Prehistoric & Roman Sites in East Devon: the A30 Honiton to Exeter Improvement DBFO Scheme, 1996-9

A.P. Fitzpatrick, C.A. Butterworth & J. Grove

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Volume 2

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by A.P. Fitzpatrick, C.A. Butterworth, and J. Grove

Volume 2: Romano-British Sites

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Volume 2: Romano-British Sites

with contributions from

Michael J. Allen, Phil Andrews, Peter S. Bellamy, Alan J. Clapham, Hayley F. Clark, Nicholas Cooke, R.A. Davis, Brenda Dickinson, Rowena Gale, F.M. Griffith, P.A. Harding, M. Laidlaw, Emma Loader, Lorraine Mepham, J.M. Mills, Mark Robinson, Robert G. Scaife, Rachael Seager Smith, C.J. Stevens, R.S.O. Tomlin, David F. Williams, and Sarah F. Wyles

Principal illustrator K.M. Nichols, with Rob Goller

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Front cover: The interior of the Roman military base at Pomeroy Wood under excavation looking east, with Honiton in the background, in March 1998. Much of the interior of the base was destroyed without any record being made in the 1960s when the old A30, to the left of the photograph, was built (photograph by Elaine A. Wakefield).

Back cover: (left to right), excavating a Roman period round-house at Pomeroy Wood, the house having been cut in half by the old A30; excavating a grain drier at Pomeroy Wood with the old road to the north, and augering a well at Pomeroy Wood (photographs by Elaine A. Wakefield).

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10. Pomeroy Wood

by J. Grove

Introduction, by A.P. Fitzpatrick and J. Grove

The sites reported in this volume in Chapters 10 and 11 are Roman in date; a military base, and a later roadside civil settlement. The two main excavations, Pomeroy Wood and Gittisham Forge lay either side of the Nag's Head stream, a northward flowing tributary of the River Otter. Neither site was known before the road building started and both were identified during the Watching Brief. The sites at Pomeroy Wood were found in August 1997 during the Watching Brief over the excavation of drainage ditches next to the route of the new road which cut through a series of linear features extending over 300 m. Most of the features first recognised at Pomeroy Wood contained Roman pottery. The site at Gittisham Forge was first identified in the winter of 1996 and the evaluation works on that site are described below in Chapter 11. The phrase 'military base' is used throughout to describe the military activity at Pomeroy Wood as the true character of the site is not known. Known sites of Roman date in the area are shown on Figures 104 and 178.

Topography, Geology and Land-use

Pomeroy Wood (centred on SY 1325 9930) lies on a spur to the west of the Nag's Head stream, encompassing a shallow fall from 86 m AOD to 82.85 m in the west, over a length of 350 m. The military base was sited on the highest point of the spur of upper Keuper Marls overlooking the floodplain of the River Otter to the north, with commanding views along the valley to the west and east. A large area of relatively flat land lies to the south of the site. Before the excavation the appearance of the site had been much altered by the excavation of a cutting for one carriageway of the existing A30 to the north, and the building of an embankment for the London to Exeter railway to the south. This denied the true prospect of the site, which is most noticeable as a promontory on older maps, such as the first edition of the 1" Ordnance Survey map of 1806. The site was previously arable farmland, and part of the now adjoining fields to the south.

Excavation Areas

Following the preparation of a site-specific project design, seven evaluation trenches were excavated, three of which were areas of 10 x 10 m. These trenches confirmed the presence of the linear features and also extensive layers containing Roman material.

The area to be excavated and stripped of topsoil was agreed and a revised project design was issued. This specified that, in addition to the full excavation of the

Plate 23 Pomeroy Wood: general view of the excavations viewed from the east before the area was extended to the north

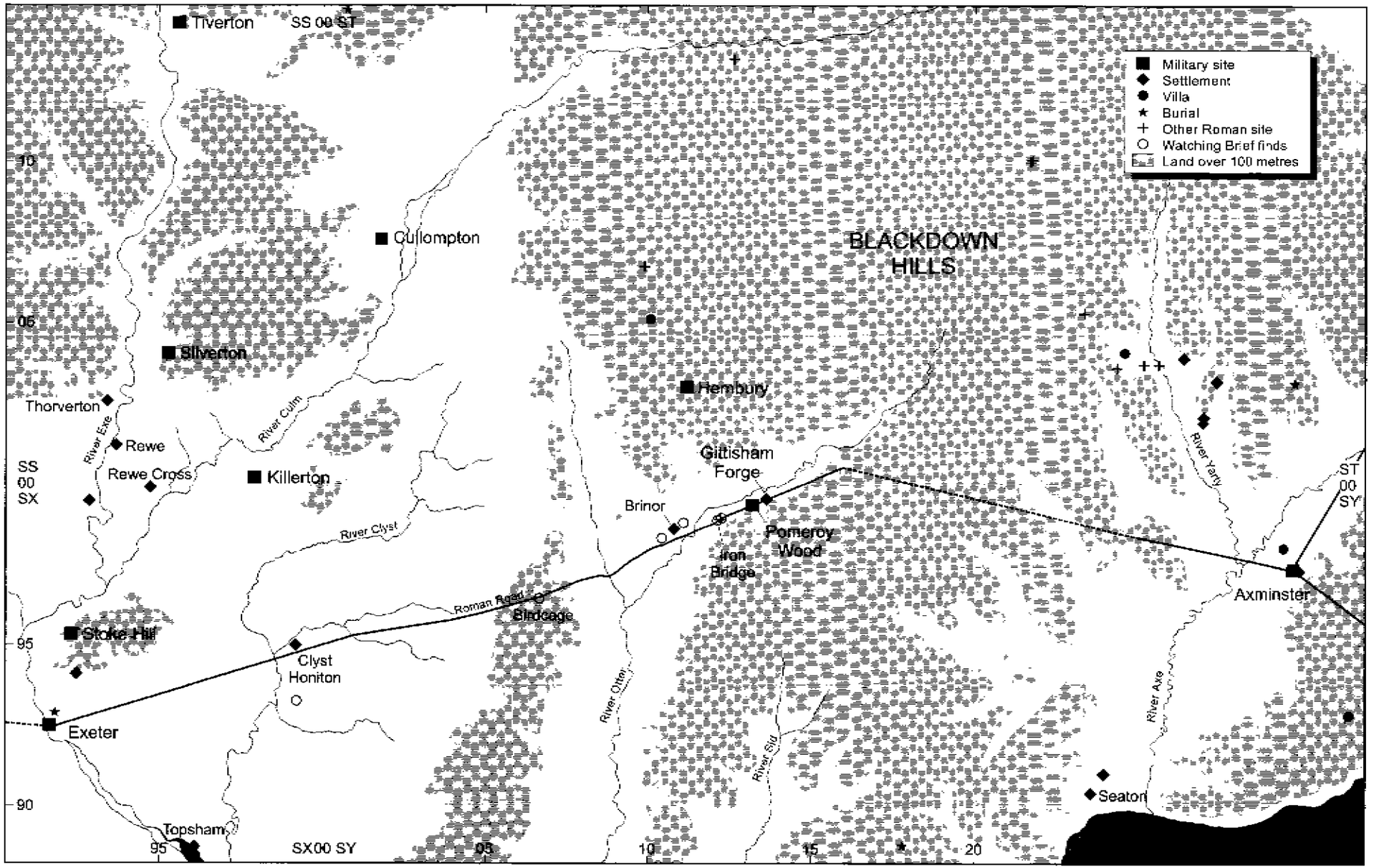


Figure 104 *Distribution of Roman and Romano-British sites around Pomeroy Wood (source: Devon County Council Sites and Monuments Register)*

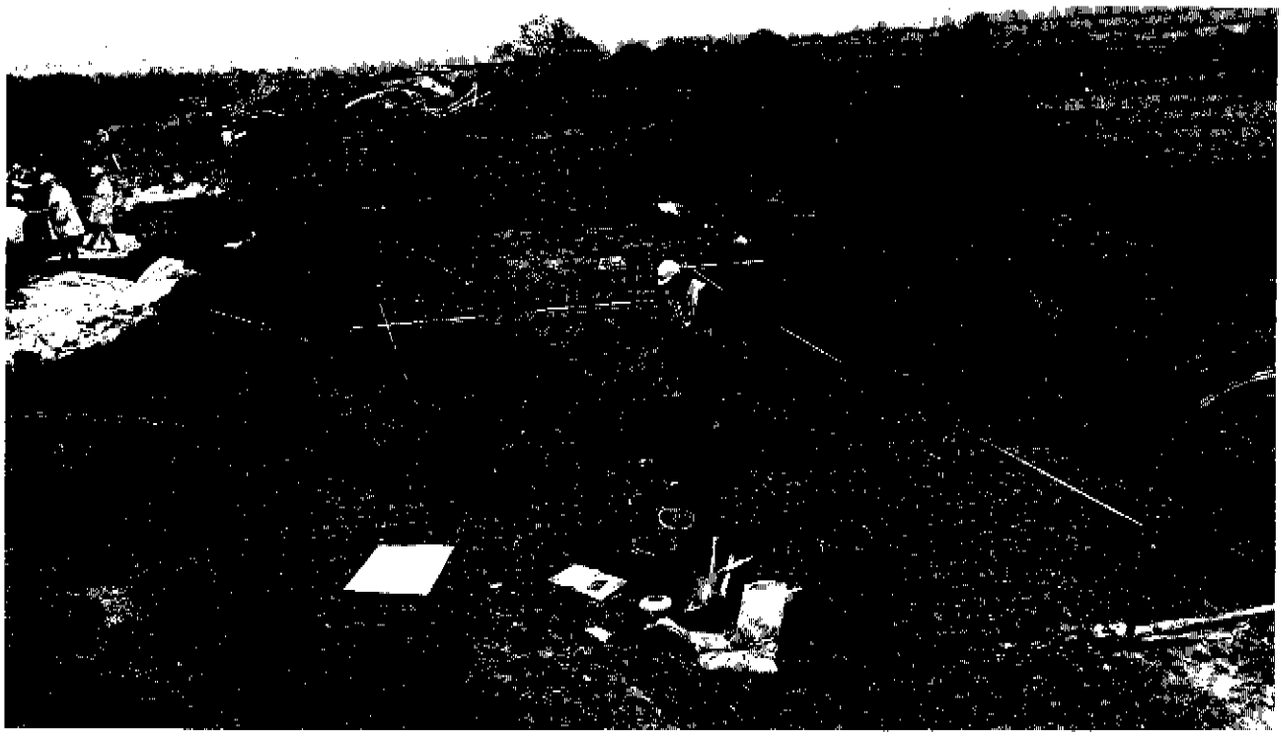


Plate 24 *Pomeroy Wood: segments 4000 and 4078 of the defensive ditches of the military base under excavation, viewed from the west (see Pls 26–7). Spoil from the northern part of the site has been side-cast onto the excavated southern part*

Plate 25 *Pomeroy Wood: general view of building 3415 under excavation, viewed from the south before the fence line of the A30 was removed and the area extended to the north*

area on which the site compound was to be sited, areas distributed over the remainder of the excavation area totalling some 250 square metres should be examined by hand as Stage 1. Stage 2 was the excavation of the remainder of the area, to which a Watching Brief was subsequently appended. In total an area of 5920 square metres was examined at Pomeroy Wood (see Plans 1 and 2). Stages 1 and 2 and the excavation at Gittisham Forge took place from November 1997 to May 1998 in order to ensure that the road building programme was not delayed by the archaeological excavation of these unknown sites.

Methods

Standard excavation and recording procedures (Site code W2414.16) were followed at both sites, though with a few local variations. At Pomeroy Wood temporary shelters were erected, and areas of the site required pumping to keep them workable. It was also necessary to stock pile the spoil, including that of the topsoil stripping, on site (Pl. 23). When the true character of the military base became apparent, the area was extended to the north and the spoil from this side cast on the area already excavated. This stage of recording was undertaken as a Watching Brief (and is illustrated on the front cover of this volume). Because of this, most of the buildings in the northern part of the area examined were recorded in two stages and the complete plans of several buildings, for example building 3545 and round-house 3415 (Pls 25 and 32) were not visible in their entirety at any time.

The opportunity was also taken at this stage to increase the sample examined of the primary fills of the defensive ditches by removing the phase 4 deposits and the upper part of those of phase 3 using a mechanical excavator. The lower fills were excavated manually (Pl. 24). In view of the archaeological sensitivity of the site, the removal of the spoil heaps raised during the excavation and the topsoil stripping of those areas which had lain beneath them was undertaken as a Watching Brief under archaeological supervision which allowed the fullest possible extent of the site to be examined within the resources available. These methods cannot lay claim to being archaeologically attractive, still less photogenic, but they were the most effective which could be employed in the circumstances. Finally a 'conventional' Watching Brief was undertaken over the roadside verges and the other margins of the excavated area during road building. The features recorded in that stage of work are prefixed '(WB)' in this report.

The wells on the main site were also excavated by hand to a depth of 1.2 m. The Health and Safety requirements of the road building programme meant that further excavation by hand within the confined space of the wells was not practicable, so further excavation was undertaken by reducing the ground surface around the wells by 1.2 m at a time using a mechanical excavator. The series of sections was then excavated by hand. The excavation, which resulted in a large, stepped, trench ceased at the level of the foundation of the road. While unconventional, and in some regards unattractive (Pl. 30), this method proved to be effective and produced better results in a safe working environment than would have been obtained from working in a confined space.

Post-medieval and later field drains, modern fence lines and geotechnical pits were recorded but are not described further here. It was not possible to secure permission to undertake a geophysical survey north of the existing A30 in order to define the extent of the military base and later civil settlement.

Results, by J. Grove

A considerable depth of stratigraphy was recorded over much of Pomeroy Wood, particularly in the upper fills of the defensive ditches of the base. These sequences have allowed most features to be ascribed to phase on the basis of stratigraphy or the associated pottery, or a combination of both. As the pottery assemblage associated with the military activity is distinctive it has usually been possible to identify earlier material redeposited in later contexts. Most of the features which cannot be attributed to phase are post-holes which did not contain any finds. However, there are a few other undated features which are thought likely to belong to a certain phase. The reasons for the attribution of these features is made clear. The location of features by phase is given on Plans 1 and 2 at the back of the volume.

Seven phases of activity are distinguished:

1. prehistoric
2. the Roman military base
3. abandonment of the military base
4. Roman civil settlement
4i. later 1st–3rd centuries
4ii. 3rd–4th centuries
5. abandonment of the civil settlement
6. Post-medieval and modern

There are three main phases of activity. Phase 2 represents the occupation of the Roman base and phase 3 its abandonment and demolition. Two sub-phases of military activity are identified in Phase 2 on stratigraphic grounds, but no finer dating is possible on the basis of the associated finds. Phase 4 is the ensuing, civil settlement and this phase is sub-divided into 4i and 4ii which span the late 1st to early 3rd centuries (called 2nd–3rd century hereafter for simplicity) and the 3rd–4th centuries respectively. The other phases of activity are less well represented. It is probable that many of the undated features within the area occupied by the military base, mostly post-holes, are Roman in date (Plan 1). Despite careful analysis these features cannot be attributed securely to buildings or other groups of features. As the preservation of features was at its best within this area, their location does not provide sufficient grounds on which to attribute them to the military occupation(s) so they have been excluded from the analyses.

Prehistoric (Phase 1)

A considerable quantity of flaked stone was recovered, but mainly from contexts of Roman date. Few features certainly of prehistoric date were identified. These

Table 68: Pomeroy Wood, dimensions of ditches

No.	*Width (m)*	*Depth (m)*	*Length (m)*	*Profile**	*Phase*
3032	0.85	0.35	5.60	irregular	1
3206	1.40	0.10	2.30		?1
3883	1.35	0.19	13		?1
703	0.80	0.20	3.50		?1
748	3.05-3.50	1.45-1.90	90	steep, 'ankle-breaker'	2
3057	2.20-3.15	1.47-1.85	106	as 748	2
785	3.50-4.00	1.65	17.25	even base	2
3626	0.45	0.19	16.50		2
649	0.75	0.26	7.50		2
3265	1.20	0.45	14		4i
3283	0.60	0.18	5.50		
4720	1.10-1.40	0.50-0.70	12.50	steep V, flat base	4i
3834	2.10	1.40	17.25	v(recut 785)	4i
4734	1.50-2.75	0.30	17.5	broad	4i
4085	1.00-1.45	0.50	78		4i
4711	0.50-1.20	0.20	31		4i
4710	1.40	0.31	13		4i
4708	0.30-0.50	0.26	11.50	steep V	4i
927	1.20	0.75	2.50		4i
103	0.70	0.28	2.40		4i
3256	0.70	0.26	15		4i
4716	1.00	0.35-0.60	23	slot in base	4i
4717	0.75	0.20	9		4i
826	0.40-0.60	0.20	17		4ii
4714	0.55	0.54	7.25		4ii
4713	1.30	0.65	33	steep	4ii
651	1.90	0.40	16		4ii
3247	1.70	1.04	15	steep V	4ii
4707	0.20-0.75	0.08	19.50		4ii
4712	0.30-0.50	0.12	14		4ii
944	0.55	0.15	2.40		4ii
3997	1.38	0.18	4.00	truncated	?4i
3995	1.00	0.06	4.00	truncated	?4i
3173	1.35	0.19	2.00		
3175	1.00	0.20	1.25		RB
4068	1.54	0.34	17.25		
3892	1.15	0.50	7		
950	1.30	0.75	2.50		
4735	1.00		2.00	unexcavated	
945	1.10	0.25	2.20	irregular	
3231	0.80	0.2	10	hedgeline ditches	6
3203	1.00	0.11	14		6

*concave unless stated otherwise

Table 69: Pomeroy Wood, dimensions of pits

Pit	*Dimensions / diam. (m)*	*Depth (m)*	*Comment*	*No. fills*	*Phase*
751	0.60	0.28	clay filled	1	1
4398	3.25x0.94	0.68		2	?1
4498	1.89x1.22	0.44	midden	11	2
3495	1.76x0.64	0.36	rectangular	3	2
4315	1.60	0.80	cess pit	7	2
4457	1.75x1.60	0.70		6	2
4294	1.60x1.00	0.25	?industrial	1	2
4187	2.20x1.15	0.57	storage/water tank?	3	?2
4061	1.15x1.10	0.40		2	4i
4120	3.25x1.50	0.68	cesspit/water tank	8	4i
4083	2.65x0.90	0.55		1	4i
819	1.90	1.16	cess pit	8	4i
3444	0.48x0.30	0.18		2	4i
3445	0.75x0.55	0.33		1	4i
3552	0.50x0.46	0.20		1	4i
3441	0.68	0.40		1	4i
3434	0.60	0.20		1	4i
3338	0.55x0.40	0.27	hearth	6	4i
3294	2.40x2.00	0.25	midden	1	4i
3876	2.00x0.70	0.06	?midden	1	4i
4486	1.00	0.20		1	4i
4265	3.05x1.08	0.19	?post-pads	2	4i
3159	1.00	0.18		3	4i
3636	0.75x0.30	0.20	clay lined	3	4ii
3146	0.70	0.20		2	4ii
653	1.18x0.42	0.07	hollow	1	4ii
3073	1.90x1.00	0.20		1	4ii
3209	0.64	0.24		2	4i/ii
4370	0.70x0.32	0.29		2	4i/ii
3507	0.60	0.11	charcoal filled	1	
3512	1.90x1.26	0.14	scoop	1	
4220	1.00	0.25	truncated	1	
749	0.73	0.20	clay filled	1	
3664	0.49x0.42	0.30	charcoal filled	1	
3978	0.40	0.30	clay filled	1	
3040	1.30x1.00	0.20		1	
745	0.57	0.30		1	
955	1.50x1.20	0.19	hollow/pit	1	
3454	1.51x1.23	0.21		2	
3841	0.75	0.19		1	
3885	0.80x0.54	0.13		1	
4036	0.70x0.40	0.19		1	
4075	0.80	0.14		1	
4269	1.00x0.45	0.15		1	
4404	0.89	0.25		1	
3416	3.50x1.65	0.42	?tree throw	1	

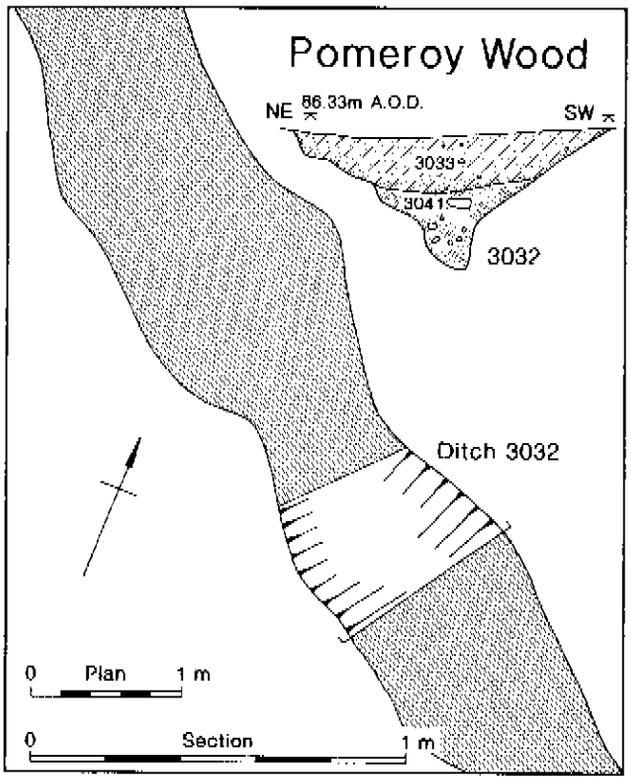


Figure 105 Pomeroy Wood: plan and section of ditch 3032

features do not form a coherent group, and do not represent an occupation site (Plan 2). Only one ditch, 3032 (Fig. 105, Table 68) and a pit, 751, can be assigned to the prehistoric period. Even here though it is possible that the Bronze Age pottery within 751 (Table 69) may be redeposited or introduced to the site as it is adjacent to feature 637 and its fill was very similar to ones within the Roman grain drier. Ditch 3032, 0.35 m deep, 0.85 m wide, was cut by 1st century Roman ditches and was aligned north-west to south-east. It contained flint cores and flakes.

Some other poorly dated features may also be prehistoric in origin, most notably ditch 3883 (Table 68) which contained flaked stone and the fill was lighter in colour than those of the Roman ditches. Feature 4398 (Table 69) was stratified below early Roman pit 4294, and contained flaked stone in fills which appeared to have accumulated naturally, which may indicate that it was a natural feature such as a tree-throw in which the flaked stone was incorporated. The shallow linear features 3206 and 703 (Table 68) which were on different alignments to and pre-dated Roman ditches may also be of prehistoric date.

It is clear then that there was some activity on the site, probably in the Late Neolithic/Early Bronze Age, but the great majority of the flaked stone was found in features of Roman or later date. It is possible that the activities in which the objects of flaked stone were used did not involve the building of earthfast structures or the digging of pits, but in relation to other sites examined in the course of the project the quantity of material is very large in comparison to the number and size of the features excavated. It is possible that some of the flaked stone was incorporated in the turves brought to the site, probably from very close by, to provide the turf facing(s) for the earthen rampart of the Roman military base. The later prehistoric material; a glass bead of Iron Age type and a small quantity of pottery of Iron Age type seem likely to have arrived at the site with the incoming garrison of the military base in the 60s AD.

The Roman Military Base (Phase 2)

An area 160 x 15 m contained the southern defences of a military base sited on the highest, eastern, point of the spur with traces of some internal buildings and related features, and an outwork or annexe to the west (Plan 1). The full extent or character of the site is not known. It may have been a small fort but the possibilities that it is, for example, an annexe or some other form of compound cannot be excluded. The base was probably founded in the 60s AD and may have been given up in the 80s.

The defences

The defensive ditches consisted of two continuous parallel ditches, 748 and 3057, defining an area 75 x 10 m. There was no indication of an entrance on the south side, where the ditches were continuous, and there was no evidence for a gateway. An interval tower was added subsequently to the rear of the southern rampart but no other interval or corner towers were recorded. A large outwork or annexe ditch was recorded to the west of the base. To the north, much of the military base must have been removed during road-widening operations in the 1960s (Belsey 1993, 29) (Pl. 25). Although the lower fills of well 3047 in the interior of the base were waterlogged when excavated, there was no evidence to suggest that the defensive ditches had been permanently waterlogged in antiquity.

Situated 1.5–2.5 m apart, the continuous ditches were similar in size (Table 68); the outer ditch 3057 (Fig. 106) was slightly narrower in parts but both showed depths ranging between 1.45 and 1.9 m (Pls 24–6). All segments excavated exhibited a narrow 'ankle-breaker'

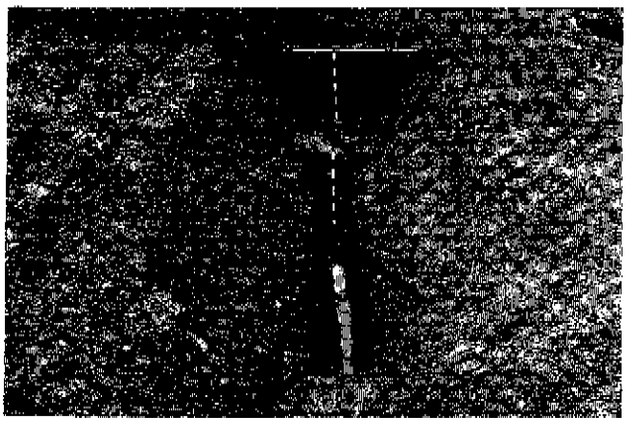


Plate 26 Pomeroy Wood: west facing section of segment 4000 of the outer defensive ditch of the military base. The excavation has been stepped for health and safety reasons (see Pl. 24)

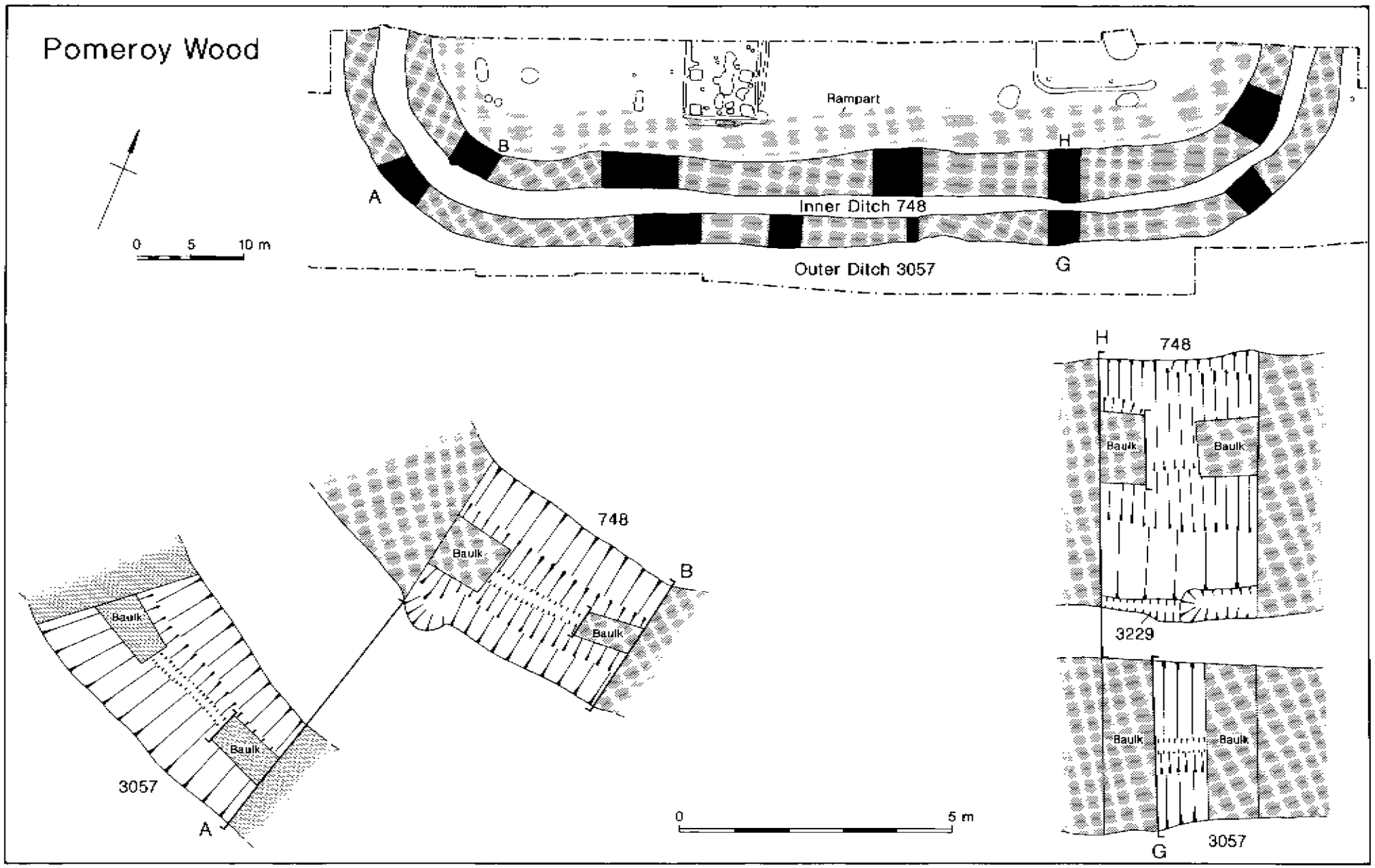


Figure 106 *Pomeroy Wood: plan of excavated segments of the defensive ditches of the military base, with probable location of rampart*

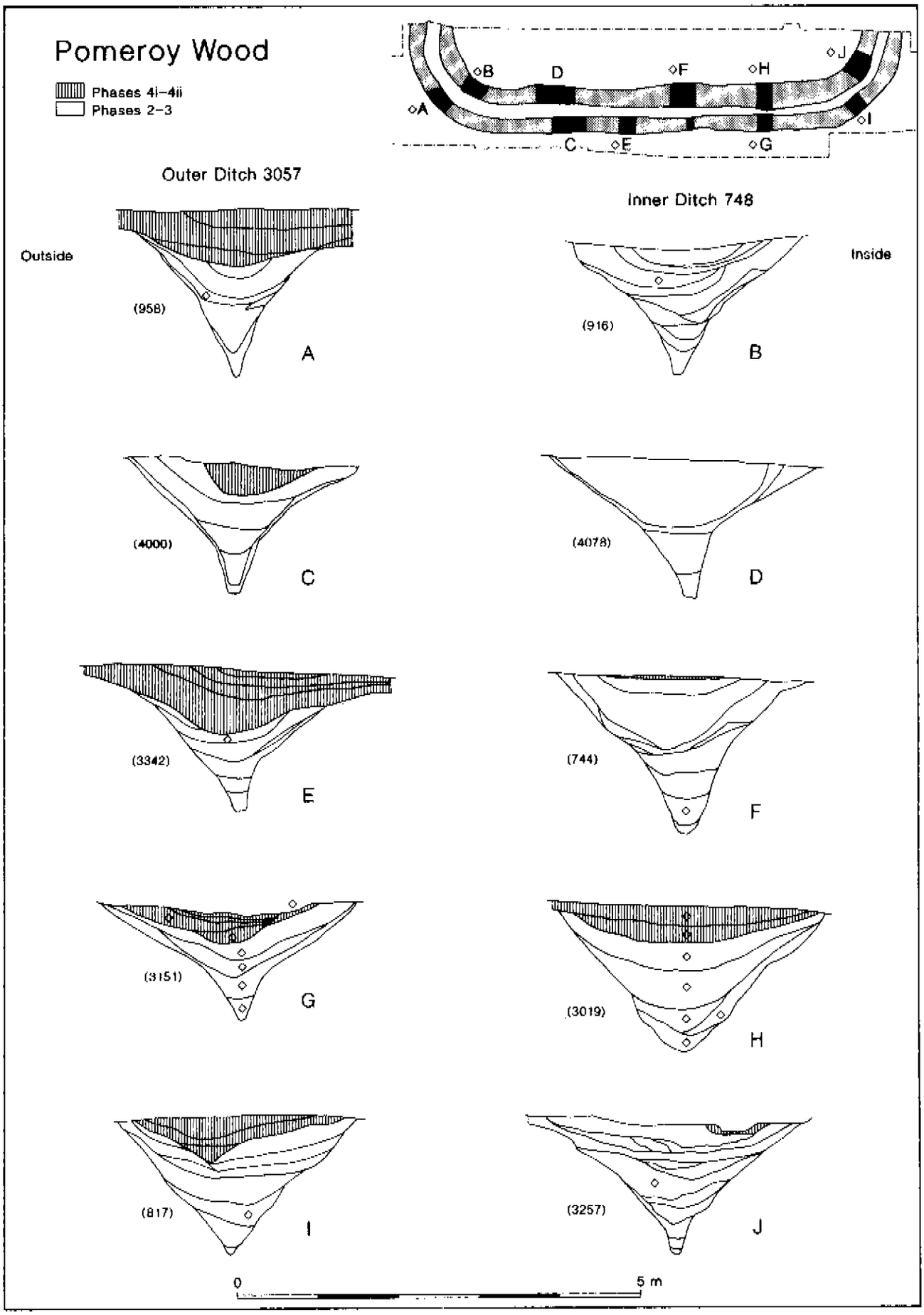


Figure 107 Pomeroy Wood: simplified sections of the defensive ditches of the military base

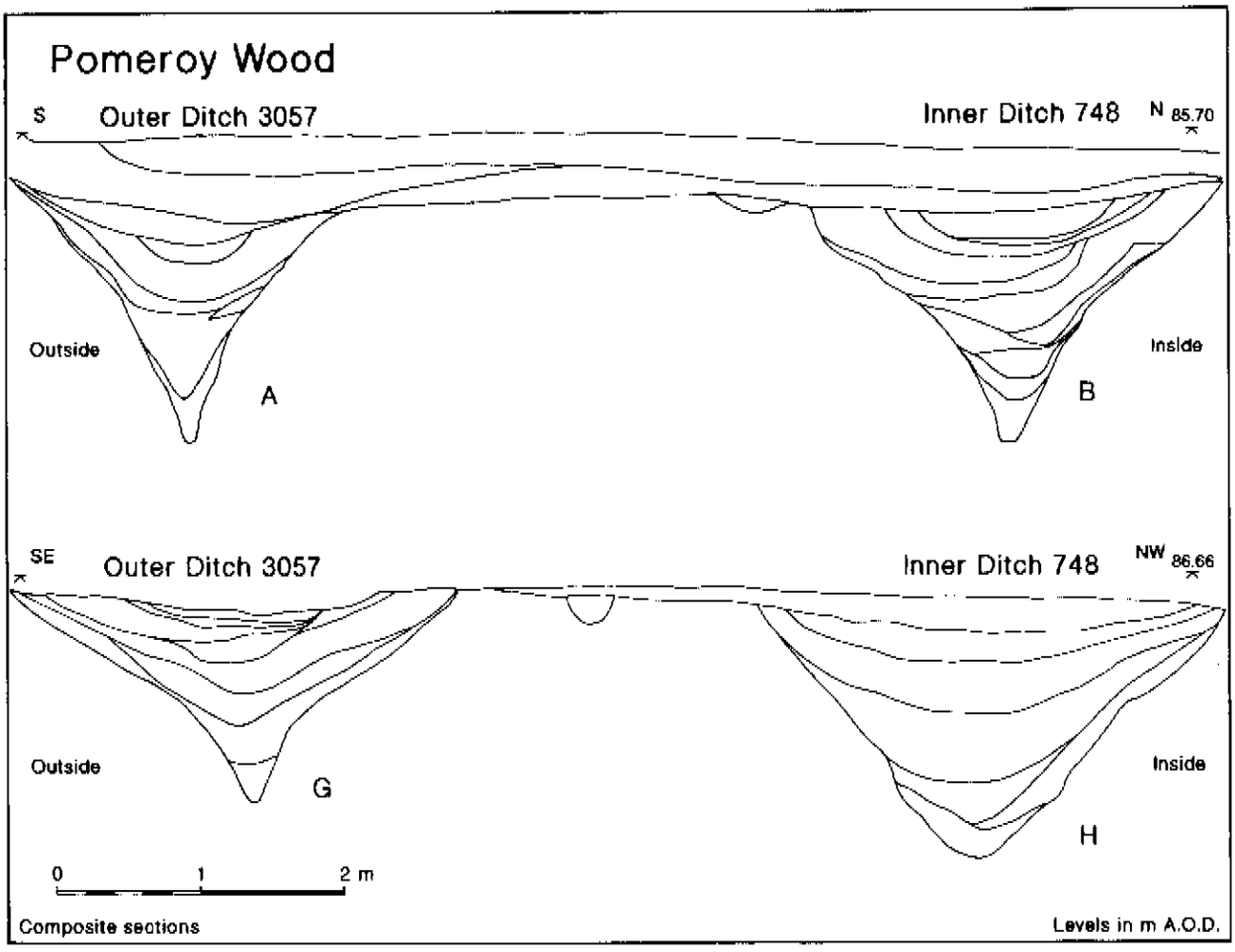


Figure 108 Pomeroy Wood: continuous sections across the defensive ditches of the military base

or cleaning slot in the base of a steep sided v-shaped ditch (Figs 107–9).

The fills of the ditches appeared to have originated mostly from the interior of the base, but in many cases this could not be established with certainty. The primary deposits consisted mainly of silts and occasional stony concentrations within the slot, as well as the weathering from the ditch sides. No evidence for erosion from a rampart was noted, and indeed the only evidence for a rampart is from the material subsequently used to infill the defensive ditches and a slight terracing on the southern side of building 3545 within the base which probably abutted the rampart. An area *c.* 5 m wide between the inner edge of the inner ditch and the interior of the base was devoid of 1st century features lay and is interpreted as indicating the likely location of the rampart stack.

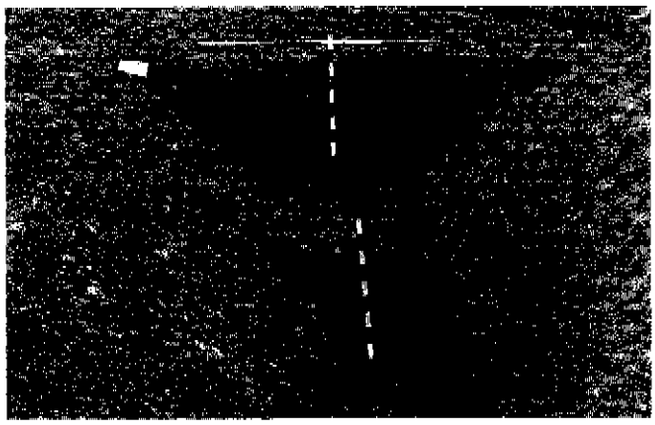


Plate 27 Pomeroy Wood: west facing section of segment 4078 of the outer defensive ditchof the miltitary base. The excavation has been stepped for health and safety reasons (see Pl. 24)

An intermittent shallow slot, 3229, was noted in three locations on the berm between the defensive ditches, but only stratigraphically associated at one. It varied in depth and width, ranging from 0.12 m to 0.2 m deep and 0.25 m to 0.4 m wide. It is possible that this represents a palisade between the ditches, or perhaps a setting out trench.

Tower 4724

This structure was represented by four substantial square-cut post pits (3391, 3591, 4366, and 4307; Figs 110–12), holding timbers 0.2–4 m in width, set up to 0.8 m deep in the pits, the southern two of which were slightly deeper than the northern two. Externally the size of the structure was 6.0 x 4.25 m and it was set within the southernmost side of building 4725 (see below and Fig. 110) and apparently respected the site of

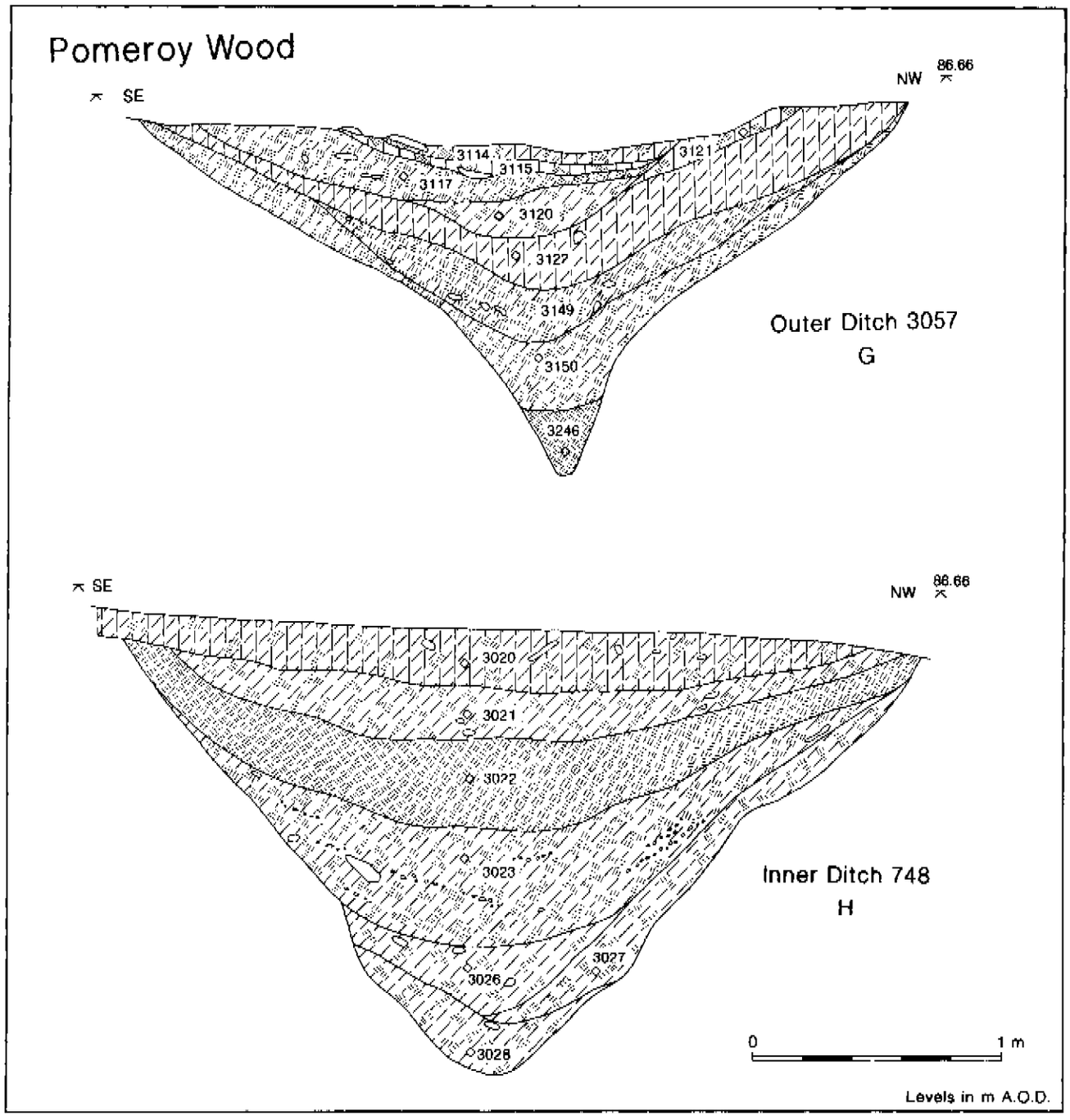


Figure 109 Pomeroy Wood: sections through the outer (section G; 3151) and inner (section H; 3019) defensive ditches of the military base

it, the building presumably having been demolished. All four of the post-pits cut features relating to building 4725, indicating that 4724 was secondary. It appears to be an interval tower that was added to the rear of the rampart. There were no post-pits to the north.

A shallow cut, 3410 encompassed the width of the structure to the south. The location of this cut may indicate where the structure had been terraced into the back of the presumed rampart to level the ground surface. Layers containing phase 4i material sealed the southern end of building 4725 and tower 4724. These layers (3384, 3470, 3456, 3387, and 3388) had built up over phase 2 features within the hollow created by the terracing (3410). If 4724 had been located within the body of the rampart, these later layers would not have occurred directly over phase 2 features, as material from a rampart would have become trapped within the hollow prior to phase 4i activity.

The post-pipes within the pits were well preserved with few silted intrusions, suggesting that the posts were either sawn off at ground level or left *in situ*; the oak charcoal from 4366 indicates that it may have been burnt *in situ*. The south-eastern post 3591 is the exception, as it contained later pottery and a later fragmentary coin adjacent to the post-pipe, which had been infilled with large stone slabs. The tower is far more

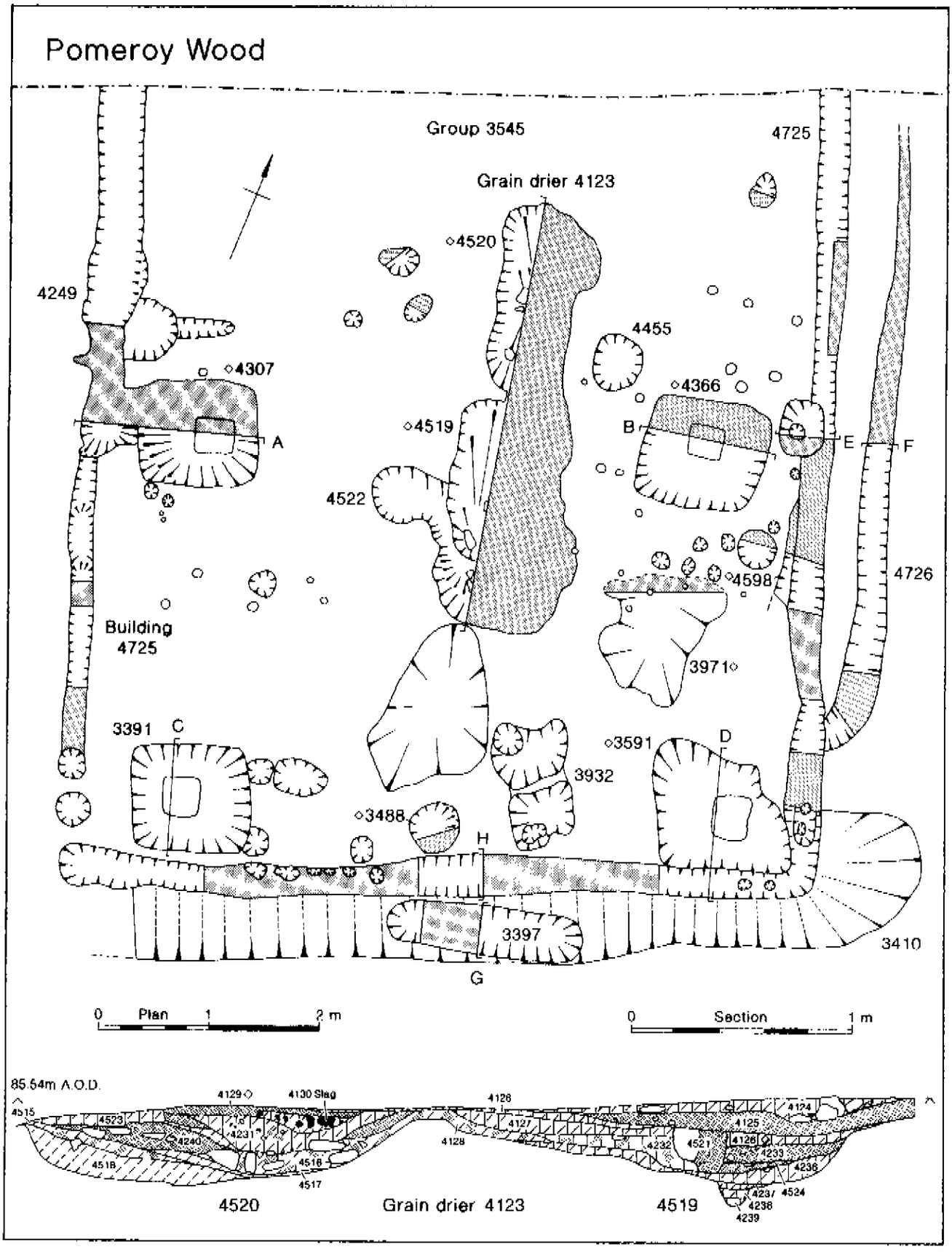


Figure 110 *Pomeroy Wood: plan of building 4725, tower 4724, and plan and section of grain drier 4123*

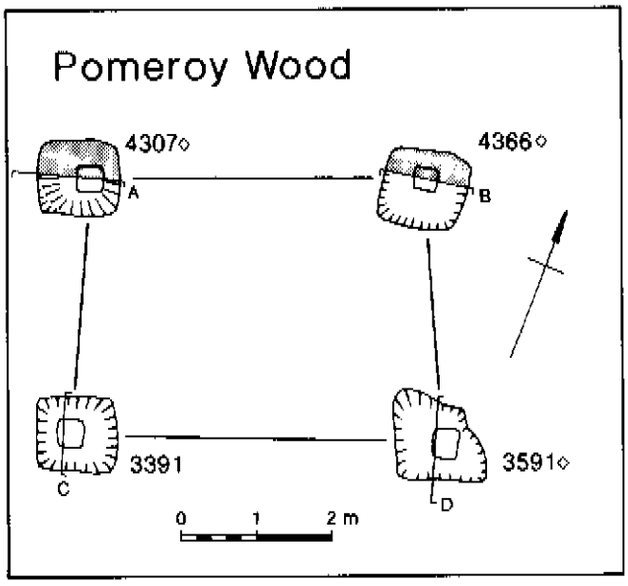


Figure 111 Pomeroy Wood: Plan of the post-holes comprising tower 4724

substantial than the possible four-post structures, 4733 and 4302, of the civil settlement (Figs 125 and 126; Table 70).

