SHARP Interim Report

2010 Season

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For further information on the project and our work, please visit our website at:
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A Word from the Editors...

Welcome to the 2010 edition of our report.

Like many previous editions, last year brought a wealth of new information to the project. The discovery of what we believe to be a second Late Neolithic/Early Bronze Age burial within the northern area of Chalk Pit Field, is causing us to re-evaluate our views on human settlement and land usage, not just within Sedgeford but the surrounding area. Settlement on the site, which may constitute continuous occupation, has been pushed back to 2300 BC.

Our work on the Anglo-Saxon settlement continued and a picture of its possible status is now starting to develop. Two exciting areas of study that are helping us gain insight are that of animal bones and of ironworking performed on the site. The wealth of material culture discovered last year has also been processed by the small finds team and their interpretation of the evidence is detailed in this report.

However our excavation focus is not just limited to Chalk Pit Field; we have now firmly established a modern conflict archaeology project centred on Sedgeford's First World War aerodrome. Our research and excavations on this site are not only creating an intriguing picture of the base and the people who used it, but also how its sudden introduction into the area would have impacted on the wider community during the early part of the 20th century.

SHARP is not just about our excavations and our research; it is also about bringing archaeology and its many themes to the attention of a wider audience. During the 2010 season we continued our educational outreach with visits from local schools and our weekly public lectures on a variety of archaeological topics. We held a hugely succesful Open Day, and we also had story teller Hugh Lupton enthrall an audience of close to a hundred with his atmospheric rendition of Beowulf on the site where people who may have heard this tale 1200 years ao still lie buried.

It is not only important to engage people with their local heritage, but also to help develop their interest and archaeological skills: this report is one more of SHARP's contributions to that effort.

Enjoy our report.

Gary Rossin and Luke Taylor

2010 Chalk Pit North Excavations: Middle Saxon Gardens

By Piers Pye-Watson

The summer of 2010 brought the fourth season of excavations in Chalk Pit Field, continuing the investigation of the Anglo-Saxon settlement that accompanies the adjoining burial ground in Boneyard. Previous excavations had entailed five evaluation trenches (2007), followed by two highly productive seasons (2008 & 2009) of open area excavation comprising six trenches.

The plan for 2010 was to open two excavation areas: Trench 12 to the north of Trench 6, and Trench 13 to south of Trench 10. Trench 12 was placed to include the east-west aligned linear features that ran across Trench 10 in order to realise their extent and relate them to the evidence from Trench 6. The placement was also to allow for study of the environs of buildings to the immediate southwest of Trench 12 that had been examined the previous year.

Trench 13 was placed to re-establish the large east-west linear feature that had been excavated thoroughly in Trench 6, and also to join Trench 10 to the south, incorporating an extension of Trench 6 in an attempt to tie everything together. Furthermore, it was hoped that Trench 13 would shed new light on the Neolithic/Early Bronze Age phase added by the 2009 discovery of a burial from that period.

A second linear feature, terminated by the east-west ditch that cuts it, ran north-west from the south-east corner of Trench 13, then curved north to the northern extent of the trench. No firm dating material was found in this feature, but the stratigraphic evidence suggests that the profiles of the two features were filled at different times, which implies different periods of use. With little dating evidence, their chronological relationship cannot be precisely established.

As this curved linear feature progressed northward from Trench 13, it cut through four other east-west linear features –three of them ditches continued from Trench 6 –before being cut in turn by a later feature, another curved linear to the west of the previous year's crouched burial. These features signify various changes in organisation of the area, perhaps before the more permanent large-scale east-west ditch was put in place. The second, later, curved linear ran to the western extent of the trench, then turned to the southern extent of the northwest corner of it. The current excavation misses the full extent of this feature, but the feature might define another space used in proximity to the buildings and the theorised plots running east-west along the field. It was within this feature that a coin of Aethelred II (AD 979 – 985)

was found. This dating evidence points to the buildings and their plots being the last phase of use for this area before the movement of the settlement to the northern banks of the river Heacham.

The work in Trench 12 began on a high when a burial was found to the eastern side. It has proven to be of a similar date to the Neolithic/Early Bronze Age burial found in 2009 and was, thankfully, not affected by the predominant Saxon features.

Above: the 2010 crouch burial found in week 2.

Starting at the southern extent of Trench 12, working away from previous year's work, we found some clear features cut into the natural geology. In total there were 17 possible postholes identified in the southwest corner of Trench 12. A relationship between most of these holes is suggested only by proximity, but six of them are evenly spaced in a straight north-south line, indicate a structure, possibly a wall of a newly identified building. Much of the archaeology has been truncated by ploughing, which might have made any remainder of a building invisible. Alternatively, it might be that the postholes are related to the beam slots identified in 2008 and 2009, which were also on a north-south orientation.

The beam slots were most certainly the foundations for the walls of buildings, so the use of postholes suggests a difference use, possibly a less sturdy secondary erection that formed part of the building to the immediate west. Unfortunately, there was no dating evidence from the postholes with which we could have confirmed when they might have been in use and then abandoned.

In the centre of Trench 12 there were various shallow, irregular pits with occasional concentrations of charcoal remains indicative of waste, or, in one instance, perhaps a hearth. Between these there were two linear features running north-south, one of which continued the dense trail of mussel shells found in 2008. These were shallow and yielded little in the form of finds, but represent a possible earlier period of use for the site which was then truncated by the greater activity to the north of the trench.

To the northern half of the trench were four east-west aligned linear features, identified in the excavations of Trench 10. During the most recent excavation it was difficult to distinguish between these features and the similar composition of the natural; however, a picture did emerge.

At the most northern end, the largest linear feature ran parallel to the northern edge of our excavation. Its Middle Saxon date, orientation, 1.2-metre depth, and square, flat bottom are reminiscent of the section of the D-shaped enclosure found in Trenches 6 and 13. This could then represent another part of the same landscape that the D-shaped enclosure represents; the two strongly define northern and southern limits to the immediate surroundings of the buildings set in the middle.

To the south of this feature ran the other ditches. One east-west ditch, running slightly downhill (northward) from Trench 10, was cut by the later, larger, east-west ditch. Several ditch recuts, some continuing into Trench 10 and all running a similar course, made for an especially wide single feature, once again with Middle Saxon pottery remains.

These cuts might represent various phases of change to the organization of the space they defined – best demonstrated by the creation of the large ditch to the north –for which careful planning and considerable effort would have been required. Alternatively, the cuts might have simply been filled by hill-wash over time and then dug out once again.

A matter of interest is the relative density of animal bones that was found in these east-west ditches. The buildings that lie between the two trenches would have drawn in human occupation and with it all collateral including waste. These ditches could thus have had a function for the disposal of used animal carcasses.

Apart from the pottery and animal bone found throughout the site, there were also some small finds, including a swindle whorl and a fine glass bead, neither of which exclaims a high status site.

