

**This Report is Dedicated to the Memory of
John Gilbert Hurst
1927-2003**

Fellow of the British Academy, medallist of the Society of Antiquaries, past President of the Society for Medieval Archaeology, J.G. Hurst may be best known for his promotion and participation in the survey of deserted medieval villages. He is particularly valued by this project however not only as the definer of pottery types in East Anglia, but as the leader of the first scientific excavation of the Boneyard site in 1957, digging a series of test pits which established the archaeological potential of the site. His death has shocked and saddened the contributors to this collection and we would like to recognise here his discrete and kindly wisdom and his major contribution to the growing discipline of medieval archaeology.

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S.H.A.R.P 2003

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Editor's Foreword

By Sophie Cabot

2002 started with the most successful Easter season S.H.A.R.P has ever achieved, in five weeks of fieldwalking we covered a massive amount of ground. Then, very soon, we were back for the main excavation season. Teaching and research ran in successful tandem once again. Old Trench drew closer to its long awaited conclusion, New Trench produced features at a pace no-one was expecting and many more are promised for the future. A survey of households in the village produced copious feedback, showing just how many people want to be involved, and this led to a number of new areas being identified for future investigation. The specialist teams have gone from strength to strength, as is evidenced by the articles here. Human Remains, especially, has produced a wide spectrum of semi-independent research on burial and osteo-archaeology. New courses, new projects, new team members and new facilities have combined to make it an exciting time. Finally, one of the most exciting achievements of the year was the recognition, which we gained for our educational work, from the British Archaeological Awards – of which more below!

AWARD WINNING S.H.A.R.P

By Andrea Cox

On Thursday 7th November 2002 the British Archaeological Awards took place in the beautiful Liverpool Town Hall. Many well-known faces took part, including Francis Pryor of Flag Fen, TV Chef Hugh Fearnley-Whittingstall and Ian Potts of ‘Meet the Ancestors’. The less well known, however, were the real stars, for instance JCB driver George Caton who discovered the Lopen Mosaic and saved it from certain destruction.

S.H.A.R.P was one of four finalists in the Pitt Rivers Award, but we were up against some tough competition. Bath and Camerton Archaeological Society (BCAS) runs an ongoing research and training project in Somerset, along similar lines to S.H.A.R.P. Botel Bailey Excavations near Castle Douglas, Scotland are in their eleventh season, and Edinburgh Archaeological Field Society had compiled a report on their 1971-1986 excavations at Fast Castle. Could S.H.A.R.P compete?

Sir Neil Cossons OBE, Chairman of English Heritage, presented the awards in the presence of the Lord Montagu of Beaulieu. BCAS and Botel Bailey were presented with ‘Highly Commended’ certificates, award plates and cheques, from sponsors the Robert Kiln Trust. The late Robert Kiln placed a keen emphasis on publication and the judges considered that the Edinburgh

Archaeological Field Society had produced an ‘academically valuable’ report for which they took the Pitt Rivers Award.

Roy Sawyer, Anj Cox & Pete Taylor on The Big Day!

S.H.A.R.P was singled out by the judges as ‘in a class of its own for organisation and concept’ and was praised for both research and inclusivity. Our range of education activities and the digging experience we offer made us ‘worthy winners’ of The Graham Webster Laurels for the best contribution to education in archaeology. We collected our certificate and plate, and a £1500 grant towards improving our facilities at the Old Village Hall.

We want to thank the Robert Kiln Trust for its generous grant and all volunteers, past and present, for their hard work and support in making the Project an award winner!

Easter Season 2002: Magnetometer Surveys

By Naomi Payne

Introduction and aims

As part of the Easter Season 2002, more of the environs of the Boneyard excavations were examined, using fieldwalking, resistivity, and magnetometer survey. A magnetometer was available to the project for only a few days and two areas were surveyed. The first was the field known as Ladywell Piece, part of Hill Farm, situated to the south of the garden at the Old Vicarage and east of the Ladywell (see Figure 1 for location).

This was in advance of trial excavation in Ladywell Field, to assess the nature of any archaeological features within the field (See report below). There is a large earthwork, probably a building platform, situated in the field and the proximity of the site to the medieval parish church makes it of great interest. The molehills on the earthwork yield quantities of medieval pottery. Resistivity survey has confirmed the presence of anomalies in the vicinity of the platform, and, in preparation for the summer's evaluation it was decided to carry out a magnetometer survey for comparison with the resistivity results. The second area examined was part of Chalkpit Field, which is located immediately to the south of the Boneyard excavations, across the track way that leads to the site (see Figure 1). This area was studied because of its proximity to the known Saxon cemetery, forming part of the ongoing aim to establish the likely extent of the Saxon site and any associated features.

Fig. 1 Location Map.

Method

A Geoscan fluxgate gradiometer FM36 with built-in data logger was employed to carry out the geophysics. At Ladywell Field, four twenty metre square grids were laid out using tapes and triangulation. Readings were taken every 50 centimetres along traverses 50cm wide. Because of time constraints, the automatic sample trigger and zigzagged traverses were used. The fairly compact size of the field allowed the position of the grids to be established using tapes. In Chalkpit Field, an area 100 metres by 60 metres to the south of the excavation trenches in Boneyard Field was surveyed. Again, tapes and triangulation were used to lay out the fifteen twenty metre square grids, but here samples were taken every 50 centimetres along traverses spaced at metre intervals. The automatic sample trigger and zigzagged traverses were used to maximise the area that could be covered. The location of the geophysics grids was surveyed using a Total Station theodolite and the data from both surveys were downloaded into Geoplot Version 3 for Windows.

Results

Fig. 2 Ladywell Field grid.

The geophysical plot from Ladywell Field did not reveal any clear patterns of anomalies (see Figure 2). However, on the earthwork platform there was a concentration of patchy negative anomalies, possibly suggesting that any building on the site was demolished or collapsed with only a partial subsequent removal of the building materials, thereby leaving a confused magnetic response. There were many small positive anomalies over the whole area, probably due to the fact that the field has often been used for horses and is likely to contain many iron nails from horseshoes. The shade plot presented in Figure 2 has been processed ("despiked") to filter out many of these small positive anomalies. The slightly larger positive anomaly at the eastern end of the area surveyed, which is more significant than just an iron-spike, probably reflects a test pit excavated within Ladywell Piece in the summer of 1999.

Fig. 3 Chalkpit Field Grid.

The survey in Chalkpit Field is presented in Figure 3. The shade plot, which has been processed to correct the effects of the zigzagged traverse method ("destaggered"), reveals a number of anomalies, including several positive linear features, probably ditches and gullies. Some of these appear to cross each other, indicating that they are probably not all contemporary. One ditch runs east-west across the full length of the survey, near the southern extremity of the area surveyed. Because of its length, it seems likely that this is a boundary feature, although at the moment it is only possible to speculate as to whether it relates to the Saxon site being excavated in Boneyard Field to the north. Another sizeable ditch appears to curve round from the north-west corner of the survey heading towards the south-east. An identification of the potentially archaeological features visible on the geophysical plot is presented in Figure 4.

Fig. 4 Potential features in Chalkpit Field.

The distinct negative feature in the centre of the northern edge of the survey has been caused by the concrete drain cover nearby.

Conclusion

The topography and geophysical surveys at Ladywell Field demonstrate the likely potential of archaeological evaluation of the site. The recent magnetometer survey indicates that the archaeological remains may well reflect the demolition or collapse of the structure.

The survey in Chalk Pit Field has revealed many archaeological features, some or all of which are probably associated with the Saxon settlement and cemetery being uncovered to the north in Boneyard Field. The limited trial of the fluxgate gradiometer in this area has shown the potential for this method, and a more extensive survey of the field using smaller sample intervals must be considered a priority for the 2002 Summer Season, providing that the appropriate equipment is available.

Acknowledgements

I am grateful to Janet Hammond of Hill Farm for her permission to carry out the geophysics and to Sophie Cabot for her help with the fieldwork.

Boneyard Environs:

Defining the Anglo-Saxon Settlement Spread

By Rik Hoggett

Introduction

Mapping the extent of the Anglo-Saxon settlement spread contemporary with the features being excavated on the Boneyard has been one of the Project's main research aims for some years. Extensive non-invasive work conducted during the 2002 Easter Season, combined with the results of the numerous excavations in and around the Boneyard area, mean that it is now possible to define this settlement spread with some certainty.

In discussions of such developments, it is often forgotten that the Anglo-Saxon period spanned approximately 600 years. Factor in the immense social, political and economic changes experienced by the Saxons during this period and one is presented with an alarmingly complex and lengthy sequence. Unfortunately archaeology is not capable of detecting the finer subtleties of this sequence, not least because so many aspects of it leave no material signature and, when excavated evidence is limited it becomes even more difficult to reconstruct. For the purposes of this discussion, the available settlement evidence has been divided into two main categories - Middle Saxon (c.700-850) and Late Saxon (850-c.1066). Though this is too simple a distinction, these divisions are broadly in line with the dates of production of Ipswich Ware and Thetford Type Wares, the two main settlement indicators used in this discussion.

Excavated evidence

The parish of Sedgeford, and in particular the area surrounding the Boneyard, has been a subject of extensive archaeological study for the last one hundred and fifty years. This work has produced an enormous quantity of data of varying quality, but fortunately the Norfolk Sites and Monuments Record (NSMR) has been very thoroughly compiled. We can confidently state that we are aware of the vast majority of archaeological activities that have occurred in Sedgeford and can trace their results. In addition, Norfolk Museums Service has always taken a positive view towards metal detecting and we can be confident that most of the finds resulting from legal metal detecting in

Sedgeford are also included in the Norfolk SMR. Of course, it is impossible to estimate the quantity of illegal metal detecting finds that are irretrievably lost.

In addition to S.H.A.R.P's own findings, there are a series of other excavations that have taken place during the last fifty years, which are of direct relevance to the question of the extent of the settlement spread. Their locations (where known) are shown on Figure 1. and their findings are summarised below.

Fig. 1 Location of past excavations.

In 1953 local archaeologist C.H. Lewton Brain conducted the limited excavation of a site in the Reeddam area, interpreting it as an Anglo-Saxon hut (NSMR 1605, not shown). Whilst it is true that pottery and a bronze pin of Middle Saxon date were recovered during the course of this excavation, a re-examination of the site in 1996 suggested that the supposed hut platform was actually derived from more modern changes in the topography of the Reeddam and that any Middle Saxon finds must have come from layers sealed beneath the marl layer discovered elsewhere in the Reeddam (Cooke et al 1997, 33. Andrews and Calow 2002).

In 1954 ploughing disturbed human remains on the Boneyard site and the Norfolk Research Committee was called upon to evaluate the site. The work identified the existence of a Middle to Late Anglo-Saxon inhumation cemetery (National Monuments Record MONARCH Database 641022). The location of their trench has not been identified but it was probably along the southern edge of the Boneyard as there the archaeology is shallow enough to have been disturbed by ploughing. It has not yet been possible to examine the archive of this excavation, but the lack of an NSMR record for this event does not bode well.

The Boneyard site was further evaluated by transects of test pits in 1957 under the direction of J.G Hurst. These pits identified areas of settlement and cemetery and were followed up in 1958 by larger scale excavations directed by Dr. P. Jewell. These excavations were never published, bar a note in *Medieval Archaeology* 3 (Wilson and Hurst 1959, 298) but S.H.A.R.P was fortunate enough to procure Jewell's notes

and draft excavation report before his death in 1998. Jewell excavated areas of both cemetery and settlement and, although he was unable to link the two areas stratigraphically, he was able to identify several discernable phases of Middle and Late Saxon features within each area. S.H.A.R.P's investigation into Jewell's work was discussed in the 2000 Interim Report (Andrews and Van Twest 2001) and will continue to be presented as work on the Boneyard New Trench continues.

Further settlement evidence from the Boneyard area was excavated by the Norfolk Archaeological Unit ahead of the laying of a pipeline in 1991. In areas along the trench's length, which broadly followed the track around the southern and eastern edges of Boneyard, many traces of Middle Saxon settlement debris were found and in the area of the Chalk Pit the remains of a Middle Saxon oven / kiln were also uncovered (Bates 1991).

Further evidence has been provided by S.H.A.R.P's own work. In addition to the excavated evidence of the Boneyard and Reeddam trenches, a series of test pits were excavated in the area of the Reeddam during the 1996 season (Cooke et al 1997); an evaluation trench was excavated in the eastern half of the Boneyard in 2000 (Davies 2001) and the western extent of the area has been evaluated by the Reeddam II trench during the 2001-2002 seasons (Calow, this volume). From a less invasive perspective, there is an ongoing programme of fieldwalking throughout the parish that has investigated the Boneyard area twice - once in 1996 and again in 2002 (Ames 1997). The area has also been subjected to extensive geophysical survey: resistivity within the Boneyard field itself and magnetometry in Chalkpit Field to the south (Payne, this volume).

The Middle Saxon Settlement

We can be certain that the evidence so far recovered is only a flavour of the full extent of the Middle Saxon phases of the settlement and in all probability some of the evidence has been lost to later phases of the settlement's development. With regard to defining a settlement area, it is quite clear that the settlement is contained within the area immediately surrounding the Boneyard site. To the south the settlement spread extends into Chalkpit field where sherds of Ipswich Ware were found during the winter fieldwalking of 1996/97 (Ames 1997) and this edge was again identified and mapped during the Easter Season 2002 (Fig. 2).

Fig. 2 Ipswich Ware found Easter 2001.

To the east, the Middle Saxon spread was encountered in both the 2000 evaluation trench and also in the 1991 pipe trench. Preliminary collection of surface finds from the woods to the east of Boneyard field suggest that the spread continues into the trees and finishes within them. Whilst some of these surface finds are undisturbed, there is a significant risk of contamination from material redeposited during the digging of a series of ponds and drainage ditches in the mid-nineties. This area remains to be more fully investigated when the undergrowth and pheasant rearing allow.

To the west, the Middle Saxon spread extends to the Reeddam II trench and was encountered in the Chalk Pit by the 1991 pipe trench. Excavations at West Hall failed to produce much quantity of Ipswich ware and so it is reasonable to assume that the spread stops somewhere in the area to the west of the causeway. It is hoped that excavations to be conducted in 2003 will allow this hypothesis to be tested.

We also know that the Middle Saxon settlement spread continues to the north of Boneyard into the Reeddam. Both the 1953 excavation and S.H.A.R.P's 1996 test pits demonstrated that there is a large quantity of material to be discovered, sealed by later adaptations to the structure of the Reeddam. Interestingly, of all the test pits only Test Pit 3 (Fig.3)

Fig. 3 Location of Test Pit 3.

found no trace of Middle Saxon material, suggesting that the spread ends under the Reeddam: perhaps even at the Saxon water's edge. This raises the question of whether the settlement continued on the opposite bank of the river, now obscured by the modern village. I would argue that it must have, but the evidence is much more difficult to come by.

We can also be broadly certain of the limits of the cemetery within the settlement spread. We know from the 1958 excavations that there are burials to the east of our main trench, but the 2000 evaluation demonstrated that the eastern side of the Boneyard field is free of burials. Likewise the 1991 pipe trench showed the area to the south of the field to also be free of burials and fieldwalking has produced no trace of human bone. It is also highly probable that Jewell's excavations and the Boneyard New Trench contain the western extent of the cemetery. Again it is only the extent of the site to the north, into the Reeddam, that needs to be ascertained.

