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THE ROMAN VILLA AT LISS, HAMPSHIRE, EXCAVATIONS 1992–2010

By the Liss Archaeology Group
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ABSTRACT

Following re-alignment of the A3 Trunk road, Roman pottery and tile were found in a field at Liss. A field-walk survey confirmed Roman activity and excavations between 2001 and 2010 revealed a late 3rd–4th century AD Roman villa. The villa appears to have grown in three main phases from a single aisled building to at least two groups of buildings, with attached bathhouses, around a central courtyard. There was also limited evidence for earlier Roman and Iron Age occupation, but no contemporary features apart from a few post holes. The excavation was organised by the local archaeological group, with funding primarily from the Heritage Lottery Fund. It involved significant community participation, as well as professional direction of the archaeological project.

INTRODUCTION

Project history

The project began in 1992 when Yvette Cook, amateur archaeologist and wife of the local Rector, searched the spoil heaps of the new A3 close to Brows Farm (Fig. 1) and found Roman building material and pottery. Over the next few years she amassed quite a collection of artefacts, which she stored at the Rectory. In 1996 David Hopkins and Ian Wykes of Hampshire County Council, visited the site. By now, there was sufficient evidence to indicate the presence of a domestic building and the site was added to the HER as AHBR 37102. Help also came from Liss Historical Society and Butser Ancient Farm.

By early 2000, with the agreement of landowner Duncan Petty and the support of Peter Reynolds of Butser, a field walking survey was undertaken. It identified several areas of high concentration of both Romano-British pottery and ceramic building material. Despite poor weather conditions, a limited geophysical earth resistance survey took place, which indicated possible associated archaeological features (Wilgoss 2002).

Excavations in 2001 were led by Richard Wilgoss, Fieldwork and Excavations Director of Butser Ancient Farm, with help from David Budd. Three trial trenches were dug to evaluate the nature and extent of any surviving remains. Two of them contained masonry walls, and one a floor of *opus signinum* (Wilgoss 2002).

In 2003, a more complete geophysical survey was commissioned by Liss Historical Society. It was part funded by Hampshire County Council and undertaken by Archaeological Prospection Services of Southampton University (Strutt 2003). The results, while not straightforward, indicated that the extent of the remains was greater than previously thought and included more than one area of activity.

The Liss Archaeology Group (LAG) was formed in 2003 to take forward the investigation of the site. Funding was obtained from the Heritage Lottery Fund for a three-year programme of excavation, with additional grants from Hampshire County, East Hampshire District and Liss Parish Councils. The HLF specified that the funding must be used for a Community Project.

George Anelay of West Sussex Archaeology was employed by LAG to supervise the excavation and post-excavation work and write a narrative report. Three four-week seasons took place, each September from 2005 to 2007. In 2005, six trenches were excavated (1–6), in order to test the geophysics and pinpoint the

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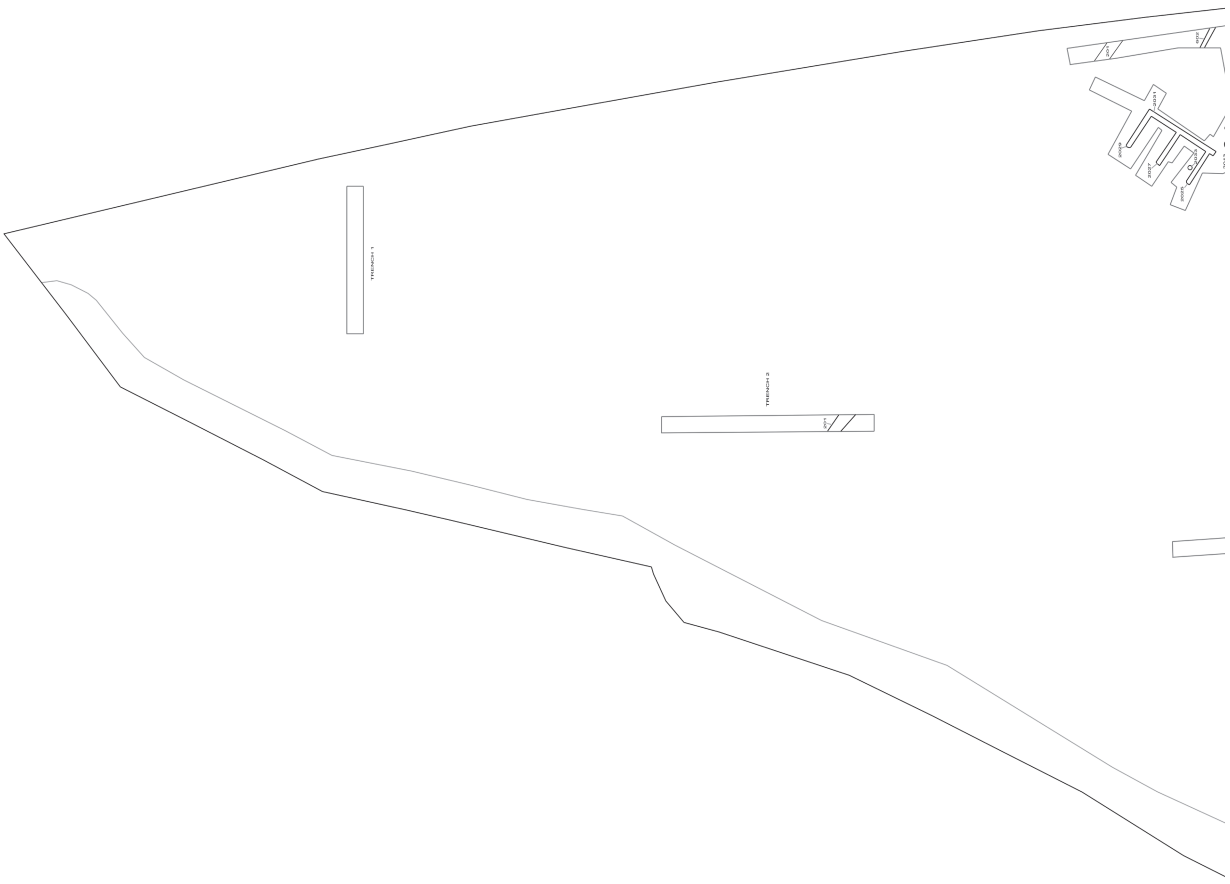
Fig. 1 Liss Roman Villa: location map. Contains Ordnance Survey data © Crown copyright and database right 2011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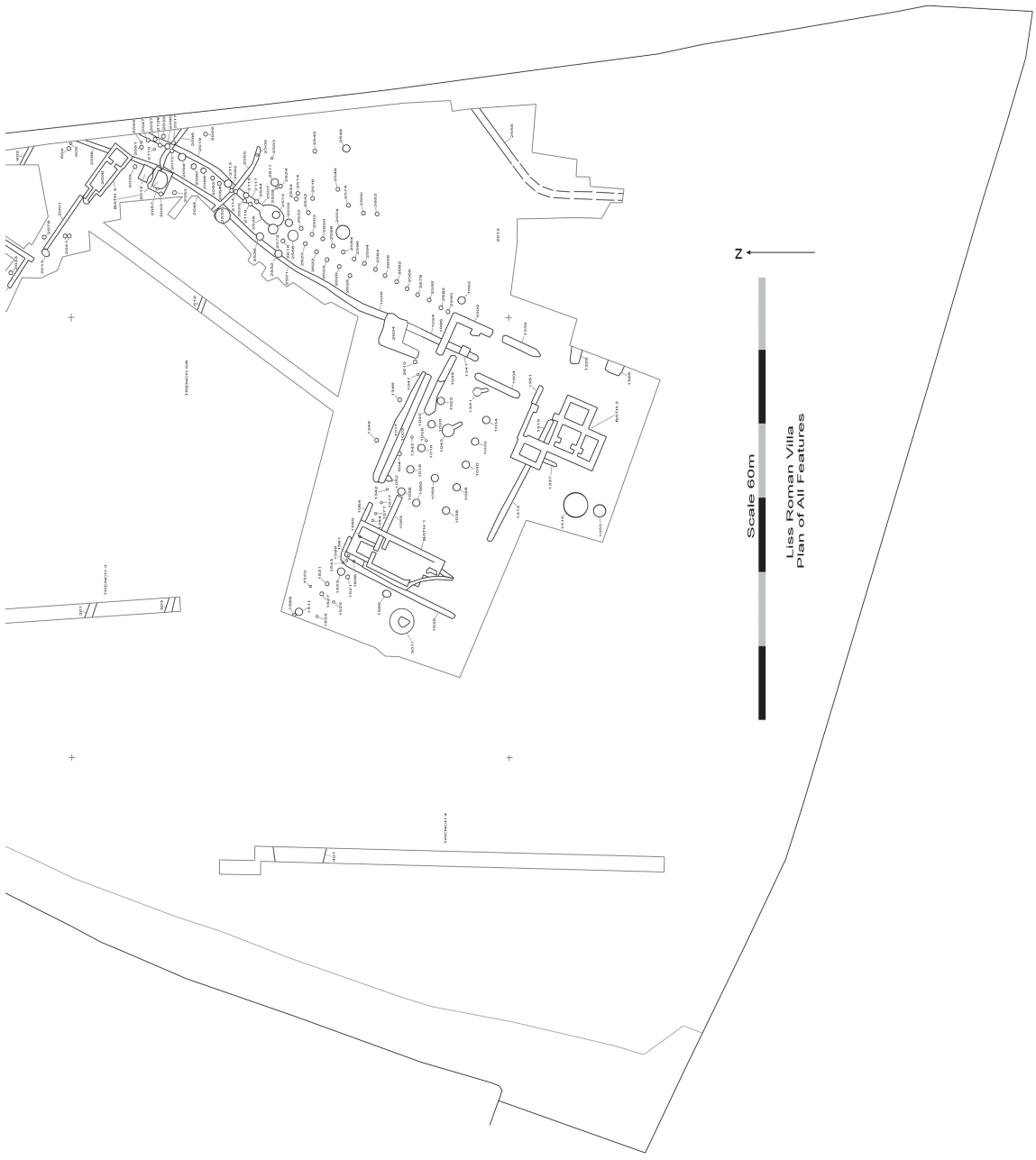

Fig. 2 Plan of Liss Roman Villa excavations 2005 – 2007

archaeology more accurately. On the basis of these trenches, a larger area was opened in 2006 and expanded in 2007. This combined trench (5/6) is the main focus of the report (Anelay 2008) which is reproduced in edited form below. The work showed that there was an aisled or basilical villa, several bathhouses, a small tessellated floor, several wells and a possible substantial perimeter fence on the eastern side with a large gateway (Fig. 2). The report proposed that additional work could be done but suggested that it was unlikely that further stone buildings would be found. It was, however, possible that evidence for timber structures of early Roman and Iron Age occupation might be revealed to the west of the villa.

Over the course of three years, 2005–2007, George Anelay and his three supervisors (Jonathan Dicks, Ken Mordle and John Wildman) led the team of local volunteers, many with no previous experience. Training was given in geophysics, surveying, trench digging and trowelling, finds processing and finds identification. The site was open to visitors with a number of special events and many school visits.

After 2007, with most of the HLF funding spent, a significant number of LAG members were keen to continue investigating the site and developing their skills. A new three-year, self-funded programme (2008–2010) was established including training, geophysics and excavations. This was directed by John Brown. LAG member Peter Page organised the geophysical surveys, with help from English Heritage, produced maps and illustrations and digitised all the records. Funds were raised to enable specialist reports to be commissioned.

Three seasons of excavations took place in order to test the geophysics, aerial photography, dowsing and field walking evidence, with emphasis on the previously unexcavated west side of the site (Fig. 3). In 2008 three trenches were dug (A, B and C) with three more (D, E, and F) in 2009. Also in 2009 another geophysics survey was conducted by LAG (Page 2009) and trenches G, H, J, and K were excavated. Finally, in 2010, trenches L, M, N, P, R and S were dug. The discoveries made between 2008 and 2010 were the main focus of the final report (Brown *et al.* 2011).

The community dig

The Liss Archaeology Group's committee, led by Pat White, successfully applied to the Heritage Lottery Fund for a three-year Community Dig. This enabled the Group to use professional archaeologists to lead and train the volunteers.

Over three hundred local residents joined the Liss Archaeology Group between 2005 and 2007 and took part in the excavations, gaining valuable knowledge of how to participate in an archaeological dig. There were even members that came from as far away as Oxford. About four hundred local schoolchildren also came to view the site over this period, as well as many other visitors, mainly due to the efforts of Colin Dring. Exhibitions were held at the Triangle Centre in Liss, to keep the village aware of the results of the excavations.

The community brought a wide range of skills to the project. It would be impossible to mention everyone in detail. However, one example is Arthur Mills, a local resident, who had been running a production studio for the army, involving training videos, photography, as well as having an artistic talent for drawing. Drawings and DVD's were produced about the excavations, as well as putting an account of the excavations on You Tube.

The research group

A research group was set up in 2008 for the LAG members, led by David Pink, to carry out desk research into other villas in the area nearby, particularly at Stroud, Sheet, and the Roman small town at Neatham. The members also studied the finds from the Liss Roman Villa site, including a series of workshops learning how to identify Roman pottery, with the help of Jonathan Dicks. The knowledge gained also helped members to understand more about the archaeology and history of the area in which they live.

Historical and archaeological background

The earliest documentary evidence for the village of Liss is in Domesday, but a scatter of flint finds from Mesolithic times onwards

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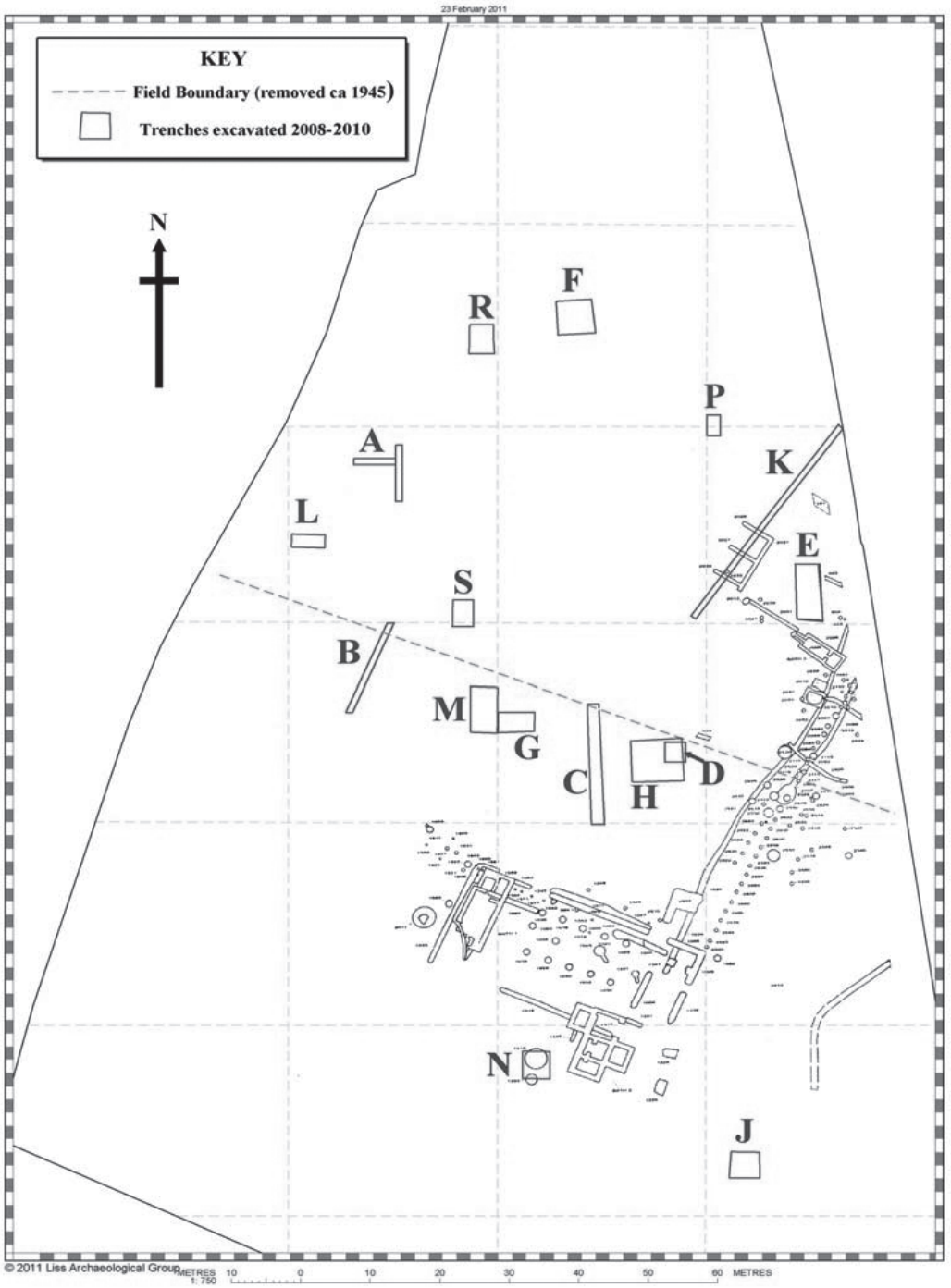

Fig. 3 Plan showing position of 2008–2010 excavations

and Bronze Age barrows at Liss, Selborne and Whitehill indicate that the land has been utilised for many millennia (HER). Indeed an Early Bronze Age barbed-and-tanged flint arrow head was found on site (Fig. 15). The construction of the Roman Road from Chichester to Silchester would have been an important event in the local landscape and the villa is less than 4km west of this major highway (Clarke 1959). The local Iron Age people would have been part of the Atrebatic kingdom, which after the Claudian invasion of AD 43, was ruled by the client king Tiberius Claudius Togidubnus (Russell 2006). Iron Age pottery from the villa site indicates that there was a possible settlement prior to the Roman occupation and a number of pits and post holes can be attributed to this period.

There are several other known villas near to Liss, at Stroud (Moray-Williams 1909), Bramdean (Haverfield 1900, 307), Holt Down (Hunt 1997), and Chilgrove I and II (Down 1979), as well as the small town of Neatham (Millett & Graham 1986) and the *mansio* (posting station) at Milland on the Chichester to Silchester road (Holgate 1988). The major Romano-British pottery industry at Alice Holt (Lyne & Jefferies 1979) was approximately 13km to the north, which accounts for the high proportion of Alice Holt sherds found on site.

Two hoards of Roman coins have been found close by; one at Woolmer Pond in 1741 (White 1995, 275) and another at Blackmoor in 1873 (Bland 1982). The Woolmer find comprised coins of the period immediately before the 'British Emperor' Allectus (AD 293 – 296) whilst the Blackmoor Hoard, also dated to around AD 296, was found nearby in two large Alice Holt storage jars. These two hoards have given rise to much speculation that Allectus and his army were engaged in a decisive battle here with Roman forces led by Asclepiodotus, at the end of the 'usurpation' (Smith & Wain 1998).