Equally, two knife blades and a bone knife handle (all found separately) reinforce the humble nature of the community present. The single coin that was found (see above) could represent the final phase of occupation at the site and on its own does little to evidence wealth.

However, the archaeological features that remain do give evidence of the importance of this settlement, if not of wealth. As yet, the relationship between this area and the burial ground is unknown, raising questions. What was the primary function of the site? Did it have an agricultural purpose relating to the D-shaped enclosure? Or did it carry greater significance, related to the cemetery and the grand depth and extent of the D-shaped enclosure? If the site was flourishing in the Middle Saxon period, why was there a move away from the settled community where great effort had been put in place in constructing the landscape?
More immediately however, the question must be asked as to what occurred in the space between the buildings and the ditches that seemingly form boundaries to their north and south.

Below: Excavations taking place on Trench 13.

Ironworking Industry at Sedgeford

By Eleanor Blakelock

During the 2010 summer season, Gerry McDonnell and I visited the excavations at Sedgeford. I was originally a volunteer in 2000-2002 and it was amazing to see how things had moved on since I was at Sedgeford last. I had now come back as a specialist in archaeometallurgy, in particular, iron artefacts. Since the visit I have been busy analysing various iron objects from the site as part of a larger PhD project, while Gerry McDonnell has been examining the iron slag.

Iron was one of the most important materials available to ancient societies. To produce iron, ancient people took iron ore and smelted it in a furnace with lots of charcoal. It is clear from excavations and experiments that many different types of iron furnaces existed in the past, but they all produced residues that archaeologists can find. The main residue we find from this process is iron slag; many different types of smelting slag exist and these can inform archaeometallurgists about the type of furnaces used. Smithing, the fabrication and repair of metal objects by hot and cold forging on an anvil, resulted in slag distinct from smelting slag. One type of smithing slag is hammerscale, tiny pieces of iron or iron-rich slag that falls off the iron as it is worked. It is recoverable using magnets and can lead archaeologists directly to the smithy.

The slag from Sedgeford, examined by Gerry McDonnell, revealed that there was smithing taking place. Smithing hearth bottoms, classic signs of smithing activity, were found, and the initial examination of sieved deposits using a magnet found hammerscale present. This strongly suggests that there was a smithy in the village, which is typical of most Anglo-Saxon settlements. More excitingly, the examination of the slag assemblage revealed the presence of tap slag from a smelting furnace. Iron smelting sites in this period are very rare and this makes Sedgeford particularly important.

It was clear from looking through the iron artefacts that there is a range of iron tools, along with coffin fittings and the occasional decorative iron object. The excavations in Boneyard and Chalk Pit Field have produced in the region of 70 iron knives of varying degrees of completeness. Some lumps of iron, when examined closely, were identified as iron blooms, created during the smelting process. In addition to these, there were some bars and rods, stock iron which would have been created by refining the blooms and which would have been easily traded.

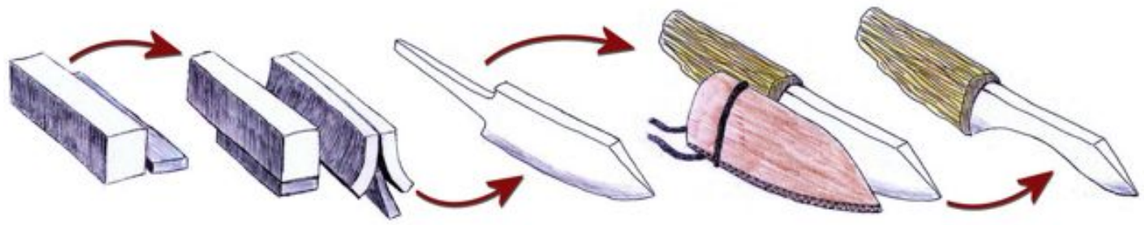
Analysis was carried out on iron bars and knives from Sedgeford. The analysis of the iron bars provides detailed information about the types of iron available to the local smith. Iron knives, on the other hand, provide information about the skill of the blacksmith, including the use of different iron alloys and their properties, heat-treatments (i.e. whether the blade is quenched in water), and welding techniques. To carry out this analysis, small samples were removed from the knives and bars of interest. These samples were set in resin, polished and examined under a powerful microscope. Prior to analysis, all the knives were photographed and x-rayed.

In the past there were lots of different types of iron available, including plain iron with no impurities, and steel with small amounts of carbon. Cast iron was not available to ancient smiths, although analysis has revealed some high quality steels that were ideal for making sharp and strong cutting edges. Another type of iron available to the ancient smithy was phosphoric iron, which was both harder and more durable than clean iron. The analysis of the iron bars revealed a high proportion of phosphoric iron present, most likely resulting from the smelting of high phosphorus bog ores. These ores can be found across the UK, including near to Sedgeford; therefore, it is likely that most of the bars were the result of smelting in the settlement.

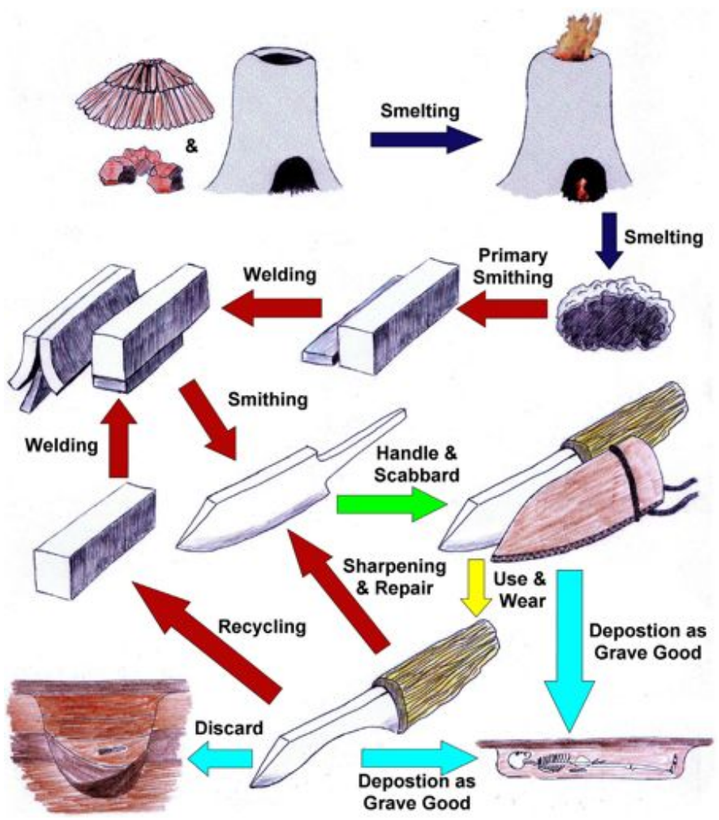
Ancient blacksmiths, much like modern ones, utilised different iron alloys to get the best out of their properties. The analysis of the iron knives from Sedgeford revealed that many of the knives were constructed using different types of iron and steel. Steel, which was scarce in the Saxon period, was used economically, only in small amounts to form the cutting edge. The two main methods to attach the steel were to weld it onto a plain iron or phosphoric iron back, or to sandwich it between two pieces of iron. In the Middle Saxon period it seems that the preferred method was to weld the steel to the back, but in the Late Saxon period this starts to change with more sandwich welds. This pattern has also been noted in knives from other sites across England. In the urban settlements, the specialised nature of blacksmiths meant that they would often quench the object they were working on, which would create a very hard and sharp edge. This technique is also seen in some of knives from Sedgeford, although not all knives were treated thus.

