SHARP, the manual wash-over technique has been adopted. This involves half filling a washing-up bowl with sample, then filling the bowl to the top with water. By mixing the sample all the charred and organic remains float to the surface. The water is then decanted into a 500-micron Endecott sieve. This process is repeated at least four times, to ensure that all of the organic matter has been removed. This is then repeated until the entire 40 litre flotation sample has been floated. The material collected is known as the 'flot', which is studied under a binocular microscope by the environmental specialist.

The material left in the washing-up bowl is known as the residue. This is sieved through a 1mm mesh to ensure a 100% collection of all artefacts and ecofacts from the 40 litre flotation sample.

The remaining material excavated from the feature is then wet-sieved on a 2:1 ratio, through 6mm and 3mm mesh, respectively. This sieving strategy was adopted to again ensure that all possible information is recovered. Wet-sieving on this scale has led to a better recovery of fish bones, small pottery fragments, small animal bones and snail shells - all of which can tell us a great deal about each feature.



Plate 2. Environmental sampling in progress.

The residues from the flotation and the wet-sieving are then sorted. Flotation residues have to be painstakingly sorted using tweezers, a magnifying glass and a team of willing volunteers! By sorting the flotation material in

this way we can guarantee that we are recovering all ecofacts and artefacts. Once sorting is complete, the ecofacts are sent to the specialist for analysis whilst the artefacts are sent to the relevant on-site team. The hand-picked material from the wet sieving is also dealt with in the same way.

These methods of on-site processing are very time consuming, but the initial results can help the site supervisors with their interpretation of the individual features and the site as a whole. Specialist analysis is also important, as will be seen in the following articles.

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COUNTING SHEEP (AND OTHER ANIMALS)

by Ray Thirkettle

Zooarchaeology is the name given to the study of animal remains from archaeological sites. This is really the study of human interaction with animals, usually as a result of their exploitation as an economic resource.

Perhaps the most obvious reason for human association with animals is as a food source, but there are others: clothing, raw materials, transport, companionship, and even unwelcome association from, for example, rats and mice! The animal remains, which have been recovered from the excavations, are beginning to give us a picture of some of these aspects. The validity of this picture is dependent on quantifying the excavated bones in such a way as to represent their original significance to the community - in other words, we have to count up all the bones and give reasons for their relative abundance.

Many factors have influenced the survival of the bones since they were living animals; these are outside our control but still must be considered. There are other influences on our data that we can control; the way we recover the bones for example.

Animal bones from the Boneyard are collected as they are encountered during the trowelling

of the site. It is generally thought that this method is unreliable as bones from the smaller sized animals may be overlooked. If this were the case, our bone count would be biased toward the larger animals, small species could be under-represented, and so our results would be misleading and therefore useless. In order to check that this was not happening, we have adopted a programme of fine screening to see what has been missed. This method requires that ALL of the soil from archaeologically important areas, that is, any area of occupational activity that can be securely dated, is washed through a 6mm mesh sieve. This entails a huge amount of work but it is of fundamental significance to our results.

We have been able to prove that the recovery by hand trowelling has generally been good, although conditions such as the weather make this variable. Sieving has increased the collection of small bone fragments and loose teeth, but has not significantly altered the species ratio for the larger animals. Most importantly, it has improved our collection of fish bone, although much of this is a product of the smaller meshes used during environmental sampling.

Now we have confidence in our figures, we are able to make some statements about the relative importance of various animals to the Anglo-Saxon in Sedgeford. Sheep bones are the most abundant by far. A large number of sheep appear to have been slaughtered at about two years old, so we can place lamb on our Anglo-Saxon's menu. Most sheep, however, were allowed to live on to old age, indicating that food was not the prime product from this beast. Abundance does not necessarily mean importance, however, as cattle bones rank next, about a third the quantity when compared with sheep, but if the butchered carcass weight is taken into consideration we can see that cattle meat, beef if you like, was available in greater quantities.

The meat yield from a cow carcass can be over seven times that from a sheep (Boessneck et al 1971). Pigs are relatively few in number but still significant; the reason why this animal is

not evident in anywhere near the same amount as sheep and cattle may be simply that it was not raised in great quantities, perhaps due to a shortage of forage and fodder. West Norfolk was probably not ideal pig country, lacking large wooded areas. Sty-fed pigs would need a large amount of surplus fodder for large-scale meat production; this was unlikely to have been available. Similar proportions of pig bone are reported from other contemporary rural sites; so the data from Sedgeford does fit into a pattern. Possible differences in bone preservation must be taken into account. Being primarily exploited for meat, most pigs were slaughtered before reaching maturity. Immature pig bones tend to be porous and fragile. This may be a possible reason for the under representation of this animal.

It is very difficult to determine the contribution that domestic birds made to the diet, particularly when attempting a comparison with the large mammals discussed above. However, bones from domestic fowl are abundant and geese plentiful, so they must have been an important food source.

Anglo-Saxon Sedgeford was primarily an agricultural economy; hunting appears to have made a very minor contribution to the procurement of food. Wild fowl such as duck and crane are present but rare, as is deer. The duck, of course could be domestic.

We are beginning to feel that fishing, particularly for sea fish and eels, was a greater source of food than the evidence at first seemed to suggest. Fish bone is by no means abundant but it is to be found distributed across the site, particularly in features such as ditch fills and possible postholes. The gathering of shellfish, particularly oysters, needs no comment for those working on or visiting the excavations. The discarded valves are to be found in considerable quantities.

The huge amount of animal bone from the site immediately gives the impression that Sedgeford in Anglo-Saxon times was a vegetarian's nightmare! However, animal bone is very 'archaeologically visible'. I feel this

does tend to over represent the amount of meat consumed by the average inhabitant. Extensive attrition of teeth, even on children's deciduous teeth, is evident on Anglo-Saxon skeletons of this period (e.g. Wells, 1980). This points to a coarse abrasive diet, perhaps indicating that bread, contaminated with grit from milling and baking, was the staple. We cannot, of course, state with certainty what was eaten; we must leave that to those studying the chemistry of the human remains, but we can at least say what was available.

There is much information yet to be revealed by this pile of bones. The next stage is to carry out a study of any changes in the animal bone from the different phases of occupation on the site. This should highlight any modifications of lifestyle and economy occurring during the Mid to Late Saxon period. In addition, an intensive study of each type of animal will give us a better understanding of the varieties of livestock kept and details of their utilisation. Such a study has recently been completed for the sheep and the bird bones; this will significantly contribute to our knowledge of animal husbandry in Anglo-Saxon times.

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PLANT MACROFOSSILS AND OTHER REMAINS FROM 1998-2000

by Val Fryer

A strategy for the systematic sampling of contexts for the assessment of plant macrofossils, molluscs, etc has been developed with members of the SHARP team over the last three years. Samples from the Boneyard, Reeddam and West Hall Paddock excavations have yielded very promising results which are summarised here.

Boneyard and Reeddam sites 1998 - 2000

To date, twenty-two samples have been assessed from various contexts across the excavated area. Cereal remains and seeds/fruits of common weed species have been present throughout at varying densities. Preservation of the macrofossils is variable. Oat, barley, rye and wheat grains have been recorded but chaff elements are consistently rare. Other crop/food plants are also uncommon but rounded seeds of field pea and fragments of indeterminate large pulses have been found.

Weed seeds generally only account for a small part of each assemblage. Weeds found in cornfields predominate and include corn cockle, stinking mayweed, brome, cornflower, black bindweed, corn gromwell, indeterminate grasses, knotgrass, wild radish and vetch/vetchling. Wetland plant macrofossils and tree/shrub remains were noted at very low densities in the 2000 samples and included sedge and spike-rush fruits, a single bog-bean seed, hazel nutshell fragments and a burnt elderberry pip.

Other material types were occasionally noted during the assessments. These included fragments of black porous material and black tarry material, both of which are probably derived from the combustion of organic materials, including cereal grains, at extremely high temperatures. Food residues and industrial waste were also recorded along with small fragments of human skeletal material.

As the composition of most assemblages is broadly similar, it would appear that the material has a common source, although at present the exact origin is uncertain. Wind dispersed hearth-waste and cereal processing debris may account for most of the material, although no features directly related to such domestic or agricultural activities have so far been discovered.

