EXCAVATIONS AT A ROMAN AND SAXON SITE

at

HADDON, CAMBRIDGESHIRE.

1992–1993

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ABSTRACT.
A second and third season of excavation at the Romano-British and Saxon site at Haddon continued during 1992 and 1993. The bathhouse revealed in 1991 was completely excavated with its adjoining stokehole and the later use of the area for agricultural use was shown within wooden shedding. Saxon occupation was confirmed within the derelict bathhouse and was linked to a series of posts and a gully to the west of the site. Later a substantial ditch was dug which appeared to be backfilled shortly after completion and a long house of 5th/6th century date built over this backfilled area. The last feature on the site was a burial linked with a brooch of the mid 6th century.

ACKNOWLEDGEMENTS
Again I am particularly indebted to Mr. G. Martin and his family for continued support and enthusiasm during the excavation of the site and while fieldwork was in progress. The success so far of the project has been very dependant on their interest and generosity.
I am also grateful for the help offered by Ray North, John Hadmam, Jill and Dr. Doug Johnstone, Ron Rowlands and Olive, Jack Greenleas, Dr. Paul Middleton and Derek Roberts. In addition I must thank all of the students and friends from Peterborough Regional College without who's help the excavation could not function, Shirley Walsh , Eileen John and Andrew Hammond, Derek Sheldrake, Polly Davies, Danny Holmes, Stacey Roe, Sue Peace, Chris Everett, Bernard O'Doucherty, Catherine Diver, Adam Johnson, Julie Hewitt and Kevin Scott. Bethan and
George Upex dug, drew and provided finds from the spoil heaps! Mike O'Brien continued with the site planning, Derek Roberts and David Fleet have been responsible for the excellent drawings of some of the finds, Ellie Robertshaw has done splendid service at pot washing and marking, Dr. Nigel Barber carried out a phosphate survey of the hut area, Martin Howe has commented on the Anglo Saxon brooch, Dr. Martin Henig has provided a comment on the intaglio, Dr. Ralph Jackson commented on the stone palette, Adrian Challands has provided a report on the coins, and with Norma Challands undertook the geophysical survey and Alex and Olive Main kindly hosted the end of dig parties. Dr. J.P. Wild and Mr. G.B. Dannell acted as useful sounding boards both during and after the excavation.

Thanks must again be made to the Middle Nene Archaeological Group for their support and the loan of the tools, to the Nene Valley Archaeological Trust for its financial support and to Peterborough Regional College.

THE EXCAVATION.
Work during 1992-3 concentrated on the total excavation of the two roomed Romano-British structure outlined in the previous report on the site and in trying to recover more information about the link with the Saxon occupation on the site.
For an outline of the site (T.L.19 137931) and the parish of Haddon see, "Excavations at a Roman and Saxon site at Haddon Cambridgeshire, 1991." Upex S.G. - P.R.C. Booklet.

THE ROMAN BATH HOUSE.
The total excavation of this structure took place during the 1992-3 seasons of work and revealed a small, well built bath unit which measures 6m by 3m. It consists in its final phase of two rooms, one with the remains of a hypocaust (room 2) and the other with a pitched limestone floor. The walls were well
PHOTOGRAPH 1 Bath house looking to the North

PHOTOGRAPH 2 Area to East of bath house (f24 f25 and f22)
built of pitched and course limestone and laid with a fine yellow mortar. The plan of the building is shown in Figure 1. In its final phase, but the structure seems to have had a probably short but much altered history. Even after 3 seasons of work on the site it is difficult to know what the original builders intended, as they seem to have changed the layout of the structure several times.

PHASE 1

In its first phase the builders seem to have intended a small one roomed structure (room 2) with a hypocaust which was fired from a covered stoking area to the South (see figure 2 - Phase 1, and photo 1). The heated room appears to have had a drain leading off to the East and down slope, which was timber lined and covered with slabs of stone and roofing tiles, (see photo 7). From the North and upslope side it is possible that a simple aqueduct led water into the building. This water supply could have been picked up from the higher ground to the back of the site and channelled down in open ditches, finally being fed via wooden troughs raised on posts and the sleeper wall to the North of the bath to give a sufficient head of water for use within the building. In the N.E. corner of the building the foundations of what could be seen as a pad (F23) for a barrel may be linked with this arrangement.