Location

The villa is located to the west of the large village of Liss, Hampshire, in a field which is part of Brows Farm (NGR SU 7685 2800), and is bounded to the east by the A3 dual carriageway, the construction of which led to the discovery of the site (Fig. 1). It is situated on the south facing slope of a small hill at 75m OD. To the south the ground falls away gently, before descending a substantial 4m lynchet to the low-lying flood plain of Batt's Brook. Most of the villa remains were found at the southern end of the field, just before it slopes away to the lynchet. Ploughing and soil erosion have severely truncated the archaeology on the southern side of the site and the construction of the A3 road may have destroyed archaeological evidence to the east.

The site lies on a narrow band of Lower Greensand of the Folkestone Beds and comprises the sands of the Sandgate Beds with patches of Gault Clay (British Geological Survey 1981). The villa itself sits upon the sands, which are here overlain by a thin layer of flint gravel in clay. At the sloping southern end of the field the gravel capping has been eroded to expose the sand. The top soil, which varies in depth from 0.30m to over 1m, is a sandy loam over a thin band of Gault Clay approximately 0.30 m thick. In recent years the field has been heavily cultivated which has resulted in large amounts of Romano-British building material, pottery and coins appearing in the plough soil. This ploughing has also truncated much of the archaeology.

The River Rother enters the parish of Liss at Greatham Bridge and passes 800m to the east of the site. It is swelled by a network of streams running down from the hangers above Hawkley and Empshott, one of which is Batt's Brook. This brook runs past the site to the south and would have provided a good source of water to complement the on-site wells.

EXCAVATIONS 2005–2007 *by George Anelay*

This is an abridged version of the archive site report on the 2005–7 excavations (Anelay 2008), with some additions resulting from the 2008–10 trenches. In all the excavations, plough soil was removed mechanically and all subsequent excavation was by hand. The Method Statements are available in the excavation archives stored at Hampshire Cultural Trust, Chilcomb House, Winchester (Accession

No. A2004.5), together with the finds and drawings, context sheets and reports. A few finds were given to Petersfield Museum for exhibition and school use, and the landowner kept a few roof tiles.

Iron Age features

A number of small pits or post-holes within Trench 5/6 contained artefacts of Iron Age date, with no Roman material. Due to the spread of Roman debris across the site it would seem unlikely that any post-Iron Age features would remain free from at least some residual Roman artefacts, while containing other finds, and therefore these pits or post-holes are likely to be Iron Age in date. No clear pattern emerges from their distribution or relative positions, except to say that there is a distinct concentration to the east of the trench, in the area of the later gateways to the Roman complex (see below).

Nine pits or post-holes containing Iron Age material were found in the main concentration. Five (2552, 2546, 2534, 2511 & 2113) were of a larger size, with diameters of 0.85m, 1.45m, 0.8m, 0.85m and 1m respectively. Their depths were broadly similar, between 0.21 – 0.27m below the surface of the sand geology, with one exception (2113) which reached 0.5m. One of these larger pits/post-holes (2511) contained the remains of a loom weight and some burnt daub carrying wattle impressions. The remaining four (2574, 2542, 2618 & 2524) were smaller, with diameters of 0.55m, 0.45m, 0.4m and 0.3m and depths of 0.1m, 0.09m, 0.31m and 0.21m. The presence of two small fragments of Roman tile, in addition to Iron Age pottery, in one of these smaller pits/postholes may suggest it was not of an Iron Age date; however it is possible they are both intrusive since it is of very shallow depth.

To the south of this concentration of features a further larger pit/posthole (1062) was found, 1m in diameter and 0.32m deep, situated close to the north-east corner of the principal Roman building. Two further smaller examples (1047 & 1346) were found further to the west, 0.25m and 0.2m in diameter and 0.12m & 0.5m in depth respectively. The presence of forty-eight rabbit bones in (1346), and its extremely shallow depth, may suggest that it is not man-made at all or indeed Iron Age; particularly when it is noted that rabbits are a species introduced by the Romans and not present in the Iron Age.

At the extreme western end of Trench 5/6 another possible Iron Age pit/post-hole was excavated (1511), 0.9m in diameter and 0.45m deep. The single sherd of Romano-British pottery found within it was probably intrusive, since it contains the largest assemblage of Iron Age pottery found within any feature on the site, a total of forty-seven sherds. A short stretch of shallow gully (1569) running to the north-west of this post-hole and under the baulk of the trench, may be associated with this pit/post-hole, but too little of it was visible for any idea of its purpose to be formed. The density of sherds in this pit/post-hole might indicate that further Iron Age features lie beyond the edge of the trench to the north-west. It is possible that another pit/post-hole, 0.55m in diameter and 0.17m in depth, lying between this one and Bathhouse 1, may also be Iron Age. While it contained no artefacts, the dark silt filling it was of a similar nature to that filling the other to the west.

In the area of the main concentration of Iron Age features and to the east of the three Roman boundary lines, a further twelve pits/post-holes (2560, 2554, 2548, 2540, 2516, 2514, 2528, 2503, 2119, 2520, 2114 & 2059) were excavated. Due to their location it is probable that some, if not all, of these are also of an Iron Age date, despite containing no artefacts of that date, including those four (2560, 2554, 2514 & 2528) which contain Roman material, since it is present in such small quantities that it could be intrusive. Four of these pits/post-holes (2560, 2548, 2516 & 2514) were very similar in size and shape, being *c.* 0.6m in diameter and 0.25 – 0.3m deep. A fifth (2548) was probably also originally of the same size, but it appeared to have been partially truncated by ploughing. Three lay along the line of a north-south running ditch (2501), one of which (2520) definitely preceded it and the other two (2119 & 2114) are likely to have done, since they only became visible once the ditch had been excavated; too little remained of these three to be able to give any dimensions. Three of the

remainder (2528, 2503, 2059) were of such shallow dimensions, less than 0.15m in depth, that little can be deduced from them, save that one (2059) was filled with very dark silt with the appearance of burning. The final example (2554) was considerably larger than the rest, measuring 2.2m in diameter and 0.85m deep. It was filled with two distinct deposits, the lower a slightly silty sand with no artefacts within it, and the upper filling just the top 0.3m, was a flinty silt containing some Iron Age or early Roman pottery. The purpose of this pit could not be ascertained with any certainty, but it could have been dug in order to extract the sand which lies below *c.* 0.2m of flint gravel and clay in the northern part of Trench 5/6. Its date is uncertain, but the lack of later Roman artefacts may suggest an early date.

The fact that no discernible structures are apparent from the grouping of these pits or post-holes should not be taken to suggest an absence of Iron Age buildings within the area excavated. Indeed it is probable that such buildings did exist, but that their presence has not left any detectable trace below the level of the plough soil.

The Roman villa

The principal building

The most significant structure discovered during the course of the 2005–2007 excavations lay at the southern end of Trench 5/6 (Fig. 4). It was orientated south-east to north-west and sat on the southern brow of the ridge upon which the whole site is situated.

The building consists of four main elements:-

1. An aisled central barn-like structure (Barn)
2. a bathhouse at its western end (Bathhouse 1)
3. a second bathhouse to the south-east (Bathhouse 2)
4. a rectangular block at its eastern end (Lodge).

The barn (Fig. 4)

The central part of the principal building was composed of an aisled building, termed a barn during the course of the excavations, consisting of ten large post-holes in two parallel rows of five (1036, 1016, 1018, 1020, 1022 & 1038, 1028, 1030, 1032, 1034) and the remains of a north aisle wall (1002). The original existence of a south aisle wall is probable, but ploughing would seem to have removed all trace of it. This is not unlikely since only one course of rubble survives of the north aisle wall and although the original contours of the site are impossible now to determine, there has certainly been much movement of sand and soil down the slope to the south. It is probable that the aisled building was initially constructed on flattish ground at the southern edge of the spur on which the site as a whole is located. The ten post-holes, in which presumably sat the timbers forming the principal uprights of the frame for the building, do have bases which deepen with the slope, but not to anything like the extent that the ground slopes at present, the fall-off now being twice as great.

In each of the two rows, the post-holes lie with their centres *c.* 3.4m apart, while the distance between the two rows as a whole is *c.* 6.5m. The width of the post-holes varies from 0.7 – 1.1m and their depth from 0.25m to 0.65m; although this latter measurement is almost certainly the result of sand slippage. No trace of the original posts remained, and judging by the jumbled mix of silt and stone which filled them, they were almost certainly removed after the building fell out of use. The fact that none of the post-holes survived intact also means that the pottery found within them cannot be used to date the barns construction, since it may well have fallen into the holes after the posts had been removed; that this was the case is indicated by the late date of some of that pottery (AD350+). All the posts had clearly been packed around with lower greensand stones, with larger blocks often used as a base on which to sit them. At the base of two of these post-holes (1018 & 1022) exceptionally large lower greensand blocks were used. Only two (1036 & 1038) retained any hint of the size of the original posts within them, where the stone packing remained partially intact, suggesting that they were square in profile and *c.* 0.4m across. The large size of the postholes, compared to the size of the posts set within them, allowed for not only a substantial amount

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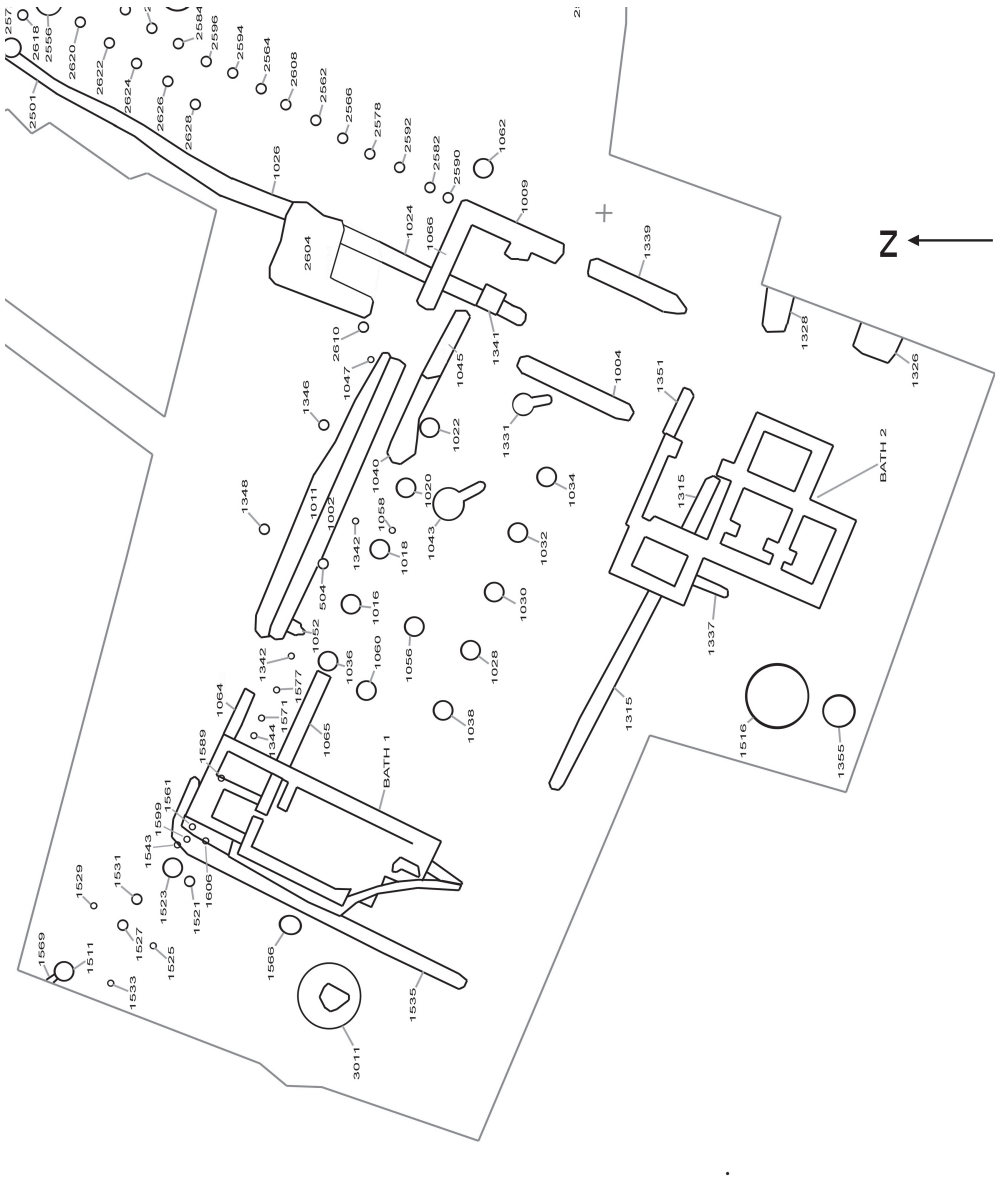

Fig. 4 Plan of Principal Building in trench 5/6

of packing, necessary in the soft sand, but also some room for adjustment when the frame was being erected.

There is a possibility that some of the posts may have rested upon large stone pads in a later phase of the buildings use, perhaps when the bases of the timbers had rotted in the ground. This may explain why two of the post-holes (1016 & 1020) seemed to have been filled with a greater number of stones than the others, since if post-pads were used the underlying post-holes would need to be in-filled to provide a more solid base. It is probably too much of a coincidence that the well (1516) next to Bathhouse 2 contained two very large flat lower greensand blocks which would have served the purpose very well.

The north aisle wall (1002) of the aisled building lay *c.* 3m from the nearest row of post-holes. All that remained was one course of unmortared stones, mainly lower greensand, but with occasional upper greensand and chalk, in a shallow trench dug into the underlying sand geology. This trench was c 0.9m wide and extended for 16.25m, parallel to the post-holes to the south. It would seem unlikely, based upon the nature of these remains, that they supported a stone wall, and it is much more probable that a rubble-filled trench was dug out as a base for a timber sill beam. Thus the aisled hall as a whole was probably constructed entirely of timber.

Lying against the outside of the north aisle wall, and running along its entire length, was a spread of dark black/brown soil (1011) up to 0.9m wide and 0.15m thick. This contained a mix of building rubble and domestic rubbish, and is probably best interpreted as the remains of a drip gully from the roof of the aisled building. This identification is supported by the fact that, where identifiable, the roofing tile was all of an earlier type, suggesting this gully had become gradually filled during the use of the building. Elsewhere there is clear evidence that the barn in its later phases used later tile types not present in this gully. If this is correct then this spread (1011) is one of the very few undisturbed occupation layers on the site as a whole, a fact which adds a particular importance to the artefacts discovered within it. Three points are worth noting in this context, first is the comparatively high percentage of pig bones from this gully in relation to the rest of the site, possibly indicating that the aisled building was the focus for either consumption or the management of these animals. The second is the large quantity of stone roof tiles, suggesting that at least part of the roof of the building was covered with these for at least some of its lifetime. Thirdly the presence of three coins dating from AD364–375 indicates that the building was still in occupation at this date.

To the west of the north aisle lay two parallel wall foundations (1064 & 1065) running east-west and apparently connecting the aisled hall with Bathhouse 1 to the west. The northern of the two (1064) was c 0.6m wide, composed of one course of upper greensand block, and extended for *c.* 2.5m east of the north-east corner of Bathhouse 1. The southern (1065) was *c.* 0.75m wide, composed of mainly lower greensand rubble, and extended for *c.* 5m east of the east wall of Bathhouse 1. Neither showed any evidence of being held together with mortar, although the northern foundation had been badly damaged by ploughing, and both therefore are likely to have been the bases for timber rather than stone walls. These provide the only relationship between the two buildings that has survived the post-Roman robbing and ploughing of the site. However, they can shed only a partial light upon the sequence of buildings. Both would appear to be later than the original build of Bathhouse 1, since they abut its eastern wall (1584). The northern (1064) continues the line of the north wall (1002) of the aisled building, but leaving a gap of *c.* 3.5m between the two, presumably to allow for an entrance. The southern (1065) spans the gap between Bathhouse 1 and what must have been the west end of the aisled building, stopping as it does just shy of the most westerly of the large post-holes (1036). It is possible that the northern wall (1064) was built at the same time as Bathhouse 1, since it is composed of the same stone, in order to link the two together. This pre-supposes that the aisled building was already in existence. At a later date the southern wall (1065) could then have been added to from an enclosed corridor between the two.

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Bathhouse 1

This lay at the western end of the principal building on the site (Figs 5 & 6). It measured 4.3m east-west and 11m north-south, with a hypocaust flue projecting a further 1.5m to the south. Due to the sand geology of the site the whole structure seems to have been constructed on a stone raft (1553) of un-dressed upper greensand, with occasional chalk blocks, set in a white mortar. This raft was of the same dimensions as the building constructed above it, save at the eastern end of its southern side, where a projection was included to support the flue, 2m north-south and 2.7m east-west, and at its north-eastern end, where a block of sand was left. The thickness of the raft varied, with a depth of 0.2m recorded at its southern end, under the flue, but with a depth of 0.1m recorded elsewhere. This is almost certainly due to the slope of the site, which begins to fall off towards the south. The purpose of this raft appears not to have been to act as a foundation for the walls, since those in the north-eastern corner are not resting upon it, but more as a base for the floors and as a levelling layer. Once the raft had been laid down an extra skim of mortar seems to have been applied to create a smooth finish. It is probable that this was done before the walls were built up, since where sections of these walls had been robbed, the skim was seen to extend under them.

Once the raft was built the walls of the building were constructed upon it. These were composed of upper greensand blocks set in a white mortar, with those stones on the outer surfaces being roughly dressed. The width of the walls was recorded at *c.* 0.55m, where they survived. In the north-east corner, where the raft had not been constructed, two stretches of walls (1546 & 1584) were built in foundation trenches *c.* 0.7m wide (1585 & 1587), in order to create a small room whose floor was not to be constructed upon the stone raft. Pottery recovered from these foundation trenches indicates that Bathhouse 1 was constructed after AD 270. When this is taken together with the presence of window glass dating to before AD 300 in several of the layers associated with Bathhouse 1, a construction date *c.* AD 270–300 is likely.

The survival of the walls of this building was generally poor, partly due to the ploughing of the site, but more as a result of stone robbing. The southern end was particularly badly affected, with the south wall (1590) surviving as only a 1.2m long stretch. The flue, which was identifiable by the remains of its brick western wall standing only 0.15m above the raft, had largely disappeared, although a spread of burning (1616) running 2.5m south from this wall marked the remains of its stokehole. Likewise the southern ends of the eastern wall (1542) and the western wall (1592) had both been lost, with the former existing for *c.* 8.5m of its total original length and the latter *c.* 5.5m, but to a maximum height of only 0.35m above the raft. The foundations of the northern wall (1546 & 1593) were still extant for their whole length.