West Hall Paddock 1998 -1999

Samples were taken from an occupation layer, an extensive deposit of organic mud, and from a dump of organic refuse. Preservation of the

macrofossils was moderate to good. As at the Boneyard and Reeddam sites, oat, barley, rye and wheat grains were recovered. However, unlike these sites, chaff elements were common and included barley/rye and bread wheat type rachis nodes (chaff).

While a small number of charred weed seeds were noted in most assemblages, wet/de-watered specimens were moderately abundant throughout. Wasteland weeds were predominant and included orache, musk thistle, fat-hen, fumitory, hemp-nettle, indeterminate grasses, buttercups, dock, chickweed and stinging nettles. Seeds/fruits of wetland/aquatic species were present in all samples and common taxa included wild celery, sedge, yellow flag iris, water crowfoot, celery-leaved crowfoot and bur-reed. Hazel nutshell fragments, oak fruits and seeds of elderberry and bramble were also recovered along with bracken pinnules and indeterminate moss fragments.

The assemblage from the occupation horizon comprises charred cereals, chaff and segetal weed seeds and is probably derived from cereal processing waste. However, the date of the material is far from certain. Although this layer was provisionally dated by the excavator as Roman, cereal processing assemblages of this date are frequently dominated by a high density of spelt chaff and this is entirely absent from the West Hall sample.

The samples taken from the organic mud deposit, which appears to cover much of this area to the north of the River Heacham, indicate that this layer was deposited as a result of either prolonged flooding or regular seasonal inundation. At present, it is not known whether this flooding was deliberate or the result of climatic deterioration, but the plant macrofossils show that the area was boggy with some standing water.

The dump of organic refuse appears to contain a mix of twigs, wood fragments, bracken and seeds of hedge/scrub species and is probably derived from seasonal hedge trimming and underbrush clearance. However, it is of note

that flax seeds are also common. Although these can be eaten after careful preparation, it is perhaps more likely that they are derived from either the local wild flora or possibly the use of flax for fibre production.

Assemblages from the 2001 excavations at the Reeddam and Boneyard sites have yet to be assessed and the results will appear in forthcoming reports.

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WHAT DOES THE ARCHAEO-ENVIRONMENTAL SAMPLING TELL US?

by Liz Wilson

Specialist analysis of archaeo-environmental results can yield a great deal of information. This information is then open to a whole series of different interpretations.

Two of the most interesting features to be sampled this season came out of the Reeddam trench. Having removed the earliest phases of the Saxon Cemetery, the appearance of Iron Age features came as a surprise. 670 litres of material from a feature interpreted as an Iron Age gully were put through the environmental sampling process. This feature was one of the richest contexts, in terms of artefacts, to be sampled this season. Large quantities of Iron Age pottery have confirmed the date of the feature. The sample contained 315 grams of burnt flint, 22 pieces of either struck, utilised or retouched flint, including a roughly made flint arrow head, which had been discarded before completion.

Another feature, which has been interpreted as an Iron Age pit, also has an interesting assemblage of 7 sherds of Iron Age pottery. The sample also contained four worked flint small finds and some burnt flint, as well as a piece of worked bone and a piece of butchered bone.

The archaeo-environmental analysis, which takes place off site out of season, should tell us a great deal more about these samples, perhaps

establishing if there are any major differences between the environments of the Anglo-Saxon and the Iron Age Sedgeford populations. It will be interesting to see if there are any differences in agricultural techniques between the two periods. The results for this season's specialist report will be in forthcoming publications.

Saxon and Medieval Features

In 1996 a feature in the southernmost part of the Boneyard Old Trench was interpreted as being a gully or a land drain. The date of the feature was unknown at the time. An archaeo-environmental sample was taken this season, although the sample only contained 37 litres of material. It seems interesting that 23 fish bones were recovered, which is a huge number when compared to other features on the site.



Plate 3. The first SFB under excavation.

It may be that this particular feature is linked to the construction of the medieval Reeddam; this would explain why there is such a relatively high number of fish bones in this feature. Further analysis is being carried out on the fish bones, and it is likely that this information will tell us more about the function of the feature.

On the lower slope of the Boneyard excavation we have unearthed two possible sunken-featured buildings (SFB). Last season 50% of the first SFB was sampled and this season the other 50% was taken out, along with 50% of the second SFB. The first SFB contains two fills, as was the case at a number of the SFBs excavated at West Stow, Suffolk (West, 1985). The primary fill of the first SFB contained 180 grams of animal bone, of which 29 grams were identified as sheep/goat and 38 grams as pig.

There was also evidence for the dumping of an articulated lamb's foot.

The sample also contained 1326 grams of human remains, which may have derived from an earlier burial. The pottery evidence indicates that the feature dates to early eighth - mid-ninth centuries. The feature also contained 5 grams of burnt/fired clay and four worked flint objects. The specialist report from last season indicates that the feature contained the grains of a bread wheat, along with oat, cereal and barley, (Fryer, 2001). This environmental evidence may suggest that the area above the pit-like feature was used as a food preparation or storage area. The SFBs at West Stow also contained these grains (West, 1985), so it could be that we are looking at similar features.

The upper fill of the first SFB contained 668 grams of animal bone. Analysis of the fish bones indicate that there were flatfish, possibly plaice and flounder within the sample. The pottery evidence suggests a similar date to the primary fill. This fill also contains a similar list of grains. There are, however, crucial differences: within the fill, 640 grams of burnt/fired clay was excavated, whilst lying on top of the feature there was a possible oven lining, made from clay. Specialist analysis of part of the oven lining last season showed that this feature contains hazel, barley, rye and wheat (Fryer, 2001). It is likely that this feature is an SFB, which was used primarily as a processing pit and during its disuse a dump of oven lining was thrown into the hollow. SFB 6 at West Stow also has a very similar feature; in this case the SFB had a hearth on the top of the second fill (West, 1985, 17).

The West Stow SFBs all have a large number of artefacts within the fills, including spindle-whorls, iron and bronze objects, Roman coins, pottery and bone objects (West, 1985). These sorts of artefacts all appear to be absent from the SFB assemblages at SHARP. However, at Mucking, Essex, the SFBs also appear to lack any substantial artefactual evidence (Bond 1988, 20).

It could also be argued that SHARP's SFBs are much too small to be SFBs, but SFB 69 at West Stow seems to be the SFB which is most like the one excavated at SHARP. It contains very few artefacts and only a small quantity of pottery and animal bone. It is oval in shape and its dimensions are 3.6 x 2.9 x 0.4m (West, 1985, 53).

The second SFB has been half excavated. So far 825 grams of animal bone have been recovered. The pottery evidence indicates a Middle-Saxon date, due to the fact that it contains 13 sherds of Ipswich ware. This SFB only contains 15 grams of burnt/fired clay. A comparable SFB was excavated at Yarnton, Oxfordshire; it too contained a relatively high amount of animal bone, and some charred material (OAU 2001, 221). The second SFB at SHARP could possibly be another processing pit, this time concerned with the preparation of meat, but the artefacts and ecofacts within the fill could just have been dumped in the pit.

Interpreting these features is difficult. The possibility still stands that these features are SFBs, but they may also be processing pits, rubbish dumps or even part of larger building. Only further excavation and analysis will improve our interpretation of these features.

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The Boneyard/Reeddam Environs

by Dominic Andrews, Stuart Calow, Marion McCabe and Naomi Payne.

In addition to the on-going work on the Boneyard and Reeddam sites, there were several other projects conducted during the 2001 season in the vicinity. We continued our investigations into the nature of the local geology through a combined approach of desktop research and fieldwork, which including the opening of the new Reeddam II trench. A small scale excavation was also carried out in the Chalk Pit to evaluate the archaeology seen during pipe laying in 1991 and sample the potential of the site. Finally, the on-site survey strategy is described, which this year made the first steps towards having all of our work recorded on a single digital plan.

LOCAL GEOLOGY AND THE REEDDAM II TRENCH

by Dominic Andrews and Stuart Calow

Sedgeford lies in an area where the surface rock is predominantly Cretaceous Middle Chalk, formed between 144 and 65 million years ago. The rock strata below this are Greensands, and include layers of Carrstone, the iron-rich sandstone used in buildings in the area. The Carrstone appears on the surface west of Sedgeford, but can be seen in the bed of the Heacham River at the west end of the village. At some places, there are thin layers of the rare Hunstanton Red Chalk (which has a deep pink colour), between the Chalk and Carrstone strata. The Chalk also contains deposits of flint; these are the remains of sponge-like colonies, which grew in the Cretaceous waters

surrounded by the micro-organisms which formed the chalk.