The arrangement of the heating in room two seems to have been very standard. Three rows of four pilae were built onto a concreted floor over pitched limestone foundations, the maximum number of tiles in any of the pilae that remained was 6 and this seems to represent the full height when linked to the surrounding walls. The tiles forming the pilae were approximately 24 cm by 24 cms (bessalis) which is larger than the standard size of 20 by 20 cms., most seem to have been finished by the tiler smearing his fingers across the tiles to form a simple cross, this is shown in the tile illustrated in figure 6 number 2.

The shape of the stoking area has offsets to the south of the flue which are clearly an integral part of the original design.
HADDON phases

A AQUEDUCT ?
D DRAIN
F FLUE
SH. STOKE HOLE

FIG. 2
PHOTOGRAPH 3  Flue into bath house plus drain and stoke hole packing

PHOTOGRAPH 4  Bath house room 2 f 52, seating for box tile.
and may be intended to take some form of boiler or copper for producing hot water.

PHASE 2

It is clear that the building as it appears in phase one was never fired, the flue has no ash or reddening associated with it and it seems that the builders changed their minds and modified their original plan to incorporate a second room which was in the area formerly intended for stoking the hypocaust in room 2. The former flue was modified and a wall added to the southern end of the building. The way the two phases of walling are butted together is very clear with depths of foundations, coursing and type of mortar all being different (see photos 5 and 6).

At the S.E. corner of the 2nd phase a flue was left (see photo 5) from which it was intended to fire the two rooms. However there seems to have been another change of plan. Room 1 which presumably was to have been the hot room in this second phase was never finished. There was no sign of the pitched floor having been concreted over or of pilae being laid.

PHASE 3

Instead of operating the two rooms together the plan was modified so that the flues between rooms 1 and 2 (which still had not been fired) were blocked. This blocking can be seen in photo 1 where the blocking remains in situ on the right but has been removed by excavation on the left. On the inside of the flue blocking of room 2 modifications were made to the hypocaust by the addition of tiles which look as if they were intended to act as the bases for box tiles, one of these is shown in photo 4. This re-arrangement also suggests that the hypocaust floor had not yet been finished and there was still access to the underfloor.

With the blocking of the flue vents between the two rooms the East wall of room 2 was breached and a flue constructed with a covered stoking area consisting of a small lean-to shed supported on a pair of posts.

It is at this phase that the structure seems to have been fired
FIG. 3 Collyweston roof tiles  Drawn by Derek Roberts
FIG. 4 Collyweston roof tiles and tegulae
Drawn by Derek Roberts
for the first time and with only room 2 being heated. The function of room 1 at this stage is unclear, it may never have been finished or even roofed, alternatively it could have acted as a fuel store.

**PHASE 4**

A later modification to the flue arrangement saw the extension of the flue by the building of a longer flue arch which had a slabbed limestone base and flue cheeks. This may have been an attempt to increase the draught and therefore the draw of the hypocaust when trying to heat such a small room. This modification was linked to the digging of a stoke hole from which the flue could be fired. Over time it became necessary to cover the bottom of the stoke hole with limestone and gravel to stop the depression becoming too wet. The clay soils would have made stoking in the Winter very unpleasant. It was at this time as well that the former drain, constructed in the first phase was cleared out and recovered, presumably to help drain the stokehole area. All of these features can be seen in photo 3, which is looking along the 2nd flue into room 2, with the stokehole packing in the foreground. The drain in its reused form was covered with Collyweston roof tiles, 6 of which are shown in figures 3 and 4.

The date at which the bath structure was built remains unclear. The earliest pottery associated with the building phase 1 is Nene Valley c/c of the late 3rd and early 4th centuries. What is clear is that the structure fell into disrepair by the later part of the 4th century. The roofing of the building, which seems to have been vaulted, at least in part, collapsed around c. 375-380. Pottery associated with this period is similar to that from Great Casterton reported by John Gillam. The bath building itself seems to be very small, although when compared to the arrangements at other sites such as at Piddington, Apethorpe and Weldon it fits into the typical range of small late structures. Perhaps the nearest parallel is the site at Barnwell to the South of Oundle, where a bath or heated
PHOTOGRAPH 5 S.E. corner of bath house- 2 phase construction.

PHOTOGRAPH 6 S.W. corner of bath house - 2 phase construction
FIG. 5 Box, voussoir and mammata tiles
Drawn by Derek Roberts
FIG. 6 Imbrex, bessalis and 'tufa' voussoir tiles
Drawn by Derek Roberts
room was constructed at the North end of an aisled building. At Barnwell the room measured 6.50 m. by 2.50 m. externally, compared to the 6.0 m. by 3.25 m. of the Haddon structure intended in phase 2 of its construction.