The internal sub-division of this building was not easy to determine, due to the patchy remains that exist. Two wall foundations survive within it, one (1541) running east-west across half the width of the building, and another (1598) running north-south down its centre-line. Together with the external walls to their north and east (1546 & 1584) these two walls form a small room in the north-east corner of the building. This room did not have the stone raft as the base to its floor, but rather an island of sand was left undisturbed within it. The nature of the floor above this cannot now be determined, but it is likely that bare sand would not have been used and instead stone flags would seem a probable surface.

To the west of this room two large blocks of masonry (1593 & 1615) lie between it and the western wall of the building. The northern of these (1593) is integral to the north-west corner of the outside walls and appears to form the northern side of a room, while the southern (1615) appears to form its southern side, although it has been partially robbed away. Both are of similar proportions, the northern being 1.4m north/south and the southern 1.5m. The reason for such a breadth of masonry was not immediately apparent, although the answer may lie with the use of the room which they create. Inside this were the remains of an *opus signinum* floor (1520) set upon Wealden sandstone chippings above the usual stone raft. It is likely that this room was

Fig. 5 Plan of Bathhouse 1

Fig. 6 Bathhouse 1 from the south after removal of robbing layers and soil build-up. The scale resting on the central walls is 0.5m

used for some form of cold plunge or douche, based upon the nature of its floor, and it is possible that these two masonry blocks played some role in supporting this. Neither need be thought of as extending to ceiling height, indeed it is extremely unlikely that they did, instead they probably provided the supports for flooring around the edges of the pool or douche.

The only sign of any alterations carried out to this original construction is a second east-west internal wall (1540) immediately to the north of its predecessor (1541). The reasons for this alteration and its date are unclear. The foundations for the wall cut through part of the southern masonry block (1615), the southern end of the north-south internal wall (1598) and through the underlying stone raft (1553). It seems unlikely that such a heavy-handed insertion would be carried out with the building continuing to function for its original purpose. The result must have meant the demolition of the wall to the south (1541) and the central wall to the north (1598). It is possible that this alteration was linked to the construction of Bathhouse 2, and some resulting change of use, with a new internal configuration of rooms. Unfortunately robbing and ploughing have removed any further evidence for this re-design and so its details must remain obscure. A further possibility is that this section of wall (1540) was added as a foundation for the later building described below, but its composition and use of white mortar argue against this.

To the south of these two rooms no trace remains of any internal subdivisions; however it is quite possible that they once existed, but have been lost to robbing. Indeed the off-setting of the flue (1555) at the southern end of the bath, a suggestion that 1615 may have continued to the south, and indications from the similarities in the plan of Bathhouse 2, may suggest that a corridor ran down the western side of the building resting upon a solid stone base, with a doorway, or more than one, entering rooms to the east. This may go some way to explaining why the later robbing of the building tends to concentrate against its western wall where there was a greater concentration of stone.

The existence of the flue (1555), together with surviving fragments of *pilae* bricks and box-flue tiles in the rubble layers overlying the building, indicates that at least some of it was heated. If the suggestion regarding a western corridor is correct then it would probably have been the eastern half of the building, up to the south wall (1541) of the north-east room. Interestingly no box flue voussoir tiles were recorded from Bathhouse 1, this may indicate that the heat was not conducted over the roof space, but exited instead at top of the walls. Painted wall plaster and window glass were recovered from the layers over the bath and would indicate that it was decorated internally in red, plain/white, green and blue/grey, with red predominating and had glazed windows.

Little remains of any occupation layers within or around this building due to later robbing, however a small patch of burning (1603) against the southern end of the eastern wall could be the only traces left of smoke blackening created by the use of the hypocaust. Outside the building a ditch (1535) runs alongside much of its northern and close to its western walls. It varies from 0.4m to 1m in width and deepens as it runs west and south to a maximum depth of 0.45m below the surface of the sand. This ditch may have been used for the removal of rain water; however its position would seem to indicate a link to the pool or douche (1520). Possibly it acted as a drain for both this and any rainwater.

Above and within the surviving features of this building there lay a significant number of deposits associated with its abandonment and dismemberment. The exact sequence and timing of this is not easy to determine, and there are likely to have been a number of separate visits made to the ruins of the building in order to extract building material for re-use elsewhere. The earliest evidence for demolition of at least part of the structure is a layer of building rubble in yellow sand (1602), up to 0.2m thick, found over and around the remains of the flue and south wall. The presence of yellow sand amongst the rubble, and its absence in any of the extant walls, suggests either that part of the building not now surviving was mortared with yellow mortar, or that this sand has been brought up with the base of the stone

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raft (1553) as part of its robbing. This may have been associated with a large pit (1611) which has taken away the whole south-western corner of the building, raft and all. The sand layer and the pit are quite likely part of the same robbing episode that removed much of the western wall (1592), the southern wall and flue (1590 & 1555) and any features internal to the building such as the remains of the stone base to the possible western corridor (1615) and any traces of original hypocaust. This single major act of robbing is indicated by a spread of rubble in white mortar (1510) which extends across the whole southern part of the building south of the remaining internal dividing walls (1541 & 1615), overlying the sand layer (1602) and filling the large pit (1611). This layer deepened towards the eastern wall of the building, suggesting that the robbing was taking place mainly to the west, with unwanted material, mainly mortar, being dumped to the east. This would lend support to the theory of the western corridor, since the space left under the floor of the heated side of the building would have been an obvious hole to fill with debris as the stone base of the corridor was removed.

Above this mortar layer two further spreads of soil (1509 & 1502) containing significant amounts of building rubble, combined to fill the space between the surviving walls of the building and below the modern plough soil. Both these layers deepened to the west, in order to fill the depression left by the robbing and the dumped material of the mortar layer (1510) to the east.

The south eastern corner of the building appears to have been removed as part of a separate episode of robbing, since a trench (1617) had been dug which cuts through the mortar layer (1510) and which had taken away all the stone of any surviving walls and the raft in this area. The trench was filled with two layers of mixed mortar, sand and soil (1505 & 1506).

Within the two rooms at the northern end of the building the robbing had been less extensive, probably because there was less worth taking. A pit (1537) was found roughly centrally placed, which had destroyed the eastern edge of the *opus signinum* floor and western edge of the sand underlying the north-eastern room. This extended from the north wall (1546/1593) of the building to the east-west internal walls (1615 & 1541) partially damaging them and removing all but the very base of the foundations of the north-south central wall (1598). Indeed it is likely that it was dug for the very purpose of robbing this latter wall. The pit was filled with two layers of mixed soil and rubble (1519 & 1538). Immediately to the west of the northern end of the building a further mortar and rubble filled pit was revealed (1618) which seems to have extended eastwards over the top of the western wall (1592) from just below its north end and then southwards. This pit was probably dug to locate and remove the northern wall, possibly at the same time as the pit to the east (1537) did the same for the north-south internal wall.

Outside the building to the west the ditch (1535) which drained the bath became filled with a silty sand (1536), containing further building rubble, but in smaller quantities than the layers inside the building. This is presumably reflecting a period of slow decay, before the main robbing event occurred; indeed the infilling of this ditch is likely to have begun before the abandonment of the building. Overlying the in-filled ditch, as it passed alongside the western wall of the building to the south of the internal walls (1615 & 1541), was a layer of white mortar only 0.05m thick. This is presumably the same layer as that (1510) lying within the building resulting from the main robbing episode. Above this was a soil layer (1513) again similar to one (1509) on the east side of the wall. A direct link between the layers inside and outside was not visible due to the presence of a later wall (1501, see below) separating them.

Subsequent to all this robbing and the build-up of the layers filling the holes left as a result, a new building was constructed over the top of the earlier one. It was roughly square, with its north-south dimensions being *c.* 6m and east-west *c.* 5m. It seems to have been of an irregular construction, re-using as foundations the remains of the earlier building where this coincided with its layout and improvising where they did not. Thus its western wall (1501) was composed of upper greensand blocks, as the

earlier had been, but this time using a yellow sandy mortar, of a rougher construction and 0.75m wide. Its northern wall sat partly upon the remains of one internal wall (1615) and presumably on that of another (1541), but no trace of it survives at this point. Its southern wall was represented only by a shallow slot trench (1550), 0.35m wide and 0.1m deep, running for the full width of the earlier building. This trench can be seen running alongside the western wall (1501) and at least part of the northern, in both locations seemingly a foundation trench for those walls. For this southern side, however, this seems unlikely since it is dug down into the underlying layer with no sign of the remains of a wall foundation on either side. It is possible therefore that the building had a timber southern wall. Its eastern wall, if it had one, has left no trace. The position of the eastern end of the slot trench (1550) suggests that, if there was one, it may well have rested upon the remains of the eastern wall (1542) of the earlier building. The structure as a whole seems to have utilised existing foundation where possible (on its northern and eastern sides), but where these did not exist, due to earlier robbing, new foundations were built either in stone (the western wall) or timber (to the south). Running along part of the northern wall (1539), the western wall (1501) and so southwards, was a ditch (1554), *c.* 0.4-0.5m wide and up to 0.3m deep. This was filled with much building rubble and burnt material (1508) suggesting that it may have been burnt down. This ditch is likely to have acted as a surface water drain, primarily taking away rain water from the roof.

The re-use by this later building of some of the walls of its predecessor, suggests that in places they still survived as visible remains. It is probable that such walls were incorporated into the new structure without further demolishing them; perhaps explaining it's somewhat patchwork foundations. Overlying this was the modern plough soil (1500), which had been largely removed by mechanical excavator before archaeological excavation began, surviving only in depressions in the layers below. The lack of *in situ* dateable material above the second building makes it difficult to assign to a particular century, but it is probably either medieval or post-medieval, and certainly before the first historic maps of the area, which do not show it.

Well 1

To the south-west of the bathhouse a stone-lined well (3011) was partially excavated to a depth of 5m below the surface of the sand geology. The upper portion of this well had clearly collapsed at some point during its use, since a large cone-shaped hole, 3.4m across, had been left above the surviving intact well shaft. This cone had been deliberately backfilled with a layer of white mortar (413) 0.9m thick, presumably to plug a dangerous void. Subsequent slumping of the underlying layers had created a further hole above the mortar layer, which had in turn been filled with a layer of silt (411). Within this mortar layer six coins from the third quarter of the third century AD were found, indicating that the void was filled sometime after this date. Immediately below this layer, and placed on top of the collapsed-in sand and rubble beneath (3000), a dog and puppy were found, probably as a thank-offering for the well when it became no longer usable. Below the dog, layers of sand and rubble (3000 & 3007) extended until near to the excavated depth of 5m, at which point the rubble appeared to lessen and the layers became more clay-like (3008 & 3010), perhaps indicating that the bottom of the collapsed stonework had been reached. Unfortunately time did not allow for further excavation. The exact dimensions of the original stone-lined shaft to the well could not be recorded, since even at a depth of 5m there still appeared no distortion in the side walls. It is estimated that it was probably somewhere between 1 – 1.3m in diameter and built of upper and lower greensand blocks. It is assumed, due to its proximity to Bathhouse 1, that this well was dug primarily to provide it with water.

Bathhouse 2

This building lies at the south-east end of the principal building on the site (Fig. 7). In its original form it measured *c.* 11m north-south and *c.* 4.75m east-west, making it slightly wider, but the same length, as Bathhouse1 and on the same orientation. In construction, however, it

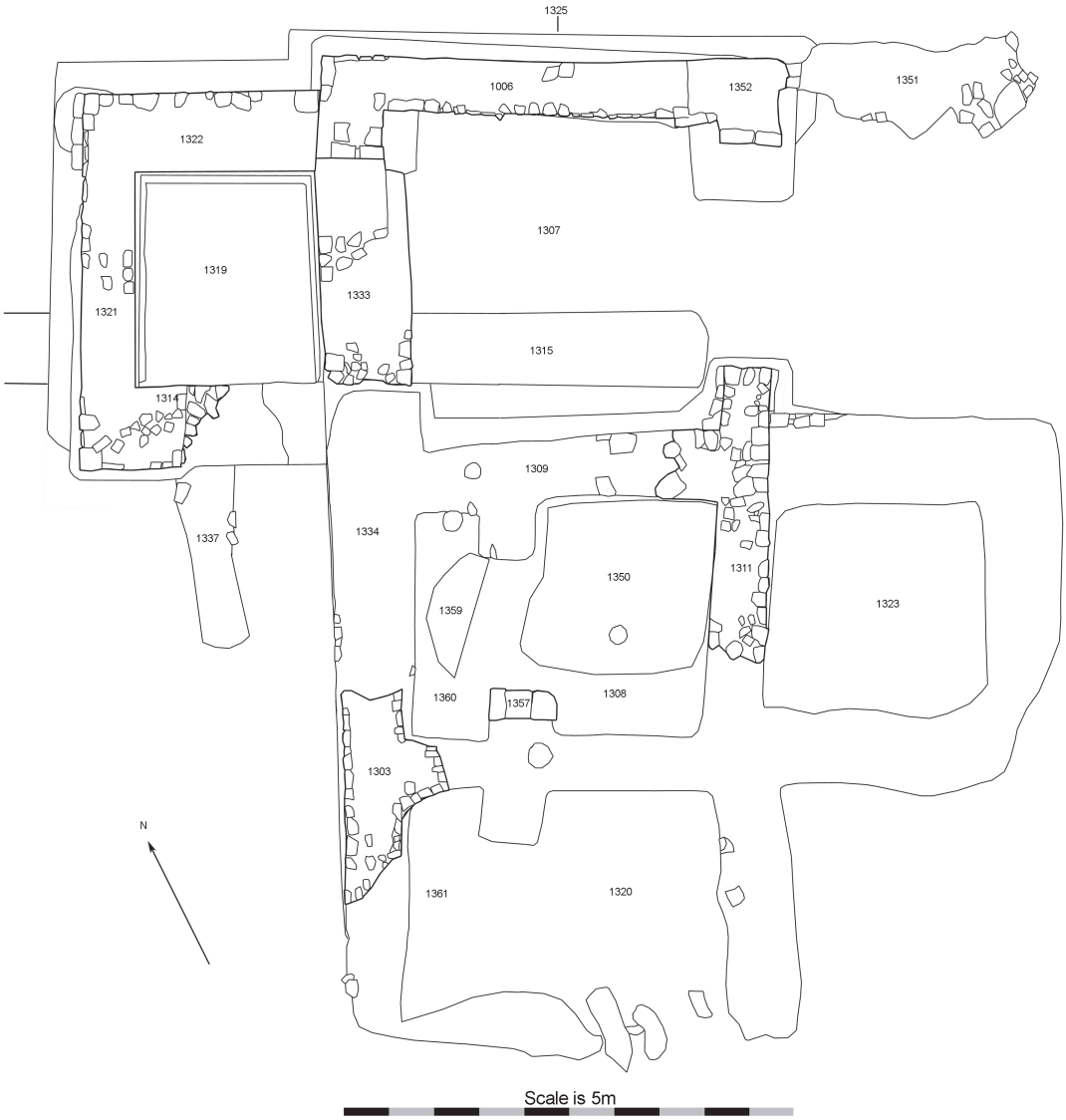

Fig. 7 Plan of Bathhouse 2

is markedly different, utilising footing trenches rather than a stone raft.

Underlying Bathhouse 2 an earlier ditch (1315) was found, which clearly predates it. Its western end lay some 13m to the west of the building, while its eastern terminus was situated under the northern end of Bathhouse 2. It was found to be *c.* 0.8m wide and *c.* 0.45m deep below the surface of the sand geology, and backfilled with a dark sandy soil. The purpose of such a ditch is unclear, but it may have formed part of an earlier boundary or field system. Pottery recovered from within it indicates that Bathhouse 2 cannot have been built until after AD 320.

As elsewhere on the site, stone robbing and

ploughing have had a major impact upon the survival of Bathhouse 2; sections of walling survive at its northern and north-western end (1006, 1322, 1321, 1314 & 1333) where survival is at its best, but elsewhere only fragments of its other walls remain (1311, 1303 & 1357). Despite this, what is almost certainly the complete plan of the building can be reconstructed on the basis of the location of the footings. These are composed of chalk rubble which has been laid down to fill the bottom of the foundation trenches and as a base for the walls. The depth of this chalk layer was only *c.* .15m, but this seems to have been sufficient to provide the stability needed over the loose sand geology beneath. The walls themselves are composed of upper greensand blocks, generally only roughly dressed on the exterior surfaces, with a rubble core, the whole set in a yellow mortar. Some more finely dressed ashlar blocks have been used within the walling, generally as quoins or jambs where these survive; however some of these blocks can be seen elsewhere serving no obvious purpose, for example just to the south of the north-west corner (1321 & 1322) of the building, giving the impression that they have been reused from another building.

A certain amount of latitude had been allowed for in the width of the chalk footings, which ranged from 0.8 – 1m, to allow the walls to be adjusted when constructed upon them. The walls themselves were *c.* 0.6m wide and could be seen to sit off-centre and at slightly different alignments to the chalk footings below, presumably in order to correct mistakes in the original setting out of the foundation trenches. The most obvious example of this is the north wall (1006) of the building which sits very crookedly upon its footing. This apparent error in marking out the foundation trenches would appear to be too great to correct since the gap between the north wall (1006) and the east and west walls (1334 & 1311) is not identical, although much closer to being so than the footings below. Such an obvious mistake seems curious, although the clear attempt to correct it adds weight to the theory that it was such.

The building as excavated had clearly been through at least two phases of design. Its original form appears to have been a straight-forward rectangular block, with opposing entrances at the northern end, created by the simple expedient of leaving a gap between the northern (1006) wall and the rest of the structure. To the south of this entrance chamber (1307), two further rooms have been created (1308 & 1320), with their foundations set 0.3m below the level of those of the north wall (1006). Such terracing was presumably made necessary by the increasing steepness of the slope at this point, and the design of the entrances enables this to be done without the difficulties of tying in two depths of foundation. Both these southern rooms do not extend to the full width of the building, instead they appear to have entrances on the west sides, indicated by the presence of the chalk foundations for door jambs, one of which still retains a single course of the jamb above it (1357). The narrow dimensions of the two chambers (1360 & 1361) thus created between these two rooms (1308 & 1320) and the west wall of the building (1303) point to their forming part of a corridor, 1m wide, running down the western side of Bathhouse 2.

Unfortunately little evidence remains for the function of any of these internal spaces, the most southerly room (1320) has lost all of its walls and any trace of a floor. The central room (1308) had the damaged remains of an *opus signinum* floor (1350) within it, but only the north-eastern section of its walls (1311) surviving to one or two courses high. The corridor on the western side (1360 & 1361) had a small section of *opus signinum* floor remaining (1359) and part of its western wall to only one course high (1303). The lowest course of the north wall (1006) of the northern room (1307) survived for its whole length, rising to three courses at its western end. Its south wall was largely absent, except at its south-eastern corner, where two courses of wall remained (1311). No floor was visible in this room; however it is probable that one originally existed over the sand geology, since removed by either robbing or ploughing.