While the Chalk directly underlies much of the soil in the area (as in the Chalk Pit quarry and in the old farmyard to the east of the church), there are also more recent deposits of Hunstanton Boulder Clay, which were laid down by glaciers during the Ice Ages in the last few hundred thousands of years. This glacial action also deposited pockets of sand and pebbles, such as can be seen at the southern extent of the Boneyard trenches. Chalk is, of course, very soft, and, like limestone lies fractured in blocks, rather than being solid. This, along with the porous nature of the rock, means that water flows readily through it in large quantities. Because of this, there are many springs along the Heacham Valley,

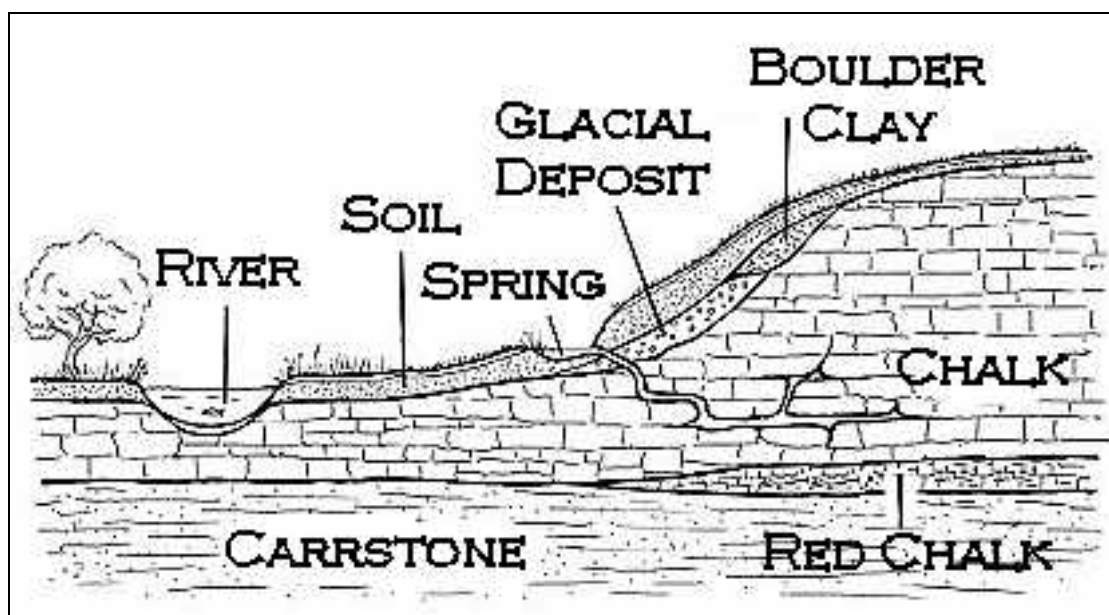


Figure 11. A hypothetical section through the southern bank of the river.

feeding the river, which in years of average rainfall has its source in Fring. Sedgford has many springs, of which the largest is now the Ladywell (Figure 1), and a great number of smaller ones flow out in numerous places along the river and in the hillsides. This can again be seen on the Boneyard, where springs uncovered by SHARP flow down the slope and cause the Reeddam trench to fill up nightly. These springs would have meant that the inhabitants of the site, whether in the Iron Age or the Anglo-Saxon period, always had a ready supply of fresh water, as the springs would have flowed constantly, and it seems that at least some of the north-south running gullies on the Boneyard were either dug to channel this water or were naturally cut by it.



Plate 4. The Reeddam II Trench looking south.

As such, the river would probably not have been used as a source of water, but more probably to take away waste, and also for transport. There is some documentary evidence that the river was navigable; while now neglected and clogged with silt and plants, it can be seen that it was once around six metres wide in places, which is enough for sizeable river craft to move building materials and trade goods up and down the valley.

The course of the river has been modified in the past. Now it flows past Sedgford Hall to

the north, and south of the woods to the east of the Boneyard, and then along the northern edge of the Reeddam. It then passes through a garden and around West Hall house, before passing below Hill Farm and the Ladywell (Figure 1). This course has probably been much the same for several centuries, but we know that the river once followed the valley bottom, and would have flowed through the centre of the woods, and along the middle of Reeddam, before passing through the area of West Hall. The re-routing of the river, as a canal, was done in order to bypass the Reeddam, which was originally a large area at the lowest point in the valley, comprising the present Reeddam, as well as the woods leading to Sedgford Hall.

The history of the Reeddam seems to have been a complex one, and we still know only some of the facts. We do know that it was dammed at the west end, possibly around the 10th century, by the causeway which now carries the Snettisham Road. The flooded area was fed by the river and also by springs, such as that in Chalk Pit field. This spring was (and still is) channelled from west to east in the ditch which runs along the north side of Boneyard field. This was examined by SHARP in 1996, and again this year in the Reeddam II trench, and it also runs through the northern end of Boneyard Old Trench.

This year we opened a new trench in the Reeddam, running north-south from the trackway in the south-west corner of the Reeddam. Measuring 1.5m by 35m, this was laid to provide a transect of the western end of the Reeddam, parallel to the Causeway. Three sondages were cut within the trench; the first of these was against the southern baulk, and aimed to investigate the foundations of the road and to complement the Chalk Pit trench being dug on the other side of the track. Few traces of the road were seen in the trench, and there were hardly any finds at this point; the homogeneity of the soil suggests that it had been brought in from elsewhere to shore up the track.

To the north of the road, the ground sloped down onto a terrace beneath the hillwash soil;

this produced a variety of finds including animal bone, pottery and bits of tractor, as well as a piece of human bone; the latter has important implications as it may point to the cemetery running further up the hill than anyone thought.

The most prominent feature in the Reeddam II trench is the ditch mentioned above. This was dug under duress and underwater (by a very dedicated series of people!), due to the continual flow from not only the spring but the entire Reeddam. Nevertheless, the team persisted, and eventually showed the ditch to be over three metres wide and over one metre deep. The ditch appeared to have been cut through the layers of hillwash and sand either side (it was probably re-cut several times). On the south side were chalk cobbles, intermingled with Anglo-Saxon pottery. We still do not know the date of the ditch, although evidence from the Boneyard suggests a Medieval origin. On the north side of the ditch was a complex series of layers; sand lay over a chalk path which ran diagonal to the ditch, and must have pre-dated it.

To the north of this, the ground becomes increasingly waterlogged, making digging very difficult, and hazardous. A sondage was put in though, which successfully located the layer of chalky-clay which has been seen in other areas of the Reeddam. This seems to be a feature, around 0.25m below the modern surface, which covers most of the Reeddam. Its age and purpose are unknown. Lewton-Braine, digging in 1953, thought he found the remains of a Saxon hut on a raised area covered by this layer (which resembles the chalk marl used locally as fertiliser), although this was probably a later feature. The chalky clay seems to seal the archaeological layers, and it may be as recent as the 18th century, laid down to seal the marshy ground in an attempt to make it usable. Documentary evidence suggests that the Reeddam pond was no longer maintained in the Post-Medieval period and silted up, becoming an area of marshy ground unsuitable for most crops. By the 19th century, the eastern end had been planted with trees, and the middle was an osier bed, with only the west end remaining as a usable but marshy field. In the 1960s the

Reeddam was planted with poplars, and it was the stumps of these, harvested in 1996, which were seen in the Reeddam II trench.

Much of the Reeddam remains unknown; a careful foray into the undergrowth north of Reeddam II found an island bare of foliage, which may be one of many. There is probably a large number of buried ditches and canals (dug so that the pond could be cleaned and the reeds harvested); some of which are visible on aerial photographs of the site. The view across the Reeddam reveals the ghosts of many features, in the changes and undulations of the plant growth, but for now it must remain mysterious.

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EXCAVATIONS IN CHALK PIT

by Marion McCabe

In 1991 Anglian Water laid a sewerage pipe that ran south from the Heacham River alongside the metalled track bounding the east and south sides of the Boneyard field, continuing east-west along the south side of the metalled track past Boneyard and through the Chalk Pit field to the main road. During this work the Norfolk Archaeological Unit carried out a watching brief to identify and record any archaeological features within the area. In the course of this watching brief the Norfolk Unit excavated three areas along the path of the pipeline. In an area to the east of the Chalk Pit they found the remains of truncated gullies and spreads of occupation material such as shell, bone and pottery. In an area to the west of the Chalk Pit they found an oval oven/kiln, possibly dating to the Middle Saxon period, which is quite a rare find.