There is a fair amount of evidence to show what the above ground appearance of the structure would have been like at Haddon. Part of the East wall of the bath is shown in photo 5, which shows pitched foundations with the above Roman ground walling consisting of coursed then pitched stonework in sequence. As mentioned above it seems probable that all or part of the building was vaulted. This is shown by large quantities of both solid voussoirs (cuneatus) which are cut from very loosely bedded limestone that resembles tufa, and from hollow voussoirs (tubulus cuneatus). An example of the hollow form is shown in fig 5 while the solid form is shown in fig. 6 by two examples. Clearly the hot gases from the furnace were passed under the hypocaust floor, up the walls through box-tiles (tubulus), one of which is shown in fig. 5, and then up through the vault and out through central vents. This arrangement is shown in the excellent reconstruction drawing (fig 7) of the bath by Derek Roberts. Fragments of window glass suggest that at least one small window lit the heated room, which on the inside was plastered and lime washed, although several fragments of a light green plaster have been found. Some of the plaster is curved and must come from the underside of the vaulting.

The actual flooring of the heated room is uncertain as robbing seems to have removed most of the material. The pilae constructed from bessalis were capped in standard form by pedalis of which no complete example survive and in all probability these were capped by sesqipedalis of which 5 fragments have been recovered. These last fragments all have opus signinum adhering to both faces, and it may be that the flooring surface was of concrete. However there are several fragments of highly polished limestone which come from the quarries at Alwalton some 4 km. to the North of the site. Once
FIG. 7 Reconstruction of the bath house from the N.E.- phase 4
Drawn by Derek Roberts
polished this material takes on a marble like character and is known in the medieval period as 'Alwalton marble'. Such fragments could have floored the inside of the hypocaust with a smooth veneer of imitation marble.

How the vault was finished externally is uncertain, it may have been rendered in cement although none of the fragments of voussoir have any indication of this. Alternatively the vault could have been roofed over by a pitched roof. There are numerous examples of both tegulae and imbrex tiles from the site (see figs 4 and 6) and this is the scheme that has been adopted in the reconstruction shown in figure 7.

One other tile type which the site has produced and which is unusual is a single fragment of tegulae mammata which is shown in figure 5. This comes from a destruction layer just outside the bathhouse and may not be associated with its construction.

Once the vault had collapsed or had been dismantled at the end of the life of the building the flooring seems to have been taken up and some of the pilae removed. The debris in room 2 consisted of discarded materials that the robbers didn't want, this was much the same in room 1 although F13 (shown in section in fig 4 - 1991 report) contained considerable amounts of pottery. Robbing stopped short of taking the walls down and the building seems to have been left unroofed and stripped of all but the stonework, this robbing appears from the pottery to have taken place around c. 380.

LATE ROMAN AGRICULTURAL BUILDINGS

PHASE 5

In the period post c. 380 the East wall of the bath house appears to have acted as a short axis wall for a timber building running E/W. This structure was 3.25m. wide and appears to have had at least two rooms, one of which ran into
PHOTOGRAPH 7 Drain cover to west of bath (f 73)

PHOTOGRAPH 8 Building to E. of bath—phases 5 and 6
the baulk and remains unexcavated. The walls were represented by timber bedding trenches on the north side, while on the south the bedding trenches had a line of stone packed against them, as if to protect the base of the timber wall. This south wall is shown in photo 8 running up to the E. wall of the bath house, it is cut through in the foreground by a later feature which may be the vestigial remains of a corn-drier (see phase 6). To the south of this structure 4 post holes seem to represent a lean-to shed built against the East wall of room'1 of the bath. Both of these buildings probably had agricultural uses, certainly the two roomed structure had within the part that was excavated fragments of 23 millstones, most showing signs of considerable wear. Two of these stones, drawn by David Fleet are shown in figure 8. Most of the stone seems on first examination to be millstone grit from western Leicestershire but there is a single example of Hertfordshire puddingstone. Also at this period a third structure was built to the west. This was plough damaged but appears to have been poorly built and consisted of limestone set directly onto the Roman ground surface. Much of this stone showed signs of burning, and the wall was presumably intended to act as the sleeper wall for a timber superstructure. The fragments of this walling that survive (F 81 and 28) are shown on photos 9 and 10, and were later chopped through by a Saxon ditch (F 62).