Buildings within the base

Two buildings were identified within the base, both of which, if the base had accommodated troops, would have lain within the *intervallum* or empty space behind the defences and the internal features. No evidence for a perimeter road or *via sagularis* was located.

Group 3545

There were at least two and possibly three sub-phases of activity on the site of this group of features. The first is a military type building, the second an interval tower (see above, 4724) which was added to the rear of the rampart, and the third the building of grain drier 4123 (Fig. 110, Table71), that has been attributed tentatively to phase 2 although its upper layers contained some phase 4i ceramic material.

Building 4725: The first building, 4725, is rectangular and represented by a discontinuous foundation trench of varying depth and width. It was 6 m wide internally, and at least 7 m long but it had been truncated by the existing A30. The trench was deepest and widest to the north-west (0.53 m deep and 0.5 m wide), as a well-cut slot of rectangular profile. The southern half of the western side is irregular and shallow, terminating to the south with the line continud by two post-holes. No stakes were noted within this line of trench, unlike the southern side, where stakes and posts set at intervals were visible and did not appear to impinge on the base of the trench (Pl. 28). The stakes continued into the eastern side, where a shallow recut, perhaps a repair, was visible starting 0.5 m from the south-eastern corner and continued for 2.75 m. The eastern trench was regular, at 0.3 m wide and 0.3–4 m deep. Repair or rebuild of this primary structure was also apparent in post-holes set mid-way along each side of the trench.

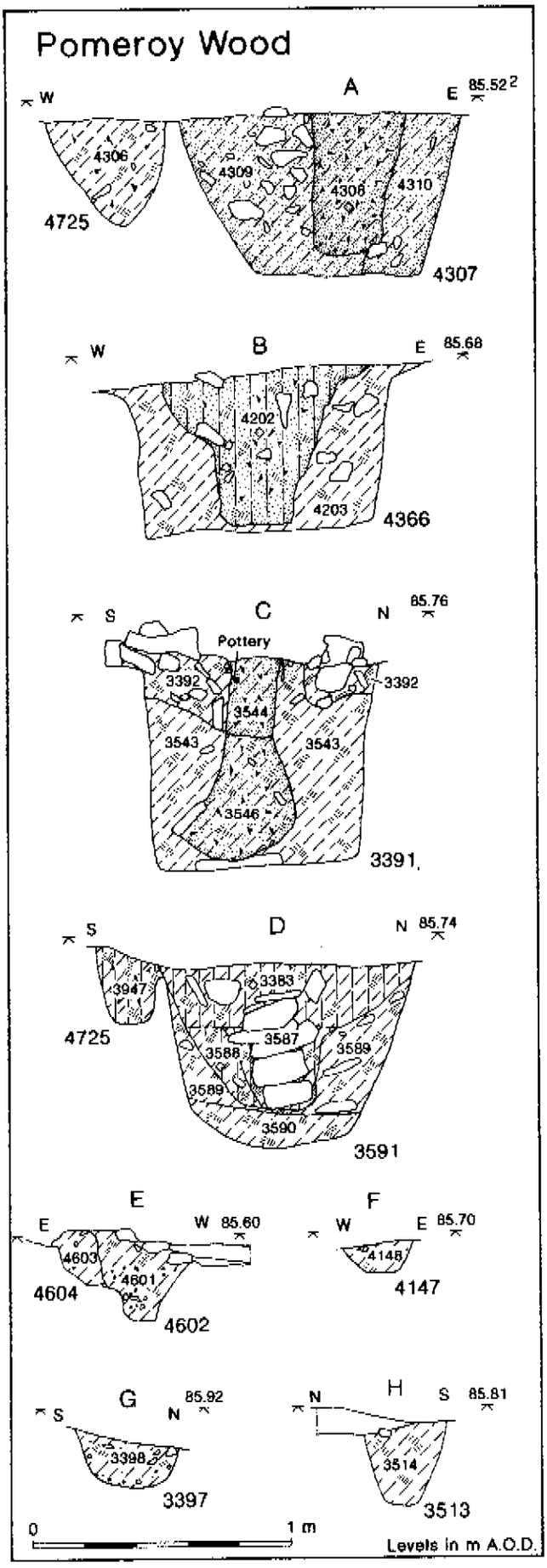


Figure 112 Pomeroy Wood: sections of features relating to tower 4724 and building 4725

Table 70: Pomeroy Wood, dimensions of buildings

Structure	*Form*	*Location*	*Function*	*Size (m)*
Phase 2				
group 3545, building 4725	rectangular foundation trench	Off-centre along S side of base, slightly into rampart	military	7.00x6.50
group 3545, building 4724	substantial, square 4-post	within 3545(i)	interval tower	5.00x4.25
4731	rectangular foundation trench, internal shallow post-holes	within base, parallel to ditches, hard against rampart	military	11.25x4.50
Phase 4i				
3042	rectilinear gully	over both defensive ditches	?shelter for processing area	6.00x5.50
4733	4-post structure	over inner defensive ditch	?store	2.50x2.00
4302	4-post structure	over structure 4301	?store	4.25x2.50
4103	ring gullies	later than 4527, within base	domestic	7 ext. diam.
4527	ring gullies	within base	domestic	10 projected diam.
4642	ring gullies	over both defensive ditches, in hollow, ?slightly later than 3415	domestic	8 projected diam
3415	ring gullies	over both defensive ditches, in hollow	domestic	7.75 diam.
3671	ring gully, partial outer circuit	?within enclosure	?domestic	7 diam.
3724	ring gullies	?within enclosure	?domestic	8 projected diam.
3053	amorphous partial gully with post-holes in base	over both defensive ditches	unknown	6.5 projected diam.
4722	partial ring gully	over both defensive ditches	unknown	9 projected diam.

Only 1st century AD pottery was recovered, from the north-east part of the foundation trench.

A number of stake-holes may have formed a partial division across the building close to the south end though these are not considered likely to represent the subdivisions for *contubernia*. Other features within the building which could be associated include a number of post-holes, stake holes, a shallow pit, and a shallow hearth 3971 (which was animal disturbed). Part of a repaired Class 25 (Dressel 20) amphora was set within a shallow hollow, 4455. The charred plant remains associated with the building have a high proportion of what may be animal feed.

A gully, 4726, ran parallel to the exterior of the building on its eastern side before cutting the foundation trench. This gully was shallower than the structural features and may be a drainage gully. The function of oval slot 3397, which contained 1st century AD pottery, to the south is unknown, appearing to be associated but not apparently structural, unless it was associated with the succeeding interval tower.

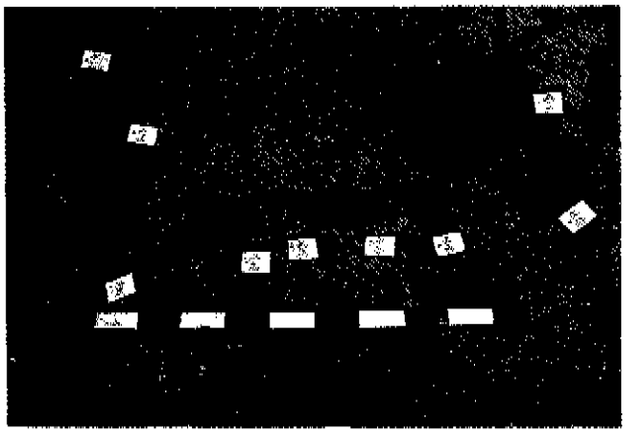


Plate 28 Pomeroy Wood: post-holes within foundation trench 3513 in building 3545 viewed from the south. Post-hole 3391 of tower 4724 is to the left

Tower 4724: This structure, which is discussed above with the defences of the base, was secondary to building 4725.

Grain drier 4123: This lay within the centre of structure 3545 (Fig. 110) but was not stratigraphically related to any features in the interior. Fragments of pottery found within 4123 date to the 1st century AD, but those recovered from the upper layers mostly date to the 2nd, and the early 3rd century at the latest. It is possible that it was built during the military occupation or but perhaps more probably within phase 4i.

A shallow ridge of natural clay separated two shallow bowls of the drier (Pl. 29). They appear to have been contemporary, although differences could be identified within each. The northern bowl, 4520, was of a sub-rectangular shape, the primary cut quite

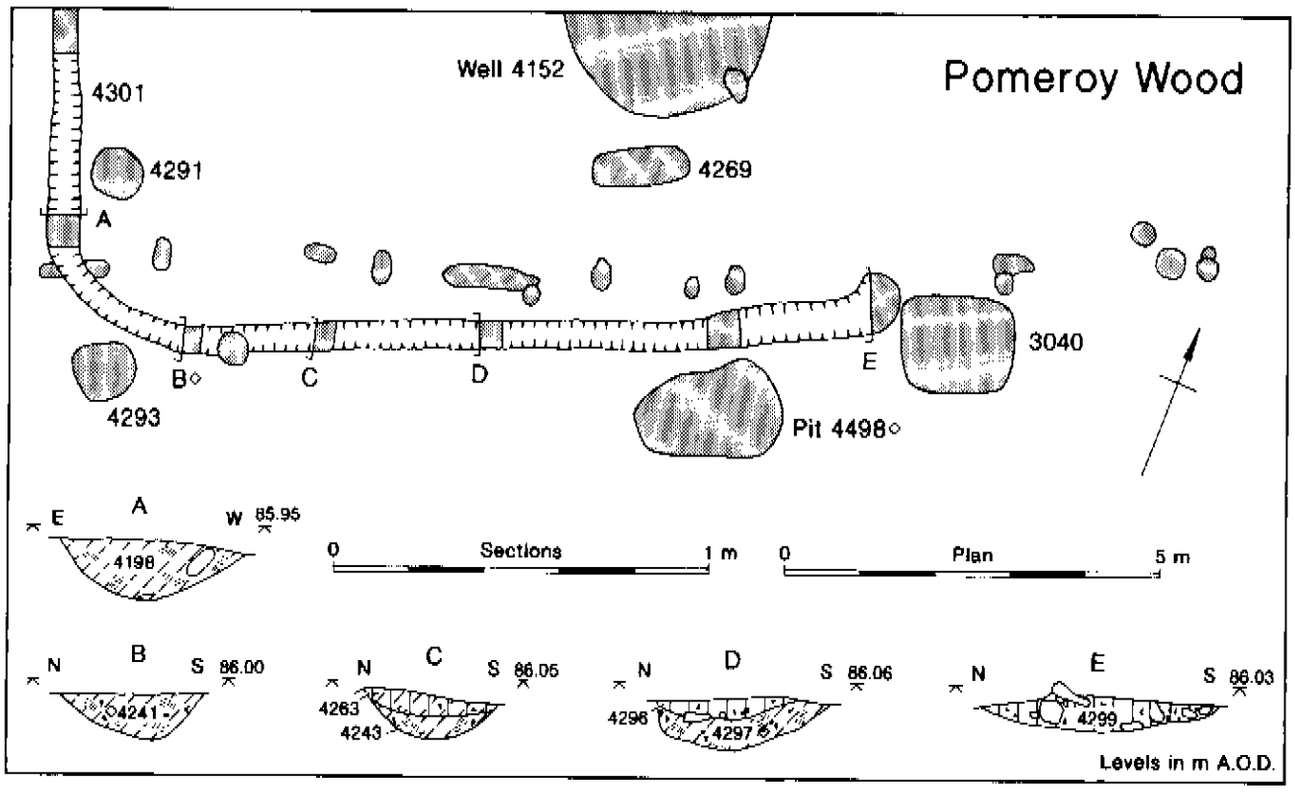


Figure 113 Pomeroy Wood: plan and sections of building 4731

steep-sided and regular. The primary fill at the north end 4518 did not contain any finds but the stones (4516) at the base of the southern end of the bowl formed a relatively flat surface, made up of different stone types, all showing different reactions to heating; shattered and fragile flint, degraded sandstone, and solid but reddened local stone. Reuse, or perhaps a collapsed superstructure, was demonstrated by a remnant clay lining 4240, which overlay the stone concentration in an elongated oval, approximately 1 x 0.5 m, in a flat based bowl 0.3 m deep. The final use of 4520 was indicated by a concentration of almost pure iron slag, 4130, in a shallow scoop at the top of the feature.

The southern bowl 4519 was deepest and widest to the south. A clay lining, 4233, again overlay the primary deposits. This abutted 4521, an area of compact burnt clay and sandstone, tentatively identified as a collapsed arch. Shallow layers to the north of 4521 spread up to

Table 71: Pomeroy Wood, dimensions of grain driers and ovens

Context	*Type*	*Dimensions (m)*	*Depth (m)*	*No. fills*	*Phase*	*Location*
637	GD	4.00x1.80	0.43	38	4ii	within ditched enclosure
913	GD	5.00x1.30	0.35	36	4i	adjacent to working hollow 4706
4123	GD	4.00x1.30	0.40	29	2	within site of building 3545
(4519)	(S bowl)	(2.10x1.10)	(0.40)			
(4520)	(N bowl)	(1.80x0.90)	(0.35)			
988	Oven	1.40x1.10	0.40	3	4i	edge of 4715
4094	Oven	1.12x1.02	0.33	4	4i	edge of 4715
3524	?GD	1.90x0.80	0.20	8	4ii	within base, post-dating round-house 4527
3843	GD	3.00x1.50	0.50	13	4ii	W end of site, partially enclosed by gully
3279	?GD	2.00x1.10	0.20	4	4i	W of 637, enclosed by gullies & ditches
953	Oven	1.00x0.50	0.14	6		Trench 8: extended trench to W
3145/6	GD	1.90x0.80	0.20	4	4i/ii	partially enclosed by 3042
(WB)1103	Oven	0.80x0.90	0.15	1	4i	enclosed by gullies & ditches, W of 637

Definitions: i) GD = grain drier, association with crop-processing remains; ii) ?GD = ?grain drier, form as i) but not confirmed by environmental data; iii) Oven, association with burning/clay lining, form not as i) and no confirmation of function from environmental data

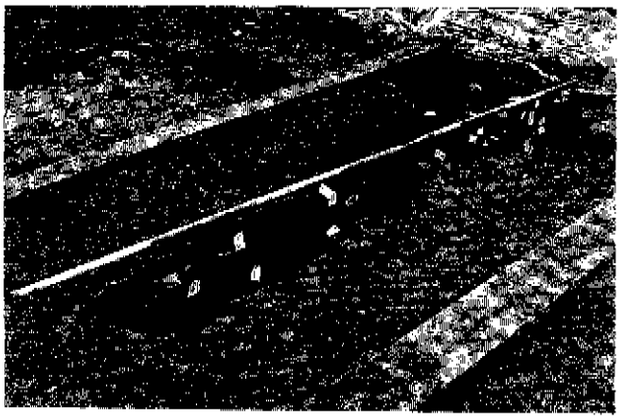


Plate 29 Pomeroy Wood: grain drier 4123 viewed from the north-west (see Fig. 110). The tarpaulin in the background covers parts of buildings 3545 and tower 4724 exposed and excavated in the area initially stripped of topsoil

the lip of the two bowls. A 0.09 m deep spread of reddened clay lay over much of the bowl of 4519, and could represent collapse of the clay superstructure. A shallow pit 4522 on the west side contained much charcoal, and was probably an associated rake-pit.

The function of 4123 is thought to be either for crop-drying or smithing, but there is little in the charred plant remains or charcoal to support either interpretation. The presence of oak charcoal is consistent with the high temperatures needed for a smithing furnace, but the lack of slag or hammerscale in primary contexts suggests an agricultural rather than an industrial function. Charred cereal chaff indicates that crop-processing waste was present, probably used as tinder.

Building 4731

This building (Figs 106 and 113, Table 70) was located at the south-eastern corner of the military base. The gully 4301, or foundation trench, described a partial rectangle parallel to the angle of the presumed rampart. As surviving it was 11.25 x 4.5 m, which terminated at the east but it was truncated to the north. There was no evidence for an eastern side to the structure, nor did the gully 4301 have evidence of posts within it of the sort found in building 4725. Well 4152 which is also assigned to the military occupation of the site lies within the area enclosed by the building but it is thought not to be contemporary with it.

The 0.12 m deep gully 4301 contained deposits of charcoal and burnt clay, but was mainly filled by brown silty clay. Internal to the gully, a series of shallow post-holes ran parallel at a distance of 0.4–0.5 m. Unfortunately a modern fence line had run on the same alignment and it is difficult to establish which, if any, of the post-holes are ancient.

The dating of the building is insecure; the few sherds found ranging from the Bronze Age to the 3rd century AD, although it is overlain by phase 4i four-post structure 4302 (see below, Fig. 125). The rectangular shape and the location of the building perpendicular to the defences are both consistent with a military origin, and the patches of burnt clay from the gully may represent daub.

Gullies 4721 and 4058

A straight, shallow, gully 4721 (Plan 1) was aligned east–west at the eastern side of group 3545. It had two post-holes at its eastern extent. It contained a small amount of phase 4i pottery, but its alignment appears to be better associated with phase 2, possibly at the rear of the rampart. There was no evidence to suggest that it should be linked with building 4725. However, another east–west gully 4058, which was cut by the phase 4i building 4103 lay slightly to the north and east (Fig. 121) and it may be that both of these gullies were associated with buildings contemporary with the base, though they recall gully 3229 on the berm.

Well 3047

This is one of two wells dating to the 1st century AD (Fig. 114, Plan 1, Table 72) and was situated hard against the probable location of the rampart stack. The diameter of 2 m at the surface tapered to 1 m at the base, over a depth of 3.9 m (Pl. 30). The base of the well cut through clay to reach the underlying gravels, presumably to reach the watertable. The basal fill 4686 contained a complete BB1 bowl (Fig. 159,1), which could have been a deliberate deposit as it was in good condition. The lower 1.6 m of fills consisted of organic layers of clay and

Table 72: Pomeroy Wood, details of wells

Well	*No. fills*	*Lining / capping*	*Reuse*	*Organic presence*	*Location*	*Method of excavation*	*Excav. to depth (AOD)*	*Phase*
3047	15	wattle lining, clay cap	cess pit 819	Y	within base	hand, machine assisted	82.14	2
4152	17	clay cap		N	within base	as above	81.95	2
920	10	stone lining		N	rampart area	as above	81.75	4i
3791	13	?wattle lining		Y	enclosed by outwork/annexe 4706	hand to 1.2 m, machined to base	81.50	4i
1114WB	8			N	outside base/outwork	as 3047	82.15	4i

NB Only 3047 excavated to base

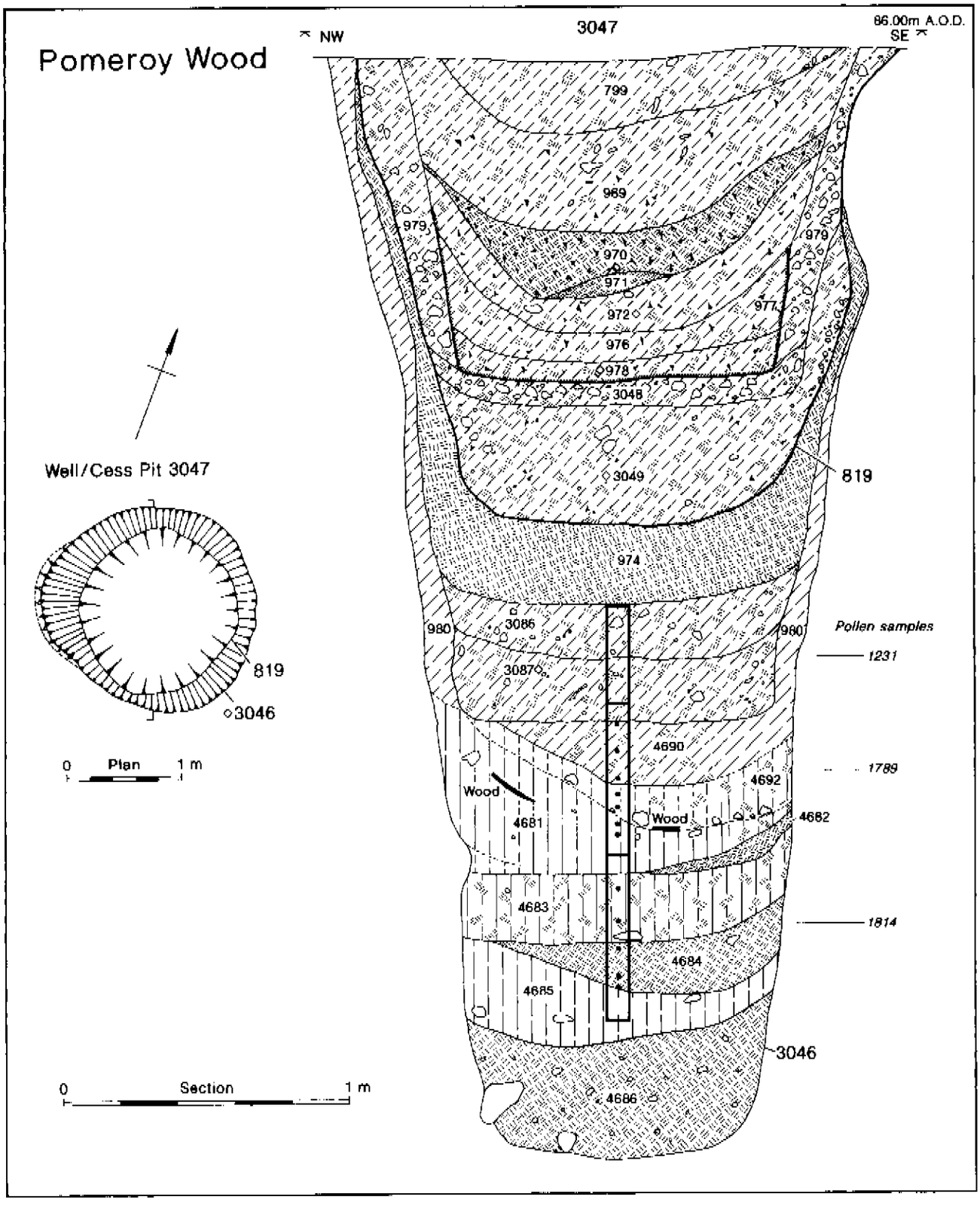


Figure 114 Pomeroy Wood: plan and section of well 3047 and cess pit 819 showing the positions of the contiguous columns for environmental samples

loam, with excellent preservation of environmental material, which showed that the well had been infilled with waste, much of which was from animal droppings.

The well was lined, being indicated by dark greyish–brown silt 980 around the sides that reached to the surface on the northern edge. Two refuse dumps (3086–7) were identified above the organic layers, both containing 1st century pottery. A capping deposit of red clay (974) sealed the surface of the well but much of this was cut away by the later cess pit 819. The source of the

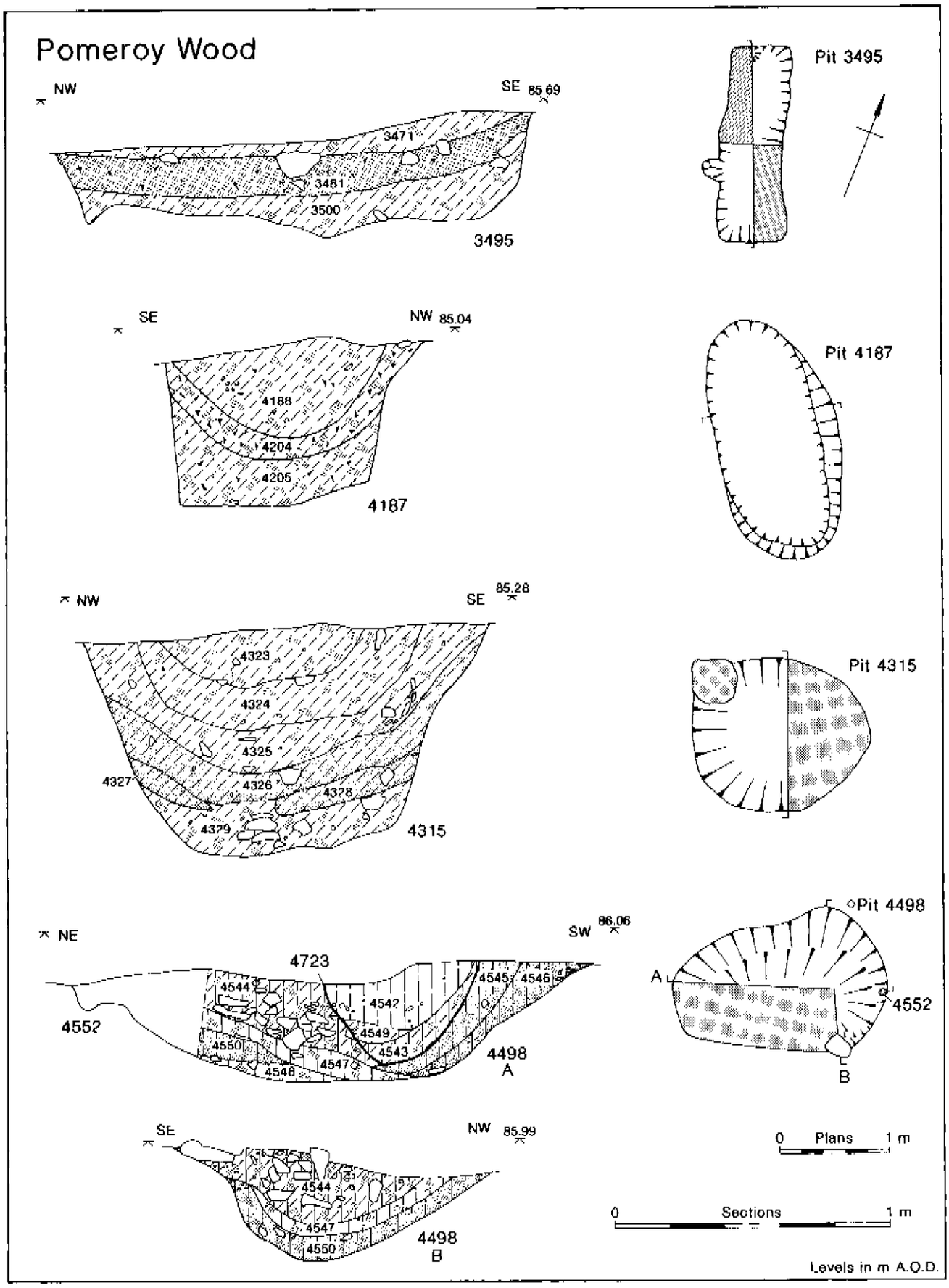


Figure 115 Pomeroy Wood: plans and sections of phase 2 pits

Plate 30 Pomeroy Wood: well 3047 under excavation by machine, viewed from the east

red clay capping material is unknown, but it could be from the excavation of a replacement well; well 4152 which also dates to the 1st century is close by.

No 1st century material was recovered from the fills of the cess pit 819, which is described under phase 4i. As the cess pit was sited directly over well 3047 it seems likely that the well was visible as a depression after the abandonment of the base in order for the cess pit to have been located so precisely.

Well 4152

This well (Plan 1, Table 72) was sited 3 m further north into the interior of the base than well 3047. It was 2.2 m diameter at the surface, tapered to 1.3 m at the base (the section is not illustrated). No lining was apparent and its mostly inorganic fills represented dumps of waste material. Irregularities in shape seen during excavation were due to the collapse of the sides of the feature, noted within the fills as deposits of clay. The top of the well was also sealed with a capping of red clay. Much of the datable material from the well can be assigned to the 1st century AD. First–second century pottery in the clay capping material suggests a date for the sealing of the well, although it would appear to have been used for refuse for some time prior to this.

Pits (4315, 4498, 3495, 4457, 4187)

Four pits within the base and one between the defensive ditches are thought to have dug during the military occupation. Pit 4315 (Fig. 115, Plan 1, Table 69) lay in the south-west directly behind the rampart. At 1.6 m in diameter, this steeply cut pit was 0.8 m deep and contained a number of well-defined layers of silt and clay. Although none was organic and no lining noted, the morphology of these layers resembles those of a cess-pit or latrine. There is no evidence to suggest that it is part of a corner tower.

An ovoid pit 4498 (Figs 115 and 158) was immediately to the south of building 4731, and contained early pottery and quantities of oak charcoal, perhaps from the same source as that in 4731. A shallower bowl-shaped recut in the east end, 4723, also contained early pottery (Fig. 158). The mixed fills suggest periodic deposition. The charred plant remains

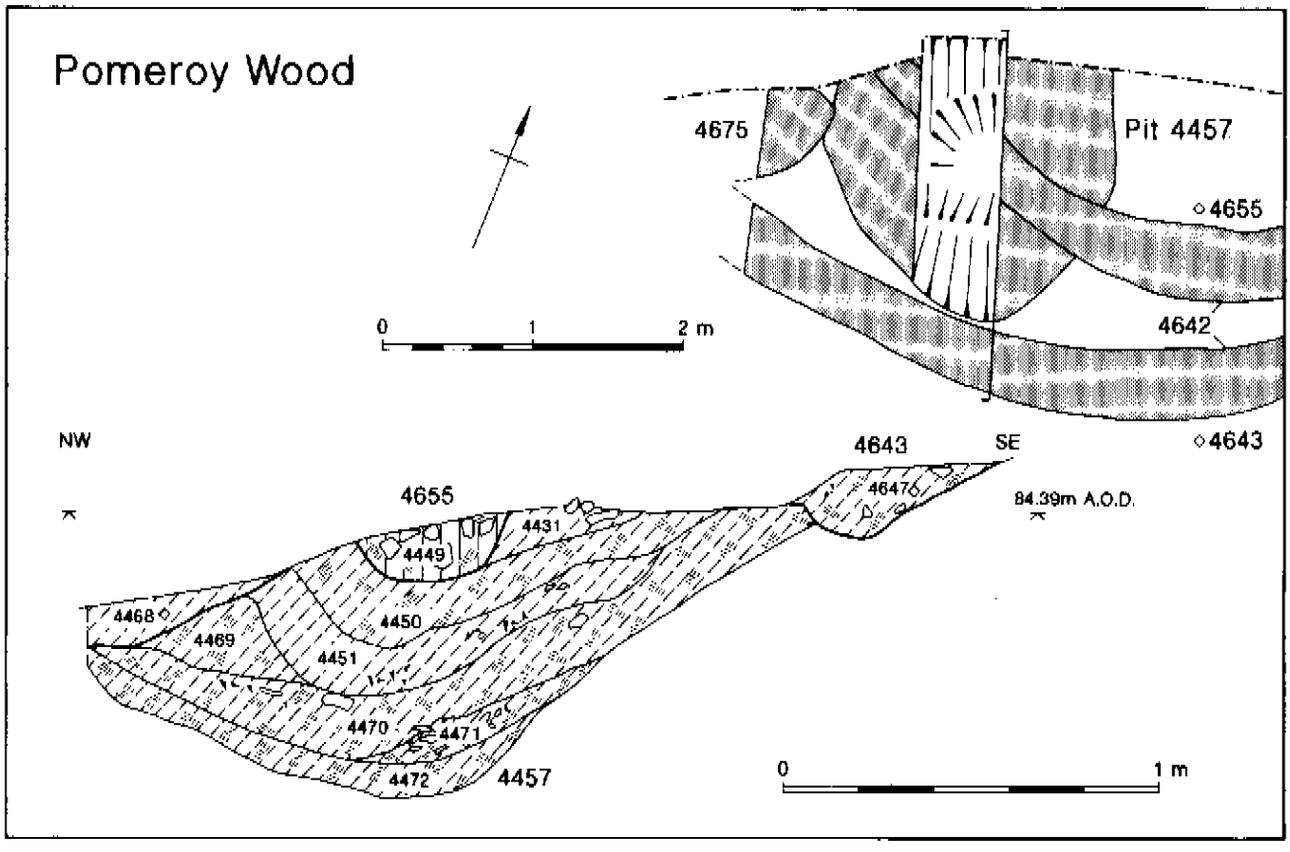


Figure 116 Pomeroy Wood: plan and section of pit 4457

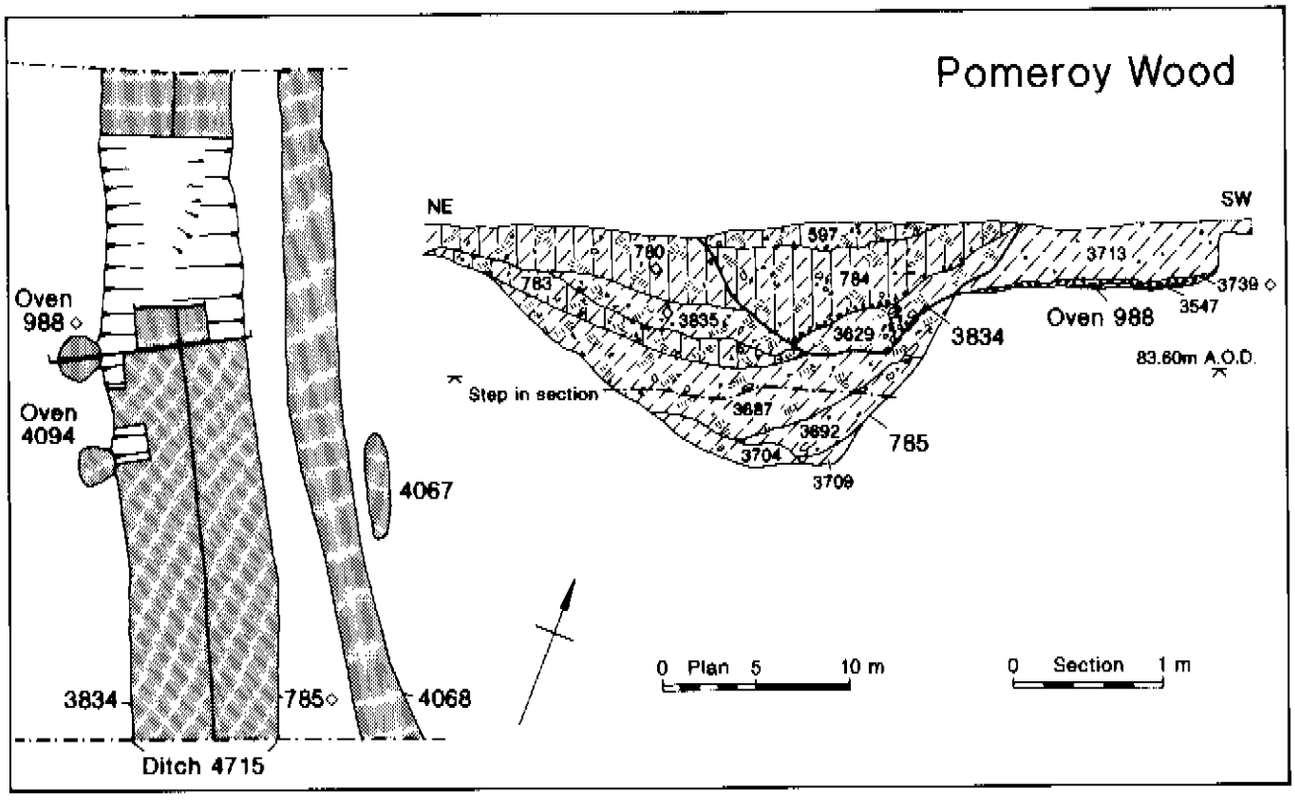


Figure 117 Pomeroy Wood: plan and section if outwork / annexe ditch 785, showing recut 3834 and oven 988

are of crop processing waste, though the presence of barley could suggest a mix of animal feed.

To the west of group 3545, a narrow rectangular pit 3495 (Fig. 115) was aligned north–south. The three layers within it were evenly deposited and contained some charcoal, but no evidence for *in situ* burning was seen. Sherds dated to AD 50–85 were recovered from a secondary fill. It is possible that this feature was associated with the interval tower.

Pit 4187 (Fig. 115) did not contain any dating evidence, but is included in the phase 2 description due to its location and lack of later ceramic material. The pit was sub-rectangular, steeply cut to a depth of 0.57 m, and contained three fills of silty clay. Its shape is suggestive of a water-tank.

A deep ovoid pit 4457 (Fig. 116) was between the two defensive ditches at the north of the excavation area. The pottery it contained can not be dated closely but it was stratigraphically earlier than round-house 4642, indicating an early Roman date. It filled in gradually, and there is no indication of the purpose of the pit. Its location between the defensive ditches is puzzling if it is contemporary with them but it is possible that it predates the base, being associated with either the construction of the base or earlier military activity on the site.

Two pits were stratigraphically earlier than the phase 4i round-house 4103. Both pits 4120 and 4061 (Fig. 121) have been attributed to phase 4i and are described there, but the possibility that they are associated with the military base should be noted.

Post-holes (3062, 3210, 3425, 3427)

Only four post-holes contained material attributable to this phase (not illustrated), two within the base, one outside the defences to the east, and one between the defensive ditches in an area of later activity. The two within the base, 3425 and 3427, were at the south-west corner of the base but they are too shallow to have been an integral part of a corner tower. A concentration of undated post-holes to the east of group 3545 may relate to a timber structure (Plan 1), although no form or pattern could be determined. Later, phase 4i, features overlay some of these post-holes.

Outworks

Two features located to the west of the base respect it, and each other; a large defensive ditch 785 (Fig. 117, Plan 1, Pl. 31, Table 68), and a small enclosure to the west of it, comprised of gullies 649/3626/4320.

The defensive ditch 785 is part of ditch group 4715, and is aligned north–south, parallel to the western defences of the base. It was not seen to join the military base at any point nor was it located in a mechanically excavated trench cut to the east of the base to establish if the ditch enclosed the whole of the base. Ditch 785 was a maximum of 1.65 m deep, was 4 m wide at the surface, and had a fairly flat base 1.0–1.5 m wide. The outer, west face of the ditch was markedly steeper than the east suggesting that it may have originally had a 'Punic' profile, that is to say that one side of the ditch was nearly vertical. The ditch is interpreted as either an outwork or an annexe.

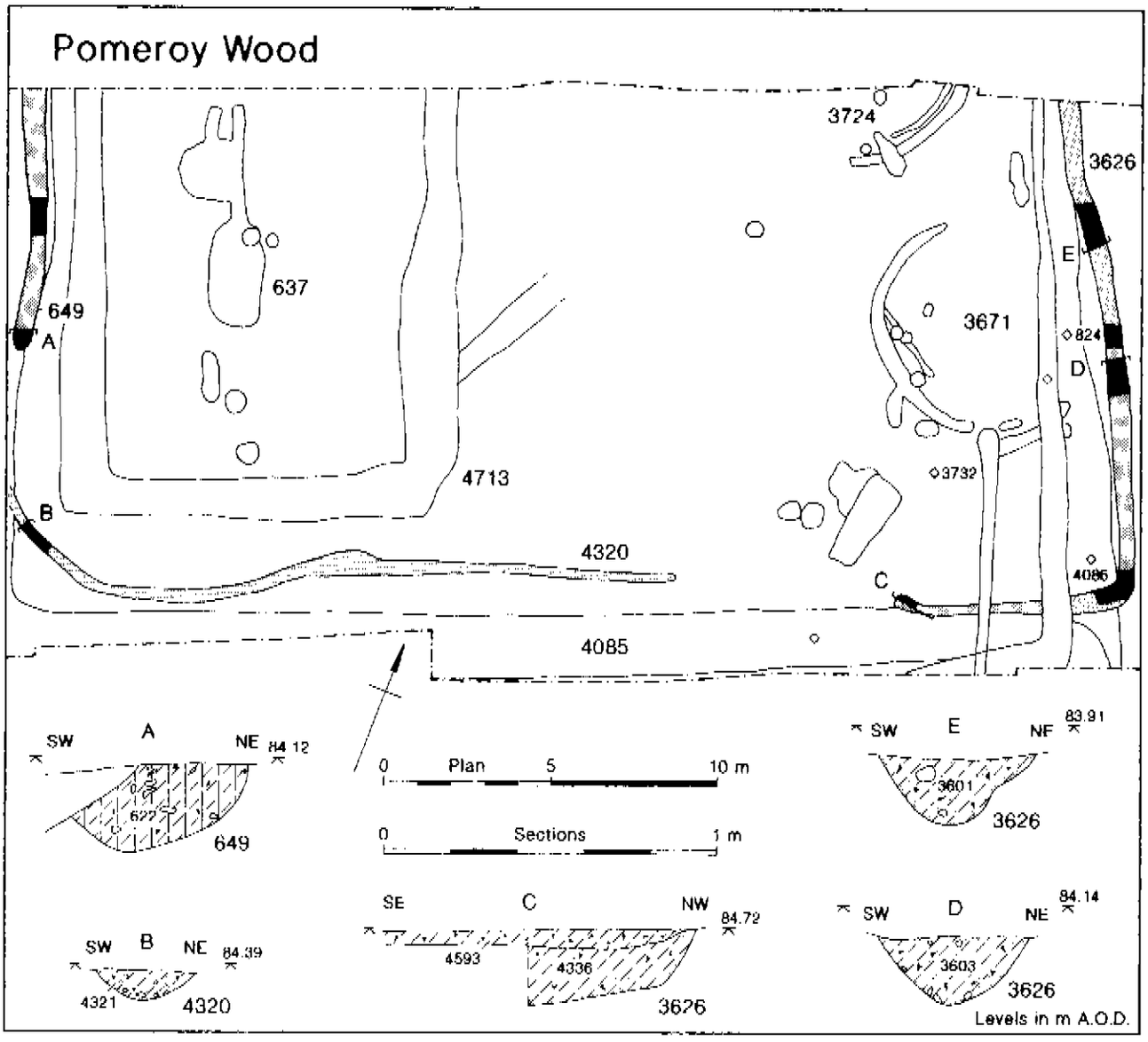


Figure 118 Pomeroy Wood: plan and sections of enclosure 649/4320/3626

Most of the fills of the ditch originated from the east, probably from the razing of a rampart to the east. The ditch was filled to ground level by the time that a narrow width on its western side was recut as 3834, suggesting deliberate backfilling. This was reflected in the limited number of contexts that made up the bulk of the fill. Particularly noticeable was a mass of light greenish–grey clay silt, 3661 and 3687, which may well represent decayed turves. Ditch 4068 (Fig. 117), which lies immediately to the east is undated. It is very close to ditch 785, but it may be chronologically significant that it curves slightly to the south-east, as if to enclose the military base.

Only a single feature, pit 4294 (Table 69), lay within the area defined by the outwork or annexe ditch 785 (Plan 1). This pit was shallow, ovoid in shape with a single fill of coarse silt and had a steep southern edge and a generally concave base. It appeared to have been dug for a specific function, possibly industrial, as it contained slag and fired clay as well as glass, flint, pottery, and nails.

A small rectilinear enclosure (Fig. 118) to the west of ditch 785 comprised three lengths of shallow gully, forming an enclosure 34 m by at least 10 m, continuing to the north. The western gully 649 was dated by pottery; the eastern gully 3626 was the stratigraphically earliest in a sequence of linear features, and the southern gully 4320 describes a corner between the other two lengths. Gully 4320 was the most ephemeral of the three, having a maximum depth of 0.08 m and its east end faded out rather than terminating like those of 3626 and 649. The other excavated sections were 0.2–0.45 m deep and 0.45–0.95 m wide, noticeably deeper to the north. No dated features within the enclosure were demonstrably contemporaneous, although a few were undated. Two possible entrances to the enclosure are located to the south and south-west, represented by gaps in the gully of 6.5 m and 4 m respectively.

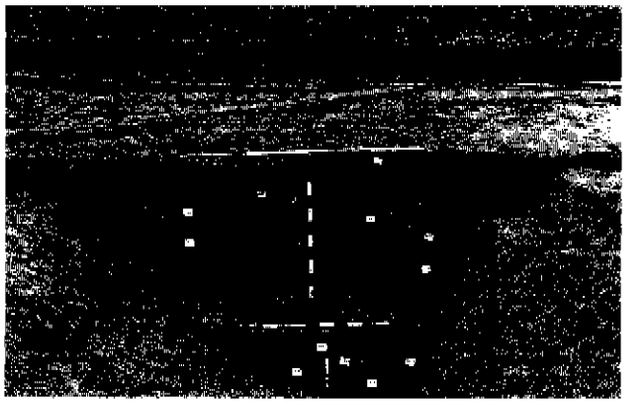


Plate 31 Pomeroy Wood: north-west facing section of outwork / annexe ditch 4715. The smaller recut of the ditch (3834) is visible in the top right of the profile, as is oven 988 (see Pl. 36)

The Abandonment of the Military Base (Phase 3)

Five segments were excavated through each of the inner and outer defensive ditches. Although these showed differences within their sequence of in-filling, a large bulk of material overlying the primary silted fills could be identified within most and this was most noticeable for the inner ditch (Fig. 107 and 108). This is interpreted as the slighting of the ramparts and the infilling of the defensive ditches. A similar sequence occurred in the outwork ditch 785 (Fig. 117).

The fills varied within each segment excavated, some at a higher level than others, reflecting local conditions of infill, but the first metre of deposits can be safely ascribed to the military occupation and no obviously intrusive pottery occurred below the top ditch fills. The inner ditch appeared to have been filled so that it was virtually level but the outer ditch 3057 consistently showed a dip within its upper fills, a linear hollow up to 0.3–0.4 m below the surface level, which was present into the 2nd century.

The charred plant remains from the ditches contained more non-cultivated species than cultivated ones, suggesting the dumping of material. It has not been possible, however, to ascribe a date more precise than the late 1st century AD, perhaps in the 80s, for the slighting of the defences.

Two phase 4i ditches, 4720 and 3265, cut through the defensive ditches, proving that they had been in-filled by this phase (Plan 1). Ditch 4720 cut through the fills to a depth of 0.8 m, its associated bank to the east sealing the defensive ditch fills on a level plain at a height of 85.9 m AOD.

The Romano-British civil settlement: 2nd–3rd century occupation (Phase 4i)

As well as the ditches that cut across the defences of the base (4720, 3265), well stratified occupation levels occurred over the defensive ditches, and some of the post-holes of a possible four-post structure (4733) cut through the location of the rampart, indicating that the rampart had been almost completely levelled (Plan 1). This occupation dates to the 2nd century AD, or possibly slightly earlier, and is part of a settlement, presumably a roadside settlement, of undefined extent. More than one phase of building occurred within this time, but the finds do not allow a closer dating.

Buildings

The majority of the buildings (Table 70), all of which date to the 2nd–3rd centuries, are represented by the concentric ring gullies of round-houses. In addition a single gully, 4722, which had been truncated by the existing A30, was in all probability of the same type. All six certain buildings occurred at the eastern end of the site, coincident with a greater depth of the modern ploughsoil. Preservation was also enhanced by the location of some over the defensive ditches of the military base which were largely, but not completely, infilled at this time. This was most notable in the case of buildings 3415 and 4642, where the depth of debris sealing the buildings and associated features was akin to a midden deposit. Building 3415 was the only complete example that could be excavated and provided extensive evidence for domestic activity in the form of hearths, pits, and post-holes. It is likely that posts were set in the inner ring gully, either earthfast or stone packed. Although this is a recognised, standardised construction method elsewhere, it has not been recognised previously in Devon.