As a result of this work SHARP decided to open an evaluation trench in the north-west corner of the Chalk Pit to try to find any evidence of occupation associated with the oven/kiln and to assess the archaeology of the area. Initially a 5 x 5 metre area was cleared of vegetation and topsoil. Our first aim was to relocate the position of the sewerage pipe since all that had been reported was that it ran along

the south side of the metalled track. We decided to concentrate on a 5 x 2 metre area at the west end of our original area.



Plate 5. The features in the southern trench.

The archaeology was difficult to interpret but we found signs of a large ditch cut. After excavating the ditch we found at the bottom a piece of green plastic marking the position of a sewerage pipe and thus successfully achieved our initial aim! We opened up areas either side of the pipe trench to sample the undisturbed archaeology. On the south side of the pipe a 5 by 1.5 metre trench was opened, whilst on the north side (nearest the metalled track) a 5 by 1 metre trench was opened. In the northern trench we found layers of compact sandy soils with many chalk and flint inclusions, which may have been associated with the track since there was an absence of these layers in the southern trench. In one of the more recent of these deposits we found a fragment of copper alloy crotal bell (sometimes called rumbler bell) which is likely to date from the 17th or possibly early 18th century (Ludford, pers. comm.). In the western end of the northern trench we found a sloping layer of compact

chalk that extended into the east-facing section of the trench and which could have been a hard standing associated with the track.

In the southern trench we found little of archaeological importance until we excavated through deep colluvial layers, which provided a few finds such as oyster shells, animal bones and pottery. Cut into a yellow gravel sand layer we found a series of features: possible postholes, two double postholes, two gullies and one ditch. Unfortunately we found no artefacts from any of the fills of these features so no date can be assigned to them.

Comparing the stratigraphy to sequences elsewhere in the area, and the sherds of pottery found in the layers above, led us to suggest that the features could be the remains of a possible prehistoric structure. However, to come to any definite conclusions and to find the extent of the features would require further excavation of this area.

We concluded that, although we had found some sherds of Thetford ware pottery in the colluvial layers, there was no direct evidence of Middle Saxon occupation in this area which could be associated with the oven/kiln previously found by the Norfolk Archaeological Unit. However we have shown that there is interesting archaeology in the Chalk Pit area, albeit very deep. Further excavation is needed to investigate the features that we found, and hopefully give more definite dating evidence.

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THE SITE SURVEY 2001

by Naomi Payne

On any archaeological project it is important that the position of trenches and their contents are carefully recorded. This is so that the information we retrieve can be related and

compared and also so that future archaeologists know exactly where the dig took place. This would be invaluable were the site to be reinvestigated at some point or if any development were proposed nearby. The plan of Peter Jewell's excavations has helped us to identify the 1958 trenches in the New Trench on Boneyard. However, there have been other investigations which were not so thoroughly recorded, and we must always be aware that other unrecorded trenches may be found within our excavation.

The Site Grid

In previous years, the project has used an arbitrary site grid, established with a convenient location and orientation. Wooden grid stakes were hammered in around the excavation limits and measurements were taken with tapes from these points. Heights were worked out from a Temporary Bench Mark using a dumpy level. This year it was decided that we were in need of a more permanent grid - stakes and pegs can move and may be removed out of season (some definitely have!), and we need to ensure that all the information we collect is directly comparable. With this in mind, this season we hired an EDM (Electronic Distance Measurer), with the intention of working out the location of our trenches and the old site grid in relation to the Ordnance Survey's National Grid.

To locate our trenches on the National grid, we used two of the nearby Ordnance Survey bench marks. Bench marks are points for which the National Grid Reference (NGR) and height are known and can be obtained from the Ordnance Survey. The two closest extant bench marks were on the south west corner of St Mary's Church, and on the north wall of the old Methodist chapel called The Voss, near the junction of the main road which runs east-west through Sedgeford and the road to Snettisham. We surveyed these two points and related the site to them. To be as accurate as possible, it is desirable to use as few traverses (moves between temporary stations) as possible. We can see the church tower from Boneyard, and in order to reduce the number of traverses, we were kindly given permission to set up a station

point on top of the tower. This allowed us to survey the bench mark using only two traverses from Boneyard. The bench mark on the Voss was also surveyed in using two traverses, the first to the Snettisham road and the second to the Heacham road.

We also surveyed the site grid, and it is now possible to set up the EDM over a station point on Boneyard and give a NGR and height or the co-ordinates on the site grid for any point. Several 'hard points' (points unlikely to move between now and next season, in this case concrete fence posts and gate posts) have been surveyed so that the station points can be checked next year and, if necessary, new stations can be put in.



Plate 6. The EDM set up on the church roof.

What is an EDM?

An EDM is a surveyor's instrument which measures distances as well as vertical and horizontal angles. It is used in conjunction with a prism attached to a staff to survey points quickly and accurately. The tripod and instrument are set up and levelled over a station point, and a backsight is taken so that the

instrument is exactly located onto the grid. The height of the instrument and the height of the staff are inputted into the instrument, and one person operates the instrument, focusing the telescope onto the prism. Another person holds the staff and moves to wherever the readings are required. The readings are recorded manually or with a data logger, and can be drawn up on graph paper or with the aid of a computer program.

As well as locating the trenches on the National Grid, the EDM has also been used on site to speed up some of the recording within the trenches, for example obtaining the co-ordinates and height of small finds (e.g. metal, glass and worked stone) and plotting the position of baselines used for section drawings and plans. We have used it to plot known points of the site grid, to help with planning. Because our site is on a slope, it can be difficult to measure in the grid accurately with tapes.

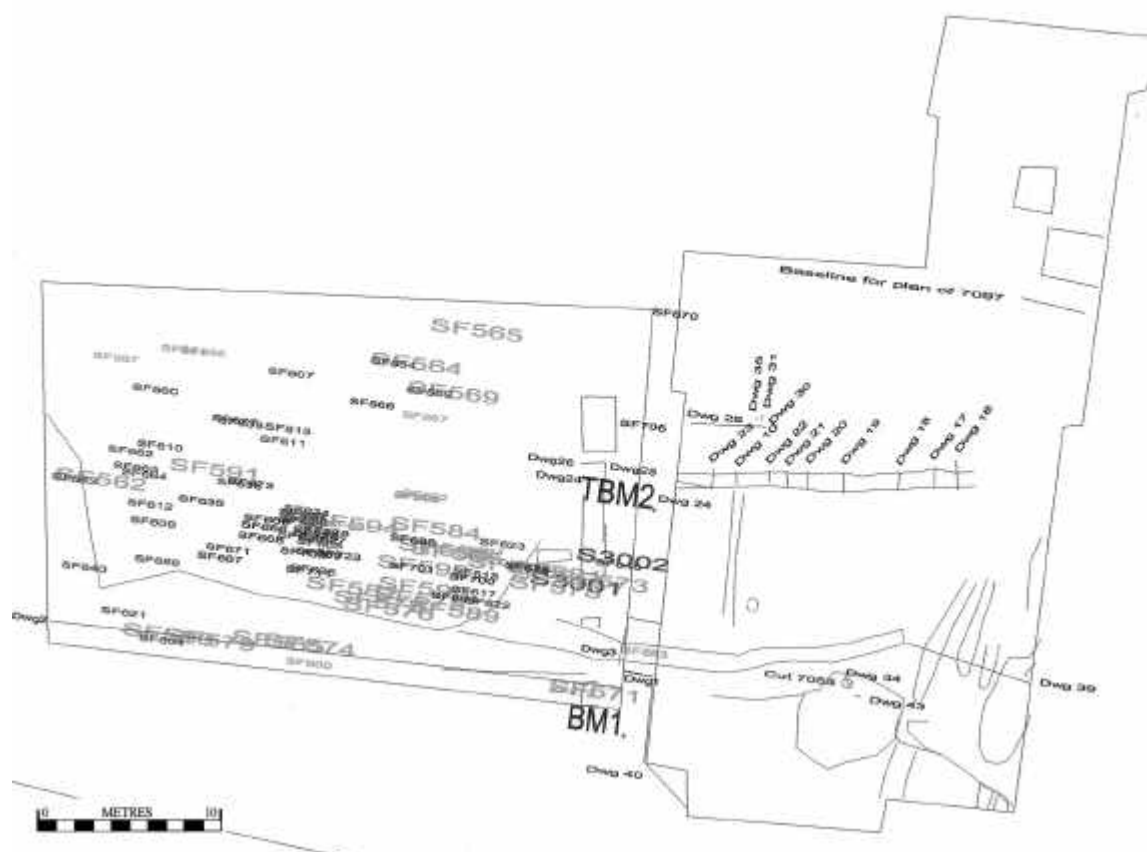


Figure 12. An extract of the digital site plan showing the Boneyard trenches.