**PHASE 6**

At a later period the inside of the phase 5 timber building appears to have had a structure built within and overlaying its south wall. The feature may represent the remains of a corn-drying/malt floor and was built from limestone with the corners of tile, taken presumably from the bath. At the end of this period the whole of the area covered by the timber buildings appears to have been used as a rubbish area, with quantities of pottery, bone and building debris spread over a wide area and butting up to the standing wall of the bath house (see photo 2 for the spread of this deposit F 22). This
FIG. 8 Mill stones from the phase 5 timber structure
Drawn by David Fleet
sealing deposit contained a coin of Arcadius, minted between 388-392 A.D. and with a series of very late pottery indicates that occupation in phases 5 and 6 is carried on to the very end of the 4 th. and possibly into the 5 th.century.

Exactly what happens in the early to mid 5 th. century is difficult to determine. Dating in the late 4 th. and early 5 th. centuries is very difficult, if not impossible due to the collapse of coinage and the lack of any sort of tight chronology for pottery. The big question is when do sites like Haddon cease to use / acquire industrially produced pottery ? At present we don't know how long the pottery industry continued in the Nene Valley, clearly the competition from the factories in the Oxford area was sufficient to allow the Haddon farmers to buy in quantities from such distant sources.

The latest coin on the site is of Theodosius, minted between 393-395, but the site has produced only 9 coins from stratified deposits with 6 more from fieldwalking and such low numbers may simply reflect the low economic status of the site. Thus in pottery and coin evidence terms it is impossible at present to say how long Roman occupation continued.

SAXON OCCUPATION

PHASE 7

The end of occupation using 'industrially produced pottery is marked by the introduction of hand made, grit tempered grey/black pottery of the Saxon period. Stratigraphically these two periods follow without a break. There are no dark earth deposits or silts which show a period of abandonment and it is difficult to see any situation other than Saxon following straight on from the Roman.

The most significant feature of this period is the re-occupation of the bath-house. A series of 4 postholes were cut
PHOTOGRAPH 9 General view looking N. ditch (f 61 and 74)

PHOTOGRAPH 10 Saxon ditch (f62) cutting R/B wall (f81)
into the walls and partly robbed and backfilled floors of the building presumably to re-roof the whole structure. One post is central to room 1, another central and to the south of room 2 and two further posts are cut into the north wall of the building (see figs 1 and 2, also photo 12 which shows a post (F42) cut into the N. wall). The posts cut into the north wall may represent the position of a doorway, the top course of stone between the posts did show some degree of wear. Such a door position could replace an earlier Roman door.

Also within the re-occupied bath house were cut two shallow pits (F1 and F18) which contained quantities of pottery and worked bone fragments. Both pits butt against the walls of the bath house and indicate occupation within and not over the earlier remains.

To the East of the re-occupied bath was a general spread of Saxon pottery, which may indicate rubbish deposits. However to the West there was clear evidence of further occupation. Three postholes were associated with a rectangular setting of stone that may represent a structure that butts onto the West wall of the bath. In addition there were 6 other postholes that relate to this period and 2 shallow pits. To the N.W. of these features a small ditch (F62) was dug which cut through the earlier wall (F81) of a building associated with phase 5 (see photo 10). This area was associated with a general spread of material that contained much Anglo-Saxon pottery, worked bone fragments, three spindle whorls and a glass bead.

**PHASE 8**

A second major Anglo Saxon phase saw the development of a spread of material over this early phase. The ditch (F62), already filled with dark earth and rubbish, including much pottery, was cut by a very substantial ditch that ran north-south. This ditch was 3m. wide, 1.45m. deep and was traced for a length of 10 m. It was cut into the underlying clay and at present it is difficult to say on which side the upcast bank, if indeed there was one, was sited. What is clear is that the ditch can not have remained open for long. There was little
PHOTOGRAPH 11 Saxon burial (f93) and tresehold to hut (f82)

PHOTOGRAPH 12 Saxon post hole cutting into N. wall of bath.
indication of any primary silting and the back fill was very homogeneous, containing little archaeological material, although significantly the two sections that were taken through this feature produced saxon pottery from the bottom deposits. The lower fills of this ditch consisted of clay mixed with small amounts of dark earth, the clay matched the natural through which the ditch was dug. This feature is shown if photo 9 (F 61 ). At present it is uncertain what function this ditch served, it is very substantial and seems to be almost too big to be an ordinary drainage ditch. The line of the feature, running north-south and therefore down a 10 degree slope also may indicate that the size and depth of the ditch is excessive to drain or divert water away from the area of the re-occupied bath house and associated features of phase 7. Clearly this ditch will form a major focus of work during the next season of work.