Below: Gerry presenting a lecture on the different types of ironwork and slag found at Sedgeford.

Below: The creation cycle of a knife.

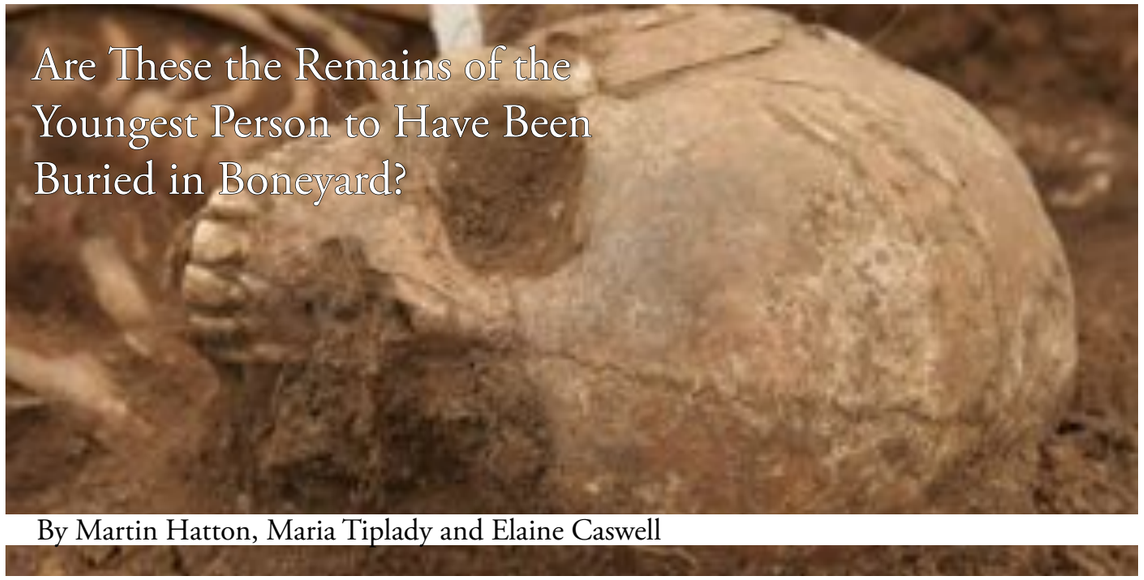


Above: A photograph and x-ray of a typical knife from this type of study.



Above: The life cycle of a knife.

This analysis has shown that Sedgeford was not only creating its own iron objects, but was actually making them from its own homemade iron. This is rare in Anglo-Saxon England; only a handful of smelting sites have been found. Future excavations, and plotting new slag residues found, may allow us to locate the Sedgeford smithy workshop(s). In addition to the iron made in the Sedgeford furnaces, some iron alloys, like the steel used in the cutting edges, were being brought into the settlement to be used in special artefacts, thereby indicating trade networks. The Sedgeford smiths were very skilled at utilising the iron and steel available, and even quenched many knives to get the best out of the steel used.



Are These the Remains of the Youngest Person to Have Been Buried in Boneyard?

By Martin Hatton, Maria Tiplady and Elaine Caswell

S0122 was excavated in 2002 from the southern end of the middle third of Boneyard Old Trench. This was an area which at the time became popularly known as the 'children's cemetery'. Although there did appear to be a few more sub-adult burials there than elsewhere, this name was probably misleading. Children were also buried in other parts of Boneyard, and adults, as well as children, were buried in this area. Indeed, the remains of S0122 were found lying over the spine and ribs of S0123, a young female. She had been between 17 and 25 years old when she died but was quite tall at about 170 cms (= 5ft 7in). The only pathology noted on S0123 was the presence of cribra orbitalia, seen as perforations in the roof of the eye sockets. This is often linked to anaemia.

We cannot say whether there was any familial relationship between S0123 and S0122, although the potential for speculation is obvious. As a counterbalance to this, it has been noticed that children's remains in Boneyard quite often seem to be buried close to, and more shallowly than, adult remains. There may be some symbolic significance to this, or it may just be a pragmatic use of space. This crowding and shallow burial, together with the smaller size and greater fragility of infants' bones, means that their skeletons have rarely been recovered intact or entire from Boneyard. S0122 is a good example of this: the excavator's records show that they even questioned whether the bones might be disarticulated and whether they might have come from more than one individual.

It might have been this uncertainty over provenance that resulted in the osteological record remaining unwritten until analysis was undertaken by SHARP volunteers Maria Tiplady and Elaine Caswell in 2010. As the photograph (Fig 1) shows, they demonstrated that, despite the lack of obvious articulation in the ground, most of the bones almost certainly did belong to one individual.

The paper-thin bones of the skull have either separated along the unfused sutures or broken in the ground. The larger pieces are from the frontals (forehead), including part of the left orbit (eye socket), and parietals (sides and top of the head). There were parts of six or seven vertebrae found, three from the neck and three or four from lower down. One of these was probably from the thorax (chest area) and the others from the lumbar (small of the back) area. There were fourteen incomplete ribs. Although these are shown paired in the photograph, most of them could not, in fact, be sided. Most of the long

Figure 1:
The bones of individual S0122, excavated from Boneyard in 2002.

bones – three arm bones and the one leg bone – and the clavicle (collar bone) were from the left side; only the proximal end of a radius (upper part of one of the lower arm bones) came from the right. The five hand (or just possibly foot) bones have been placed in the photograph on the left because that seemed most likely, although they couldn't actually be sided. The ilium (the biggest part of the pelvis) was from the right. In all cases not only were epiphyses unfused, the epiphyseal parts of the bones (e.g. the joints at the ends of bones in adults) were non-existent. This, together with the relative sizes of the bones, is consistent with them all having belonged to one individual – a baby, and a very young one at that.

There were also a few other fragments recovered with the bones of S0122 – See Fig 2.

These fragments are clearly from bones which are bigger than those of a baby. They are either from S0123 or the original excavators were right – there might have been disarticulated remains from more than just S0122 present.

Figure 2: Fragments from bones that are larger than those of a baby. They could possibly belong to S0123.