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LATER MEDIEVAL SEDGEFORD

by Janet Hammond, Rik Hoggett, Jackie Heath and Pauline Fogarty

Moving away from the predominantly Saxon focus of much of SHARP's work in 2001, we turn to the ongoing study of the later medieval history and archaeology of Sedgeford. Excavations in West Hall Paddock finished in 2000 and are currently in the process of being written up, but the documentary study of the West Hall estate continues. Likewise, work continues on the documentary and archaeological study of the parish church, and the results of a study of wills and a geophysical survey of the churchyard are presented here. Firstly, however, we welcome a contribution from the Smithdon Hundred Local History Forum, which sprang from the loins of a SHARP Field History course in 1999 and has continued to study many aspects of the village throughout the year.

SMITHDON HUNDRED LOCAL HISTORY FORUM - REPORT 2000/1

by Janet Hammond, *et al.*

Over the following autumn and winter we met monthly to discuss the various works we each had in progress, and in the spring of 2000, after considering how we could further the SHARP Project, we adopted a proposal to study the area in Sedgeford known as Eaton.

There were several reasons why it was a suitable project for a Field History group, not the least being that it was an inappropriate area for excavation but very suitable for non-invasive techniques such as fieldwalking, shovel or molehill testing, surveying, (hedgerow and plant as well as land), and geophysics.

We started surveying the fields to the north of Eaton Lane towards the end of May, hoping to define slightly higher areas where geophysics might show interesting results (Figure 1). By early July we had made good progress with the area bounded by the lane on the south and a ditch to the north and the hedge to the west. At that point we broke off for the summer excavation season with every intention of resuming the survey in the autumn. However, the combination of the wettest autumn and spring any of us can remember with the outbreak of foot and mouth and the restrictions that caused meant that we have been unable to progress further on the ground so far, though we hope this coming autumn and winter will prove more favourable, as we have about a

mile of drainage ditches to survey and at least two mill sites to pin-point and investigate; a third at Kyme Mill was explored by SHARP in 1996-7.

During the summer of 2000 we mole hill tested an area of 35 x 38 square metres to the north of Eaton Lane and east of the now demolished farm buildings, situated on a terrace above the river flood plain, but in easy reach of both river and a tributary known as the Beck. Molehill testing is not a very exact science - we have been unable to persuade the moles to make their hills on a regular grid to a specific size! - but at least we worked to a regular grid of 5 metre squares in which we sieved the earth of every molehill and bagged the resultant finds.

In the quite small area observed we found pottery dating from a piece of possible Iron Age, through Roman, Middle and Late Saxon, to medieval and modern. Plotting these finds back on the drawn grid showed no definite pattern in the find spots, rather a fairly random scatter. However the overall picture seems to be one of long, though not necessarily continuous, occupation in the area.

Fortunately Eaton is well documented (being covered by Lewes Priory and Norwich Priory from the eleventh to the sixteenth centuries, and later by Norwich Priory and the muniments of the LeStrange family of Hunstanton). Since, deprived of outdoor work, it was decided that we should glean as much information as we could from records. So far this has involved

several maps, Domesday Book, a dozen or so printed charters, and fifteen-plus original documents dating from a rental of Lewes Priory of 1351 (a labour of transcribing and translating!) to the War Ag. Surveys of farms in 1940, which were made one hundred years after the survey of the country when the Tithe Awards were made and Tithe maps were drawn. The names of sixteenth century and seventeenth century landholders from field books (surveys) have been plotted onto a seventeenth century map, with interesting results as the number of landholders decreased and the size of some of the remaining land holdings increased. Though the LeStrange family, who had a substantial holding in the mid-sixteenth century, did increase their acreage, it was other families such as the Cremers who were more engaged in engrossing between the 1546 field book and 1631 when the LeStrange estate map was made (Norfolk Record Office, LeStrange Map OC1). Later the LeStrange estate acquired many of these enlarged holdings, and by the Enclosure Act and Award in 1795-7 Eaton and much of the western part of the parish was part of their allotment. It still has to be determined how much of this they already owned by the late eighteenth century, but possibly a high proportion.

As well as our group project, several members have been pursuing individual studies for essays, dissertations, etc., even just plain curiosity. These, though not all relating to Sedgeford specifically, help to put it in context. A study of the progress of a farm in Snettisham, from strips scattered in the open fields to a discrete area after enclosure, may well have comparisons and lessons for the study of the same process in Sedgeford. The operation of the pre-1835 Poor Law was not the same in every village: some had Town Houses in which the poor lived and were fed, clothed etc., others did more by outdoor relief supporting the poor in their own homes. Also, in some villages more information has survived than in others, so again comparison is helpful. Other essentials are water supply, food and drink, all of which have come under scrutiny by one member or another, as have early/mid-

twentieth century health, transport and religion by the oral historians

Outside the Eaton Project, in April 2001 the whole group was involved with the Village Hall Committee in promoting and presenting the Alice Hunt Exhibition of late nineteenth century photographs. Walter and Alice Hunt lived in Sedgeford Hall from 1880 to 1897, and in that time Alice took up photography. Many of these were of the family but there were also many local scenes, buildings and people. A spin-off from the exhibition is that we have been able to obtain copies of approximately 160 non-family local photographs for the archives. These are being paid for by the profits from our first historical *Miscellany* which was launched at the exhibition in April and has sold very well, so well that, even after the fairly high costs of this number of quarter plate prints, we shall have sufficient money left to produce our second *Miscellany* next year.

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GEOPHYSICAL SURVEY OF ST. MARY'S CHURCHYARD

by Rik Hoggett and Jackie Heath

As regular readers of the SHARP *Interim Reports* will be aware, the graveyard of St. Mary's Church was subjected to a partial geophysical resistivity survey during the 1998 season, and a lengthy article on the subject appeared in the third *Interim Report* (Hammond 1998). During the fourth week of this season SHARP ran a geophysics course, and the decision was taken to return to the churchyard and use it as a teaching area, partly because we knew that good results were guaranteed, but also because we could go back over the previous areas in more detail and survey a wider area.

The survey was conducted using geophysical resistivity, a method in which an electrical current is passed through the ground between two metal prongs and the relative difficulty with which it flows between them is recorded. Solid features such as walls restrict the flow,