**PHASE 9**

Once the phase 8 ditch was backfilled and levelled off a rectangular structure was built following the same line of the earlier ditch. This building, which was 3 m. wide and could be up to 10 m. long (of which 8 m. was excavated) had walls formed from stakes approximately 25 cm. apart and 5-8 cm. thick. Photograph 13 shows this wall line (f97) on the East side of the building - in the S.E. section of the excavation. There were internal roof supports at 2.50 m. intervals down the centre of the structure and on the West side in what may be a central position (?) along the long axis wall was an entrance marked by two large post (f87andf88). On the outside of the doorway there was a spread of limestone forming a rough paved surface which acted as a threshold to the door, this material is shown in photo no. 11 (f82). Over much of the area associated with this building there were large amounts of daub some of which was burned. The precise date of this building is uncertain. It is clearly of the Anglo-Saxon period and must fall stratigraphically somewhere between the end of the Roman / Saxon occupation recorded in phases 6-8 and the
PHOTOGRAPH 13 Stakeholes of saxon hut (f97) wall - East side.
burial of phase 10. Thus a date in the mid/late 5th to early 6th centuries seems at present the most acceptable.

Dr. Nigel Barber of Peterborough Regional College has provided a phosphate analysis of the soils within the building and the results show higher readings on the West side than on the East. This may indicate that stock was being kept at some point during the life of the building against the door side of the structure.

PHASE 10

The very last feature on the site, apart from the medieval ploughing lines, was a grave (f83) situated on the west side of the building and partly cut into the threshold (f82), this is shown in photo no. 11. The burial was partly disturbed by the medieval and later ploughing and only the lower half of the skeleton remained in situ. The grave outline was marked by an in-fill of dark soil and from this material came a perforated Roman coin that was illegible but which Adrian Challands reported was of a type minted A.D. 337-341, a small round perforated bronze disc and a broken small-long brooch of Anglo-Saxon date which Martin Howe has commented on as belonging to the second third of the sixth century (see below for the full report). It is possible that the burial may have been disturbed shortly after interment, the upper legs bones were both broken while the hip joints were together in an articulated position 1.0 m. to the East. This may be the result of early robbing or even animal disturbance.

Excavation sampling techniques

During 1992 a sampling exercise was undertaken by Ray North to establish the comparative densities of Roman and Saxon pottery within the topsoil layers of the site and their relationship to the destruction of the site by modern ploughing and medieval ploughing in ridge and furrow. The general arrangement is shown
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**Fig 9** Area of control for sampling A/S and R/B pottery

**Fig 10** Table of results for sampling techniques
FIG 4: DENSITY OF SAXON SHERDS [nos/100 litres]

FIG 11. 12 Comparison between R/B and A/S sherd concentration
Drawn by Ray North
in fig. 9 and consisted of 7 metre squares running parallel to the West wall of the bath house and over the area of the Saxon occupation referred to in phase 7 above. This area covered the width of a medieval ploughing ridge, with each end of the sample extending into a furrow and the centre therefore under the ridge. Each of the squares were sub divided into 50 cm. boxes and each box was carefully monitored with regard to the quantities of both Roman and Saxon material and the actual volume of soil removed. The results are shown in fig. 10 in quantitative form and diagrammatically in figs. 11 and 12.

The results indicate that the Roman material which is very resilient to erosion in the soil is generally spread across the sample and therefore the medieval ploughing ridge. This may indicate that although the furrows were cutting into the Roman layers there appears to be a general spread of material which is the result of long term plough damage. By contrast the Saxon material which is very friable and liable to abrasion in agricultural conditions was seen to have a concentration dominantly in the central part of the ridge. This does suggest that once formed, the medieval ridge protected and the furrows cut into and destroyed the underlying archaeological deposits. This would result in a general spread of R/B pottery retained within the topsoil, while the Saxon pottery would quickly erode down into the soil matrix. (The soil analysis undertaken by Mike O'Brien suggest that this residual Saxon material is not only recoverable but quantifiable—see below for this report.)