Although a full osteological study of the bones of S0122 had not been made until 2010, there had been an entry made in our Catalogue of Burials for this skeleton. This showed it to have been classified as a neonate of 0 years old. When it comes to classifying the very young by age there are a number of overlapping terms which can be used:-

Infant = from birth to 1 year
Neonate = from birth to 28 days
Perinate = from 24 weeks gestation to 7 days post natal

From an archaeological point of view it is fortunate that these terms do overlap: there is a limit to how accurately one can age an infant's skeleton when all that one has to go on are the dry bones. Nevertheless, there are published tables which give us an indication of probable age based on bone lengths. The results obtained by Maria and Elaine are shown in Table 1.

was a 'full term' birth (defined as from 37-42 weeks gestation). However, what we cannot be sure about is whether S0122 was born alive or whether it was a still-birth. Hence it is probably more accurate to classify this as a perinatal skeleton rather than a neonatal one. So, does that mean that S0122 is the skeleton of the youngest person to have been buried on Boneyard? Well, there are two others listed in our Catalogue of Burials as neonates – S0089 and S0115.

Bone	Measurements	Age Range (weeks gestation)	Source
Clavicle	43mm length	38wks = 42.6mm 40wks = 44.1mm	Tbl 8.1 P250
Ilium	32mm length	38wks = 32.1mm	Tbl 10.1 P373
Ilium	30mm width	38wks = 28.5mm 40wks = 30.4mm	Tbl 10.1 P373
Ulna	50mm length	34wks = 49.1mm 36wks = 51.0mm	Tbl 9.14 P307
Radius	44mm length	34wks = 43.3mm 36wks = 45.7mm	Tbl 9.7 P297
Femur	*c.*70-72mm length (estimated)	38wks = 69.0mm 40wks = 74.4mm	Tbl 11.2 P393

Table 1:
Source: Scheuer,L & Black,S 2000 Developmental Juvenile Osteology Academic Press

The length of the femur had to be estimated because, as can be seen in Fig 1, the distal (lower) end of it was broken off. The full size was therefore estimated by comparison of the overall shape and size with a published scale drawing of a perinatal femur. However, even without this, it seems that the measurements confirm the impression already noted that these bones could all have come from one individual. Furthermore, we can now say that this individual had most likely been conceived about 35–40 weeks before he or she died – i.e. that this

The bones of the latter were also recorded in detail for the first time by Elaine and Maria in 2010. There was even less of S0115 than there was of S0122, and none of the long bones was sufficiently complete to measure accurately. However, the radius, which was the most complete bone present, was clearly bigger than the radius of S0122. The best estimate by Maria and Elaine was that S0115 was 'no more than 3-4 months old'. Even at this young age it would be more accurate to classify it as an infant rather than a neonate.

The bones of S0089 had been recorded in 2008. Comparison of their measurements with the same tables that were used to estimate the age of S0122 indicates that it too was born and died at 36-39 weeks gestation. The methods available to us are insufficiently precise to distinguish between the ages of S0089 and S0122. The best we can say is that S0122 is one of the two youngest people to have been buried in Boneyard.

Above: The human remains students after completing their osteology course.

Right: The crouched burial found in 2010. Photo by Ray Baldry.

Meet the Supervisor Gary Rossin

By Piers Pye-Watson and Valerie Teh

Height: 5' 11"
Age: 50
Star Sign: Aquarius
Little Known Fact: Mr Rossin furnishes his tent with a bookshelf.

SHARP: Mr Rossin, let's get down to business. What is your role in the project?

Rossin: 'Supremo'. No, that sounds a bit too authoritarian doesn't it? My role is Project Director, which essentially means that I organise the running of the project itself, not just during the season but outside as well. I see my main role as the facilitation of the archaeology for those people with the real skills to dig and continue their research.

SHARP: What attracted you to SHARP.?

Rossin: Well, I hadn't heard of SHARP until an archaeologist recommended it to me. Time Team had an excavation near Peterborough [his home town], and I got talking to a specialist who mentioned a dig in northwest Norfolk, and hey, you know. I thought, why not?

SHARP: And what drew you to archaeology in the first place?

Rossin: I suppose I've always had an interest in archaeology and the past. You know, seeing this faraway world by going through the digging process. But the person who had the greatest impact on me would have to be Julian Cope. He used to be front man from [the band] Teardrop Explodes. But he's better known these days for his book, *The Modern Antiquarian*. I suppose some would say he has 'popularised' prehistoric Britain but I think his approach has articulated meaning that many others have missed. I suppose reading it gave me some confidence that archaeology is not something that is done by other people! An ethos that I am pleased to say that I found at SHARP.

SHARP: Do you see yourself as a 'modern antiquarian'?

Rossin: No, well, hey, secretly, secretly...

SHARP: And what is your particular area of interest in archaeology? Any periods?

Rossin: Prehistory every time. Specifically what was starting to happen in the Neolithic. People talk about having favourite sites but how can you choose from within this amazing country of ours?

SHARP: So, these recently excavated Early Bronze Age burials are your 'thing'?

Rossin: Sure, it's, yeah, it's really getting exciting up there for me. Having two EBA [Early Bronze Age] burials in such close proximity within what we thought was 'just' the Anglo-Saxon settlement have made us rethink not just Chalk Pit Field but what was going on in and around Sedgeford at this time. We have a huge amount of evidence that hasn't really been fully investigated, and I think what the two burials are showing us, apart from the continuity of human settlement in the area going back almost 4,500 years, is how important this area has been throughout. However, we have only really just started to understand what may have been going on in prehistoric Sedgeford.

SHARP: Eating in or out?

Rossin: Oh, out, definitely. Followed by a nice walk by a river. Grab a coffee around about dawn, then head home. This is beginning to sound very 'Manhattan' isn't it?

> " This is beginning to sound very Manhattan isn't it? "

SHARP: Now then, on a different note, what would you do for a first date? How would you treat that lucky person?

Rossin: Hey, right, there's treat and there's treat you know! I would start with the cinema.

SHARP: And what would you see? A rom-com, or an action-thriller?

Rossin: You know me so well... It would have to be a film that makes you think, and I don't mean think as in 'why have I wasted two hours of my life watching that ****'. Then a meal.

SHARP: Is that the end of the night?

Rossin: The end? I suppose that is for another interview...

SHARP: Finally, Mr. Rossin, could you please describe SHARP to us in 5 words?

Rossin: To paraphrase the Apple motto, right, 'Archaeology for the rest of us'.

SHARP: Gary, that's six words...

Rossin: Whoa, whoa, hey, hey, listen.

Just a Load of Old Rubbish

By Douglas Mitcham

Ritual or rubbish, problems for archaeologists

Visitors to SHARP might well ask why archaeologists spend so much time digging up the 'rubbish' left behind by people in the past. But our interpretations of the archaeological record are greatly influenced by the use of a term such as 'rubbish', by which we mean material which no longer has any great value or use and is simply thrown away. Clearly people in the past generated such waste, and we find evidence of the everyday domestic refuse in the fills of the pits and ditches of the Saxon settlement in Chalk Pit Field, normally animal bone fragments (some with butchery marks) and many hundreds of oyster shells.