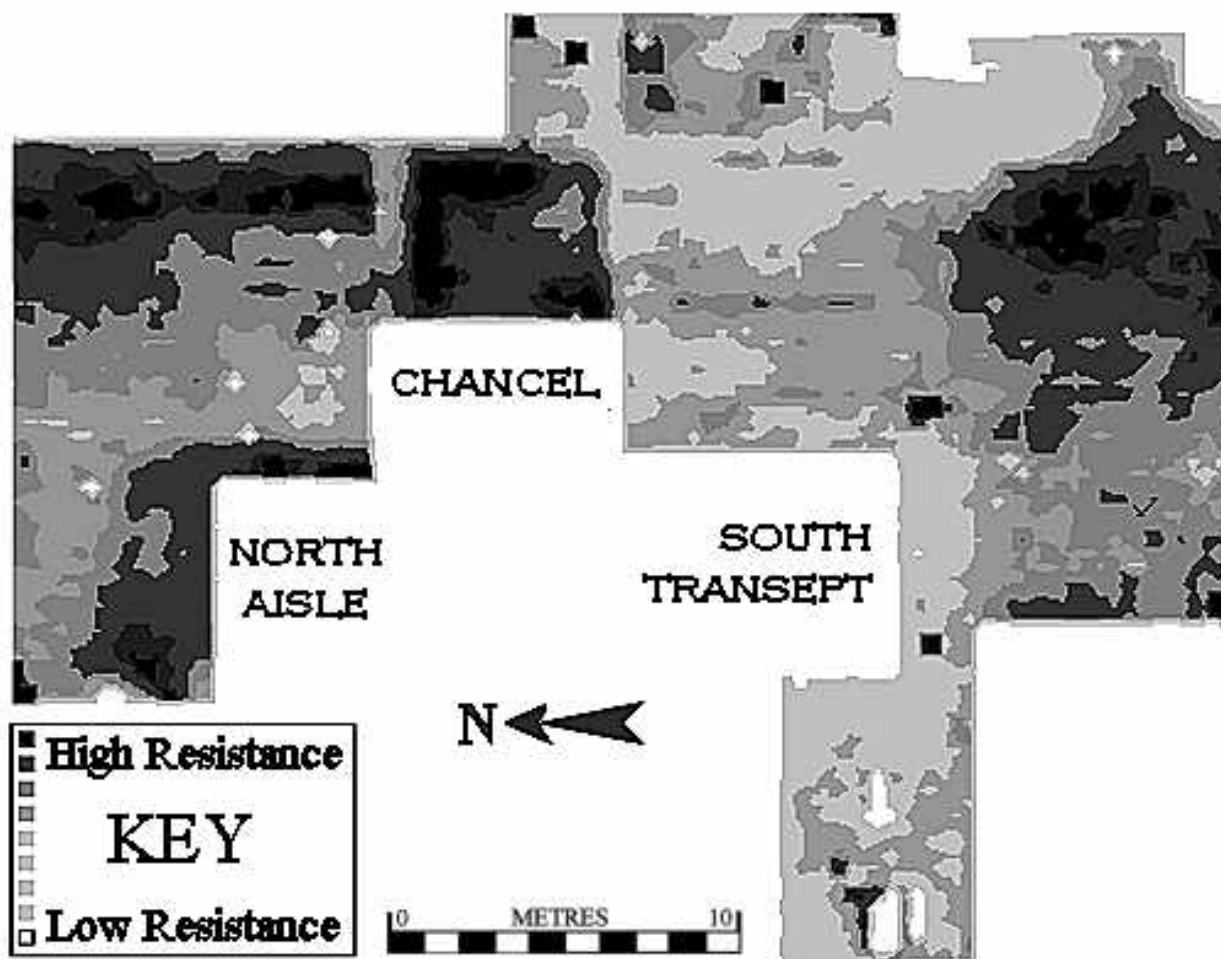


Figure 13. The results of a geophysical resistivity survey of St. Mary's Churchyard at 1:250.

whereas looser features such as ditches allow an easier flow. Readings were taken every fifty centimetres and produced the results shown in Figure 13.

As can be seen, the outline of the Chancel, known to have been demolished in 1770, can be clearly seen to the east of the church and in addition there is a clear rectangular feature on the plot indicating the presence of a now demolished north transept at the end of the north aisle. As well as these structural features the plot gives a good impression of the underlying geology. To the north of the site the general background readings are higher, suggesting a bedrock that is close to the surface, whereas to the south the readings are lower, suggesting that the bedrock is deeper in this area. This finding would seem to support the hypothesis that the eastern end of the church is structurally unstable due to the lack

of solid foundations in the south-eastern part of the building.

Perhaps the most surprising thing is the clarity of the results, for it was expected that the burials would disturb the picture. Whilst there are anomalies caused by both graves and tree roots, it appears the degree of disturbance must be fairly uniform and that the 120 years since the cemetery was closed to burials has allowed the soil of the graveyard to become more homogeneous.

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Acknowledgements

We are very grateful to the members of the geophysics course and the Rector and Churchwardens of St. Mary's for permission to use the site.

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WHAT CAN WILLS TELL US ABOUT ST. MARY'S CHURCH?

by Pauline Fogarty

This year research was undertaken to try to piece together the documentary history of Sedgeford's parish church. Sedgeford does not have a great deal of surviving documents to tell us about the medieval church, since no churchwardens' accounts or guild records survive. Nevertheless, we do enjoy the luxury of a large number of wills, beginning in 1417. These wills have been able to give us a great deal of information, both about the church itself and what was going on inside its doors.

The wills can give us an insight into how the Church of Our Lady, Sedgeford, would have looked in the Medieval period. Although we are unable to use the wills to date any parts of the remaining fabric of the church, there are references to structural alterations. The will of Richard Crispe of Fring in 1517 describes the rebuilding of the south elevation of the church. Although we do not know exactly what this refers to we can be sure that building work took place on the church in this period. There are also references to many different objects within the church. The rood loft is referred to in the will of Randyll Birde in 1530, when he bequeathed 20 shillings to the gilding of the rood cross.

Various images of different saints, such as St. James and St. Loye, are mentioned in the wills, and two wills (Katherine Lynne in 1529 and William Rose in 1533) mention a 'pax of silver'. This is a tablet with a handle that depicts either the Crucifixion or a sacred subject. These objects present a portrait of the church as a spectacle of colour, with pictures of saints to impress the religious message onto the parishioners.

The wills tell us there were four guilds present in the church. Guilds, or religious fraternities, as they were also known, were organisations set up to look after the souls of the members of the guild. A fee would be charged to those who wished to join, and they would then not only take care of the member's soul, but would also

partake in group activities such as feasting on their patron saint's day. In Sedgeford, we know there were four guilds; All Saints, Holy Trinity, Our Lady and St. John the Baptist.

The existence of the Holy Trinity guild may be explained by the strong presence of Norwich's Holy Trinity Priory in Sedgeford, as they held much manorial land and the advowson to Sedgeford parish church, giving them the right to nominate an ecclesiastical benefice.

The dedication of a guild to Our Lady shows the importance of the Blessed Virgin in Sedgeford, because not only was the church dedicated to the saint, but there was also an image of her in the chancel.

The guild of St. John the Baptist is also particularly interesting, as this dedication seems to have been particularly popular in East Anglia. John the Baptist has also often been linked to the wool trade and sheep; he is therefore an appropriate dedication in Sedgeford, where the sheep and trade in wool were a particularly important industry in the Medieval period.

There was also a chapel dedicated to St. Peter in Sedgeford; this is not referred to in the wills, but in the patent rolls. The Reformation did, however, see an end to these foundations. We can see, therefore, that in spite of the fact that all the references to the church in the wills were incidental, they can still be used to give us information about what Sedgeford was like in the Medieval period.

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THE MANORS OF MEDIEVAL SEDGEFORD

by Pauline Fogarty

In the 2001 season, research was undertaken to see what we could find out about West Hall Manor. The original aim of this research was to complement the standing building survey done on West Hall House in 2000. In researching one of the manors of Sedgeford, however, we inevitably found out much about the other manors of Sedgeford. There were three manors in medieval Sedgeford, of which two were owned by Norwich Cathedral Priory. These were known as East Hall and West Hall. There was also a third, secular manor owned by the de Sechfords and later the LeStranges.

It is likely that West Hall was located where the present West Hall House is, although the fabric of the present house cannot be dated back to the medieval period. Its earliest feature is a chimney, stylistically dated to c.1600. It is probable, however, that the previous manor house either underlies or is located near to the present house. East Hall, however, was never in the heart of Sedgeford and has always been on the outskirts of the village to the east, in an area known as Gnatingdon. The private manor of Sedgeford is the most difficult manor to actually place on the ground, but it is possibly in Dovecote Piece to the west of West Hall. This land is described in various documents as either 'Sechfords' or 'Sechford's Yard'. Although there is no remaining fabric there now, there is a raised earthen platform that may represent a feature such as a manor house.

The manor of West Hall was first given to the Priory by Bishop Turbe of Norwich, between 1146/7 and 1174. By 1205, a fee farm rent on the manor was released and the Priory had total control over the manor. However, the legality of this transaction must be called into question, as we are told that in 1395 the manor of West Hall was given back to the Priory after a period in the king's hands: presumably due to an earlier failing (possibly Bishop Turbe's) to get licence for exchange of lands. East Hall was acquired for the Priory in the early twelfth century, in exchange for Thorpe next Norwich. From the thirteenth century the two manors

were then treated as a double manor and were valued together as being worth £61 in 1535.

Some research has been undertaken to try to establish a picture of life within Sedgeford, such as the industries and running of the manor. We know that sheep husbandry was particularly prominent in Sedgeford throughout the Medieval period. In the late thirteenth century there is evidence that Sedgeford was not only producing wool but was also being used as an intermediary for its transportation. The prominence of the wool industry can still be seen in the sixteenth century, when the LeStranges had taken over running the manors. The LeStranges kept two flocks of sheep in Sedgeford and in their household accounts the references to purchasing, clipping and washing of sheep show the survival of this industry.