Modern ploughing is now levelling the ridge and furrow profile with the result that the protected, intact Anglo-Saxon levels on the site are now being destroyed as the ridge height is reduced. This is clearly seen in fig. 12 where the density of A/S material increases towards the centre of the ridge and must represent newly disturbed material being ploughed up into the topsoil layers. The reduction in A/S material to either end of the sample and therefore into the furrows indicates that what
material there was in these areas has been ploughed and abraded by medieval agriculture. Clearly the site and especially the upper Anglo-Saxon layers are therefore being destroyed by modern ploughing. It would be difficult to calculate how many more years of ploughing would totally destroy the topmost layers but it can only be a matter of a year or two before the protection offered by the medieval ridges has gone and the field is totally levelled.

Systematic Fieldwalking 1993/4

During the winter of 1993/4 the site was fieldwalked using the 20m. excavation grid, with the finds plotted to the nearest meter. Building stone, tesserae and Roman and Anglo-Saxon pottery were plotted. The Saxon pottery was lifted from the field because it was felt that this would deteriorate in the ploughsoil. Three late 4th century coins and a fragment of a bone comb of probable Saxon date were also recovered. Plots of the building stone and the tesserae are shown in Fig. 13. The excavation area is in the S.E. corner of grid square K 5 and a building stone plot was impossible over this area due to the excavation boxes and spoil heap disturbance. However the plot does show concentrations of stone, especially in K 6 and K 7 and these scatters must represent other buildings. The distribution of tesserae is almost exclusively within grid square I 5 and possibly represents a floor in a timber building, which may follow the Nene Valley tradition and be of aisled construction.

The plot of Saxon pottery is shown in Fig. 14, where the concentration of material is clearly related to the bath house and the area to the south in square J 5. However there is a general spread of material across all of the area and it seems likely that other buildings of this date are present. Both the plots shown in Figs 13 and 14, and the R/B pottery
FIG. 13 Fieldwalking plot - Stone - Tesserae
plots will form a useful basis on which to set out further excavation trenches.

Geophysical Survey 1993

During the autumn of 1993 Adrian and Norma Challands undertook a resistivity survey of the site. The work was generously sponsored by the Nene Valley Archaeological Trust. Readings were taken at 1 m. intervals over an area 70 m. by 40 m., with an extension to the north of the site and the results area shown in Fig 15. The lower plot shows the raw data and the upper plot the filtered data; the scale along the side of the plots is in meters.

The plot clearly shows the backfilled bath house as an area of high resistance in the centre of what could be an enclosure. In the N.E. corner of this enclosure are other areas of high resistance which when linked to the fieldwalking plot must indicate underlying buildings. In one or two areas of the plot there are low resistance readings which could be pits, wells or sunken floored buildings of Saxon date.

The line running N./S. through the whole of the plot is a petrol pipe line!
FIG. 15 Geophysical plot. Upper plot = filtered data
Lower plot = unfiltered data
Produced by Adrian Challands
SOME NOTES ON DISTINGUISHING CHARACTERISTICS OF SAXON POTTERY SHERDS AND A METHOD OF ESTABLISHING THE PRESENCE OF SAXON POTTERY AND ITS' LIKELY DENSITY IN SURFACE SOIL

INTRODUCTION

Examination of the cross-section of otherwise similar looking Saxon sherds under a x10 eyeglass revealed a variety of differences of a type that might lend themselves to classification and hence to individual identification. Later in attempting to then link the characteristics of the pottery fabric to those of the soil from the excavation site a technique evolved that fortuitously revealed a possible method of establishing the density present of very small Saxon pottery particles in the soil.

DISTINGUISHING CHARACTERISTICS OF SMALL SHERDS OF SAXON POTTERY

The differences relate to the size and the number, present in the fabric, of the quartz/silica inclusions and whether they are clear or milky. The granule size also varies from crystals a fraction of a millimetre across to fragments several millimetres across. Putting these characteristics together in a matrix and coding each characteristic enables individual sherds to be given a coded reference. Such a matrix might look as follows:

<table>
<thead>
<tr>
<th>SHERD REF</th>
<th>QUARTZ OPACITY</th>
<th>PARTICLE SIZE</th>
<th>QUANTITY PARTICLES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CLEAR ONLY</td>
<td>MIXED</td>
<td>LESS THAN 30% AND &lt;= 50%</td>
</tr>
<tr>
<td></td>
<td>MILKY ONLY</td>
<td>MOSTLY</td>
<td>&gt; 30%</td>
</tr>
<tr>
<td></td>
<td>MIXED</td>
<td>MOSTLY</td>
<td>&gt; 50%</td>
</tr>
<tr>
<td></td>
<td>MOSTLY</td>
<td>EQUAL MIX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MORE THAN 0.5MM</td>
<td>BOTH SIZES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LESS THAN 0.5MM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus with an assemblage of Saxon sherds looking superficially much like one another it is possible to sensibly sort them using the characteristics of the matrix. The next sorting would be done using fabric thickness and finally by what I would call the firing characteristic. "Hard" fired pot ie pot fired at elevated temperatures feels much harder than pot fired at lower temperatures.