At a date subsequent to its initial construction, three additions were made to Bathhouse 2 although whether these were part of a single programme of works, or more than one, it is no longer possible to determine. On the east

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side an additional room (1323) was added, at a point level with the central room (1308) of the original block. This was built upon the same type of chalk footings as had been previously employed, but slightly overlapping those of the earlier building, thus demonstrating their secondary construction. Nothing remains of this new room save these chalk foundations, but its internal dimensions would have measured *c.* 2.3m north-south and *c.* 2.4m east-west. To the north of this room, and extending east from the north wall (1006) of the earlier building, an extension was added (1351), again using chalk footings which overlap those of the north wall (1006) and are its only survival. The eastern end of this new section of foundation is roughly in line with the east wall of the new room to the south (1323) and may well have been used to create an extension to the northern room (1307). A step down (1352) in the remains of the north wall (1006) at the point where it meets the extension (1351) may be an indication that at a later date a new door was cut in this wall with access to the north, possibly due to the erection of a new building (see discussion of the lodge below).

The third addition to the original building occurred on its western side and involved the addition of a further room (1319), which is much the best preserved structure found during the course of these excavations. The walls of this new room were again placed on chalk footings, as had been done elsewhere. While the western wall (1321) was of similar size to the earlier walls, at *c.* 0.6m, the northern and southern ones were significantly thicker, at *c.* 0.9m. The eastern wall was formed by blocking the earlier west entrance of the building with a thick plug of *opus signinum c.* 1m wide, surmounted with at least one course of masonry. The original brick north jamb of this blocked entrance was clearly visible to the north of this plug. The fact that the bricks had been broken before their use in this doorway suggests that they were being re-cycled from elsewhere. The floor of this new room (1319) was of *opus signinum*, with a roll-moulded edge forming the corner between the floor and further *opus signinum* extending up the walls to a surviving height of 0.05m. The extreme southern edge of this floor had been partially damaged by ploughing, with score marks visible in its surface. The size and form of this room, and in particular its thickened walls, suggest that it is the remains of a cold plunge or douche.

Immediately to the south of this room a small ditch (1337) was revealed, extending for *c.* 2m before fading out with the contours of the slope. Its position indicates that it is likely to have been the drain from the cold plunge/douche to the north, any trace of the original outlet being lost.

While it is very likely that this building as a whole, in both its early and late phases, was a bathhouse, it is not easy to work out its internal layout. This is mainly because, with the exception of the room added to its north-western corner (1319), so little remains of its walls and floors. If parallels can be drawn with Bathhouse 1, then it is probable that a flue and stoke-hole would have existed off its southern side, but this is exactly the part most affected by subsequent destruction. The *opus signinum* floor (1350) in the central room (1308) presents some difficulties of interpretation; it could be the base for a hypocaust, the remainder of which in the southern room (1320) has disappeared. Some base would have been needed since the sand is too soft. Its continuation (1359) seemingly into the corridor to the west (1360) may indicate that this too was heated. Alternatively it may have formed part of cold plunge or douche in use before the addition of that to the north-west (1319), which was then abandoned to become a heated room, enlarged with the addition of the new room to the east (1323). A possible scenario is that in the first phase the baths consisted of three rooms, the northern (1307) being an entrance chamber and changing room (*apodyterium*), the central one (1308) being the plunge pool or douche, and the southern (1320) the single heated room (*caldarium*). A corridor (1360 & 1361) linked the three rooms down the west side. In a second phase the *apodyterium* is enlarged to the east, the plunge becomes part of a second heated room (*tepidarium*) enlarged with the addition of a room to the east (1323) which may have had its own flue, the *caldarium* remains the same and a new plunge/douche is added to the north-west (1319). Box flue and voussoir box flue tiles recovered from the

layers overlying the bath, indicate that it was heated up the walls and over the roof space. Painted wall plaster and window glass were also recovered and would indicate that it was decorated internally in red, plain/white and blue/grey, with red predominating and had glazed windows.

Following the abandonment of Bathhouse 2 a significant amount of stone robbing clearly took place before the site came under the plough. Due to the truncation of the site, it is not possible to determine exactly how much had gone before ploughing began, but the north (1309) and west (1334) walls of the central room (1308) and the eastern end of the southern wall of the plunge (1319) were clearly robbed away rather than ploughed out, since the depth of the robbed walling is far below that reached by the plough. The damage done by the plough, while clearly visible in places, has in all likelihood taken way only a course or two of stonework, if that, from walls already largely removed by earlier robbing. The remains of floors are also likely to have been taken at an early date where they could be re-used, as is probable in the northern room (1307) where a surface of stone flags is a possibility. However if the base for the hypocausts in the central and southern rooms (1308, 1323, 1360, 1361 & 1320) was composed of *opus signinum* throughout, then this probably survived until ploughing began.

Well 2 or large pit

To the south-west of Bathhouse 2 a suspected well (1516) was partially excavated to a depth of 1.8m below the surface of the sand geology (Fig. 8). There is some evidence for a wooden lining, evidenced by much black staining around its sides, although nothing substantial survived in that part of it excavated. The putative shaft of the well appears to have been much wider than that of Well 1, narrowing from 3.4m at the surface to 2.3m at the base

Fig. 8 Well 2 or large pit, looking north. Scale is 2m

of the excavation. It had become filled with layers of sand, stained black in places, which had slumped, leaving a void filled with silt. The fill was rich in artefacts, particularly building material from the ruins of Bathhouse 2. Further excavation in 2010 suggested that this feature was in fact a large pit rather than a well.

The lodge

At the eastern end of the principal building a fourth structure had been added to complete the complex, measuring *c.* 16m north-south and *c.* 6m east-west, with entrances on its western and eastern sides. Little of it survived, with only chalk rubble foundations remaining except on its north side (1066), where one course of ironstone and upper greensand blocks were still *in situ*. Even the chalk footings had been ploughed away at its southern end, leaving its exact length uncertain; however the similar depth and construction of the stretch of chalk footings (1351) extending from the north-east corner of Bathhouse 2 indicate that they probably were part of the south wall. If this were the case then this puts the construction of this building at a date later than that for Bathhouse 2, since the footings (1351) overlie the bath's foundation trench (1325). The building is at any rate later than a north-south running ditch (2501) which underlies it, pottery from which provides a date of *c.* AD 320.

The eastern entrance to the building is marked by a break in the footings *c.* 6m south of its north-east corner, and is *c.* 1.5m wide. The western entrance is much larger, extending for *c.* 5m from the north-west corner of the building to the start of the western wall footings (1004). Set *c.* 1m back from this entrance, and central to it, is a square pad (1341) of crushed chalk with one course of upper greensand blocks set in white mortar surviving upon it. Almost opposite this, and projecting westwards for *c.* 1m from the east wall (1009), is a further chalk footing *c.* 1.2m wide. Due to the absence of the most southerly lengths of the eastern (1339) and western (1004) footings, it remains a possibility that further entrances lay at the southern end of the buildings. The fact that the one course of stones on the north wall were un-mortared, irregular and of different geological origins, suggests that, as with the aisled building, the superstructure of this structure was entirely of wood, resting on sill beams sat upon rubble filled foundation trenches. The additional use of chalk as a base, as opposed to its absence from the north wall of the aisled building, could indicate that here the load they were expected to bear was greater. The mortared stone found resting on the central pad (1341) was probably necessary because the load it had to bear was not spread along a trench and therefore needed to be more self-supporting. The nature of this load was not apparent from the visible remains, but could have been a major timber upright, or a derrick for shifting loads to an upper storey. The former is probably more likely since the projecting footing off the east wall is almost certainly associated with it and may have formed the base for an adjoining timber. This would have had the effect of dividing the internal space into at least two bays, that to the north being only *c.* 2m north-south, with that to the south being nearly 11m long.

Industrial and production activity

Associated with this principal building were a number of structures and deposits of a distinctly industrial or domestic productive appearance. Roughly central to the aisled building and lying between the second pair of large post-holes (1016 & 1028) was a shallow depression (1056) *c.* 1.1m in diameter and 0.1m deep, filled by black sandy soil and surrounded by burnt sand. It had been badly truncated by ploughing, but it may be all that is left of a hearth within the aisled building. To the west of this, and again central to the aisled building, was a pit (1060), 0.9m in diameter and 0.2m deep. It was filled with a dark silty fill suggestive of burning, but it is not possible to ascertain what its purpose was. Against the west end of the north aisle wall another badly plough-damaged structure was found (1052), this time a similar small spread of burnt soil was partially surrounded by the remains of a clay wall, 0.07m thick and 0.35m long on its western side. The fragmentary remains of this structure suggested a small oven built alongside the north aisle wall (1006), whose dimensions would have been *c.* 0.7m in width and *c.* 1m depth.

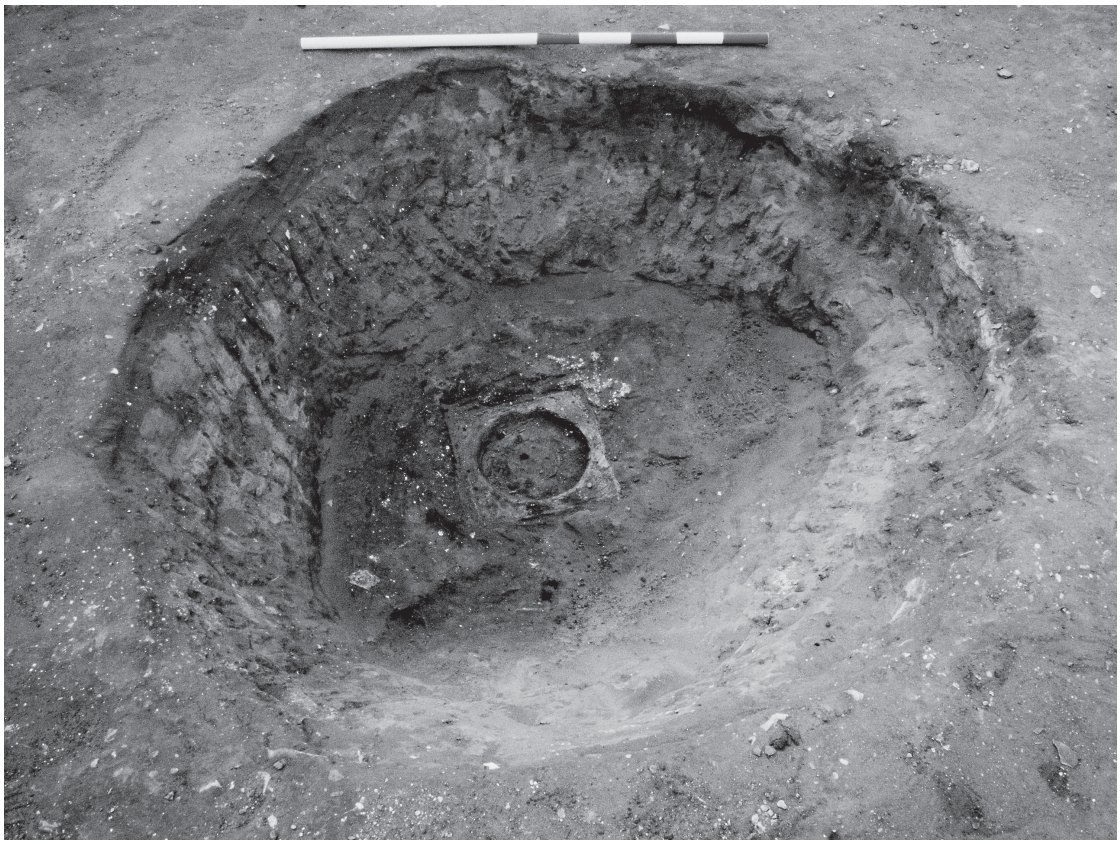

Fig. 9 Furnace pit (1043), with pewter dish in its base, looking south. Scale is 0.5m

To the east of these, two circular pits were excavated, the western (1043) being *c.* 1.5m across and 0.6m deep, the eastern (1331) *c.* 1.2m across and 0.3m deep. Both had shallow gullies, 0.3m deep, running off their south-eastern edges, *c.* 1.5m long with the former and *c.* 1.2m with the latter. The upper layers in both pits contained numerous fragments of roof tile in ceramic and stone. The *tegulae* tiles were of all forms, from the earliest to the latest, and likewise the stone tiles were of both limestone and Wealden sandstone. Below this layer in the eastern pit (1331) the sand was burnt red, particularly in the shallow gully. In the western pit (Fig. 9), not only was similar burnt sand found, but in addition a large quantity of black burnt material, lying *c.* 03m thick in the base of the pit. Within this layer a pewter dish was recovered, 0.3m square with a circular depressed bowl in its centre, 0.24m in diameter and 0.03m deep. It was of poor quality and was quite possibly discarded for this reason.

Both of these pits are likely to have been furnaces of some type, possibly for working metals. Plenty of iron slag was recovered from the site as a whole and it seems likely that iron-working formed at least some of their purpose. The pewter dish might suggest that other metals were also worked with, its poor quality indicating that the process was a bit hit-and-miss. The question of when this metal-working was undertaken is hard to answer, any direct relationships with the buildings around them has been lost. The absence of the remains of any superstructure within the fills of the pits suggests that they were deliberately

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dismantled and the debris taken elsewhere. The roofing material found with them could have been used to fill up inconvenient holes with solid hard-core. The close proximity of the smaller furnace (1331) to the west wall (1004) of the eastern building would point to its abandonment before this latter structure was erected, but this cannot be stated with any certainty. The similar nature of the tile filling them also indicates that they were abandoned at the same time, but this also is open to debate. The evidence, such as it exists, would seem to suggest that the construction of the eastern building put an end to the aisled buildings use as a metal workshop. Within the gully attached to the western pit (1043) over 100 (10g) charred grains were found. This might indicate that for some, or even all, of its use it acted as a corndryer; however there was a marked absence of grains within the pit itself and so it is possible that this grain had found its way into the gully from somewhere elsewhere in the aisled building. There were no charred grains found in the eastern pit (1331).

To the north of these furnaces a 9.5m long gully was excavated, running east-west between the northern line of post-holes and the aisled building's north wall (1006). It was between 1 – 1.5m wide and *c.* 0.2m deep, with a slight fall-off to the east, at which end it appeared to drain into the north-south ditch (2501) which underlies the eastern building. Its position relative to the two furnaces suggests that its purpose may have been linked to them, possibly as a drain for any water and waste associated with their use. Should this have been the case, then it adds further weight to the argument that the furnaces were put out of service when the eastern building was added. The dating provided by the pottery found within this ditch, and under its clay upper fill, becomes of some significance in the light of this. The fact that it provides a date of infilling after AD 350, suggests that the eastern end (the Lodge) of the building was not added until after this time. The evidence for such a late date for the abandonment of the furnaces and this associated gully is strengthened by the pottery found with the smaller pit (1331), which points to a fourth century infilling (AD 320+).

To the north of the principal building, and overlying the north-south ditch (2501) which runs under its eastern end, was a large spread of burnt material (2604), some 4m north-south and 4.5m east-west, with a further spread, 1m wide, running south from its south western corner for 1.5m. In depth this spread only reached 0.05m below the base of the plough soil. It contained numerous pieces of iron slag, which suggests it may have been either the site of a dump of metal-working waste or the site of iron-working itself. This feature may have been linked with the furnaces within the aisled building. It is unlikely to have continued in use after the construction of the eastern end of the principal building since it would have been directly in front of its entrance.

The north range

At the northern end of Trench 5/6, evidence was found to suggest the presence of a second complex of buildings, comprising a third bath building (Bathhouse 3) and two timber buildings. These were aligned north-west to south-east on a similar, but not identical axis to the principal building to the south. The distance between the two ranges was *c.* 50m, with a boundary feature linking the two (see below).

Bathhouse 3 (Fig. 10)

The most obvious surviving part of the northern complex was the baths, consisting of a heated building (2006) with a second building with a plunge pool (2012) just 2m to the south. The heated building was aligned south-east to north-west, roughly parallel to the principal building to the south. The plunge pool lay at right-angles to this, but slightly misaligned, its north side being 0.3m further away from the heated building at its west end than at its east.