The Late Saxon Settlement

Both Jewell's and S.H.A.R.P.'s work have identified Late Saxon phases of occupation on the main Boneyard site, although they are different in character to the Middle Saxon phases (Faulkner, this volume). The features appear to be much less structural than those of the Middle Saxon period, suggestive of the settlement element of Late Saxon Sedgeford having moved away from the area of the trench.

Interestingly, the trenches and test pits to the north in the Reeddam record no trace of Late Saxon material, suggesting that the settlement had retreated to the south. To the east, Late Saxon material was found in the 2000 evaluation and the 1991 pipe trench. It is again likely that the spread continues into and finishes in the woods. To the west, traces of the spread were picked up in the Reeddam II trench and Late Saxon material was discovered in quantity during the West Hall Paddock excavation, suggesting that the settlement had extended downstream to encompass the chalk outcrop upon which the West Hall complex sits.

Fig. 4 Thetford Ware found Easter 2001.

To the south, fieldwalking has picked up a definite concentration of Late Saxon material much larger and more defined than the Middle Saxon one (See Fig 4.) It is also interesting to note the quantity of Late Saxon pottery and domestic material that was recovered from the topsoil during the initial excavation phases on Boneyard - the majority of which is derived from further up the slope. This is strongly suggestive of at least a part of the settlement having moved to higher ground, away from the river. This area has also produced some very promising geophysics results (Payne, this volume) and should clearly be considered as a focus for further work.

Conclusions

From this very superficial analysis of the available evidence it would appear that the Middle Saxon settlement spread is quite discreet by comparison to the larger Late Saxon spread that we have detected. Hopefully further excavation within the area of the spreads will allow us to better understand the subtle changes to settlement function and morphology that occurred during the Middle and Late Saxon periods. Work in the eastern woods should pin down that edge of the settlement more certainly, and work to the west will bridge the knowledge gap between the Boneyard area and West Hall. Further geophysics and excavation to the south are expected to produce excellent results, for the archaeological potential is clearly very high. We must hope for an exceptionally dry summer to allow further investigation of the Reeddam, or substantial quantities of money to buy a coffer dam. The work of the Village Survey, begun this year, will trace the settlement spreads on the northern bank of the river.

Acknowledgements

This work could not have been completed without the work of the students of the Easter Surveying and Geophysics courses; all those who have fieldwalked with S.H.A.R.P; Naomi Payne, Sophie Cabot and their magnetometer; and Graham Perry, whose composite excavation plan is invaluable for so many reasons.

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Boneyard Old Trench

Norfolk SMR:1609

By Gareth Davies, Matt Hobson, Kelvin Smith, Laurence Storey and Susan Westlake.

The seventh year of excavations on what is now affectionately known as Boneyard Old Trench was certainly one of the most successful in terms of information gained. It is hoped that the eighth season, in 2003, will see the conclusion of this excavation and although our final interpretation remains in archaeological limbo until the site is fully dug and phased we can begin to speculate on some conclusions.

Areas excavated this year can be broken down into three key parts of the lower slope of the site. These are the structural and boundary sequence at the west of the excavation area, burial excavation and associated features to the east of the excavation area, and deposits, burials and settlement features excavated immediately south of the Reeddam excavation area that was completed in 2001 (see Pack 2001).

Structural and boundary sequence

At the western extent of the trench's lower slope, the surface that has archaeological features cut into it is relatively flat, and possibly terraced. Excavations between 1999 and 2001 had suggested that a structure was situated in this portion of the site, now presumptuously known as Structure 2. This was interpreted as a lean-to, or outhouse, on the evidence of post-holes and a sunken feature containing charred grain and burnt clay and interpreted as a 'working' hollow. In 2002 favourable conditions of water retention within the archaeological deposits allowed Matt Hobson and Susan Westlake to gain a lot more information from this structure. Perhaps most importantly an area of beaten earth measuring roughly 8.5 metres East-West and 5 metres North-South was identified and interpreted as a floor surface within the structure.

To the south and west of Structure 2, a number of boundary/drainage ditches and gullies were identified and interpreted as two sides of the building-plot boundary. This plot boundary appears to have been maintained over time, and future phasing work will show which features are contemporary. To the west of Structure 2 two north-south running charcoal filled gullies were located and excavated. Within the eastern gully fill there was a considerable quantity of animal bone. These features had previously been identified further to the south of the excavation area in 1998 and 2001. In 2002 these north-south gullies were found to be later recuts lying within two larger ditches. These two ditches were dated to the Middle-Late Saxon period. These two Saxon ditches truncated two further portions of parallel north-south running ditches that may have been the original north-south plot boundary ditches of structure 2. The charcoal filled gullies were overlain by a charcoal rich

occupation layer at the northern extent of the excavation area. This layer may be associated with the abandonment of structure 2.

At right angles to these north-south gullies, two intercutting east-west gullies identified as gaps between flinty areas in 2001, were identified and excavated. These gullies, although not contemporary with the earlier north-south plot boundary ditches may represent the southern side of the plot for Structure 2. The fact that this structure was inside a plot indicates some planned land-use within the area of the Middle-Late Saxon cemetery.

One of the most important aspects of excavating the north-south ditches is that we were given an opportunity to observe the remaining sequence of deposits. The slots cut through the north-south sequence of ditches to the west of structure 2 reveal the natural sand around 40 centimetres below the ground surface. Above this deposit we identified three layers, a post Iron Age hill wash, a grey deposit of hill wash and Saxon occupation debris which elsewhere on the site has burials cut into it, and an overlying brown deposit associated with Structure 2. This sequence means two things. Firstly, there appear to be no burials in the area reserved for Structure 2. Secondly, the structure continues in use after the deposits associated with burial are laid down. The significance of this sequence will become more fully apparent when the excavation is fully phased in post-excavation analysis.

Burial Excavation and associated features.

To the east of Structure 2, excavations supervised by Susan Westlake, Matt Hobson and the Human Remains Team added a great deal to our existing knowledge of the Middle-Late Saxon cemetery. In 2001 priority had been given to understanding the sequence of north-south gullies that truncate burials on the upper slope. This year with this sequence better understood, we could excavate these later gully features in conjunction with burials. In total 32 burials were excavated this season.

The features excavated in this portion of the site fall into five main phases which this interim report can only begin to do justice to. The latest phase consists of a possible north-south fence line at the west of the lower slope and two shallow hollows associated with occupation. These features are probably Middle-Late Saxon, but are disturbed by overlying colluvial deposits. One of the shallow hollows produced a decorated sherd of Middle Saxon vessel glass decorated with a red trail. This latest phase of cut features truncates the north-south drainage gullies mentioned above. These intercutting north-south gullies have not yet been exposed at the northern extent of the excavation area and will be further excavated in 2003.

The north-south drainage gullies cut through east-west orientated burials. Within this portion of the site we have excavated at least three phases of intercutting burials. In some cases grave cuts were observed. Both shroud and coffin burials were excavated, with neither style of burial exclusive to any one phase of burial. The density of burials in this lower slope portion of the Boneyard seems to be a satisfying compromise between the densely packed burials of the Reeddam (up to seven phases of burial) and the more spaced-out burials of Boneyard field upper slope (up to two phases of burials). This sequence of burials may not yet be completely excavated and a fourth phase of burials may be located in 2003.

One of the most interesting aspects of this portion of the excavated cemetery is the high proportion of juvenile and infant burials in comparison to other portions of the site (see Human Remains article). In addition, it would seem that this quite densely utilised portion of cemetery is bounded by the western extent of Structure 2. As we complete the excavation of this part of the cemetery in 2003 it will be interesting to see if the cemetery always respects this plot boundary.

Interspersed amongst the burial sequence were a number of highly truncated east-west ditches and cut features. In some instances these features were truncated beyond the point of meaningful interpretation, but they all add to our existing impression of this phase of the site as an extensively utilised portion of land for both burial and settlement. Further phasing work may show that some of these cut features link up and pre-date the Middle-Late Saxon burials. This is to be resolved in 2003.

Below the level of the burials and truncated east-west features, excavations at the bottom of a test pit initially dug in 1997 showed that the natural sand is only about 40cm below the ground surface. In this natural sand, five sub circular cut features were identified and one was excavated. These features appear at the same level as the Iron Age features located in the Reeddam to the north, and give an indication of where we can expect the base of the archaeological sequence to appear.

Deposits, burials and settlement features south of the Reeddam.

The 10 by 5 metre Reeddam excavation to the north of Boneyard excavation trench was finally completed in the summer of 2001. This year, excavations immediately south of the Reeddam excavation were supervised by Laurence Storey and Kelvin Smith. These excavations aimed to stratigraphically link the Reeddam with the northern extent of the Boneyard Old Trench by removing the baulk between the two areas. After initial disturbance and topsoil had been removed, the large post-medieval east-west ditch that represents the southern extent of the Reeddam was excavated in plan and recorded in section. The large Reeddam ditch cut through a post-cemetery layer containing Middle-Late Saxon material including a bone stylus. This layer is the same as the Saxon 'midden' layer observed by S.H.A.R.P as early as 1996.

As the post-cemetery layers were recorded and removed, an east-west orientated burial was uncovered and recorded. This burial represented the top layer of Saxon inhumations. This area of the excavation site will be of great interest as this intact portion of cemetery is matched to the phases of burials on the Boneyard lower slope. It is our intention to excavate the remaining layers of burials within the baulk in 2003.

To the immediate south of the Reeddam baulk, waterlogged conditions meant that initial cleaning exposed a number of features within a 'triangle' of the site north of the truncation caused by the post-medieval Reeddam ditch, but south of the Reeddam excavations southern baulk. At the west of the excavation area east-west burials were excavated. These burials represented the very base of the burial sequence; if they had been any higher in the sequence they would have been truncated by post medieval ditch cutting. As these burials were at the base of the cemetery sequence, the base of the graves cut into natural sand and the outline of the cuts could be partially observed.

To the east of these burials, initial cleaning showed that post-medieval ditch digging had truncated away almost all the Saxon layers leaving only some heavily truncated Saxon features. These took the form of parallel post-holes possibly relating to an early structure and some smaller post-holes akin to those associated with a Saxon fence line found in the Reeddam excavation area. At this level, the heavily truncated ?Saxon features cut through an earlier phase of settlement features, including a north-south curvilinear gully, a number of small irregular cut features and an east-west curvilinear ditch terminal. The discovery of these features caused some excitement, because they are quite probably Iron Age, linking-up with similar features located beneath the Saxon burials in the Reeddam in 2001. Although there was little dating evidence from the features excavated in 2002, it now seems certain that before the Saxon occupation of the valley bottom there was some kind of Iron Age settlement. In this small excavation area we have chanced upon ditches and gullies that are more than likely directly associated with an Iron Age roundhouse. As yet we can only guess at the nature of this Iron Age settlement.

Conclusion

The excavations on Boneyard Old Trench this year have clearly provided us with some excellent new information. We have added substance to the structural sequence at the west of excavation area, and started to reconcile the Boneyard and Reeddam areas of the Middle-Late Saxon cemetery by excavating a very interesting burial sequence. We have also further observed Iron Age settlement features at the base of our archaeological sequence. It is hoped that excavations in 2003 can provide us with some highly satisfactory conclusions to the Boneyard Old Trench excavations.

New Trench Excavations 2002
Norfolk SMR: 1609

By Naomi Payne, Dom Andrews, Neil Faulkner, Claire Malleson, and Liz Wilson

Introduction

S.H.A.R.P.'s "New Trench" in Boneyard Field was opened by machine excavation at the start of the 2001 season. The Ministry of Works had previously investigated the area to the west of Old Trench. J.G Hurst dug two transects of test pits across the field during December 1957, and Dr P. A Jewell returned the following year in advance of deep ploughing to investigate in more detail an area of occupation and a sample of the cemetery (see Figure 1, Jewell 1977). A central north-south "long trench" and a number of box grid trenches were opened. The baulks between these grids were eventually removed, creating the arrangement of trenches shown in Figure 1. Jewell discovered a number of burials east of the settlement features, which included flint spreads and ditches. The deposits were found to be of much greater depth further down the slope. Jewell recognised five main layers. Most recent in the sequence was the topsoil, layer 1. Layer 2 was a light-textured brown soil between 7 and 14 inches thick, with occasional flints and little occupation debris. Layer 3 was found to contain evidence of occupation in the form of finds (bone, shell and pottery) and accumulations of flints. Overlying the natural glacial gravel, layer 5, was a light-textured tan-coloured sandy soil, layer 4, through which Middle Saxon settlement features were cut (Jewell 1977: 4).

Two trenches, Link Trench 1 (LT1) and Link Trench 2 (LT2), were opened as part of the 2000 S.H.A.R.P summer season in order to locate precisely Jewell's trenches and evaluate the findings of the 1950s excavations. (Andrews 2002) LT2 was situated further to the north and therefore lower down the slope. This trench was not excavated as far as Jewell's layer 3 and was completely removed when the New Trench was machined. Jewell's trenches B and D (S.H.A.R.P.'s lettering system) were identified within LT1, and a skeleton (S0091) was discovered unexpectedly. This burial was just outside Jewell's excavations, and was situated fairly high up on the slope, hence the limited depth of material covering it. The decision was made to open a new open area of a similar size to S.H.A.R.P.'s original trench in Boneyard field. This new area would encompass Jewell's main trenches in order to investigate more of the settlement associated with the Middle Saxon cemetery and to apply to a new area the stratigraphic method learnt from the excavation of the Old Trench.

The 2002 Season

During the 2001 season, the depth of the deposits in the upper (southern) part of New Trench was found to be very shallow (Jewell's layers 1 and 2 only). A build up of ploughsoil and colluvium was observed on the lower slopes, and this was not entirely removed during the 2001 season. The southern portion of our excavation trench on the upper slope was left under backfill during the 2002 season, whilst we worked down to a comparable stratigraphic level. The open area worked during the 2002 season was approximately 30m by 12m and can be seen in Figure 2.

Field observations, stratigraphic sequence and interpretations

After the removal of the backfill and Terram from the lower part of the site, general cleaning (8000 and 8001) revealed some of the edges of the 1957-8 trenches, although not every line was apparent. This was probably because the trenches were not manually backfilled to the top following excavation, but collapsed in at different levels when the field was deep-ploughed in 1960 (Bill Armitage, Pers.Comm.) Further trench edges were identified after subsequent trowelling, although the exact position of parts of Jewell trenches D and E, and the western part of F remained unclear. Although the 1957-8 trenches represent the latest events in the sequence, it was decided that they would not be excavated out unless necessary for practical reasons. This was because of anticipated difficulties with backfilling. Instead, the Jewell trenches were marked out clearly to differentiate the contexts.

In the eastern half of New Trench, the deposits likely to be recent (post-Jewell) ploughsoil (7015 and 7091) and late colluvium (7058) were removed to reveal a general poorly stratified context (8006) which probably includes elements of both medieval and post-medieval ploughsoil and colluvia. In the north-eastern area, a mottled brown grey deposit was designated as 8002; the precise boundary between this and 8006 was unclear.