The disposal of rubbish can be determined by cultural rules and highly structured; for example, in our modern society we regularly separate out different sorts of refuse material such as glass, plastic and paper. We are not performing a ritual by depositing these items in separate communal bins in supermarket car parks; however, some archaeological deposits represent more than just the throwing away of material no longer wanted.

Past societies may have had a different understanding than ours of what constitutes rubbish. Many prehistoric societies accumulated domestic refuse in a specific location (a process called middening), then spread the refuse on cultivated areas. The practice is often interpreted as having ritual meaning; for example, the returning of animal remains and broken items to the earth, or the ensuring of fertility or successful harvests.

A problem for archaeologists is how to identify when ritual or symbolic intention lies behind a deposition, rather than being a non-activity. Disagreement over intention has cropped up on trench during our excavations at SHARP. It is fair to say that academics based in universities tend in general to favour ritual explanations, whilst those from the more practical world of commercial archaeology tend to favour practical explanations.

Saxons and animals in Chalk Pit Field

Animal deposits found as articulated or semi-articulated skeletons are referred to as *associated bone groups* or *special animal deposits*. Over the last twenty years or so, it has been increasingly recognised by archaeologists that such deposits were made in different periods, and that the seemingly deliberate nature of such actions suggests more than the simple disposal of unwanted remains. For example, animal bone groups have been recognised for the Neolithic period (4200-2200 BC in

Britain), and many have been identified on settlement sites dating to the Iron Age (700 BC - AD 43), often deposited with other items, including pottery and metalwork, in disused grain storage pits. Such deposits in prehistory are relatively well recognised, but more recent research has shown that animal bone groups also occur on Anglo-Saxon settlement sites. A number of these deposits have been found in association with the middle Anglo-Saxon settlement in Chalk Pit Field.

In SHARP's 2008 excavation season, in Trench 9, two partly articulated sheep and a cow humerus (upper front leg) were discovered in a shallow pit inside the D-shaped enclosure immediately to the south of the settlement. Their location was close to the large east-west boundary ditch that defines the boundary between the settlement and enclosure, and relatively close to where this boundary ditch is cut through by another ditch running northeast-southwest. Unfortunately, no datable finds came from the shallow pit, nor did it have a relationship to another datable feature. But its location may be of significance as such deposits are often associated with major boundaries or entrances.

During the 2009 season, in Trench 10, a partly articulated calf skeleton covered by a dense deposit of apparently steam-opened mussel shells was discovered in the terminus of the north-south aligned western boundary ditch of one of the settlement plots. Its placement in the terminus of a boundary ditch is strongly suggestive of a deposit with greater significance than the simple disposal of a dead animal. Previously, such deposits uncovered on Saxon settlement sites in Britain have tended to be interpreted as domestic rubbish, but this is a young animal, a valuable commodity, with no apparent evidence of butchery. It could be a foundation deposit to sanctify the establishment or re-establishment of the boundary, or the boundary's closing when habitation within it ceased. Another possibility is that the deposit was associated with the rebuilding of the post-built structure in this area. But such associations can only be speculated upon.

During our 2010 season, the best example of an associated bone group excavated so far was found in the upper fills of one of several east-west aligned ditches at the northern end of Trench 12. It consisted of an articulated dog skeleton, pig tooth, goose femur and articulated cow tibia (lower leg) and astragalus (ankle) sitting on top of a deposit of oyster shells. Trench 12 supervisor Mark Blagg-Newsome considered this to be a structured deposition rather than a rubbish deposit. Again, it is tempting to speculate that this was a ritual deposit intended to close the ditch.

Ritual in Iron Age Sedgeford?

One notable example of an intentional deposit of material culture (artefacts used by people in the past) is the Sedgeford Hoard. Found in 2003 in the Reeddam area of our excavations, it consists of thirty-nine gold coins - Gallo-Belgic E type staters - which were buried in the ground, twenty of them in the leg bone of a cow. The hoard dates to around 50 BC, the period known as the Later Iron Age (in southern Britain, the period between 400 BC and AD 43). The practice of hoarding coins and other metal objects occured in various periods, for example, during Roman Britain and the Anglo-Saxon period. Over the years, since early attempts at archaeological study began to identify the regular occurrence of hoards, many explanations have been put forward to explain why people buried them in the ground. Earlier explanations suggested that coins and other valuable items were hidden in times of danger or unrest and never recovered by their owners. In the case of the Sedgeford Hoard it might be tempting to argue that the coins were deliberately hidden inside the bone and buried for safe keeping, with the cow's pelvis found above the hoard left as a retrieval marker. However, the lanscape context of the deposit offers an altogether different explanation.

Many studies have pointed out that hoards and metalwork findspots are located near rivers or wet places, and most archaeologists would accept that people in the Iron Age revered natural phenomena such as rivers and bogs. The hoard at Sedgeford could have been a ritual deposit, perhaps an offering to a water god or river spirit. Here the context is crucial. Reeddam is still wet - the SHARP volunteers who excavated in it had to contend with rising waters and the use of pumps whilst trying to dig! The location is fairly close to the River Heacham, which was probably more active during the Iron Age than today. If the hoard was buried for safekeeping to be recovered later, the choice of a wet location close to a river does not seem logical for a safe place. Probably many hoards were buried in containers, but ones made from organic materials unlikely to have survived, so containment within a bone does not necessarily indicate the coins were hidden for later recovery.

A final thought...

The use of the term ritual is itself a problem, tending as it does to assume it is possible to separate the sacred from the everyday economic spheres of past societies. This assumption is a bias of our own culture, where the economic and everyday are separated from ritual and religion quite rigidly. This was almost certainly not the case for ancient societies, in which religious beliefs played a much more prominent role in people's understanding of the world around them, and ritual and the sacred were not separate from everyday economic concerns. Thus it may be more useful to to consider how deposits such as animal bone groups or hoards fitted into people's understanding of the world rather than emphasize differences between the sacred and the profane. Some of the subtleties of the archaeological evidence, however, such as the landscape context of the hoard, can offer vital clues to our understanding of the intentions behind such deposits. The placement of animal bone groups and the treatment of animal remains can also answer much broader questions in Anglo-Saxon society; for example, to what extent did the essentially Pagan tradition continue after the conversion to Christianity.

Overall, I hope this article has demonstrated that the way in which we approach and discuss the archaeology we study can have a big impact on how we interpret the past, and that we always have to be aware of our own cultural bias. Hopefully, you can see we are dealing with much more than a load of old rubbish at Sedgeford!

Above: Excavating partly articulated animal remains in Trench 9 during the 2008 season.