Building 3415

Building 3415 was the only complete round-house available for excavation, though it was necessary to excavate it in two halves (Figs 119, 120, and 161, Table 73, Pls 25 and 32). It lay over the infilled defensive ditches, and was possibly slightly earlier than structure 4642 to the north. Its structural components comprised an inner ring gully 4727 and segments of concentric eaves drip gullies, 4728, 4729, 3473; it was not possible to trace these in the north-west quadrant. An entrance to the building was not identified, and if it interrupted the gully it must be presumed to be either to the south-south-west or the north-west, as a continuous gully circuit was recorded elsewhere. The inner gully was the more substantial feature; its true dimensions at 0.4 m wide and 0.17 m deep being distorted when it cut through the softer ditch fills. The diameter of some of the alder charcoal recovered from the inner gully was large enough to represent timber from structural elements. The outer gully, which described a segmented arc at a distance of 0.15–0.5 m, was 0.2 m wide and 0.15 m deep, though both of these again increased where the gully cut the fills of the ditch.

Feature 3576 appears as an anomaly within the projected structure of the inner gully, and may again be distorted by the soft and silty fills of the outer defensive ditch, which made differentiation problematic. Identification of smaller features within these silts was impossible to achieve with any confidence. To the north-east, shallow gully 4660 may represent a segment of the outer ring gully, being truncated by the construction of round-house 4642. The north–south oriented slot 4695 is a later Romano-British feature.

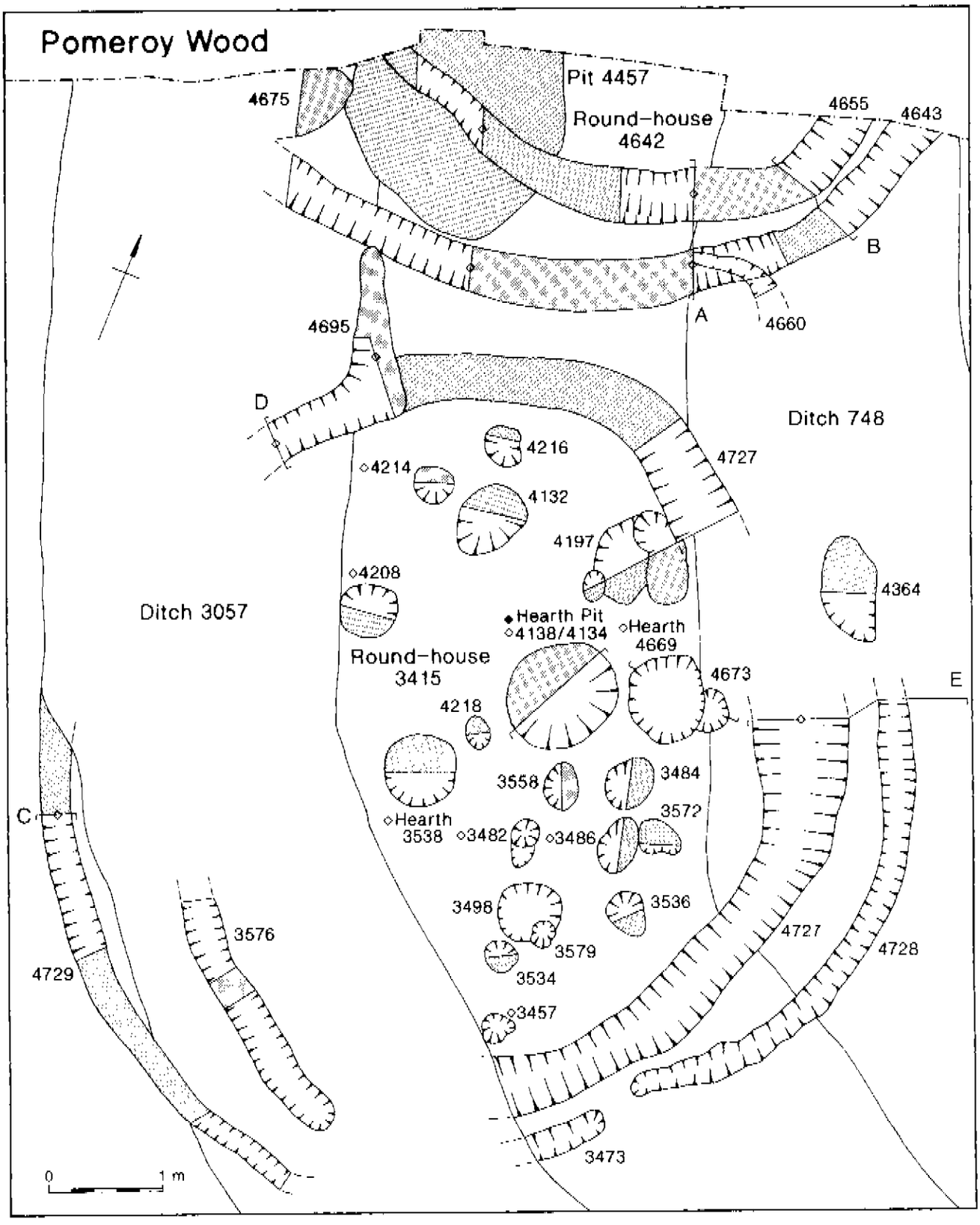


Figure 119 Pomeroy Wood: plan and sections of round-houses 3415 and 4642

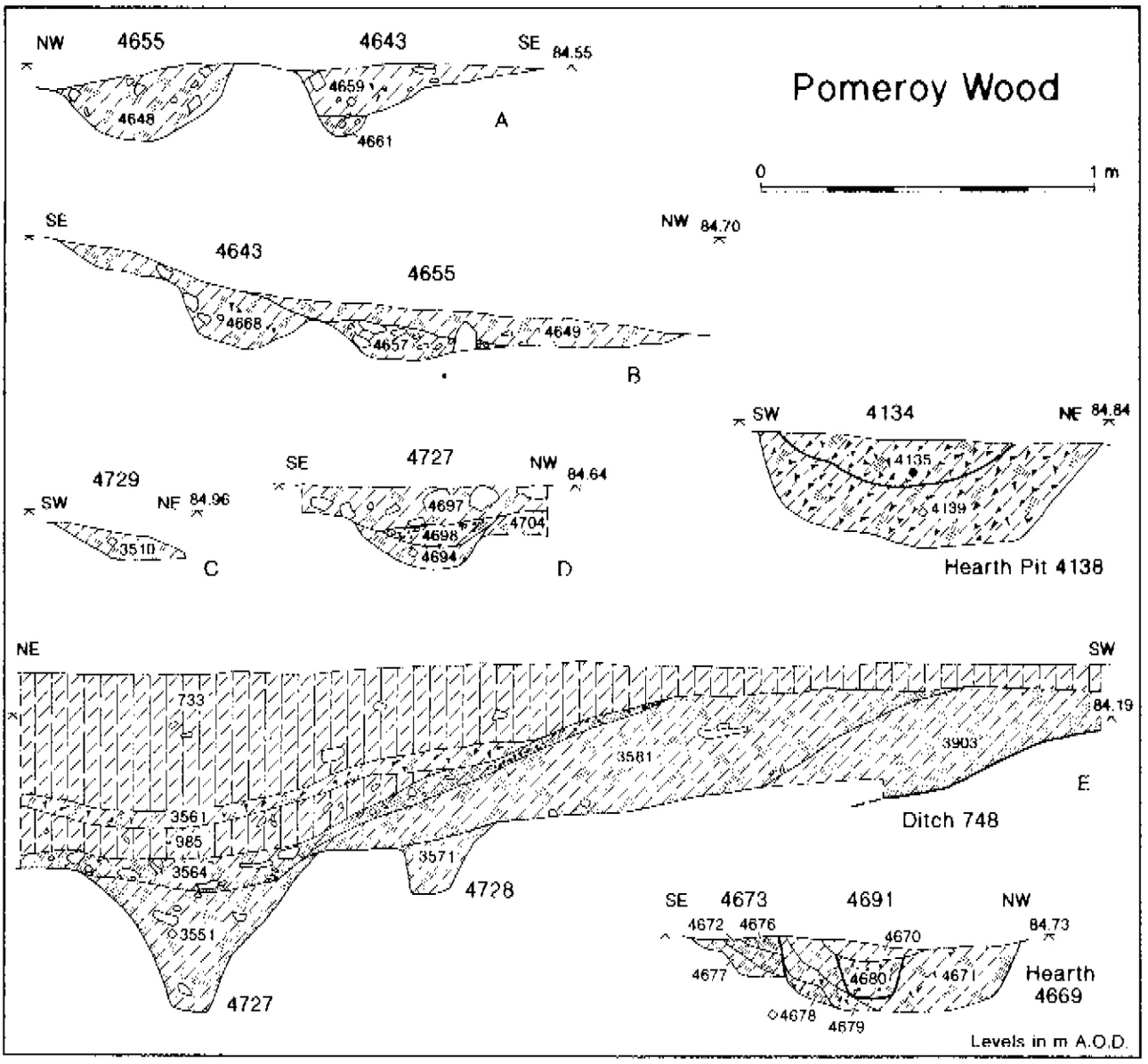


Figure 120 Pomeroy Wood: sections relating to round-houses 3415 and 4642

The internal features (Table 73) consisted of a number of pits and post-holes, with four possible hearths being identified. All appear to be contemporary with the structure, as no similar features were found on the berm between the defensive ditches to the south. The hearths were grouped to the centre and north-east of the round-house. The most substantial hearth-pit, 4138 (Fig. 119), was up to 1 m in diameter, and cut to a depth of 0.3 m, reused as shallower pit 4134 (charcoal from the recut produced a radiocarbon determination of 1905±45 BP: cal. AD 1–240; AA-32606). Hearth 3538 contained a circular arrangement of sub-rounded stone, up to 0.13 m in size; a burnt spread, 3560 (not illustrated), lay immediately to the east of this feature. A sub-square, steep-sided hearth pit, 4669 (Fig. 120), was 0.21 m in depth, and contained layers of charcoal and reddened clay, with a remnant clay lining 4678. A later shallow cut, 4691, central to this pit contained a complete spouted cup (Fig. 161, 18), its location suggesting that it had been deposited deliberately.

The post-holes do not appear to be related to the superstructure, unless they were additional internal supports. Unless the material is redeposited or intrusive, the consistent presence of slag in all but three of the internal features, may also suggest a specialist use for the structure. The charred plant remains are crop-processing waste used for tinder, with oak being the dominant fuel.

Building 4642

This round-house was sited immediately to the north of 3415 and was also sited over the infilled defensive ditches (Figs 119, 120, and 161, Table 70). The inner and outer gullies respected each other but were not concentric. Both gullies were truncated to the north by the existing A30 road and also showed root and animal disturbance at either end. The inner gully, 4655 was up to 0.4 m wide and 0.2 m deep and contained a high number of stones up to 0.2 m in size, as well as large slag fragments. The outer gully 4643, 0.35 m wide and up to

Table 73: Pomeroy Wood, dimensions of features within round-house 3415

Feature	*Type*	*Diam / dimensions (m)*	*Depth (m)*
3538	hearth	0.63	0.10
4134	hearth	0.68x0.60	0.10
4138	hearth-pit	1.00	0.30
4197	hearth-pit	0.80x0.55	0.20
4669	pit	0.80x0.70	0.21
3457	post-hole	0.30x0.24	0.15
3482	stake-hole	0.28	0.35
3484	?post-hole	0.42	0.12
3486	?post-hole	0.50x0.30	0.13
3498	hollow	0.60x0.50	0.09
3534	?post-hole	0.33	0.08
3536	?post-hole	0.43x0.33	0.11
3558	?post-hole	0.40x0.30	0.10
3560	spread	1.00x0.35	0.03
3572	hollow	0.40x0.26	0.05
3579	post-hole	0.20x0.16	0.20
4132	post-hole	0.70x0.60	0.19
4136	stake-hole	0.20	0.12
4208	post-hole	0.49	0.17
4214	post-hole	0.30	0.15
4216	post-hole	0.25x0.30	0.20
4218	?post-hole	0.30x0.22	0.10
4673	assoc. 4669	0.34x0.16	0.10
4691	cut with spouted cup	0.18	0.11

0.15 m deep, contained much less stone, reinforcing the distinction in function between the construction trench 4655 and the drip gully 4643. The outer gully cut through 4660, a gully that might be associated with the outer gully of building 3415 as it is on the correct alignment, but no direct stratigraphic relationship could be established. No contemporary features were noted in the limited area of the interior that survived. The inner gully 4655 cut through the upper fills of the phase 2 pit 4457 (see above).

Building 4527

This building was within the interior of the former military base, and had also been truncated by the A30 (Plan 1, Fig.121, Table 70). Only a limited area of the interior of the building, which was of double ring construction, survived. The inner gully 4159, 0.35–0.4 m wide, 0.14 m deep, was slightly more substantial than the outer gully, 4161, at 0.3 m wide and deep. The outer gully terminated at its western extent, both gullies being truncated to the east by pit 4370 and building 4103. Three post-holes within the building could be related to the structure, but they are not well-dated and there are also a number of other post-holes in the vicinity with which they might be associated.

Some 2 m to the south of the structure, a straight shallow east–west gully 4721 with two post-holes at its eastern extent (Plan 2), contained phase 4i pottery, although its alignment appears better associated with features dated to the occupation of the military base in phase 2.

Building 4103

The adjacent and stratigraphically later building 4103, exhibits a less regular layout, having a very shallow, incomplete, internal gully 4072, the fill of which spread over the interior features (Figs 121 and 162, Table 70).

Plate 32 Pomeroy Wood: the southern half of building 3415 fully excavated, viewed from the south

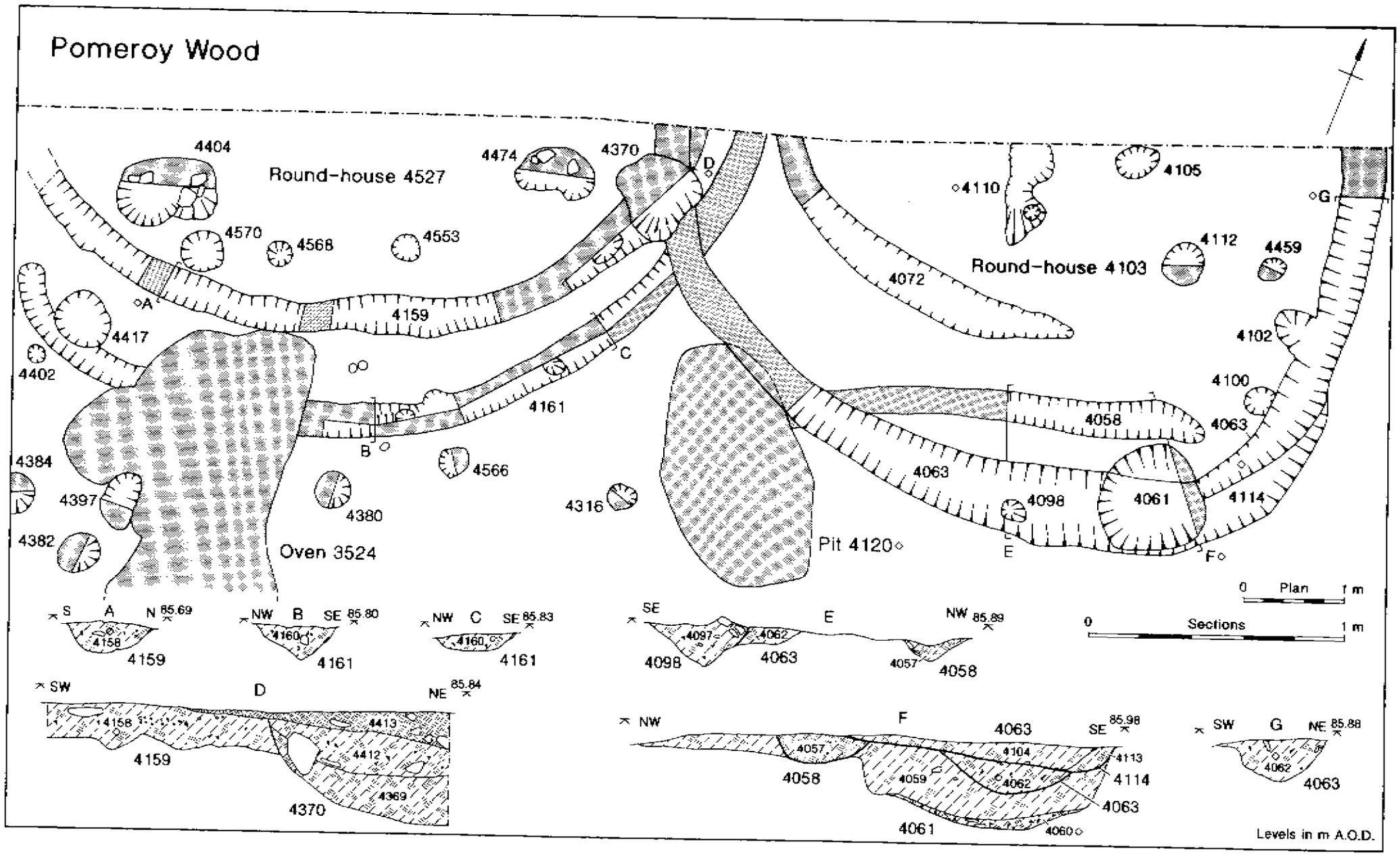


Figure 121 *Pomeroy Wood: plans and sections of round-houses 4527 and 4103*

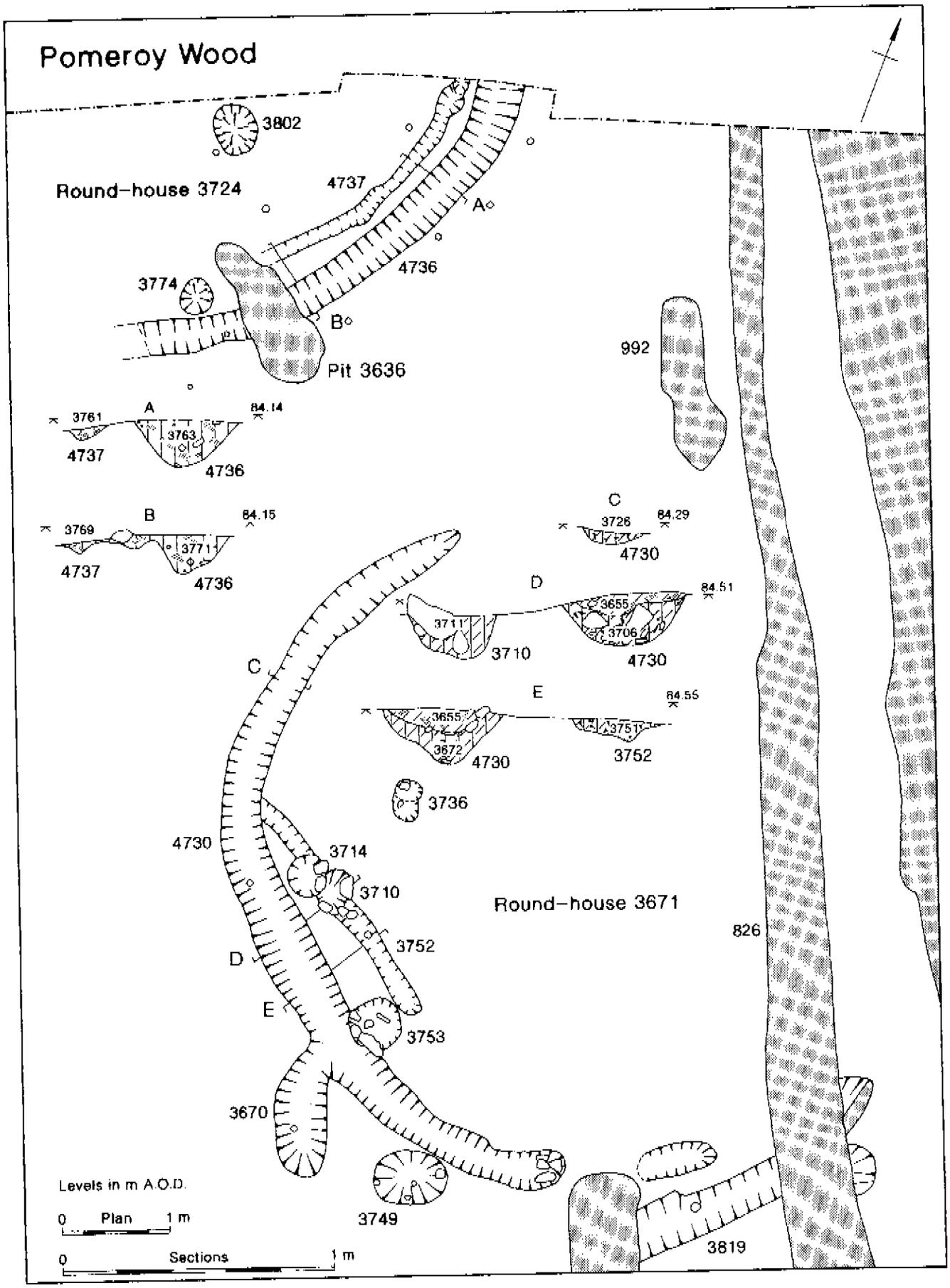


Figure 122 Pomeroy Wood: plans and sections of round-houses 3671 and 3724

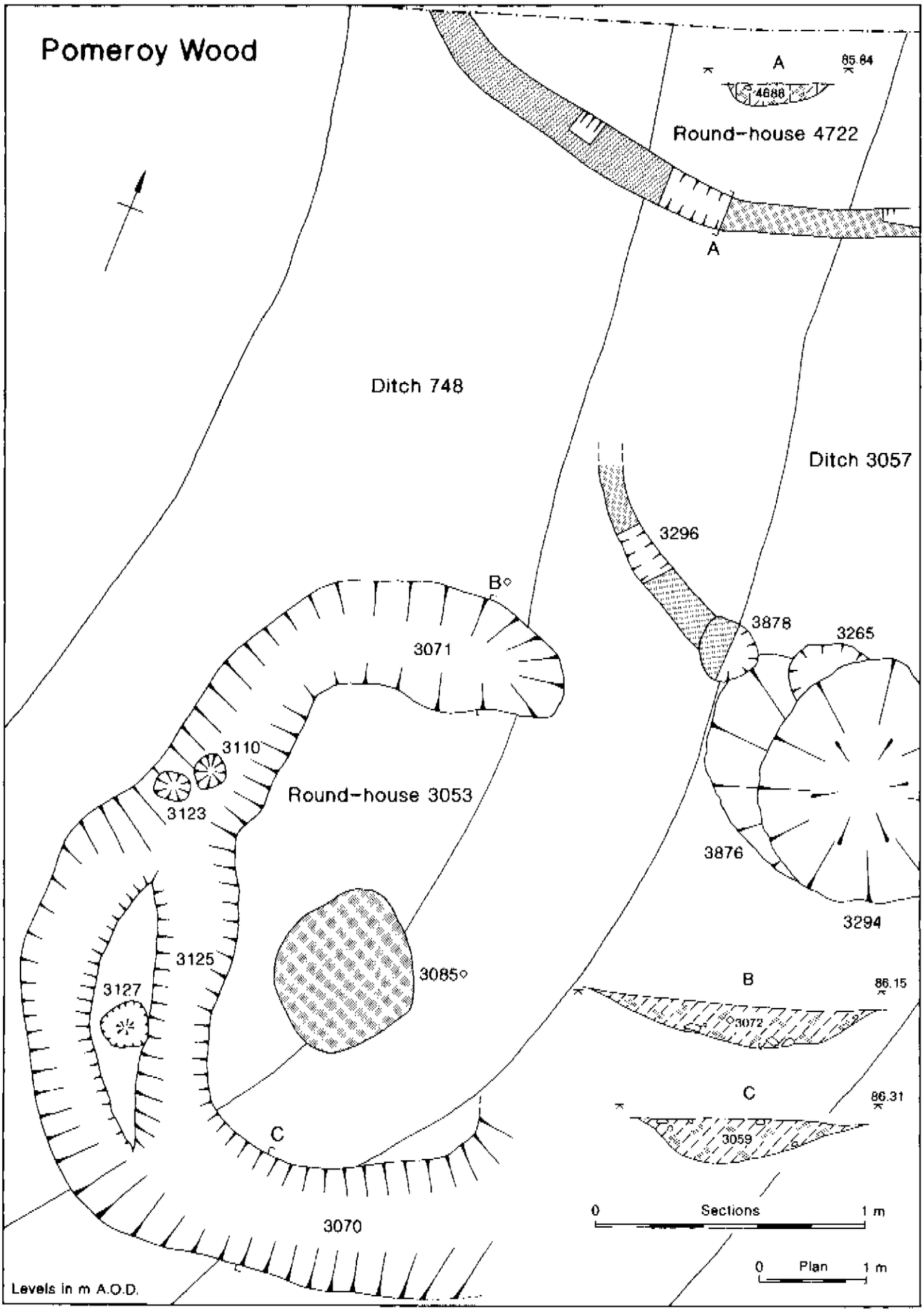


Figure 123 Pomeroy Wood: plans and sections of round-houses 3053 and 4722

Plate 33 Pomeroy Wood: building 4103 viewed from the south-east illustrating the extent of truncation by the existing A30

It too had been truncated by the existing A30 (Pl. 33). The western end of this gully was damaged by root and animal disturbance. A recut or realignment appears to have taken place to the south-east as the outer gully 4063 cuts a short stretch of curvilinear gully 4114, giving the appearance of a wide slot. This may be the result of cutting through the softer fills of underlying pit 4061, which was possibly a storage pit for semi-cleaned barley. The ring-gully is sub-ovoid, describing an irregular arc, 0.3–0.6 m wide and up to 0.16 m deep. It was truncated by pit 4370. The building is later than a number of features; gully 4058, pits 4061 and 4120, as well as the adjacent building 4527. The internal features comprised a hearth 4110, three post-holes, 4100, 4112, 4459, a stake-hole, and an amorphous feature 4105. Two possible post-pads were also noted within the overlying spread 4071.

Building 3671
This building was sited to the west of the former military base and appears to have been set at rear of a compound or enclosure (Plan 1, Fig. 122, Table 70). Approximately 60% of the circuit of one ring-gully, 4730, was visible. The gully was 0.4 m wide and up to 0.2 m in depth. Later features cutting into the area disturbed the south-eastern quadrant, where an outer gully, 3819, was visible, 0.3 m wide and up to 0.2 m deep. The quantity of stone in the top of gully 4730 suggests a structural function for it and that an outer gully was either eroded; or not present. Three post-holes, 3714, 3710, and 3736 on the interior were the only features associated, although patches of red clay and areas of charcoal and burning were in evidence in the vicinity of the south-western arc.

Building 3724
Parts of another building lay 2 m to the north of 3671. The external gully, 4736, of building 3724 was considerably more substantial, at 0.4 m wide and 0.18 m deep, than the inner gully 4737, 0.13–0.2 m wide and 0.04–0.1 m deep (Fig. 122, Table 70). A few sherds of (presumably) redeposited 1st century AD pottery were recovered. Internal features that were possibly associated consisted of two post-holes, 3802 and 3774, and four stake-holes. The charred plant remains again suggest that crop-processing waste was used for tinder.

Building 4722
A length of truncated curvilinear gully (4722) overlay the infilled eastern defensive ditches of the military base (Plan 1, Fig. 123, Table 70) appeared to be an element of a further round-house, either a drip gully or a foundation trench.

Building 3053
This building was also sited over the infilled eastern defensive ditches and was initially seen as a sub-circular feature with a north–south gully across its western interior (Fig. 123, Table 70). The main curvilinear gully 3070 was up to 1.35 m wide and 0.2 m deep, with broad terminals, whereas the north–south gully 3125 was 0.75 m wide and up to 0.18 m deep. No stratigraphic relationship between the two gullies could be determined but they are presumed to be contemporaneous. Three post-holes were located, two (3110 and 3123) within the northern gully and one (3127) on the berm between the two features. Whilst initially appearing substantial, the excavated form of this feature was amorphous and irregular; the broad gullies were dissimilar to other features on site, in that their edges were diffuse both within the fills of the defensive ditches and over the berm. The function of building 3053 could not be determined precisely, but its mid-Roman date and the similarity in size and, to a lesser extent form, to the round-houses elsewhere on the site suggests that it too may be the much disturbed remains of a round-house.

Four-post structures 4302 and 4733
Both of these putative structures were located within the main area of 2nd–3rd century occupation (Figs 124 and 125, Table 70). Neither of them is square. Structure 4302 is interpreted as a four-post structure with more confidence than 4733, as the post-holes were of a similar size and regular layout, whereas those relating to 4733, while appearing to be associated, and of substantial depth and form, were arranged symmetrically.

Ditches

North–south aligned ditches were noted over a distance of more than 300 m to the west of the former military base, although they were grouped more closely within the 120 m nearest to it, which reflected the density of occupation (Plan 1, Table 68). Seven north–south ditches were dated to this phase. One east–west ditch 4085 ran for a length of 78 m, and is thought to define the rear of one or more compounds. Some ditches were seen to continue to the south beyond the excavation area, especially at the south-eastern 'corner' of 4085, although the area available for investigation here was restricted. The line of the infilled military phase outwork or annexe appears to have remained an important boundary, with six gullies or ditches maintaining its alignment to its west.

Ditch 3834 (Fig. 117) represents a partial recut of the western side of the outwork ditch 785. It had a steep sided v-shape and was contemporary with ovens 988 and 4094. Some 2–3 m further to the west was the broad

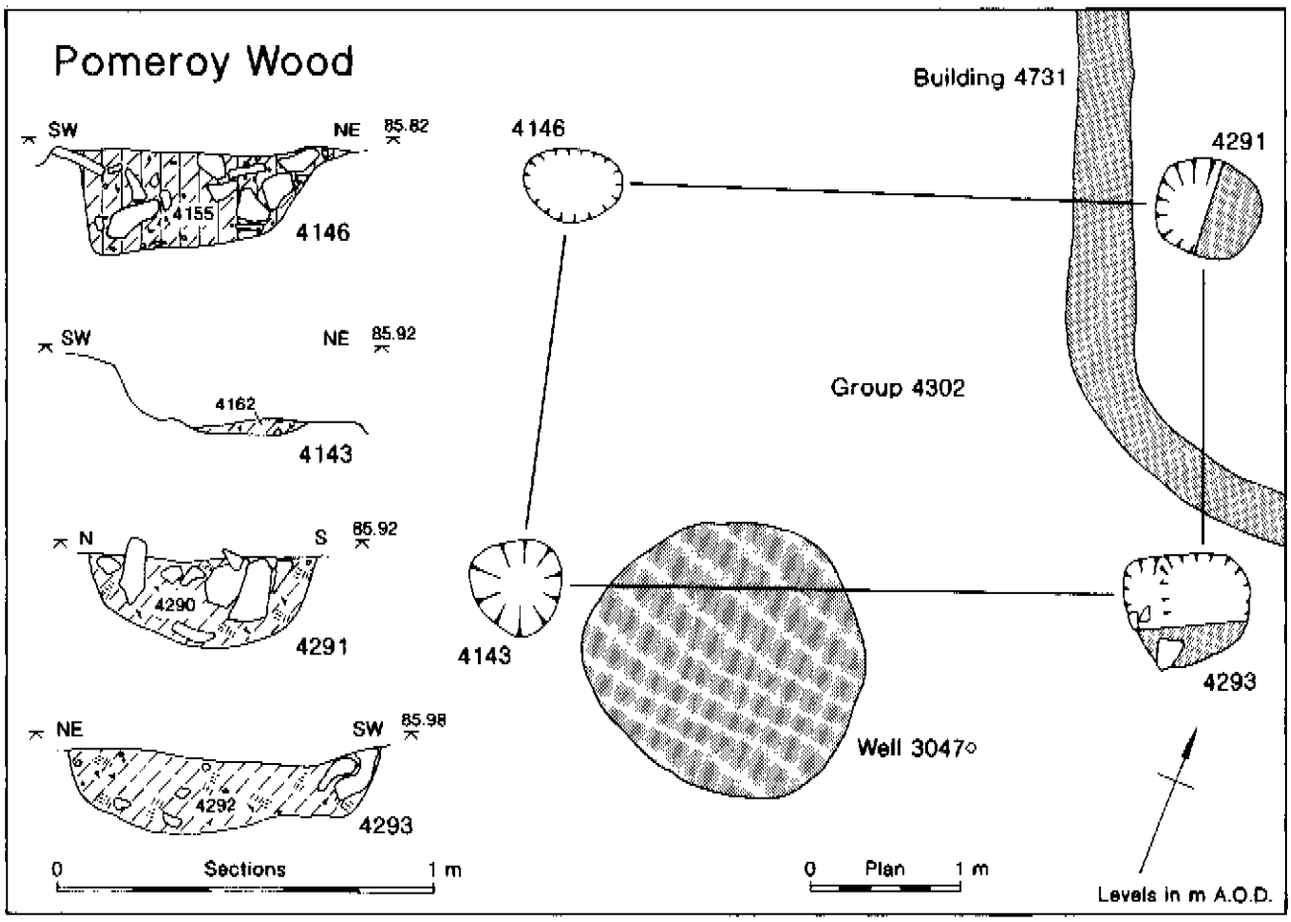


Figure 124 Pomeroy Wood: plan and sections of four-post structure 4302

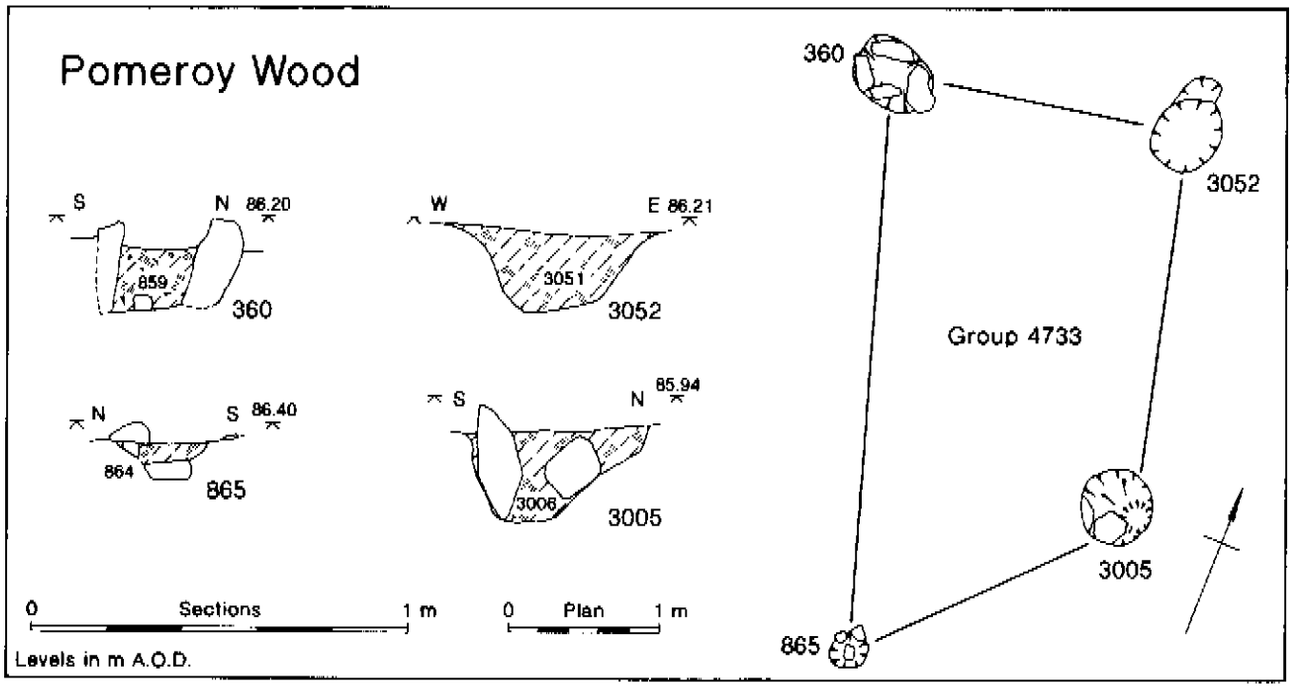


Figure 125 Pomeroy Wood: plan and sections of four-post structure 4733

shallow north–south gully of 4734. It was not possible to establish whether these ditches were contemporaneous. If the gap was used as an entrance, the furnaces would have blocked this, which suggests that the ditches were successive.

Ditch 4085 did not continue as far to the east as these two ditches, appearing instead to turn to the south or terminate immediately to the west of 4734, where it was itself cut by the butt end of a probable linear feature 4332. If it did indeed turn to the south, this would indicate that further enclosures exist beyond the confines of the excavation. Either way, it does not form a continuous enclosure facing the road, even if boundaries such as 3256 are perpendicular to it. No relationship could be discerned between the western end and ditch 4710, although 4710 continued to the south beyond 4085, while 4085 continued to the west for some 2 m, at which point it either terminated or turned to the south.

Two linear features recorded to the west beyond the main excavation area also date to this period, 927 and 103. Ditch 927 was the more substantial of the two, a 0.75 m deep steep sided, v-shape, immediately to the west of a group of undated features, including an oven or hearth 953. Gully 103 was aligned north- south. If the settlement was defined by an outer ditch, then 927 is the most likely candidate for it.

Within the interior of the former military base the linear features were different in character. The north–south linear features are absent apart from three shallow gullies, 3181, 3182, and 4189. The first two were parallel for a length of 3.5 m, 4189 was noted for a length of 2.5 m. All were identified between and over the defensive ditches, where they could have been protected from erosion by later accumulations of material. None was noted to the north of the ditches, and their shallow nature may mean that they had been destroyed. Whether these represent a systematic division imposed on the area of the base alone is not known, but they give an indication of a regular layout that could have been lost elsewhere.

Ditch 4720 (Figs 126, 162) was cut through the defensive ditches on the south-west of the base, describing a wide curve to the south and terminating just beyond the inner ditch. At 0.7 m deep it was well cut, with an associated bank on the inner east side spread for a distance of 4 m from the ditch edge. Although appearing to be an enclosure ditch, no other ditch of comparable date and dimensions was found to the east.

To the north-east, ditch 3265 cut through and terminated within the outer defensive ditch of the military base at an angle oblique to the A30. Up to 1.3 m wide and 0.45 m deep, the ditch contained much domestic debris, including metalwork fragments, and was parallel to a slighter ditch, 3283. It is possible that it was part of a right-angled enclosure, continuing to the east as undated ditches 3995 or 3997. The similar and parallel nature of these ditches compared to ditches 3265 and 3283 suggests that they are related.

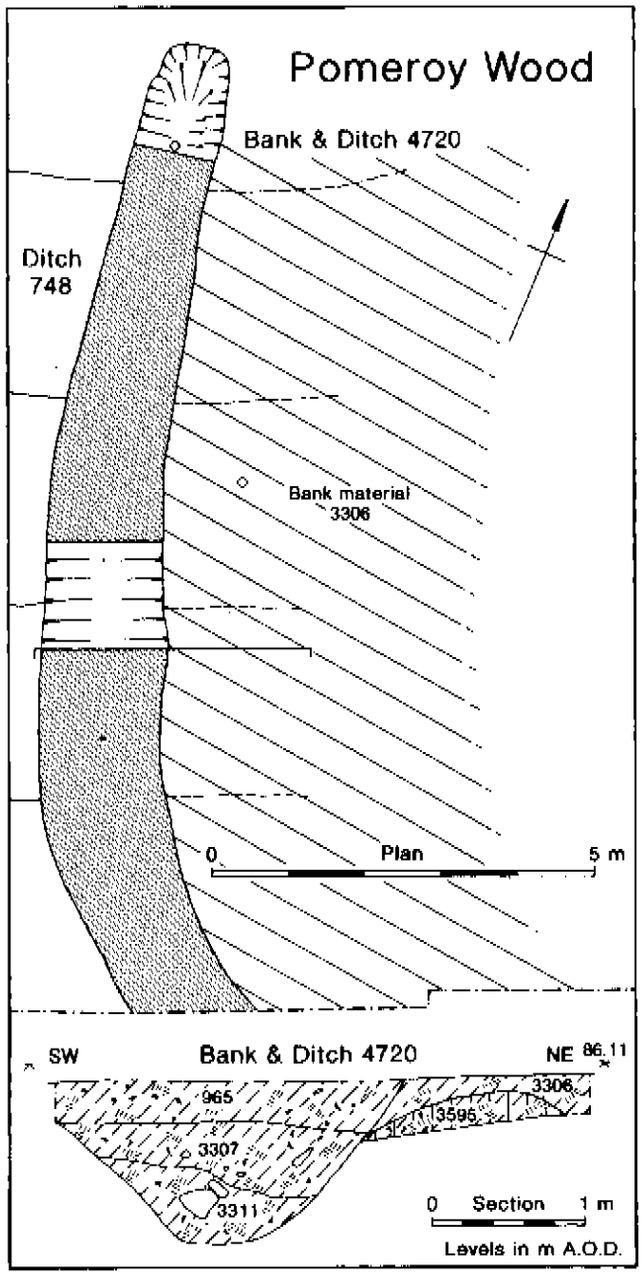


Figure 126 Pomeroy Wood: plan and section of ditch and bank 4720

Areas of activity

An area of intense activity in which several episodes of use could be distinguished (Fig. 127) was sited over the defensive ditches in the south-east of the excavated area. The first use occurred with the gullies described above, 3181 and 3182. The main activity after this relates to an area roughly 40 m in length over the defensive ditches, the softer make-up of which was consolidated with a layer of stones 3200 (Plan 1). This was most apparent in the outer ditch where the stones were up to 0.4 m in size, and in a spread up to 0.2 m deep that varied in compaction and density. It did not present a level surface, except for an area over the inner ditch and the berm, where the layer was shallower, less extensive and resembled a metalled surface; here the stone content comprised smaller stone, and showed evidence of compaction. The origin of the stones, which came form a variety of geological sources, is unknown, but the fact that much of it was similar in size and shape suggests

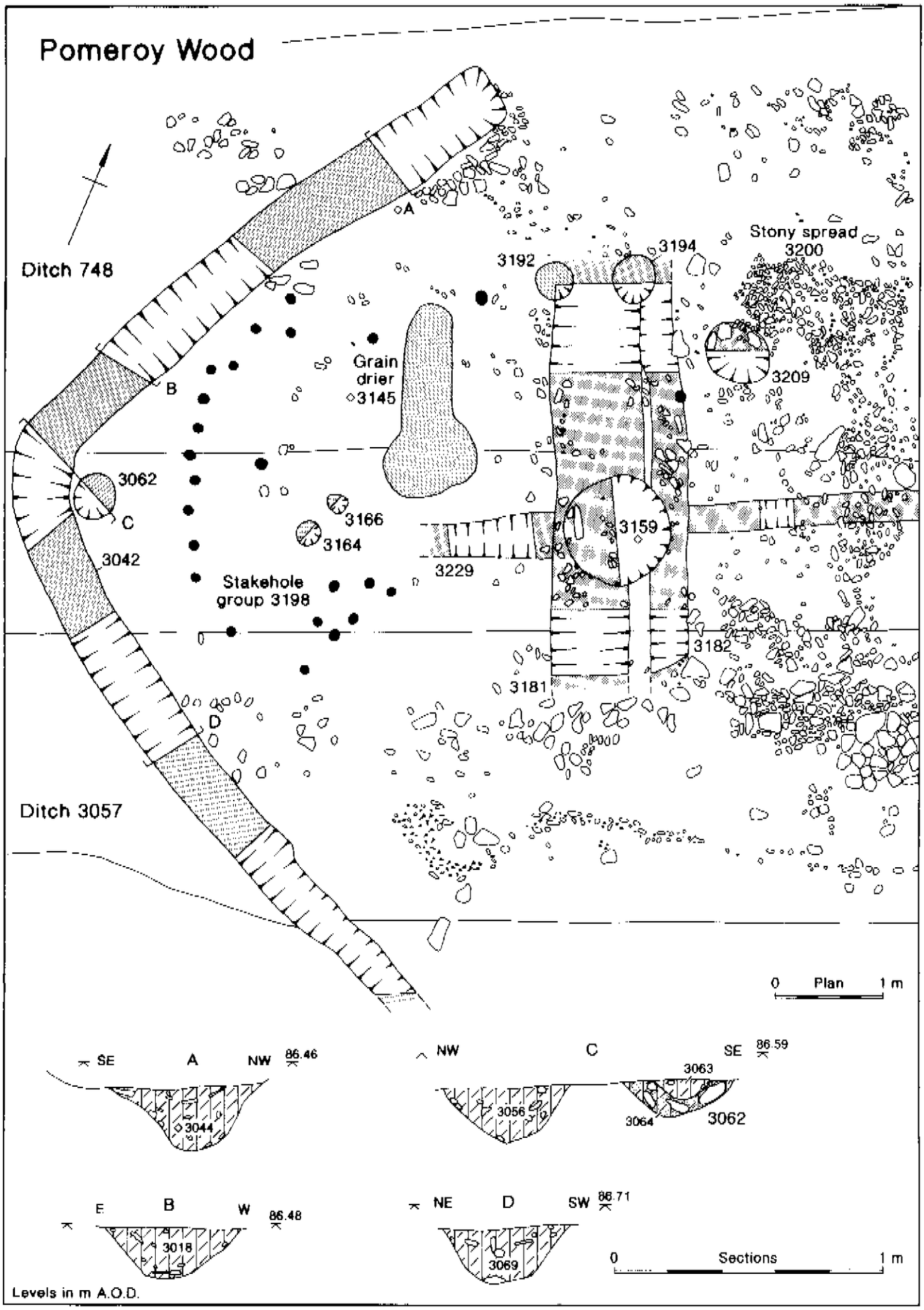


Figure 127 Pomeroy Wood: plan of gully 3042, the area of activity enclosed by it, and related sections

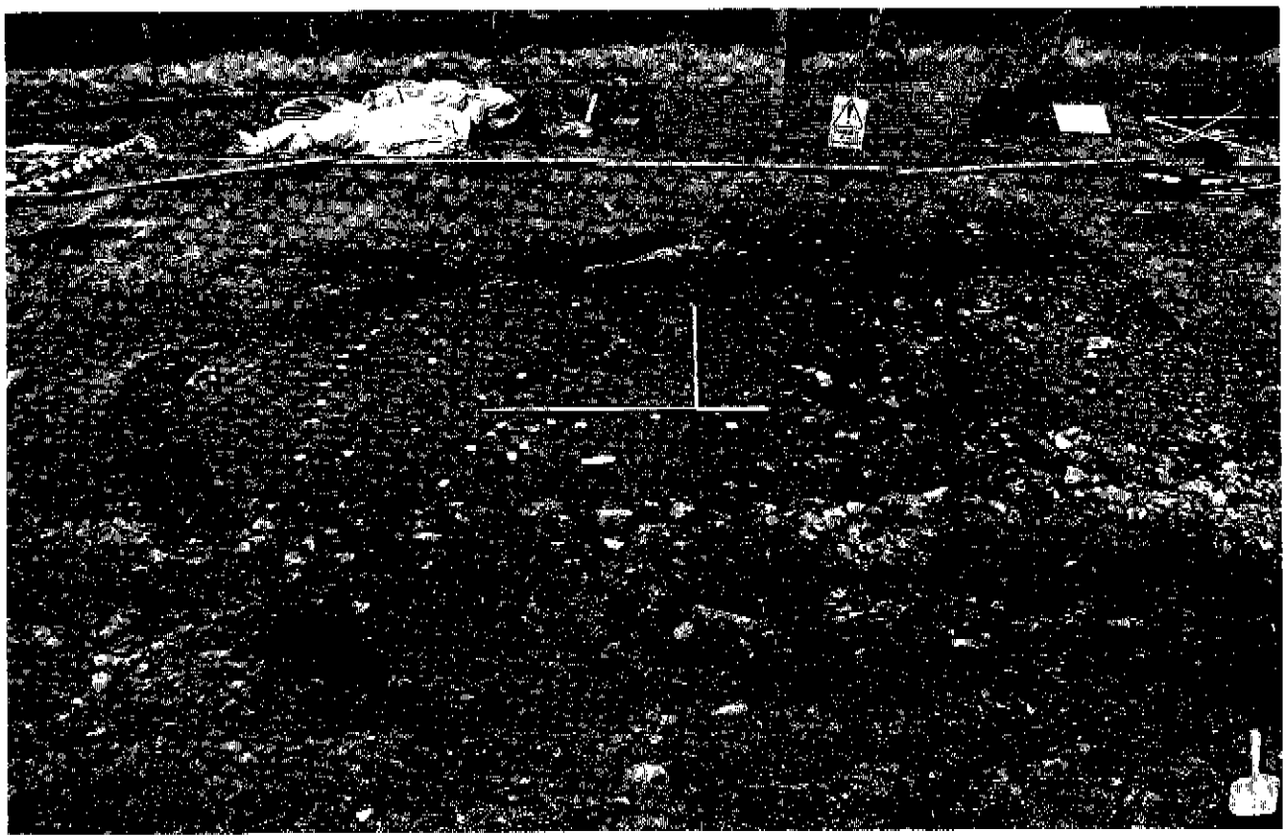


Plate 34 Pomeroy Wood: gully 3042 and the enclosed area of activity viewed from the south

that it comes from the same source, perhaps a building. Layer 3200 represents the deliberate levelling and consolidation of the area prior to use.