The heated building (2006) in its original form was *c.* 5m long and *c.* 3m wide, with a flue projecting from its north-west end for a further 1.5m (Fig. 11). At a later date, an extension had been added to its east end, providing an extra 2.2m of length. The walls of the first phase utilised upper greensand blocks, roughly dressed on their outer faces with a rubble core and were *c.* 0.5m wide. Only one course of stonework survived of this building, and in

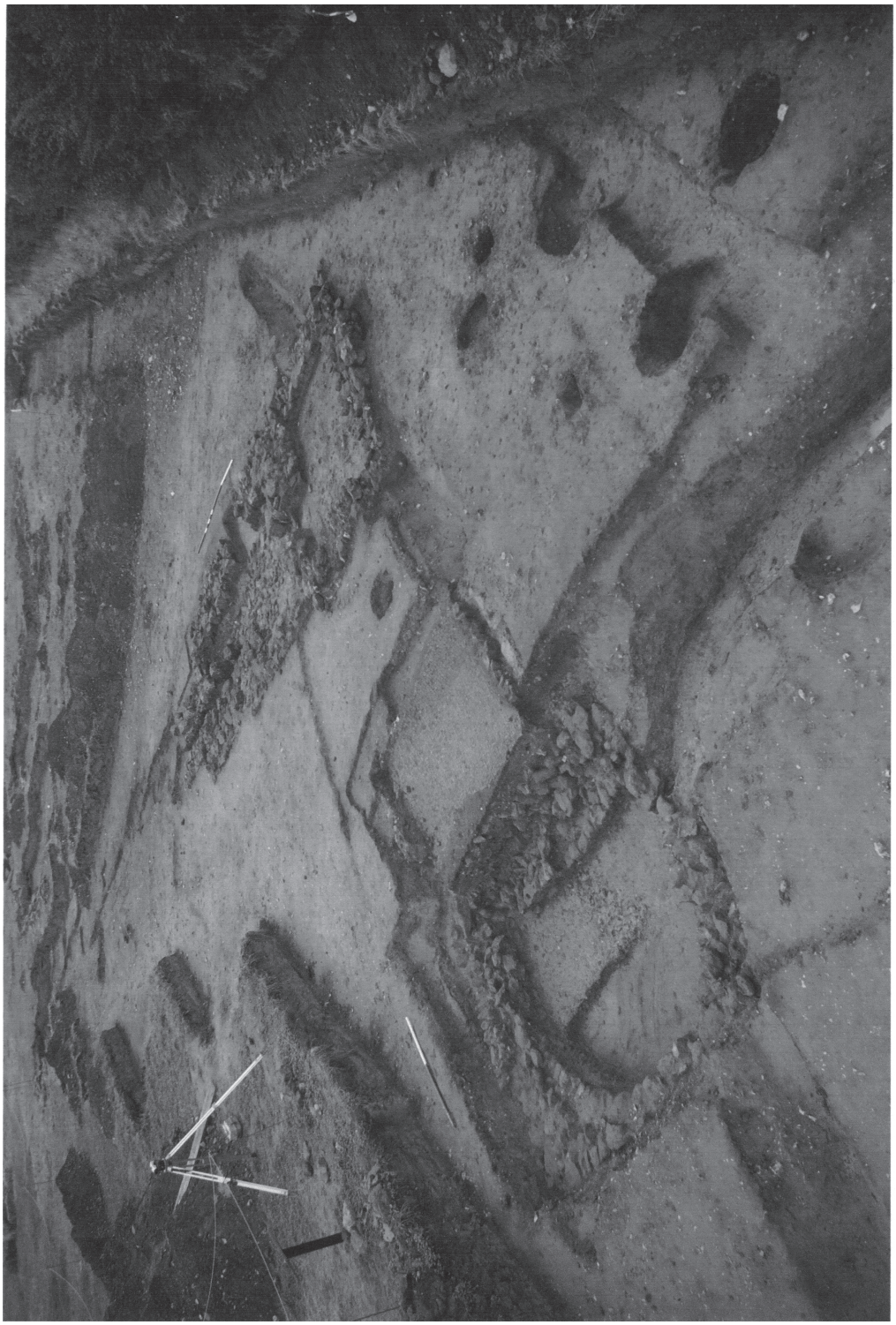

Fig. 10 Bathhouse 3 looking north. Scale is 2m

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Fig. 11 Plan of the heated building of Bathhouse 3

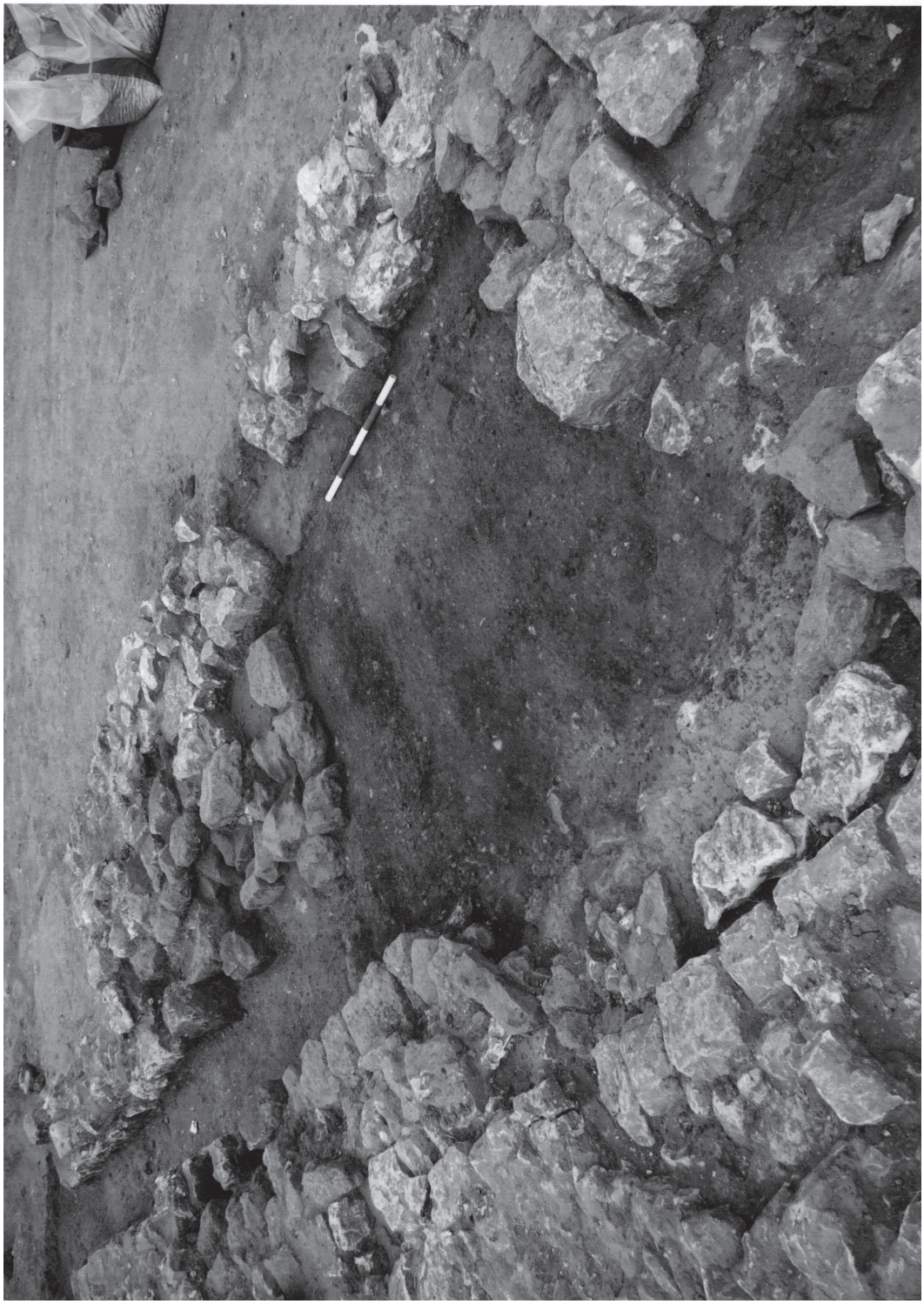

Fig. 12 The marks left by the *pilae* in the heated room (2006) of Bathhouse 3. Scale is 0.5m

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some places even this had been lost. The walls had very shallow foundations, with the top of the lowest course lying at the interface of the plough soil and the underlying geology. Internally the floor, which seemed to consist of a fine skim of crushed tile, possibly the degraded remains of *opus signinum*, was supported on a layer of upper greensand rubble, one course deep. This floor seems to have acted as the base for a hypocaust, the upright supports of which were upper greensand blocks, *c.* 0.2m square and *c.* 0.25m high. Only seven of these survive in their original positions, but it is assumed that such blocks originally filled the internal area of the first phase of the bath. Together they indicate that there were three channels running parallel to the length of the building; the central channel was the widest at *c.* 0.5m, with the two side channels measuring 0.4m. The gap in the north-west wall of the building, through which the hypocaust was stoked, was not central, being slightly nearer to the south-western wall, this had necessitated the use of a third row of upper greensand blocks against the north-east wall in order to support the floor above. In each of the three rows the blocks were *c.* 0.2m apart. The flue projecting off the north-west wall of this bath was also constructed of upper greensand blocks. Each side wall was *c.* 0.4m wide, leaving a central channel also of *c.* 0.4m, which continued north-westwards for a further 1m beyond the entrance to the flue and was filled with burnt material. Since the flue walls are only butted up to the bath it is possible that it was added later, with stoking originally being carried out close against the north-west wall. However this seems unlikely since they are constructed of the same type of stonework as the bath, unlike the obvious later alterations. There is no evidence to suggest that this first phase bath was ever sub-divided into more than one heated chamber.

A major re-working of the bath clearly occurred at some point after its first use; the main element of this second phase was the addition of the extension to the south-east. This extension was constructed of lower greensand blocks, very roughly put together and left un-dressed, only two courses of which survive; indeed it is possible that the walls were of timber with a stone base, less of a fire risk that might at first appear since the flue was at the far end of the building. If timber was used, then it would be unlikely that box-flue tiles were used at this end, heating solely being provided under the floor. Underneath the foundations for this extension lay the same back-filled ditch (2501), which preceded the eastern end of the principal building to the south and provides a date of after AD 320 for its construction. It is not possible to determine whether the early phase of Bathhouse 3 also post-dates the disuse of this ditch, but the fact that it originally seems to avoid it might suggest it was still functioning. Indeed window glass dating to pre-AD 300, found in layers in and around Bathhouse 3, suggest that this first phase may have been constructed in the third century, as was the case with Bathhouse1 to the south.

In order for the hot air to reach the new extension the previous hypocaust system had to be radically altered; a hole, 0.5m wide, was punched through what had been the south-east wall of the bath and the old system of upper greensand floor supports was replaced. Lower greensand rubble was used to in-fill the earlier channels at the north-western end of the bath, presumably to create the extra draw now needed, and new floor supports were installed in the south-eastern end. These new floor supports have not survived *in situ*, however their presence can be deduced from the squares of un-sooted floor still visible (Fig. 12). It is probable that this time bricks, rather than stone blocks, were used to form stacks (*pilae*); the size of the squares fitting with the Roman *pedales* bricks, a significant number of which were found in the soil which had built up within the building after its abandonment and subsequent robbing. These appear to have been more closely spaced than the earlier stone supports, the rows being only 10cm apart, possibly this reflects the unavailability of the large *bipedales* tiles needed to span a greater gap. No evidence for floor supports was noted within the extension, but this is probably because the soot, which marked them out in the rest of the building, does not seem to have travelled through the hole created in the original south-east wall. No *in situ* box flue tiles were recorded relating to either phase, but it seems probable that they were used in at least

part of the building since a significant number were recovered from within the layers in and overlying the bath.

As to the later use and abandonment of the bath, it had clearly been largely destroyed by the removal of its stonework and hypocaust system, before being back-filled with unwanted rubble and soil and then ploughed over. One notable feature of the broken tiles which were recovered from within it is that they are almost all of the same type, suggesting that the roof had been little altered since it had been laid; it is possible that it is the same new roof put on after the alterations carried out in the second phase. These tiles are all of a particular regional type found so far only in Hampshire, with Liss being the most easterly of the sites to have had them; this suggests that, at least for this roof, the inhabitants were being supplied from the north. No painted wall plaster was recovered from the layers over the bath which might suggest it was not decorated; although the degraded quality of the *opus signinum* suggests that it may not have survived. Window glass was found, indicating that the bath did at least have glazed windows.

The southern (2012) of the two buildings which together form Bathhouse 3 contained no heated elements, but instead a plunge pool fronted by a room with a tessellated floor (Fig. 13). Underlying both these elements was the same back-filled ditch (2501), which was beneath the extension to the heated building (2006) to the north and provides a date of after AD 320 for their construction. The tessellated floor measured 2m east-west and 1.5m north-south, and was composed of cubes of primarily upper, but also with some lower, greensand, *c.* 0.025m across, laid in rows running north-south but with no discernable pattern. Underneath the floor, where visible around its edges, was a thick layer of grey clay, which seems to have provided a base for it and the walls of the room in which it was placed. Little remains of these walls, only a scatter of greensand fragments and flints along the western, northern and eastern sides of the floor, with only on the western side part of one course of upper greensand blocks. Around the edges of the floor patches of crushed tile could indicate the degraded remains of *opus signinum* roll moulding masking the gap between the tessellation and walls. Near to the south-eastern corner of this room a complete *imbrex* roof tile was found lying up-side down amongst the remains of the east wall. It is possible that this may originally have acted as a drain, but the presence of the pool at a lower level to the south with its own drain would seem to render this unnecessary, and so it is probably just a fortunate survival from the roof.

The plunge pool immediately to the south of this room was D-shaped, with the curve facing southwards, *c.* 2.3m across its width and *c.* 1.7m north-south. The sides of the pool were composed entirely of lower greensand blocks surviving to between two and three courses high. These walls were 0.7m wide on the northern side, 0.5m wide on their eastern and western sides and only 0.25m wide to the south. The greensand blocks had been left un-dressed, except on the interior faces of the pool where they were roughly faced. The base of the pool lay at *c.* 0.7m below the level of the sand geology, composed of a 0.05m thick layer of upper greensand stone chippings below more degraded *opus signinum*, which in patches survived also on the pool's walls. On the eastern side of the pool, 0.35m from its northern edge and flush with its base, a lead outlet pipe was positioned in a hole in the wall on a platform of broken bricks. This pipe, 0.27m long and 0.07m in diameter, must have acted as the plunge pool's drain, presumably blocked during use with a plug. The pipe emptied into a gully (2096), *c.* 0.75m deep and up to 0.85m wide, visible running for 6m in a south-eastern direction, until reaching the edge of the excavations. It is possible that a stretch of ditch (2558), *c.* 0.8m wide and *c.* 0.25m deep, excavated in the south-east corner of Trench 5/6 could be a continuation of this gully as it drains to the south down the slope. Its somewhat circuitous route necessary in order to avoid the entrance to the whole complex discovered to the south of this bathhouse (see below). It is natural to assume that between the pool and the tessellated floor were a set of steps resting on the north wall of the plunge pool, which may account for its greater width. No trace of these steps was visible during the excavations. Once it fell out of use the re-usable stone from

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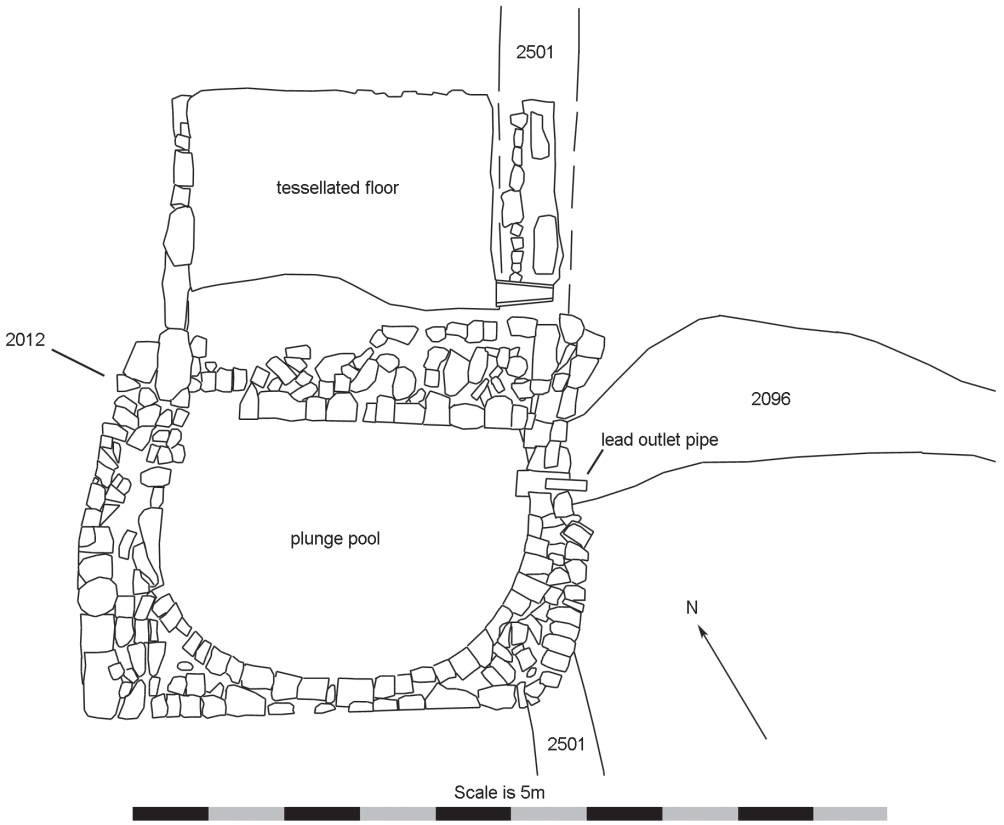

Fig. 13 Plan of the plunge pool in Bathhouse 3

the bathhouse seems to have been removed at a fairly early stage, since no robber trenches were observed and the material filling the pool has built up after the walls had been reduced. The lowest level of in-fill was composed of silty clay-sand containing much stone rubble, presumably formed as what was left of the pool sides collapsed inwards. Filling the remaining depression was a 0.5m deep layer of much cleaner soil similar to the plough soil above.

The two buildings of Bathhouse 3 appear to have been detached from one another. No sign of a linking room or corridor was found, save for a solitary post-hole (2039), 0.4m in diameter and 0.25m deep, packed with lower greensand rubble around a *c.* 0.2m wide post. It seems probable that there was a link between the two, since it is unlikely that bathers would have desired an open-air walk between the heated rooms and the plunge bath; it can only be assumed that it was of timber and has left no trace, save possibly the one post-hole.

Well 3

To the south of Bathhouse 3, a well (Well 3 – 2530) was partially excavated to a depth of 1.4m below the surface of the sand geology. As with Well 2, there appears to have been little collapsing of this well, possibly because again the sand forming its sides was compact. There was no evidence for any lining to the well shaft, but that may survive at a greater depth. The shaft of the well was again wider than that of Well 1, narrowing from 1.95m at the surface to 1.85m at the base of the excavations. The well shaft had become filled with layers of silt and sand (2581, 2577 & 2569), stained black in places (2569), which had slumped, leaving

a void filled with further silt (2531). Pottery recovered from these layers indicated that it fell out of use sometime after AD 270. Unfortunately time did not allow for further excavation. It is assumed, due to its proximity to Bathhouse 3, that this well was dug primarily to provide it with water.

The timber structures

To the north and west of Bathhouse 3 was a series of shallow gullies (2025, 2027, 2029, 2031, 2001 & 602) all containing a dark silt fill, probably beam slots for timber buildings. Four of them (2025, 2027, 2029 & 2031) formed a reversed 'E'-shape, 10m north-east to south-west and 4.5m north-west to south-east. The two bays created by the three north-west pointing arms (2025, 2027 & 2029) are *c.* 4m wide. The single north-east to south-west aligned slot (2031) projects for *c.* 1m beyond the outside of the bays. The beam slots vary in size and depth with the two northern (2029 & 2031) being slightly wider, at *c.* 0.75m, than the southern, at *c.* 4m. Their depth decreases to the north-west, from a maximum of 0.15m, suggesting that the two bays may originally have extended further, but that now all trace of them has been lost. Pottery recovered from their fills suggests that the structure was demolished no earlier than AD 350.

To the east of this structure two broadly parallel slots (2001 & 602), *c.* 9m apart, were found running north-west to south-east. The northern of these (602) was only partially revealed, but was 0.55m wide and 0.15m deep. The southern (2001), 0.65m wide and 0.3m deep, was completely excavated and ran for 9.5m up to the north-western end of Bathhouse 3. Pottery recovered from within them suggests that the structure was demolished no earlier than AD 320. Roof tile recovered from the backfill of all these beam slots suggests that any buildings in this area of the site had been in use for the same length of time as the aisled building to the south.

The eastern side

Running north-east to south-west in the eastern half of Trench 5/6 were two lengths of ditch and a large number of postholes, all of which lay at right-angles to both the Principal Building to the south and Bathhouse 3 to the north (Figs 2 & 14). It would seem probable that they formed the eastern side of the complex of Roman buildings as a whole. Three phases were apparent in these ditches and postholes, reflecting the development of the buildings to which they relate. A gateway was found about halfway down along the eastern boundary, with two much larger postholes.