Into 8002 there were two small sub-circular features cut (cut 8003/fill 8004, cut 8008/fill 8009), the yellow brown fills of which showed up clearly against the darker mottled deposit (8002). These features were interpreted as small (possibly truncated) tree boles. Beneath 8002, further to the north close to the baulk was a dark grey gravelly layer of moisture-rich silty sand, 8063 (with cut 8162 being the natural cut/truncation event at the edge of the Reeddam). This appears to represent the southern-most extent of the flooding of the medieval Reeddam, perhaps with 8002 reflecting occasional alluvial/colluvial interaction. Jewell's trench at L 100 (not assigned a letter in our 2001 coding) was located cut clearly through the dark grey layer 8063. Jewell said this had "a very dark profile, probably due to periodic water-logging" and he had to abandon this pit at a depth of four feet due to the standing water (Jewell 1977: 5). The cuts and fills of twelve small circular stake holes, all approximately 5-6 centimetres in diameter and 8-10 centimetres deep were identified in this area. The majority of these had pointed bases, supporting their interpretation as stake holes. Two (cut 8096/fill 8097, cut 8098/fill 8099) were cut through 8002 and the others through 8063 and six of those cut into 8063 (cut 8082/fill 8083, cut 8076/fill 8077, cut 8074/fill 8075, cut 8072 /fill 8073, cut 8094/fill 8095, cut 8066/fill 8067) appear to have been in a linear alignment, possibly representing a fence associated with the edge of the marsh. The stakes must date from a time at which the flooding of the Reeddam had ceased ever to reach this far up the slope, perhaps during the post-medieval period. The alluvial deposits 8002 and 8063 would have presumably periodically interleaved with the colluvial material from upslope, depending on the water levels in the Reeddam.

Several areas of 8006 remain on the eastern side of New Trench, the removal of which will be the initial priority for the 2003 season. In certain areas we seem to have entirely removed this deposit and found another deposit, 8158, into which a number of features have been cut. Up to now, these have only been seen in plan and their exact dimensions and nature are not yet clear. The position (near Jewell's long trench B) and orientation of cut 8131/fill 8130 are consistent with its identification as a burial. If this is the case, it would be very near to the furthest known western limit of the cemetery, with only Derek, S0091, further west. A north-south section of a small ditch (cut 8132/fill 8133) is visible in plan north of S0091, and a larger ditch, as yet quite ephemeral (and uncontexted) runs north-south through the centre of the eastern half of the trench. Also beneath 8006, possibly sitting directly on 8158, is 8100, an irregular light yellow grey clay feature, which appears to reflect a single episode of dumping. This feature, which measures approximately one metre by 0.9 metres at its greatest extent, was not excavated, so its depth and precise character are unclear. However, the presence of occasional patches of orange red clay, apparently burnt, could indicate further potentially larger burnt areas beneath that are not yet visible. A possible parallel is a smaller patch of rammed and burnt clay found in a sunken feature on Old Trench in 2000 (Davies 2001: 6). This was interpreted as a dump of oven lining.

In the western portion of the trench, the overlying deposits interpreted as ploughsoil (7015 and 7091), late colluvium (7058) and earlier colluvium (8006), were quickly removed to reveal an apparent interface with archaeological features. A large spread of flints (8163) set into 8007, a probable early colluvial layer, covered much of the area outside Jewell trenches F, H and I. In three areas, concentrations of circular and sub-circular postholes were discerned. These were excavated and backfilled with dark spoil so that they could be properly recorded before any weathering could occur through the season. The postholes ranged in size and depth and at least two appeared to have been recut. A concentration of postholes was discovered in the north-western corner of New Trench, cut into 8007, in which the flint scatter 8163 is sitting. Again, these features were ephemeral and shallow, suggesting truncation. Four postholes were in a linear alignment, cut 8032/fill 8033, cut 8106/fill 8107, cut 8119/fill 8120 and cut 8113/fill 8114. The latter appeared to have been recut (cut 8123/fill 8124). Two other postholes, cut 8112/fill 8111 and cut 8121/fill 8122 were also cut through 8163, slightly further to the south, but these were not in an interpretable pattern. About one metre to the east of the aligned postholes was a concentration of oyster shells, 8029, which appear to have been deliberately dumped, possibly into a cut feature although this is still uncertain as the feature was not excavated this season. Regularities in the distribution of flint and postholes may indicate the presence of one or more buildings.

Another concentration of possible postholes was identified to the north-west of Jewell trench I. Here, four postholes (cut 8012/fill 8013, cut 8010/fill 8011 with recuts 8050, 8052 and fills 8051 and 8053, cut 8014/fill 8015, cut 8016/fill 8017) and four stake holes (cut 8028/fill 8027, cut 8058/fill 8059, cut 8054/fill 8055, cut 8020/fill 8019) appear to have been cut into a possible late Anglo-Saxon colluvial layer below 8006 which

has been designated 8060. This may be the same as 8007, but it lacks the embedded flint scatter seen further west in the trench (8163). Three of the postholes may be aligned north-south, but there is no clear pattern in this area. We are expecting to find the continuation of a north-south ditch in this area, which Jewell located in the north west corner of Jewell Trench H. The fill of this ditch has been designated as 8018, although it has not yet been identified with certainty on the ground. It is possible that the postholes and stake holes discussed above are cut into the upper part of the fill of this ditch.

Between Jewell trenches H and I, nine postholes cut into 8007 were identified, seven of which appeared to be in a significant alignment. Cut 8048/fill 8049, cut 8046/fill 8047, cut 8044/fill 8045, cut 8040/fill 8041, cut 8034/fill 8035, cut 8026/fill 8025 and cut 8024/fill 8023 were set on two lines around a right angle, and 8085, a concentrated scatter of rounded flints, was present north and east of the lines of postholes. This concentration of flints was interpreted as the base of the floor of a post-built structure, Building 3. Some patches of clay (8084) found sitting on top of the flint concentration may represent a former rammed clay floor surface. The floor of Building 3 was not excavated so the nature of the relationship between the postholes and the flints and rammed clay is not yet properly understood; we are not sure whether the posts were erected before the floor was laid or vice versa. Two other postholes, cut 8086/fill 8037 and cut 8038/fill 8039 were identified nearby to the west, but it was not clear if these were directly associated with Building 3. All the postholes were fairly shallow when excavated (between 10 and 25 cm deep, compared with 12-20cm in diameter), indicating that they must be truncated if they were to have effectively held structural posts. The excavated remains (approximately 3 by 1.5m) may suggest an ancillary structure; however Jewell's trenches F, H and I may have removed evidence of this structure, in which case it may have been significantly larger.

Near the southern edge of the limit of this year's excavations, next to the area left covered by Terram and backfill, the edge of a terrace consisting of frequent large and medium flint and chalk cobbles set into light orange-brown silty sand has been located (8116). During the season, this was referred to as (the northern edge of) the Upper Terrace, as it probably links up with that feature in Old Trench. Derek, S0091, appears to have been cut through the edge of the terrace, suggesting that this burial falls fairly late in the sequence, post-dating the creation of the Upper Terrace and perhaps also the boundary features excavated in the south western part of Old Trench. These too have late burials cut into them. At this stage in the excavation, the terrace and area to the south east (currently under Terram) appears to be the only area where the orange-brown post-Iron Age colluvium (as seen in Old Trench and equating to Jewell's layer 4) has been exposed. Upslope from the terrace edge, the orange-brown layer (Jewell's layer 4) is very thin and quickly merges into the sub-glacial sand and gravel (Jewell's layer 5). Although not yet exposed, these layers are expected to be thicker to the north (down slope) of the Upper Terrace cut.

Two of the Jewell trenches have been entirely emptied (D and I) and two have had a slot removed for practical reasons (F and H). In these locations we therefore have a number of sections through the archaeology. Contexts evident in the sections have been given numbers but have not yet been tied into the sequence in plan. Firstly, we have the north facing section of Jewell Trench D. Whilst cleaning this section, we noted what appeared to be the cut of a north-south gully with one or two fills, which does not appear on Jewell's plan. The plan of Jewell Trench D (see Figure 1) appears to depict a north-south slot through the centre of the trench, with a number of linear features that run from east to west. It is possible that we have not excavated Trench D fully, and the "cut" may be an artefact of the backfilling. It was allocated the number 8159 (fills 8160 and 8161) in the register, and will require further attention to clarify the sequence in this area.

In Slot 3, cut east-west across the north of Jewell trench H, we have excavated out Jewell's backfill to reveal the "footing trench" and the large gully identified during the 1958 excavation, which is visible in plan and in the south-facing section of the slot (see Figure 3). Jewell found that the "footing trench" was cut through the fill of the large gully. Cut 8153/fill 8152 appears to correspond to Jewell's "footing trench" and cuts [8136], [8139], [8156] and fill (8155) correspond with his large gully. Several other recuts and fills [8141]/(8134), [8144]/(8134), [8148]/(8147), [8151]/(8150) of north-south gullies were observed in this section and it is possible that there was a deeper gully [8136]/(8138) below that which Jewell observed, which seems to have been cut into the natural glacial till (Jewell's layer 5). Interpretation was complicated by a horizontal slot cut by Jewell through the ditch sequence [8157]. Other layers (8125, 8128, 8129 and 8145) were seen in section east and west of the observed cuts. 8125 and 8128 may be colluvial soils underlying 8007. All of these layers

may equate to Jewell's layer 3, but they have not yet been exposed in plan. A possible stake hole [8127]/(8126) was noted cutting into (8128).

In the north-facing section of Jewell Trench I, a section of a large north-south ditch can be seen. Cut 8091 (fill 8090) appears to have been the original ditch cut, but there is also a recut, 8093, with two fills, a primary fill (8092) and secondary fill (8089). The east-facing section in Jewell Trench I relates to the north-facing section discussed above. A possible interpretation is that this is where the ditch terminated because the fill 8089 rises up and disappears. Other layers (8102, 8103) can be seen below the gully in the section, but these are known only from the section so no further comments can be made. Examination of this section allowed us to see that a possible posthole, cut 8056/fill 8057, was in fact created by bioturbation. This activity can also be seen lower down the section and was described as 8101 in the register.

Conclusion

The 2002 excavations on New Trench have identified past activity on the site which can be divided into four main phases, within each of which we can recognise a number of sub-phases. Jewell's excavations represent the most recent significant event on the site, Phase 1. Phase 2 relates to the period after Anglo-Saxon occupation of the site had ceased, the pre-Jewell agricultural use of the site. The archaeological deposits relating to this represent ploughing and pasture, the hillwash, the cutting and flooding events associated with the Reeddam and the possible stake fence near the edge of the extent of the flooding of the Reeddam. Phase 3 is interpreted as the latest Saxon use of the site as a settlement and cemetery, and appears to include the cut features and dump of clay on the eastern side of the Trench, as well as many flint scatters and postholes on the western side. The flint concentration and possible postholes relating to Building 3 has tentatively been assigned to an earlier phase, Phase 4. However, this has not been demonstrated stratigraphically. The only feature that can be assigned with more confidence to this earliest observed phase is the Upper Terrace (although the lower layers observed in Slot 3 may also fit into this category). At the moment, all of the features can be interpreted only as broadly contemporary.

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NOTE

The contexts of the stake holes not listed in the main body of the text are cut 8068/fill 8069, cut 8070/fill 8071, cut 8078/fill 8079 and cut 8080/fill 8081

Reeddam II Evaluation Trench 2001 and 2002

Norfolk SMR: 36665

By Stuart Calow

The Reeddam II site was chosen after analysis of evidence from fieldwalking, previous excavations and historical documents. The hope was to find evidence of Middle Saxon occupation, contemporary with the Boneyard cemetery in this western area. Fieldwalking had revealed high concentrations of pottery, animal bone and oyster shell to the south of the cemetery in the field to the east of the Chalkpit. In 1991 excavations by Norfolk Archaeological Unit, in advance of pipe laying, disclosed a Middle Saxon clay oven just west of the Chalkpit. Signs of terracing are visible to the south of the presumed Medieval ditch which defines the southern limit of the Reeddam, and these seemed likely to be stratigraphically and geologically similar to those thought to exist to the south of the Old and New Trenches.

The 2001 Season

Based on this, a 35m x 1.5m trench was located approximately 80m to the west of New Trench. Running South to North, downhill from the track the profile is a steep slope for 7m; a nearly horizontal 'terrace' for 13m, a 0.5m drop down a bank crosses the ditch which is 5m wide, and continues to rise for another 2m before it reaches the Reeddam 8m from the end of the trench. The total drop is 3.2 metres.

The research objectives were:

1. To find evidence of Middle Saxon settlement.
2. To discover the structure and age of the track to the south of the trench.
3. To section and date the ditch.
4. To take environmental and pollen samples from the 'terrace', ditch and Reeddam.

In 2001 a 1.5m square sondage was cut in the south end of the trench but, at 1m to the north of the road, it was not close enough to reveal its structure. The colluvium was so deep that it was considered too dangerous to continue. Because of tree root disturbance, the southernmost 7 meters of the trench was then backfilled and abandoned.

Also in 2001, mattocking and trowelling in 10cm spits reached the bottom of the colluvium on the terrace at a depth of approximately 0.8m from the surface and revealed a pattern of embedded flints which was interpreted as hard standing. Among these flints dozens of potsherds were found, all Saxon and predominantly Ipswich ware, as well as much animal bone and oyster shell. Half the ball joint from the top of a human femur, an incisor, and a small section of a jet ring were also found.

Little more was done to this surface in 2002. Three possible post-holes proved ephemeral, and further trowelling and sieving revealed only small fragments of bone, and some more Ipswich ware. A sondage was cut half way down the east side of the terrace baulk, to retrieve samples for pollen analysis at and below the level of the hard standing. More animal bone and several large sherds of Ipswich ware were found, which lay above a 2cm layer of hard black burnt material revealed in the section.

The 2002 Season

Towards the end of the 2002 season, it was decided to reveal the whole west facing section down to the natural. The 11m length of the terrace revealed a dramatic series of 'terracing' and ditch cuts into the natural yellow sand and pebbly chalk, sealed beneath the hard standing. There are two possible terraces to the south, then a ditch, then a cut sloping down to the north one metre south of the Reeddam ditch which contained one sherd of Iron Age pottery.

A revetment feature was uncovered on the south bank of the ditch, at the north end of the terrace. This comprised large flints, some cut at right angles and worn on one side, possibly re-used Roman cobbles. It was one metre wide and shallowly sloping. Although several sherds of Saxon pottery were found among the flints they were not sufficient to provide a secure date for this feature.

Attempts to excavate the large west-east ditch to the north of the terrace in the 2001 season had failed because of flooding and collapsing sections. However a rammed chalk 'path' running west-east along the ditches

northern bank had been revealed, 0.3-0.5m below the surface, one metre to the north of the northern ditch cut. This feature was proved to be relatively modern by 17th –19th century pottery and tile, glass and clay pipe and in 2002 one metre extensions of the trench to the west and east uncovered more of it. How far this ‘path’ extends is unknown without investigation, although it does not appear to the north of the same ditch in the Old Trench, 100 metres plus to the east.

Backfill from 2001 was re-excavated from the ditch, revealing the west facing section where two recuts could be seen. The central recut, 2 metres wide, was sub-rounded and 0.5m deep with a plastic bag at the bottom! The fills of the southern cut beneath this, however, contained Saxon and 13th century pottery in the top layer, and Iron Age in the bottom. Unfortunately, the fills in the northern recut contained no datable material. However, when a section was cut through the rammed chalk feature (‘path’) to the north of the ditch, not only was the cut in which it was laid clearly revealed as steeply sub-rounded down from the south and more gradually up to the north, but the bottom of one or possibly two more cuts were seen beneath it, and seemed to be truncated by it. These were cut into the natural at 45° sloping down to the south. The fill of one of these cuts contained one sherd of late Iron Age pottery.