News from the Finds Hut

By Naomi Payne and Ann Smith

The 2010 SHARP summer season revealed its usual array of interesting finds. To mention all would be impractical, so what follows is a brief look at some of the more exciting or unusual.

Spindle whorl

One of our earliest finds of the season was a beautiful complete spindle whorl. Circular in shape, with the central hole showing signs of use, it measures approximately 35mm in diameter and weighs 23.2g. Spindle whorls were used to weight the spindle when spinning yarn.

Our example appears to have been shaped from buff-coloured chalk, a common material for Anglo-Saxon spindle whorls, but a rare discovery for our site.

Above: A photograph of the Anglo-Saxon spindle whorl discovered this year.

A highly decorated item, the spindle whorl has been scored on every surface, creating what mostly appears to be random patterning. However, there is a small area on one surface where a different mark has been scored out, looking rather like a double capital 'A', definitely worthy of further study. Apart from a little surface damage, the artefact is in good condition. Interestingly, it is also going to get away with not being cleaned as it is the soil lying within the scored grooves that makes the patterning so discernible.

Penny of Aethelred II

Another Anglo-Saxon coin was discovered during the 2010 season, bringing the total from Chalk Pit Field to five (in addition to the three found in Boneyard). The silver coin is a penny of King Aethered II (reigned 978-1016), who used to be called 'the Unready' in history books. It dates from AD 979-85. The front (obverse) shows a side-on depiction of the king's head and shoulders, and the back (reverse) shows a religious motif, the hand of providence descending from a cloud.

The coin was produced in London by a moneyer called Wulfsige. By the 10th century, London was already a sizeable and important town, and each borough was permitted at least one moneyer. These individuals operated their own private workshops rather than working out of a single official mint. The coin is a little later in date than we would expect from the site, suggesting that occupation here may have been longer than previously thought.

Above: A photograph of the penny of Aethelred II.

Right: A photograph of some of beads found in this years crouch burial.

Bead after bead

2010 seems to have been the year of the bead! During environmental sampling of the grave fill in Trench 12, a tiny amber bead was discovered. Measuring approximately 5mm in height and fractionally more in diameter, and weighing just 0.11g, it was well spotted. The bead is sub-circular in shape, slightly flattened top and bottom, and has a tiny central circular hole all the way through. It is yellowy orange in colour with the amber crystals quite visible under a microscope. Unfortunately, it is in an extremely fragile condition.

Following on from this success, a further six possible beads were recovered from the grave fill, although no further amber beads. These additional 'beads' are all equally small, if not smaller, and all weighing just the slightest fraction of a gram. All are irregular in shape, but most have a circular hole through them of similar dimension. The material is uncertain, but interestingly quite porous, suggesting perhaps that they have been formed from clay. Several suggestions were offered concerning their manufacture, including the possibility that they may have been made by pinching tiny pieces of clay around a horse hair or something similar. We are looking forward to learning more about these items.

But by far the most exciting bead to be found was an exquisitely made glass bead that would originally have been white with red trails and dots, although the white glass has become discoloured in the ground. Beads of this type are most commonly found in the northern part of Norfolk, but are also found along the east coast, as far north as County Durham and as far south as Kent, with a few examples coming from sites further inland. Most excavated examples are from early Anglo-Saxon graves, so the type is generally dated to c. AD 550-650. However, they may well have continued to be made into the 8th century. The type may have been a continental import as they are very common on Frankish and Alemannic cemeteries of the 7th century.

Bone tools

An incomplete bone handle was found this season. Made from a young cow's metatarsal (foot) bone it has a central slit along just over half of its surviving length. A single transverse iron rivet is still in place, but the implement that the rivet held in place has not been

preserved in situ. One side of the slit end has broken at the point of the preserved iron rivet. More of the other side survives, having broken across a second rivet that only shows as an iron stain. The handle is decorated on one side of the slit with a line of short incised parallel lines.

One-piece socketed handles were the norm during the Anglo-Saxon and early medieval periods. In the later Middle Ages, two-piece bone plate ('scale') handles became common. Handles from Anglo-Saxon asymmetrical composite bone combs were made in a way similar to this object, but they are smaller, more highly decorated and would have required more rivets to keep the relatively narrow tooth plates in place. This handle therefore presumably held an iron implement of some sort, but an exact parallel has not been found.

Towards the end of the season, in Week 6, a right cattle scapula (shoulder blade) that appeared to have had its blade edge deliberately squared off was uncovered. Its largest surviving dimensions are approximately 250mm x 130mm and it weighs 151g. Although incomplete, we wondered whether the shape of this bone indicated that it had been utilised in antiquity as a shovel. Lorrain Higbee, the zooarchaeologist at Wessex Archaeology's Salisbury office, kindly took a look at the item for us. Lorrain told us that the perpendicular straight edge across the 'blade' part of the bone is a classic butcher's cut, and as there are no other signs of working or wear, this object is not really an artefact. It is still of interest as it may help to shed light on butchery practices in Anglo-Saxon Sedgeford and it will therefore be examined with the rest of the animal bone assemblage.

Flint fabricator

The term fabricator is ascribed to chunky rod-like flint tools that are found in assemblages ranging in date from the Mesolithic to the Later Bronze Age. Their purpose(s) are not entirely certain, but they are thought to have been used to detach flakes from cores during knapping.

One such finely worked piece of flint was found out of context, but typologically it fits best into the Late Neolithic or Early Bronze Age and is therefore most likely to have been associated with the Chalk Pit Field crouched burials or the individuals who buried them. The implement has been made from a thick flint flake. There is a small area of cortex on one side, indicating that the flake was probably secondary, removed from a flint core fairly early in the knapping process. Flakes have been removed from both sides to create a long, thick oval, with a broadly oval cross-section. Much of the surface has a milky greyish blue patina, although there are areas of damage on one side where the surface is a darker grey.

Mystery item

Towards the end of Week 5 an artefact was discovered that remains quite a mystery, an unclosed circular ring measuring just over 15mm in diameter and weighing just over 1g. The ring is a simple but beautiful item, a band circular in cross-section, thicker opposite the tapered terminals that lie parallel to one another.

Our problem is identifying the material from which it has been made. Its feel and colouration suggest a metal content, yet, of the four metal detectors passed over it, only one gave any signal, and then only a very faint ferrous signal. If the ring were ferrous, being so small, it would have been unlikely to survive in the ground, and certainly not in such good condition. Indeed, there are no signs at all of corrosion. Bearing in mind that some minerals can give off a signal on some metal detector settings, it may be that the ring is not metal.

Identification of the material will help to determine the artefact's identity. It may have been a finger ring, but if it turns out to be made from a more malleable material, an earring is possible. Watch this space!

By Katie McKinnon and Valerie Teh

The night before the Big Day, Christine, our Open Day coordinator, was busy organising the final touches of her big project. It was all hands on deck –volunteers and supervisors alike –to transform our workplace into a site for the public to experience and enjoy.