A number of features are thought to be contemporary with this area, including a probable grain drier 3145 (Fig. 128), consisting of a simple bowl and flue with regular sides and a slightly uneven base. The bowl contained a dense deposit of charcoal; the flue a silty loam. Cereal chaff was used as tinder or fuel for the drier. The bowl, 3146, was recut at a later date. An arc of stake-holes could be a windbreak to the west of the drier. A right-angled gully 3042 (Table 70; Pl. 34) partially enclosed these features. Terminating to the north-east, the gully was well cut to a maximum depth of 0.28 m over both defensive ditches. It contained a variety of ceramic material, and metalwork. Circular pit 3159 was central to the two arms of the gully; having a flat base and steeply cut sides, it contained a quantity of charcoal below the uppermost debris layer. The charcoal appeared to have been deliberately deposited or dumped, as there was no evidence for burning within the pit itself; an association with drier 3145 is probable. The charcoal within 3159 was of fast grown coppiced oak, which suggests an activity requiring a good quality high-energy fuel rather than a domestic hearth. Four post-holes, 3164, 3166, 3192, and 3194 and a small pit, 3209, are also present. In all, this collection of features presents the appearance of a working, as opposed to a living, area.

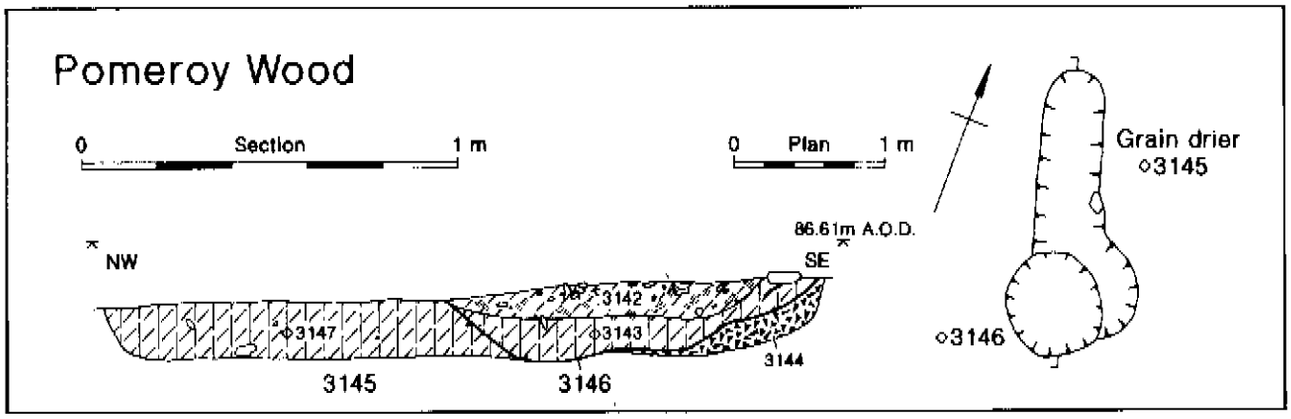


Figure 128 Pomeroy Wood: plan and section of grain drier 3145

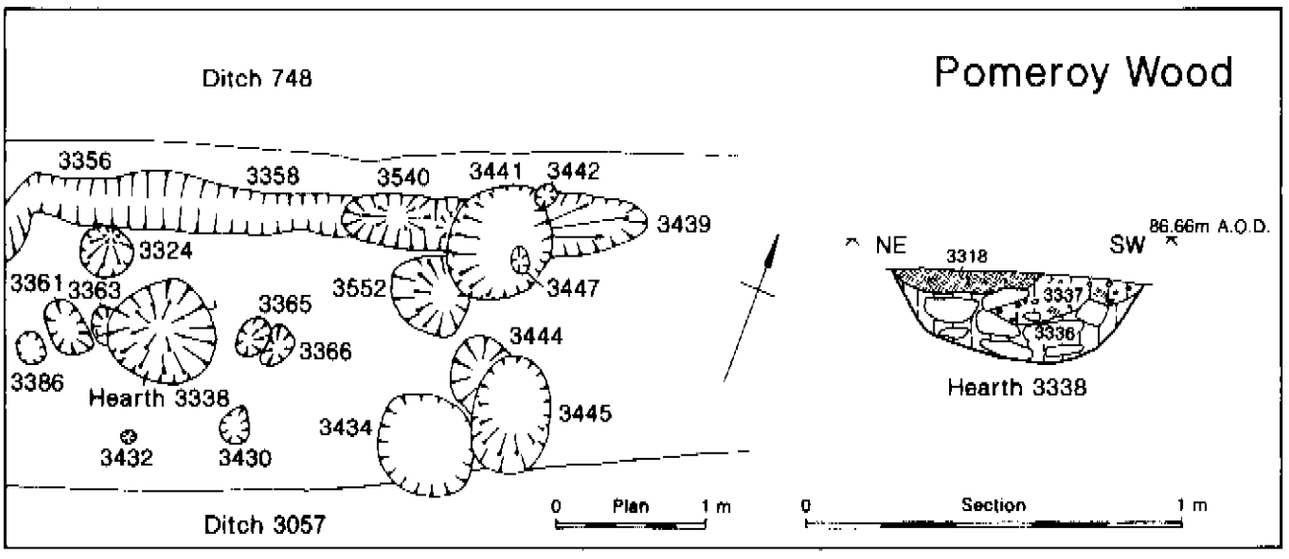


Figure 129 Pomeroy Wood: plan and section of hearth 3338

Some 10 m to the west of grain drier 3145, a small area on the berm between the defensive ditches was used intensively (Fig. 129). There was no stony surface, other than in the outer ditch 3342. The first activity in this phase overlay a 1st century AD horizon associated with the east–west gully 3229, and comprised four tightly grouped pits (Fig. 129, Table 69), 3444, 3445, 3441, and 3552, an isolated post-hole, 3361, and three stake-holes. The pits contained little datable material; the major fill of the first three was non-structural sub-rounded stone up to 0.2 m in size. These features were sealed by a series of layers and lenses of red to reddish–brown clay, of a maximum depth of 0.08 m, which defined a break in activity within this phase recognised elsewhere. Associated with this horizon was a group of post- and stake-holes in an area 2 m in diameter centred on a hearth-pit 3338 (Fig. 129). A collection of moderately sized stones in the base of the pit showed signs of heating, and was overlain by lenses of red clay and charcoal which spread out from the pit to cover the surrounding area.

Hollow 4706

An 8 m wide hollow (4706) lay in the area between the base and the outwork or annexe (Figs 130 and 131). It was scarped to some 0.85 m below the surrounding ground level, with a central paved surface of large flat stones (4719) over an area of some 5 m^2, and a less coherent surface, possibly having been displaced to the north. Two inter-cutting curvilinear ditches, 4716 and 4717 (Table 68), surrounded the surfaced area. Ditch 4717 terminated to the north within the excavated area, and became shallower immediately to the south of the stone spread, describing an arc around the surface. Ditch 4716 replaced 4717, and encompassed a considerably larger area, continuing north beyond the excavated area. A slot in the bottom of the ditch could indicate that it was cleaned out on at least one occasion, but the reason for its irregular shape remains unclear as it seems probable that the ditches were cut to provide drainage for the surfaced area. Three post-holes on the inner edge of 4716 may be the remnants of an associated fenceline. A number of post-holes and shallow gullies were present within the hollow, including one substantial post-hole, 933. Three irregular features on the north-west edge of the hollow showed evidence of animal disturbance and could not be related to any distinct purpose.

An industrial function for the hollow seems likely, possibly in association with grain drier 913 (see below; Fig. 133). Neither hollow 4706 or grain drier 913 was well-dated, with some of the Roman pottery within 4706 features probably deriving from later 3rd to 4th century silting/deposition. However, the curvilinear ditch 4716 is cut by well 3791 which also belongs to this phase suggesting that the hollow, and by association grain drier 913, belong relatively early within phase 4i.

Grain driers and ovens

Grain drier 3279, oven (WB) 1103, and associated features

Towards the western end of the excavated area (Plan 1), a group of heavily truncated features lay within an enclosure some 20 m wide, which yielded high magnetic susceptibility readings. Among a collection of shallow gullies and post-holes, two features were of note, a possible grain drier 3279 (Fig. 132) and oven (WB)1103 (Table 71). Enclosing the area was a curvilinear gully, 4711, which terminated within ditch 4710 (Table 68). The gully described an oblique arc to the north-east, possibly to encompass an oven (WB)1103. The east-west gully (WB)1105 lay to the north of oven (WB)1103, possibly completing the enclosure.

Oven (WB)1103 was a shallow sub-rectangular cut filled with a brown silty clay loam. A concentration of burnt sandstone on its western side, blackened clay, and charcoal all suggest that it was the base of an oven. It contained 2nd century samian.

Grain drier 3279 lay within an area of shallow truncated features, associated with burnt spreads (Fig.

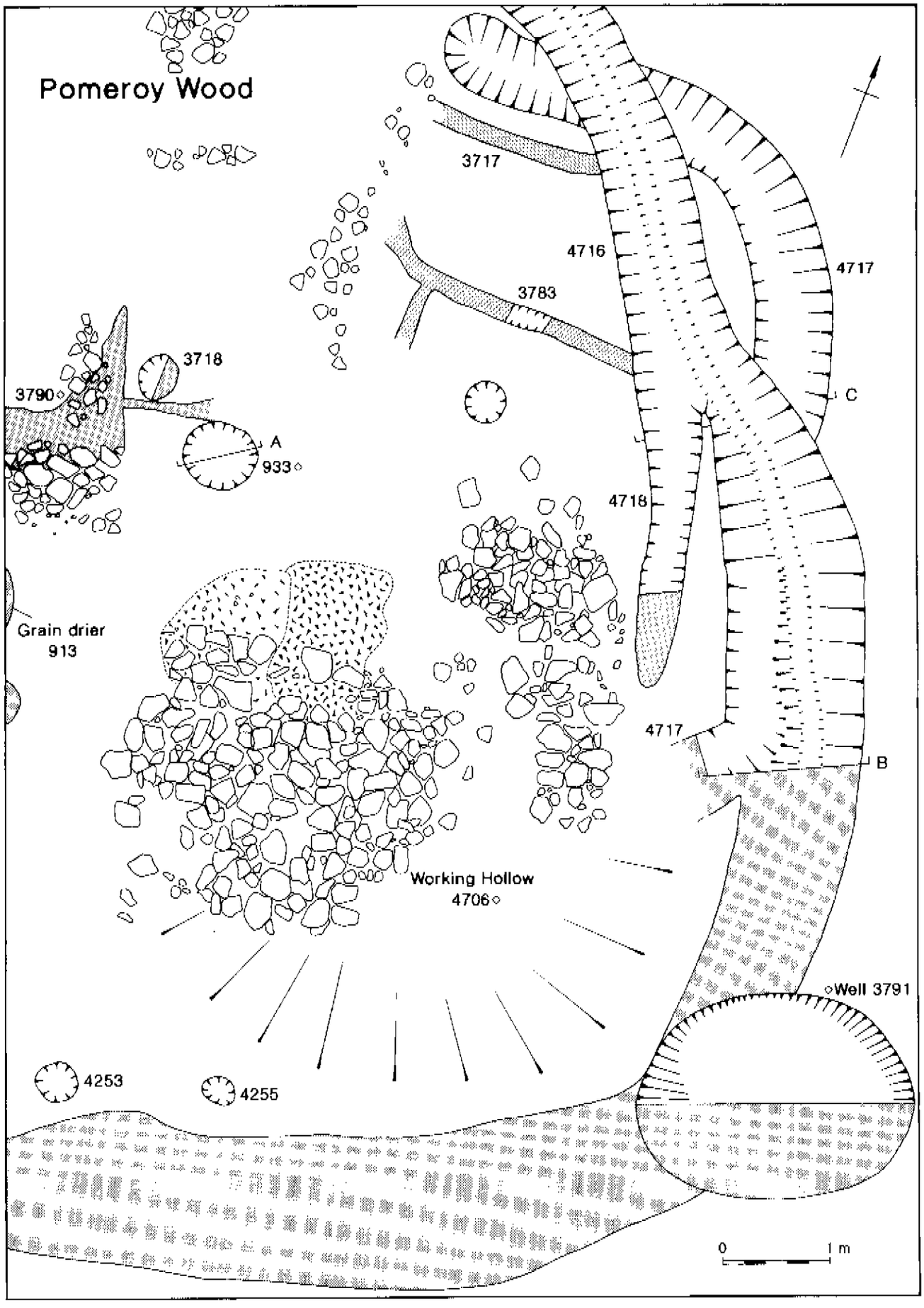


Figure 130 Pomeroy Wood: plan of working hollow 4706 and well 3791

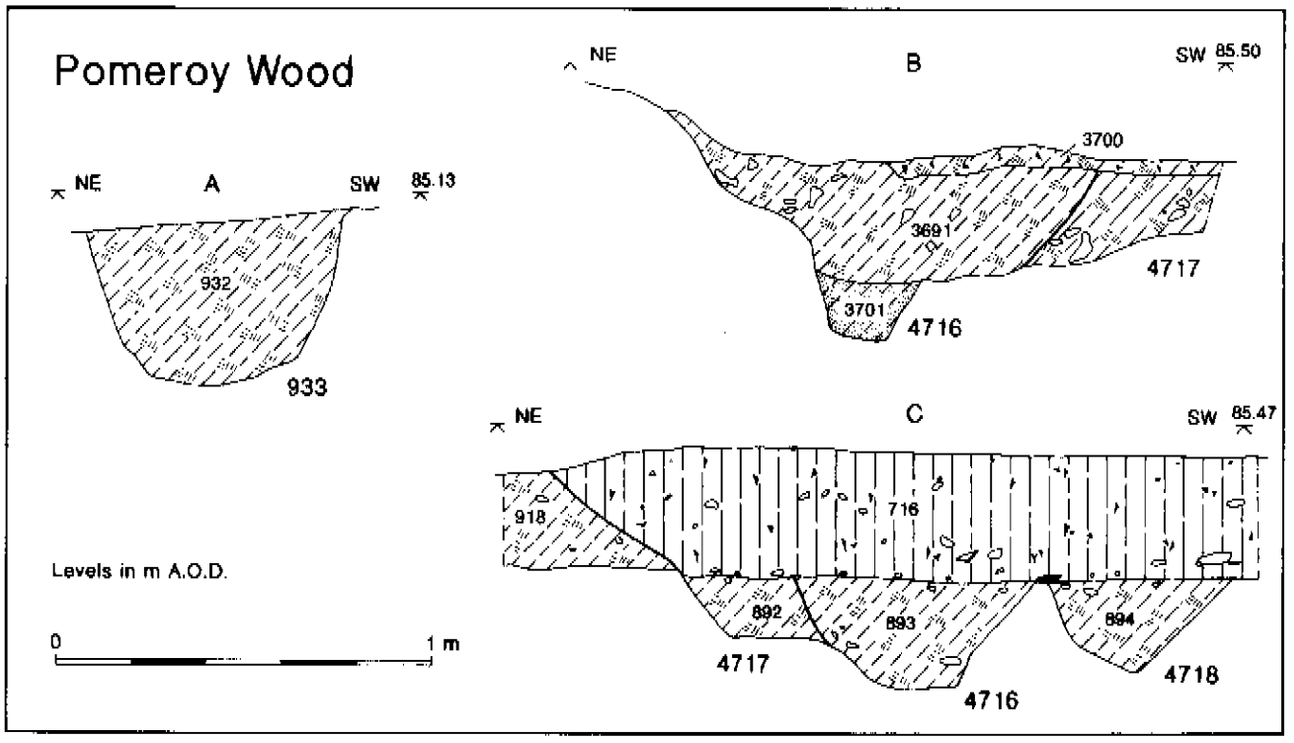


Figure 131 Pomeroy Wood: sections relating to working hollow 4706

132). It was smaller than the other similar features and sub-rectangular, with irregular features on the southern side. The east end of the feature was lined with a red clay, overlain by a mixed deposit of loam containing clay patches and charcoal. A dense deposit of charcoal lay over this within the east end of the feature, with red clay spreads above it, possibly indicating a reuse of the feature. Pottery within the lower fills of the feature was of 2nd–3rd century date.

A series of short linear features within the area do not appear to be parts of buildings and their purpose is uncertain. An irregular curvilinear gully, 3884, cut across the infilled 4711, possibly continuing to the north-west as 3936. These may relate to phase 4ii occupation of the area, but no definite dating was possible.

Further to the west, a series of shallow linear features lay below an irregular metalled surface, 3889. Two gullies, 4708 (Table 68) and 4709, were aligned north–south, 4709 curving to join the other to the north. A spread of stone and gravel, 80% up to 0.15 m in size, formed a compacted surface over these gullies for an area of *c.* 25 square metres, possibly on a north-east to south-west alignment. A disturbance on the southern edge, 4432, contained large, irregular, stones within the overlying spread of 4495. This perhaps represented the remains of a ploughed out wall-line that was made of blocks of volcanic trap and other stone.

Grain drier 913 and ovens 988 and 4094

A number of large features with complex fills appeared to have an industrial or agricultural function that required heating. Few finds were recovered from 913, 4123 and 637 to indicate the precise nature of this, but the charred plant remains from 637 clearly indicate an agricultural role and none of the features yielded evidence for metalworking. In the absence of other evidence, this interpretation has been applied to these features, and others of a similar form. Feature 637 is included within phase 4ii and 4123 within phase 2.

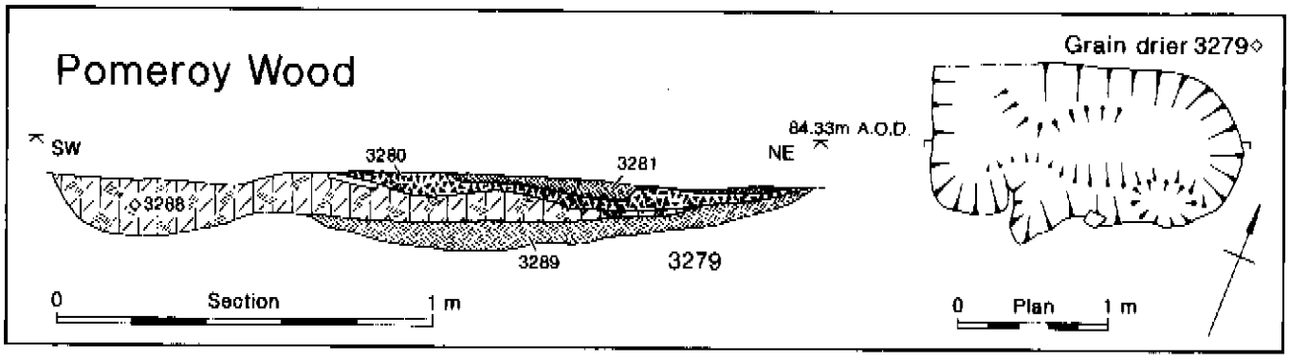


Figure 132 Pomeroy Wood: plan and sections of grain drier 3279

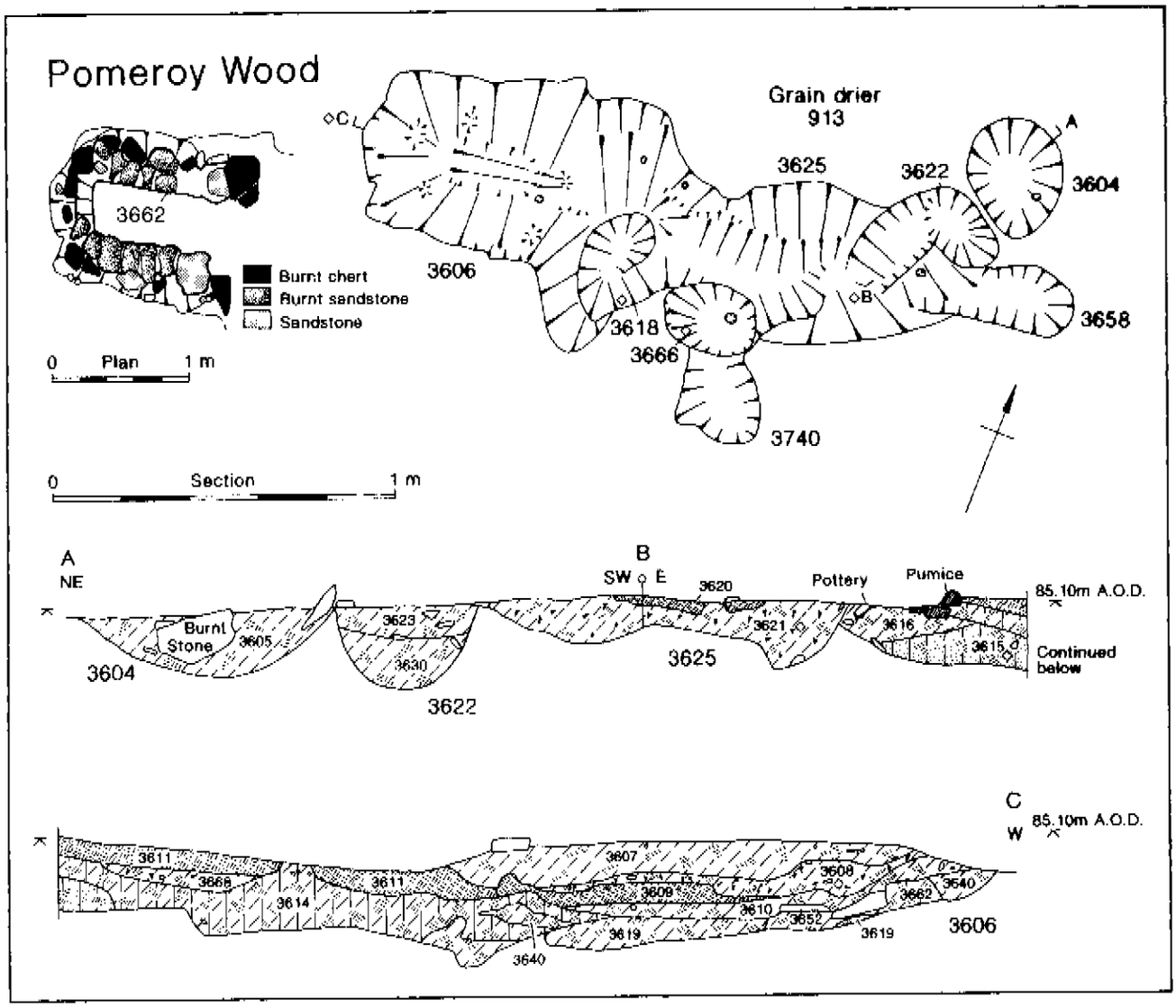


Figure 133 Pomeroy Wood: final excavation plan and section of grain drier 913 with, top left, an inset plan of the secondary stone lining 3662 at the eastern end

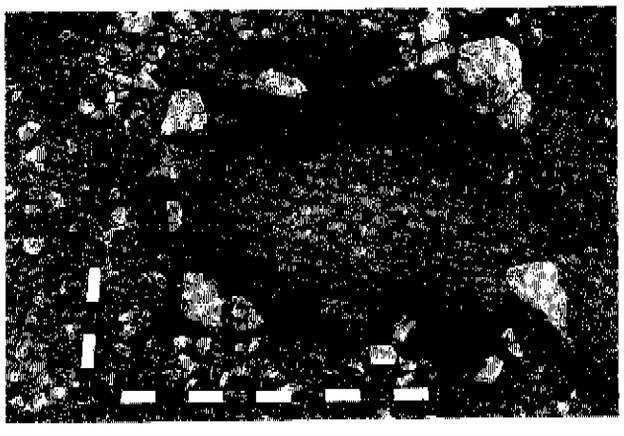


Plate 35 Pomeroy Wood: the western bowl of grain drier 913 with the burnt stone lining in situ, viewed from the south

Grain drier 913 (Fig. 133, Pl. 35, Table 71) was situated on the west side of working hollow 4706. It consisted of an irregular arrangement of shallow pits directly to the east of a fire-pit 3606. This was surrounded by subsidiary rake-pits, 3740, 3666, 3618, and 3625. Three pits, 3604, 3622, and 3658 to the east are thought also to be associated, with 3658 having a clay lining.

Fire-pit 3606 was rectangular, 2 x 1.3 m and cut into the sub-soil which showed signs of heating. The compact greyish–olive clay lining (3619) of the base was surrounded at its western end by a horseshoe shaped lining (3662; Fig. 133) of over a dozen heat damaged red sandstone blocks and chert pieces set in a reddish–brown silty clay. The blocks, set on either side of the bowl, were of a regular size, 200 x 130 x 120 mm, with heat damaged chert fragments at the west end. At the rear the sandstone blocks were packed with shattered chert fragments and part of a quern stone (Fig. 148, 4). These chert fragments may represent the first build of the fire pit, with the sandstone blocks being a later addition, though no recut was observed.

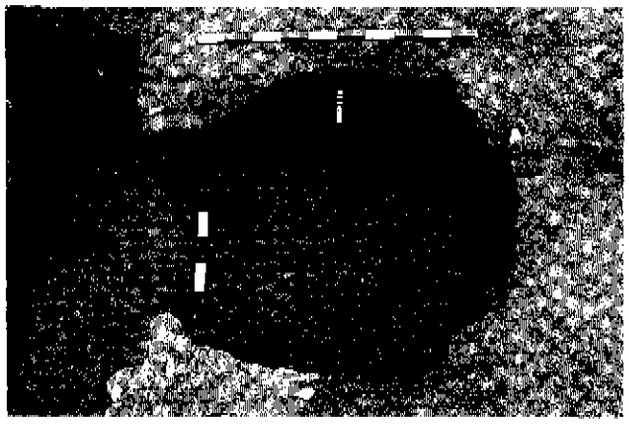


Plate 36 Pomeroy Wood: oven 988 fully excavated, viewed from the south (see Pl. 31)

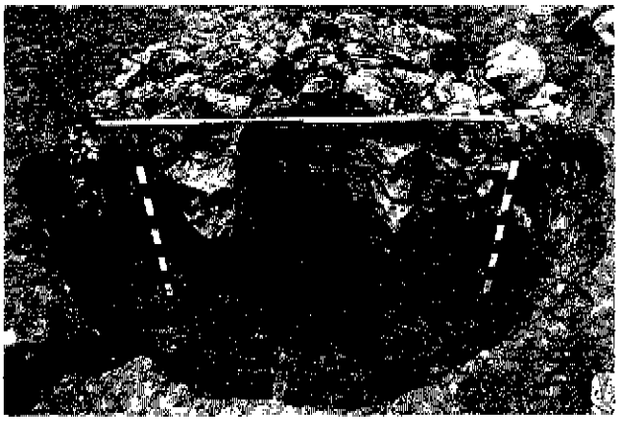


Plate 37 Pomeroy Wood: the top of well 920, viewed from the south

The neck of the fire pit contained the remains of a collapsed arch, 3640, of dark red clay containing burnt chert and sandstone. Above this, two blocks of chert flanked the neck of the structure to north and south, indicating rebuilding and a new clay lining, seen on the base as an olive–grey baked clay, 3619. A difference in the charcoal types was noted, with willow and alder prevalent within 3606, suggesting a wattle superstructure or shelter, in contrast to the taxa amongst the fuel debris within the rake pits. Analysis of the charred plant remains did not, however, provide any further indication of the function of the structure. No further structural elements were noted, the upper layers and fills of the adjoining rake-pits consisting of spreads of charcoal rich silty clay.

Oven 988 (Fig. 117, Table 71, Pl. 36) was on the west edge of ditch 3834 and was either cut by or was associated with the recut of ditch 4715. The oven was roughly circular with the sides being undercut to a flat base, in which were the remnants of an orange clay lining. Rectangular cuts in the sides of the pit below the undercut edge suggest that there had been some structure within the furnace relating to its operation. A spread of charcoal, ash and occasional slag within the fills of the recut of 4715, extending from the mouth of the oven suggested that the feature was located on the edge of the ditch to allow cleaning.

Oven 4094 was similar to oven 988, 4 m to the south, also on the western edge of the same ditch (Fig. 117). It was slightly smaller than 988 and also contained remnants of a clay lining. Its charcoal rich ashy fills had been raked from the mouth of the feature into the recut ditch 3834. Within the upper fills a quantity of clay, which was similar to that of the lining, may be from a collapsed superstructure. The fills contained 2nd century samian.

Wells 920, 3791, and (WB)1114

Well 920 (Plan 1, Figs 134 and 135, Pl. 37, Table 72) is of a different character to the 1st century (phase 2) wells, being stone-lined and sited on the base of the now demolished rampart stack. The outer shaft tapered from a diameter of 2.6 m at the top to 1.9 m at the base. The inner shaft had a diameter of 0.8 m at the top, tapering to 0.6 m at the base. The stone lining was not uniform, ranging from a standard thickness of 0.85 m at the top, gradually becoming more distorted towards the base, where in section one side appeared 0.2 m wider than the other. The blocks making up the dry-stone wall varied from 0.2–0.4 m in size. Those facing the well were neatly coursed and roughly dressed, with the facing stones keyed into the rubble core.

A number of post-holes surrounding the well may relate to the building of it. A possible lining 3379, which extended all around the shaft, may be natural in origin perhaps representing plants, such as moss, or leaching. The well appears to have silted up gradually as there is no indication of it having been capped, though one layer near the bottom of the excavated section (4621) contained a dump of spoiled grain. The latest identifiable pottery is of later 3rd century date. The occurrence of post-medieval material in the upper fills may suggest that there was some form of superstructure which prevented the spreads of 3rd–4th century material that are present elsewhere on the site from entering the well, with the post-medieval pottery only becoming incorporated after the wellhead was reduced by cultivation or decay.

Well 3791 (Fig. 130) was on the south-eastern edge of working hollow 4706, and was cut through ditch 4716. It was 1.9 m wide at the top and tapered towards the base but the organic lower fills voided in the course of excavation making further manual excavation unsafe and impracticable. The remains of a possible organic lining were noted at the top of the well. The pottery from the upper fills suggests a 2nd–3rd century date. These fills contained deposits similar to the dark spreads overlying the whole of the area of 4706, as well as a quantity of smithing debris including six smithing hearth bottoms. The insects from the base of the well indicate that domestic animals grazed nearby and that a timber building which was infested by beetles also stood in the vicinity.

Well (WB)1114 (Plan 1) was the only well outside the confines of the former military base and outwork/

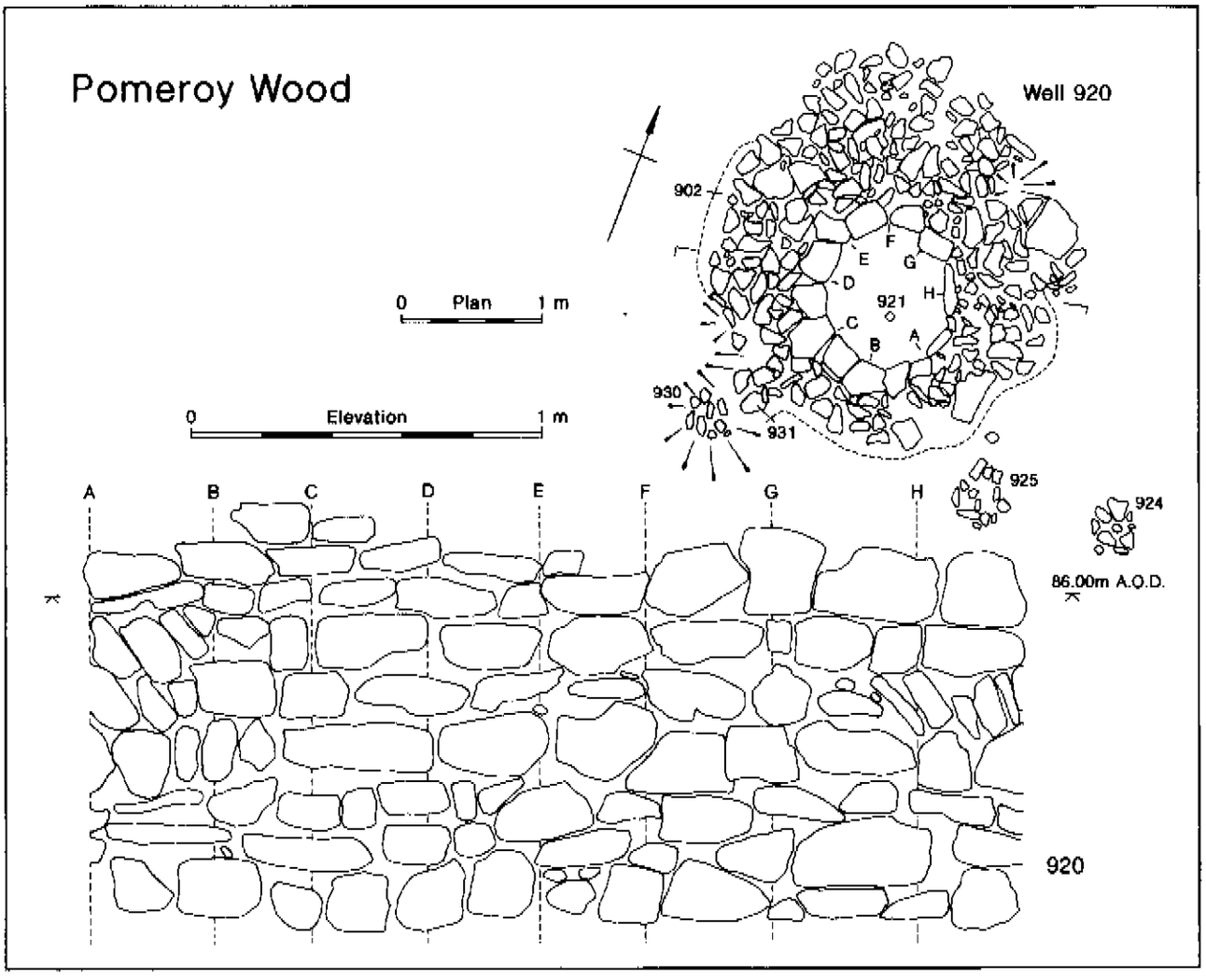


Figure 134 Pomeroy Wood: plan of well 920 and the elevation of the complete inner surface of the upper 1.2 m of the stone lining

annexe. It was not stone lined and its diameter of 1.6 m was similar to those of the other wells, but as it was found during the Watching Brief and in poor weather conditions only a limited examination was possible. The pottery from the upper 1.9 m of its fill was of later Roman date; 2nd century samian was also present, hinting that it may have originally been excavated in phase 4i.

Two of the wells (3791 and 920) that are attributed to this period were in close proximity to the pairs of round-houses described above.

Pits

A pit (819) was cut through the compact clay capping (974) of 1st century well 3047 to a depth of 1.6 m, and showed evidence of preparation in a layer of gravel (3048) deposited over the initial silting/trampling of the basal fill (Fig. 114, Pl. 38, Table 69). It is thought that this was a cess pit, though none of the environmental samples contained evidence such as the mineralised remains which sometimes occur in contexts which are rich in posphate, to confirm this. What are thought to be the remains of a wicker lining or basket was noticed as a shadowy impression (977). It was some 10 mm thick, 1.58 m in diameter, and tapered to 1.1 m at the base. Tiles had been used to fill the gap between the basket and the edge of the pit. Layers of what are thought to be cess lay in the base of the pit and were covered with layers that suggest periods of disuse and also the deliberate dumping of material and the charcoals in these layers may have been used to stop the pit from smelling. As no early Roman material was recovered from 819 it appears that the site of well 3047 was still visible after the abandonment of the military base, thus allowing its later reuse. The final fills of pit 819 contained 3rd–4th century pottery, possibly indicating that clearing out had removed any evidence for earlier use.

Pits 4061 and 4120 were stratigraphically earlier than round-house 4103. Both are attributed to phase 4i, though it is not impossible that they were excavated during the military occupation of the site (phase 2). A sub-ovoid, steep-sided pit 4061 (Fig. 121) was below the south-east of the outer gully. It contained little distinctive material within its two silty clay fills, but did contain the remains of spelt wheat and barley. Pit 4120 (Figs 121 and 136) was considerably larger, and lay beneath the south-western arc of round-house 4103 and just to the north of well 920. There were no closely

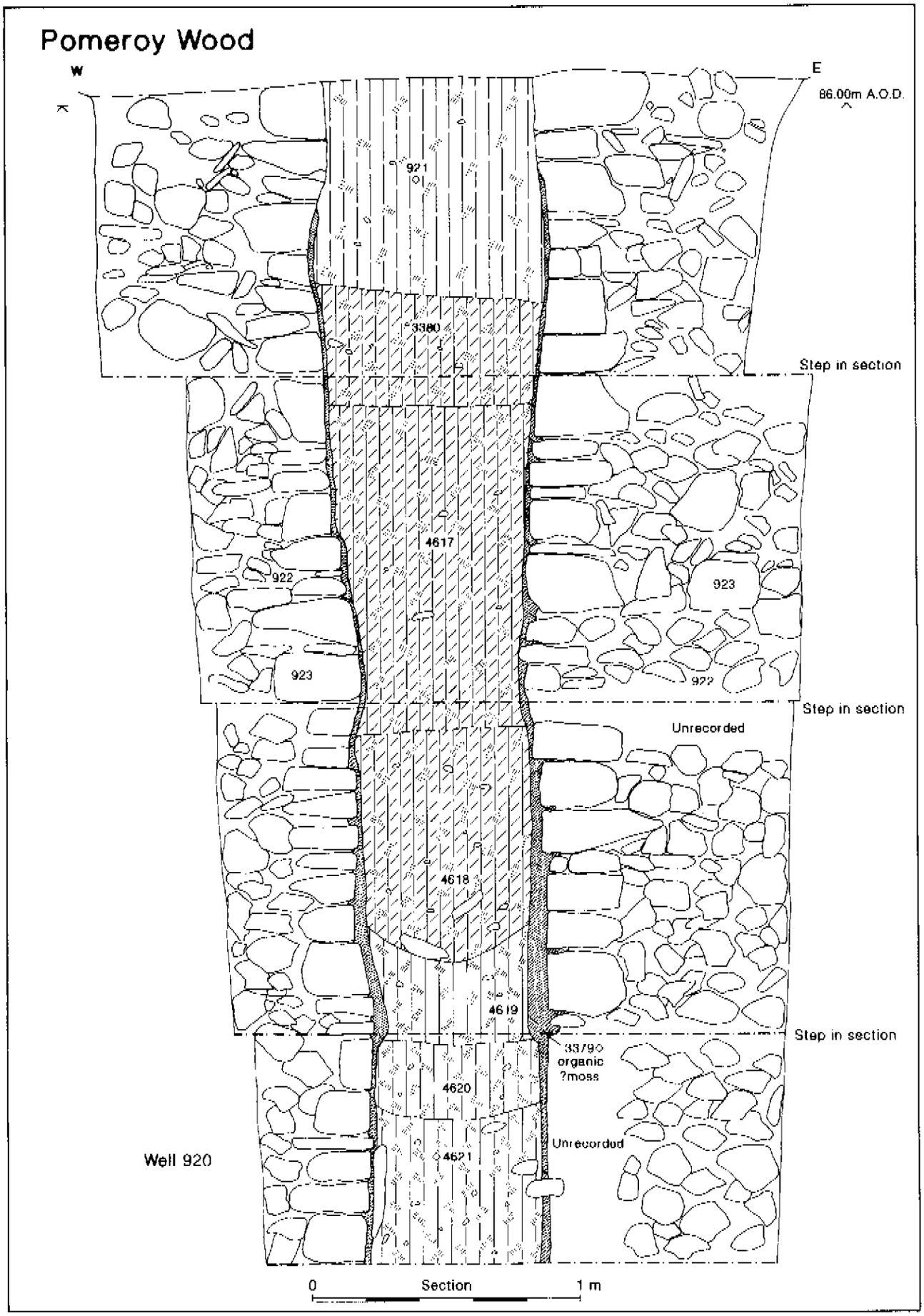


Figure 135 Pomeroy Wood: stepped section of well 920

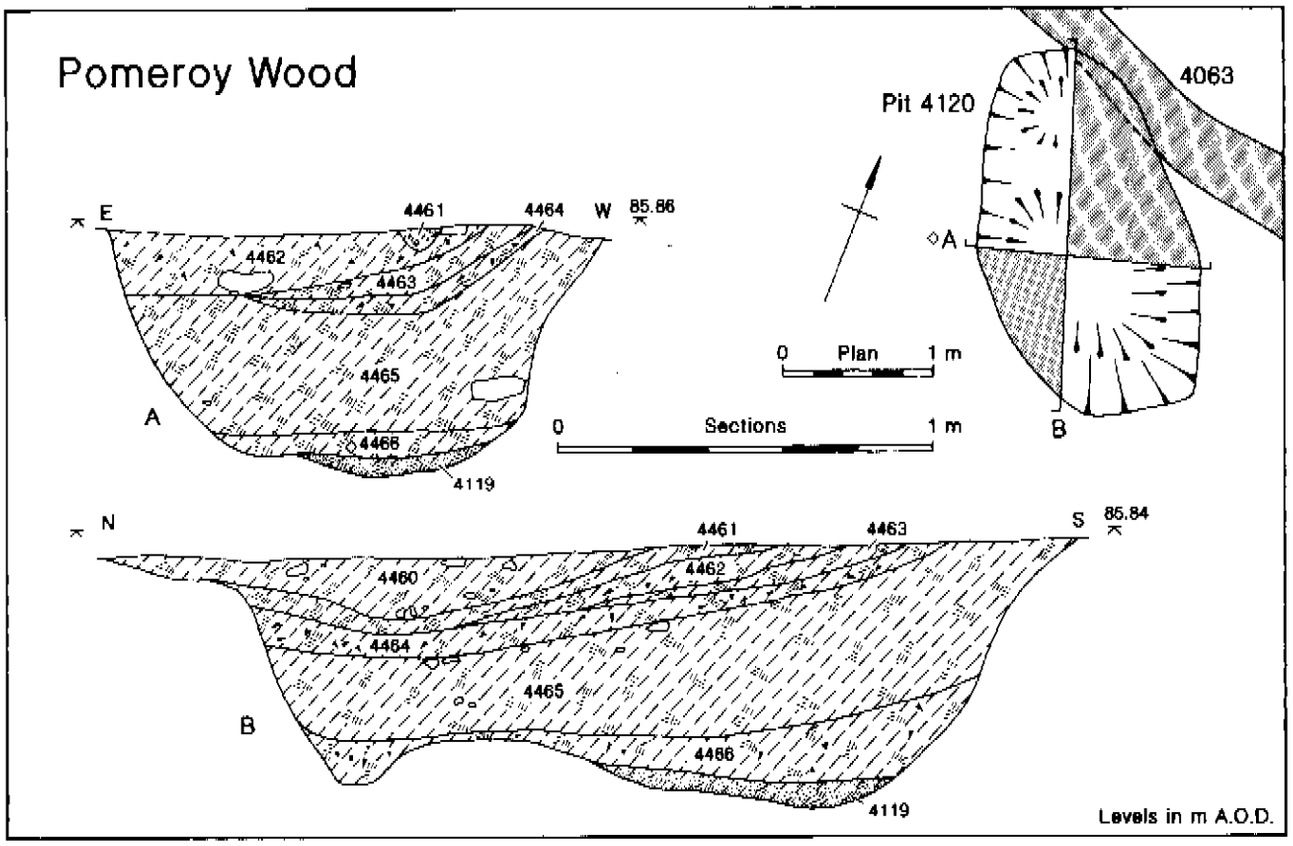


Figure 136 Pomeroy Wood: plan and sections of pit 4120

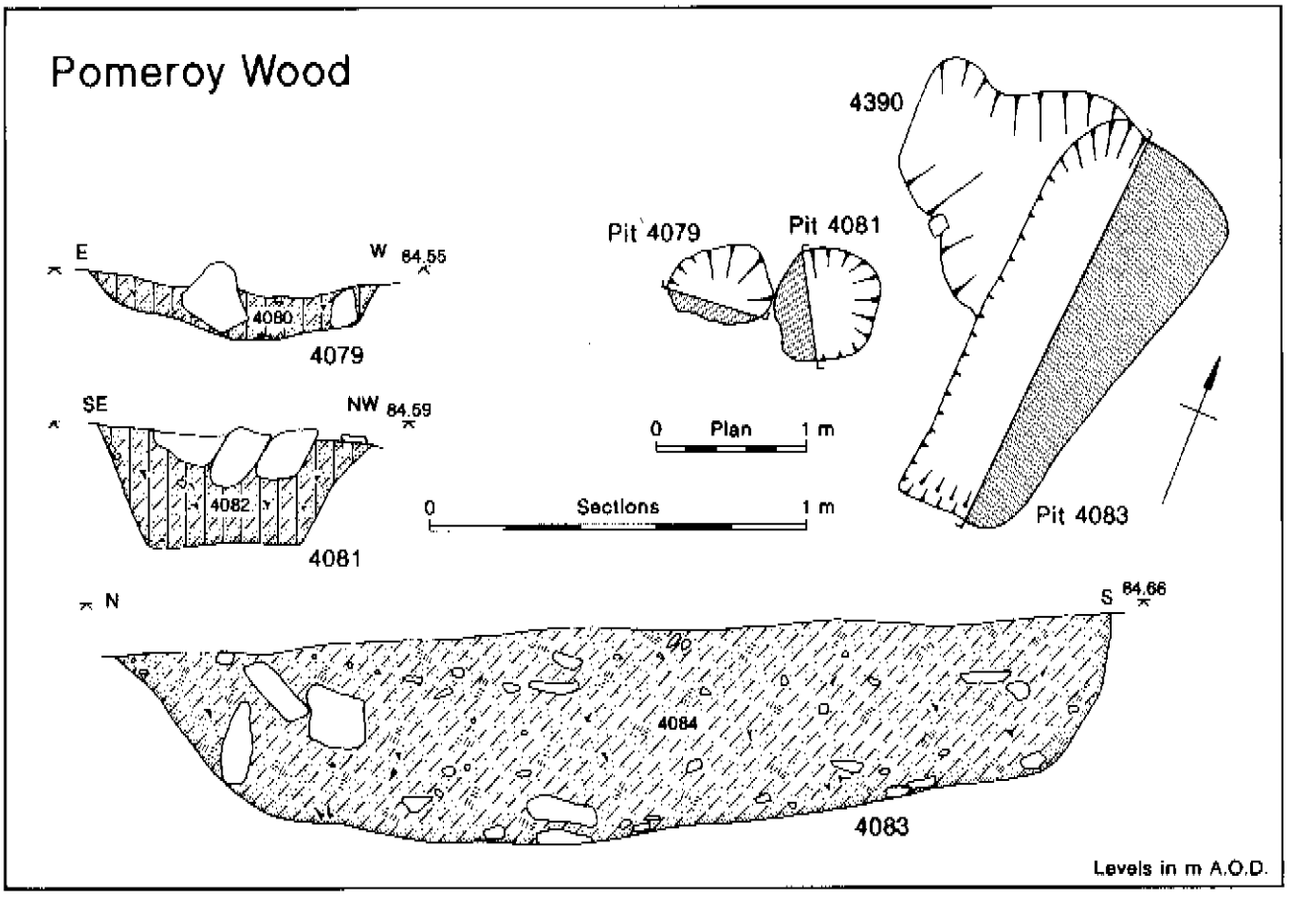


Figure 137 Pomeroy Wood: plan and sections of pits 4083, 4079, and 4081 as fully excavated, the quern stones within pits 4079 and 4081 having been removed earlier

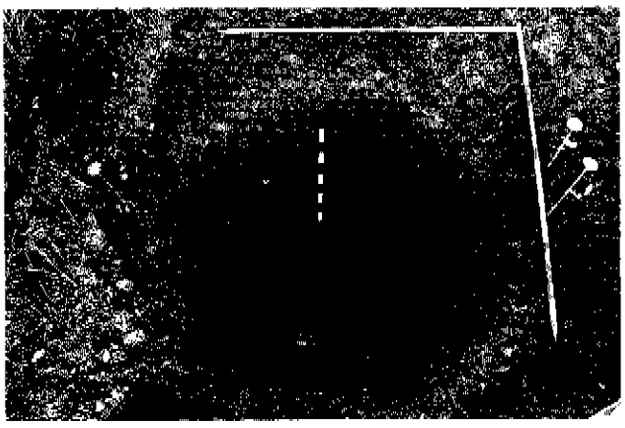


Plate 38 Pomeroy Wood: cess pit 819 cut through top of well 3047, viewed from the west

datable finds from the pit, which was sub-rectangular and steeply cut to an irregular base. Its lower fills contained a component of what is thought to faecal matter, though again the environmental evidence neither supports nor refutes this suggestion. The many lenses of material indicate that the pit filled in gradually with material deriving from the south. Feature 4173, which was a shallow linear feature between 4120 and 920, appears to be earlier. Pit 4120 was possibly a cess pit or latrine, but its location adjacent to 920 could also suggest that it was originally a water tank. No lining for 4120 was noted, but the clay subsoil may have rendered one unnecessary.