The earliest phase, identified by the fact that unlike the others it underlies the eastern end of the principal building and Bathhouse 3, was composed of a ditch (2501) running for the length of the eastern side. This ditch varied from 0.75 – 1.3m wide and 0.2 – 0.4m deep from the surface of the sand geology, although these dimensions were probably largely dictated by the extent of later truncation from ploughing. Its silty fill contained pottery ranging from the Iron Age through to the late Roman period, which indicated that it had been back-filled by AD 320 at the earliest. The fact that the eastern end of the principal building (the Lodge), the slag spread (2604), Well 3 (2530), the plunge pool of Bathhouse 3 (2012) and the eastern extension of the heated building of Bathhouse 3 all overlay it dictates that they too must all have been formed after AD 320 at the earliest. The ditch (2501) does, however, seem to enclose an area including the earlier elements of both the principal building (the aisled building and Bathhouse 1) and Bathhouse 3 (the upper greensand parts of the heated building). This would suggest that they at least were part of this first phase.

At some date during the lifetime of this first boundary a gate appears to have been added approximately half way up its length. This was composed of two large post-holes (2532 & 2526) with their centres 3.3m apart and both *c.* 1m in diameter and 0.46 – 0.53m deep. Upper and lower greensand blocks had been used to pack around the posts within them, which seem to have been *c.* 0.4m in diameter. The only dating evidence from within their silty fills was undiagnostic Romano-British coarseware pottery sherds. This entrance had clearly been put in after the ditch was back-filled, and therefore is unlikely to have been an original feature of the boundary, but it is highly probable that the ditch had an internal bank which would have

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Fig. 14 The three boundary phases from the south. To the right of the image are the post-holes of phase three, while to the left is the ditch of phase 1. Scale is 2m

continued in use after the ditch itself had been abandoned and to which this gateway would have related.

The second phase appears to have consisted of five post-holes (2628, 2626, 2624, 2622, 2620) and a stretch of ditch (2019), 2.3m to the east of the first phase boundary at its southern end and 3m at its northern. Where this second boundary passes in front of the earlier entrance, a new gateway seems to have been located, although both the two postholes (2556 & 2538) which defined it seem to have been badly disturbed. The southern (2556) was 1.5m in diameter and 0.98m deep, while the northern (2538) was 2.5 × 2m in diameter and 0.7m deep. These dimensions would appear excessive for even a large post, although the considerable quantity of lower greensand blocks in the fills of each and their positions suggest that that was what they were. It seems likely that the large posts within them were removed for re-use, possibly in the new gateway of the third phase, and that the method of extraction caused the large pits which were found. To the south of this gateway the boundary was formed of five post-holes (2628, 2626, 2624, 2622, 2620), spaced 1.75 – 2m apart and ranging from 0.53 – 0.6m in width and 0.2m – 0.3m in depth. All contained the remains of stone packing of predominantly lower greensand, but in none was it undisturbed. To the north of the gateway the boundary appears to have been formed by a stretch of ditch (2019) running north until disappearing under the east baulk of Trench 5/6. This ditch ranged from 0.5 – 0.9m wide and 0.28 – 0.4m deep below the surface of the sand geology. Pottery from within its silty fill was Iron Age through to late Roman, providing a date for its disuse of no earlier than AD 320. It is likely that there was originally a bank internal to this ditch, which has since been completely destroyed.

An unexplained feature of this second-phase boundary is why its southern end does not extend for the full length of the east side of the complex as a whole. The answer to this may lie with the reason for its formation; the construction of the plunge pool to Bathhouse 3 and the extension to its heated block would have forced the abandonment of the first phase boundary, it is likely that the stretch of ditch (2019), gateway (2556 & 2538) and line of post-holes (2628, 2626, 2624, 2622, 2620) described above formed its replacement. The direction of this latter boundary as it runs southwards indicates that the eastern end of the principal building had not yet been constructed since it would not include it. It is quite possible therefore that this second phase line merged with the first phase line at the point where the former seems to stop. It is also possible that the line did continue but further post-holes were missed or had been removed by ploughing. These would both seem unlikely explanations since firstly efforts were made during the course of the excavation specifically to find further post-holes in this line and secondly the extent of plough damage in this area of the site would seem insufficient to completely remove all trace of one of these post-holes.

The third phase consisted entirely of post-holes stretching in a long line along the eastern boundary, approximately parallel to the earlier ditch (2501) but further to the east, by 2.65m at its northern end and 4m at its southern. Half way along its length, at a point equal to the position of the earlier entrance, two larger post-holes (2550 & 2570), 2.25m apart, were located presumably creating a new gateway. The northern (2570) of the two was the more substantial being *c.* 1.15m in diameter and *c.* 0.7m deep to the others 0.9m diameter and 0.45m depth. This may have been due to the presence of an earlier pit into which the northern post-hole was dug, necessitating a larger setting for stability. Predominantly lower greensand blocks had been used to pack around the posts within them, which both seem to have been *c.* 0.5m in diameter. To the south of this gateway fifteen further post-holes (2632, 2602, 2600, 2598, 2584, 2596, 2594, 2564, 2608, 2562, 2566, 2578, 2592, 2582, 2590) were located, stopping at the north-east corner of the principal building. This latter relationship clearly indicates that this third phase of boundary was put in place after the eastern end of the principal building had been added, sometime after AD 320. The addition of this block would provide the reason for a shift in the boundary to the east, in order for it to be included within the whole complex. These fifteen post-holes, although by the straightness of the line in which they sit clearly forming one

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boundary, vary significantly in dimensions. The distance between their centres ranges from 1.5 – 1.85m, their diameters range from 0.55 – 1.1m and their depths from 0.29 – 0.58m. This could reflect the occasional replacement of the posts within them, but there was no obvious evidence for this. The one thing that was consistent was the size of the post within them, the shape of which was clearly seen in six of them to be 0.24m square and packed around with predominantly lower greensand blocks. In all but one of the other postholes the packing remained, but had collapsed. To the north of the gateway the line of post-holes was less even, but still continued until disappearing under the eastern baulk of Trench 5/6. Eleven post-holes (2544, 2115, 2092, 2084, 2082, 2088, 2090, 2094, 2015, 2108, 2047) could be identified as part of this line with their distance apart ranging from 1.15 – 2m, their diameter 0.4 – 0.95m and their depth 0.16 – 0.5m. Only three (2015, 2082 & 2084) retained any trace of the size of their posts which were again square and between 0.2m and 0.3m across. All but one (2544) still contained stone packing, which were predominantly lower greensand blocks, as with the others to the south. The reason for the greater variation in the size and spacing of the post-holes at this northern end of the boundary is not obvious; it may be explained by the partial integration of the remains of the second phase boundary at this point.

Running at right angles to these boundaries, another ditch (2505) was excavated which was later than all three. This same ditch was also identified to the west (618) in Trench 5/6 and in Trench 3 (303). It ranged in width from 0.55 – 0.80m and in depth from 0.1 – 0.37m, but diminishing in size as it ran eastwards until it disappeared completely, nearing the eastern side of Trench 5/6. It is probable that this ditch is the remains of a field boundary visible on 19th century OS mapping, but removed by the late 1950's. A small pit/post-hole, 0.55m in diameter and 0.18m deep, was also recorded which cut through this back-filled ditch and must therefore be of a modern date. In Trench 3 a second, broader and shallower ditch (301) containing post-medieval pottery was excavated to the north, running parallel to the first. It is probably related to the other to its immediate south, perhaps marking the edge of a track running alongside the boundary. This boundary was replaced by a second which ran at a diagonal to it further to the north, before being removed itself in 1968. The ditch to this second boundary was found in Trench 2 (201) and at the far north end of Trench 5/6 (201).

At the south end of the eastern side of Trench 5/6 the depth of soil became markedly greater, with an earlier plough soil (2513) being preserved below the modern one. This layer proved comparatively rich in artefacts, although it is almost certainly to be interpreted as a post-Roman plough soil partly due to the broad range of dates of the artefacts found within it and partly because the ploughing had clearly gone right up against the remains of the east end of the principal building; it is unlikely that this would have occurred while the building was in use, through fear of undermining the foundations, instead it probably took place after abandonment, but while the ruins of the east wall were still an obstruction

The droveway

From the gateway, a potential track or droveway was found in Trench B in 2008 (Fig. 3), approaching the courtyard from a WNW direction. It then enters the courtyard directly opposite the eastern gateway and palisade. In Trench B the trackway ditch was c 2.5 metres wide and contained sherds of 2nd century AD Alice Holt pottery (B 1201).

A crushed brick and tile floor

Although there was no direct evidence for any buildings in the area, substantial amounts of Roman ceramic building material, pottery, and flat stone tile were found in close association with the trackway. The area also contained a compacted, crushed surface of the same material at a depth of 300mm. The layer was 100mm thick. Beneath it was a compacted chalky, sandy soil (2002), with quantities of flat Horsham stone tiles.

Blue-painted wall plaster was found in context (M 5008) as well as a large pot rim and substantial amounts of CBM suggesting possible habitation in that area. The quantities of tile, nails, plaster and stone tile suggest demolition material from a nearby building.

The pottery in trenches M and G was predominantly late 2nd to early 3rd century AD, which may indicate earlier Roman activity towards the western edge of the courtyard. The pottery report for finds from 2008 to 2010 (Dicks 2011) is included in the archive.

THE FINDS

All the reports in this section are concerned with material from the 2005–2007 excavations, except where indicated, and are summaries of full reports and catalogues in Anelay 2008.

Worked Flint by James Kenny

The assemblage is for the most part that of a blade technology, of which at least the two cores and two microlithic waste blades represent Mesolithic flint working. The utilisation of both Downland and Wealden resources is not surprising given the location of the site. The Neolithic axe and knife and the Bronze Age arrowhead (Fig. 15) may be the result of 'casual' loss rather than any static activity.

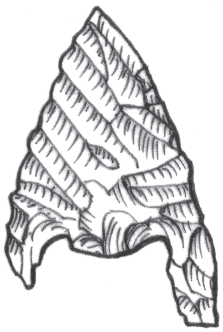

Fig. 15 Early Bronze Age flint arrowhead (SF9) from context (1504). Maximum dimension along right-hand edge, 32 mm. Drawn by David Hopkins

Coins by David Rudling

A total of 167 Roman coins were found during the fieldwork at Liss villa. Of these, 88 were discovered during metal-detecting from 2000 to 2002, whilst the excavations of 2000 to 2007 yielded another 74 coins, and those of 2008–2010 a further five. The majority are dated to the late 3rd and 4th centuries. Of particular interest are a number of late 4th century *nummi*, ending with examples dated to *circa* AD 388–395. A clipped silver *siliqua* may also have remained in circulation during the late 4th/early 5th century. Other coin finds from the Liss site included a Scottish trader's halfpenny token, dated 1792, of Hutchinson of Edinburgh (Dalton & Hamer 1977, 424: no. 41) and one (possibly two) 18th century English halfpenny coins. A detailed catalogue of all the coins found during 2000–2010 has been produced by the writer and forms part of the site archive.

The Roman coins

Table 1 provides a summary of the 150 Roman coins from Liss which it has been possible to identify by emperor and/or Richard Reece's periods of Roman coin issue (Reece 1972; 2002). The remaining 17 unattributed Roman coins comprise two illegible *asses* or *dupondii* which can be broadly dated in terms of issue and usage to *circa* AD 41–250, and 15 much smaller bronze coins which were probably made between AD 260 and 402.

Treating the two main groups of Roman coins found at Liss as one assemblage, there are at least nine, but probably ten coins which pre-date AD 260. The earliest of the identified coins are two *sestertii* of Trajan dating to the early 2nd century (Reece Period 5: AD 96–117). Of interest amongst the other eight coins, which span the period ending in AD 260, are the core of a once plated denarius of Antoninus Pius and a lightweight cast *as*, also of Antoninus Pius. Such cast coins, which are known as 'Limesfalsa', are thought to have been made *circa* AD 230–270. The Liss example is similar to specimens illustrated by Boon (1988, plate 1: nos. 11 and 12) and Alram and Schmidt-Dick (2007, Tafel 88: no. 99/c). The lack of either any Iron Age or 1st century AD Roman coins may be significant, although it should be noted that some of the other types of finds, including a two-piece Colchester brooch and small numbers of residual Iron Age sherds from the site indicate some activity during these periods in the vicinity of the villa. The main dating of the Roman pottery assemblage, however, is late 1st century AD to late 4th century AD, with a clear emphasis on the mid 3rd century to late 4th century. This later Roman

Table 1 Summary of identified Roman coins from Liss villa by emperor and Reece Period

Period	*Dates AD*	*Emperor*	*2000-2002 Metal-detected coins*	*2000-2010 Excavated coins*	*Total*
5	96–117	Trajan	1	1	2
7	138–161	Antoninus Pius	1	–	1
		Uncertain, c. 117-92	1	–	1
8	161–180	Faustina II	1	–	1
10	193–222	Julia Domna	1	–	1
11	222–238	Maximinus	–	1	1
12	238–260	'lightweight cast' c. 230-70	–	1	1
13	260–275	Gallienus	–	1	1
		Claudius II	2	–	2
		Victorinus	2	4	6
		Tetricus I	2	3	5
14	275–296	Barbarous radiates, 275-96	11	5	16
		Allectus	1	1	2
15	296–317	Galerius	–	1	1
		Constantine I	1	–	1
16	317–330	Constantine I	1	–	1
17	330–348	Constantine I	4	–	4
		Constantine II	1	5	6
		Constantius II	2	1	3
		Constans	2	6	8
		House of Constantine	4	2	6
		Theodora, comm. issue	–	3	3
		Comm. Issues, c. 330-340	5	8	13
18	348–364	Constantius II	1	–	1
		Constans	2	–	2
		Magnentius	2	–	2
		Barbarous copies	2	3	5
19	364–378	Valentinian I	–	2	2
		Valens	5	9	14
		Gratian	4	2	6
		House of Valentinian	10	5	15
21	388–408	Theodosius I	1	1	2
		Arcadius	1	1	2
		House of Theodosius	4	9	13
		Total	75	75	150

emphasis for the pottery finds is also reflected in the coin data, as can clearly be seen in Table 1. A similar emphasis is also apparent from the glass finds (see below). The relatively small numbers of coins minted before AD 260 is not surprising, however, as the use of coinage, especially in the countryside, was not widespread in Roman Britain before that date (Walker 1988, 305).

The later Roman coinage at Liss begins with good representations of the two normally very prolific periods of coin losses, the radiate episode of AD 260–296 (i.e. Reece Periods 13 and 14 with a total of 32 coins) and the House of Constantine mid 4th century phase (i.e. Reece Periods 17 and 18 represented by 53 coins). Both of these episodes at Liss involved large numbers of irregular/barbarous coins. The subsequent coinage of the House of Valentinian (Reece Period 19: AD 364–378) is also very well represented by 37 coins and these include two worthy of note. The first is a *nummus* of Valentinian I, GLORIA ROMANORVM type, which has been holed/pierced through near the centre of the reverse side for suspension or attachment. The other is a clipped silver *siliqua* of Valens (or possibly Valentinian I), VOT/X/MVLT/XX type, mint-mark missing, issued AD 367–375. There are some signs of wear to the raised surfaces. The clipping of *siliquae* in Britain is now thought to have occurred in the early 5th century, perhaps starting after AD 402 and possibly as late as AD 407–411 (Moorhead 2008, 40–42; 2013, 200 and 209). The Liss *siliqua* is a metal-detecting find and unfortunately has no stratified context.

The final Roman coinage found at Liss, that of the House of Theodosius, all belongs to Reece Period 21 (AD 388–408). There are 17 small bronze coins which can be attributed to this period, and there are possibly further examples amongst the 15 illegible coins attributed to the general period AD 260–402. Such coinage represents the last issue of bronze coins to arrive in Britain, with the once prolific mints of Trier and Lyon producing few bronze coins after about AD 402. Moorhead (2008, 42) has suggested that these and some earlier bronze coins, alongside coins of gold and silver (such as heavily clipped *siliquae*), may have continued in circulation 'for a significant time after AD 410', but that currency generally ceased to be used altogether after about AD 430. Thus the finding at Liss of the Theodosian *nummi,* and perhaps also the clipped Valentinianic *siliqua*, could represent occupation at the site during the first three decades of the 5th century AD.

Richard Reece (1972; 1987; 1991; 1995; 2002) has demonstrated that statistical analysis of Roman coin losses can be used to compare coin assemblages between sites. This can be achieved by calculating the number of coins lost during each of 21 'Reece' periods of issue, per thousand coins discovered at each site. Table 2 shows the resultant statistical comparisons between Liss villa, several other Roman-period sites of different types in Hampshire and West Sussex, and Philippa Walton's British Mean which excludes coin finds from Richborough and provides 'the most representative picture of average coin loss throughout the province of *Britannia*, regardless of site function or geography' (Walton 2012, 36). The statistical data for the other Hampshire sites and also Chilgrove 2 in West Sussex have been published by Reece (1987, 77; 1991, table 2). Figure 16 presents the comparison of the Liss and Walton's British Mean data in graphical form.