Immediately to the north of the chalk ‘path’, 25 metres from the south end of the trench, two rounded pits appeared in plan, 0.3m below the surface. The smaller one, to the west, was about 0.3 x 0.3m. The fill of this pit was environmentally sampled, and several tiny beads which were found during the sieving have been preliminarily identified as amber. A copper pinhead and a small piece of gold leaf were also recovered. The larger, eastern, pit contained many oyster shells, animal bones, and some large and unabraded pieces of Ipswich ware. These included one rim with a ‘lug-hole’. This pit was cut into the natural pebbly chalk at approximately 1m in depth. It truncated a small ditch cut into the same natural, running north-south, and veering into the east baulk. The latter contained animal bone, and truncated another ditch running east-west, about 0.5m wide. Finally, at 29 metres north, a more recent ditch cut east-west across the north-south ditch described above. This was cut from 0.3m below the surface (i.e. the same level as the ‘marl layer’, see below) just into the natural chalk. This 0.6m wide u-shaped ditch’s bottom fill was pure marl, as if it had been deliberately filled in at the same time as the marl layer was laid on the Reeddam. This may have been done in post-Medieval times in order to return the Reeddam to the pasture - which it was in the early 20th century - or it may be connected to the Chalk-pit workings.

Five out of six S.H.A.R.P test pits in the Reeddam have previously found a uniform layer of marl 0.3m below the surface, from 10-15cms thick. It was revealed again, in section, in the northern 5 metres of this trench, and in the sump beyond it. It had brown sandy subsoil above it, and dark grey waterlogged deposits below. Pollen samples were taken from the latter. Because of time and flooding, these deposits were matted and shovelled out to reveal the section down to the natural and finds were only recovered as a second priority. However, in going down to the natural chalk and sand in two spits, the top disclosed only Ipswich ware and the bottom Ipswich ware and Iron Age wares.

Conclusion

Although no dwellings were discovered, evidence of habitation nearby seems proven: there was unabraded Middle Saxon pottery in abundance, much animal bone and oyster shell, a pit with Ipswich ware, as well as ditches with traces of Iron Age pottery. These seem to point to habitation in the Roman, Iron Age and Saxon times. The date of the main ditch is still elusive, the working hypothesis still being Late Saxon or Medieval, though there is some evidence that it may have had a previous Iron Age incarnation. Having been excavated to the natural, the trench was closed at the end of the 2002 season.

Ladywell Field Archaeological Evaluation

Norfolk SMR 37296

By Andrea Cox

From 1996 to 2000, S.H.A.R.P undertook small-scale excavations at West Hall Paddock, on the western edge of what was discovered to be two moated courts or enclosures likely containing a post-Conquest (AD 1066 to

AD 1500) manor house owned by Norwich Cathedral Priory. During this research, earthworks consisting of several raised rectangular platforms; a low linear area of damp land running north-south and several smaller low wet patches were discovered in the field next door and tantalising evidence began to suggest that these earthworks belonged to another two-court medieval moated manor. Research showed that the de Sedgeford family, the local gentry, had owned this land during the medieval period.

The field, Dovecote Piece or Ladywell Field, was systematically surveyed using geophysical techniques and the results backed up our theories. The 1998 survey (Carnell 1998) showed that the linear damp area appeared to split the field into two parts; this being the central arm of another two-court moated system. This would form the two courts along with the Ladywell pond to the west, the river to the south and an arm of the Priory manor's moated court to the west. The steep slope of the valley side creates the northern boundary of the system. The rectangular platforms situated directly to the east of the central arm showed clearly on the 2002 survey giving readings consistent with buildings, possibly a manor house and outbuildings; although the exact lines of walls were difficult to discern. The smaller wet patches to the west of the central arm also appeared on the initial geophysical survey results and could be interpreted as ponds in the secondary court of the de Sedgeford manor complex

Figure 1: Map showing the Ladywell and West Hall Paddock sites in relation to St Mary the Virgin Church and the course of the River Heacham. Note the shape of the river around West Hall House and along its course to the Ladywell.

This represents the course of the river around the moated courts of the manors. Despite these excellent results and compelling theories, our geophysical surveys and documentary research could not conclusively tell us the date and exact character of the earthworks. We did not have a layout of the buildings or proof that the cut of the moat existed. So a programme of archaeological evaluation trenching was devised to answer these questions. Initially five trenches were planned. The topsoil was to be removed, the archaeological deposits recorded and interpreted but as little as possible excavated to avoid any fragmentary destruction of important deposits. Each trench was to be dug and backfilled one at a time in case we came up against complicated and time-consuming archaeology or were unable to complete all five. This proved to be the case and only two of the trenches were excavated, on the northern and western edges of the rectangular platforms (See Figure 1).

Trench 1 was 'L' shaped and was sited to study an area of high electrical resistance, which suggested that walls or an area of rubble lay beneath. In general the topsoil was thin and two 20th century field drains were excavated to give a window through which to study a depth of archaeological remains. The earliest deposits were a compact layer of chalk rubble and two layers of sandy silt containing chalk and shell fragments. Founded directly on top of this was a nicely faced wall surviving to three or four courses. It was constructed of roughly hewn blocks of chalk and ran east to west across the trench and beyond. A thick layer of sandy silt butted the southern side of the wall and likely accumulated against it during its time in use. No datable finds were recovered from this sequence of activity but the stratigraphic relationships with activity elsewhere in the trench and the depth of the deposits suggests that this sequence represents the earliest phases of activity in Trench 1.

Later than and to the west of this sequence were the very fragmentary remains of another chalk wall. Only part of a single course remained and it was founded at a much higher level than the first and on top of a layer of cockle and mussel shell that contained a single fragment of 13th to 14th century green glazed Grimston type ware pottery.

Figure 4: The earliest chalk wall.

Figure 5: The fragmentary chalk wall.

This or the earlier chalk walls cannot be interpreted more fully. Neither bears a direct relationship to any other wall thus making it impossible to say that they form part of a room or building. The small and/or

fragmentary portions uncovered also makes it impossible to infer their original length, height or function. Both walls could equally have been part of a building or part of a boundary wall.

After its destruction, a surface of compacted chalk covered the later of the two walls and the surface was bounded to the north by a curb of on-edge chalk blocks. The surface material may have been demolition debris as it contained fragments of flint and carrstone, shell, animal bone, fragments of Rhineland lava quern, ceramic tile, an iron nail, a fragment of dressed limestone, 11th to 12th century unglazed Grimston type ware and 13th to 14th century glazed Grimston type ware pottery. Alternatively, these finds could represent debris from buildings and activities nearby. This curbed surface appeared also to be contemporary with the final phases of medieval activity within Trench 1.

This final phase was uncovered in the northern part of the trench. Two walls were recorded, the first running north to south along the edge of the trench so that its full width was not seen. It terminated 1.6m to the north of the curbed surface and running westwards at approximately 80°, the second chalk wall butted this end. This reversed 'L' construction of walls lay parallel with the curb suggesting that they were either in use at the same time or that the walls were at least still visible when the curb and surface were laid. Finally these walls went out of use and a layer of silty sand sealed them.

Trench 2 was sited to explore the western edge of the rectangular platform, near to the corner of a possible building. It was also designed to find the eastern edge of the moat's central arm. The thick topsoil was removed and, again, a 20th century field drain allowed us to view a depth of stratification without disturbing the deposits themselves. The earliest deposit recorded was a layer of grey sandy silt that had been cut into by a foundation trench for a wall. The wall ran north to south across the centre of the trench and was faced with roughly hewn chalk and occasionally flint or conglomerate blocks. The interior was made up of weakly cemented sand and lime mortar, and chalk rubble. The depth of the foundations was not determined but, above the foundation cut, the wall survived to a height of 0.5m in eight courses. The eastern face of this preserved section of wall had later been refaced with chalk blocks, widening the wall by about 13cm to 55cm wide. This may represent running repairs or the strengthening of the structure.

Again, the small portion of wall uncovered and the lack of relationship to any other structural remains means that this wall is difficult to interpret further. Its size and the need for foundations suggest that it may be a significant structure, as does the need for widening repairs. Nevertheless, an important structure could equally mean a perimeter wall running around the edge of the court, as a main wall of a building. Either way this eastern side of the wall was gradually obscured by a sequence of deposits that butted it showing that eventually its importance may have declined.

Four deposits made up this sequence; an isolated patch of grey sandy silt containing chalk fragments being the earliest. Above this was a thick deposit of shell, burnt daub and yellow sandy silt clearly representing a deposit of waste and possibly demolition debris dumped up against the wall. It appeared to be of later medieval date as it contained several fragments of adjoining 13th to 16th century green glazed Grimston type ware jug with applied flower motif decoration. Sister pieces of this jug were also recovered from the disturbed and mixed fill of the 20th century field drain. A small patch of yellow clay was recorded above this, and a widespread layer of compacted chalk containing flint and carrstone fragments, medieval roof tile, iron nails, shell, Grimston type glazed and unglazed pottery, bone and 17th

Figure 6: The chalk wall in Trench 2.

Century building brick. The building brick probably originated from a rectangular Ladywell that is documented to have stood near to the trench during the 17th century.

An interbedded sequence of sandy silt and chalk rubble deposits also butted the western face of the wall. The chalk layers were probably formed by rubble tumbling from the wall as it decayed, while the silt layers simply represent the natural accumulation of soil against the wall. All appear, from the finds recovered, to be of modern date as they included early to late modern brick and tile fragments and a stainless steel button. The

edge of the probable central arm of the moat system was not uncovered here, as these modern deposits would conceal any such medieval cuts.

Nevertheless, Trenches 1 and 2 yielded enough significant archaeological features and such a depth of archaeology to prove that Ladywell Field had been settled in the past. Although the evidence recorded during the summer has not made the layout of possible manor buildings any clearer, or proved the existence of a cut moat, it has clearly dated activity on the site to the medieval period. It has shown that there were at least three phase of construction and associated surfaces and deposits in the area of Trench 1 and Trench 2 proved that the site was occupied from at least the 13th century for long enough to need repairs or alterations. In fact, it seems as though the site was extensively and quite intensively occupied during the medieval period but again evidence for its exact character remains tantalising but not yet conclusive.

P. Carnell, 'Sedgeford: 'A Non-invasive Search for a Lost Manor' Norfolk Archaeological and Historical Research Group No. 7 (1998).

Human Remains in the 2002 season

By Patricia Reid

Introduction

2002 was a season in which Human Remains went from strength to strength. Once again we were on site for the whole season, this time in excellent and sensibly located accommodation. Many volunteers participated in cleaning, labelling and preparing remains for the archive using a covered outdoor area. Courses were fully booked well in advance, and course graduates were very active in the onsite excavation of skeletons and post-excavational recording. We are especially grateful to trainees from previous years who returned for to work on the trickier post-ex recording, analysis and research.

Thirty-two articulated (though not necessarily complete) skeletons were lifted this season. Twenty-nine came from a relatively small part of the central Old Trench shown on Figure 1. Two well-preserved ones came from waterlogged conditions in the north-westerly corner of the Old Trench. One, S0132, came from the baulk between Old Trench and Reeddam, and represents the topmost burial in what will certainly prove to be an interesting sequence in 2003.

The 'Children's Graveyard'

Up until this season, we have been very concerned by the apparent absence of burials of small children. There could be a number of explanations for this. Most obviously, perhaps small children did not die. Sadly, however, the infant mortality rates in low-technology societies in the modern world do not suggest that such an explanation is plausible; it is far more likely that as many as 40% of babies died before their first birthday (Coale & Demeny 1983). Perhaps then, the fragile bones of the small children have not survived 1,200 years underground? Yet in the 1999 season, well preserved remains of a 2-4 year old, S1025, had been found in a sondage in the lower Old Trench. Perhaps taphonomy explained the absence of neonates (new-born) and infants but not, it would seem, the absence of 2-6 year olds. The presence of S1025 also counted against the argument that maybe small children were not regarded as 'people' entitled to 'proper burial' and were disposed of in other ways which we have not yet recognised (Lucy 1994). We also had the alarming idea that perhaps inexperienced volunteers were not recognising unfused children's remains and were consigning them to animal bone processing. Volunteer training in the recognition of the bones of young children was introduced in 2001 to counteract this, and animal bone checked carefully.

There remained one other explanation, i.e. that children were buried in a special part of the burial ground not yet excavated. At the end of the 2000 season an area of possible child burials was identified in the central Old Trench. Time did not permit excavation of the area in 2001 (see last year's report) but this year it was opened up. The initial diagnosis was right. From a relatively small area came at least 17 juvenile burials, most of them so close together that excavation was a major challenge. Estimating a reasonably reliable age using tooth eruption and stage of bone fusion is fairly straightforward (though see below) and the table below gives a breakdown by age of the juvenile remains from 2002.

Age category	Number of skeletons
0-1	3
2-3	6
4-6	5
7-11	2
12-15	1
Total	17

Table 1: Juvenile burials 2002

During post-excavational recording we often found infant bones intermingled with the more complete skeletons of slightly older children, implying an even greater packing-in of child burials than we had first recognised. The adjacent areas to the south and east of the child concentration contained mostly adult burials,

though with children occasionally represented. The adjacent area to the north will, hopefully, be excavated in 2003.

Recording these small skeletons was a learning experience for many of us. The adult skeleton is made up of 206 bones: that of a child is made up of a far greater number of bones, many of them very small indeed. Meticulous excavation enabled excellent recovery (S0102 is a particular fine example, thanks to Maria Fashing - see photo 1) and the re-matching of the multitude of bones in the workroom was a real challenge. (photo 2) The thin walled crania had mostly disintegrated into many tiny pieces but the mandibles survived well. These skeletons have been fully recorded, but as yet we have found no obvious pathological signs and cause of death cannot at present be identified in any way.

So have we found the 'children's graveyard' - the Lost Children of Sedgeford, as the press called them this year? What we must remember is that the under sixes still only represent 10% of the total archive of 177 articulated skeletons, a much smaller proportion than we would expect if the child mortality rate was comparable with the modern figures given above. We still have to keep an open mind, and there will be more on this at the end of this section in the plans for 2003. Meanwhile, however, a very illuminating article by Jo Buckberry of Sheffield University, called Missing, presumed buried? Bone diagenesis and the under representation of Anglo Saxon children is available as a research article on the web at

<http://www.shef.ac.uk/assem/5/buckberr.html>

Adult skeletons 2002

Fifteen adult articulated skeletons were excavated this year. All of the ones in the central Old Trench had been truncated to a greater or lesser extent by the many ditches that run through this area. Many of these burials are underlain by still more burials, and there is clearly a complex sequence emerging in this part of the cemetery. These adult skeletons have also been recorded and are of familiar types. The age and sex distributions are given in the table below.

Age categories	Male	Female
15-24	1	2
25-34	1	3
35-44	3	3
45+	0	2
Totals	5	10

Table 2: Adult burials 2002

Once again, the oldest people are female, which seems to have been the case on the rest of the site. The ageing of more mature skeletons is, however, notoriously difficult. (Molleson & Cox 1993) In the last two seasons we have been relying heavily on the tooth wear models worked out by Miles and Brothwell (outlined succinctly in S. Mays 1998: p57-66). We are, however, beginning to have our doubts about using tooth loss: could it be the case that women are losing their teeth at an earlier age than men, perhaps because of frequent pregnancies? This would mean that a toothless woman might well be the same age as a man who still possesses teeth (albeit heavily worn ones). Again, this goes on the agenda for future research.

For the most part, pathologies were familiar – two fused lumbar vertebrae for S0116 (male) and two fused cervical vertebrae for S0090 (female), dental abscesses for S0130 (male) and cribra orbitalia (anaemia?) in S0123 and S0133 (both female). 3 skeletons did, however, show abnormalities in the sacral area (base of spine) and one, S0112, had her right pelvic bone completely and seamlessly joined to her sacrum: this has been very provisionally diagnosed as our first case of Ankylosing Spondylitis.