On the day itself, with not a press gang in sight, everyone played a part. Janine and her catering team provided everyone with adequate nibbles. The trench supervisors lost their voices during the numerous site tours demanded of them by the visitors. People came from near and far to visit the site, and they were certainly not disappointed. Aside from all the exciting settlement features on trench, a bone knife handle complete with rivets was unearthed in front of an enthralled audience during one tour. The visitors were also treated to a detailed account of the combined findings of the past 15 seasons of the project. Back on site, visitors relaxed under the shade of the gazebo, enjoying a series of captivating lectures. Topics ranged from animal bones to recent small finds, and visitors came away feeling enlightened.

As in previous years, the marquee was a hub of activity. Children (and some youthful-minded adults!) were kept busy by Iron Age face painters, a pottery making stall, finds cleaning, writing in Anglo-Saxon runes, and much more. Yet again, the human remains team put on a great display, resulting in a portacabin packed from dawn till dusk. The younger audiences seemed to relate particularly well to the juvenile skeleton as they were able to see what their own bones looked like. Other Anglo-Saxon remains on show included a reconstructed head of a warrior and some interesting examples of osteo-arthritis from the Boneyard excavations. Nelly the Skelly made his debut appearance in his original crouched position, showing the expansion of our already extensive skeletal collection into the early Bronze Age.

New to the 2010 Open Day were two blacksmiths who went down a storm re-creating some of our recently excavated small finds –many people went home with replicas of hairpins, torcs, and other period accessories. The pair will certainly be making future appearances on site after this successful first showing.

The SHARP ethos of sharing its archaeology with the public has been core to the project, and this jam-packed day only helped to further our commitment to this cause. After all the blood, sweat and tears, the volunteers on site celebrated the success of this year's Open Day with copious amounts of cheese and wine. If you missed out this time, wipe away the tears and prepare for your trip in 2011!

Left & Above: Some of the project's children dressed in Anglo-Saxon clothing for the occassion.

Below: Erica organised a face-painting stall for the children and 'over-enthusiastic' adults., seen here painting a woad design.

Full Steam Ahead at Sedgeford Aerodrome

By Charlie Middleton

Today, Whin Hill is a quiet wooded area on the eastern fringe of Sedgeford parish, occasionally disturbed by a passing tractor, but at the end of 1918 it was a busy hive of activity preparing pilots of the newly formed Royal Air Force for the killing skies of the First World War. With the kind co-operation of the land owner, William Barber, SHARP has undertaken to investigate this era of Sedgeford life and determine the form and function of Sedgeford Aerodrome, firstly as an active airfield between 1915 and 1919, and then as a decoy airfield and emergency landing field during the Second World War for nearby airfields such as RAF Bircham Newton.

Following a successful 2009 investigation, we returned in 2010 to carry on. The strategy for this season was to carry out a thorough investigation of the western aircraft hangers and identify any structures related to the railway running onto the site.

But first, some unfinished business from the 2009 survey.

An area on the southern edge of the woods had been identified from surface traces of bottles as a target, and the first week of the 2010 season saw a team of volunteers and supervisors return to carry out a thorough investigation of the area identified as just within the 1918 woodland boundary.

Figure 1: The location of primary 2010 sites.

Two trenches were opened to the north side of the boundary bank, with a total area of 12m^2 excavated to identify the spread of cultural material deposits. The artefacts recovered include a leather shoe (subsequently dated to 1939), pocket watch, felt hat, numerous bottles, and a few ceramic remains. One of the ceramic items found, a piece of Adderley ware, was identified as being produced only between 1906 and 1926, and is therefore a possible link to the First World War use of the site.

During the excavation, one of the volunteers uncovered the end of a pipe that subsequent test pitting revealed was continuing in a south-easterly direction at a depth of nearly 60cm. A quick evaluation of the aerial photos and site plans revealed this could well be linked into buildings of the First World War era, but the large area of 7ft-high nettles, 5ft-high volunteers, a temperamental strimmer, and a limited time frame decreed a policy of continuing this investigation at another time!

Zeppelins, Fighters and Ack-Ack: An introduction to modern conflict archaeology

Two of the key elements of SHARP are education and community involvement, and the Aerodrome Project is no different, so six students arrived at Sedgeford for a course on modern conflict archaeology (MCA), a week's taster of the techniques and methods used within. This included examination of an assemblage of desktop research materials, including old maps, aerial photographs and written records, together with site surveying and recording using GPS technology, and excavation to uncover the physical remains of the aerodrome. All this helps to identify key components of the once thriving aerodrome, and allows the dry plans of the past to be turned into real structures filled with artefacts and the memories of the airfield in its heyday.

A very large shed

As mentioned, one of the key objectives for the 2010 season was to record the standing remains of the western buildings marked on the plan as '1916 G.S. Shed'—an aircraft hangar to you and me—and use this information to start building a 3D computer model of the aerodrome.

The 1918 plan had provided brief dimensions, so the first task was to determine the corners of the remains, which were predominantly at ground level or below. The MCA students quickly set to work clearing and excavating the two western corners of Hangar 1 and the north-eastern corner of Hangar 2, and soon confirmed that the hangars were indeed 170ft x 80ft (5.8m x 24.4m) as marked on the plan. More importantly was confirmation that the dimensions given for this and other structures could be considered accurate, and thus the plans could provide valuable measurements for locating the structures on the ground – a task complicated by nature taking back the site over the last 90 years.

Further work on the site of Hangar 1 showed that the hangar walls were supported externally by vertical 9in x 6in (22.8cm x 15.2cm) posts, braced by angled posts. These were spaced in pairs, 10ft (3m) apart along the western edge, with trial investigations (due to dense undergrowth) revealing the same arrangement on the eastern side. The postholes were found to be of concrete construction with evidence of metal bracing around each post, each hole approximately 60cm in depth, with the concrete at the base of each flaring outwards – possibly to prevent water building up around the wooden post. Key finds included numerous shards of broken glass and concrete edging, together with 3in (7.6cm)-wide T-shaped thick metal strips, all found close to the hangar wall. These were considered to have been the remnants of the concrete sections forming the hangar walls and the overlying side windows of the hangar (see figure 2).

The corners of Hangar 1 that were accessible showed that there may have been problems with subsidence during construction as there was cracking and evidence of repairs. Within the corners were arrangements of six postholes for squared posts that would have supported the sliding doors that once sealed the hangars against the elements. Remains of raised metal running for approximately two-thirds of the total width at each end, together with the postholes, led the team to propose that the doors ran on rollers guided within metal channels and through a wooden post framework. Further investigation has led to the proposal that the hangars at Sedgeford could have been similar to one still standing on the site of RAF Montrose in Yorkshire (see figure 2).