A large sub-rectangular pit 4083 (Plan 1, Fig. 137) lay to the south-west of round-house 3671 and had regular vertical sides and a flat base. Its single silty sandy clay fill contained frequent medium to large, sub-rounded stones, as well as quantities of pottery, slag, fired clay, nails, and charcoal. Directly to the west of the pit, two undated shallow sub-circular pits, 4079 and 4081 (Fig. 137), each containing one half of a reused quernstone (Fig. 148, 2) which were set horizontally and surrounded by packing stones. It is unclear whether the querns were post-pads (as there is no related structure), or had an industrial purpose such as at the Chesters villa, Woolaston, Gloucestershire (Fulford and Allen 1992, 177–81), where querns were reused in ore-crushing platforms.

Two concave and inter-cutting pits, 3294 and 3876 (Fig. 123), were positioned over the defensive ditches of the military base, and over the west end of ditch 3265. They contained a quantity of pottery, burnt clay and flint, perhaps material from middens but the primary function of the pits was again uncertain.

The evidence for two or more sub-phases within 4i

The number of features attributed to phase 4i which intercut suggests that the site was occupied continuously and extensively during the 2nd and 3rd centuries. The evidence for this is widespread, most notably in the successive replacement of round-houses which appear as pairs, and is perhaps emphasised by the pits that underlay round-house 4103. Well 3791, which cut through the infilled working hollow deposits of 4706, is also dated to this phase. Two phases of activity are also present in the area enclosed by and to the west of structure 3042, in which the latter phase appears to be contemporary with the structure and the metalled surface 3200. This may indicate an expansion of settlement away from the presumed road frontage to the north. Pits were also cut into the top of ditch 3265 at the eastern end of the site, and two cuts were noted for the curvilinear gully 4711 to the west.

One anomaly to this general pattern is ditch and bank 4720, which has the appearance of a small enclosure. The ditch is dated to phase 4i but it could represent another sub-phase of activity as no features appear to respect its location, or to lie within an enclosure defined by it.

The Romano-British Civil Settlement: 3rd–4th century occupation (Phase 4ii)

The succeeding occupation was less intensive although it did extend further to the west along the presumed course of the Roman road. No buildings can be attributed to this sub-phase, but a number of pits and ditches show that the area continued to be used and it seems likely that the focus of settlement moved elsewhere. The quantity of unabraded pottery recovered from phase 4ii is similar to that from phase 4i suggesting that this material is also debris from occupation rather than material being redeposited by, for example, the spreading of manure. A number of hearths, ovens and grain driers also show that occupation continued nearby (Plan 1). Additional compounds – or at least ditches perpendicular to the presumed course of the Roman road – were also set-out during this period.

Grain driers

Grain drier 637

Grain drier 637 (Figs 138 and 139, Table 71) is thought to be associated with ditch 4713 (Table 68), which forms a rectangular enclosure around it, with the drier in the centre of the area excavated. The drier was a sub-ovoid hollow, with a deep pit, 790, near to its northern end from which extends a gully. The deepest part of the hollow was at the south and this had many layers of fire-reddened clay, interleaved with charcoal lenses, all of which spread and became shallower to the north. Thick charcoal bands between red clay layers indicated two phases of reuse. Pit 790 lay off centre within the northern end of the furnace and was a steeply cut bowl, filled with a black charcoal-rich silty clay, possibly acting as a rake-pit for the main furnace. Pit 790 is contemporary with the building of the drier but may have been used throughout. This may also be true of gully 3946 which was filled with charcoal rich silt loam which faded to a yellow/brown silty clay to the north. The charred plant remains suggest that 637 was a grain drier.

Three features immediately to the south may be associated. Pit 749 was filled with a compact red clay, which was similar to that in the prehistoric pit 751. A shallow linear feature, 653, and a post-hole 677 directly to the east of the grain drier were the only other features nearby.

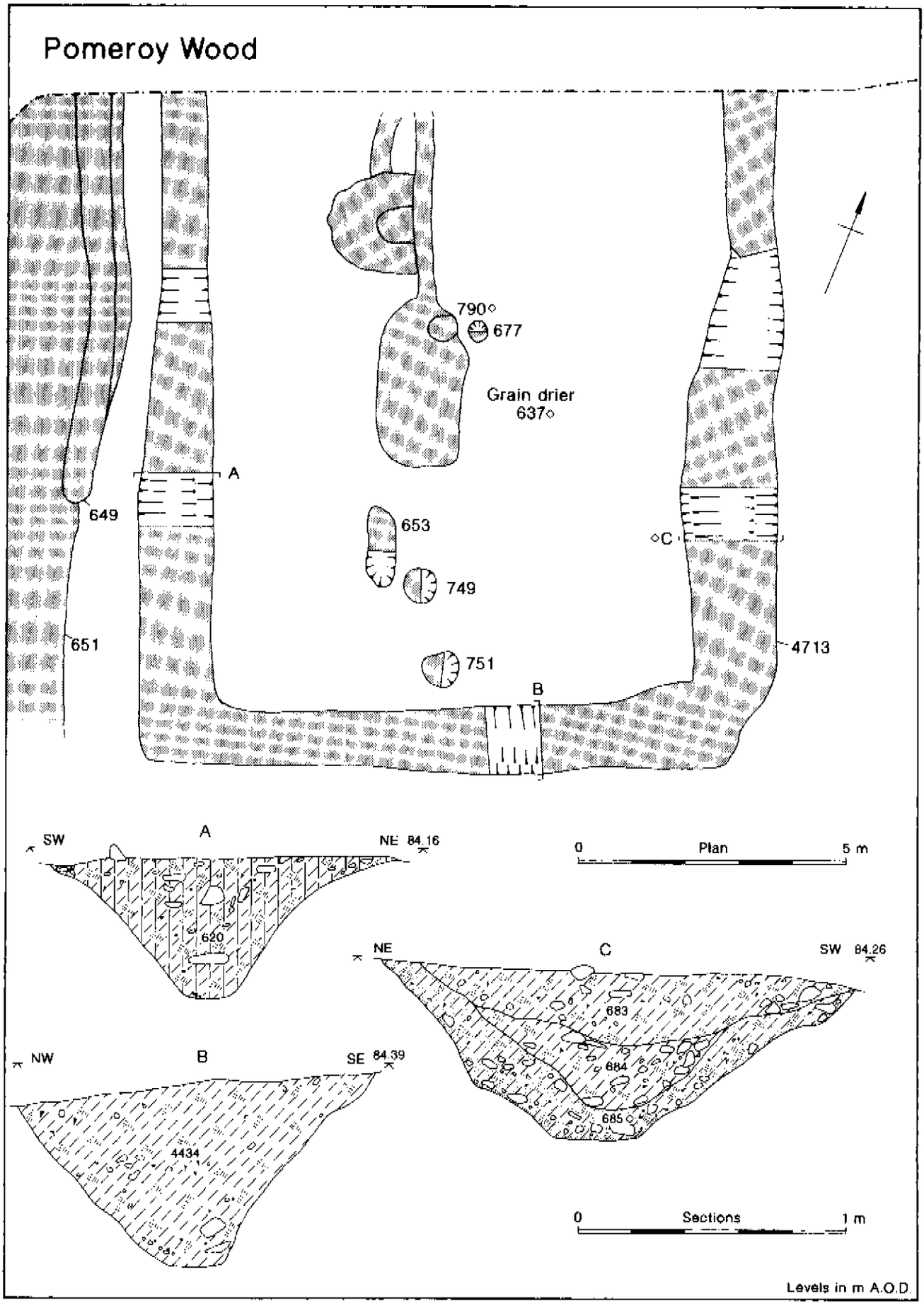


Figure 138 Pomeroy Wood: plan and sections of enclosure 4713 and plan of grain drier 637

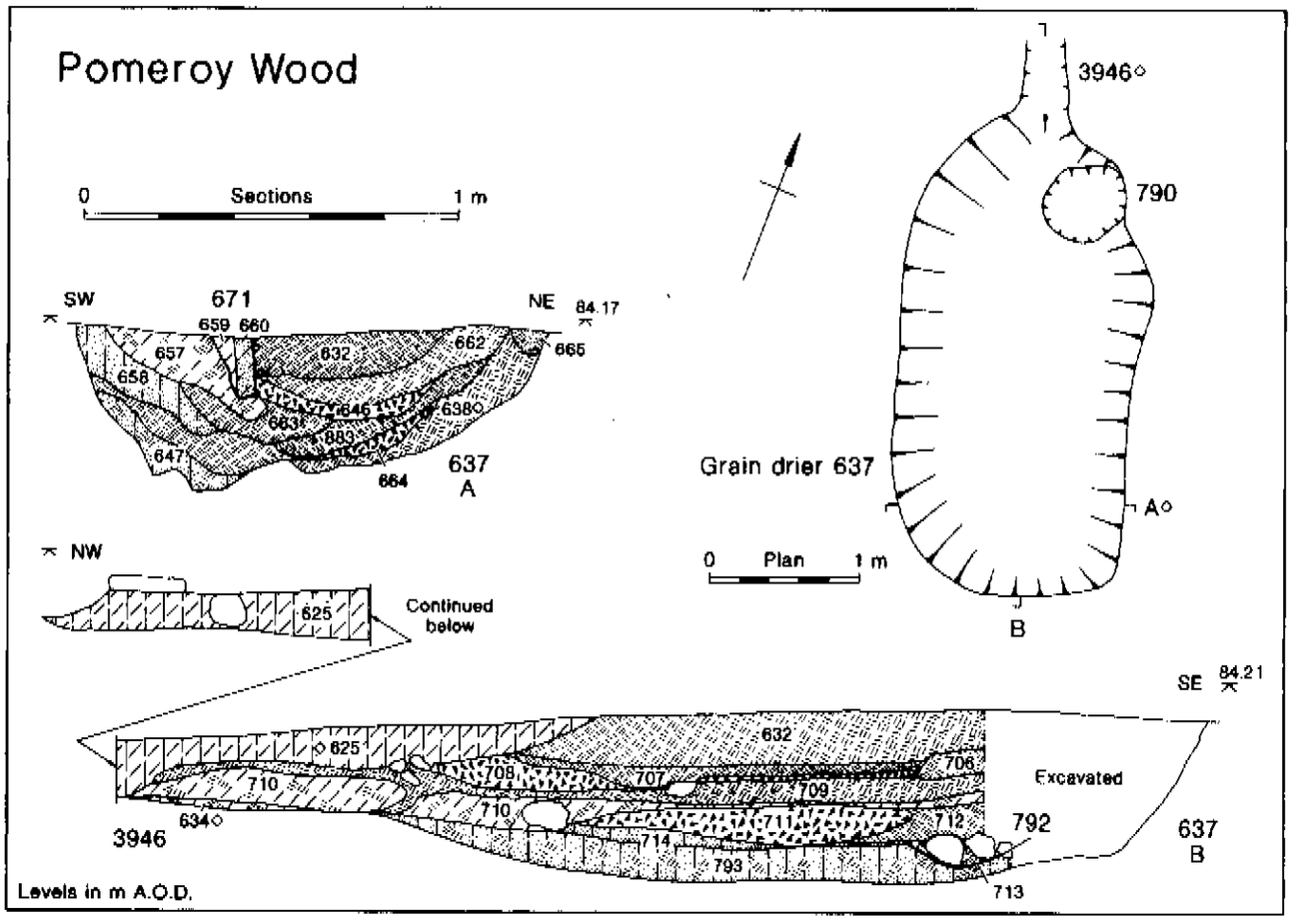


Figure 139 Pomeroy Wood: plan and sections of grain drier 637

The ditches of compound or enclosure 4713 formed a rectangular enclosure around 637. The ditches were fairly substantial, being on average 1.3 m wide and 0.5–0.65 m deep, and enclosed an area 8.5 m wide x 11 m. The fact that grain drier 637 appears to lie centrally within enclosure 4713 is the principal, but inferential, evidence for dating the grain drier.

Grain drier 3524

Grain drier 3524 (Plan 1, Fig. 140, Table 71) lay within the interior of the former military base, cut through round house 4527, and overlay a number of post-holes. The drier was 'key-hole' shaped, the southern end being a square-cut pit, which was lined with sandstone and clay. There was abundant evidence for heating – the sandstone blocks were degraded, the clay burnt, the chert blocks were fire-cracked and charcoal occurred plentifully in shallow lenses across the length of the feature before dipping into a rake-pit at the north end. A deposit of red clay, which may represent a collapsed superstructure, sealed the upper layers. It is suggested that, like grain driers 913, 3843 and 637, this feature was also used in crop-processing.

Grain drier 3843

Grain drier 3843 (Figs 141 and 142, Pl. 39, Table 71) was sited towards the western end of the excavated area and was partially enclosed to the south-west by curvilinear gully 4025. The original element of 4021 was hour-glass shaped, with the northern half being quite substantial. Clay bonded walls of marl and sandstone blocks faced the sides of the bowl, around a fired clay floor (Fig. 142). The raking pit to the south was filled with fragments of fired clay, ash and charcoal, primarily of oak. This overlay a semi-circular arrangement of small stake-holes, suggesting that the first superstructure was wattle.

The drier was rebuilt (3856) in the same location reusing the original walls. The southern pit was extended, and a stone floor laid in the northern bowl. This was mainly of marl, but included part of a greenstone quern (ON 2319). Layers of ashy silt and charcoal, within which there were some concentrations of ash and charcoal, spread across the upper fills. The charred plant remains derive from the final stages of crop-processing, suggesting the oven was used for parching cereals.

Ditches and gullies

The existence of another sub-rectangular enclosure or compound is suggested by ditch 826. This described a right angle to the west (Plan 1, Table 68). It could be associated with one of a number of ditches that run north–south further to the west, for example ditches 651 or 3247. Alternatively ditch 826 could follow the alignment of the major phase 4i east–west ditch 4085. Ditch 826 is slighter than 3247, 80 m to the west, and so is more probably associated with ditch 651 which has a broad, shallow profile. The resulting area was *c.* 30 m wide and would itself enclose rectangular enclosure

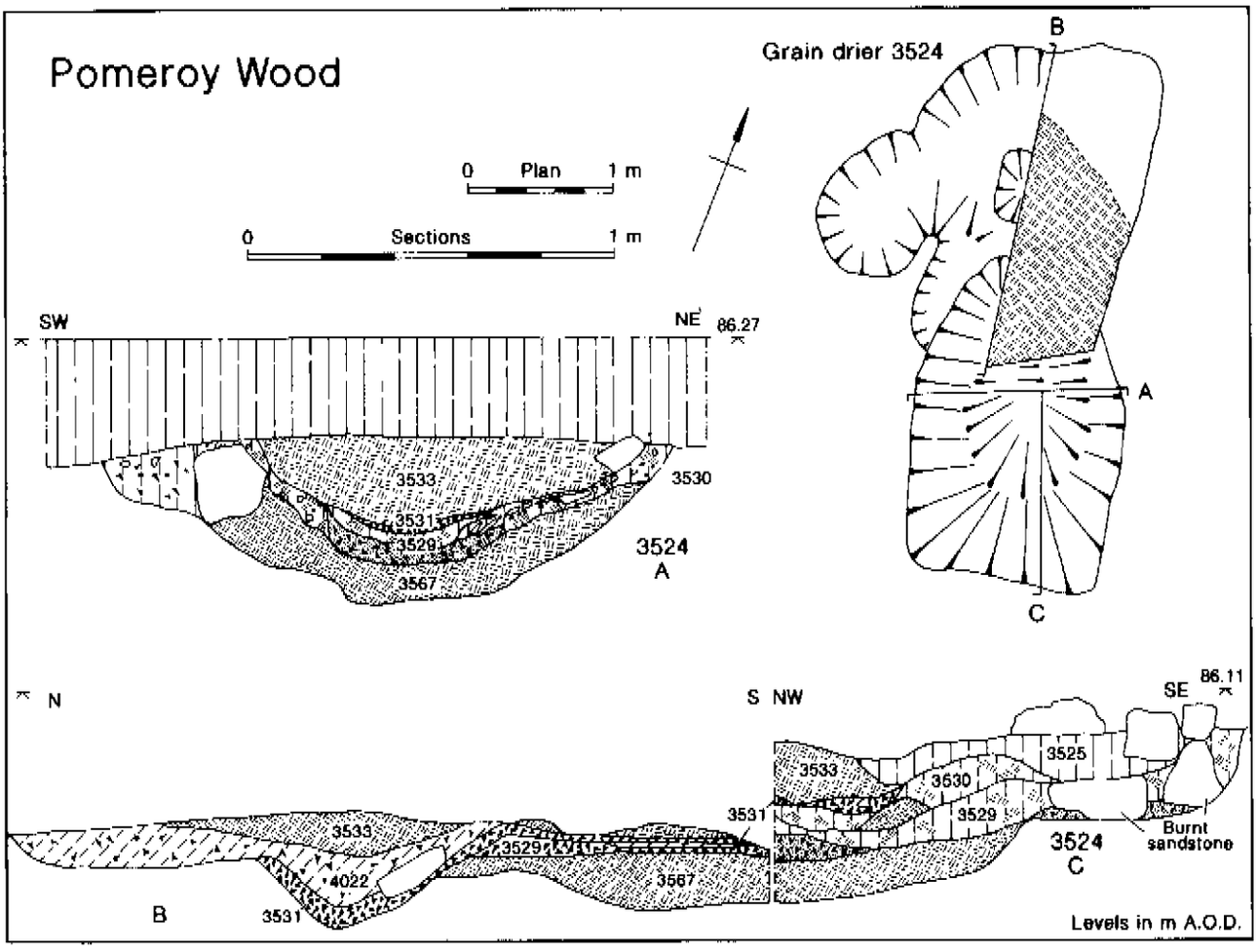


Figure 140 Pomeroy Wood: plan and section of grain drier 3524

Plate 39 Pomeroy Wood: grain drier 3843 under excavation, viewed from the east

4713. A small sub-rectangular pit, 3636, (Fig. 143) lay to the west of 826 and was lined with red clay and contained layers of ash and charcoal.

A shallow ditch 4714, cut through 826, running parallel to it for 7 m, before terminating. The arrangement of the ditches in this area is the only indication of successive episodes of use during phase 4ii.

Ditch 3247 was fairly substantial in relation to many of the others in the civil settlement, being 1.04 m deep with a steeply cut v-shaped profile. It contained a high proportion of late Roman pottery, as well as quantities of other domestic debris such as tile, fired clay, and nails. The character and quantity of these finds suggests settlement nearby, including at least one substantial building, but few other features in the immediate vicinity reflect this. A number of shallow gullies to the west, 3268, 3270, 3906, and 3953 indicate other activity, but they do not form a coherent pattern and they are not thought to be structural in origin, not being, for example the sites of timber-framed buildings.

Further to the west lay 4707, a shallow discontinuous rectilinear gully but no features were recorded in the area enclosed by it. Another gully, 4712, mirrored 4707 and was of a similar size and it too was devoid of features. Both these gullies follow the general north–south alignment of linear features in phase 4ii while further to the west, a shallow north–south gully, 944, overlay an earlier but otherwise undated ditch which was on a slightly different alignment.

Other features

Pit 3146 (Fig. 128, Table 69), which was a recut of grain drier 3145, contained 38 hobnails presumably from a

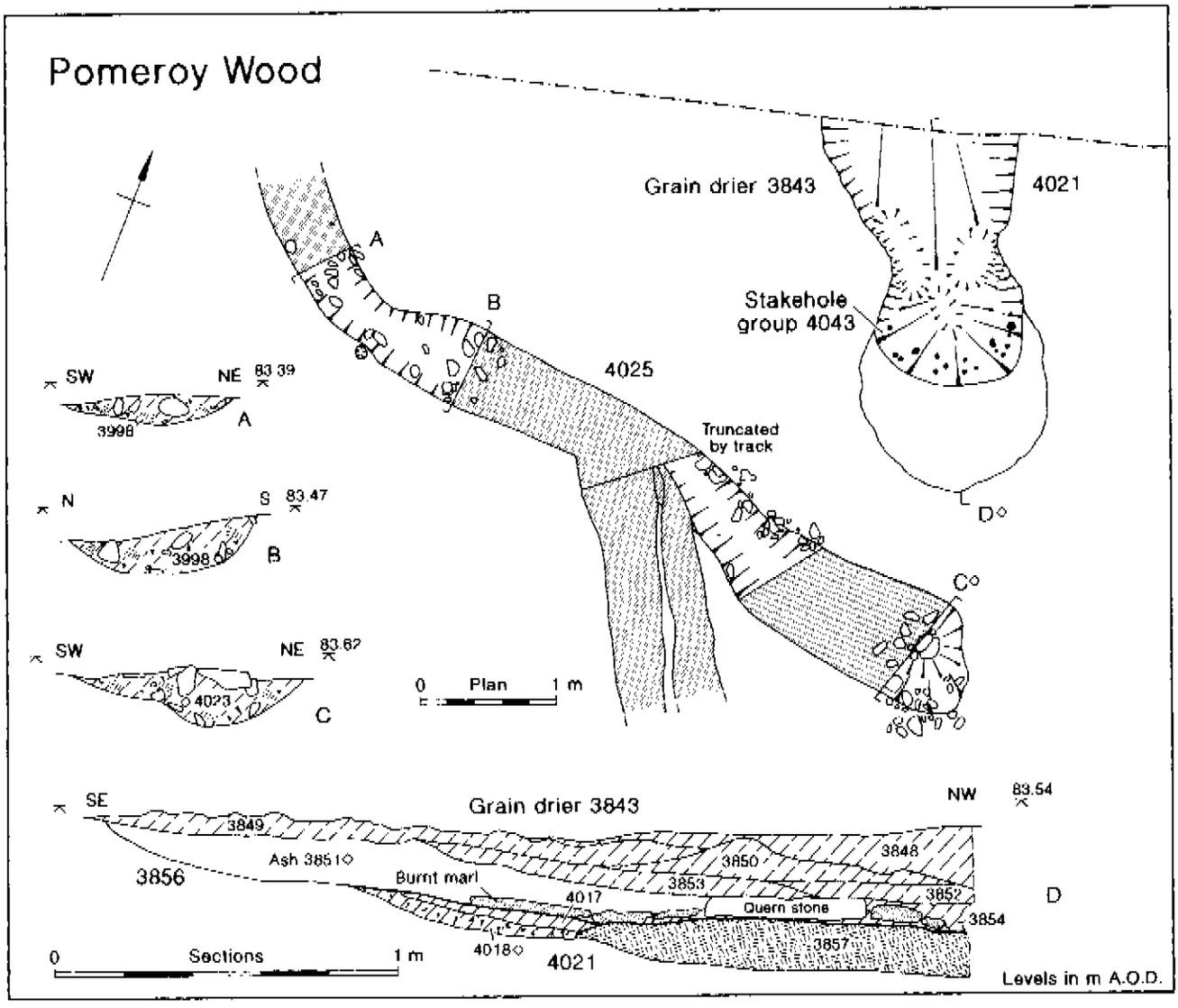


Figure 141 Pomeroy Wood: plan and section of grain drier 3843 and gully 4025

piece of footwear, in its charcoal rich primary fill. The upper fill contained a quantity of stone rubble (including part of a quern, ON 2244), which appears to represent the levelling of the ground surface. Some of this material may have originally formed part of the grain drier.

The base of a hearth, 3014 (Fig. 144), survived within the upper fills of the outer defensive ditch of the military base at the eastern end of the excavation area. An ovoid hollow was filled with a charcoal flecked silty clay, on top of which were remnants of red puddled clay. A large jar (ON 2127, Fig. 163) had been deliberately set within the clay, probably to form part of the superstructure of the oven. The use of these jars for this purpose has been noted elsewhere in Devon, at Exeter (Holbrook and Bidwell 1991, 175) and Holcombe (Pollard 1974, 104, 135, fig. 21, 139, pl. xlii–iv). To the west of hearth 3014 a shallow pit 3073 also contained a quantity of burnt material.

Comment

Although evidence for activity continuing into the later Romano-British period was present over the length of the excavated area, over 500 m, in comparison with the previous sub-phase there is little evidence for buildings or occupation. Activity appears to have concentrated to the west of the former military outwork/annexe ditch 4715.

Much of the later Roman material, including large quantities of pottery and fragments of iron, was recovered from dark organic spreads that formed the upper fills of the western defensive ditches of the former military base and in working hollow 4706 (Plan 1). There was a mixture of materials and objects within these spreads, with a noticeable concentration of metalwork within the spreads over hollow 4706. These spreads resembled midden deposits rather than occupation horizons, but the unabraded condition of the pottery indicates that it derives from occupation debris, which suggests that areas of occupation during the later Roman period were nearby, but outside the excavated area, probably fronting the road. A notable feature of these later Roman spreads was the presence of clay roof and flue tiles.

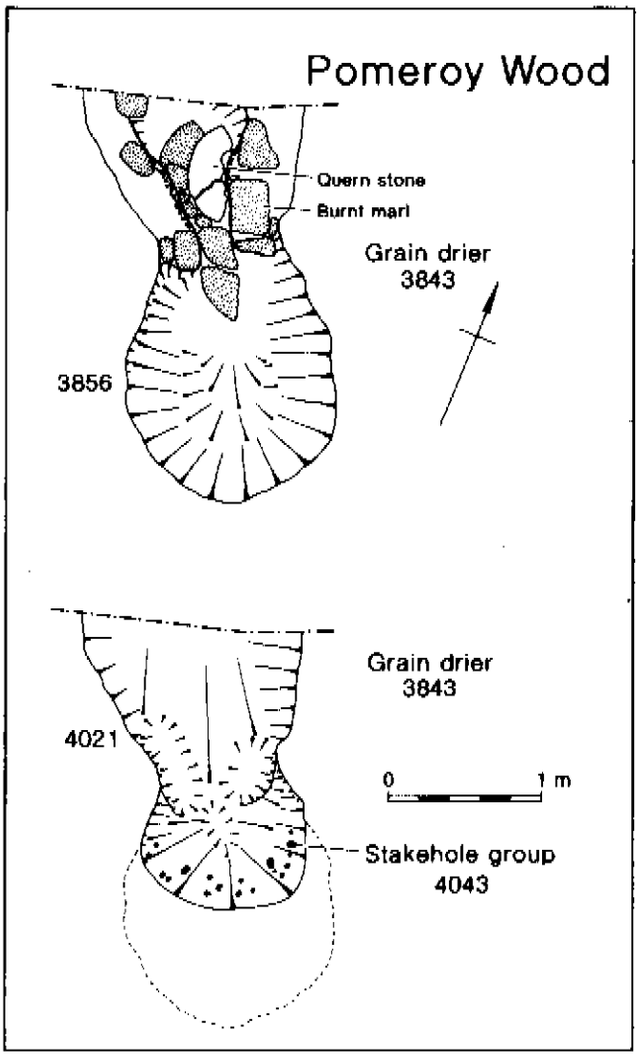


Figure 142 Pomeroy Wood: plan and section of the secondary use (3856) of grain drier 3843

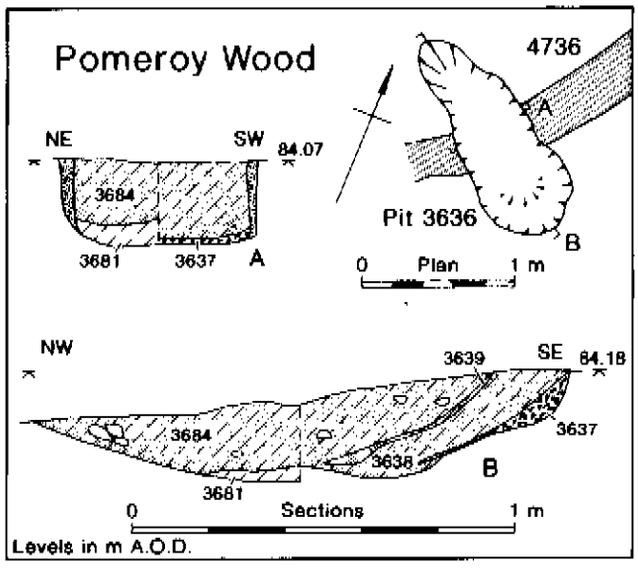


Figure 143 Pomeroy Wood: plan and section of pit 3636

The Abandonment of the Civil Settlement (Phase 5)

As far as can be judged from the pottery, the settlement was abandoned during the 4th century, though it is, of course, possible that occupation continued into the early 5th century. The few features attributable to this phase were not deliberately in-filled and there is no evidence for renewed or further activity on the site until the post-medieval period.

Post-medieval and Modern (Phase 6)

Field boundaries noted on aerial photographs as extant in 1947 (CPE/UK/1974 11.Apr.47; 1447) were identified at the eastern and western ends of the excavation, as 3865, 3893, 3862 (west), and 3231 and 3203 (east) (Plan 2, Table 68). The eastern hedgerow still survives to the south of the new road.

Unphased Features

A lack of dating or stratigraphic evidence resulted in a number of unphased features (Plan 2). Most of these are post-holes, small pits, and gullies, but include a few substantial linear features and a hearth. It is likely that most of these are Romano-British in date. Features in the western half of the excavated area had been truncated more heavily than those to the east, and this contributed to the limited dating evidence recovered in this area.

Feature 953, in the western extension trench, probably represents the truncated remains of an oven or hearth of Romano-British date. A shallow ovoid pit filled with greyish–blue compact clay, it was recut centrally and filled with reddish–blue clay, which was itself cut centrally by a rectilinear slot. The quantity of compact heated clay distinguishes it from the other hearths on site.

A number of small pits were shallow and concave, and were filled with a concentration of medium sized stones. Pits 4157, 4474, 4404, 4372, and 4417 were all adjacent to the north edge of the excavation, and almost certainly relate to an undetermined phase of Romano-British occupation. Two ditches, 4068 and 3892, remain unphased due to a lack of dating evidence. Sited in the centre of the excavated area, pit 4486 was 1 m in diameter, 0.2 m deep, and contained flint scrapers and also Roman pottery in a charcoal flecked silty clay.

Finds

Coins, by Nicholas Cooke

Sixteen coins were recovered. In general, the coins are in extremely poor condition, with most too badly corroded, even after conservation, to be legible – one is completely unidentifiable. In most cases only broad date ranges can, therefore, be ascribed. For this reason only the details of the two coins that could be dated more

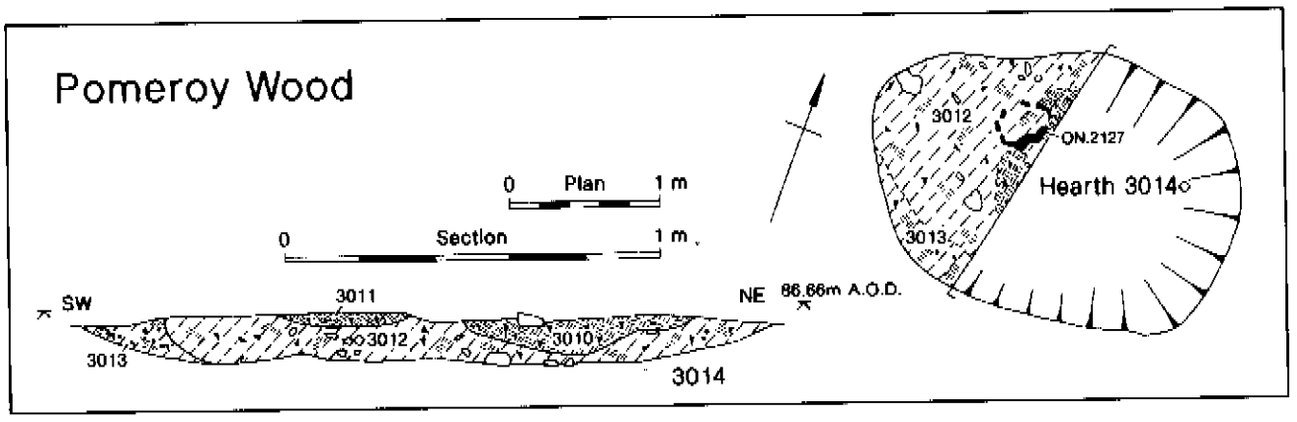


Figure 144 Pomeroy Wood: plan and section of hearth 3014

closely are given here and the full catalogue is held in archive with the results being summarised here.

The 15 identifiable coins span the 1st–4th centuries AD and eight can be dated to the 1st–early 3rd centuries. Seven are large bronzes, whilst the eighth is a denarius. Of the large bronzes, five are too heavily corroded to be further identified; only two, both bronze issues of Marcus Aurelius can be more closely dated.

1. Marcus Aurelius. *As*

Obverse:	Bust r. Curly hair and beard.
Reverse:	Fig standing r. Altar to l.
Date:	AD 161–180
Diameter:	30 mm
Axis:	180°
Context:	995 (remnant soil horizon, phase 4ii). ON 2111
Notes:	Heavily worn

2. Marcus Aurelius as Caesar. *As*

Obverse:	Male bust r. Curly hair. AV -
Reverse:	Female figure standing. S C on either side.
Date:	AD 140–161
Diameter:	25 mm
Axis:	0°
Context:	838 (phase 4ii fill of outer defensive ditch) ON 2024
Notes:	Damaged edges. Worn, but not badly corroded. Struck during reign of Antoninus Pius.

All the seven later coins are heavily corroded and illegible. These have been dated to the 3rd and 4th centuries AD on the basis of size and form. It is impossible to draw conclusions regarding the significance of the dating of the coins given their small number and condition. In the two contexts where more than one coin was recovered (contexts 648 (unphased clearance) and 784 (recut 3834 of ditch 785)), the coins show a broad coherence of date; (648: 1st–3rd and the 4th centuries; 784: 1st–3rd, and 3rd–4th centuries).

Metalwork, by Emma Loader

The metalwork consists of 649 objects: 623 iron, 22 copper alloy, and 4 lead. Of this total, 12 iron objects are post-medieval and are not discussed further here. All the objects were X-radiographed and, with the exception of nails and hobnails, individually recorded and described using an Access database; this information forms the archive catalogue. Nails and hobnails have been recorded as context groups. Where possible, artefacts have been dated by their typological features or otherwise on the basis of their provenance and the associated pottery.

Eighteen copper alloy and 18 iron objects were selected for conservation, ranging from full cleaning and stabilisation to investigative cleaning of small sections, on the basis of provenance and/or intrinsic interest. No metallurgical analysis was undertaken.

Objects of copper alloy

All the objects are common items of the Romano-British period and are found frequently on settlements (Table 74). Although two brooches might be contemporary with the military occupation of the site, no pieces of military equipment were noted.

Dress or adornment

Two brooches were recovered from phase 4ii contexts in which they are likely to be residual, one from layer 975 (cleaning over the inner defensive ditch 748) and the other from layer 986 (upper spread in working hollow 4706). A small brooch pin fragment was recovered from a phase 4i layer (3384) within structure 3545 (linear 3386).

The brooch from layer 975 (Fig. 145, 2) is a hinged, T-shaped Colchester derivative and can be compared to an example from Exeter (Mackreth 1991, fig. 101, 9–10), dating from the mid-1st century AD into the 2nd century and is thought to be a local development of the Colchester and Polden types.

The brooch from layer 986 is also T-shaped (Fig. 145, 1), although only the axis, one arm, and approximately half the bow survives. Examples of this brooch and related types are found predominantly in the south-west, with parallels from, for example, Tiverton, Devon (Maxfield 1991, 81–2, fig. 23, 1) and Catsgore (Butcher 1982, fig. 78, 25) and Ilchester in Somerset (Mackreth 1982, fig. 115, 3–5).

Five hair pins (Cool 1990) were recovered, three complete, one head, and one shank. Two, from phase 4ii layer 965 (a spread over the defensive ditches) and ditch

Table 74: Pomeroy Wood, objects of copper alloy by phase

	Phase						
Type	*2*	*3*	*4i*	*4ii*	*6*	*Unph.*	*Total*
Dress							
brooch	–	–	1	2	–	–	3
pin	–	–	3	2	–	–	5
?armlet	1	1	–	–	–	–	2
Toilet instument							
?frag.	–	–	–	–	–	1	1
tweezers	–	–	1	–	–	–	1
Fitting							
stud	–		–	1	–	–	1
fitting	–	–	–	1	1	–	2
Miscellaneous							
?terminal	–	–	1	–	–	–	1
wire	–	–	1	–	–	–	1
rod	–	–	–	1	–	–	1
unident.	–	–	1	3	–	–	4
Total	1	1	8	10	1	1	22

3265 (phase 4i) respectively (Fig. 145, 3, 5), each consist of a plain spherical head on a circular section shank, set in from the top of the shank. These pins are a well known type (Crummy 1983, type 3/Cool 1990, 151, group 1B) and are relatively common in the south-west from the 2nd century, having been found at, for example, Exeter (Allason-Jones 1991a, 260, fig. 119, 131), Woodbury (Silvester and Bidwell 1984, 49, fig. 9, 7), and Woodbury Great Close, Devon (Weddell *et al.* 1993, 101, fig. 35, 3). A pin with a slightly flattened, spherical head on a ribbed neck and in poor condition (Fig. 145, 4) came from a phase 4ii layer within the outer defensive ditch (3057). There is a comparable example from Exeter (Allason-Jones 1991a, fig. 118, 130). The head of a pin, conical with an incised pattern of two concentric diamonds or squares (Fig. 145, 6), came from a phase 4i layer within gully 3042 (segment 3082). An incomplete shank, possibly from a large pin (Fig. 145, 7), was recovered from a phase 4ii layer (965).

A small curving rectangular fragment (Fig. 145, 8) was recovered from phase 2 layer 816. This object possibly derives from an armlet or bracelet, as might a highly corroded, curved fragment of copper alloy, recovered from a phase 3 layer within primary cut 785 of the outwork ditch 4715. This object has a square section, and a groove running the length of the fragment, and is substantial enough to also be from a handle or some other fitting (Fig. 145, 13).

Fittings

A small, square headed stud decorated with two parallel raised bands (Fig. 145, 9) was recovered from phase 4ii layer 963 (spread over defensive ditches). It is likely that this object was a decorative fitting.

Toilet instruments

Two toilet instruments were identified. The first, recovered from a phase 4i layer in gully 3042 (segment 3017), is a very fragmented and heavily corroded pair of tweezers. The second object, which is broken at one end, is possibly the handle of a toilet instrument of uncertain type (Fig. 145, 10). The complete end is flat and has two perforations, probably for suspension loops. The shaft is decorated with square and rectangular mouldings. Although the object was recovered from layer 983 (an unphased clearance layer), it is likely to date to the Romano-British period. A similar object, identified as either the handle of a toilet instrument or mirror, is known from Colchester, Essex (Crummy 1983, fig. 204, 4648).

Miscellaneous objects

The remaining six objects are all of unknown function. The first, from an unphased clearance layer, is possibly a mount or decorative fitting (Fig. 145, 11) comprising a poorly cast hollow rectangular base tapering to the top, with a square hole through the centre. The hole shows evidence of wear on the inside. A similar object was recovered from Wanborough, Wiltshire (Hooley forthcoming). A small, cylindrical fitting with rims at either end and a flat base with a circular indentation (Fig. 145, 12) was recovered from phase 4ii layer 3015 (spread over enclosure ditches). Iron corrosion is present on the inside and it is probable that the object is the decorative or protective terminal of a larger iron object. A highly corroded flat object, a possible decorative terminal, and a small fragment of wire were recovered from phase 4i layers. A square-sectioned rod, possibly decorated, two small circular sectioned fragments (probably both from the same object) and a highly corroded lump were recovered from phase 4ii layers.

Objects of iron

All the iron objects are heavily corroded. Some were recovered from the military phase but most are types commonly found on civil settlements. Eleven categories of object have been defined here and a breakdown of objects (other than nails) by phase is given in Table 75. Forty-six objects (7% of the total) were too corroded to be identified.

Weapons

Three weapon points were recovered from phase 4 contexts and, although related types do occur in 2nd century or later contexts (Cool and Philo 1998, 128–9), it seems likely here that all three derive from the military occupation of the site. One ballista bolt, or possibly a pilum head, was recovered from structure 3053 (gully 3070, phase 4i). It is highly corroded and has a pyramidal head and a tang rather than a socket (Manning 1985, 159–60; Fig. 146, 1). Two spearheads, one from a phase 4ii layer (961) within working hollow 4706 and one from gully 4212 (phase 4i), in the vicinity of round-house 3415, were also recovered. The first is a small, leaf-shaped, spearhead with the remains of a socket made from rolled-over flanges just visible from the X-ray (Fig. 146, 2). This falls within Manning's group IB (1985, 162–3, pl. 77, V78) and is dated to the mid-1st century AD. The second also has a closed socket with a

Table 75: Pomeroy Wood, objects of iron by phase

	Phase					
Type	*2*	*3*	*4i*	*4ii*	*Unph*	*Total*
Weaponry						
pilum	–	–	1			1
spearhead	–	–	1	1	–	2
?sheath frag.	–	–	1	–	–	1
Agricultural tool						
reaping hook	–	–	1	–	–	1
Knife	–	–	2	1		3
Leatherworking						
awl	–	–	–	1	–	1
punch	–	–	1	–	–	1
Domestic equipment						
flesh hook	–	–	–	1	–	1
hook				1		1
socketed hook	1	–	–	–	–	1
Key	–	–	1			1
Stylus	–	–	2	1	–	3
Dress						
buckle	–	–		1		1
hobnail	2	2	56	158	3	221
pinhead			1	–	–	1
Textile working						
needle	–	–	–	2	–	2
Structural						
double-spiked loop	–	–	1	1	–	2
looped spike	–	–	1	–	–	1
joiner's dog			2	–	–	2
staple	–	–	–	1	–	1
nail	50	–	61	99	16	226
bolt	–	1	–	–	–	1
T-clamp	–	–	1	3	1	5
Miscellaneous						
binding	–	–	1	2		3
collar	–	–	1	–	–	1
curved strip	–		2	2	–	4
ferrule	–	–	–	1		1
socket	–	–	1	1	–	2
flat bar	–	–	–	2	–	2
flat frag.	1		7	7	3	18
flat strip	–	–	2	2	–	4
point	3	–	6	13	4	26
rod	–	–	10	11	5	26
ring	1	–	1	–	–	2
unknown	7	2	16	14	2	41
wire	–	–	1	–	–	1
Total	65	5	181	326	34	611

Unph. = unphased

pronounced midrib on both sides and a narrow blade (Fig. 146, 3) and is comparable to Manning's group IV A (*ibid.*, 167, pl. 79, V111), also of mid-1st century date. It is possible that this may be a lance head (*ibid.*; Jackson 1990, 55).

An incomplete socket was recovered from a phase 3 (demolition) layer in inner defensive ditch 748, and was only identified from the X-ray (Fig. 146, 12). It could either be the socket of a very narrow spearhead or a conical ferrule. Conical ferrules are the commonest form of ferrule and had a number of uses including protecting the butts of spears or staffs, but they are frequently found on military sites where they were probably spear butts (Manning 1985, 140–1). Two fragmentary sockets and a number of broken and badly corroded points and rods, some of which may well be from projectiles, were also found.

A possible fragment from a dagger sheath was recovered from ditch 4720 (phase 4i). It is very highly corroded, no outer surfaces are visible, and the X-ray does not identify any diagnostic features. Both 'ends' are broken and reveal an iron, hollow, rectangular-sectioned object that appears to have a copper alloy lining.

Even assuming that the weapons are redeposited in the contexts in which they were found, their number is too small to allow much comment. They do, however, find numerous parallels at the slightly earlier south-western sites of Hod Hill (Brailsford 1962; Richmond 1968; Manning 1985) and Waddon Hill (Webster 1979) in Dorset. It is also interesting that the weapons, with the exception of the possible dagger sheath fragment, are projectiles. It has been hinted elsewhere that the identifiable types of projectiles at Pomeroy Wood may be associated with auxiliaries and specifically cavalry (Manning 1985, 163, 167; Jackson 1990, 19), but the number here is too small to be helpful and, as with types of armour, weaponry does not necessarily allow the type of unit occupying a military base during the first century to be characterised (*cf.* Maxfield 1986a, 59).

Agricultural tool

An incomplete reaping hook was recovered from ditch 4720 (segment 3315, phase 4i). Both the blade end and the socketed end of the object are broken (Fig. 146, 4). This object is comparable to Manning's type 2 reaping hooks (1985, 53, fig. 14). These objects were used throughout the Romano-British period.

Knives

Three highly corroded knives were recovered. Two knives have the tang set centrally onto a probable triangular blade and have been identified as Manning's type 16, which is not well dated (1985, 116, fig. 29). Both were recovered from phase 4i layers – one from ditch 4716 (within working hollow 4706; Fig. 146, 5) and the other from round house 3415 (gully 4727; Fig. 146, 6). The third knife (Fig. 146, 7), recovered from gully 4707 (phase 4ii) has been assigned to Manning's type 23 (*ibid.*, pl. 56, Q69–70) which, when found in dated contexts belonging to the 1st century AD.

Leatherworking tools
A small, hand-held awl, comparable to Manning's type 3b (1985, 40, fig. 9), came from a phase 4ii layer within the inner defensive ditch 748. A small punch from ditch 4720 (segment 3315, phase 4i) is rectangular in section at one end, and tapers to a point at the opposite end. This object could have been used either for leather working, or for decorating metalwork.

Domestic equipment
A flesh hook, broken at both ends, was recovered from phase 4ii layer 965 (spread over defensive ditches; Fig. 146, 8). This object has a twisted stem, and one hook formed from the tip of the stem. The other hooks are absent, though the X-ray shows that two more teeth may have been welded to the stem. Objects such as these change little over time, and are therefore difficult to date closely. Manning notes that simple flesh hooks are rare in the Roman period, and that it was more common to find these objects combined with ladles as a dual purpose implement (1985, 105).