Research in 2002

Much time this year has been spent familiarising ourselves with, and learning from, the juvenile skeletons. Research in other fields has, however, continued. Carrying forward from 2001, Charlotte Burrill has used her

MA dissertation on burial practice at Sedgeford to bring together some fascinating material on styles of burial and coffin fittings. Bill Wilcox has contributed more on the orientation variability of the burials. Ben Stillman's dissertation on cranial trauma amongst Sedgeford skeletons has been invaluable.

New projects this year are quite diverse. Steve Horn carried out an exploratory investigation of a method said to be reliable for estimating the number of pregnancies a woman has had from skeletal remains. Ray Baldry and Eve Richardson carried out a detailed investigation of the leg injuries of S1043. Claire Scudder (UCL MA) visited to carry out an investigation of the reliability of methods being used to age juvenile skeletons. She is at present using laboratory techniques to check against volunteer estimates – her results are awaited with interest (and some nervousness!). Allysha Powanda, inspired by her on-site experiences, is currently working on a dissertation on child burial, which will involve comparison of Sedgeford child burials with those of other sites.

Other projects are under negotiation at present for 2003 – see below.

Other developments in 2002

A number of requests for written copies of our Human Remains excavation policy brought us to a decision: what we have been doing through our practice had to be put into writing, and not just left to our Home Office License. A Thursday evening site meeting was devoted to a heated discussion of this topic, with attention particularly focussing on the reburial-or-indefinite curation issue. Based on this discussion, Martin Hatton drew up a policy document, which incorporated the main points and respected the Home Office conditions. At the time of writing this, the document has been passed for consideration to the trustees. Once approved, it will be available on the website and on request from the Secretary.

Another development has been the acquisition of an industrial racking system, donated by National Grid, for the storage of the Human Remains in the Old Village Hall. The storage of the Human Remains was becoming very problematic: the boxes are heavy and bulky, and as they should not be stacked more than four deep they were threatening to take over the Old Village Hall. The new system is ideal and very professional. Thanks to Jim Reid!

Looking ahead to 2003

Some directions have already emerged from the account above. The excavation of the area to the north of the children's graveyard could be very exciting, and the sequences revealed in the central area and baulk will be most interesting. Individual research areas being discussed at present include a dissertation on activity based skeletal modification, and another investigating dental variation. Research proposals are always welcome – see the S.H.A.R.P website for suggestions.

The Human Remains team will be participating much more fully in the Easter season 2003. Our standard basic level course with UEA accreditation available is being offered in the first week of the Easter season. A totally new development will be the offering of a 'Level 2' Human Remains course in the summer of 2003. This follow-on course is being offered in response to public request – so many of you have now done the basic course and want to do more. The course will include specialised topics and will be geared more to research and interpretation, but 'hands on' experience will remain central! See the S.H.A.R.P and UEA summer handbooks for details.

For the Easter season, a new priority has come onto the agenda. Over the last few years, we have been able to bring our record keeping up to date for the articulated skeletons and by summer 2003 our database (designed and set up by Hilary Snelling in 2001) should be completely updated, enabling speedy research. What is now demanding attention is the huge quantity of disarticulated bone in our archive – in terms of bone weight, disarticulated bone amounts to between a third and a half of the total. Some attempt has been made in the past to record the disarticulated bone but the methods used have been so time consuming that the time pressures of the summer season have defeated them. The problems caused by this were strikingly highlighted this year by the accidental discovery by our archivist, Graham Perry, that a collection of disarticulated bone from a test pit

dug in the Easter season 1998 contained the remains of at least 5 juveniles, ranging in age from neonate to around 12-14 years old. These have never been recorded, yet they turn upside-down any notion that we have found the only children's graveyard. This test pit was located high on the Boneyard field, well to the east of the Old Trench but not as far east as the exploratory trench in 1999. How many more children are lurking in the disarticulated bone? And what other surprises does it hold?

The plan is to use the Easter season to draw up a workable plan for recording and interpreting the disarticulated bone, then work through it season by season, starting with the bone from the topsoil in 1996. We will need to interpret using the Harris Matrix for the whole project so far. We would be enormously grateful for any volunteers with basic anatomical knowledge who can spare one or more days for this exercise: contact Pat Reid on patmreid@hotmail.com, telephone 01795 532252 or write to her at 8, Provender Walk, Faversham, Kent ME13 7NF.

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Names in bold are those of S.H.A.R.P team members and volunteers.

Archaeo-Environmental Sampling

By Susan Westlake and Claire Malleson

This year the environmental research at Sedgeford has expanded once again, with two supervisors overseeing the sampling strategy; one for the Old Trench and one for the New. As both supervisors were also site supervisors, unlike previous years, volunteers carried out the majority of the processing with refresher briefings. The Basic Training course now contains a teaching session covering the theory and practical techniques of Archeo-Environmental Sampling. Over the eight-week season we took over 30 samples from different areas of the site.

The Sampling Process

Archaeo-environmental samples are taken from what are termed 'sealed contexts', that is contexts that we know have not been disturbed by later intrusions and are easily defined, for example pits and ditches. The sample is excavated into clean, white, sampling buckets, and details are recorded about the pH of the soil, the type of soil, and about what the nature of the feature may have been. The samples are then processed by flotation. Forty litres of each sample are floated, using a technique called manual wash-over. This involves mixing the soil with water and allowing the organic material, such as charred seeds, grains, small fragments of bone and molluscs, to float to the surface. These are separated from the material that sinks, termed the residue, and put through a very fine, 500-micron, Endecott sieve. This flot is then dried and sent off to our environmental specialist, to be studied under a binocular microscope, to identify the different species present.

The residue from the flotation process is washed through a 1mm mesh and left to dry. The pieces of shell, small fragments of animal bone, fish bone, and small fragments of pottery are sorted from the residue using magnifying glasses and tweezers, by very patient volunteers! Each type of find is weighed and recorded and then sent off to the relevant specialists for identification and analysis. The rest of the sample is wet sieved through 3mm or 6mm sieves, to get a 100% collection of all the larger artefacts and ecofacts in the feature.

Boneyard is a particularly good site on which to carry out environmental archaeology. The natural geography, and land-use history, provide conditions that can preserve organic material very well. Although working a site with a high water table presents innumerable practical problems, it does offer some benefits as in dry arid sites flotation and gathering of useful quantities of organic remains and pollen samples is virtually impossible, charred seeds and plant remains dissolve on contact with water. The Medieval Reeddam, while destroying some of the Saxon archaeology, has left numerous alluvial silt layers preserving medieval ecofacts and protecting what lies beneath.

Pollen analysis.

This year we also carried out a trial of pollen sampling. The results will tell us if it is worth continuing to take samples for pollen analysis in future. If it is, we could learn a great deal more about the ancient environment of Sedgeford.

Pollen samples have to be taken under controlled conditions as the risk of contamination can be very high. A local specialist, Anne Blackham, kindly offered her services to the project. She spent a day noting all the species in flower around the Boneyard (knowing what the contaminants might be is very important) then worked with the excavators to remove several block core samples from sections around the Old Trench and Reeddam II. We took these samples from places where we know the dating of the various contexts/layers, from previous year's work. This will allow us to build up a more general picture of the site.

We took Pollen samples under controlled conditions from around ten features on Old Trench. Once the feature had been recognized and excavation planned, the top 5 mm was cleaned off with a freshly washed trowel into the white buckets for flotation. Tools were then re-washed and one trowel-sized scoop was transferred into a sealed plastic bag. After the feature had been quarter- or half-sectioned we were able to decide how many other samples to take. If the feature had several layers we took samples from each layer when it was fully excavated using the same method. In a feature containing only one context, we aimed to take 2 more samples – from the middle and base of the feature. These samples were then sent off for further analysis.

What can this sampling tell us?

Although this sampling strategy is very time-consuming, and involves a lot of work, it is worthwhile. Environmental sampling serves three main areas of investigation:

Diet – Fish bones, cereal grains and animal bones can tell us a great deal about what people were eating and how they were processing their food. For example we can tell if they were catching freshwater or sea fish.

Function – Sampling can tell us about the feature from which the sample was taken. For example if we found an abundance of bread-wheat grains in a pit, we might hypothesize that it was a grain storage pit.

Date – If the feature has produced no dating material, for example pottery, then cereal grains can give us clues as to the date of the feature. For example, spelt wheat, which was in use in the Iron Age, went out of use in the Early Saxon period, to be replaced by bread-wheat. So if we find an abundance of spelt wheat in a pit, then we suggest a rough date in the Iron Age.

The results of the specialist analysis will be available before next season, and should allow us to direct our research more closely in the future.

What about the pigs?

By Ray Thirkettle

The animal bone from 'Boneyard' is proving to be a very valuable resource due to the sheer quantity, excellent preservation and well-defined dating of the deposits. To do justice to the material, this is necessarily a long-

term study. The results we can see at this stage do of course pose more questions than answers, hence the title for this piece. A young girl attending one of our site tours asked this question and an answer was demanded! So... what about the pigs?

The first question we have to ask is 'Where are they?' Figure 1. shows the relative quantities of bones from the three main animals found. Pigs seem to be very few.

Figure 1. Sedgeford

A comparison with contemporary sites shows that Sedgeford fits in fairly well with the rural examples illustrated, although pigs seem to be particularly scarce. The pattern of animals found in the Saxon towns is rather different, however, perhaps this represents the distinction between 'producer' sites and 'consumer' sites. I think it is fairly clear that ideal consumer choice would be represented by the urban assemblages and we should discount the possibility that the lack of pig bones mean that Sedgeford people had no taste for pork.

In order to get a better idea of the availability of different meats to the Anglo Saxon in Sedgeford it is useful to convert this data into an estimate of relative carcass yield. Figure 2. illustrates this.

Figure 2. Data as in Fig. 1 corrected for relative meat yields

To arrive at these figures we have assumed that carcasses of cattle would yield 7.5 times the amount of meat produced by a sheep and the carcass of a pig, 2.5 times that of a sheep (Boesneck et al). This reverses the probable quantities of beef and mutton consumed but it emphasises the apparent low consumption of pork

It is important to bear in mind that we are looking at only the residue of butchery and kitchen waste, which has happened to be deposited here and has just happened to have been preserved allowing us to dig it up and count it! We have to assume that the bones of pigs were disposed of in the same manner as cattle and sheep bones. I can think of no reason to say that this may not be the case at Sedgeford, unless of course, our community consumed only flank cuts and exported the recognisable limb joints and heads. This, I think is unlikely, if not absurd.

Pig bones are invariably under-represented in archaeological assemblages. Most pigs are slaughtered at a young age, before their bones are fully formed and fused. The adolescent bones are porous and fragile; this has an obvious impact on preservation. The epiphysis, or joint surfaces, are used in identification and quantification so unfused bones compromise the accuracy of our study. The effects of the above are somewhat compensated by the fact that pigs have more skeletal elements than cattle and sheep and if we consider counting just teeth, which survive particularly well, then pigs have more teeth to count. I feel that preservation is not the major factor for the low representation of pigs at Sedgeford.

Pigs are the only farm animal kept exclusively for meat and hide. Cattle and sheep are multipurpose; they would have been valued for milk, and sheep for the fleece, but both cattle and sheep had other vital roles in arable farming. Successful crop production, the main food source, was dependant on the mechanised tilling of a large acreage by ox drawn plough. Evidence suggests that sheep were folded on arable fields before the crops were sown. The value of manure must not be under-estimated. Crops would not flourish without the maintenance of soil fertility and animal manure was, as it probably is today, the safest and best way of replenishing the tilth. In short, arable crops could not have been successfully grown without cattle and sheep. The meat was certainly not a by-product but can be considered to complete, or rather balance, the economic equation. Pigs offer nothing that fulfils this function.

It is clear that pigs then were something of a luxury commodity. The degree of this luxury is a trade off between the high fecundity of the sow and the availability of fodder with which to fatten the piglets. Feeding systems based on cereals and pulses (as today's) were no doubt uneconomical and in any case would depend on a harvest surplus. The limitation in the availability of fodder is my main argument to explain the low number of pigs in Anglo-Saxon Sedgeford.

We know from Medieval historical sources that pigs were kept; at least part of the time, in woodland and they were tended by the swineherd, who was often a prominent figure in documents. A large area of woodland would be required even for a small herd. Perhaps this is an indicator of the value of the forage available and certainly hints at the favoured way of raising pork.

Little Domesday Book entries suggest that appropriate woodland was not available in Sedgeford (Darby 1977). The entry states that there was woodland for 60 pigs (Phillimore). Scholars have spent hours agonising over what this may represent in modern acreage and I doubt that it is helpful to try. It may be more productive to look at comparisons between entries over various parts of the landscape, (difficult, as the recording is different for each circuit let alone each county!) and correlate it with animal bone from archaeological excavations. Sedgeford had a large area of waste to the east of the parish (Janet Hammond pers. com.); it is possible that pigs may have been allowed to forage on this. Lacking beach mast and acorns, which must have been important autumn and winter fodder, heath would be a poor substitute for woodland.

Figure 9. (Stevens in Crabtree and Campana)

Data from Wicken Bonhunt in Essex, above, presumably well endowed with woodland, shows a very high proportion of pigs. This does look encouraging but until further research on comparative sites is carried out this must be treated with caution. It has been suggested that Wicken Bonhunt was a royal farm, which may have served as a food-rent collecting centre (Hodges 1982). This surely is a worthwhile topic for future research as there may be the suggestion of a link between perceived site status and the presence of pig remains. The implication that Sedgeford was a low status settlement would not, I suspect, accord with all other archaeological, evidence. It may be as well to conclude that if we take Sedgeford as a producer site, pork production was directly linked to the resources available.

Sty kept pigs appear to be a feature of urban sites during this period but the practice does not seem to have been widespread. There is no reason to discount the possibility that penned animals would feature on rural sites such as Sedgeford. This is probably impossible to detect archaeologically. However, an interesting indication of this practice in medieval times came to light when recording material from Ladywell field excavations this season. A pig's mandible was recorded as having extremely uneven wear along the tooth row. This anomaly has been observed on pig mandibles from urban sites and may result from pigs kept in pens getting thoroughly bored and neurotic and picking up stones and sticks to chew (Terry O'Connor pers. corn.) This phenomenon has not been observed in the Anglo-Saxon material from the Boneyard but it is worth bearing in mind as an indicator of sty husbandry.

We can return to the Historical documents to get some idea of the kind of animal kept by the Anglo-Saxon population. Illustrations, although stylised, do give us an idea of the animals' form. It was a very different animal from the one we know today. The modern pig is derived from stock imported from China and the East in the 17th century (Benynon 1990). The Anglo-Saxon pig was a rangier, long legged, bristly animal. It was more like the wild boar in appearance, but how much like the wild boar? Measurements of the animal bones can go some way to answering this question. Comparing measurements of pig bones is always difficult simply because of the persistent shortage of measurable elements. A method that has been developed to overcome this problem is to compare the available measurements with a 'standard animal'. The amount that these measurements deviate from the standard animal can be used for direct comparison between different bone elements and for comparison with material from different sites (Payne & Bull 1988). A set of standard measurements from a modern wild boar has been published (ibid.) and we can use them to see how the Sedgeford pig compares with a wild boar. Fig.9 shows, as expected, that the Sedgeford pig is much smaller; size reduction invariably following domestication.

Fig. 10

This chart shows the comparison of the range of measurements of pig teeth from Sedgeford. These are compared with the standard measurement from a wild boar. The wild boar is represented as the '0' point of the histogram scale. The range of measurements shown is calculated using the log ratio technique (Payne & Bull 1988). Measurements calculated as less than zero are smaller than the wild boar.