Figure 2: The hangar at RAF Montrose

MCA students gave way to volunteers, who, whilst clearing back to determine how the walls of the hangar were supported, made a discovery that had the SAP Project Directors putting down their mugs of tea and picking up their trowels—a possible series of rooms running along the western side of the hangar, placed between the outer angled and inner vertical posts. A decree was issued that the overlying agricultural debris be removed, allowing an accurate plan of the entire western range to be drawn.

Possible doorsteps on the internal face of the hangar wall suggested that several of these rooms were only accessible from outside, whilst others only from within the hangar (see figure 3 for further details).

The floors of these rooms varied from bare earth to smooth concrete, to rough cast concrete cut by regular grooves, the last being possibly the base surface of a wooden floor, the grooves made by the overlaying floor joists. The team tasked with clearing back several decades of animal waste that only a gardener would regard as pleasant received their just reward with the discovery of the hangar's toilet, which proved a suitable location for the site 'throne' for the ensuing site tour photo (see figure 4).

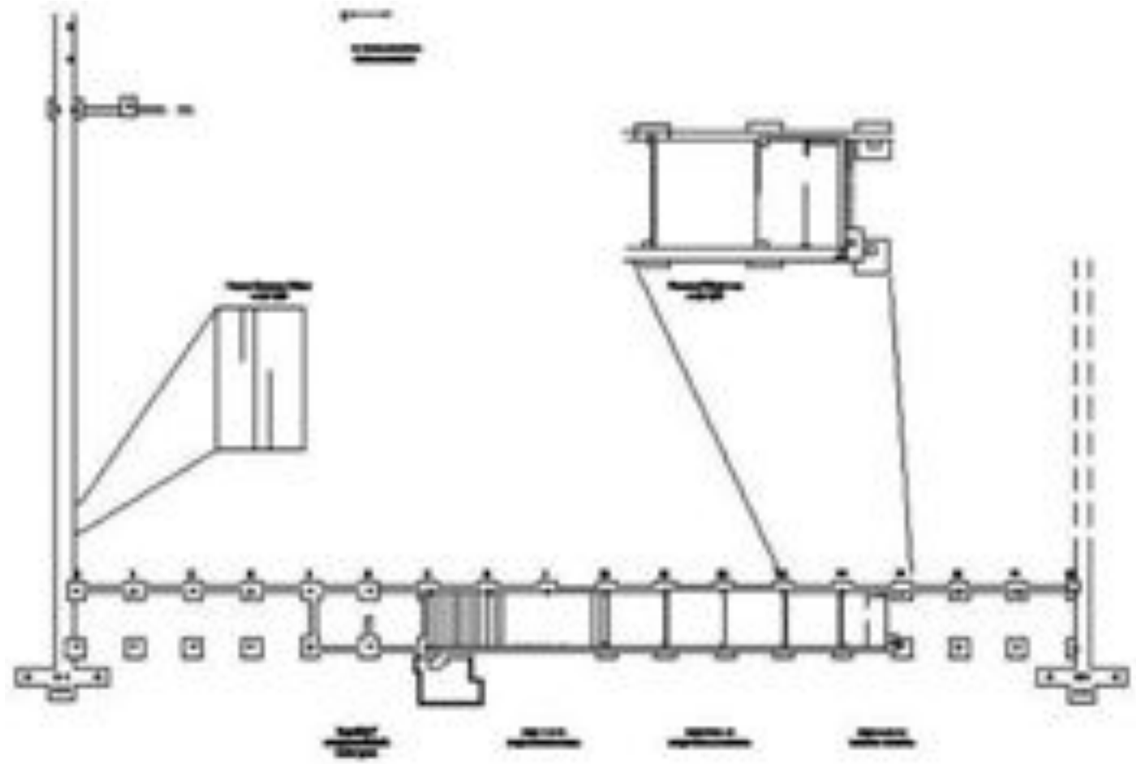
The next stop is Sedgeford International

It should never be forgotten that the First World War was industrialised conflict on a colossal scale, with Sedgeford playing its part, producing aircrew for the killing skies over the numerous battlefields. Stark evidence is found in the site plans and aerial photos of late 1918, showing a railway line running onto the airfield to feed the needs of its, by then, 1200+ population. That it was constructed this late indicates that there was no perceived end to the slaughter. No investigation into the infrastructure of the aerodrome could be regarded as complete without looking at this key element of the Sedgeford war machine.

Images on the following page:

Figure 3: Ground layout of Hangar 1.

Figure 4: SHARP members illustrating the position and shape of the post-holes at the Hangar 1 site to give an impression of the view of the original hangar.



A raised area to the east of Hangar 1 had been identified as the possible railhead, and through interpolation of old plans, aerials photos and existing features, the MCA students targeted a 9m x 2m strip bisecting this area. Subsequent excavations through overlying burnt deposits of glass and ceramics, brick rubble and damaged slate tiles led to the discovery about 30cm below the existing ground level of a 10cm-thick concrete base overlain with several rows of inverted bricks. The base was found to have been cast directly against the ground, without shuttering, although it had been deliberately cut away in several locations, possibly as a later non-military modification (see figure 5).

The base was on a north-south alignment and at the right location to be considered a structure connected with the railway, but, although ephemeral traces of a track bed were found, the dry ground conditions prevented resistivity surveying, and therefore trial pits over possible track bed locations, being carried out.

At the north end, the base was 4m wide, extending in a southerly direction for 2m before narrowing to a strip, visible only on the western edge of the excavation because of an overlying hedge. Subsequent test-pitting by volunteers to the south revealed that this strip continued for at least another 14m and possibly further, but the end of the 2010 season prevented further investigation. At each test pit the same depth of concrete was found with associated inverted bricks. A couple of nice small finds from the initial excavation of this area were a .303 round dated to 1917 and the remains of a small clockwork mechanism.

Where there's muck, there's....

Finally, some of the muck shifters from the hangar site used their last hours on site trying to identify the location of features shown on the aerial photos. They quickly identified two concrete tanks and associated valving, and set to with gusto recording and photographing, but their jubilation soon turned to wry amusement when a supervisor identified the tanks as possible sewage settlement tanks! If they are contemporary with the military occupation, then their downhill location with respect to the rest of the site provides a 'pipeline' to the men and women who called Sedgeford 'home' for the duration of their posting.

The Future?

The main objective for the 2011 season will be to locate the actual position of the railway line and any associated structures. It is also hoped, following the site survey carried out earlier in the year, that the numerous workshops for carpentry, doping (waterproofing) and engine maintenance, together with canteens and generator houses, can be identified and excavated.

Figure 5: Photograph of the railway structure.

Photo: Luke Taylor

A big thank you to all those who participated in SHARP during the 2010 season!

2010 Season Image Gallery

A new season begins

Landscape archaeology students visiting Castle Acre

Excavations taking place on Trench 12

Piers in his costume of the season

Katie, Gary & Zoe planning

At the end of a hard days work (?)

Valerie, looking 'sharp'

For further information about the project and our work visit our website
www.sharp.org.uk

Registered charity number
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