A very simple curved hook was recovered from defensive ditch segment 958 (phase 4ii). The function of this hook is assumed to be domestic, although the hook is simpler and smaller than meat hooks found on other sites of this date. A comparable hook was recovered from a Flavian context at Strageath, Perth and Kinross (Grew and Frere 1989, fig. 87, 178).

A socketed double hook, recovered from well 4152 (phase 2; Fig. 146, 9), is comparable to a socketed hook from London (Manning 1985, 104, pl. 49, P31). The example from Pomeroy Wood has two opposing hooks. Hooks of this type could have had a variety of functions, although it seems probable that this example was used for lifting and lowering buckets into the well.

Possible key
A small flat strip with a loop, formed by curling over the end of the strip, was recovered from phase 4i layer 769 (spread over to building 3545). The object is broken at one end. Loops such as this are frequently found on lift keys and padlock keys.

Styli
Three styli were recovered; two from well 920 (phase 4i) and one from phase 4ii layer 986 (burnt spread within working hollow 4706). The former are both incomplete with only the eraser present. They are highly corroded and no form can be identified. The third stylus may have a twisted stem and point, though the object is very corroded (Fig. 146, 10). Some importance was attached to the number of styli found at Woodbury Great Close in relation to the small number known from Exeter, suggesting that the former site might have been a *mansio* (Weddell *et al.* 1993, 77), but styli are quite common finds in Romano-British 'small towns' and roadside settlements generally.

Items of dress
An incomplete large buckle plate came from phase 4ii layer 733 (spread over defensive ditches). The bar and tongue of the buckle are absent, and both arms of the frame are incomplete.

A total of 221 hobnails was recovered, representing 35% of the iron objects recovered. Groups of hobnails, such as in pit 3146, indicate the presence of footwear, though the type is unknown. The majority of hobnails (71%) came from layers and features assigned to phase 4ii, with a further 25% from phase 4i (Table 75).

A tiny pinhead was recovered from a soil sample taken from a hollow associated with structure 4103 (hearth 4110, phase 4i).

Textile-working equipment
Two needles, probably for domestic sewing, were recovered from phase 4ii layers – one from layer 961 (within working hollow 4706) and one from layer 965 (spread over defensive ditches). Both have been identified from the X-ray, and appear to be complete (Manning 1985, 35, pl. 15, D16 and D22).

Structural fittings
Two double spiked loops were recovered, one from phase 4ii layer 961 (within working hollow 4706) and one from well 3791 (phase 4i). These consist of a piece of iron bent to form a loop with two parallel spiked arms, and are comparable to modern split pins. A ring could be slipped between the two spikes and once driven into masonry or wood, a secure fastening was made.

A single looped spike, recovered from phase 4i layer 769 (spread over building 3545), is highly corroded, and there is a small fragment of ring attached to the loop. It is possible that this is a corroded double spiked loop, missing one arm. The function of a looped spike was also to provide a loop in masonry or wood; double spiked loops are generally more common than the single looped variant, although both are found frequently on Roman sites.

Two joiners' dogs which were used as staples to join timbers were found; one from ditch 4720 (segment 3315, phase 4i) and one from phase 4i layer 3788 (stone surface within working hollow 4706). One staple, with very short arms, came from a phase 4ii layer in the outer defensive ditch 3057 (segment 958) of the military base.

A total of 226 nails (36% of the total number of iron objects) was recovered from a variety of features across the site. Most were recovered from the eastern part of the site. Table 76 gives a breakdown of the quantity of

Table 76: Pomeroy Wood, nails by phase

	Phase				
Manning Type	*2*	*4i*	*4ii*	*Unph.*	*Total*
Unid.	3	17	22	4	46
1a	–	6	8	–	14
1b	46	33	60	11	150
3	1	1	5	–	7
7	–	4	2	–	6
9	–	–	1	–	1
?9	–	–	–	1	1
10/stud	–	–	1	–	1
Total	50	61	99	16	226

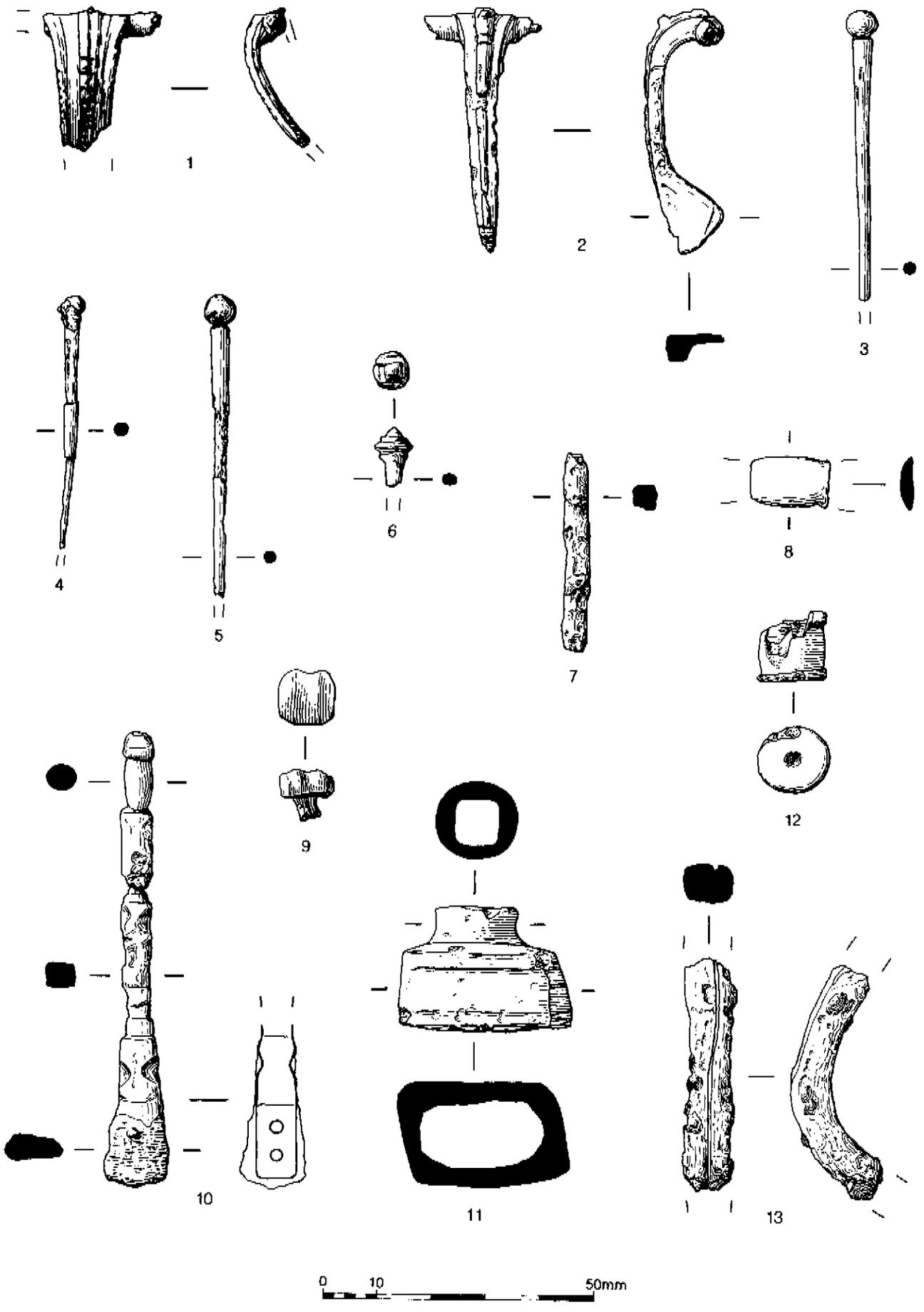


Figure 145 Pomeroy Wood: copper alloy objects (scale 1:1)

nails by phase and type, as classified by Manning (1985, 134–7, fig. 32). The largest proportion of the assemblage comprises Manning's type 1 (72%); this is the most common Roman nail type, and consists of a square-sectioned, tapering shank with a round or square head, which could have been used for all types of carpentry. They are sub-divided on the basis of length – type 1a greater than 150 mm, often with a conical or pyramidal head and type 1b less than 150 mm with a flat head. Of the other nail types identified, the type 7 and 9 nails could have been used for upholstery (Manning 1985, 135), as could one example similar to a type 10 nail.

One bolt was recovered from inner defensive ditch 748. Five T-clamps were recovered and all are comparable to Manning's examples (*ibid.*, 132, pl. 62, R70–2). Three came from layers within working hollow 4706, one from ditch 4720 (segment 3315, phase 4i), and the fifth from a clearance layer. T-clamps were used for a wide range of structural uses, and occur on many sites of this period. Their dimensions can vary considerably.

Miscellaneous objects

A total of 140 miscellaneous objects (22% of the total of iron objects) was recovered (see Table 75). In many instances, these were too corroded or incomplete for their original function to be identified. Many (bars, strips, bindings, sockets, etc) are common finds on civilian and military sites and they represent the fragments of everyday objects and fittings that have been discarded and their original form is no longer recognisable. None has an obvious functional identification or is closely datable.

Objects of lead

Four amorphous lumps of lead were found, from phase 4ii layer 961 (within working hollow 4706) and from outwork ditch 4715 (phase 3). No diagnostic features were present on any of these objects and it is likely that they are waste.

Summary

Most of the metal objects come from the civil settlement and are typical of Romano-British settlements. Most of the assemblage comprises nails, pieces of binding, and strips of iron, and other structural fittings such as joiner's dogs. Relatively few tools, whether for craft or agricultural purposes, were found. A small number of hairpins, which are of a type common in the south-west, a few pieces of toilet equipment, and some styli were also found. There is little that is certainly derives from the military occupation(s); two brooches and three projectile heads found in later contexts might be residual in those contexts.

Illustrated objects

Copper alloy

(Fig. 145)

1. Brooch. ON 2211, context 986, burnt spread in working hollow 4706, phase 4ii.
2. Brooch. ON 2088, context 975, cleaning over inner defensive ditch 748, phase 4ii.
3. Spherical-headed pin. ON 2112, context 965, spread over defensive ditches, phase 4ii.
4. Pin, flattened spherical head. ON 224, context 3118, outer defensive ditch 3057 (segment 3151), phase 4ii.
5. Spherical-headed pin. ON 2254, context 3170, ditch 3265 (segment 3103), phase 4i.
6. Decorated pinhead. Context 3083 (sample 1223), gully 3042 (segment 3082), phase 4i.
7. Pin shank, very abraded. ON 2152, context 965, spread over defensive ditches, phase 4ii.
8. Strap end/bracelet fragment. ON 2018, context 816, ?colluvial deposit, phase 2.
9. Stud. ON 2035, context 963, spread over defensive ditches, phase 4ii.
10. Toilet instrument. ON 2090, context 983, unphased cleaning layer.
11. ?Fitting. ON 2089, context 973, unphased cleaning layer.
12. Cylindrical fitting. ON 2148, context 3015, spread over enclosure ditches, phase 4ii.
13. Curved rod, possibly bracelet fragment. ON 2044, context 849, ditch 4715 (segment 785), phase 3.

Iron

(Fig. 146)

1. Ballista bolt or pilum, with tanged shaft. ON 2176, context 3059, structure 3053 (gully 3070), phase 4i.
2. Small leaf-shaped spearhead. ON 2337, context 4213, round-house 3415 (ring gully 4727), phase 4i.
3. Spearhead/lance. ON 2045, context 961, within working hollow 4706, phase 4ii.
4. Reaping hook. ON 2164, context 3307, ditch 4720 (segment 3315), phase 4i.
5. Knife. ON 2194, context 3693, ditch 4716 (segment 3694), phase 4i.
6. Knife. ON 2253, context 3497, round-house 3415 (ring gully 3496), phase 4i.
7. Knife. ON 2280, context 3860, gully 4707 (segment 3861), phase 4ii.
8. Flesh hook. ON 2113, context 965, spread over defensive ditches, phase 4ii.
9. Socketed hook. ON 2412, context 4666, well 4152, phase 2.
10. Stylus. ON 2367, context 986, burnt spread in working hollow 4706, phase 4ii.
11. Curved strip. ON 2338, context 986, burnt spread in working hollow 986, phase 4ii.
12. Ferrule (possibly spear butt) or spear socket. ON 2031, context 827, inner defensive ditch 748 (segment 744), phase 4ii.

Metalworking Evidence, by Phil Andrews

A significant amount of evidence for ironworking on or in the immediate vicinity of the site can be assigned to the Romano-British period and all appears to have been associated with iron smithing. No certain evidence for iron smelting was recovered and no evidence for other metalworking activities has been identified.

Approximately 41.5 kg of certain or probable smithing slag was collected (no material was discarded) including as many as 25 complete or near-complete smithing hearth bottoms, some hearth lining, and a small quantity of fuel ash slag (formed during high temperature processes, but not necessarily derived from smithing). The hemispherical-shaped hearth bottoms, likely to have formed in the bases of smithing hearths, are of various sizes and range in weight from 121 g up

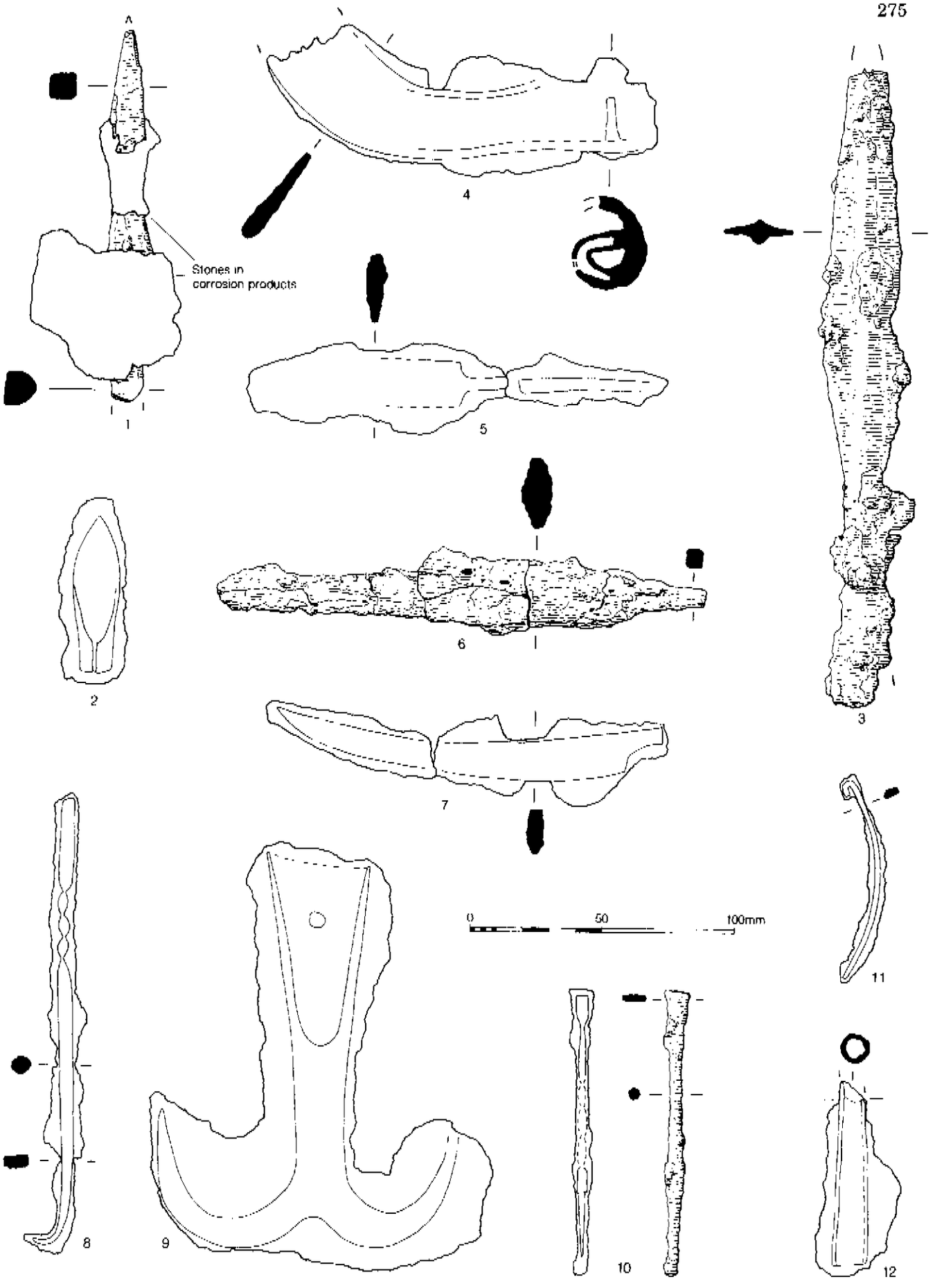


Figure 146 Pomeroy Wood: objects of iron (scale 1:2)

Table 77: Pomeroy Wood, slag by context

Phase	*Feature*	*Weight (g)*
2	Inner defensive ditch 748	26
	Structure 3545	8
	Grain drier 4123	1535
	Other layers/ features	824
	sub-total phase 2	2393
3	Inner defensive ditch 748	480
	ditch 958	500
	Outer defensive ditch 3057	116
	Outwork/annexe ditch 4715	1004
	sub-total phase 3	2100
4i	Grain drier 913	32
	Well 920	49
	Gully 3042	326
	Structure 3053	12
	Outer defensive ditch 3057	883
	Stone spread 3200	6
	Ditch 3265	1252
	Structure 3415	4028
	Structure 3545	688
	Structure 3724	4
	Well 3791	3603
	Structure 4642	1628
	Working hollow 4706	966
	Ditch 4720	464
	Enclosure ditch 4085	560
	Other layers/features	3978
	sub-total phase 4i	18,479
4ii	Grain drier 637	6
	Ditch 651	666
	Inner defensive ditch 748	6575
	Cess pit 819	82
	Outer defensive ditch 3057	1410
	Working hollow 4706	1806
	Enclosure ditch 4713	9
	Ditch group 4714	6
	Occupation area 4732	102
	Other layers/features	4391
	sub-total phase 4ii	15,053
6	Well 920	70
Unphased	All contexts	3484
	Total	41,579

to 914 g. Total quantities of slag by feature are presented in Table 77.

Five contexts produced 2–3 kg of slag (with a maximum of 2.654 kg from context 967) and a further six contexts each produced 1–2 kg. The smithing hearth bottoms usually occurred singly, although six examples came from well 3791 (context 3798). Plate hammerscale, almost certainly deriving from iron smithing, was also present in some of the 0.5 mm residues from bulk environmental samples, though not in particularly substantial quantities.

Initially, at least three features were identified which it was thought might be associated with ironworking (grain driers 637, 913, and 4123). These are described in detail above, but generally comprised sub-oval hollow(s) containing complex sequences of deposits including layers of burnt clay and charcoal. Two of the features (913 and 4123) had the remains of stone linings that had been heat-affected. None was associated with ironworking and, more specifically, smithing, nor produced large amounts of hammerscale which would be expected in the immediate vicinity of any smithing activity. The small quantities of smithing slag recovered (6 g from 637, 32 g from 913, and 1.535 kg from 4123) all came from the upper fills of these features and therefore post-dated their use. It is suggested elsewhere that these features are more likely to have been grain or crop driers, or served a similar agricultural function.

Discussion

The smithing slag occurred in a variety of contexts across the site, with most likely to be residual in later deposits. The majority came from contexts towards the east end of the site in the vicinity of the military base, although the stratigraphic evidence and the pottery suggest that the iron smithing belonged to the later civil settlement rather than deriving from the military occupation. However, because of the likelihood that much of this material has been redeposited, this cannot be demonstrated with certainty, and evidence for iron smithing would not be unexpected within a military base or annexe (e.g. Maxfield 1991, 86–92, and below). In this respect, the relatively small area exposed of the interior of the base should be taken into account, and it is quite probable that further evidence for iron smithing and other metalworking activities, including *in situ* remains of hearths and associated features, once existed outside the area investigated.

Recent fieldwork has identified evidence for Romano-British iron smelting in the Blackdown Hills beginning in the 1st century AD (Griffith and Weddell 1996), and it seems certain that this area represents the source of the iron at Pomeroy Wood which lies less than 10 km to the south-west. That evidence indicates some major smelting sites represented by substantial slag mounds containing tap slag, furnace bottoms, furnace lining, ore, and some possible smithing slag. One site investigated at Upottery, *c.* 12 km north-east of Pomeroy Wood, produced pottery dated to *c.* AD 50–70, contemporary with occupation of the base at Pomeroy Wood and the legionary fortress at Exeter, and suggests an early Roman military involvement in ironworking in this area (Griffith and Weddell 1996, 33).

Flaked Stone, by P. Bellamy

The assemblage consists of a total of 464 pieces (6105 g) of worked flint and chert, almost all derived from secondary contexts, with only a very small number of pieces (primarily tools) recovered from features of prehistoric date (Table 78). The quantity of material from the prehistoric features is too small to enable any meaningful characterisation of this part of the assemblage, which is treated below as an entity. It has been examined in terms of its condition, composition, technology, and distribution in order to characterise its functional and chronological affinities and investigate its depositional patterning. The methods again follow those set out in Appendix 2.

Raw material

The raw material utilised comprised 84.3% flint and 15.7% chert. The bulk of the flint is dark grey with slight mottling but it also includes a range from dark brown lustrous flint with slight mottling, through mottled grey and brown flint with cherty inclusions, and mid grey and white mottled flint to grey opaque flint. Both chalk (8.7%) and gravel flint (31.9%) are present, though the proportion of gravel flint may be higher as it is clear from a small number of pieces that worn pebble surfaces and relatively fresh-looking cortex can occur together on the same piece of parent material. The gravel flint is likely to have been procured from the immediate vicinity, perhaps from the local valley gravels and similar partially eroded flint pebbles are found in the soil on site. Some of the chalk flint has rather eroded cortex and may have been derived from a secondary source, perhaps from the alluvium or from the clay-with-flints, both of which occur in the locality.

The chert is primarily golden brown in colour with a smaller quantity of darker brown banded chert. It was probably derived from the Upper Greensand of the Blackdown facies (Appendix 2). Most of the chert on the site appears to have come from pebbles or cobbles, and two pieces of Portland Chert were recovered.

Assemblage description

Flint

The flint assemblage is unpatinated and in a sharp or slightly rolled condition and a small number of pieces have been burnt. It comprises material from all stages of the reduction process from cores to finished tools. Flakes from the initial preparation of cores are perhaps under-represented and there is a relatively high proportion of tools present.

Nineteen flint cores were recovered. They are all small in size, 30–73 mm (20–99 g) with the majority less than 50 mm across and had been abandoned because they had been worked out or, less commonly, because of faults in the raw material. The cores generally show evidence for small squat flake removals, though three cores have a number of small blade-like flake scars. The size and shape of the flake scars does not reflect the bulk of material in the assemblage and undoubtedly reflects the final few removals immediately before abandonment rather than being typical of the removals from an earlier stage in the reduction of the core. There is little sign of any platform preparation. The majority of the cores are multi-platformed with flakes removed from many different directions. Five single-platformed cores are also present and these are generally the smallest cores in the assemblage. One core on a thick flake was noted.

There is a general tendency towards long flakes of which a small proportion is roughly parallel sided. They measure 20–65 mm long and 12–35 mm wide with plain or thermal butts about 7 mm thick. The flakes include core preparation flakes (*c.* 10%), core trimming flakes (*c.* 67%), and other 'waste' flakes. Very few examples have evidence for abrasion or other signs of platform preparation, though the presence of a core rejuvenation tablet and a crested blade indicate a degree of care in the preparation of cores. Both hard and soft hammer flakes are present though the vast majority is indeterminate. Hinge fractures are fairly common, *siret* fractures (Tixier *et al.* 1980, 103) also occur fairly frequently, and there are a small number of plunging flakes as well indicating a certain lack of control in the flaking technique or difficulties with the raw material. A single side-blow janus flake was recovered; this may have come from a core on a flake.

Tools and other pieces showing signs of utilisation comprise about 17% of the assemblage (Table 78). The majority (69%) of the tools are scrapers and there are only a small number of utilised or retouched flakes present. The scrapers include a range of sizes and forms from very rough, rudimentary examples to regular, finely retouched scrapers. The most frequently occurring type has a regular convex edge formed by fine semi-abrupt retouch often extending down both sides, a form common in Late Neolithic and Early Bronze Age assemblages. Several examples with straight or more irregular scraping edges are also present. Other tool types present are represented mainly by single examples.

The assemblage includes three oblique arrowheads (Fig. 147, 7–8) and one barbed-and-tanged arrowhead (Green's Sutton c type (Green 1980)) (Fig. 147, 6). One other tool worthy of comment is a broken flake knife on a flake from a polished flint axe. Three of the illustrated tools (Fig. 147, 3–5) are from possible prehistoric features; two scrapers are from an unphased pit (4486; Fig. 147, 1–2).

Chert

The chert assemblage was relatively small compared with the flint assemblage (Table 78). In general its character and composition was similar to the flint. The flakes were generally larger and thicker than the flint flakes and have a tendency towards being squatter in plan shape, probably partly a result of the differences in the nature of the raw material.

Distribution

Very little flaked stone was recovered from the prehistoric features and the overall distribution did not appear to centre on them either, suggesting that there was no close spatial relationship between these features and the use (or more properly the discard) of the flaked stone artefacts. The overall distribution of flaked stone was focused on the area of the military base and to a

Table 78: Pomeroy Wood, flaked stone by context (no./wt (g))

	Cores	*Broken Cores*	*Flakes*	*Broken flakes*	*Blades*	*Broken blades*	*Tools*	*Broken tools*	*Chips*	*Misc. debitage*	*Total*	*Tool types*
Chert												
Feature 630	–	–	1/6	–	–	–	–	–	–	–	1/6	
Boundary ditches	–	–	2/9	1/16	1/8	–	–	–	–	–	4/33	
Enclosure 4713	–	–	1/13	–	–	–	–	–	–	–	1/13	
Other features W of base	–	–	6/115	2/11	–	–	–	–	–	–	8/126	
Hollow 4706	–	–	3/50	–	–	–	–	–	–	1/43	4/93	
Interior of base	1/184	–	15/204	7/79	–	1/3	4/122	–	2/1	–	30/593	3 scrapers, piercer
Inner defensive ditch	–	–	12/345	–	–	–	–	–	–	–	12/345	
Outer defensive ditch	–	–	1/34	1/16	–	–	–	–	1/1	1/13	4/64	
Over defensive ditches	–	–	1/43	1/4	–	–	–	–	–	–	2/47	
Unstratified	–	–	6/275	1/9	–	–	–	–	–	–	7/284	
Sub-total chert	1/184	0	48/1094	13/135	1/8	1/3	4/122	0	3/2	2/56	73/1604	
Flint												
Feature 630	–	–	1/11	–	–	–	4/60	1/5	1/0	–	7/76	3 scrapers+1 burnt, burnt fabricator
Pit 4486	–	–	–	–	–	–	2/43	–	–	–	2/43	2 scrapers
Boundary ditches	–	1/15	3/27	1/6	–	–	2/11	1/5	–	–	8/64	oblique arrowhead, scraper+1 broken
Enclosure 4713	–	–	4/19	1/3	–	–	3/181	–	4/2	1/9	13/214	scraper, ret. flake, hammerstone
Other features W of base	6/234	–	26/238	28/64	1/3	2/1	9/122	–	5/4	2/24	80/700	8 scrapers, flake tool
Outwork/annexe	–	–	3/8	2/11	–	1/1	1/4	–	3/1	–	10/25	oblique arrowhead
Hollow 4706	3/285	–	9/90	5/35	–	–	6/113	–	1/1	–	24/524	4 scrapers, piercer, ret. flake
Interior of base	3/200	–	55/586	43/189	1/4	6/8	17/297	1/12	4/1	9/121	139/1418	13 scrapers+?1 broken, oblique arrowhead, notch, 1 backed+1 ut.+1 ret. flake
Inner defensive ditch	3/198	–	6/67	8/40	–	3/3	4/80	2/7	–	1/31	27/426	2 scrapers+1 broken, ut. flake. 1 ret. flake+1 broken

Table 78: (continued)

	Cores	*Broken Cores*	*Flakes*	*Broken flakes*	*Blades*	*Broken blades*	*Tools*	*Broken tools*	*Chips*	*Misc. debitage*	*Total*	*Tool types*
Outer defensive ditch	–	–	7/88	3/10	–	–	2/41	1/5	1/1	2/5	16/150	scraper, ut. flake, broken ret. flake
Over defensive ditches	1/99	–	9/110	5/30	–	1/0	–	1/11	1/1	–	18/251	knife on polished flake
Area E. of base	–	–	–	3/17	–	–	–	–	1/0	–	4/17	4 scrapers+2 broken, barbed&tanged arrowhead, broken ut. blade
Unstratified	3/162		13/205	12/70		1/2	5/64	3/16	3/2	3/72	43/593	
Sub-total flint	19/1178	1/15	136/1449	111/475	2/7	14/15	55/1016	10/61	24/13	19/272	391/4501	
Total	20/1362	1/15	184/2543	124/610	3/15	15/18	59/1138	10/61	27/15	21/328	464/6105	

lesser degree in the area immediately west of the outwork/annexe. Only a single piece was found in the area to the west of ditch 4710. The distribution of the material also tailed off rapidly to the east of the military base. Overall the density of flaked stone seemed to reflect the density of archaeological features of all periods and, therefore, it must remain inconclusive whether this reflects the true pattern of earlier prehistoric activity given that the information from the ploughsoil has been lost. The much lower density of material in the western end of the site may reflect the more truncated nature of the features in this area. It is also possible that many of the flaked stone objects were introduced to the site in turves for the earth and timber rampart of the Roman military base. There was no apparent difference in the spatial distribution of the flint and chert artefacts and the tools also followed the same general distribution pattern with no significant concentrations.

Discussion

There is little evidence to suggest the presence of more than one flaked stone industry from this site, other than the occasional isolated artefact. The character of this long flake industry – if indeed it is a single assemblage – suggests that it is likely to date to the mid to late 3rd millennium BC. The presence of three oblique arrowheads and a barbed-and-tanged arrowhead also suggests a Late Neolithic–Early Bronze Age date. If there was as site it has been largely destroyed by later activity and little stratigraphic or spatial evidence survives to enable the nature of this site to be examined in any detail. The distribution of the flaked stone material indicates an extensive scatter rather than a small tightly-constrained site and no specialised activity areas can be recognised within the distribution pattern. The overall character of the assemblage suggests that there was some manufacture of flaked stone artefacts, though the initial preparation of the cores may have taken place elsewhere. The nature of the raw material indicated that much of it could have been collected from the vicinity of the site, though the high proportion of flint and the preference for good quality dark grey flint suggests some preferential selection of raw material and may indicate that some of the material was brought in from sources further afield. If material was brought in as prepared nodules/cores, this could explain the under-representation of primary core preparation flakes.

This model of preferential procurement and utilisation of flint fits the previously observed pattern of flint being the dominant raw material used during the Neolithic in this region (Chapter 3). There is some chalk flint present that may have been brought to the site, perhaps from Beer and the two pieces of Portland chert point to contacts further afield. The number of tools recovered from the site indicates activities other than knapping; although the number of tools from the site is fairly high, there is a very restricted range of types. Scrapers are the dominant tool and unusually there is a very small number of unspecialised retouched and utilised flakes present. This may indicate some sort of specialised activities being carried on at the site.

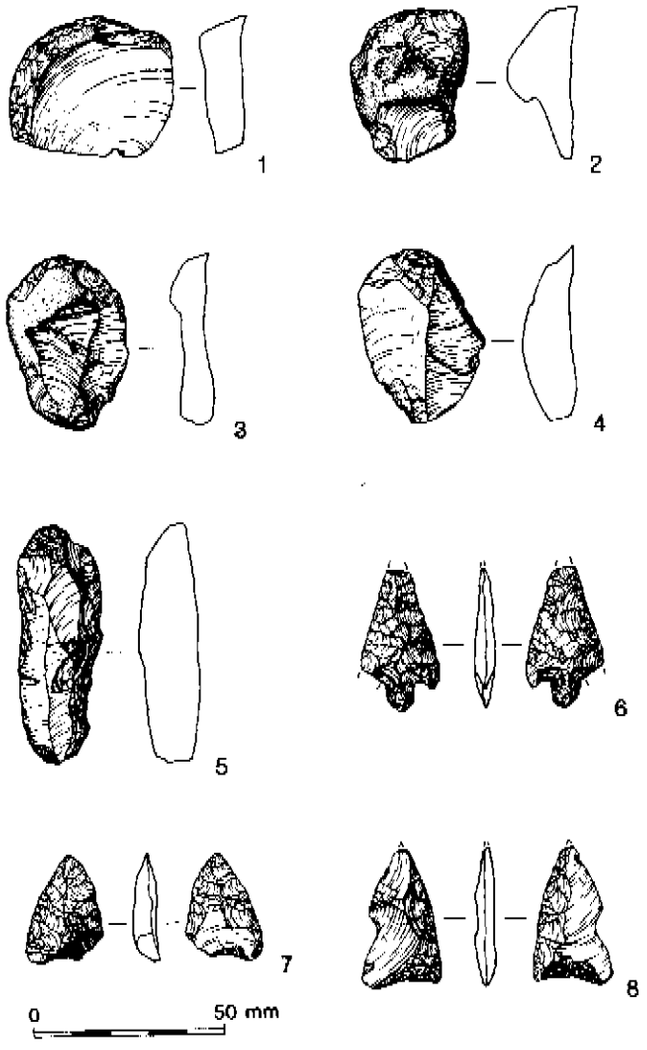


Figure 147 Pomeroy Wood: objects of flaked stone (scale 1:2)

Flint scatters of Late Neolithic–Early Bronze Age date are relatively common in Devon (Miles 1976) although little work has been done on the study of the scatters of this date, so there is little published comparative material which may help in the interpretation of the lithics from this site. Excavated assemblages of this date have been relatively small or have occurred as part of a multi-period assemblage (*cf.* Bulleigh Down; Berridge and Simpson 1992, and Churston; Parker Pearson 1981) where it is not always possible to satisfactorily identify all the Late Neolithic material present. There are some parallels with the material from the Late Neolithic settlement at Topsham (Jarvis and Maxfield 1975) though there was a greater tendency towards longer flake production at Pomeroy Wood. The assemblage at Pomeroy Wood fits into the pattern of numerous extensive lithic scatters along the river valleys of east Devon. Unfortunately, it is difficult to be certain what the precise status and function of this site was; or even where it was.

Illustrated pieces
(Fig. 44)

1. Scraper. ON 2370, context 4467, pit 4486, unphased.
2. Scraper. ON 2373, context 4467, pit 4486, unphased.
3. Scraper. ON 2008, context 624, unphased spread of material.
4. Scraper. ON 2017, context 624, unphased spread of material.
5. Fabricator. ON 2009, context 624, unphased spread of material.
6. Barbed-and-tanged arrowhead, ON 2000, unstratified.
7. Oblique arrowhead, ON 2170, context 783, ditch 4715 (segment 785), phase 3.
8. Oblique arrowhead, ON 2002, context 610, ditch 651 (segment 611), phase 4ii.

Table 79: Pomeroy Wood, objects of stone by phase (no. fragments)

	Phase				
Object	*2*	*4i*	*4ii*	*Unph.*	*Total*
Whetstones					
Pennant sandstone	–	–	1	–	1
Permian sandstone	–	1	–	–	1
Other sandstone	3	6	2	4	15
sub-total	3	7	3	..	17
Querns					
Permian lava	–	11	2	–	13
Permian volcanic	1	1	4	7	13
Permian sandstone	–	–	1	–	1
Greensand	–	–	16	–	16
Other sandstone	-	6	1	-	7
Contintental lava	–	1	–	1	2
sub-total	1	19	24	8	52
Permian lava	–	3	1	–	4
Permian volcanic	6	2	27	4	39
Greensand	–	-	2	-	2
Other sandstone	–	1	-	1	2
Contintental lava	10	–	–	1	11
sub-total	16	6	30	6	58
Mortar	-	–	1	-	1
Structural pieces					
Flat frag. (?tile)	–	1	–	-	1
Architectural frag.	–	-	1	-	1
Burnt stone	-	–	10	–	10
Kiln strucutre	–	–	7	–	7
sub-total	–	1	18	–	19
Unknown function					
Permian sandstone	-	1	–	–	1
Other sandstone	–	1	–	1	2
Greensand	–	1	–	–	1
Metaquartzite	–	2	–	–	2
sub-total	–	5	–	1	6
Total	20	38	76	19	153

Worked Stone, by Emma Loader, with stone identifications by D.F. Williams

Seventy-six objects (153 fragments), all of Romano-British date, were recovered, with just under half (32 objects) from phase 4(ii) contexts. The assemblage can be divided between portable stone objects and building material; the types of object are summarised by phase in Table 79. The portable stone objects comprise 17 whetstones and 27 quern stones (110 fragments). The highest density of objects is within features and layers associated with working hollow 4706 and the upper fills of the defensive ditches, that is to say the largest features examined.

David Williams writes

> The majority of the stone types identified were almost certainly obtained locally or from the surrounding area. The Exeter lavas and associated intrusions, including material in the Permian breccias, incorporate a wide range of volcanic rocks (Tidmarsh 1932), and are probably the source for many of the querns. The distinctive red coloured local Permian Sandstone was used for at least some of the whetstones, although one example of Pennant Sandstone, probably from the Clevedon area in Avon, is present. Greensand, probably from the Upper Greensand, was also used for querns; these rocks outcrop around Honiton and also south of Exeter where they cap the Haldon Hills. One example of a sandstone quern may be from the local Triassic series. Apart from the Pennant Sandstone, the only long-distance imports to the site appear to be the lava querns from continental Europe.

Whetstones

All the whetstones are made from sandstone and vary from fine-grained to moderately coarse-grained; most are likely to be in the local Permian Sandstone, although one example of Pennant Sandstone was identified (pit 3784, phase 4i). All have worn surfaces and range in shape from a small, well-worn, triangular example (Fig. 148, 1) to rectangular and irregular flat pieces; most are incomplete.

Querns

Twenty-three identifiable rotary quern stones (52 fragments), plus 58 further fragments almost certainly deriving from rotary querns were recovered from a variety of features across the side. One complete stone was recovered, with the two halves having been reused in adjacent pits (Fig. 148, 2). This quern type is comparable to Romano-British examples from, for example, Hengistbury Head, Dorset (Laws 1987, ill. 120, 2) and Catsgore, Somerset (Leech 1982, figs. 90–1). Most querns are incomplete; none has any visible tooling marks and several are quite roughly shaped. With one exception, all the stones have vertical sides and near flat surfaces. They range in thickness from 56 mm to 115 mm, and in diameter from 400mm to 460 mm. The one exception is a small lower quern stone, with a diameter of 400 mm, whose sides are undercut towards the central feeder (Fig. 148, 4).

Four lower and five upper quern stones were identified but the remainder of the fragments are too small to identify to type. Traits of upper quern stones include the presence of a hopper or feed pipe and a slot for the handle. Chronological indicators include the thickness of the upper stones; later stones are generally thinner than early Roman examples. This can, however, be an unreliable dating method as it does not take into account the amount of wear. Upper rotary stones of early Roman date also generally have round or oval feed pipes, with a slot for the handle, while later querns have rectangular feed slots.

One half of an upper rotary quern stone in Permian lava was recovered from a phase 4ii layer in working hollow 4706; this has vertical sides and a flat upper surface with a shallow well around the hopper (Fig. 148, 3) and finds a parallel in the type R(U)5 querns from Hengistbury Head, which are almost exclusively Romano-British in date (Laws 1987, ill. 120, 14). This particular type of quern is thicker and heavier than the complete stone described above, though it is of a smaller diameter (300 mm).

A burnt Greensand quern of uncertain type, of which just over half remains, was recovered from floor surface 3856 within grain drier 3843 (phase 4ii). The diameter of this quern is c. 500 mm, the thickness is 82 mm and it is in a very fragmentary, friable condition.

None of the dimensions of the other identifiable quern stones can be measured. The remaining fragments have been identified as querns on the basis of stone type and/or the presence of at least one worked surface. This includes 13 fragments of Neidermendig or Mayen lava stone, originating from the Rhine Valley. This particular stone type does not survive well under adverse conditions and, although surfaces were only noted on two fragments, it is likely that all the lava fragments derive from quern stones. Most of these lava fragments came from one phase 2 context and are likely to be from one stone.

The stone types identified amongst the quern assemblage show an increase in the range of types from just two in phase 2 to five in phase 4ii (Table 79). Greensand, for example, only occurs in phase 4ii. Given the demonstrable degree of residuality in phases 4i and 4ii, this apparent increase in the range of sources exploited should be treated with caution.

Mortar

One mortar fragment, in Greensand, came from a burnt spread within working hollow 4706 (phase 4ii). The vessel is heavily worn on the inside.

Building stone

A flat fine grained sandstone fragment, possibly from a roofing tile, was recovered from round-house 3671 (spread 3787, phase 4i) and a corner of architectural stone was recovered from the fill of ditch 826 (segment 4086, phase 4ii). Ten fragments of medium-grained, burnt sandstone were recovered from grain drier 637 (phase 4i), all of which were probably part of the superstructure of the oven.

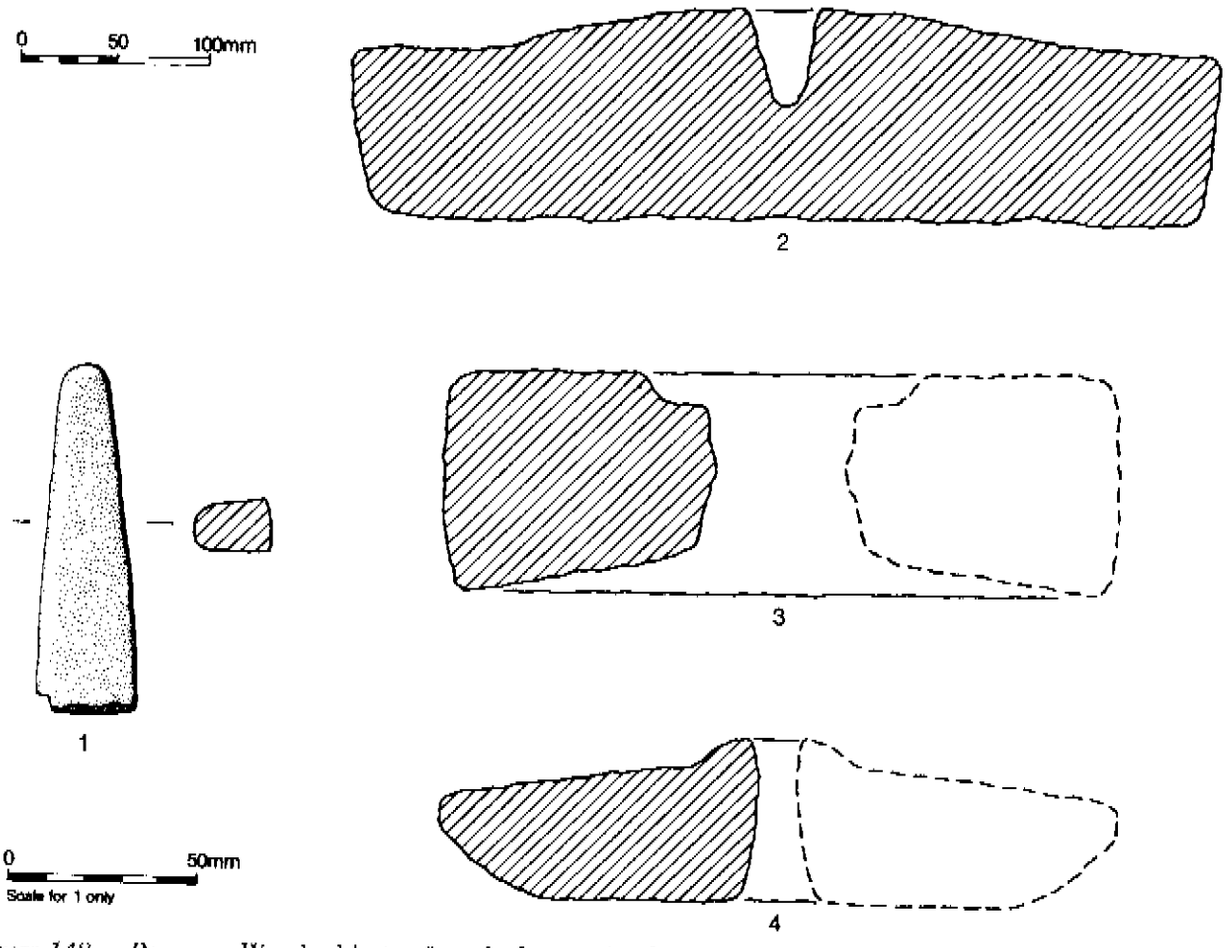


Figure 148 Pomeroy Wood: objects of worked stone (scales 1:2, 1:4)

Objects of unknown function

The function of six objects is unknown. They comprise three small, irregular fragments of sandstone, possibly whetstone fragments, two fragments of metaquartzite, with flat surfaces, and one curiously-shaped piece of glauconitic sandstone, probably from the Upper Greensand, with what appears to be a 'basal wort'.

Illustrated objects
(Fig. 148)

1. Whetstone, ON 2311, context 3956, gully 3957 (adjacent to ditch 4711), phase 4i.
2. Quern, complete, found in two separate halves. Contexts 4079/4081, pits 4080/4082, phase 4i.
3. Quern, partial, ON 2263, context 961, spread over 4706, phase 4ii.
4. Quern, partial, ON 2196, context 3640, superstructure for grain drier 913, phase 4i.

Objects of Shale and Jet, by Emma Loader

Four shale and jet objects and one fragment that may be from a vessel or be a waste piece, were recovered. With the exception of the beads, which are likely to be of jet, the objects almost certainly originate from the Kimmeridge shale beds of Purbeck in Dorset and are in good condition, with only the fragment showing signs of lamination. The shale objects were almost certainly imported as finished items, rather than being manufactured on the site, and may have been redistributed through Exeter, where a relatively large number of objects of shale and jet have been recorded, possibly a result of coastal trade in these items (Allason-Jones 1991b; 1996).

Two joining fragments of a plain armlet, with a circular section, were recovered from structure 3671 (gully segment 3720, phase 4i) (Fig. 149, 1). Plain shale armlets are common but not closely datable within the Romano-British period (e.g. Lawson 1976, fig. 4; Mills and Woodward 1993). They are not infrequent finds on Roman sites in Devon (Allason-Jones 1991b, 271–3, fig. 126; Maxfield 1991, 79, fig. 22, 3–4).

Two cylindrical beads, both decorated with incised transverse grooves, were recovered from two separate layers within cess pit 819 (phase 4ii) (Fig. 149, 2). Similar incised cylindrical beads (all jet), which are probably fragments of larger, 'long cylinder' beads, have been recorded from Colchester (Crummy 1983, fig. 36, 1042, 1183/4). Another jet example, more deeply scored than that from Pomeroy Wood, is known from Exeter (Allason-Jones 1991b, fig. 125, 4). The main source of jet at this period was the Whitby area, and this source does not seem to have been exploited until the late 3rd and 4th centuries AD (*ibid.*).

A lathe-turned spindle whorl, biconical in section with a groove around the central perforation, was recovered from ditch 4718 within working hollow 4706

Table 80: Pomeroy Wood, glass by phase (no. of fragments)

Type	*Phase* 2	3	4i	4ii	*Unph.*	*Total*
Pillar-moulded bowl	–	–	–	1	–	1
Strongly coloured monochrome	–	–	–	1	2	3
Globular jugs	2	–	–	–	2	4
Colourless cups and beakers	–	–	1	4	–	5
Misc. jars, jugs, bottles, and flasks	–	–	1	2	–	3
sub-total	2	–	2	8	4	16
Blue–green prismatic/cylindrical bottles						
Cylindrical	–	1	–	3	1	5
Prismatic	2	–	4	1	1	8
Uncertain	1	1	3	3	–	8
sub-total	3	2	7	7	2	21
Undiagnostic fragments						
Blue–green	1	1	4	2	5	13
Colourless	1	1	–	2	–	4
sub-total	2	2	4	4	5	17
Beads	.	?17	–	2	1	20
Total	7	21	13	21	12	74

(phase 4i). Spindle whorls made from Kimmeridge shale are known in Devon from Exeter (Allason-Jones 1991b, 274, fig. 126, 25–6), and the Romano-British villa at Holcombe and the farmstead at Stoke Gabriel (Silvester and Bidwell 1984, 49).