It is interesting that no measurements from Sedgeford, to date, suggest that any of our pig bones originate from wild boar; all appear to be domestic stock.

Having suggested that the Anglo-Saxon pig is similar in appearance to the wild pig but clearly a domesticated species, it is probably more constructive to use an example of domestic stock as the standard animal. A large sample of well-preserved bone and teeth from the late Neolithic site of Durrington Walls in Wiltshire has provided suitable data from which a 'standard animal' has been taken (Albarella & Payne unpublished). The 'standard animal' derived from this data set provides a facility to compare the size and stature of the Sedgeford pig with those from other sites.

Fig. 11

RURAL SITES Fig.3 Fig.4 Fig.5

SAXON TOWNS Fig. 6 Fig.7 Fig.8

Data sources: Fig.3 Crabtree & Campana 1991. Fig.4 Noddle 1980. Fig. 5 Crabtree 1989. Fig. 6 Albarella, Beech & Mulville 1997. Fig. 7 Stevens in Crabtree & Campana 1991.

Only teeth measurements have been considered in this example. Pig teeth have low natural variation, they exhibit less sexual dimorphism than bone and they do not alter much through the lifetime of the animal. Tooth width is therefore an ideal indicator of changes due to domestication and stock improvement. Figure 11 shows that the range of measurements fits very well with that expected from domestic stock. The size of the Sedgeford pig is comparable with examples selected from contemporary sites.

There is a suggestion of a size reduction in the Sedgeford stock when compared to the Neolithic standard animal but many more measurements would be required to establish a mode point. Clearly, much more work remains to be done and the range of comparative sites could be extended. This is fraught with problems: comprehensive metrical data are not always recorded and measurements, where taken, are not always comparable.

This report should not be considered in any way definitive. Please see it as a news bulletin of work in progress. I hope it demonstrates the amount of information obtainable from animal bones and shows that their careful recovery is worthwhile. But most importantly, it does say something about pigs!

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The Geophysical Survey 2002

By Pauline Fogarty
The Technique

This year was our first year with a new piece of geophysical surveying equipment donated to the project – the TIR Resistivity Meter*. We have used this method before, but the new equipment has allowed results to be logged electronically rather than each result being called out and written on paper, then entered into a computer.

The equipment records areas of high and low electrical resistance in the soil. High resistance occurs where the electrical current is not conducted very well and indicates dry areas such as floor surfaces and walls, while low resistance shows damper areas that do conduct electricity well, such as ditches.

The Program for 2002

This improved equipment has allowed us to undertake geophysics on a much wider scale than we have ever done in the past. This year's geophysical survey has been used to finalise some projects undertaken in the past and to open our eyes to whole new areas in the parish which we can focus on in the future.

Geophysics can be used as a tool to survey the site prior to excavation, allowing evaluation of the extent of a site and the preservation of archaeology. It cannot be a complete substitute for excavation, however, as it cannot give you phasing of a site and some features may appear different in reality from the geophysical report. In order, therefore, to answer many questions it is better to analyse the results in the context of research on an individual area. For certain areas investigated this year the analysis of the results sits better with the results for that area as a whole and has been presented with those articles. However, for some areas where research is at an early stage I have outlined our results here. Further analysis may be made of these results in the future as the project grows.

Ladywell Field

A full report on this site appears on page?

West Hall House

Geophysics was done on West Hall House gardens in order to complement the standing building survey made in 2000. This area encompassed the area West Hall Paddock, which has been the focus of excavation, 1997-2000?. The terrain is basically garden, so includes many trees/bushes and fairly frequently dug ground which reduces the visibility of subsurface archaeological features.

Fig. 1 West Hall House Gardens (North top of page)

There are a few interesting areas which may show features. South of the house there is an area of high resistance surrounded on the south and west by low resistance. There are a couple of theories as to what this may show. It may show the edge of a courtyard that is shown in photographs kept in West Hall House or the low resistance may be a feature like a ditch surrounding this area, if this is so it is tempting to see it as a moat leading off an old watercourse in the grounds. In the north west corner of the site, a horseshoe shape of low resistance is shown. It is very difficult to tell if this is a natural phenomenon or some sort of archaeological feature.

Saggy Horse Field

Saggy Horse field shows a wide band of low resistance with a band of higher resistance to the south. With a small patch of lower resistance within this higher resistance. It is speculated that this band of low resistance may be related to the cutting of the Reeddam. However, without excavation it is difficult to interpret any of these geophysics results.

A composite picture of West Hall, Ladywell piece and Saggy horse field has been produced. Although the three sites are based on three separate sets of results so are not directly comparable.

East Hall Paddock

This year we devoted some of our resources into looking at the Gnatingdon end of Sedgeford as part of the Village Survey. This site was the focus of two evaluation trenches in the area close to the East Hall House. A geophysical survey was also conducted in the paddock (the area in front of the house – between the house and the Docking Road).

Fig. 2 East Hall Paddock (↑ house)

The results for East Hall Paddock show very high resistance, compared to sites within the modern focus of Sedgeford. This may be due to work on the area making it suitable for training horses or it may simply be the chalk bedrock outcropping at the top of the hill. It is difficult to get a clear view of any areas of high or low resistance in this set of results, so an interpretative illustration has been made showing areas of high, low and medium resistance.

* For further information about this equipment see www.archaeology.co.uk/cia

Fig. 3 East Hall Paddock Interpretation (↑house) Allotment Field

This area was surveyed in order to see how comparable it was to Boneyard on the other side of the river, and to see if we could see similarities between the two. The field is predominantly high resistance with an area of low resistance at the bottom (South); we can assume this represents the start of the Reeddam and wetter ground. There is a circular anomaly in the north-west corner of the field. We have been unable to interpret what such a distinctive feature may be. It looks as though it might be fairly modern, however, as it seems to cut patches of high and low resistance that go through it. Yet again, until this site is excavated we cannot produce any conclusive results.

Fig. 4 Allotment Field (North at top of page)

Evidence of childbearing: A study of Parity in female skeletons excavated from Boneyard and Reeddam

By Steve Horn

Introduction

The study of parity, also called parturition status, is the determination of whether a woman has given birth (is parous) or has not (is nulliparous). Researchers have used three anatomical methods in the past, with varying success, to determine parity. These are based on the belief that pregnancy and lactation cause changes to bone microstructure, or cortical resorption and remodelling, where ligaments and tendons attach around the pelvic

girdle. The areas examined are the deep pre-auricular sulcus and the dorsal aspect of the pubic body, which are examined for pitting, evidence of extension to the pubic tubercle, and changes to bone micro-morphology.

The summary of previous research results provided by Cox (2000) suggests that, while an extension to the pubic tubercle may be significant, the other methods suffer from a lack of equivocal data and meaningful research has not been carried out to enable them to be used to identify parturition. On the basis of this opinion it was decided to attempt an assessment of the Sedgeford assemblage using the pubic tubercle method.

Methodology

The pubic tubercle is the attachment point for a number of tendons and ligaments which contain and compress the abdominal viscera and are put under particular stress during pregnancy and the expulsion of the foetus from the uterus. Bergfelder and Hermann (1980) have suggested that an extended tubercle is usually associated with females with three or more obstetric events (births/stillbirths and miscarriages). Based on this a number of female skeletons were examined for signs of extension to the pubic tubercle.

The criteria for the selection of the sample were as follows: Those skeletons recorded as female or probably female and whose left, right or both pubis were in a better than 25% state of preservation. This provided a sample of 14 skeletons in the current database, that is 11% of the total.

Results

Of the sample, 5 were found to be in too poor a state of preservation for examination. Of the remaining 9 individuals, 7 showed no extension to the pubic tubercle. An extension was present in 2 skeletons, the greatest length of extension being 4.4mm.

Conclusion

The following points were drawn from this study.

It is possible that those individuals examined that did not show extension were parous, but had experienced fewer than the three obstetric events required by Bergfield and Hermann.

It is also possible that the lack of extension visible may be the result of taphonomic or post-excavation damage. An extended pubic tubercle is recognised by Cox (2000) as a fragile projection prone to damage in a burial environment.

The study was considered worthwhile despite the small sample which made it difficult to draw meaningful conclusions at this time. It is suggested that better results may be available as the Sedgeford assemblage, and the database grow.

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Grave alignment at Sedgeford

By Bill Wilcox

1. The approximate horizon as viewed from Boneyard without local obstructions such as trees, etc.

“There is a crowd of calculators who are able to continue the Easter cycles and keep the same sequences of the Sun, Moon, month and week in the same order as before” Ceolfrith, Abbot of Wearmouth-Jarrow, in AD 706, in Bede, HE v.21 (Trans. Stevens 1999, 50).

The above statement strongly suggests that the Anglo-Saxons must have known how the Sun and Moon move relative to the stars, the celestial poles (true north and south) and the terrestrial horizons. The practice of east-west orientation for burials was already widely used in Pagan Anglo-Saxon times (Welch 1992, 74) and to the early Anglo-Saxon Christians at Sedgeford burying their dead facing east, looking towards dawn on the day of resurrection, was obviously important.

The orientation of burials at Sedgeford has been measured (Davies & Hoggett 2001, 18) and found to range between 16 degrees north to 16 degrees south of true east. This deviation is much smaller than the 38.5 / 43.5 degrees deviation at the time of the solstices. Irrespective of beliefs therefore, the question at Sedgeford is "how did they determine the exact direction of east?"

Determining the Cardinal points (north, south, east & west) can be simply achieved in several ways, and if one is found the others are simply at 90 or 180 degrees to it

2. (Moore 1990, 26 - fig 22) showing the circular path of true north over time.

Placing a vertical stick in the ground and marking when the shadow is at its shortest will provide an approximate north-south line. Observing the rising and setting of the Sun from the same position on any given day then simply dissecting the angle will also determine a rough north-south line (although this method does not work well if the horizon is uneven).

It is not uncommon to find people nowadays who know which star is the pole star (Polaris) that lies to the north (in reality about 0.66 degrees off-centre from true north). However, the Anglo-Saxons were not so lucky, during their era there was no convenient star to mark north. This is due to a process called procession in which the position of true north moves around the night sky over time (similar to the axis of a spinning top that starts to gyrate as it slows). It therefore seems unlikely that they used the night sky to determine the Cardinal points.

Just as important to the Anglo-Saxon community as the exact direction of east was the time of year (to know when to plant crops etc). From any given position on the Earth's surface, the position of the rising (and setting) Sun changes with the time of year. Simply dissecting the angle (from a set location) of the rising Sun on the horizon at the winter solstice (mid-winter's day) and summer solstice (mid-summer's day) provides a rough direction for east, added to this the position of the sun on the horizon between the two gives the approximate time of year.

At Sedgeford (or more precisely in the middle of Boneyard) the latitude = 52 degrees, 53 minutes, 47.6 seconds and the longitude = 0 degrees, 32 minutes, 35.0 seconds plus the eye height of an average height person (i.e., the writer) = 22.060 m above sea level (ordinance survey data).

Using a simple astronomical planetarium computer program (Skymap 1.2, 1993 by C A Marriot) the approximate azimuths (the theoretical direction of an object in degrees starting from north and going clockwise, i.e. east = 90 degrees, south = 180, etc) for the rising Sun from Boneyard for the following times of the year are –

The summer solstice (21 June at 03:32 am) = 48.5 degrees

The winter solstice (21 December at 08:17 am) = 131.5 degrees

Spring equinox (21 March at 05:52 am) = 90.0 degrees

Autumn equinox (23 September at 05:53 am) = 90.0 degrees

(A solstice is either the longest or shortest day of the year and an equinox is when day and night are of equal length)

As these readings only change about 1/10th of a degree every 1,000 years (Burl, 1997: 20) the change over time has been ignored (this is why Sunrise over the Heel stone at Stonehenge has only moved slightly since it was built). That is to say that these readings roughly apply to the entire time span of the Anglo-Saxon

occupation at Sedgeford. However, this is not the entire story as the height of the horizon (or any feature on it) comes into effect and it is necessary to calculate or draw the true position of the rising Sun.

Drawing the local horizon with the path of the rising Sun at different times of the year the following approximate angles are determined -

The summer solstice = 51.5 degrees

The winter solstice = 133.5 degrees

Spring equinox = 92.5 degrees

Autumn equinox = 92.5 degrees

(See Figure 1.)

This suggests that the Anglo-Saxons must have sighted east on a distant object (like a hill or valley) or from an object (like the side of a Church) and not buried their dead facing the rising Sun at the time of the burial.

3. Map of Sedgeford showing Dove Hill

4. Plan of Boneyard (Davis & Hoggett 2001).

This is at variance with the Anglo-Saxon cemetery at Finglesham in Kent (Figure 5.) where there is a much greater variation in the grave alignments (ranging from the winter solstice to beyond the summer solstice). It was concluded that the earlier 6th century (and presumably Pagan) burials had been orientated more towards the north than the later 7th century (and presumably Christian) burials, suggesting that the Christian burials were orientated towards Sunrise (Welch 1992, 74). However, if this were true then the writer would expect more burials towards the south east (during the winter) than are shown on the graph.

5. Grave orientation at Finglesham (Welch 1992, 74 – Fig 50).

The earlier and higher burials at Sedgeford appear to follow the sweep of the contour around the valley side (running north-east) and they show a greater variability in orientation to the later and lower burials which appear to be more regular and are predominately orientated south-east (Davies & Hoggett 2001, 18).

This suggests two things to the writer. Either some form of 'landmark' had been built during the use of the cemetery and was used to align the graves or that an object (valley or hill) used to 'sight' east was (and possibly still is) only visible from the lower level

Using a modern ordinance survey map it is possible to identify the 'summit' of Dove Hill (Figure 3.) on the horizon as being true east as viewed from Boneyard. Currently woodland around Sedgeford Hall obscures the view of Dove Hill from Boneyard and it is known that approximately 60 acres of woodland existed in Sedgeford prior to the Norman Conquest (Morris 1984, 10:20) although its exact location is unknown. The noted predominance in orientation towards the south east for the lower burials may possibly be explained by the approximate 2.5 degree shift southwards of the azimuth of the rising Sun at the equinoxes. Some form of 'pointer' (such as a cross) may have been placed on the summit to mark true east or sunrise at the equinoxes or the approximate sunrise at Easter (a very important Christian festival to the Anglo-Saxons) from either the Church or the settlement. Such a 'pointer' would serve as a calendar 'marker' for the local community (say for farmers to start sowing crops) and the Christian symbolism of the rising Sun behind a cross would be both obvious and spectacular.

It may be possible to obtain environmental data (pollen) from individual grave cuts and to correlate this with the orientation of that grave. E.g., can summer pollen grains be found within northeast grave cuts proving that they were buried during the summer?

The orientation of the graves at Sedgeford needs to be investigated further and a radial graph of the results produced for comparison with other sites plus the summit of Dove Hill needs to be examined (possibly by geophysical survey) to search for signs of any 'pointer' (possibly a structure).

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The Name 'Sedgeford'

By Rik Hoggett and Sophie Cabot

The earliest documentary reference to the name Sedgeford is made in Domesday Book, where it is recorded twice with two different spellings, Secesforda and Sexforda (Brown 1984, 10, 20 & 66, 88). This article discusses the possible origins of the name and its use in dating the foundation of the settlement at Sedgeford. It also seeks to lay to rest one major misconception about the name which has been widely published by some in the academic community.