The coin profile of Liss villa clearly indicates markedly higher than average coin losses (and thus presumably usage) during Reece Periods 19 and 21 (i.e. AD 364–378 and 388–402 respectively). This finding corresponds to research by Moorhead (2001, 89) and Walton (2012, 97) which suggests that higher levels of coin usage occurred in the late Roman period across a band of England extending from Somerset, Dorset, Wiltshire and Hampshire in the south up to North Norfolk and Lincolnshire. With regards to such higher levels of coin usage/losses in late 4th century Wiltshire, Moorhead (2001, 94) points out that the 'West Country, focused on Cirencester, was becoming increasingly wealthy' and that farming was 'undoubtedly the major source of [this] wealth'. Liss villa is near the eastern edge of the West Country group where high, late coin usage is observed. In contrast, further to the east at the Chilgrove 2 villa in West Sussex, the coin sequence ends in Period 19 (i.e. AD 364–378) (see Table 2). At

Table 2 Statistical comparison of coins per thousand from Liss and other regional Roman sites. The British Mean is based on 211,505 coin records, taken from Walton (2012) and excludes the site of Richborough

Reece period	*Dates*	*Liss villa*	*Rockbourne villa*	*Sparsholt villa*	*Chilgrove 2 villa*	*Owslebury farmstead*	*Winchester town*	*British Mean*
1	to 41AD	0	3	0	0	0	1	8.19
2	41–54	0	0	24	0	0	5	11.25
3	54–69	0	1	0	0	0	2	6.27
4	69–96	0	3	24	19	32	9	34.24
5	96–117	14	3	0	10	16	3	28.01
6	117–138	0	4	0	10	32	9	29.94
7	138–161	14	4	71	0	32	6	40.05
8	161–180	7	4	24	0	0	10	18.95
9	180–193	0	3	24	10	0	1	6.20
10	193–222	7	6	24	0	0	5	15.83
11	222–238	7	6	24	20	0	2	7.08
12	238–260	7	1	48	0	0	3	9.83
13	260–275	94	130	333	106	111	250	137.13
14	275–296	120	127	286	86	143	240	110.56
15	296–317	14	25	0	0	16	14	21.98
16	317–330	7	87	72	48	64	25	42.57
17	330–348	281	509	72	336	159	200	235.27
18	348–364	67	61	24	211	64	61	89.11
19	364–378	247	12	0	144	317	68	110.04
20	378–388	0	1	0	0	16	5	4.35
21	388–402	114	9	0	0	0	62	32.02
Total number of Roman coins found		167	684	42	104	63	1,466	

another West Sussex villa, Batten Hanger, however, a scattered hoard of 41 *nummi* ending with three coins issued between AD 394 and 402 and other Theodosian coins of the period AD 388–402 were recovered from contexts which predate a masonry hall building of cruck-trussed type (Kenny 2008, 23). When available, the statistical analysis of the Batten

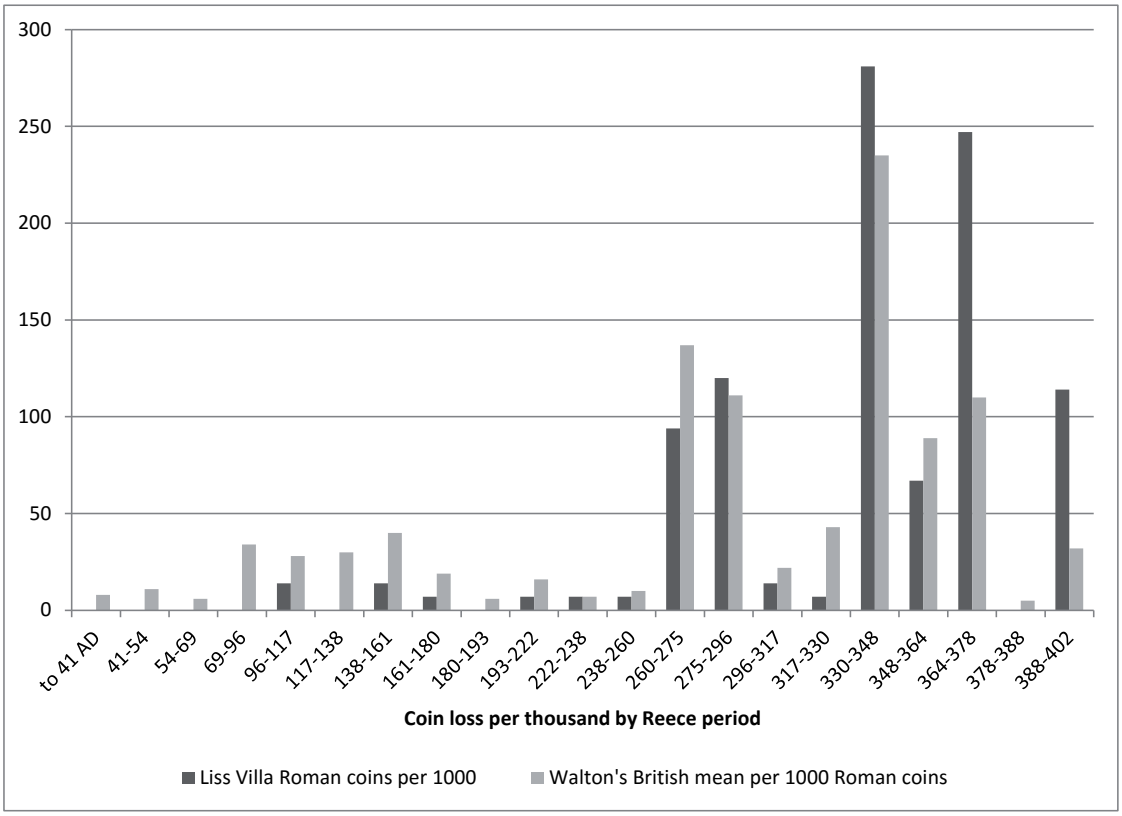

Fig. 16 Comparison of Liss villa Roman coin profile against Walton's British Mean (excluding Richborough)

Hanger coin data will be very interesting to compare with the data from Liss.

Most of the coins found during the 2000–2010 excavations at Liss were from the plough soil or were unstratified. A small number, however, were recovered from features/fills/sealed deposits. Examples of such coins include six *antoniniani* of the period AD 260–273 from fill contexts (411) and (413) in Well 1. In addition to providing a *terminus ante-quem* for the initial use of the well, the discovery of these radiate coins in deposits filling the well above another deposit containing the remains of a dog and puppy, mean that the coins may have formed part of structured ritual deposits rather than accidental losses. Another interesting deposit with associated coin finds is a probable drip gully from the roof of the aisled building (1011). Two GLORIA ROMANORVM coins issued AD 364–378 were recovered from this context and are interpreted by the excavator as indicating that the aisled building was still in occupation at this date.

Metalwork by Ian Scott

The metalwork assemblage comprises one silver object, 31 copper alloy objects, 51 lead objects and 862 iron objects, a total of 945 pieces. Most of the objects are nails (n = 711), 75.2 % of the assemblage by number. The nails form 83% of the metal finds from stratified contexts, whereas they form only 57.5% of the assemblage from plough soils and disturbed natural. It is likely that the majority of the nails were derived from Roman levels, rather than being the result of later activity on site.

There are three identifiable tools, comprising a sledge hammer head from pit 504 (505),

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a chisel from pit 2041 (2042) (SF30) and a reaping hook from a medieval sandpit 401 (402). There were also three possible tools; comprising two punches (plough soil; gully 2032) and a tanged blade fragment (Bathhouse 3, 2011).

There is a small bell (SF100, from burnt layer, 1001) that could be a harness or decorative fitting. There are various lead weights, all from plough soil, including two bi-conical steelyard weights with iron attachment loops and a small, waisted cylindrical lead weight attached to a copper alloy link. The purpose of four more possible lead weights is less uncertain, but they may have served as small pan weights for balances. Although from plough soil, there is little doubt that some at least, and probably all the weights, are of Roman date.

Personal items include 36 hobnails, 13 of which were from pit 2014, the remainder occurred in one and twos in other contexts. There is an unstratified, two-piece Colchester brooch (SF 1) of mid1stcentury AD date, a plain finger ring (SF 34, plough soil) and a part of a pair of tweezers comprising a plain flared blade (context 2513, old plough soil). There are also small fragments of five bracelets, or probable bracelets, all probably of late 3rdor 4thcentury AD date (Well 1; posthole 1060; Bathhouse 3, 2002; two from plough soil). These include a cable bracelet, a fragment with ring and dot decoration and a bracelet with a plain band of oval section.

The nine household items include a small whittle-tanged knife of late Roman type (SF13, Bathhouse 1 disuse, 1504) Manning Type 21 blade (Manning 1985,117, fig. 29), and two undiagnostic blade fragments (burnt layer, 1001) as well as some post-Roman items. There is a probable copper alloy furniture nail with hollow pyramid head (plough soil), and an iron hinge comprising three split spike loops pivoting around a single spindle. Particular mention has already been made of the length of lead pipe found in the outflow from the Bathhouse 3 plunge bath.

Post-Roman finds include a very worn copper alloy stirrup mount (SF 18) of Saxon date from plough soil, a medieval silver annular brooch (SF 129, plough soil), and a more recent stamped metal button (plough soil). There was a post-medieval key (1500, old plough soil) and a second possible key (521, burnt layer).

Provenance of metal finds

Almost two thirds of the metalwork assemblage by number was stratified, but the finds were not distributed uniformly across the site. There were very few finds associated with Bathhouse 3, a small number, mainly nails with Bathhouse 2, and a more substantial numbers with the various phases of Bathhouse 1. The bulk of the finds from Bathhouse 1 are nails (88.7% by number) and most of these were associated with the abandonment or disuse of the structure. Amongst the few finds from Bathhouse 3 and associated with its disuse was a large T-staple, or clamp (2002). One of the uses of such clamps was to secure box flue tiles to the walls.

A number of metal finds were associated with the aisled building and others were found in the area to the north. Again, the majority of the finds (91.3% by number) were nails. If the finds from the 'industrial area' (2604) are included nails form 88.8% of the metalwork. The lack of finds other than nails in the aisled building suggests that it was built and used for agricultural or craft work rather than for domestic occupation and this is confirmed by the presence of furnaces. One of these (1331) produced a badly decayed and deformed pewter dish (Fig. 9).

A number of finds came from the postholes and linear features on the east edge of the site, including ditch (1026–2045) and the probable gate postholes. These features produced 61 metal finds including 56 nails (91.8% by number).

Conclusion

The metalwork assemblage, which provided no evidence for literacy, very limited numbers of items of personal adornment and very little in the way of household items, clearly lacked many finds that would be expected from a high-status Romanised domestic site. One group that does occur in some numbers is weights; of particular interest are the two steelyard weights. Weights serve a very practical function in trade and commerce. Their presence reinforces the

idea that the metalwork assemblage reflects an agricultural site and perhaps a site where some craft activity was also undertaken, rather than a domestic site of any pretension.

The pottery from the site provides a similar picture, with limited fine wares suggesting low status. While the composition of the metalwork assemblage, like the pottery, points to a basic level of material culture, the fact that the site had a bathhouse, or bathhouses, and the presence of quantities of Roman tile, and of window glass and vessel glass perhaps contradicts this idea. There was also the decayed pewter plate, an article of some rarity, deposited in pit (1331).

The lack of household and personal items may reflect the fact that the assemblage has a small copper alloy component, since many personal and household items would be of copper alloy. It may also be that pit deposits and rubbish dumps were not excavated. If we assume that the metal assemblage is representative of the objects used on site then perhaps we need to consider what exactly is meant by 'low status'.

Pottery by Kayt Marter Brown

A substantial ceramic assemblage (7,447 sherds, 83,922g) was recovered during the 2005–2007 excavations. Included in this material was a small quantity of residual Iron Age sherds occurring alongside late 1st century AD – late 4th century AD wares. Within the whole assemblage there was a clear emphasis on the mid 3rd – late 4thcentury AD period. The plough damage recorded on site was reflected in the condition of the ceramic assemblage and the limited stratigraphy precluded a detailed discussion of the pottery by phase or distribution, beyond that of general observations. This report summarises the salient findings from the archive report.

The pottery from the 2006 excavations was initially recorded by Jonathan Dicks, and to ensure consistency in approach, recording of the 2005 and 2007 elements of the assemblage reflects the methodology used for the 2006 material (Table 3). The data from all three seasons of fieldwork have been incorporated into the one dataset, held in an Excel spreadsheet a copy of which is stored with the archive.

Prehistoric pottery

The small prehistoric assemblage comprised early Iron Age coarse flint-tempered sherds with fingertip decoration on the shoulder and rim, comparable to the 1st century BC examples at Chilgrove 1 and other sites within the area (Down 1979, 185, fig. 68). A range of bead rim jars and a saucepan pot with tooled decoration and horizontal rows of stab marks in flint fabrics were also present and a similar fabric was identified at Petersfield golf course, near Sheet (Seager-Smith unpublished).

Imported wares

There are few fine wares for this period, with samian accounting for just 1.4% (by eves), in addition to the few body sherds from single vessels of Central Gaulish black slipped and Moselkeramik. These latter vessels would not have reached Liss before the mid to late 2nd century AD (at the earliest), corresponding with the date range of much of the samian identified. Small quantities of central Gaulish black-slipped ware were recognised at Chilgrove 1, Chilgrove 2, and Upmarden, with Moselkeramik also recorded at both Chilgrove 1 and 2 (Young 1979, 194). If compared to a recent reappraisal of fine wares within villa assemblages in the region (Dicks 2007), then Liss falls within the low status range of sites identified during this occupational period. Comparable proportions of samian were identified at Holt Down (1.03%), Chalton (1.16%), Batten Hanger (1.73%) and Elsted (1.8%) (*ibid.* 77, table 7). At nearby Petersfield golf course, samian was the only fine ware recovered from excavations and accounted for 2% of the 935 sherds of the predominantly early Roman assemblage recovered (R Seager-Smith pers. comm.).

British fine and specialist wares (Fig. 17)

The large regional industries at Oxford and the New Forest dominated supply of fine wares to Liss from the mid to late 3rd century AD into the 4th century AD, and possibly beyond, although the proportion of fine wares at Liss were still minimal, comprising less than 3.5% of the assemblage by count (6.2% by eves). In keeping with the generally observed pattern in the area (Young 1979, 197; R Seager-Smith

Table 3 Quantification of pottery assemblage by sherd count, weight and eves

Ware Group	*No. sherds*	*No. sherds %*	*Weight (g)*	*Weight (g) %*	*Eves*	*% Eves*
Iron Age fabrics						
Coarse flint	23	0.31	390	0.46	0	0
Fine flint and sand	37	0.50	655	0.78	0.13	0.16
Flint	433	5.81	5,826	6.94	2.61	3.21
Grog	22	0.30	259	0.31	0.53	0.65
Sand	59	0.79	652	0.78	0.14	0.17
Iron Age fabrics sub total	574	7.71	7,782	9.27	3.41	4.20
Imported wares						
Samian	66	0.89	375	0.45	1.12	1.38
Central Gaulish Black-slipped	2	0.03	9	0.01		0.00
Moselkeramik	2	0.03	16	0.02		0.00
Imported wares sub total	70	0.94	400	0.48	1.12	1.38
Fine and Specialist wares						
Un-sourced colour coat wares	6	0.08	9	0.01	0.34	0.42
Lower Nene Valley colour coat	2	0.03	13	0.02	0	0.00
New Forest colour coat	116	1.56	1,192	1.42	4.57	5.62
New Forest mortaria	4	0.05	207	0.25	0.2	0.25
New Forest parchment ware	1	0.01	78	0.09	0.07	0.09
Oxford Colour coat ware	134	1.80	1,519	1.81	1.23	1.51
Oxford Colour coat mortaria	27	0.36	619	0.74	0.68	0.84
Oxfordshire white slipped mortaria	1	0.01	23	0.03	0.05	0.06
Oxfordshire white ware mortaria	13	0.17	516	0.61	0.07	0.09
White ware mortaria	3	0.04	142	0.17	0.02	0.02
White slipped oxidised mortaria	2	0.03	74	0.09	0	0.00
Fine and specialist wares sub total	309	4.15	4,392	5.23	7.23	8.90
Oxidised wares						
Oxidised	205	2.75	2,283	2.72	2.3	2.83
White ware	4	0.05	116	0.14	0.13	0.16
Oxidised sub total	209	2.81	2,399	2.86	2.43	2.99
Coarse wares						
Alice Holt reduced wares	2,686	36.07	33,544	39.97	40.84	50.25
Black Burnished Ware	28	0.38	400	0.48	0.38	0.47
Grey wares (un-sourced)	2,926	39.21	23,606	28.13	12.4	15.26
Overwey	378	5.08	5,315	6.33	7.99	9.83
Rowlands Castle	128	1.72	2,952	3.52	4.89	6.02
Grog	18	0.24	440	0.52	0.14	0.17
Sand	80	1.07	2,358	2.81	0.39	0.48
Coarse wares sub total	6,244	83.85	68,615	81.76	67.03	82.48
Post Roman wares						
Medieval	20	0.27	201	0.24	0	0.00
Post medieval	17	0.23	113	0.13	0.05	0.06
Modern	4	0.05	20	0.02	0	0.00
Post Roman Sub total	41	0.55	334	0.40	0.05	0.06
Total	7,447	100.00	83,922	100.00	81.27	100

pers. comm.) the New Forest products reaching Liss were principally enclosed vessels, with the Oxford industry supplying the majority of open forms. A particularly prolific New Forest form at Liss was the indented beaker type 27 (Fulford 2000, 50), although none was sufficiently well preserved or re-constructible to enable more precise form dating. Other New Forest vessels identified include the globular beaker form type 30, flagon form types 11 and 12, and the jug form type 17, all of 4th century AD date, and a probable type 93 (AD 320–340). Oxfordshire bowl forms comprised the common C45, C49 and C51 vessels. Single vessel examples of the decorated 4th century AD bowl forms C73 and C75 and two examples of the mid-late 4th century AD wall sided, bead rim, carinated Young type C84 bowl were also present.

Mortaria were poorly represented with single examples of Oxfordshire white ware mortaria (Young type M10, M17 and M22) and a single body sherd of an Oxfordshire white slipped vessel. The 4th century AD mortaria Young type C100 was marginally better represented than the common wall sided form C97, which although produced from the mid 3rdcentury AD is also well attested to in late 3rd and 4th century AD deposits (Young 1977 173). By contrast New Forest mortaria were restricted to just two body sherds and two rim sherds of types 103 and 104, thought to date from the late 3rd to mid 4th century AD, and early to late 4th century AD respectively. It is interesting to note that Fulford remarks on the similarity of these products to the Oxfordshire mortaria (Fulford 2000 76). At Liss, although later fine wares are overall poorly represented in terms of sherd count and weight, when comparing estimated vessel equivalents (eves) for fine wares and for mortaria, the amounts of 5.6% New Forest 1.5% Oxfordshire and 1.26% mortaria at Liss are most comparable to Batten Hanger where eves of 4.19%, 1.45% and 1.25% respectively were recorded (Dicks 2007). As at Liss, Batten Hanger was occupied until the late 4th century. Although providing a tool for comparison, the eve's data also reflects the different vessel forms being supplied by the two large fine ware industries. The preference for New Forest beakers and Oxfordshire bowls evident within the assemblage would result in a higher eves total for the smaller rims of enclosed beaker forms, as opposed to larger bowl rims which are likely to be more fragmentary. When compared by sherd count and weight these two industries are present in equal proportions.