A flat fragment of shale with possible cut marks along one edge, perhaps a laminated fragment from a vessel or a waste piece, was recovered from round-house 3415 (gully 4660, phase 4i). It is likely that the fragment was brought in with other finished objects.

Illustrated objects
(Fig. 149)

1. Two joining fragments of a plain armlet. ON 2384, context 3721, structure 3671 (gully segment 3720), phase 4i.
2. Cylindrical bead, possibly jet, decorated with four transverse grooves. ON 2398, layer 799, cess pit 819, phase 4ii.

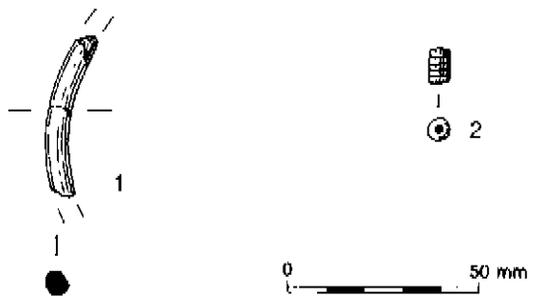


Figure 149 Pomeroy Wood: objects of shale and jet (scale 1:1)

Glass, by Lorraine Mepham

A total of 74 fragments of glass was recovered, comprising 57 vessel fragments, three beads (one faience), and a group of 17 tiny shattered fragments, possibly from a fourth bead. With the exception of one Iron Age bead, and three modern fragments (intrusive in phase 4i and 4ii layers), all of the glass is of Romano-British date. The majority of the pieces came from phase 4 contexts, although glass was also recovered from phases 2 and 3 (the total for phase 3 is skewed by the presence of the 17 shatter fragments) (Table 80). Of the 54 fragments of Romano-British vessel glass, 17 are completely unidentifiable to form (13 blue–green and four colourless). The remainder are discussed here by vessel form in chronological order.

Pillar-moulded bowl

One cast vessel was identified: a pillar-moulded bowl in blue–green glass (Fig. 150, 1). This form is one of the commonest on 1st century AD sites; blue–green examples continued to be produced until the Flavian period, and are rare finds after this period. This example was residual in a phase 4ii layer.

Strongly coloured monochrome vessels

Strongly coloured glass was used for tablewares in the 1st and early 2nd centuries AD, occurring most frequently in Claudian–early Flavian contexts. Two tiny fragments of emerald green glass (phase 4ii depression 3785; unphased post-hole 786) and one of yellow–brown glass (unphased pottery-rich spread 514) were found at Pomeroy Wood. None of these fragments can be assigned to form; one of the emerald green fragments has been heat-distorted.

Globular jugs

Two joining fragments of pale yellow–brown glass derive from a globular jug with optic-blown ribbing (Fig. 150, 2), found in a phase 2 gully (Building 4725, gully 4726, segment 3466). Globular and conical jugs (Isings forms 52 and 55) are the most common forms of jugs on later 1st and earlier 2nd centuries AD sites. A third fragment, in yellow–green glass with part of a handle attachment (Fig. 150, 7), may also derive from a globular jug, as might another featureless fragment in yellow–brown glass, from an unphased cleaning layer.

Colourless bowls, cups, and beakers

Colourless glass was used for bowls, cups and beakers of various forms from the 1st century AD onwards. Fragments of four such vessels have been identified.

Two small body fragments have horizontal abraded bands, one of which can be identified as a convex-sided form (Fig. 150, 3); the second, from a phase 4ii burnt spread, is too small for the form to be determined. Horizontal bands of abrasion were used to decorate a wide variety of forms from the 1st to the 4th century AD (Price and Cottam 1998, 34). There are several possibilities for the convex-sided form, such as cups (*ibid.*, fig. 35; 45a; 48) and flasks (*op. cit.*, fig. 82–3), with an overall date range of mid 2nd–4th century AD.

A third fragment has a horizontal wheel-cut groove as well as an abraded band (Fig. 150, 4). Several cup and beaker forms current in the 1st and 2nd centuries AD were decorated in this way (*op. cit.*, fig. 22–3; 33; 35), including the pre-Flavian Hofheim cup (*op. cit.*, fig. 21), but the techniques were also used on cylindrical bottles at the same period (*op. cit.*, fig. 88).

The fourth vessel is represented by two small body fragments with facet-cut decoration; traces of at least two round or oval facets are visible, as well as one broad cut line (Fig. 150, 5). The combination of facets and cut line(s) identify this vessel as an elaborately decorated cup or bowl (Price and Cottam 1998, fig. 47b). Such vessels are not uncommon finds. Their date range is uncertain, and they may have been produced in the 2nd century AD, and were certainly in use in the 3rd and early 4th centuries; they appear at Colchester in the mid 3rd century (Cool and Price 1995, fig. 13.5).

Miscellaneous jars, jugs, bottles, and flasks

A small fragment of ribbon handle with a single central rib (Fig. 150, 8) is not attributable to specific form. Single-ribbed handles are found on both globular and conical jugs, although more common on the latter form (Cool and Price 1995, 120–1).

A rolled-in rim in colourless glass (Fig. 150, 9) is from a funnel-mouthed form, either a jar or flask. Funnel-mouthed jars and flasks with rolled-in rims were current during the later 1st and 2nd centuries AD (*op. cit.*, 112, 150), although the use of colourless glass here seems to be unusual.

One further fragment may derive from a bottle. This is a base in green-tinged colourless glass with wheel-cut radial grooves (Fig. 150, 10). Such decoration may be found on a number of different forms, and could have been executed at any time after the vessel was blown. One example, from an unknown form, is illustrated by Cool and Price from Colchester (1995, fig. 10.2, 1583), although this is in blue–green glass. The example from Pomeroy Wood is most likely to derive from a cylindrical bottle of 3rd/4th century type (e.g. Price and Cottam 1998, fig. 84; 94).

Blue–green cylindrical and prismatic bottles

This is the most common form found on the site. A total of 21 fragments, representing a maximum of 17 vessels, has been assigned to this group of forms. Few pieces are closely diagnostic, and most cannot be assigned with certainty to exact form; the 17 vessels comprise five cylindrical, six prismatic, and six uncertain forms. There are two bases with moulded concentric circles in relief, probably from square bottles – one has three circles and the second four circles (Fig. 150, 6) – and at least one other basal angle from a prismatic form.

Square and cylindrical bottles were commonest in the later 1st and 2nd centuries AD, and frequently dominate glass assemblages of this date; the cylindrical form appears to have gone out of use in the early 2nd century, while the square form continued throughout the 2nd century and possibly into the early 3rd century. Other prismatic forms (rectangular, hexagonal, octagonal, and triangular) are rarer. At Pomeroy Wood prismatic/cylindrical bottle fragments occur in all Romano-British phases, although the majority were found as residual fragments in phase 4ii contexts.

Beads

Two complete beads and part of a third were recovered. One of the complete beads is an Iron Age type; this is an annular bead in opaque yellow glass (Fig. 150, 11). Iron Age annular beads date from at least as early as the 3rd century BC and continued to be produced until about AD 50. A few other examples are known from Roman contexts (Guido 1978, 73–6).

The second complete bead is a long polygonal form in opaque green glass (Fig. 150, 12). Long polygonal beads, invariably green in colour, are found in Britain from the latest pre-conquest Iron Age and throughout the Roman period, although they became more popular in the later Roman period (*ibid.*, 96–7).

The third bead is a melon bead in opaque turquoise faience. Melon beads have a chronological range in the 1st and 2nd centuries AD, though they are more common in the 1st century. This example came from an unphased cleaning layer.

In addition, a group of 17 tiny, shattered fragments of blue–green glass from an upper silting layer (phase 3) in inner defensive ditch 748 of the military base (segment 744), may represent another bead.

Discussion

Despite the concentration of glass in phase 4i and 4ii contexts (see Table 80), it is apparent that much of the identifiable glass derives from vessels current in the later 1st and 2nd centuries AD, and several forms are unlikely to be later than Flavian in date. The presence of the Iron Age annular yellow bead is interesting, but it is possible that this bead arrived at the site with the Roman garrison in the 60s AD, along with the handful of sherds in grog-tempered fabrics which are considered to represent a native Iron Age tradition (Seager Smith below).

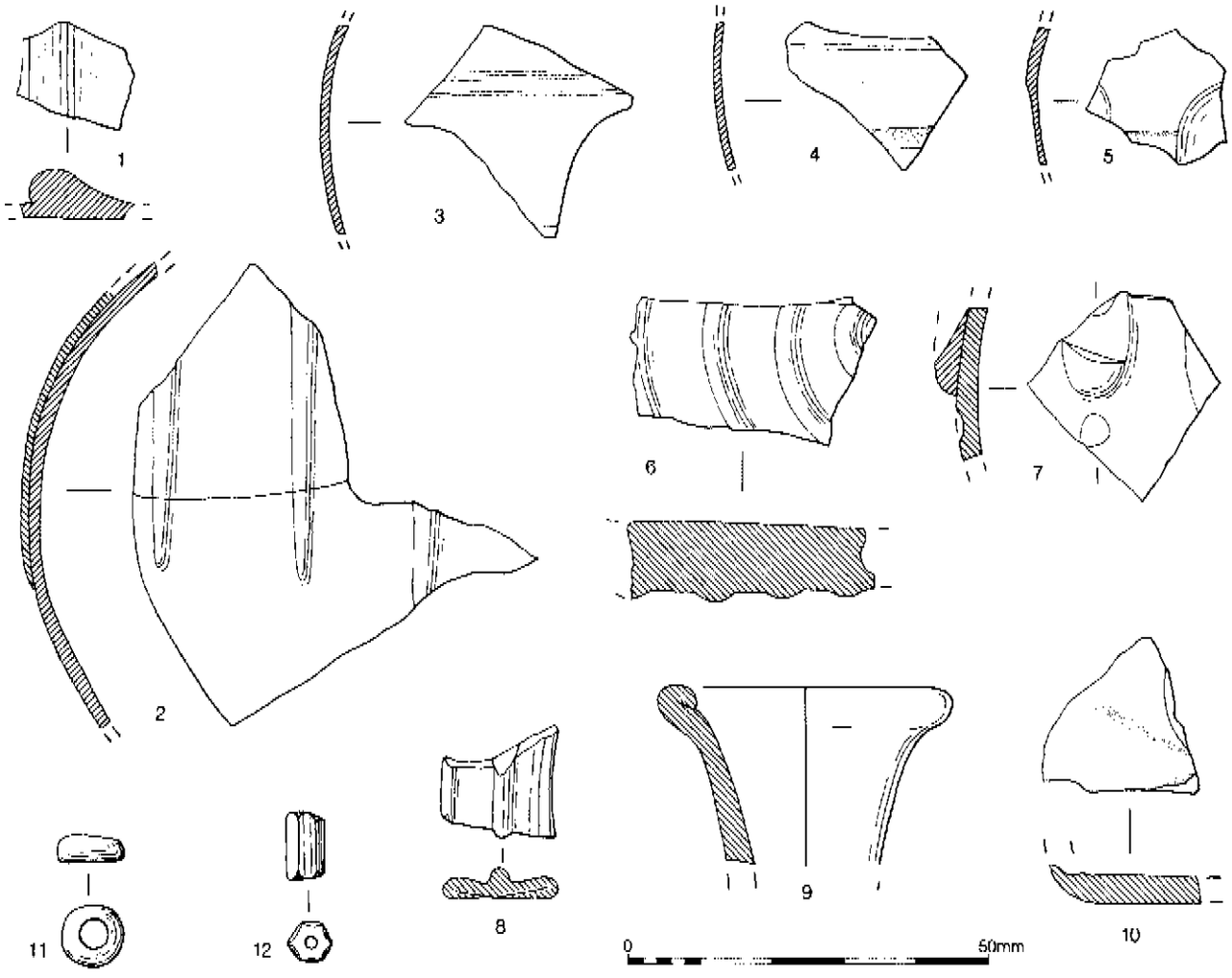


Figure 150 Pomeroy Wood: glass (scale 1:1)

From contexts associated with the military occupation of the site (phase 2), the most closely datable form is the ribbed globular/convex jug (Fig. 150, 2), a form commonest on later 1st and earlier 2nd century sites. The only other vessels which might be considered likely to derive from this phase are the pillar-moulded bowl, from a phase 4ii layer (Fig. 150, 1), the possible Hofheim cup, found in a phase 4i gully (Fig. 150, 4), and the two emerald green fragments, one unphased and one residual in a phase 4ii feature. Strongly coloured monochrome vessels are not common after the Neronian period; a large group of such vessels from Colchester is considered to date from the final years of production of this type of glass, after AD 43 (Cool and Price 1995, fig. 2.10). A small number of monochrome vessels, including emerald green examples, has been found at Exeter, at least one of which is associated with the military occupation (Charlesworth 1979, 222–3, nos 3–7; Allen 1991, fig. 94, 20). Some of the blue–green cylindrical bottles could also originate from the military phase. The vessels from Pomeroy Wood can be considered typical of the range of tablewares and containers found on other mid to late 1st century AD military sites in Britain. In Devon the most obvious parallels lie at Exeter, and a small but broadly comparable assemblage came from the military base at Tiverton, although the latter did not contain any colourless glass (Price 1991).

There are no closely datable forms from contexts associated with the abandonment of the military base (phase 3); the only identifiable piece (from ditch 3151) came from a blue–green cylindrical or prismatic bottle.

All of the other identifiable vessels and objects derived from occupation deposits of 2nd century date or later (phases 4i and 4ii). While the forms from phase 4i, with the exception of the emerald green vessel discussed above, would not be out of place in 2nd century contexts, it is likely that at least some of this material is residual here, and the incidence of residuality increases in phase 4ii contexts, as seen in the occurrence of blue–green prismatic/cylindrical bottles, the pillar-moulded bowl (Fig. 150, 1) and the funnel-mouthed jar/flask (Fig. 150, 9). Identifiable late Roman forms comprise the possible hemispherical cup (Fig. 150, 3), a form in use throughout the 4th century, the elaborately decorated facet-cut cup/bowl (Fig. 150, 5), and the possible cylindrical bottle represented by the base with radial cut grooves (Fig. 150, 10). The latter two forms appear in the mid 3rd century at Colchester (Cool and Price 1995, fig. 13.5).

Parallels for all these vessel forms (with the exception of the radially-grooved base) can be found within the much larger assemblages from Exeter (Charlesworth 1979; Allen 1991). A similar emphasis on the blue–green cylindrical/prismatic bottles can be seen in all cases. While much more limited in the range of

vessel forms present, the Pomeroy Wood assemblage does contain a small proportion of tableware as well as containers, and it is interesting to note the presence of certain less common pieces such as the early emerald green vessel(s) and the colourless facet-cut cup/bowl, indicating that the garrisons of the military base and the residents of the later settlement had access to better quality vessels as well as the more utilitarian forms.

Illustrated vessels
(Fig. 150)

1. Pillar-moulded bowl, blue–green. ON 2387, layer 716, loam spread within working hollow 4706, phase 4ii.
2. Globular or convex jug with optic-blow ribbing; pale yellow–brown. ON 2246, gully 3467, drain 4726 (gully 3466), building 4725, phase 2.
3. Colourless, convex body fragment with abraded band. ON 2388, context 738, external defensive ditch 3057 (segment 817), phase 4ii.
4. Colourless (green-tinged) body fragment with horizontal wheel-cut groove and abraded band. ON 2326, context 3502, gully 3501, structure 3415, phase 4i.
5. Colourless body fragments with round/oval facets; facet-cut cup or bowl. ON 2231, layer 986, burnt spread within working hollow 4706, phase 4ii.
6. Base of prismatic bottle with four moulded concentric circles. ON 2190, layer 769, related to structure 3545, phase 4i.
7. Yellow–green body fragment with trailed rib; ?globular jug. ON 2132, context 983, unphased cleaning layer.
8. Ribbon handle with central rib; blue–green; ?globular/conical jug. ON 2332, context 4160, round-house 4527 (ring gully segment 4161), phase 4i.
9. Rolled-in rim from funnel mouth jar or flask; colourless. Context 3851 (sample 1410), grain drier 3843 (hollow 3856), phase 4ii.
10. Base fragment with wheel-cut radial groove. ON 2364, context 4411, clearance layer, phase 4ii.
11. Annular bead, opaque yellow. Context 3972 (sample 1508), structure 3545 (hearth 3971), phase 4ii.
12. Polygonal long bead, dark green. ON 2103, context 3036; occupation spread sunk into inner defensive ditch segment 3019, phase 4ii.

Prehistoric Pottery, by M. Laidlaw

A total of 69 sherds of prehistoric pottery (105 g) was recovered, of which 61 sherds were retrieved from sieved soil samples. With the exception of one rim sherd, all are small, abraded, and undiagnostic body sherds (mean sherd weight 1.5 g). Due to the poor condition of the sherds it was difficult to attribute some to fabric type. Fabric types recorded all occur within the prehistoric fabric type series created for the prehistoric sites (Appendix 3), and fuller discussions of their date ranges may be found within the relevant chapters (Chapters 3–8). Grog-tempered sherds of early Romano-British (and possibly Late Iron Age) date are not included here, but are discussed with the Romano-British assemblage.

Of those sherds tentatively assigned to known prehistoric fabrics, 45 are Bronze Age and eight are Iron Age. The Bronze Age material consists of 38 small, grog-tempered sherds (fabric G4); 6 sherds in a rock-tempered fabric (R1); and 1 moderately fine sandy sherd (fabric Q7). The single rim sherd (fabric R1) is from a vessel with a slight neck constriction (form MBA3). Fabrics G4 and R1 were recorded within the Middle–Late Bronze Age assemblages from Castle Hill and Hayne Lane, while fabric Q7 has been recorded only at Castle Hill, where it has been tentatively dated as Late Bronze Age. Of the 45 Bronze Age sherds, 37 derived from a pit tentatively dated as prehistoric (751), although there is some doubt as to whether the sherds are residual in this context. Other sherds all came from Romano-British contexts.

The Iron Age material consists of seven sherds in a fine sandy fabric (Q2), possibly burnt, and one sherd in a moderately coarse glauconitic sandy fabric (Q12). Fabric Q2 is recorded in the Iron Age assemblages from Blackhorse and Long Range, and fabric Q12 in the small Iron Age group from Langland Lane. All the sherds from Pomeroy Wood came from Romano-British contexts.

In addition, 16 tiny sherds (18 g), all extracted from soil samples, have not been attributed to known fabrics; these comprise 12 grog-tempered and four sandy sherds. The grog-tempered sherds could be of Middle/Late Bronze Age date, but the sandy sherds are chronologically non-distinctive. Again, all these sherds came from Romano-British contexts.

Romano-British Pottery, by Rachael Seager Smith

The pottery assemblage comprises 17,100 sherds weighing 238,699 g. With the exception of 13 post-medieval sherds (54 g), all the material is of Roman date and spans the period from the middle of the 1st century AD into the 4th century. Outside Exeter, it is the largest group of Roman pottery yet found in Devon.

In general the condition of the assemblage is poor. All the pottery has suffered severe chemical erosion in the acidic soils of the area. The majority of sherds are very worn and most have lost their surfaces, although some edge definition survives. Overall, the mean sherd weight is only 14 g, dropping to just 9.7 g when the inherently 'heavy' sherds, such as the amphora, mortaria, and storage jar fabrics, are excluded. The low mean sherd weight and abraded condition suggests that deposits were reworked after the pottery was initially discarded, a view consistent with the large quantity of residual material, especially in phase 4ii.

Methods

The pottery was analysed using the standard Wessex Archaeology guidelines for the analysis of pottery (Morris 1994). The New Forest and Oxfordshire wares were recorded using the standard published corpora (Fulford 1975; Young 1977). Where appropriate, the Exeter type series (Holbrook and Bidwell 1991) was used to record both fabrics and forms but otherwise a site-specific fabric and vessel form series was created. In addition to a group of 'established' wares (distinctive fabric types of known provenance), the sherds were divided into groups on the basis of predominant

Table 81: Pomeroy Wood Roman pottery, total number and weight (g) of sherds by fabric and phase

	Phase													
	2		*3*		*4i*		*4ii*		*6*		*Unphased*		*Total*	
	No.	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*
Imported finewares														
Samian	36	434	31	110	129	1394	168	1937	–	–	43	261	407	4136
Pompeian red ware (E126)	2	2	1	17	–	–	–	–	–	–	–	–	3	19
Terra Nigra (E110)	2	6	2	16	–	–	1	31	–	–	–	–	5	53
Terra Nigra type (Exeter 372)	1	10	–	–	–	–	–	–	–	–	–	–	1	10
Terra Nigra type (Exeter 375)	–	–	–	–	8	14	–	–	–	–	–	–	8	14
Imitation *Terra Nigra* (M107)	8	26	–	–	2	2	4	22	–	–	–	–	14	50
Lyons Ware	1	2	–	–	–	–	–	–	–	–	1	1	2	3
N. Gaul fabric 1 (E130)	–	–	–	–	3	32	–	–	–	–	–	–	3	32
C. Gaul Rhenish ware (E122)	–	–	–	–	18	35	33	119	–	–	2	46	53	200
Trier type Rhenish ware (E121)	–	–	–	–	11	36	6	9	–	–	1	2	18	47
Cologne colour-coated ware (E132)	–	–	–	–	8	23	7	20	–	–	–	–	15	43
Unass. colour-coated wares (Q128)	–	–	–	–	2	18	5	10	–	–	1	1	8	29
Total	50	480	34	143	181	1554	224	2148	0	0	48	311	537	4636
British finewares														
Oxidised finewares (M103)	–	–	–	–	5	60	4	20	–	–	–	–	9	80
Hard, sandy with ferrous particles (Q112)	–	–	–	–	8	31	–	–	–	–	1	4	9	35
Local colour-coated ware (Q118)	–	–	–	–	10	166	4	23	–	–	–	–	14	189
Local stoneware-type colour-coat (Q124)	–	–	–	–	–	–	9	75	–	–	–	–	9	75
V. hard fired sandy colour-coat (Q126)	–	–	–	–	–	–	1	55	–	–	–	–	1	55
Nene Valley colour-coat (E176)	–	–	–	–	6	34	–	–	–	–	–	–	6	34
New Forest red-slipped (E161)	–	–	–	–	4	131	97	1240	–	–	1	6	102	1377
New Forest colour-coat (E162)	–	–	–	–	21	390	70	856	–	–	9	102	100	1348
Oxford red/brown colour-coat (E170)	–	–	–	–	19	106	82	1097	–	–	26	201	127	1404
Total	0	0	0	0	73	918	267	3366	0	0	37	313	377	4597

Table 81: (continued)

	Phase													
	2		*3*		*4i*		*4ii*		*6*		*Unphased*		*Total*	
	No.	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*
Amphorae														
Class 10 (Dressel 2-4; E254)	–	–	6	147	1	27	2	185	–	–	5	456	14	815
Dressel 5 (E264)	–	–	3	324	–	–	–	–	–	–	–	–	3	324
Class 15 (Haltern 70/E263)	–	–	–	–	–	–	1	124	–	–	–	–	1	124
Class 25 (Dressel 20, E256)	144	8051	57	4194	169	9931	255	31,142	–	–	73	3264	698	56,582
Class 27 (Gauloise 4/Pelichet 47; E259)	2	74	2	71	10	570	12	565	–	–	13	32	39	1312
Total	146	8125	68	4736	180	10,528	270	32,016	0	0	91	3752	755	59,157
Mortaria														
Spanish (FC1)	2	743	–	–	–	–	1	108	–	–	–	–	3	851
Massif Central (R100)	2	38	1	484	–	–	–	–	–	–	–	–	3	522
N. Gaulish (I100)	–	–	20	197	25	466	4	55	–	–	–	–	49	718
Rhineland (Q113)	–	–	–	–	–	–	1	24	–	–	1	142	2	166
Rhineland (Q120)	–	–	–	–	2	142	–	–	–	–	–	–	2	142
Rhineland or Britain (Q106)	–	–	–	–	1	8	1	86	–	–	1	22	3	116
?S. Wales (M108)	–	–	–	–	2	306	2	202	–	–	1	63	5	571
?Local sandy fabric (Q125)	–	–	–	–	–	–	1	171	1	29	–	–	2	200
Coarse, sandy fabric (Q127)	–	–	–	–	1	24	1	47	–	–	–	–	2	71
Oxford, white ware (E209)	–	–	–	–	–	–	7	115	–	–	–	–	7	115
Oxford, white-slipped (E210)	–	–	–	–	–	–	1	1	–	–	–	–	1	1
Oxford, red/brown colour-coat (E211)	–	–	–	–	8	118	5	90	–	–	12	91	25	299
New Forest parchment (E212)	–	–	–	–	–	–	4	163	–	–	–	–	4	163
Total	4	781	21	681	39	1064	28	1062	1	29	15	318	108	3935
Oxidised coarsewares														
Fine, white flagon fabric (Exeter 406)	17	45	–	–	2	5	7	94	–	–	–	–	26	144
Fine, pink flagon fabric (Exeter 435)	1	16	149	862	2	6	–	–	–	–	–	–	152	884
Fine, micaceous oxidised wares (M100)	13	64	2	13	14	96	17	97	–	–	9	58	55	328
Fine, sandy oxidised wares (Q102)	27	125	8	43	32	111	68	568	–	–	9	51	144	898
Soft, fine sandy wares (Q109)	–	–	–	–	2	22	3	11	–	–	–	–	5	33

Table 81: (continued)

	Phase													
	2		*3*		*4i*		*4ii*		*6*		*Unphased*		*Total*	
	No.	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*
Coarse sandy wares (Q110)	3	91	18	341	21	276	34	563	–	–	5	45	81	1316
Hard, slightly sandy fabric (Q119)	5	54	7	61	–	–	4	35	–	–	3	25	19	175
N. Gaulish wares (Q117)	2	50	5	153	11	152	42	665	–	–	35	235	95	1255
New Forest parchment (E160)	–	–	–	–	–	–	5	141	–	–	–	–	5	141
Oxford white-slipped (E171)	–	–	–	–	1	2	–	–	–	–	–	–	1	2
Total	68	445	189	1473	85	670	180	2174	–	–	61	414	583	5176
Grey Coarsewares														
Exeter fortress ware 'B' (Exeter 190)	–	–	–	–	–	–	–	–	–	–	1	21	1	21
Gabbroic wares (Exeter 2)	–	–	5	82	1	11	–	–	–	–	–	–	6	93
Grog-tempered wares (G100)	6	380	–	–	9	133	7	64	–	–	1	2	23	579
South Devon ware (Exeter 5)	–	–	1	21	40	372	268	4473	–	–	18	205	327	5071
Micaceous greywares														
Exeter micaceous grey (Exeter 125)	6	102	–	–	2	56	–	–	–	–	–	–	8	158
Fine, with common mica (M104)	29	359	1	7	56	665	19	103			14	90	119	1224
Coarse, mica+shiny black grains (M105)	7	85	–	–	14	241	12	177	–	–	–	–	33	503
Soft, highly micaceous (M106)	2	116	–	–	11	84	2	4	–	–	5	28	20	232
Sandy grey wares														
Exeter sandy grey ware (Exeter 151)	–	–	–	–	2	66	–	–	–	–	–	–	2	66
Misc. coarse sandy grey wares (Q100)	364	4695	132	635	1051	6126	1036	7891	1	12	314	1801	2898	21,160
Misc., fine sandy grey wares (Q101)	79	454	26	185	265	1684	300	2549	–	–	50	1148	720	6020
Fine sand, micaceous surfaces (Q104)	181	722	4	7	259	1278	40	167	–	–	14	53	498	2227
V. coarse quartz grits (Q105)	–	–	–	–	6	94	7	121	–	–	1	4	14	219
Hard, dark blue-grey ware (Q107)	10	48	–	–	63	398	10	39	–	–	3	15	86	500
Fine+smooth, micaceous surfaces (Q108)	24	108	8	104	49	239	21	140	–	–	5	16	107	607
Coarse sand+shiny black grains (Q111)	–	–	–	–	–	–	8	128	–	–	–	–	8	128
Fine, smooth fabric, few inclusions (Q115)	–	–	–	–	21	102	29	470	–	–	–	–	50	572

Table 81: (continued)

	Phase													
	2		*3*		*4i*		*4ii*		*6*		*Unphased*		*Total*	
	No.	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*
South-western grey storage jar fabrics														
Type A (Q103)	1	4	1	56	140	4217	350	11,729	–	–	62	2152	554	18,158
Type B (Q121)	–	–	–	–	29	743	257	6229	–	–	3	86	289	7058
Gritty grey wares														
Type A (Q123)	27	173	4	72	255	3392	457	6630	1	69	74	871	818	11,207
Type B (Q122)	9	227	2	112	184	2314	359	4810	–	–	15	124	569	7587
Black Burnished wares														
South-eastern Dorset (Exeter 31)	354	2985	165	1609	1926	16,752	3825	42,215	1	12	528	4270	6799	67,843
V. coarse south-eastern Dorset (Q116)	–	–	–	–	1	29	17	532	–	–	–	–	18	561
South-western BB1 (Exeter 40)	106	1516	71	1052	227	2383	74	887	1	2	22	217	501	6057
Fine south-western BB1 (Exeter 60)	45	500	10	100	136	1843	63	778	–	–	4	68	258	3289
Total	1250	12,747	430	4042	4747	43,222	7161	90,136	4	95	1134	11,171	14,726	161,140
Briquetage														
Hobarrow Bay (E91)	0	4	–	–	–	–	–	–	–	–	–	–	1	4
Post-medieval														
Plain red earthenwares (E600)	–	–	–	–	1	3	–	–	4	19	–	–	5	22
Fine white wares (E7400)	–	–	–	–	–	–	2	3	6	29	–	–	8	32
Total	1	4	0	0	1	3	2	3	10	48	0	0	13	54
Overall total	1519	22,309	742	11,075	5306	57,959	8132	130,905	15	172	1386	16,279	17,100	238,699

Table 81: (continued), proportions of main fabric groups by phase

Phase	2		3		4i		4ii		6		*Unphased*		*Total by phase*		*% overall total*	
	No.	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*	*No.*	*Wt*
Imported finewares	3%	2%	5%	1%	3%	3%	3%	2%	–	–	4%	2%	537	4636	3%	2%
British finewares	–	–	–	–	1%	2%	3%	3%	–	–	3%	2%	377	4597	2%	2%
Amphorae	10%	36%	9%	43%	3%	18%	3%	24%	–	–	6%	23%	755	59,157	4%	25%
Mortaria	<1%	4%	3%	6%	<1%	2%	<1%	<1%	7%	17%	1%	2%	108	3935	<1%	1%
Oxidised coarsewares	5%	2%	25%	13%	2%	1%	2%	2%	–	–	4%	3%	583	5176	3%	2%
Grey coarsewares	82%	56%	58%	37%	89%	75%	88%	69%	26%	55%	82%	69%	14,726	161,140	86%	68%
Briquetage	<1%	<1%	–	–	–	–	–	–	–	–	–	–	1	4	<1%	<1%
Post-medieval	–	–	–	–	<1%	<1%	<1%	<1%	67%	28%	–	–	13	54	<1%	<1%
Total	1519	22,309	742	11,075	5306	57,959	8132	130,905	15	172	1386	16,279	17,100	238,699		
Mean sherd wt (g)	15		15		11		16		11		12		14			
% overall total	9%	9%	4%	5%	31%	24%	48%	55%	<1%	<1%	8%	7%				

inclusion type. These groups were further subdivided according to the range and coarseness of the inclusions present, and assigned a unique fabric code. A binocular microscope at x20 power was available for the examination of fabrics throughout the analysis.

The assemblage was quantified using the number and weight of sherds by fabric type for each context. Pottery fabric totals for each phase are shown in Table 81. An estimation of the minimum number of vessels was made for each fabric, using rim forms alone (Tables 84–93). For example, single sherds or groups of joining sherds were counted as one but seven sherds of the same form in the same fabric without direct evidence for joining were counted as seven examples of that form. In this report, the proportions and percentages are generally based on sherd count although figures based on weight are provided in brackets. This is to enable comparison with assemblages from other sites in the district which, where the information is published at least for selected groups, are usually quantified by weight alone or weight and estimated rim equivalents (i.e. Holbrook and Bidwell 1991; 1992; Brown and Holbrook 1989, tab. 1; Holbrook 1991, tab. 6).

The condition of the assemblage has had a significant effect on the level of detail used in recording. Excluding the samian, surface treatments could be recorded for only 26% of the sherds and decoration on 9%. Discrimination between fabrics was hampered by the absence of surfaces and consequently broad fabric groups based on predominant inclusion types and containing the products of more than one source were used. Problems were also experienced in correlating sherds in poor condition with published fabric descriptions (Holbrook and Bidwell 1991). The absence or poor representation of many Exeter fabric types (such as the Sandy Grey wares or the Grey Burnished wares) at this site may, therefore, merely reflect the condition of the assemblage.

It has also proved impossible to identify vessel forms to the level achieved by Holbrook and Bidwell (1991) who often used decoration to subdivide types. The relatively small sherd size and paucity of total profiles in this assemblage made it difficult to distinguish between, for instance, bowls and dishes with similar rims or forms with flat or chamfered bases. Consequently, for this assemblage, the Holbrook and Bidwell numbers have been used without sub-divisions, and in some cases, the vessel type numbers have been bracketed together to allow the more general description of vessel form. Examples of the Exeter types present at Pomeroy Wood are illustrated by fabric in Figures 152–5 and briefly described in Appendix 5 while the site-specific vessel type series is shown in Figures 156–7 and described in Appendix 6.

Imported finewares

Together, the imported finewares represent 3% of the total number of sherds (2% by weight). Samian dominates this assemblage, alone accounting for 2% of all the sherds. The other imported fineware fabrics represent just less than 1% of the Romano-British assemblage. Ten ware types were identified, in addition to a group of unassigned colour coated sherds of unknown provenance (fabric Q128).

Samian, by J.M. Mills, with contributions from B. Dickinson

Much of the samian has also suffered from erosion by the acidic soils. This has meant that most sherds have little or no slipped surface remaining, making precise dating of many difficult, and has reduced the clarity of much of the detail on the decorated vessels, again making precise identification difficult or impossible. The exception to this is the early material from waterlogged well 3047, which was very well preserved. Although there are some large sherds and three or four vessels of which about 50% survives, much of the material consists of small chips weighing only one or two grammes. Approximately 37% of the assemblage weighs less than 2 g per sherd, and 55% weighs less than 5 g. This factor has lead to a high proportion of sherds that could not be assigned a vessel type, or has caused doubt in the identification of vessels in the 18/31 series for example (Table 83). The mean sherd weight for the samian assemblage is *c.* 10 g.

The condition of the material has meant that wear caused by usage could not be determined for most of the material, and it is possible that if any unused vessels were present these may not have been detected. The material from well 3047 appears to have been quite heavily used before it was broken and discarded. A total of nine vessels had been drilled for lead rivet repairs. Rivet holes were observed on plain and decorated forms, but only Central Gaulish vessels were repaired.

Only 24 vessels show signs of having been subjected to post-depositional burning. Burnt sherds occur in all phases. A single base from a form 33 cup (context 769) seems to have been chipped neatly around the edge as if to prepare it for a secondary use, perhaps as a lid or small pot.

Just three potters' stamps were recovered (see below), two on Southern Gaulish vessels and one on a Central Gaulish cup. The only legible stamp is that of Niger ii on a form 29 bowl.

The fabrics / production centres: The bulk of the samian is from the main production centres of South and Central Gaul: La Graufesenque and Lezoux respectively. A total of nine vessels from Les Martres-de-Veyre was identified and it should be noted that two of these are the work of Cettus and have a date range of *c.* AD 135–60; they are not Hadrianic/Trajanic products. A single vessel has been identified (B. Dickinson pers. comm.) as the product of either the Vichy or Terre-Franche kilns (No. 28), although the mould for that particular vessel was made by Cinnamus of Lezoux. No Eastern Gaulish samian was identified.

Quantities: A total of 407 sherds (4136 g) representing a maximum of 360 vessels was recovered during excavation. The quantity of sherds by fabric (production centre) and phase can be seen in Table 83. Samian supply to the site had two main peaks, one in the Neronian/Flavian period associated with the military base, and another in the mid-2nd century AD. Supply to the site seems to have been continuous from the foundation of the military base, sometime in the 60s AD, until the end of the 2nd century.

Table 82: Pomeroy Wood, quantity of samian (no/wt (g)) by production centre (fabric) and phase

	SG	*CG*			
Phase		*Les Martres*	*?Vichy*	*Lezoux*	*Total*
2	32/384	–	–	4/50	36/434
3	28/96	–	–	3/14	31/110
4i	20/73	2/17	1/9	106/1295	129/1394
4ii	20/45	3/18	–	145/1874	168/1937
Unph.	7/44	3/10	–	33/207	43/261
Total	107/642	8/45	1/9	291/34,440	407/4136

SG = South Gaul; CG = Central Gaul

The range of vessel types and dating: The range of vessel types and the maximum number recovered by fabric type can be seen in Table 83. It is possible that some of the small scraps derived from the same vessel but no obvious joins or similarities were observed.

The Southern Gaulish vessels are mainly form 18 or 15/17 platters, decorated bowls (forms 29, 30, and 37), and cups (forms 27 and 33) with two flanged bowls and a single closed vessel represented. Approximately one-third of all the Southern Gaulish sherds were decorated. There are none of the classically early (Neronian) plain vessel forms such as Dr 24/25, or Ritterling forms 8, 9, and 12. There is certainly Neronian material within the assemblage and much of the material from well/latrine 3047 is Neronian or early Flavian in date, including a form 29 bowl with the stamp of Niger ii which dates to *c.* AD 50–65. The proportion of Neronian to later 1st century AD material is similar to that in the larger Southern Gaulish assemblage from the military base at Tiverton, *c.*16 miles to the north-west (B. Hartley 1991), and a similar date in the mid AD 60s for the initial occupation of the site is probable.

The ratio of form 29 to 37 is approximately 25:10, whereas at Pompeii (destroyed in AD 79) the proportions were approximately equal. Form 37 is known to have become the most popular decorated bowl by the mid-80s AD. The prevalence of form 29 within this assemblage suggests that there was greater use of samian during the first two decades of the occupation than later in the 1st century AD. However, later 1st century AD vessels are present and at least four form 37 bowls date between *c.* AD 80–110.

A scarcity of samian from the end of the 1st century AD until the beginning of the main export period of the Lezoux potteries (*c.* AD 120) is well documented (Marsh 1981) and accounts for the apparent gap in the samian record on many sites at this time. There are, as we have seen, some of the later products of La Graufesenque on the site and also a few vessels from Les Martres-de-Veyre. Given its general rarity during the first two decades of the 2nd century AD, the apparently negligible quantity of samian of this date within the assemblage must not be read as a hiatus in the occupation of the site but rather seen as evidence for

Table 83: Pomeroy Wood, summary of samian vessel forms by production centre (no. of examples)

Form	*SG*	*LM*	*V/T-F*	*CG*	*Total*
Platters					
15/17	10	–	–	–	10
18	12	–	–	–	12
15/17 or 18	7	–	–	–	7
Bowls					
29	25	–	–	–	25
30	1	–	–	–	1
29 or 37	1	–	–	–	1
37	9	6	1	68	84
?37	1	–	–	9	10
30 or 37	–	–	–	5	5
bowl	1	–	–	21	22
18/31	–	1	–	19	20
18/31 or 31	–	–	–	4	4
18/31R	–	–	–	6	6
18/31R or 31R	–	–	–	4	4
31	–	–	–	8	8
31R	–	–	–	3	3
31 or 31R	–	–	–	1	1
Ritt 12/Curle 11	1	–	–	–	1
flanged	1	–	–	2	3
38	–	–	–	1	1
Curle 23	–	–	–	1	1
Mortaria					
45	–	–	–	2	2
Cups					
27	9	–	–	4	13
33	1	1	–	14	16
35	–	–	–	4	4
cup	1	–	–	4	5
Dishes					
Walters 79	–	–	–	2	2
Ludovici Tg	–	–	–	1	1
Closed forms					
67	1	–	–	–	1
68 or 72	–	–	–	1	1
Unident. forms	15	1	–	70	86
Total	96	9	1	254	360

SG = South Gaul; LM = Les Martres;
V/T-F = Vichy/Terre-Franche; CG = Central Gaul (Lezoux)

All are Dragendorff types unless stated otherwise

continuity of occupation. Having said that, it becomes apparent that identifying a date for the end of the military phase of activity is very difficult, and it may be the case that very shortly after the abandonment of the military base and slighting of the defences, a civilian settlement was established. The fact that there are fewer form 37s than form 29s indicates a decline in samian consumption in the mid-Flavian period suggesting that the military base may have been abandoned and slighted at a similar time to the abandonment of the military base at Tiverton (B. Hartley 1991) during the 80s AD.

The vast majority of the 2nd century AD material comes from Lezoux. Dating has been especially difficult because of the condition of this material, and much has simply been assigned to the Hadrianic/Antonine period. This includes many of the decorated vessels. The range of forms is fairly standard. It is perhaps surprising that more than 30% of the vessels from Lezoux are decorated bowls and a further three form 37s fall within this date range (one from ?Vichy or Terre-Franche (No. 28) and two bowls by Cettus of Les Martres-de-Veyre (Nos 21 and 41)). The later plain forms are comparatively less well represented; only 12 form 31 or 31Rs were identified compared with 34 18/31 or 18/31R forms. Other forms characteristic of the mid–late Antonine period are present, but are not found in great numbers, and include Ludovici Tg, Walters 79, form 38 and mortaria form 45. The Ludovici dish, however, is an early type dating to c. AD 155–170. The latest form 37 bowls are dated to c. AD 160–90 and include bowls by Catussa, Casurius (2), Doeccus, Paternus, and Severus vi. These latest vessels suggest that samian consumption continued until the end of the 2nd century AD although probably not into the 3rd century as some Eastern Gaulish vessels might be expected in the assemblage if this were the case. Eastern Gaulish samian is also very rare in Exeter, and generally in the south-west (Holbrook and Bidwell 1991, 2), reflecting its location on the extreme western limits of the area receiving Eastern Gaulish samian.

The high proportion of form 37 bowls within the 2nd century AD material and the presence of at least one form 45 mortaria indicate that this remained a relatively high status settlement even after the withdrawal of the army.

Conclusions: The samian evidence suggests that samian supply was continuous from the late Neronian period until the end of the 2nd century AD although perhaps at a reduced level during the end of the Flavian period until the Hadrianic or early Antonine period. The military base at Pomeroy Wood seems likely to have been occupied for a similar period to the short-lived military base at Tiverton (Maxfield 1991), and it is possible that the two military bases were part of the same military campaigns. A date in the 60s AD for the establishment of the military base is likely and a date somewhere in the 80s AD is probable for its abandonment, although a clear date for the cessation of military activity is not apparent.

Catalogue of Decorated Sherds
Abbreviations used: D = Dechelette 1904; O = Oswald 1936–7; S&S = Stansfield and Simpson 1990)
(Phase 2)

1. Dr.29, SG; Fig. 151, 1. Tiny body sherd with fragment of zone of leaf tips. Late Neronian/early Flavian. 4306, post-hole 4305, building 4725.
2. Dr.29, SG; Fig. 151, 2. Small well-preserved sherd with scrolled festoon between bead rows, *c.* AD 60–80. 980, well 3047.
3. Dr.29, SG; Fig. 151, 3. Two sherds most probably from the same vessel, ornamented with winding vegetative scrolls with chevrons between. Wellpreserved. Neronian/early Flavian. 3086, well 3047.
4. Dr.29, SG; Fig. 151, 4. Three small sherds probably from the same vessel. They may also belong to the same vessel as 3 above although there are no joins and ornamental similarities are confined to similarities between the scroll on two of the sherds. All sherds have a cordon with well-spaced bead row either side. The beads appear to be joined. Wellpreserved. Neronian/early Flavian. 3086 and 3087, well 3047 and 3122, segment 3151, outer defensive ditch 3057 (phase 3).
5. Dr.29, SG *Identified and discussed by Brenda Dickinson*; Fig. 151, 5. Form 29 stamped O[FNIG]RI. Niger seems not to have made his own moulds, but tended to patronise a particular mould-maker or group of mould-makers, whose style is quite different from this vessel. The use of crossed leaf tendrils is paralleled in a pit group *c.* AD 50–60 at La Graufesenque (A. Vernhet pers. comm.) and on a bowl from Poitiers with a mould-signature of Modestus i (Mees 1995, Taf. 138, 3) *c.* AD 50–65. His stamp is usually on form 29 and all the examples are pre-Flavian in style, though a few have been noted in early-Flavian contexts. The site evidence includes Usk and the military base at Strutts Park, Derby established in the pre-Flavian period, *c.* AD 50–65. 4683, well 3047.
6. Dr.29, SG; Fig. 151, 6. Small body sherd with large, many petalled rosette. Pre-Flavian. 4326, pit 4315.

(Phase 3)

7. Dr.37, CG. Body sherd with legs and torso of warrior O.167 and legs of a second figure to the right. Potter not identified. Hadrianic or early Antonine. 964, segment 958, outer defensive ditch 3057.
8. Dr.29, SG *Identified and discussed by Brenda Dickinson*; Fig. 151, 7. The rosette and four-petalled motifs are on a bowl from Mainz with an almost identical upper zone and an internal stamp of Aquitanus (Knorr 1919, Taf. 9L). They are also on another of his bowls, from Lake Farm, Wimborne, Dorset, with a different scheme of decoration. The rosette also appears on bowls stamped by Ardacus, according to Knorr (*ibid.*, Taf.10, 9), *c.* AD 50–65. 3171, segment 817, outer defensive ditch 3057.
9. Dr.37, SG; Fig. 151, 8. Rim sherd and another body sherd, which do not join, but which have the same ovolo and are from the same bowl. The sherds are very worn, and little slip remains. The ovolo is trident-tongued and has no bead row below, only a little of a vegetative motif and a ?twist remain of the main decoration, *c.* AD 80–110. 3378, segment 3342, outer defensive ditch 3057.
10. Dr.37, SG; Fig. 151, 9. Fragment of ovolo with rosette tongue, *c.* AD 70–85. 780, segment 785, outwork/annexe ditch 4715.
11. Dr.29, SG; Fig. 151, 10. Body sherd with small bead row and part of scrolled design below. No slip remaining. Neronian. 780, segment 785, outwork/annexe ditch 4715.
12. Dr.29, SG; Fig. 151, 11. Small sherd with fragment of scrolled design. No slip remaining. Neronian. 780, segment 785, outwork/annexe ditch 4715.
13. Dr.29, SG; Fig. 151, 12. Small sherd with fragment of vegetative decoration below bead row. No slip remaining. Neronian. 780, segment 785, outwork/annexe ditch 4715.