As early as the seventeenth century local antiquarian Sir Henry Spelman is reported to have expressed the belief that the name Sedgeford was simply derived from the settlement's position on a ford where sedge was grown. This theory was recounted and supported by Blomefield and Parkin (1809, 385) who also commented that the Domesday form of the name was suggestive of a ford on a river called the Set or Snet. However, not only is this a contradictory argument, but no such river name is recorded, it would appear that this particular theory came from a mistaken transcription of Secesforda as Setesforda. This analysis of the name is still being put forward, for instance in the recent Lark Press publication by James Rye. There is some evidence of reed production in the area during the Medieval period, not least in the Reeddam area, and it is easy to see how both the theory and the modern name have evolved as a result (Hammond and Barnett 1997).

It is human nature to try and assign meaning to the meaningless; we do not like to see that which we do not understand. Long before the seventeenth century many of the old English words from which Domesday names are formed had become obsolete. There is an acknowledged phenomenon in place name studies, known as 'folk etymology', by which a place-name having lost its meaning gains another, based on the sound of the words involved. Thus a word which sounded like sedge, referring to a place where sedges grew, was taken to mean sedge – and in a way came to do so. It would appear that the origin of the name actually has nothing to do with the growing of sedge and can be firmly dated to the Saxon period.

In his Dictionary of English Place Names Ekwall asserts that the name is 'hardly Sedge Ford', but is rather derived from the personal name *Secci, making Sedgeford 'the ford that belongs to Secci' or is at least significantly associated with him for some reason (Ekwall 1960, 410. Cox 1999a, 369).

Ekwall's hypothesis of an Old English personal name + ford, is echoed by Mills in The Dictionary of English Place Names (1991) and Willcox also considers it to be plausible, although she prefers 'the obvious 'ford where the sedge grows' (OE *secg* + *ford*)' hypothesis (Willcox 1997, 21. My italics.)

Ekwall also suggests that the name may be the Old English *saece 'stream' derived from the verb *sican* 'to trickle' and cognate with the Old High German *seich* 'urine'. As such, making Sedgeford 'the ford on the trickling stream' (Ekwall 1960, 410). This second explanation is dismissed by Willcox (1997, 21) as being unacceptable due to the evidence for the river being much more than a trickle during the Medieval period.

There is no substantial evidence regarding the size of the river before the thirteenth century, but given the necessity of a ford it is perhaps reasonable to assume the river was more than a 'trickle'. It is likely that this debate will never be fully settled, although the balance of opinion is currently weighted in favour of the name being derived from 'Secci's Ford', and this is the analysis preferred by the current authors. Ironically, given the disputed first element of the name, more important archaeological things can be learnt from the undisputed 'ford' element.

In the field of place-name studies there has been much debate regarding the construction of chronologies and the consensus is that the earliest English place-names are toponyms, those names which define a settlement 'by describing its situation without making reference to the habitation' (Gelling 1992, 58). In any interpretation the name Sedgeford falls into this category, describing the ford itself rather than the type or status of the settlement.

Toponyms generally contain two elements, known as the specific and the generic, and in this case it is the specific Sedge that has been debated so much, whereas the generic -ford is undisputed. Ford is actually one of the earliest and most prevalent of the Anglo-Saxon place name elements (Cox 1999a, 369).

Place-names recorded before c.730 AD contain a range of topographical elements of which -ford is one of the four most prevalent, along with -ēg (dry ground surrounded by water), -burna (stream) and -hamm (land in a river bend). It has been commented that the prevalence of these terms creates an impression of a farming people concerned about the location of dry ground, water supply and water crossings (Cox 1999b, 450-1).

This agricultural preoccupation is also noted in a recent study of Suffolk where Gelling identifies two distinct classes of -ford place-names. The first class comprises the vast majority of sites, all located on small streams, considered to only be of interest to people in the immediate neighbourhood and therefore assumed to be earlier settlements. The second class of site are located on larger rivers, and therefore on long distance routes, and are thought to have been of much wider concern. These are presumed to date to after the formation of the kingdoms, when this wider framework became applicable (Gelling 1992, 59).

Whilst Gelling's model is generalised it would seem that Sedgeford falls into the former class, given its location on a relatively small river in the north west corner of Norfolk. As a textbook toponym, Sedgeford is far more likely to have been founded and named during the period before c.730 AD. On balance it is probable that the name is derived from Secci's Ford, gradually becoming Sedgeford as the original meaning was forgotten and reed growing became more prominent. This conclusion appears to be supported by the archaeological evidence from the Boneyard, where the earliest Anglo-Saxon phases date to the late seventh or early eighth centuries. It is within our grasp to state that the people buried on the Boneyard site knew their village, if not as Sedgeford, at least as a form of the name which would be instantly recognisable to us today.

Note

Old English words preceded by an asterisk, i.e. *Secci, are xxxx, that is words that have been hypothesised but for which no recorded examples exist.

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WWWhat's all the fuss about?

by Rik Hoggett

As the visitor counter ticks past 12,000 hits, as S.H.A.R.P's outgoing webmaster I feel the need to discuss the philosophy and design behind the development of the S.H.A.R.P website - www.sharp.org.uk.

It is the professional responsibility of archaeologists to bring their 'unrepeatable experiment' into the public domain through publication. Traditionally this has been in the form of conference papers, journal articles, interim reports, monographs and popular books. Today digital publication can be added to the list, particularly on the World Wide Web (WWW). Unlike traditional media, which can carry inhibitive costs, web publishing is cheap, easy and instant. All that is required is a basic knowledge of computing, the hardware to connect to the internet and a web domain to put your site on. This makes it possible for even the smallest organisations to have a significant web presence.

One of the most exciting things about working with webpages is their dynamic and interactive structure, allowing each user to explore the information in a different way, following different links to assemble their own personal narrative. This fluidity of structure allows for wide audiences to be catered for with a single site. It is now possible to publish the general public account of the site alongside the specialist site reports and archive, and leave it up to the individual to decide which level of information they read. Another major attraction of the webpage format is its ability to present many forms of data in a single document. It mimics the familiar format of the book, but at the same time there are also aspects of television or radio with animations, movie clips, graphics and sound and much more combined with the formatted text.

S.H.A.R.P has had a web presence since 1999, when Bert Weaver very kindly provided the [sharp.org.uk](http://www.sharp.org.uk) name. During the 2000 season it became obvious that the full potential of the website was not being realised and a major redesign was undertaken. The site was seen as needing to perform three essential functions: to provide information about the organisation; to provide all the material necessary to get involved; and to publish our results in as much detail as possible.

Addressing the first aim, the website contains pages which detail the latest Project news. This is followed by the history and philosophy of S.H.A.R.P, the text of the Project's constitution, details of how to find us, and light-hearted pieces about the experience of living on site. There are several pages dedicated to the Project's personnel past and present - trustees, directors, supervisors and sponsors. We like to think that this gives the whole site a more personal touch, although it has tended to provide a showcase for the funniest pictures taken during the season!

In the last two seasons the website has come into its own as a recruitment tool. A significant number of our volunteers are now finding us through the website and using the downloadable application forms. During the 2002 season we had volunteers from across the world, most of whom found us online. Web recruitment is particularly applicable to two key volunteer groups; the overseas market as mentioned above, but also school and university students, who are increasingly provided with free web access in their institutions. We are able to provide extensive details of the taught courses we offer, and importantly we can now update this information when courses are full to avoid disappointment. It is hoped that in future we may also provide course support material on the site.

It could be argued that the most important parts of the site are those which present our results. All of the Project's major research areas have designated pages and it is the eventual aim that multiple levels of data will be published, so that each area can be navigated at will. At present, this is a work in progress but the results of the excavation of Sedgeford Hall's Bowling Green in 2000 have been digitised as a pilot study. On the main

Bowling Green page <<http://www.sharp.org.uk/bowling/index.htm>>

you find a general account of the work and its results but you are also presented with the options of reading an online version of the site's archive

report beginning on <http://www.sharp.org.uk/bowling/SH00BGE_TOC.htm> or even downloading the report as a PDF document from

<http://www.sharp.org.uk/bowling/SH00BGE_Archive_Report.PDF>. Other research areas are gradually being added, but in the meantime copies of previous seasons' interim reports are available as well as a great deal of material specifically written for the website.

In addition to these main functions of the site, there is a variety of other little features. There is a guestbook for visitors, a web forum for socialising and discussions, panoramic movies of S.H.A.R.P sites and even an online shop for purchasing Project merchandise.

Although the internet shows little sign of eclipsing the printed word as some had thought it would a decade ago, digital publication is now a major force in society and not least in archaeology. Because it effectively allows for the creation of a website that can be all things to all people, the medium is ideal for the promotion and publication of a mass participation project like S.H.A.R.P.

The task of producing and managing such a site is not easy as it serves two ends. One one hand it aims to recruit new volunteers and involve as many people as possible and on the other attempting to publish multiple levels of archaeological and general reports in the many and various research areas covered by the project. The results can and will only ever be work in progress as the site continues to grow and develop along with the Project. I have enjoyed being the Webmaster for the past two years and have been greatly encouraged by the 12000 visitors that the site has had since its opening, I do hope that you will continue to support the site under its new management.

Acknowledgements

I am grateful to Bert Weaver for all his help and support with the S.H.A.R.P website and also to all of those who have contributed material to it.

Village Survey Project

By Sophie Cabot

The Village Survey Project is a new initiative of S.H.A.R.P for 2002. Looking at the Village, rather than the parish, it seeks to find out when it took its present form, and what stages it has passed through. It is also an attempt to revisit some of the earliest priorities of the charity by plugging in to the community of Sedgeford and asking for their help. Over the last few seasons we had come to the worrying conclusion that there was still a lack of knowledge of the project in some parts of the community and a lack of knowledge of how to get involved.

To kill these two birds we sent out 350 double page spread questionnaires at the end of the Easter season. These were delivered by hand to every occupied house in the village, in a Herculean effort by the Village

News letter delivery team. We chose not to exclude holiday homes, since they form such a high proportion of the housing stock in Sedgford. The questionnaire covered two main areas; the recipient's house and garden, and the recipient's level of interest/involvement with S.H.A.R.P. We asked people if they would consider letting us investigate their house or garden, either by digging test pits or by simply sieving garden soil. The questionnaires were collected, by S.H.A.R.P team members, in the first week of the summer season and the response rate topped 40%, excellent for a social sciences study.

From the questionnaire responses we received over 15 permissions to either dig or record in a property. These had to be prioritised to make the best use of manpower, and 8 field projects were undertaken over the season. Two site supervisors, James Insley and Virginia Vargo, meant that two sites could be worked at the same time with up to half a dozen volunteers.

On some sites we recorded pottery just by sieving a measured amount of garden soil through a 1cm mesh. The strategy on dug sites was to dig small test pits, primarily to access datable pottery, less than 1.5m deep. To this end, the test pits were either 1m square, or 4m square – 1x1, 1x4 or 2x2 as best fitted the site. Again, each context was sieved at 1 cm, but in many cases the only context was topsoil. Where structural remains were discovered they were evaluated rather than excavated, without cutting into them. This might seem to fly in the face of the way we work other sites, but it allows us to give general date parameters to each area without causing damage. Instead of providing a date after which events must have occurred 'terminus post quem', these pot samples provide an earliest likely date for activity on site 'terminus anti quem'.

Where digging or sieving wasn't possible, if appropriate, we still took an interest in houses around the village. We recorded Standing Buildings, noted old trees and hedges, and interviewed respondents about their memories of the village. We also collected a number of interesting finds that residents had in their possession from the local area.

The Buck

The Old Buck, formerly The Buck Public House, close to Sedgford Church was one site investigated from the Standing Building point of view. The current owners have extensively and sensitively restored the building, believed to have a seventeenth century origin. They had stripped internal plaster during the work, and very kindly provided photographs of blocked windows, doors, and fireplaces revealed in the walls. Following this we made a measured drawing of one of the external walls, taking advantage of scaffolding put up for painting. By recording what is known to be one of the oldest extant buildings in Sedgford we are adding to the completeness of our archive and giving ourselves the opportunity for deepening our investigations at any time.

The 'Washpit' Area

Our single most interesting test pit for existing S.H.A.R.P personnel was a single metre square in the back garden of 'Serendipity', a house above the Washpit, close to the river crossing in the centre of the village. This produced the only Saxon pottery uncovered by the Village Survey, 2 sherds of Thetford ware. At present this provides a tantalising glimpse of the western edge of the Boneyard scatter.

Littleport

Our major area of interest, and one which will be ongoing, is the area sometimes known as Littleport, to the east of the village down the Docking Rd. This is the area where the Peddars Way, a Roman and probably prehistoric route, crosses The Broadgate/ Eastgate (medieval names for the Docking Rd) and there is a cluster of settlement activity around the crossroads. It is generally believed that this area is the location of a settlement known as Gnatingdon and outlier of Sedgford at Doomsday. This hamlet, first Gnatingdon, then Northgate, and latterly Littleport still survives as a clearly distinct part of Sedgford and we were anxious to date its origins.

To further our understanding of this area, we examined the gardens of Magazine Cottage, N°4 Littleport Cottages and High House. We also did more extensive test pitting at East Hall Farmhouse, one of the recorded manors of Sedgeford from about 1600 onwards. This house is going to be the focus of next seasons standing building recording work, to complement the work on West Hall House done in the past.

The cluster of test pits at Littleport did not, on the whole, produce a great deal of material, but enough was found in every case to conclude that a) occupation from late medieval times was probable and b) that further investigation was worthwhile. Interesting individual finds include a medieval strap end from close to the Peddars way, and a Belgian Coin found in the Littleport Cottage gardens which is thought to be a souvenir of the First World War.

The Beeches

Near Weathered Manor, in the centre of the modern village, we were invited to dig a test pit as part of the construction of a garden pond. We were interested in doing this, as the area is a new development on the 18th century (or earlier) farmyard, but it proved disappointing. Under the levelling rubble – probably the last remains of old farm buildings – we came very quickly onto natural chalk. The rubble was packed with modern rubbish, including decorators' brushes, and could not much predate the construction of the new homes. Sadly this confirmed that any clues to the date of the original dwelling on this site had probably been lost.

Fring Rd

A single test pit at a property on the Fring Rd found limited material, but we intend to pursue this area in the future. We also want to carry on further work on Glovers Farm to accompany that in 2000, and possibly investigate the area known as Fring Cross.

Other Areas

The Village Survey project also recorded a number of local traditions and anecdotes, the previous names of buildings, plots and routes where they could be found, and anything else of potential future interest. This is a highly organic element of the Project and will follow where the material leads – in this at least it is little different from any other branch of archaeology!

Can You Help Us?

The Village Survey is always looking for more information, and more permissions to undertake work. We have recently come into contact with a family who emigrated from Eaton in the 19th century, and received information from them. If you, or your family has any connection to the village, even if you don't live in Sedgeford now, we would love to hear from you. Please get in touch with S.H.A.R.P via the website or secretary, or come and see us in the summer.

Approaches to Anglo-Saxon settlement: Sedgeford and Northwest Norfolk

By Gareth J. Davies

Recent research in Northwest Norfolk has been attempting to move Anglo-Saxon settlement studies forward in a more systematic way than in the past. Within the study area, important questions have been asked about what the best methods for identifying and then categorising buried settlements, with the ultimate aim of understanding changing social organisation in Anglo-Saxon Norfolk.

Contrasting approaches

One of my own research interests is in 'designed research'. This designed research at a regional level includes field survey, spatial analysis and quantitative comparison between settlement sites. It contrasts with the site-centred research undertaken at Sedgeford, which is quite organic in design and includes excavation, qualitative characterisation of vertical sequences, and inter-site spatial analysis. In acknowledging these contrasting approaches I do not intend to advocate one method over another, but rather to highlight where contrasting approaches have been useful for interpreting Anglo-Saxon settlements.