This sorting procedure carried out on an assemblage of 16 nondescript Saxon sherds by the writer yielded the information that they represented a minimum of 9 different vessels: a conclusion not possible to draw by any other easily accessible means for those particular sherds.
ESTABLISHING THE PRESENCE OF PARTICLES OF SAXON POT

Taking this approach further it was decided to compare the quartz/silica inclusions in the fabric with those present in the soil on the excavation site. The idea being it might then be possible to conclude whether the pots had been made on site or not. One would be able to be rather more positive that the pots were not made on site than about whether they were made on site; it always being possible that the soil from another field would have similar characteristics.

Soil samples of 100gm were carefully washed to get rid of extraneous organic matter. Further washing eliminated the most minute particles of silica leaving particles consistent in size with those visible in the Saxon sherds.

An entirely unexpected result emerged. Some of the washed samples contained a significant quantity of quite small particles of Saxon pot. Conveniently described as "crumb"; other samples were quite devoid of any Saxon "crumb". The amount of crumb present could readily be removed and weighed. Thus it would immediately be possible to make comparisons between samples. It is important to note the crumb would not normally be visible in its natural environment.

CONCLUSIONS

The two techniques described here offer additional tools for the excavator that are worth considering on sites where Saxon presence is evident or suspected.

The ability to demonstrate the presence of Saxon pottery micro particles from samples taken from an excavation grid and to then plot the results would be useful.

Also the method of coding anonymous looking Saxon sherds to arrive at the likely number of vessels represented by the assemblage offers additional information to the excavator not easily arrived at by other means.

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APRIL 1994
During 1993 Mike O'Brien found an intaglio during random field walking in square K5. A photograph was sent to Martin Henig who kindly made the following observations:— The intaglio is moulded and not engraved in glass of two layers, imitating nicolo (onyx with blue upper face on a lower dark one). The device is a satyr walking to the left; in his outstretched right hand he holds (?) a bunch of grapes and in his left a throwing-stick lagobolon. These would be reversed in an impression. The type is a common one both on cut gemstones (M. Henig, A Corpus of Roman Engraved Gemstones from British Sites, B.A.R. British Series 8, 1978, nos. 160-3, App. 41) and on moulded glass intaglios (ibid nos. 164-5, 167-9) and was emblematic of prosperity. There are quite a lot of other comporanda from France and elsewhere; see H. Guiraud, 'Intailles et Camees de l'époque Romaine en Gaul', 48e supplement à Gallia (Paris 1988) nos 255-8 260-2 (cutgems); 259, 263-266 (glass).

The Haddon intaglio may be dated to the 2nd or 3rd century.

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FIG. 16 Intaglio from Haddon
COMMENT ON THE STONE PALETTE FROM HADDON
BY Dr. Ralph Jackson

During 1992 a stone palette was found to the East of the bath house in the late Roman destruction layer (f. 22) of phase 6, part of which is shown in photograph 2 (f22 forms the uppermost layer in the recorded section on which the scale rests). The deposit is dated to the late 4th century.

Dr. Jackson writes:—The Haddon palette is a good example of a characteristic type which, unfortunately, is not diagnostic as it was susceptible to several different uses. The commonest context is toilet/cosmetic, but there are also undoubted medical contexts. Occasionally the palettes in medical contexts served as both a preparation surface and as lid for the medicine boxes. Often, as in the Haddon case, the distinct hollowing of the flat face evidences heavy or prolonged use.

The stone is usually fine grained or exotic. The Haddon example is more likely to have been toilet/cosmetic than medical and thoughts on this are summarised in 'Britannia 17'. (See also R. Boyer et.al. 'Decouverte De La Tombe D'un Oculiste A Lyon', Gallia 47 1990.)

Dept of Prehistoric and Roman Antiquities
British Museum
London.

FIG. 17 Stone palette from Haddon

0 ———— 5cm
ANGLO SAXON POTTERY FROM HADDON

Raymond North is at present researching into the Anglo-Saxon pottery from the site, looking at fabrics, forms, methods of production and usage. To date the site has produced over 500 stratified and 500+ unstratified sherds. The vessels are mostly plain wares but to date there are 8 stamped vessels and examples of both lugged and bossed types.