The LeStranges were prominent landowners in Sedgeford from at least the sixteenth century, as they leased West Hall from 1538. They leased both the manors from the Priory, in the case of West Hall on such a long lease that in the eighteenth century there was a dispute regarding a confusion of boundaries. We know the Priory farmed out the manors from the 1420s, and we know the LeStranges held land in Sedgeford prior to their 1538 lease, so it is probable that they held these manors for some time before the extant lease of 1538. The LeStranges also held the private manor of Sedgeford, which is described in LeStrange records as once being owned by the Duke of Suffolk. It is probable that this manor was also leased to the LeStranges in 1538, although we know the manor had been bought by 1582, when it was bequeathed in John LeStrange's will.

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CONFERENCE PAPERS

by Sophie Cabot and Andrea Cox

As was noted in the Foreword, this year has seen SHARP making an extra effort to raise its public profile in a variety of ways. Immediately before the start of the 2001 season, Rik Hoggett, Gareth Davies and Sophie Cabot gave a paper to the Society for Medieval Archaeology's Cardiff Conference on the subject of the Boneyard. Shortly afterwards, Gareth and Rik also addressed the Interpreting Stratigraphy Conference in York on the subject of SHARP's excavation methodology and recording system. The proceedings of both of these conferences are in preparation for publication, and therefore the papers are not included in this Interim Report.

However, SHARP also hosted its own conference this year, the proceedings of which are also in preparation for publication, and a summary of the day's papers is given here. SHARP was also invited to address the Council for British Archaeology's Education and Archaeology Conference in York, and the paper given by Andrea Cox and Sophie Cabot is included here too.

A CONTEXT FOR SAXON SEDGEFORD: SOME THOUGHTS ARISING FROM THE CONFERENCE.

by Sophie Cabot

The second SHARP Day Conference, *The Origins of the Church in Anglo-Saxon England*, took place at the end of the 2001 season. It provided a forum for a question that is at the forefront of current Anglo-Saxon studies: what is the nature of the relationship between Church and Settlement in Middle Saxon England? It was clear from the contributions that no site is closer to the heart of this debate than the Boneyard, where what might be interpreted as a religious practice - Christian burial, lies alongside settlement evidence which is not in any obvious way ecclesiastical or even high status. Contributions from other sites show clearly that the mixture of religious and secular elements on Middle Saxon sites is always complex and that it is not, so far, possible to categorise the sites excavated into lay sites and monasteries, at least not with any degree of certainty.

The other major problem to which the attention of the Conference was drawn is the radical difference between the quality of evidence recovered from different sites and the problems that difference creates in comparing them. A number of sites were presented, all of which had some relevance to the Boneyard, but only

one of which, Flixborough, has a comparable excavation history.

The other sites discussed were in that far more numerous group, those known from the evidence of field walking and metal detecting.

We started our day with what was perhaps the most eagerly awaited paper, at least for those of us digging Boneyard. Chris Loveluck gave us an account of the work undertaken at Flixborough in Humberside. Chris had much to say which struck a chord with us; Flixborough is a site with many similarities to ours and some key differences. We were told that our pattern of building remains and many of our finds were absolutely consistent with this important settlement, which is dated between the 7th and 10th centuries. Work on the faunal remains at Flixborough is giving exciting results reflecting changing status in different periods, and we were led to wonder whether such results might emerge at Sedgeford, as we refine our phasing. The findings relating to diet, and the consumption of 'high status protein' (in the form of porpoise meat amongst other things) showed what it might be possible to get from the excavated evidence which already exists as well as from new projects. This showed that there are other means than the overused and highly problematic reliance on styli as evidence of the ecclesiastical nature of the site, since certain meats could be deemed to

be more suitable for monastic consumption. The occurrence of clear phases of differing diet also shows we must be aware of the changing role of these sites through their existence.

The next paper was a summary of sites being discovered in our own area, presented by Andrew Rogerson. These are largely unexcavated, and it is interesting to note the problems this produces for comparison. It appears very likely that the country of North Norfolk in particular is scattered with 'Sedgefords' if not with more important sites (which could be 'Flixboroughs' or even 'Hamwics'). Far from being the enemy of archaeology, metal detecting was presented as the key means by which these sites have been brought to light and, in many cases, saved from degradation by ploughing or development.

After a break, we took a slightly more abstract path, Trefor Jones introducing us to some personalities of the 7th century landscape in East Anglia, figures who may well have known the sites we study. We were reminded of the availability of an historical context for our evidence - looking at the process of Christianisation in the Anglo-Saxon kingdoms. Trefor pointed out the insecurity of the earliest church in England, and its close relation to royal authority. Both syncretism (where both Christian and pagan rites are observed) and aposticism are known from historical examples and might be expected to appear in the archaeological record. In passing, Trefor also drew attention to the Irish element that we might expect to see in the conversion of East Anglia, attested by the historic record of St Fusa. The paper concentrated on the 7th century evidence but showed clearly how the scene was set for the type of Christianity we see in sites of the 8th. Missionary sites, it is suggested, could have been on the periphery of early territories, and might very often be located in river valleys for the purpose of mass baptism, and this would match then with those sites which develop in the 8th century into new settlements with burial grounds.

The next paper moved forward into the Norman period and beyond, but attempted to

look back to the formation of the parish structure in East Anglia. Keith Robinson introduced work he has been doing on church dedications which was new even to those of us who have worked with him on the project for several years. His maps show clearly that there are a number of areas, in Norfolk especially, where Marian dedications predominate. He put these forward as potentially early, and drew attention to a number of other interesting dedications. He further drew attention to the way in which a group of related dedications adjacent to one another might point to a large and therefore early parish that had become subdivided. Joint dedications may also point to amalgamations of parishes in areas where population dropped.

The day was concluded with the 'home' presentation. The material presented by Rik Hoggett and Gareth Davies was largely that presented elsewhere in this report, so I will not seek to duplicate it. It served to reinforce the connection of our own work to the context of the other papers. For delegates who were new to Sedgeford (at least a third part of the audience and speakers alike) this was a comprehensive introduction to our work to date, and an assertion of the importance of the site and the Project.

One of the major themes, especially in the first and last papers, was how crucial it is to have some large-scale excavations of Middle Saxon sites. The data from Flixborough is so extensive that none of the smaller projects can usefully be compared to it, but the work being done by SHARP will produce a data-set that, however different, will at least be a valid comparison in scale. It was stressed just how rare in the current funding climate these large projects are and are likely to remain. This is not to criticise the information that can be gained from small scale and non-invasive work, as was evidenced by Andrew Rogerson's presentation of work in East Anglia. The productive site information is extremely valuable, and increasingly so as it is collated into databases, but the level of detail is necessarily different.

The detailed comparison between our own data and that from Flixborough was also interesting, since we have often heard the site held up as our main parallel. This proved to be less true in many respects than we might have expected. It was clear from the evidence of small finds that, although the areas of Boneyard so far excavated have high status elements, they do not show similar status to the Flixborough finds. We were reassured by the size of the Flixborough site, and the low density of buildings on its phase plans, which allows us to hope that there is much more of Boneyard yet to be excavated and we should not expect finds to occur in great concentration.

Overall, the Conference centred on the pressing need for more work on the nature of Middle Saxon settlement, to fill a gap in our knowledge between the 7th and 9th centuries. Trefor Jones presented a very clear picture of the situation in the 7th century kingdoms as they went through the process of conversion. There is plenty of work available that shows continuity between Late Saxon and Medieval Christianity and nucleated settlements. What remains unclear is the bridge between the two. We are starting to see a little of the full complexity of the Middle Saxon settlement pattern - differences in type and status between sites - which can only be quantified as more sites are understood. This presents the dilemma of how more sites can be studied in sufficient detail without more costly excavations, but Andrew Rogerson showed what can be achieved without excavation, where the distribution of finds are properly recorded, and this is obviously one way forward. The questions raised at the start of the Conference were by no means answered by the end of it, but it was never intended that they should be. We are left with a clear idea of the 'state of play' and of where we must go from here. It is envisaged that the Conference will be published in full by the Project, and the series of biennial Day Conferences will continue in 2003.

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EDUCATION AND ARCHAEOLOGY 2001

by Sophie Cabot and Andrea Cox

The following paper's purpose was to outline the range of educational activities that SHARP provides to all ages and backgrounds and to further publicise the work of the project. The paper was greeted with enthusiasm and interest by a wide variety of delegates, from primary school teachers to members of other research projects like the Vindolanda Trust. Many were surprised and encouraged by the quality and scale of SHARP's work.