Site-centred approach: Sedgeford

Since 1996, our research project at Sedgeford has been trying to characterise the history of human settlement and land use within the parish. Work on the Saxon phase of settlement is now well under way.

An article by Rik Hoggett in this report shows that in Sedgeford parish the Middle and Late Saxon settlement evidence is concentrated on the south side of the Heacham river valley near the present village (Page?). Fieldwalking has produced large quantities of pottery dating from the eighth to the eleventh centuries here that is indicative of a buried settlement and associated cultivated land. The boundaries of the Middle-Late Saxon settlement spread (ibid) are still approximate, but they certainly bear very little relation to the distribution of Early Saxon evidence in the Heacham river valley. Within the environs of the Middle-Late Saxon settlement at Sedgeford, the Early Saxon evidence consists only of disturbed burial material such as cremation urns (Cabot 2000). Little can therefore be said about the Early Saxon settlement in Sedgeford, although a dispersed settlement rooted in subsistence agriculture might be implied from the distribution of burial material (Hoggett 2001).

The Middle and Late Saxon settlement that we have identified in Sedgeford parish is the first nucleated settlement to be established after the Roman occupation. But it is unclear why, by the onset of the Middle Saxon period (c. 650-850), we can observe in the archaeological remains a nucleated settlement that is essentially the precursor of the medieval and modern village? There are a number of suggestions that have been put forward at other sites. One suggestion is that settlement nucleation is a reflection of the rise of feudal administrations in which lords of the manor needed to keep tabs on surplus agricultural production (Saunders 1991). Alternatively, contemporary increase in the number of nucleated settlements has been seen as the reaction of an organised hinterland of consumers and producers to the growth of proto-urban centres like Ipswich (Hodges 1982). The historically documented conversion to Christianity or environmental pressures on farmable land are frequently cited reasons for these observed changes in settlement pattern.

In reality, the location and land-use of every nucleated settlement was probably dictated by a unique combination of the above causal effects. Excavations by Dr. Peter Jewell in the 1950's, and by S.H.A.R.P since 1996, have revealed a portion of the Middle-Late Saxon settlement in Sedgeford. Now that we are some way through excavation, we can perhaps suggest some reasons for the foundation of the nucleated settlement in this location. A word of warning though: although the southern slope of the Heacham valley has now been extensively sampled, these excavations have probably covered less than 20% of the overall settlement spread. Because a satisfactory sample of the settlement has not yet been fully excavated and analysed, the questions currently debated are likely to alter significantly when more data is available.

Perhaps the most obvious starting point in this discussion is the extensive evidence for Christian inhumation burial and directly associated settlement that S.H.A.R.P's excavations have revealed. We have now excavated over 200 burials from a Christian inhumation cemetery consisting of a number of phases of burial which carbon dating has placed within the eighth to the ninth centuries. The crucial question now is that given the extensive burial evidence at Sedgeford, 'just how important was the cemetery for the location of the adjoining settlement'? Let us consider this question for a moment. Initial analysis of the phases of the cemetery is suggesting elements of Churchyard-style burial. For example, in some areas there are noticeable rows, intercutting burials and burials respecting fence lines. Certainly at the base of the river valley the burials were very tightly packed and intercut one another, giving the impression that this area was of premium land value for some time. This suggests that there was an element of prestige to the style of burial and hints at some kind of legitimisation of the burial through its location.

This notion immediately conjures up pictures of a settlement founded as the result of the conversion and built around an early church. Yet despite the proximity of structures to the cemetery focus, the site cannot be categorised by looking at the morphologies or layout of buildings associated with or immediately post-dating the cemetery – there is no obvious church. This is because timber buildings of differing functions during this period do not fit into prescribed archaeological types; a timber church might leave an anonymous archaeological imprint once decayed in the earth. To further complicate matters, the archaeological remains of structures so far excavated at Sedgeford consist of scattered postholes, beam slots and structural hollows. These features are not substantial, well preserved or even well dated. Whereas the excavations suggest that we have observed some of the most prestigious areas for burial, the associated structures may represent the fringe of the nucleated settlement; perhaps working areas that gradually encroach on the cemetery.

The dynamic relationship between settlement and cemetery that we can see in the excavated areas at Sedgeford raise further important questions. From the initial foundation of the nucleated settlement -the phases of Middle Saxon burials- through to a structural sequence and later-Saxon boundaries (see Davies 2001), land-use was constantly shifting over a period which feasibly was as short as c. 750-950 (Faulkner 2001). Far from the static image that we obtain from surface distributions of pottery, excavation gives us a fascinating picture of a settlement that was constantly moving and changing, yet one that was tightly bounded. This dynamic sequence perhaps hints at the true complexity of an Anglo-Saxon settlement. To take an example certain areas of occupation, that are not spatially discreet from the overall Middle-Late Saxon settlement spread change in function over time, from burial ground to working area for example.

The impression of movement and phasing that we have obtained from the excavated areas blurs some of the distinctions that are often set-up between mobile ‘dispersed’ settlements and static ‘nucleated’ settlements. It is possible that the centre of this, nucleated, settlement wanders slightly to the west by the late Saxon period (see Hoggett this report). To see this at present we have to move away from the excavated portion of the site and look at the more imprecise horizontal distribution of surface pottery scatters to observe the end product of the settlement’s movements.

How should we interpret what we see?

A nagging question, in the light of the obvious complex nature of the changing cemetery and settlement sequence is this: ‘was the settlement at Sedgeford ever a ‘planned’ concept, and if so how did the trajectory of this initial image of the settlement change over time?’ The fact that there is no evidence for an Early Saxon site in the immediate vicinity does support the notion that the settlement was a ‘clean break’. When presented with the inhumation burials and associated structures of the Boneyard excavations it is tempting to match the settlement foundation to the plans of an incoming Christian administration. However, we ignore at our peril other crucial factors such as changing patterns of land cultivation. For example, the location of the settlement at Sedgeford at the interface of gravel, sand, chalk and river silts would have been an important factor in agriculture and subsistence. This may have been a more important determinant for location than any administrative planning. Perhaps the river valley was simply uninhabitable in the Early Saxon period.

The problem detailed above leads us to one of the key difficulties in the interpretation of undocumented Middle Saxon rural sites in general. Because there are a number of different factors that dictate settlement location, whichever ‘factor’ is brought to the fore from the excavated remains often biases the subsequent interpretation. For example, if we excavate the cemetery and find styli, the site can be a monastery, if we chance upon charred grain and working hollows, the site is a farm, and if we also have one large building we have a manor. These interpretations are clearly self-fulfilling. They only consider what is present at a site, and not what is absent.

Another issue is that the label of ‘manor’, ‘monastery’ or even ‘village’ really only describes the concept of what a settlement was, perhaps these concepts might even be as frail as an idea shared amongst the elite of the settlement. This is clearly a problem, as archaeology has to base its interpretations on material remains and not abstract concepts. As a possible solution, recent research has attempted to get beyond notions of the elite and look at the material assemblage from sites to see what activities the population of a settlement as a whole

were engaged in. By looking at what was consumed and produced at a settlement site it is hoped that a hierarchy of sites can more readily be established, and terminologies can be based in material evidence.

So, how does Sedgeford fit into the patterns of production and consumption? Where does Sedgeford fit into the hierarchy of sites if we look at the artefactual assemblage? From initial qualitative comparison with high-status Middle Saxon settlements such as Brandon, Suffolk and Flixborough, Humberside, Sedgeford is materially less wealthy. Indeed, our abundance of animal bone, particularly sheep, may suggest a site rooted in production of wool, or some kind of animal husbandry (Thirkettle 2000). Yet Sedgeford is within the networks of consumption, as the presence of coinage, literacy (writing styli), Ipswich ware, pins, brooches and bone combs in our settlement assemblage suggests, albeit in small quantities compared to the aforementioned 'high-status' rural sites. At this point we are left wondering exactly where Sedgeford does fit into the hierarchy of settlement sites. Indeed, it is increasingly apparent that the interpretation of observed patterns of production and consumption cannot progress satisfactorily until other settlement sites in the region are identified and recorded in a comparable way.

A Regional Approach: Northwest Norfolk pilot study.

As soon as we leave the confines of a single settlement focus and start to look at the regional picture, we are confronted with a whole new set of opportunities and problems. A regional approach is very good for viewing sites from various perspectives, such as how a settlement's location might relate to topography, geology and soil quality. In addition, Anglo-Saxon settlements in Northwest Norfolk (Fig. 2), associated with large quantities of chronologically diagnostic pottery and metalwork, give us a brilliant opportunity to identify a range of Early, Middle and Late Saxon settlements to compare and contrast patterns of production and consumption.

Fig. 1 The study area.

Fig. 2 Sites in Northwest Norfolk.

As a pilot study, I looked at all of the Saxon settlement evidence in a portion of Northwest Norfolk. This took the form of a transect running from the western fenland coast and silts near Terrington St. Clement and Kings Lynn, through the sand and chalk geologies of villages such as Congham and Grimston, and onto the upland clay plateau of Central Norfolk, south-east of Sedgeford. As Fig. 2 shows, there is an abundance of evidence which fuller analysis of the whole of Northwest Norfolk would no doubt confirm.

This settlement evidence if handled carefully, provides a useful context for the Sedgeford excavations. However, we must always appreciate the limitations of the information gathered at this regional level. As most of the identified settlement material -such as pottery and metalwork- was discovered on the surface of agricultural land, we cannot always be sure that a find will directly represent a buried settlement. In many cases, finds may have been moved by modern ploughs, or even incorporated into cultivated land in antiquity, and some finds seem to be just that: 'stray finds'.

Continuity and change.

Perhaps the most interesting observations made by this pilot study are to do with continuity and change in land use during a period dating roughly from 400 – 1000 AD.

Where there are concentrations of Early Saxon metalwork and pottery, we also find our most abundant and varied find spots of Middle and Late

Saxon material. The find spots from Congham and Grimston for instance, clearly represent important Middle Saxon settlements that acted as axes in the networks of consumption. Furthermore, the potential of these settlement locations had already been spotted in the Early Saxon period. The location of these two sites, just off the high upland, clearly takes full advantage of as many environmental niches as possible. In addition,

these sites are also situated on known prehistoric trading routes. It is possible that these settlements represent the 'first choice' locations for Anglo-Saxon period settlements: easy to cultivate, with some more fertile land and quick access to other communities.

Although areas settled in Early Saxon Northwest Norfolk are apparently more likely to be settled in the Middle and Late Saxon periods, the patterns of artefact discard does not suggest continuity at settlements: settlements simply share locations. What the surface record actually suggests is a change in the activities carried out at these sites. For example, at Congham, the Middle Saxon settlement seems to have distinct areas for habitation, cultivation and trade/exchange: no such patterns are discernable in the Early Saxon surface finds. In addition, at the Early Saxon settlement near Hillington, the distribution of Early Saxon material bears no relation to the modern village centre, where there is a concentration of Middle and Late Saxon material.

If the established rural centres of Early Saxon Northwest Norfolk are eventually replaced by Middle Saxon nucleated sites in roughly the same location, the real change in the Eighth and Ninth centuries is the newly founded sites. During the middle Saxon period the harder to cultivate silts of the western coast and the infertile clay plateau to the east is settled for the first time, as evidenced by the material found at South Wootton in the coastal silts and Great Massingham on the clay plateau. These sites although extensive (in the case of South Wootton) were clearly not as wealthy as the well-established sites at Congham or Grimston. The sites were not large consumers, with only Ipswich ware and no metalwork being found at South Wootton. It is tempting to see these newly founded sites as the producers of the salt, grain and meat consumed at sites further up the settlement hierarchy. Braudel supports this notion in a discussion of ancient settlement patterns in the Mediterranean, he states that 'on the whole, human settlement took more readily to the hillsides as being more immediately habitable than...lowland sites which called for land improvement [, these sites] could only be occupied by hierarchical societies, those able to create a habitable environment by collective effort' (Braudel 1998: 14).

Is the fen edge settlement of Middle Saxon Northwest Norfolk a direct result of the changes in organisation that we see at the established Saxon rural settlements on the edge of the upland? Braudel's argument above clearly gives primacy to the upland settlement of the Mediterranean. However, with the onset of the Middle Saxon period can we genuinely give primacy to changing administrations at established rural centres for founding satellite 'producer' settlements. Is it not the case that these producer sites would already have had to be in place to provide the catalyst of consumer sites to change function and become part of a more organised hierarchy of sites? The symbiotic relationship between a productive lowland zone and the more economically advanced upland fringes clearly warrants further investigation.

Conclusion

It is within this question, supporting the observations of regional survey, that I feel a site like Sedgeford has a very important part to play. By way of conclusion, let me set out some ideas that might begin to investigate over the coming years.

In the light of the Northwest Norfolk pilot study, although we cannot yet attach meaningful descriptive labels to Anglo-Saxon settlements, we can clearly observe a hierarchy of settlements, perhaps with complimentary consumer and producer sites. A crude analysis has suggested that Middle-Late Saxon sites associated with Early Saxon material are likely to be consumer sites. Newly founded coastal and upland sites are more likely to be rooted in the networks of production.

This is where Sedgeford is different. The settlement here seems to be a Middle Saxon foundation yet the site it is not entirely rooted in the networks of production. The artefacts from the excavation, if not from the surface assemblage, suggest that some conspicuous consumption was taking place at Sedgeford. This is indicative of a hierarchy within the settlement, possibly associated with an administration that comes in when the cemetery is established (above discussion). Yet although Sedgeford is within the networks of consumption, it pales into insignificance when compared to the (unexcavated) sites at, for example, Congham or Grimston.

What we seem to be seeing at Sedgeford is a site with a consumer element founded in the Middle Saxon period, and with strong ties to the conversion to Christianity. Sedgeford was a largely self-sufficient settlement, but with an administration that was engaged in local trade networks whilst providing services to peoples beliefs. An important site not yet mentioned is located at Bawsey to the South West of Kings Lynn. This site is often cited as the location of a possible monastery (e.g. Andrew 1992). This site, like Sedgeford, is founded in the Middle Saxon period and is not rooted in production, but the abundance of ecclesiastical and personal metalwork at Bawsey renders further comparison with Sedgeford a fallacy.

Nevertheless, these two sites do share common ground, not least the Christian element to both sites. It is possible that Sedgeford performed many similar functions to a site like Bawsey but on a smaller scale. As the hierarchy of settlements in Northwest Norfolk is further revealed it should become apparent that the role of the Church was not only one of providing a place for worship, burial and administration. The role of the Church in trade, exchange and production is also fundamentally important. It should not be a surprise to see a whole hierarchy of sites with religious associations some, like Sedgeford, with largely self sufficient lay communities, with others, like Bawsey, more likely to act as trading centres whilst relying on producer sites (Hamerow 2002).

Through sites like Sedgeford we may also begin to see some of the complexity of interaction between ecclesiastical and secular. It may be the case that large secular consumer sites, such as Congham, were actually under the religious administration of sites where an initial glance at the surface artefact assemblage would suggest a 'producer' assemblage, as is the case at Sedgeford. This is where the importance of using the contrasting approaches of field survey and excavation becomes most apparent. Without excavation, Sedgeford would still be a 'producer' site in a sea of anonymous 'producer' sites. Yet with excavation we have uncovered some of the true subtleties of this site. It then requires a regional survey of the networks of consumption and production to set this intriguing site in context and make the comparisons that will explain it.