The drawings shown in fig 18 and 19 show a range of the vessels recovered so far and are meant as an interim comment. Vessels 1 and 2 are part of the stamped assemblage, while nos. 5-12 are all plain wares. Vessel 4 appears to be part of a lid with a decorated rim and may fall into the class that was recovered at Spong Hill (see E.A.A. Rpt. no 11 1981 p.166 no. 1936).
FIG. 18 Anglo-Saxon pottery from Haddon
Drawn by Ray North
FIG. 19 Anglo-Saxon pottery from Haddon
Drawn by Ray North
An Anglo-Saxon Brooch Fragment from Haddon, Cambridgeshire.

Introduction.

The fragment was found in grave pit feature number 83. The burial had been disturbed, particularly at the head, and one of the clavicles was pushed right to the edge of the pit. The burial was located outside and to the west of a structure of Anglo-Saxon date and overlay this building.

There were no traces of a coffin and it is unclear whether the disturbance resulted from contemporary grave robbing or from later agricultural activity...

Description.

The fragment consists of the headplate and bow of a small-long brooch 34mm wide at the wings. The brooch may be a blundered casting, faults and disfigurement being particularly in evidence on what should be a carefully delineated central panel on the headplate. The two side wings and the bow give the clearest evidence for the original appearance of the brooch.

The wings are crescentic and are bordered, on their bottom edges, by two carefully incised lines. It is certain that the upper wing was also similarly decorated. The upper edge of the left hand wing is decorated with four crescentic punch marks which would, again, have bordered each of the wings.

The bow is 10mm wide and is decorated with incised lines on its outer edges and lower terminal. The foot of the brooch is snapped-off just below the base of the foot and the corrosion on the break indicates that this damage occurred in ancient times. The foot would have been of expanded form and was most likely decorated with crescentic punch marks of the same type found on the wings.

The reverse of the brooch has no traces of textile impressions. The iron attachment pin is missing as is the catch plate which would have been situated on the reverse of the now absent foot. The pin lug is of single type and its hole appears to retain traces of a single cord tensioner normally found on single lug brooches.

Discussion and Dating.

The Haddon brooch fragment belongs to one of the most common types of small-long brooch, the trefoil-headed type. (Leeds, E.T., 1945, p.8). This type is consistently found in Anglian female burials and occurs in significant numbers throughout East Anglia and the East Midlands.

Such brooches are normally worn in pairs as dress fasteners. They are mostly located on or near the clavicles of the body. Strings of beads of amber or glass are often found strung between the two brooches.
FIG. 20 Brooch from Saxon grave (f 83)
The Haddon brooch is unusual in that it has a number of features which suggest that it was a casting failure and was never fully finished. It is unlikely that the disfigurement has resulted from post-burial corrosion, a failure of the clay mould being the most likely cause of the damage. The angles between the wings have not been settled-up after casting, and although this feature is not uncommon on brooches that were in use, it also indicates a failure in production. Similarly, the loss of the pin indicates serious disturbance of the burial.

The reverse of the bow is extensively damaged and corroded, further suggesting that the brooch was a failure. The bows of such brooches are frequently hollowed-out to save metal and to aid the brooches function as a dress fastener. Brooches with small bows were used to fasten together loops of woven tape attached in pairs to each shoulder of the shift-like dresses worn by Anglian women. As the brooch did not have to accommodate a thick gathering of material, a large bow was not necessary.

E.T. Leeds believed that trefoil headed brooches with notched "lobes" were a late development in the brooch typology. There also seems to be a connection between the presence of punch decoration on the brooches and the use of stamps on Anglo-Saxon pottery. Reichstein places two trefoil headed brooches from Little Wilbraham (Reichstein, J, 1975, pl. 111) which closely resemble the Haddon fragment, within his "Stufe D3/E" (Phase D3/E). This phase contains his "Späte" (later) and "Spätest" (latest) cruciform brooch types. Hines (Hines, J, 1984, pp. 27/8) proposes a date range for the D3 brooches of c.475-525 (Welch, M, 1987, p258) and also suggests a range of 520-550 for the "Spätest" type (phase D3/E1). Following these dating schemes, the Haddon fragment is most likely to date to the second third of the Sixth Century.


Bibliography.


Reichstein, J, 1975, "Die Kreuzförmige Fibel" - Offa Bücher 34.