Sedgeford Historical and Archaeological Research Project was founded in 1996 after Professor Bernard Campbell invited Dr Neil Faulkner to examine part of his land, known locally as 'Boneyard'. Previous excavations, in 1958, revealed evidence for a 9th to 10th century Anglo-Saxon cemetery and we had been given the rare chance to explore this further and to develop a unique project at a time when 'Rescue' archaeology is predominant. SHARP was set up as an independently funded, community based research project, fully staffed by volunteers, with the simple aim of making archaeology available to everyone.

This key aim, which encompasses education, was always at the forefront of the Project but in the beginning our approach to teaching and public presentation was small-scale and casual. We had arrived in Sedgeford to dig a Saxon cemetery with about 70-80 volunteers for the season. Volunteers with no previous archaeological experience were therefore put on a 'Basic Training' course, which essentially consisted of getting a bit more on-site training and supervision than the 'experienced' volunteers. All training was essentially hands-on experience and dependent on the progress of the excavation, and at that time there were no dedicated course supervisors.

In the first season we also organised a series of Tuesday evening lectures from outside speakers, where all of us volunteers and anyone else who was interested crammed into the Old Village Hall or a local barn for a 1 ½ hour talk.

Similarly Friday afternoon site tours took place, generally aimed at making the week's progress clear to the volunteers, but if any passing folk wanted to join in, fine! We were offering the now rare chance for students to be taught on-site and gain their fieldwork experience and the chance for the local community to get involved in the generally closed archaeological world.



Plate 7. The site is explained to the public.

Over the last five years the Project has kept its main philosophies on education and research but has grown in size and organisation, developing its research objectives as necessary. We have re-dated the cemetery to the 8th and 9th century and are excavating nationally important contemporary settlement evidence. We are studying the landscape of the parish as a whole, have made a full study of the church and have excavated later medieval remains nearby. We have acquired the skills within the team to do most of our post-excavation analysis during the summer season and we have very strong links with the local community. Also the 'ad hoc' education strategy of the first season has been developed to become what we hope is one of Britain's foremost educational and training opportunities for archaeology.

During our six-week summer season we now offer a series of adult education courses and

day schools, and for the first time in 2001 we were able to offer volunteers the chance to gain credits towards a further education qualification or to study towards a 'Certificate in Practical Archaeology'. This is run in conjunction with the Centre for Continuing Education, University of East Anglia. In 2001 we had a total of 236 volunteers over the six-week season and conducted fourteen courses. We had 62 experienced volunteers, 124 volunteers completed the 'Basic Excavation and Recording Techniques' course, 24 'The Archaeology of Human Remains' course, 10 the 'Church Archaeology' course, 7 the 'Geophysics' course and 20 people attended our day schools in pottery and animal bone analysis. Six people are still studying towards the correspondence course 'Practical Archaeology in Context' and in total 43 students gained credits towards a further education qualification. We have taught a range of students from retired farmers, graphic designers and those on holiday, to A-level students, under-graduates and professional pollen analysts!



Plate 8. A Basic Training Seminar.

So, what do these courses consist of? As an example, on the 'Basic Excavation and Recording Techniques' course, we provide a minimum of two hours of contact time a day with a dedicated group tutor. In these seminar sessions we take the students through discussions concerning how sites are formed and how we study archaeology, through the use of tools and excavation techniques, to soil descriptions and the drawn, written and photographic record.

All of this is discussed in conjunction with the Project handbook and a series of handouts and demonstrations. The rest of the day is spent working on the Project's excavations, where, under close supervision, students get the chance to re-enforce what they have learnt with field experience.

In the more specialist courses the contact time is increased, as students undertake projects in groups to re-enforce their skills, for instance recording a skeleton or a standing building. All of our courses, however, remain a mixture of informal lectures or seminars and hands-on experience. Students get to work closely with the primary evidence in an on-site or post-excavation context and contribute to our real archive and understanding of the archaeology and history of the parish. Many of our students stay on after their courses to complete a piece of research work for the Project.



Plate 9. Mucking in and making pots.

As well as our adult education courses we now run schools activity days that can be complemented class activity by using the SHARP *Anglo-Saxons* booklet and *Archaeology* booklet. Schools' groups are given a tour of the site as it is being worked and they have a chance themselves to excavate in a 'sand-pit' constructed in layers and seeded with finds. They get to meet Anglo-Saxons, in the form of Project supervisors acting as living historians, and the children can get hands-on experience of finds sorting, drawing, spinning,

pottery and weaving. This season a group of 6 to 16 year olds also visited us from the Young Archaeologists' Club and they worked for two days on-site alongside our basic trainees and experienced diggers. This was such a success that in 2002 it is planned that it will be expanded into a three or four day field course, for children, run through the Young Archaeologists' Club's residential holiday activities.



Plate 10. 'Living Historians', Open Day 2001.

SHARP also plays a major role in education via the public presentation of archaeology. Our series of weekly lectures are now given at the parish church in order to accommodate an audience of up to a hundred, and are very well attended by our volunteers and the general public. This season we were lucky to attract speakers such as Dr Catherine Hills of Cambridge University, Brian Ayers of Norfolk Museums Services, and Professor Mick Aston of Bristol University. We also held the second of our biennial conferences entitled 'The Origins of the Anglo-Saxon Church', attracting almost 100 delegates, both from the academic world, the church and the local community.

Throughout the season we have a regular stream of daily visitors who are shown around the excavations by one of our directors, Chris Mackie, or by a volunteer. Our regular Friday

site tours are going strong, sometimes attracting up to 150 people. These still explain the week's progress but now also include small presentations on other aspects of the Project including the human remains, finds, geophysics and standing building surveys. This often provides an opportunity for students on courses to present their work. The last two seasons we have expanded on these tours and presentations with an annual Open Day including hands-on activities for children (and adults) and more living history displays. Weather permitting, they have attracted up to 700 people and never fail to generate more volunteers for the following season!

The Project has grown tenfold in its research and educational aims over the last five years - so where do we go now? Naturally our research into the Anglo-Saxon cemetery and settlement will continue and develop for many years to come, as will our weekly routine of lectures and tours. Next season we will continue our summer adult education courses and will consolidate our links with UEA. We also plan

to expand into a four-week Easter season offering several more courses. To allow more schools to visit, we have brought forward our season to overlap with the school term by another week and the YAC course now looks like a certainty. In the long term, we would like to expand our young persons' educational programme and eventually to offer year-round outreach to schools, taking our archive resources to schools and doing archaeological workshops. It may be possible to pilot this concept this year, since we have had some interest from schools, and we would like to develop outreach provision within the framework of the National Curriculum.

Essentially we hope to consolidate what we have already achieved and to continue offering people the chance to excavate an important archaeological site, to learn more about field archaeology and post-excavation analysis and to bring field archaeology alive for the many adults and children who live in or visit Sedgeford.

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SHARP 2002

EASTER SEASON DATES 2002

17th-22nd March: Archaeological Surveying Course (UEA Credits available).

24th-29th March: Geophysics Course (UEA Credits available).

7th-12th April: Church Archaeology Course (UEA Credits available).

SUMMER SEASON DATES 2002

Week 1: 7th - 13th July;

Week 2: 14th - 20th July;

Week 3: 21st - 27th July;

Week 4: 28th July - 3rd August;

Week 5: 4th - 10th August;

Week 6: 11th - 17th August.

Basic Training Courses are run every week (UEA Credits available Weeks 2-5).

Human Remains Courses are run in Weeks 1, 3 and 5 (UEA Credits available).

Church Archaeology Courses are run in weeks 2 and 4 (UEA credits available).

We are also running a series of dayschools:

6th July: Introduction to Pottery Analysis.

13th July: Anglo-Saxon Poetry.

20th July: Anglo-Saxon Settlement.

27th July: Basic Archaeological Illustration 1.

28th July: Basic Archaeological Illustration 2.

3rd August: Food of the First Millennium.

10th August: Landscape Archaeology.

For further details and application forms you should visit our website at www.sharp.org.uk or contact the SHARP Enrolment Secretary at Drove House, 32 School Road, Heacham, King's Lynn, PE31 7DQ. Tel. 01485 570414.

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SEDGEFORD HISTORICAL AND ARCHAEOLOGICAL RESEARCH PROJECT
REGISTERED CHARITY NUMBER 1064553

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