Coarse wares (Fig. 17)

The reduced, wheel thrown, sandy wares dominate the assemblage as a whole comprising 83% by count (79% by weight, 83% by eves). As is often the case, the miscellaneous, un-sourced, presumably locally produced, grey wares comprise the largest proportion of this group. Given the main period of activity at the site, combined with its geographical location to the Alice Holt production area, it is not surprising that these kiln products form such a major component of the assemblage. Quantification by estimated vessel equivalents of the Alice Holt vessel types is presented in Table 4. A range of Alice Holt forms was identified, spanning the late 1st to 4th centuries AD, although relatively few vessels dating prior to the early 2nd century AD were present, all these forms are well documented in Lyne and Jefferies (1979). Reduced sandy fabrics from Rowlands Castle are also present at Liss, although they form only a minor component of the assemblage. The most common form present is the everted rim jar (form D1), comparable to early Alice Holt class 3A vessels, flanged and lid seated bowls and single examples of lid and jug forms. Black burnished ware sherds are rare within the assemblage, with less than thirty sherds recorded. Forms were restricted to plain and flanged bowls/dishes. Late Roman coarse grog-tempered sherds were rare, the

Fig. 17 (*opposite*) Examples of Roman pottery. **1** New Forest Type 11 flagon with globular body dated AD 300–370; **2** Local greyware Steamer Lid dated AD 70–400; **3** Overwey Class 3C.11 Triangular and hook rimmed Jar dated AD 300–400; **4** Rowlands Castle Class D2.2 Jar dated AD 80–350; **5** Overwey Type 5B.10 dish with obtuse lattice decoration dated AD 220–400; **6** Oxfordshire Type M22 Mortarium dated AD 240–400; **7** Alice Holt Class 9 Storage Jar dated AD 60–220. Drawn by Jonathan Dicks

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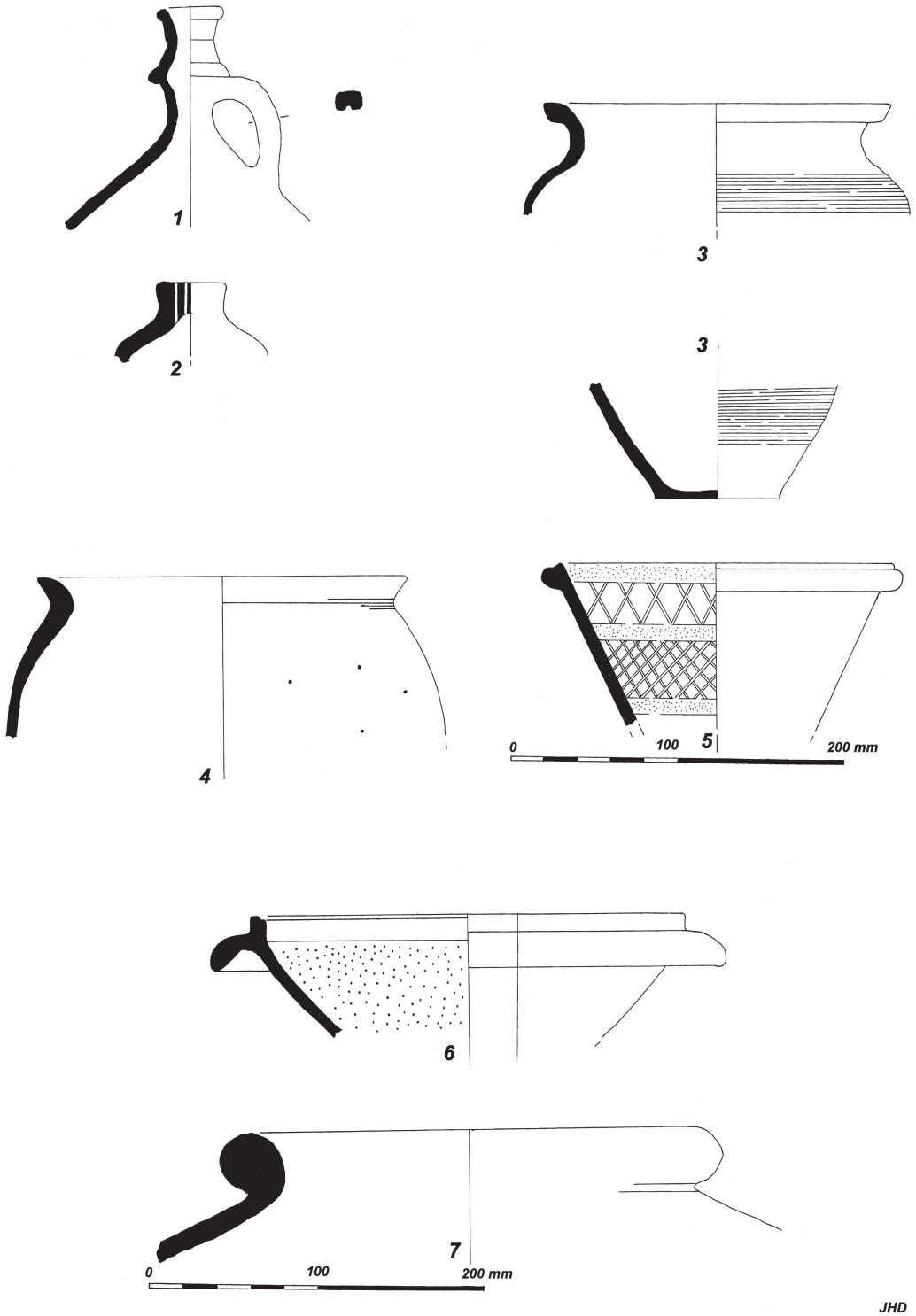
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Table 4 Quantification of Alice Holt vessel class by eves

Vessel class	*Description*	*EVEs*	*%*
1	Cordoned jar	4.67	11.4
1A	Cordoned and necked jar	1.36	3.3
1B	Flasks	0.39	1.0
1C	Large cordoned jars	0.51	1.2
3A	Flat rimmed jars	5.39	13.2
3B	Everted rim jars	5.54	13.6
3C	Hook rim jars	2.92	7.1
4	Bead rim jars	0.68	1.7
5	Bowls (Atrebatic)	0.94	2.3
5A	Flat and triangular rimmed bowls	0.73	1.8
5B	Beaded and flanged bowls	2.95	7.2
6	Dishes, lids	0.27	0.7
6A	Straight and convex sided dishes	2.31	5.7
6B	Flat and triangular rimmed dishes	0.44	1.1
6C	Beaded and flanged dishes	0.23	0.6
7	Lids	0.60	1.5
8	Flagons	0.85	2.1
9	Handmade storage jars	0.09	0.2
10	Large cable rimmed vessels	0.28	0.7
R	Miscellaneous rim fragments	9.69	23.7
Total		40.84	100.0

one notable example being the complete profile of a convex sided bowl/dish from the fill of gully (2027), associated with the timber building. Similar grog fabrics were identified at both the Chilgrove sites, from late 4th century AD and plough soil layers (Down 1979, 192). The low proportion of Rowlands Castle may in part be a reflection of chronology, with production thought to span the 1st to 3rd centuries AD, whereas much of the activity at Liss would appear, at least in terms of the pottery, to be focused on the late 3rd through to 4th and possibly into the 5th century AD.

Although there were hints of earlier Roman activity at the site, it is unclear whether or not this represents continuous, low level occupation from the late Iron Age through to the early to mid 2nd century AD and beyond. There was certainly evidence of occupation from the Late Iron Age into the 2nd century AD to the south of Liss, at Petersfield golf club near Sheet, including possibly small scale pottery production, and the early Roman pottery at Liss may represent similar occupation in the vicinity of the excavated areas. The overall impression from the Liss assemblage is, however, that of a low-status, late Roman rural assemblage, with no evidence within the pottery assemblage to suggest anything other than domestic occupation.

Glass by Denise Allen

Window glass

A high proportion of the glass found on the site can be identified as window glass. Two methods of manufacture were used during the Roman period: cast matt-glossy panes which seem to occur up until about AD 300, and double glossy cylinder-blown panes which were more common during the 4th century AD. Both production methods are described in Allen (2002, 102–111). Both types can be identified here, with the later variety being the most numerous.

There are 41 fragments of cast window glass, of which 35 were blue-green, four were yellowish – colourless, and two were colourless. There were 214 fragments of cylinder blown window glass identified, of which 71 fragments of blue-green glass were found in Bathhouse 1 (1507). Some of these join together and are of a similar colour, but they may not all be from the same pane of glass. These pieces are unusual in that they have the characteristics of blown window glass, but are rather thicker than normal for this type, and are coarsely made. The remaining fragments comprise a further 121 of blue-green, 20 of pale green, one colourless and one of yellow-green glass.

Vessel glass

There were 82 fragments of vessel glass found, of which only six have characteristics which date them to before the later 3rd century AD. These include two blue-green bottle fragments (Price & Cottam 1998, 191–200, figs 88–90), two fine colourless fragments, one of which has evidence of wheel-cutting, and two blue-green unguent bottle or flask fragments.

The remaining vessel fragments of pale green, yellow-green and colourless glass include perhaps 16 late Roman drinking vessels. Thirty three fragments are likely to represent at least 11 conical beakers, of a type common in the late 3rd to 4th centuries AD (Price & Cottam 1998, 121–3, fig. 50). These include several typical cracked-off rims, and some are decorated with horizontal wheel-incised lines, and one has a trail. Eight fragments are likely to be from possibly five indented or convex bowls, which are also typical 4th century AD types (Price & Cottam 1998, 124–9, figs 51 and 53).

There were also two fragments with typical late decorations: an applied blob of dark blue glass, and a mould – blown pattern of hexagons. These may have been vessels which were of higher quality, but the forms cannot be identified.

A further 23 fragments include some likely to have been from flasks and jugs of the late Roman period (Price & Cottam 1998, figs 71 and 72) and some which are vessel bases which cannot be assigned to any specific form – some may be drinking vessels.

Conclusion

The majority of both window and vessel glass dates from the late 3rd and 4th centuries AD. Earlier vessel glass was represented by only six fragments whilst cast window glass was rather more numerous. Drinking vessels and serving vessels of the late Roman period were quite well represented, and included one or two pieces which may have been quite fine, albeit only present as small fragments. The largest part of the assemblage was made up of cylinder-blown window glass, also typical of the later period.

Roofing material by Peter Warry

Several complete *tegulae* come from the excavations at Liss, and signatures were seen on many of the *tegulae* in the assemblage. Three Group A *tegulae* were found, dating to AD 40–120, which indicates that a Roman-style building was on the site from an early period (Warry 2006). Six Group B *tegulae* were also identified, dating the settlement at the site as pre AD 180. However, most were Group C, Group D and Regional Group R7. This indicates continual use of the site through to the end of the 4th century AD. Six Regional Group R7 tiles are part of a group only found in Hampshire and the Isle of Wight, at Sparsholt, Crookhorn, Grateley and Houghton Down. Liss is the most easterly site for this group. Regional Group R7 is not represented at Fishbourne, Bignor, Batten Hanger or Chilgrove, which are south and west of Liss.

Many of the *tegulae* have linear marks evidencing the way they were stacked for drying, and they are the best examples of this process so far discovered in Roman Britain.

It is unusual to find examples of all four periods on one site, and so it was decided to store almost all of the *tegulae* found at Liss in the archive at Chilcomb House in Winchester for future research. It should be mentioned, however, that the landowner has decided to keep a few of the most complete examples.

Faunal remains by Sheila Hamilton-Dyer

The condition of the animal bone was generally good and over 2,000 individual specimens were recorded from the excavations. Most of the bones are of cattle or cattle-sized fragments and the majority of the meat consumed at the site would have been beef (Table 5). Butchery marks can be clearly observed on several bones and relate to the removal of the hide, head and feet; the division of the carcass, and others from filleting. Of particular interest were the scapulae, some of which had a distinctive butchery style. It is thought that these scapulae represent cured shoulder joints, trimmed and then brined and probably smoked (Dobney *et al.* 1996, Lauwerier 1988). They are quite frequently found in butchery dumps at military and urban sites but are rare at rural sites (cf. Hamilton-Dyer 1993; 1997; Maltby 1989; 1993; O'Connor 1986). Their presence at Liss implies either a specialist butcher on site or, more likely, the purchase of ready-cured joints from an urban centre such as nearby Neatham.

The few measurements that are available on the cattle bones fit well with other material from the south and east; the animals would have been larger than many from the preceding Iron Age period, although smaller than most recent breeds (Maltby 1981).

Although most of the meat supply would have been beef, remains of pig were more common than is usual on rural Roman sites (King 1988). Sheep and goat were also present but in much smaller quantities. The few horse bones and teeth found were probably not from consumed animals, but there is evidence that they may sometimes have been used for bone-working or glue and their hides could also have been utilised.

Remains of wild animals are few but they include both red deer and roe. These would have provided not only hunting sport and meat but also raw material in the form of antler for artefacts such as the lathe-turned spindle whorl.

Bones of birds are quite frequent and are mainly of domestic fowl (chicken); a few bones are of domestic/greylag goose, domestic duck/mallard, wild duck (probably wigeon) and the woodcock, a common wader adapted to breeding in woodland.

Fish remains are few but they do include herring and shark, indicating the availability of marine fish to the inhabitants. The main marine food consumed, however, was shellfish; over 16 kg of mollusc shell was recovered from the 2005 – 2007 excavations. These were the remains of oysters, whelks, winkles, mussels and limpets with oysters the most frequent. These shellfish would have remained alive and fresh for the relatively short journey from the coast, especially in cold weather.

Last but not least of the animals represented at Liss are the dogs. Their presence is indicated by gnawed bones across the site but dog bones were only found in one location, Well 1. In the upper fill of this feature, directly below a group of six coins, the skeleton of a dog was discovered. It had been laid on its left side with its head resting on a large stone and it was lifted out on a board as a single unit. The dog was male and would have been about eighteen months old at death. The bones were slightly smaller than a recent greyhound specimen but were of the same general build. Material recovered from the stomach area showed that the last meal had included several beef bones. The animal had suffered fractures of the forelegs that were partially healed at the time of death. In addition, the remains of a neonatal puppy were found near the forepaws.

The finding of dog skeletons in pits, wells and shafts is a common phenomenon of both Iron Age and Roman sites (Maltby 2010a; 2010b; Morris 2010). The deliberate placement of the dogs at Liss strongly suggests a votive purpose, perhaps marking the final closure of the well.

DISCUSSION

There is some evidence for Mesolithic activity

Table 5 Animal bones from Liss Roman villa, given as identified specimens (NISP)

Phase	*Main (hand)*	*Main (sieved)*	*Plough soil*	*Total*
Horse, *Equus caballus*	15	0	2	17
Cattle, *Bos taurus*	214	1	38	253
Sheep and/or goat, *Ovis/Capra*	74	1	10	85
Pig, *Sus domesticus*	230	11	26	267
Red deer, *Cervus elaphus*	16			16
Roe, *Capreolus capreolus*	2			2
large mammal, cattle-sized	417	3	72	492
large mammal, sheep/pig-sized	244	5	32	281
mammal, indeterminate	196	88	13	297
Dog, *Canis familiaris*	136*	1		137
Cat, *Felis catus*	1			1
Hare, *Lepus europaeus*	1			1
Rabbit, *Oryctolagus cuniculus*	102*		16	118
Badger, *Meles meles*	8			8
indeterminate medium-sized mammal	2			2
Woodmouse, *Apodemus sp.*		1		1
Shrew, *Sorex sp.*		4		4
indeterminate small mammal		7		7
Domestic fowl, *Gallus gallus*	39	1	3	43
Goose, domestic/greylag, *Anser anser*	2			
Duck, mallard/domestic, *Anas platyrhynchos*	4	1	1	6
Duck, other species	3			3
Wader cf. woodcock, *Scolopax rusticola*	3	1		4
Corvid, crow family, Corvidae	1			1
Small passerine eg thrush/blackbird	3	15		18
indeterminate bird	21	6	1	28
Amphibian		7		7
Shark		4		4
Herring, *Clupea harengus*		1		1
Cyprinid, carp family, Cyprinidae		1		1
indeterminate fish		10		10
Total NISP	1734	169	214	2115

* The dog and rabbit totals include partially articulated skeletons. The MNI are 2 and 3 respectively. The rabbit bones were probably intrusive.

on the site, in the form of two cores and two waste blades. However, this is too little in itself to point to any settled presence. A Neolithic axe and knife and a Bronze Age arrowhead, also recovered from the excavations, are again more likely to be the result of 'casual' loss rather than any static activity.

It is not until the Iron Age that a greater concentration of artefacts points to the beginnings of settlement. A number of pits and post-holes

are probably to be dated to this period, but no obvious pattern of settlement was discernible.

From the end of the Iron Age to the mid 3rd century AD, the quantity of artefacts remains few, with no dateable features on the site. The results from the specialist reports, however, strongly suggest that the site was occupied from the Iron Age through to the end of the Roman period. This is supported mainly by the roofing tile, the window glass, the coins, the metalwork and the pottery.

The second half of the 3rd century AD seems to mark the beginning of a marked increase in activity on the site. It is probable that at around this date, a large aisled building was constructed at the southern end of the modern field, placed upon the brow of a south facing slope. Sometime between AD 270 and 300 a bathhouse was constructed adjacent to the west end of this building and subsequently attached to it by a short corridor.

Meanwhile, at the northern end of the site, a second timber structure was erected, again with an attached bathhouse. The two complexes were joined by a boundary bank and ditch running from their eastern ends. It is probable that this boundary surrounded a large courtyard created between the northern and southern ranges.

In the 4th century AD, sometime after AD 320, the northern bathhouse was enlarged with the addition of a plunge pool and an extension to its heated block. This necessitated a re-alignment of the eastern boundary, which was moved to the east to accommodate the new building.

Meanwhile, at the southern end of the site a new bathhouse was built to replace that already in existence, with the latter being changed to a different use. The final main phase on the site seems to have occurred sometime after AD 350 when an eastern block was added to the southern range, the whole, by this stage, probably forming one large unified structure. This final building phase forced another shift in the eastern boundary, and a new fence-line was erected, yet further east.

It is impossible to say for how long after this last phase of growth, the site continued to be occupied, but at some stage after the end of the Roman period, all the structures were abandoned. It is likely that the site was extensively robbed in medieval and later times for its building stone, possibly including some destined for the construction of Lyss Place to the west. The only subsequent visible sign of occupation in the field, excepting changing field boundaries, was a square structure erected over the ruins of the first bathhouse, possibly for use as a small barn. It is not known when this was built, but it probably belongs to the medieval or post-medieval periods.

The site as excavated at Liss would appear to be a fairly low-status villa, occupied until the end of the Roman period, whose principal activities would have been focused on agriculture. The high percentage of pig bones on the site may point to a greater concentration on this form of husbandry than seems to be the norm for similar villas in the area, but cattle were still the dominant livestock. A limited amount of metal-working seems to have also been undertaken on the site, but this may well have been purely for the inhabitants' own consumption.

Two main complexes of buildings were identified around a central courtyard, with the southern of the two being the more important. It is possible that this may mark the dwellings of two related families or of an owner and his workforce.

The late Roman date for the villa at Liss, taken together with that for many of the other villas in the area, including the villa at Stroud nearby, lends weight to the theory that a significant change in the rural economy occurred in the later 3rd century AD. A study of the villas in East Hampshire and West Sussex with their pottery assemblages and settlement pattern, showed that there was a relationship between the socio-economic status of a villa and the percentage of fine wares in the associated pottery assemblage (Dicks 2007). From this study, the inhabitants of the villa at Liss would have been 'medium status', based on the percentage of fine wares found during the excavations.

The evidence for trade links points both to north and south, with the proximity of the Chichester to Silchester Roman road providing relatively easy access to markets in both towns. It is not surprising that the bulk of the pottery comes from the Alice Holt kilns, since they

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lie only a short distance to the north. Some at least of the roofing tiles are likely to have come from the north, since they are of a Hampshire type, whereas the limestone roof tiles probably came from the West Country via the port of Chichester. The two small towns of Neatham and Iping, which lie on the routes to Silchester and Chichester respectively, may well have served as markets for more everyday items.

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