(Phase 4i)

14. Dr.29, SG; Fig. 151, 13. Small body sherd with fragment of spiral motif with central rosette. Neronian/early Flavian. 4647, segment 4646, gully 4643, structure 4642.
15. Dr.37, CG. Small eroded body sherd with scrap of ovolo B143/144 and bead row below, *c.* AD 140–180. 3672, gully 3750, round-house 3671.
16. Dr.37, CG. Body sherd almost certainly from a Cinnamus bowl with ovolo fragment only. Below in a double-bordered festoon is cockerel O.2347 with, to left, a vertical bead row and philosopher O.905, *c.* AD 135–165. Structure 3053.
17. Dr.37, CG. Abraded body sherd with front legs of stag O.1720 only. Antonine. Structure 3053.
18. Dr.37, CG *Identified and discussed by Brenda Dickinson*; Fig. 151, 14. Two body sherds, possibly from the same bowl, perhaps by Martio i of Lezoux who used the hare and the small four-petalled rosette (Rogers C23) next to the candelabrum. The hare is on a bowl in the Musée Bargoin, Clermont-Ferrand, and the rosette is on a bowl from Nijmegen. Both have the mould signature Martio retr. below the decoration. This is the potter whose signatures are usually attributed to Martialis (S&S, pl. 96), but the final letter is consistent with the formation of an O with a stylus. Unfortunately there are no parallels for the zone of rosettes, *c.* AD 125–145. 3108, structure 3053.
19. Dr.37, CG. Base and lower part of decoration from a bowl in the style of Cinnamus. The extant decoration comprises a winding scroll and fragment of a central leaf, see S&S pl.162, 61 and 62 for similar scrolls. To the right is a vertical bead row with ?rosette terminal; trophy Rogers Q27 with Cinammus' lozenge Rogers U36 below; and the lower part of figure O.711 which can be seen on bowls with Cinammus label stamps from London (S&S pl.160, 35) and Exeter (Dannell 1991, fig. 18, 118), *c.* AD 135–70. 784, segment 3834, outwork/annexe ditch 4715.
20. Dr.37, CG. Body sherd in poor condition. The ovolo with ?bead row below is not identifiable. The only identifiable element of the decoration is double-bordered medallion containing lion to left (either D. 753=O.1421 or D756=O1422) with a bird looking right below. Mid–late Antonine. 851, segment 3834, outwork/annexe ditch 4715.
21. Dr.37, CG (Les Martres-de-Veyre). Abraded rim sherd with ovolo (Rogers B80) used by Cettus of Les Martres-de-Veyre, *c.* AD 135–60. 101, ditch 103
22. Dr.37, CG. Fragment from lower part of decoration, badly eroded. Decoration seems to comprise winding scrolls and a fragment of a large natural-style leaf although the leaf itself is not identifiable. Hadrianic/Antonine. 3183, gully 3181, occupation area 4732.
23. Dr.37, CG. Three sherds from the same vessel, two of which are discoloured by burning. The ovolo has

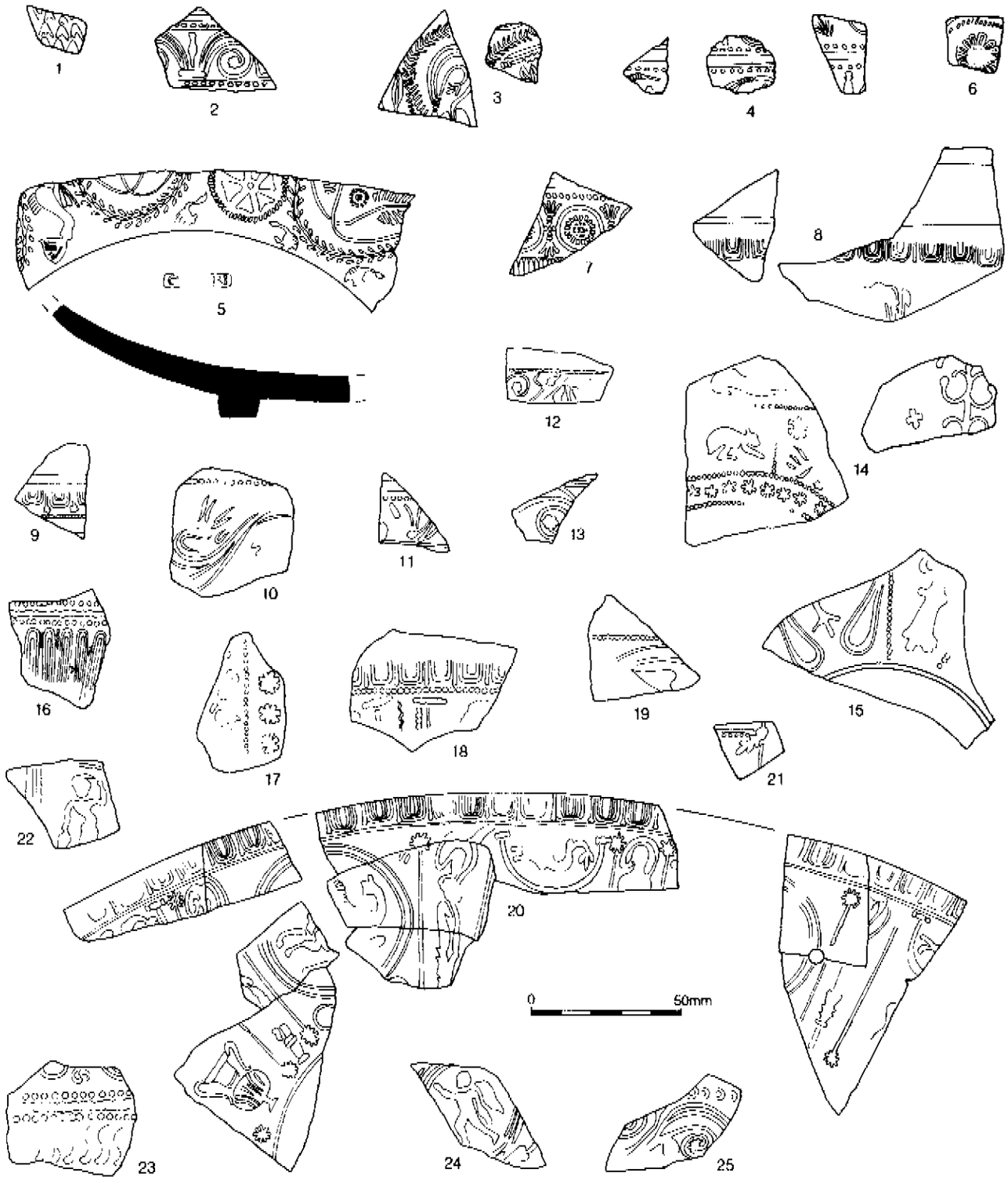


Figure 151 Pomeroy Wood: decorated samian (scale 1:2)

a cabled tongue with a rosette terminal, but is not identifiable. Below the bead row the design comprises medallions with bird (O.2295A) between. Mid-Antonine. 3307, segment 3315, ditch 4720.

24. Dr.37, CG *Identified and discussed by Brenda Dickinson*; Fig. 151, 15. Body sherd from lowest part of a bowl by Paternus iv. Paternus, whose signature sometimes appears on moulds, used the leaves (Rogers U161), a trifid and figure of Victory or a dancer (O.819A); all are on a bowl in his style from Lincoln. Another bowl attributable to him, from Watercrook, has the leaves (Wild 1979, fig. 121, 79), c. AD 130–55. 3213, ditch 3265.

25. Dr.37, CG. Two body sherd with fragments of ovolo, from the same bowl. Possibly a Cinnamus bowl but the ovolos are too poorly preserved to be certain. Mid-Antonine. 3213, ditch 3265.

26. Dr.29, SG; Fig. 151, 16. Body sherd from carination and below. The decoration comprises straight gadroons with fine wavy lines between. The same

gadroon with wavy lines between are on bowl from Le Graufesenque stamped by Germanus i, *c.* AD 60–75. 3191, post-hole 3192, occupation area 4732.

27. Dr.37, SG; Fig. 151, 17. Worn body sherd with vertical ?bead row and vertical rows of large rosettes either side. Details not identifiable, *c.* AD 75–90. 3191, post-hole 3192, occupation area 4732.
28. Dr.37, CG (Vichy or Terre-Franche). Eroded body sherd from a bowl in a strong orange fabric, made at Vichy or Terre-Franche. Probably made in a Cinnamus mould, the surviving decoration comprises a fragment of ovolo B231 with bead row below and nude man O. 684A. Antonine. 832, hearth 3279.
29. Dr.37, CG. Body sherd drilled to take lead rivets. Lower part of decoration comprising caryatid O.1206 between bead rows ending with beaded rings, and panther O.1518 to the right. The panther was used by Criciro v and for his use of caryatid (on different stand) and vertical beads with beaded rings see signed bowls from London and Corbridge, Northumberland respectively (S&S pl.117, 6 and 4), *c.* AD 135–165. 4264, pit 4265.
30. Dr.37, CG; Fig. 151, 18. Burnt body sherd with ovolo B208 with bead row below. The decorative detail comprises ?simple festoons and vertical bead rows surmounted by astragali with a vertical wavy line between the bead rows, a similar grouping of motifs can be seen on a bowl by Casurius from London (S&S, pl.135, 32), *c.* AD 160–90. 4264, pit 4265.
31. Dr.37, SG; Fig. 151, 19. Worn body sherd with bead row and heart-shaped leaf only visible. No surviving slip. Early Flavian. 734, spread within structure 3545.
32. Dr.37, CG (Les Martres-de-Veyre). Worn body sherd with a fragment of decoration only. Probably the Rosette Potter, *c.* AD 100–120. 769, spread within structure 3545.
33. Dr.37, CG. Over 50% of bowl decorated with a freestyle design comprising horse and rider (O.245) and bear to right (O.1588) alternating in upper part of decorated zone with corn stook (Rogers N15) between each figure. A stag and another unidentified beast occupy the lower part of the pot. Ovolo Rogers B143. Cinnamus style, *c.* AD 145–75. 769, spread within structure 3545.
34. Dr.37, CG. Possibly same vessel as 7 above. Body sherd with fragment of legs of warrior O.167. Hadrianic/early Antonine. 3345, segment 3342, outer defensive ditch 3057.
35. Dr.37, CG. Body sherd from lower part of decoration from a bowl almost certainly by Doccus who used the man with cloak (O.638), naked leaping figure (O.687), kilted figure (O.177A) and kneeling figure (O.204); see S&S pls 148, 25; 148, 13; 147, 6; and 148, 19 respectively. He also used the hollow, eight-petalled rosette (Rogers C170), almost always within panels, but it occurs at the bottom of a bead row on a form 30 mould from Lezoux (see also S&S, pl. 151, 55), *c.* AD 160–195. 3575, segment 958, outer defensive ditch 3057.

(Phase 4ii)

36. Dr.37, CG. Burnt body sherd with ovolo B106 and row of small beads below and double-bordered medallion containing sea horse O32. Paternus, *c.* AD 160–95. 683, segment 686, ditch 655.
37. Dr.37, CG. Rim sherd with small rosette-tongued ovolo and bead rim below, *c.* AD 125–145. 3013, hearth 3014.
38. Dr.37, CG. Small fragment with ovolo B144; Cerialis–Cinnamus group, *c.* AD 135–165. 765, segment 817, outer defensive ditch 3057.
39. Dr.37, CG. Part of bowl base with fragment of Diana O.106, caryatid O.1205 or 1206 and a double-bordered medallion containing a seated figure. These motifs were used by many of the mid–late Antonine potters, *c.* AD 150–90. Layers 823 and 868.
40. Dr.37, CG. Body sherd with backward facing bird in small festoon. Probably Antonine. 961, layer overlying working hollow 4706.
41. Dr.37, CG (Les Martres-de-Veyre). Body sherd with vertical bead row and leaf (Rogers J57) used by Cettus of Les Martres. There may also be fragments of three of his small leaves (J.144) to the right of the bead row, *c.* AD 135–160. 965, spread over the south-west area of the defensive ditches.
42. Dr.37, CG *Identified and discussed by Brenda Dickinson*; Fig. 151, 20. A total of 11 sherds from a bowl of Catussa of Lezoux. The decoration is of repeating panels as follows-dolphin (O.2392) in simple festoon with urn below; caryatid (O.1206); seahorse (O.33) in double bordered medallion, with an astragalus on each side above and a large ring on each side below; caryatid; etc. The urn and unusually large ring are on a bowl from Lezoux with the mould signature of Cantomallus. Evidence from a bowl assigned to him found in York suggests that he may also have used the same rosette (Dickinson 1997, 951, fig. 375, 424). There may be part of a mould signature Ca.... below the urn/caryatid (B. Hartley pers. comm.), *c.* AD 160–90. 967, spread over the south-west area of the defensive ditches.
43. Dr.37, CG. Joining rim and body sherd with very pitted surface. The ovolo with bead row below is not identified. The only identifiable element of the freestyle design is the stag O.1781. Antonine. 985, spread over the suth-west area of the defensive ditches.
44. Dr.37, CG. Rim fragment with ovolo B153 with small bead row below. This ovolo is on a stamped bowl of Severus vi from Ilkley, Yorkshire (S&S pl.128, 2). A rim sherd from phase 4i, 853 may also belong to this vessel. AD 160+. 986, layer overlying working hollow 4706.
45. Dr.37, CG. Badly eroded body sherd with feet of running animals suggesting freestyle decoration. Antonine. 3020, segment 3019, inner defensive ditch 748.
46. Dr.37, CG. Lower part of decoration from panelled bowl with seahorse (O.33) and fragment of festoon or medallion above; nude man with drape (O.638) with leaf (Rogers H167) behind; and lower part of Victory (O.819A). The panels are bordered by bead rows. The nude man and seahorse appear on a similar bowl by Casurius from York (S&S, pl.133, 20); whilst the nude man, Victory and leaf can be seen together on a bowl from Corbridge (S&S pl.135, 34), *c.* AD 160–90. 4427, spread over the western defensive ditches.

(Unphased)

47. Dr.37, SG *Identified and discussed by Brenda Dickinson*; Fig. 151, 21. Small body sherd with bead rows and leaf cluster. The use of the leaf cluster suspended from the top border is typical of L.Tr-Masculus (Knorr 1952, Taf., 37A) but perhaps also used by some of his contemporaries, *c.* AD 85–110. 973, clearance.

48. Dr.37, SG; Fig. 151, 22. Body sherd with satyr within panel, *c.* AD 90–110. 973, clearance.
49. Dr.29, SG; Fig. 151, 23. Body sherd with S-shaped gadroons below cordon, *c.* AD 70–85. 993, animal disturbance.
50. Dr.30, SG; Fig. 151, 24. Body sherd showing cherub (?O.436) within double-bordered medallion, *c.* AD 70–85. 3002, clearance.
51. Dr.37, CG (Les Martre-de-Veyre). Body sherd with rosette-tongued ovolo with fragment of scarf dancer (O.361A), *c.* AD 100–120. 3002, clearance.
52. Dr.37, CG. Body sherd with fragment of ovolo B102. Advocisus, *c.* AD 160–90. 3002, clearance.
53. Dr.37, CG. Rim sherd with ovolo B143/144 with bead row below, *c.* AD 140–180. 3002, clearance.
54. Dr.37, CG. Body sherd with fragment of a panel containing eagle O.2167. Probably Cinnamus or an associate, *c.* AD 140–70. 3174, gully 3175.
55. Dr.29, SG; Fig. 151, 25. Part of scroll design from above carination. Neronian or early Flavian. Watching Brief, unstratified.

The Samian Potter's Stamps, identified by Brenda Dickinson

1. Dr.18 or Dr.15/17, SG. Incomplete stamp, probably CE[or GE[. Not identifiable. Neronian or early Flavian. 980, well 3047 (phase 2).
2. Dr.29, SG, Fig. 151, 5. Form 29 stamped O[FNIG]RI: Niger ii of La Graufsenque, Die 2a, (Hermet 1934, pl 112, 113). As usual with this stamp of Niger, the middle is blurred where the die has gone down into the base and up again, *c.* AD 50–65. 4683, well 3047 (phase 2).
3. Dr.33, CG. Incomplete stamp AC[. Hadrianic or Antonine. 4427, layer overlying defensive ditches (phase 4ii).

Other imports

Pompeian Red Ware: Three sherds of Pompeian red ware were recovered, two plain bodies from the military (phase 2) post-hole 3591, part of tower 4724 and a low footring base sherd from a slighting (phase 3) deposit (780) in the primary cut 785 of the outwork ditch 4715. All are very abraded and it is not certain whether they belong to Peacock's fabric 2 or 3 (1977, 153–4). The fabric 2 sherds probably originated in the Mediterrancan and date from *c.* AD 10–79 on British sites. The fabric 3 sherds, which did not appear in Britain until after the Conquest and remained current until *c.* AD 90, are from the Auvergne region of central France (*ibid.*, 159). Both fabrics were present at Exeter, with the fabric 3 sherds being much more common (Rigby 1991, 80, tab. 9; Holbrook and Bidwell 1992, tab. 4).

Terra Nigra: Only five sherds of Gaulish *Terra Nigra* were recognised although three *Terra Nigra* type fabrics from other sources are also present. Two of these occurred at Exeter, where one (Holbrook and Bidwell 1991, 79, fabric 372) was believed to be a fairly local product, the other (*ibid.*, 80, fabric 375) probably a continental import. The fourth (fabric M107) represented only by body and base sherds, is highly micaceous and is also likely to be from a fairly local source. Rim forms include *Cam.* 16 platters, dated to between *c.* AD 45–85, one of the most common and latest forms to occur in Britain and the only form to occur on military sites established after AD 70 in the north (Rigby 1977). The small jar or beaker (Fig. 161, 17), found in layer 769 (phase 4i), can be broadly paralleled at Exeter (Rigby 1991, 79, fig. 22, 16–17) in contexts dated to *c.* AD 90–100 although these were of a different fabric.

Lyons ware: Only two, extremely abraded sherds of Lyons ware (Tomber and Dore 1998, 59) were recognised. One, from the phase 2 pit 3495 may be derived from a beaker with applied scale decoration (*cf.* Greene 1978, fig. 3, 23). Another plain body sherd was found in an area of animal disturbance (992). The date range of Lyon ware in Britain is generally considered to be *c.* AD 40–70 and it was totally absent by AD 80 (Tyers 1996, 150).

North Gaulish colour-coated ware: Three sherds of this fabric (Anderson 1980, 28, fabric 1), alternatively known as Argonne colour-coated ware (Tomber and Dore 1998, 47), were identified in phase 4i deposits. A small beaker base was found within building 4725 (Fig. 161, 1) and two sherds, including a beaker rim (Fig. 157, type R134) were found respectively in segments 3103 and 3233 of ditch 3265. The date range for the import of these vessels is *c.* AD 80–135, although production for a local market probably continued well into the 2nd century AD.

Rhenish wares: This term refers to two distinct fabric groups, one made in Central Gaul and the other at Trier. The Central Gaulish type, now often known as Central Gaulish black slipped ware (Tomber and Dore 1998, 50) was produced at Lezoux and at a variety of lesser workshops in the region from *c.* AD 150–200 continuing into the 3rd century (Tyers 1996, 138). The Trier fabric or *Moselkeramik* black slipped ware (Tomber and Dore 1998, 60) dates from *c.* AD 180–250 (Tyers 1996, 138). Both fabrics were found at Pomeroy Wood but, in contrast to the situation at Exeter (Holbrook and Bidwell 1991, 81, tab. 10; 1992, tab. 4), the Central Gaulish fabric is more common. Most sherds of both fabrics derived from beakers but only one form could be definitively identified (Fig. 157, type R150). Rim, base and body sherds almost certainly from the same Central Gaulish vessel were found in the phase 4ii layer 733 overlying the defensive ditches of the base. These sherds are from a beaker with a high rounded shoulder, upright neck, and a slightly everted rim and a solid, slightly splayed pedestal base (Symonds 1990, beaker form 1, group 9, fig. 9, 173–93). Body sherds indicate the presence of indented and fluted beakers from Trier and globular and indented beaker forms from Central Gaul.

Cologne colour coated ware: Fifteen sherds of Cologne colour coated ware (Tomber and Dore 1998, 57), alternatively known as Lower Rhineland fabric 1 (Anderson 1980, 14), were identified. All the sherds derive from beaker forms. Eight were found in phase 4i contexts (segment 852 of linear 4734 and post-holes 3932 and 3488 within building 4725), including the only rim (Fig. 156, type R124), from well 920. The other seven sherds were all found in phase 4ii contexts within the outer defensive ditch 3057. A beaker base and a body sherd with roughcast decoration were found in segment 817 and a plain body in segment 3151. The date range of these vessels is *c.* AD 150/60–250.

Unassigned colour-coated finewares: This group comprises eight small sherds (29 g) of fine colour-coated ware of unknown provenance. One sherd with roughcast decoration was found in well 4152 (phase 2) while a roughcast beaker base was from segment 3233 of ditch 3265 (phase 4i). Other beaker bases were found in layers 815 and 3015 and three sherds, including one with rouletted decoration were found in hearth 3014 (phase 4ii). Another tiny plain body sherd was recovered from pit 505 (unphased). These sherds probably derive from more than one source, but the quality of workmanship suggests that all are likely to be imports. All were from beaker forms and they are probably of 1st–2nd century AD date.

British finewares

The British finewares can be broken down into two groups, a range of unassigned wares, probably of local origin and dating from the 2nd century AD onwards, and products of the main Late Roman fineware producing industries located in the Nene Valley, New Forest and Oxfordshire regions.

Five fabrics probably of local origin were identified:

M103 Oxidised finewares. Fine-grained oxidised, slightly micaceous fabric with rare quartz, red/black ferrous particles <0.5 mm across and soft, rounded fine-grained speckled inclusions, silver or pink in colour and up to 1 mm across. Occasional presence of other rock fragments, probably derived from the Trap deposits of the Permian lava. Wheelmade.

Q112 Very hard sandy fabric with moderate sub-angular quartz and rare red/black ferrous particles (both <0.5 mm) in a smooth matrix. There seems to be deliberate variation in firing conditions to produce some vessels with deep red exterior surfaces and buff interiors while others have been fired in a non-oxidising atmosphere, giving dark grey surfaces and a red/brown core. Wheelmade.

Q118 Local colour-coated ware. Hard, fine-grained, oxidised ware with moderate black ferrous particles <0.5 mm across and rare white mica, <0.125 mm across. Ferrous particles often result in a slightly speckled appearance. Wheelmade. 'Wishy-washy' colour-coat, usually darker reddish–brown on exterior surfaces.

Q124 Local, stoneware-type colour coat. Hard, fine to medium grained fabric, orange brown or pink in colour with a red-brown, chocolate or black colour-coat, sometimes lustrous. Inclusions consist of rare to sparse rounded quartz, rare red iron oxides and soft, white, non-calcareous particles, all <0.5 mm across. Wheelmade.

Q126 Very hard fired sandy colour-coated ware. Fine sandy fabric with a close, almost vitrified texture. Rare quartz <1 mm across, and red/black iron particles <0.5 mm. Wheelmade. The burnished surfaces give a rather soapy feel to the sherds. Not very carefully made.

All of these fabrics occurred in only very small quantities (Table 81). The oxidised finewares (M103) contain a similar range of inclusions and are presumably related to the Type A South-western grey storage jar and Gritty grey ware fabrics which are discussed more fully below. Only one vessel form was recognised, a very abraded sherd from a narrowmouthed jar or beaker (Fig. 156, type R129) found in segment 3315 of ditch 4720 (phase 4i).

Table 84: Pomeroy Wood, quantities of New Forest and Oxfordshire fineware types

	Phase			
Form	*4i*	*4ii*	*Unph.*	*Date range (AD)*
New Forest colour-coated ware				
1	–	1	–	300–330
27	4	6	–	270–400
28	1	–	–	??270 320+
30		1	–	300–400
42	–	3	–	300 330/340
44	2	5	–	pre-350
New Forest red-slipped ware				
63	1	9	–	270–400
67	–	11	1	300–370
68	–	3	–	pre-350
73		3	–	345–380
Oxfordshire red / brown colour-coated wares				
C12	–	1	–	300–400
C22	–	1	1	240–400
C23	–	2	–	270–400
C45	–	3	–	240 400
C51	–	6		240–400
Total	8	55	2	

New Forest forms after Fulford (1975); Oxfordshire forms after Young (1977)

No rims were found among the sherds of the hard sandy fineware fabric (Q112). Five sherds, probably from the same vessel with the characteristic red exterior surface, were found in gully segments 3055 and 3068 of structure 3042 (phase 4i). The other plain sherds were from pit 4083, well 4152, stone spread 4719 within working hollow 4706 and in the topsoil (648) over cess pit 819, all phase 4i contexts.

The local colour-coated ware (fabric Q118) appears to be of 2nd–3rd century AD date although no precise parallels for this fabric have been identified. One body sherd, from segment 3926 of curvilinear gully 4711 (phase 4i), is decorated with incised grooves and a panel of barbotine dots, a style of decoration more usually found on the 'poppy-head' beakers of the 2nd century AD. All the sherds were derived from beaker forms. Two examples of a small globular-bodied form (Fig. 161, 8, type R116) were found in layer 3384 (phase 4i) within structure 3545 and layer 4427 overlying the defensive ditches (phase 4ii). This form is paralleled at Woodbury Great Close (Holbrook 1993, fig. 34, 20) and among the micaceous grey wares at Exeter (Holbrook and Bidwell 1991, fig. 63, 4.1) dated to *c.* AD 160–80. The other small

jar or beaker form made in this fabric (Fig. 157, type R144) is probably copied from imported cornice rim beakers. In addition, a small, complete spouted cup (Fig. 161, 18, type R119) had probably been deliberately deposited in a small recut (4691) within pit 4669, one of the internal features of round-house 3415 (phase 4i). No trace of a handle is apparent on this example. These vessels have been variously interpreted as children's or invalid feeding cups or lamp fillers but may have been used for a variety of other purposes involving the pouring of small quantities of liquids, from libations to salad dressing or precious perfumed oils. They occur in a wide variety of fabrics and are generally of late 1st or 2nd century AD date, although later examples are also known (e.g. Seager Smith 1993, 52)

All the sherds of the local stoneware (fabric Q124) were found in the phase 4ii layers (733, 814, 815, 965, and 967), overlying the defensive ditches. At least four sherds are from the same bag-shaped beaker with barbotine decoration (Fig. 157, type R151). The form probably copies beakers made in the New Forest industry (Fulford 1975, 56, type 44) and does not appear in the repertoire of the Oxfordshire potters. This fabric also occurred at Ilchester (Leach 1982, 139, fabric Cciv), Catsgore (Leech 1982, fig. 100, 74) and Exeter (Holbrook and Bidwell 1991, fig. 23, 24–7), during the late 1st or 2nd century AD but, at Ilchester at least, it reaches its maximum occurrence in the 4th century AD (Leach 1982, 139). The form of the beaker or small flagon base decorated with white paint (Fig. 164, 9) can be compared with the bulbous beakers of the Oxfordshire potters (Young 1977, types C27 and C105) although the fabric (fabric Q126) indicates that it was not a product of this industry. However, given their position within the stratigraphic sequence, and the date of associated material, both these fabrics probably belong within the 4th century AD.

The Nene Valley was never a major supplier of fineware to Exeter (Holbrook and Bidwell 1991, tab. 10) although significantly more sherds from this source were found on the sites excavated between 1980 and 1990 (Holbrook and Bidwell 1992, tab. 4). Nene Valley wares are represented by only six sherds at Pomeroy Wood, all from brown colour-coated beakers and all from phase 4i contexts. A base sherd was found in recut 3834 of the outwork ditch 4715, four plain sherds from hearth 4134 within round-house 3415 and a rouletted sherd from layer 3521. None of these sherds are intrinsically datable but as Nene Valley ware did not reach Exeter until the early 3rd century AD (Holbrook and Bidwell 1991, 81), it is unlikely that these sherds are any earlier.

From the last quarter of the 3rd century AD, or perhaps a little earlier, the New Forest began to supply finewares to the residents of the Pomeroy Wood settlement. As at other sites in Devon (Holbrook 1993, 96), it seems that the Oxfordshire potters did not infiltrate the fineware market in this region until the last decade or so of the 3rd century AD. A total of 65 vessels was recognised from rim sherds alone (Table 84) and together the New Forest and Oxfordshire fineware fabrics (Young 1977, 123) represent 2% of the overall assemblage (both number and weight). They occur in the ratio of approximately two New Forest to one Oxfordshire sherd. At Exeter these fabrics occurred in roughly equal quantities (Holbrook and Bidwell 1991, 82, tab. 10; Holbrook and Bidwell 1992, tab. 4) but it must be remembered that here the colour-coated mortaria sherds from both centres are included with the finewares. Trade in the Oxfordshire wares must have been by road while the New Forest wares could have been transported by river and coastal waters, perhaps more cheaply.

Although the range of New Forest types present at Pomeroy Wood is wider than at Exeter (Holbrook and Bidwell 1991, tab. 12; Holbrook and Bidwell 1992, tab. 4), a more restricted selection of Oxfordshire forms was present. No late (commencing after *c.* AD 325) Oxfordshire forms were recognised and only one New Forest form, the carinated bowl with stamped decoration (Fulford 1975, type 73) need necessarily belong to the second half of the 4th century. Late Oxfordshire forms were also scarce at Exeter (Holbrook and Bidwell 1991, tab. 11). One uncommon New Forest colour-coated ware type is worthy of noted – an indented beaker with applied scale decoration between the indents (Fulford 1975, type 28; Fig. 162, 10), found in the bank material of 4720 (phase 4i). A similar vessel is known from Hembury (Liddell 1931, pl. viii, 8). Although the barbotine decorated indented beakers are dated to *c.* AD 320–40 by their presence at the Lower Sloden kilns (Fulford 1975, 52), a reappraisal of the Sloden material has suggested an earlier starting date for production at this site, perhaps *c.* AD 250/260–270 (Seager Smith and Swan in prep.). This type of applied scale decoration also occurs on early New Forest beakers dated to *c.* AD 260–330 (Fulford 1975, 58, type 47) and therefore a date in the second half of the 3rd century would be appropriate for this vessel.

Forty-four (627 g) of the New Forest and Oxfordshire ware sherds were found in phase 4i deposits (Table 81). This represents 13% of all the sherds from these sources (15% by weight). Most sherds of these fabrics were derived from the phase 4ii fills within working hollow 4706. Significant quantities (34 sherds, 366 g) were also found in the layers over the defensive ditches but none of the other phase 4ii features contained more than six sherds. Sherds from the phase 4i features were mostly derived from the upper fills.

Amphorae, with identifications by D.F. Williams

No complete amphora was found and only a small number of rim, handle, and spike fragments were recovered. The total of 755 pieces, 59,157 g, accounts for 4% of the sherds and 25% of the weight of the whole assemblage. The majority were featureless body sherds. The weights of the different amphora fabrics are shown in Table 81.

Peacock and Williams Class 10 (Dressel 2–4)

The only featured sherds found amongst this material were three small pieces from a bifid rod handle found in a slighting deposit (780) in primary cut 785 of the outwork/annexe ditch 4715. The form was made in many areas including Italy, Spain, France, and the Aegean, and it predominantly carried wine. The Class 10 amphorae date from the later 1st century BC to the mid-2nd century AD although seem to have been in decline by the later 1st century AD (Peacock and

Williams 1986, 106). The bifid handle sherds, and five body sherds found during the watching brief, are probably of Italian origin. The three other body sherds from slighting deposits (959 and 966) within segment 958 of the outer defensive ditch 3057 are in an unusual, highly micaceous fabric but are similar enough to suggest that they derive from the same vessel, probably of this form.

?Dressel 5
Part of a bifid handle attached to the body and two other body sherds of the same fabric were also found in a slighting deposit (780) in primary cut 785 of ditch 4715. Although the rim is missing, the bifid handle indicates that the sherds belong to a koan-type amphora while the steep angle of the summit of the handle suggests that this may be a Dressel 5 form (*cf.* Sciallano and Sibella 1991). These amphorae were made during the 1st century AD in the eastern Mediterranean region.

Peacock and Williams Class 15 (Haltern 70)
Part of a solid spike found in pit 3073 (phase 4ii) probably belongs to a Class 15 or an associated form. These vessels date from the 1st to early 2nd century AD (Sciallano and Sibella 1991; Davies *et al.* 1994, fig. 4). Although probably residual in this context, the spike suggests the presence of greater quantities of Class 15 amphora within the assemblage. The fabric is very similar to that of the much more common Class 25 vessels, and although the 15s have a more cylindrical profile and tend to be thinner walled, the two types can be easily confused. These vessels carried *defrutum*, a sweet liquid made by boiling down grape musts (Peacock and Williams 1986, 116).

Peacock and Williams Class 25 (Dressel 20)
These vessels were made on the banks of the River Guadalquivir and its tributaries in the southern Spanish province of Baetica. They carried olive oil, and had an average capacity of 66 litres (Sealey 1985). The Class 25 vessels were the most common amphora form imported into Roman Britain from the Late pre-Roman Iron Age until at least the late 3rd century AD (Peacock and Williams 1986, 136). Although earlier (c. AD 50–170) and later (c. mid-2nd century onwards) fabrics can be identified (Symonds and Tomber 1992, 94–5), no attempt has been made to distinguish them here, given the poor condition of the assemblage. Consequently, only the more diagnostic sherds, the rims and stamped fragments, can be more precisely dated.

Estimated weight equivalents (the total weight of sherds present divided by the average weight of a complete vessel – for Class 25s, an average of 28.42 kg (Peacock and Williams 1986, tab. 1) – indicate the presence of just less than two vessels at Pomeroy Wood. However, the assemblage includes rims from at least five different amphorae. A comparison with Martin-Kilcher's (1987) typological scheme for the Class 25 rims derived from well-dated contexts at Augst, Switzerland, suggests a date range covering the period from the first half of the 2nd century to the 3rd century for these rims (Table 85). The importance of Class 25 sherds in phase 2 deposits (Table 81) suggests that even though no early rims were found, these vessels were reaching the site during the military period.

Table 85: Pomeroy Wood amphorae, typology and dating of the Class 25 (Dressel 20) rims (Martin-Kilcher types)

Phase	*Context*	*M-K type*	*Date (AD)*
2	Fill (4317) of post-hole 4602/4316, building 4725	76/77	110–150
3	Fill (3687) of segment 758, outwork/annexe ditch 4715	73	110–150
4i	Fill (3798) of well 3791	76/77	110–150
	Fill (897) of segment 3834, outwork/annexe ditch 4715	96/100	150–210
4ii	Layer 742, overlying military base ditches	103/104	210–280

Probable stamps were noted on two handle fragments. One, from round-house 4527 (context 4158, outer gully 4159; phase 4i), was probably stamped close to the upper attachment but is so abraded that the stamp is illegible. The other, from a slighting deposit (964) in segment 916 of the inner defensive ditch 748, has a much worn stamp in cartouch towards the summit of the handle. The last letter appears to be either F or P.

Peacock and Williams Class 27 (Pélichet 47 / Gauloise 4)
No rims were present but base, handle, and body sherds probably belonging to the flat-bottomed wine amphora from southern Gaul were identified. The type had a long life from about the middle of the 1st century to the 3rd, possibly early 4th centuries AD (Laubenheimer 1985).

Discussion
Although some of the sherds were found residually, the currency of the early amphora types (the Class 10/Dressel 2–4, ?Dressel 5, and ?Class 15/Haltern 70) was probably exclusive to the military occupation at this site. The Class 25/Dressel 20 vessels were by far the most common amphora type throughout the Roman period (c. 93% of the sherds or almost 96% of the weight) and carried olive oil. The Class 27/Gauloise 4, which also carried wine, represent 5% of the sherds (2% of the weight). These two amphora types also dominated the assemblage from Exeter (60% and 14% of the weight respectively – Holbrook and Bidwell 1991, tab. 14; Williams 1992, tab. 5) although a wide range of other early types, including the southern Spanish *Cam.* 185A, 186A and C forms, Dressel 2–4, Rhodian, Richborough 527, and carrot amphora, were also identified. Evidence from Pomeroy Wood and Tiverton where, in addition to Class 25/Dressel 20 vessels, only two other amphora types were identified (Holbrook 1991, tab. 7), indicates that relatively few of these types were redistributed to the non-legionary military bases, if Exeter was the principal point of supply. It is also interesting to note that no late amphora types were found at Pomeroy Wood, even though the North African, hollow-foot and Palestinian types are all known at Exeter (Holbrook and Bidwell 1991, tab. 14; Williams 1992, tab. 5).

There is some evidence to suggest that some of the Class 25/Dressel 20 vessels may have reached the site empty, secondarily traded as large containers rather than for their original contents. Five groups of sherds were repaired and probably reused for a variety of other purposes. At least ten, and possibly 13, of the sherds found in a shallow depression (4455, phase 2) which formed part of building 4725, were from the same vessel. Two of the group of joining sherds had had small, circular perforations drilled through the vessel wall after firing. These indicate an attempt at repair, perhaps with a metal staple or plug (although no evidence of this survives), a cord or leather thong. That amphorae were repaired with metal is indicated by another sherd, from a layer (965, phase 4ii) overlying the defensive ditches, which has a partially surviving lead plug within a circular, post-firing perforation. It is unlikely that vessels repaired in this way could ever be expected to hold liquids again.

Other evidence for alteration and/or adaptation of these vessels come from the handle sherd with the illegible stamp noted above, which has a *c.* 5 mm deep cut mark on its outer surface, suggesting that an attempt was made to cut or saw the handle off, before it was simply broken. Similarly, sherds in segment 817 of the outer defensive ditch 3057 (742, phase 4ii), which derive from the central part of a vessel, just beneath and preserving the lower handle attachment, show that the neck was deliberately trimmed and the handle knocked off close to the body. Two sherds from a slighting deposit (3667) in primary cut 785 of the outwork ditch 4715 also show deliberate trimming at the base of the neck. The removal of the neck and handles of amphorae, presumably to allow the reuse of the body, is not uncommon on military sites.

Mortaria

A total of 108 mortarium sherds, 3935 g, was recovered, with a little over half of these being from the later Roman phases 4i and 4ii. Although mortaria were never a common element within the Pomeroy Wood assemblage, up until the later 3rd or 4th century AD continental European imports predominated, with a small range of local products. Subsequently, supply (such as it was) switched to the products of the Oxfordshire and New Forest centres. The Oxfordshire red/brown colour-coated mortaria have been included here rather than with the finewares, as vessel function (food preparation) distinguishes them from the serving vessels more commonly made in these wares.

In addition to the Oxfordshire white wares, white slipped red wares and red/brown colour-coated wares (Young 1977, 56, 117 and 123) and New Forest Parchment wares (Fulford 1975, 26, fabric 2a), nine other fabric were identified. Rims from 18 vessels were present, and the forms are shown in Table 86.

FC1 Imported, ?from Spain (K. Hartley 1991, 189; Tomber and Dore 1998, 81). Hard, grey–white fabric with abundant quartz <0.5 mm; other inclusions comprise white mica, red and black ferrous particles and clay pellets. Fine quartz trituration grits. Neronian–Flavian.

R100 Made in Central France, probably the Massif Central (K. Hartley 1991, 190, fabrics FC6–11; Tomber and Dore 1998, 68). Hard, buff fabric with moderate igneous rock fragments <1.5 mm across, golden mica, feldspar, and occasional ?manganese fragments. Igneous rock trituration grits, often extending onto flange, *c.* AD 50–80/85

I100 Group of fabrics made at a variety of centres in North Gaul (K. Hartley 1991, 189, fabrics FC2–5; Tomber and Dore 1998, 75). Pale yellowish–brown to orange–red with pink or cream surfaces. Size, proportions, and quantity of inclusions vary but generally consist of red and black ferrous particles, quartz sand, and limestone fragments. Crushed flint or chert trituration grits, *c.* AD 50–150 but may have continued into the 3rd century.

Q113 Probably from the Rhineland (*cf.* K. Hartley 1991, 190, fabrics FC12–17; Davies and Seager Smith, 1993, 220, fabric 42R). Very hard and off–white with sparse to moderate quartz, sparse soft black non-magnetic inclusions, and rare red ferrous particles, all <1 mm. Traces of a pale yellow slip. Transparent quartz trituration grits. 1st–3rd centuries AD.

Q120 Probably from the Rhineland (*cf.* K. Hartley 1991, 190, fabrics FC12–17; Davies and Seager Smith, 1993, 220, fabric 42H). Hard, bright orange fabric with a deep red wash on exterior. Rare red iron particles<0.5 mm, and scattered quartz in a matrix with sparse sparkling flecks too small to identify. Large (<5 mm) angular white quartz/quartzite trituration grits, *c.* AD 150–250.

Q106 The Rhineland or possibly Britain (Davies and Seager Smith 1993, 219, fabric 42L). Hard, off-white to light orange with common quartz, rare to sparse iron oxides (both < 0.25 mm), and hard, white non-calcareous particles (<1 mm). Crushed flint trituration grits. Later 2nd or earlier 3rd centuries AD.

M108 British, perhaps south Wales. Soft, powdery fine-textured micaceous fabric. Generally orange with a dull grey core and sometimes traces of a thick white slip on the exterior surface. Other inclusions consist of red/brown ferrous particles up to 1 mm across, and rare scattered quartz. Large angular white trituration grits. Late 1st–2nd century AD.

Q125 Probably local. Hard, medium-grained fabric with moderate to co mmon quartz up to 1 mm across. Large, soft, well-worn, dull reddish–brown trituration grits up to 5 mm across. The only examples were dark grey with creamy brown surfaces but these may have been burnt.

Q127 Probably local; coarse sandy fabric. Dark brown–orange surfaces with a grey core. Contains abundant well-sorted quartz <0.5 mm, red/black ferrous particles and very rare hard, dark brown angular grains <0.75 mm.

The typically Claudian wall-sided mortarium forms are completely absent from this assemblage but the Spanish mortaria and those produced in the Massif Central were certainly present during the military period at this site. The Spanish mortaria are a characteristic feature of 1st century AD assemblages from the south-west, having been found at Carvossa and Nanstallon in Cornwall, Exeter, North Tawton and Tiverton in Devon as well as at Sea Mills in Bristol (K.

Table 86: Pomeroy Wood, quantities of mortaria vessel types

Fabric	*Form*	*Phase* 2	4i	4ii	6	*Total*
Spanish	R130	1	–	1	–	2
Massif Central	Exeter TC3	1	–	–	–	1
North Gaulish	R113	–	1	–	–	1
?South Wales	R125	–	2	2	1	5
?Local sandy fabric	R140	–	–	1	1	2
Coarse sandy fabric	R147	–	1	1	–	2
Oxfordshire white ware	Young M17	–	–	2	–	2
Oxfordshire red/brown colour-coated ware	Young C97	–	–	1	1	2
	Young C100	–	–	1	–	1
Total		2	4	9	3	18

For vessel forms see Appendices 5 and 6 except for:

Young type M17	mortarium with an upstanding rim and a wide flat flange, hooked under at the tip. The spout was formed by turning out the rim across the flange, AD 240–300 (Young 1977, 72)
Young type C97	Mortarium copying samian form 45, *c.* AD 240- 400 (*ibid.*, 173)
Young type C100	Mortarium with an upright rim and an angular flange formed by squashing down the rim over the flange, *c.* AD 300 -400 (*ibid.*, 174)

Hartley 1991, 194) as well as at Dorchester (Davies and Seager Smith 1993, 219, 42M). No kilns are known but the source area is suggested by its distribution in Britain and its association with Spanish finewares of the same date at Exeter (K. Hartley 1991, 194). Two joining rims (Fig. 159, 17) were found in the possible lining (980) of well 3047 (phase 2) while the third was found residually in layer 965 overlying the defensive ditches (phase 4ii). Joining rim sherds of a vessel from the Massif Central were found in post-hole 3427 and a base sherd from a slighting deposit (960) in segment 958 of the outer defensive ditch 3057.

The North Gaulish fabrics are particularly susceptible to soil conditions and not only lose their surfaces but laminate and fragment into small blocky pieces making form recognition problematic. A distinctive range of vessel types (i.e. Bushe-Fox 26–30, Hartley group I and II (Gillam 238), Gillam 255, and some Gillam 272) were made at a variety of centres, including kilns at Noyon, from *c.* AD 50–150 although there is increasing evidence that production may have continued into the 3rd century (K. Hartley 1991, 204). Only one form was recognised made up from 13 sherds found in post-hole 3123 of structure 3053 (phase 4i), a variant of Gillam 255 (1957, 206, fig. 26) which can be paralleled at Greyhound Yard, Dorchester by vessels dated to *c.* AD 160–230 (Davies and Seager Smith 1993, 222, types 317 and 318) and at Exeter (K. Hartley 1991, types TC 46–49).

Although none of the North Gaulish mortaria was found in a phase 2 deposit, it is probable that at least some of the products from this region relate to the military activity at this site. This is suggested by the 20 very abraded sherds (197 g) all from the same vessel and probably derived from somewhere near the spout, found in a slighting deposit (960) in segment 958 of the outer defensive ditch 3057.

During the late 1st and 2nd centuries AD, North Gaul probably became the predominant source of supply with the addition of a few vessels from the Rhineland probably arriving from the mid-2nd century onwards. No rims are present among the material from the Rhineland although base sherds from at least four vessels were found.

Mortaria were produced in Exeter during the fortress period and between c. AD 70–120 (Holbrook and Bidwell 1991, 144, app. 1), with a revival in perhaps the second half of the 3rd–4th centuries (Hartley 1992, 65). A wide range of fabrics was made (K. Hartley 1991, FB7–22, 24, 26–31, 35–6) but the only certain example found outside the city is from Tiverton (Holbrook 1991, 74, no. 106). Fabrics Q125 and Q127 are likely to be local products and may well be from Exeter although no precise parallels have been found. All four sherds of these fabric types were rims (types R140 and R147). None were from well-sealed contexts (layer 769 within structure 3545 (4i), layer 961 within working hollow 4706 (4ii) and layers 735 (6) and 965 (4ii) overlying the defensive ditches) and therefore their date range remains uncertain.

All the sherds probably from South Wales (Fabric M108) are of the same form (type R125) and it is possible that they derive from a single vessel. Mortaria were produced in south Wales during the late 1st–2nd centuries AD and are unlikely to have been common in Devon, only one vessel, probably from Caerleon, being identified in the much larger assemblage from Exeter (K. Hartley 1991, 215).

Just over one-third of the mortarium sherds were from the Oxfordshire and New Forest regions. Sherds from Oxfordshire red/brown colour-coated vessels were by far the most common, the other fabrics being represented only by negligible quantities (Table 81). Only three forms were identified, the Oxfordshire white ware type M17, date to *c.* AD 240–300 (Young 1977, 72), and red/brown colour-coated types C97 and C100 dated to *c.* AD 240–400 and AD 300–400 respectively (Young 1977, 173–4). Like the finewares from these sources, mortarium sherds were especially common in segments 4335 and 4595 of ditch 4085, layers in working hollow 4706 and in the layers overlying the defensive ditches.

Oxidised coarsewares

A total of 583 sherds, 5176 g, of oxidised coarseware fabrics was recovered. This group of fabrics seem to have been especially vulnerable to abrasion in the harsh soil conditions, but it is probable that the majority were comparatively well-made and provided slightly better quality wares intermediate between the coarsewares and the true fineware range. Almost all the sherds within this group are wheelmade. Rims from only 15 different vessels were identified; the vessel forms are shown in Table 87.

Two of the fabrics (Table 81) have been identified at Exeter (Holbrook and Bidwell 1991, fabrics 406 and 435). Small quantities of New Forest parchment ware (Fulford 1975, 26, fabric 2a) and one probable sherd of Oxfordshire white slipped ware (Young 1977, 117) were also identified. However, the very poor condition of the oxidised coarseware sherds has made precise fabric identification and attribution to specific sources problematic. Consequently, three of the ten fabrics identified are 'catch-all' groups encompassing the products of several different centres and perhaps a wide date range.

M100 'Catch-all' group for fine, micaceous slightly sandy fabrics.

Q102 'Catch-all' group for fine sandy wares, white, buff and orange.

Q109 Soft fine sandy wares. Sparse to moderate quartz and rare black or dark grey inclusions <0.25 mm. Traces of white slip on exterior.

Q110 'Catch-all' group for coarse sandy wares.

Q119 Hard, slightly sandy fabric. Fine-grained matrix containing very fine sand < 0.125 mm and larger inclusions of sparse, soft red or dark brown particles <1 mm, and rare soft white non-calcareous particles <0.5 mm. Interior is generally pale grey while the exterior is orange. White-slip on exterior.

Q117 North Gaulish wares. Hard, slightly sandy fabrics with variable quantities of red and black iron particles <1 mm across, limestone <1 mm across, and quartz < 0.5 mm across. Colour varies from a uniform greenish–cream for the most iron-rich examples to reddish–orange with cream surfaces for the sandier sherds.

Fabric 406, a fine white flagon fabric, may be another product of the Exeter fortress ware industry and while fabric 435, also fine but generally pink in colour, may itself contain the products of more than one source, it too is probably of relatively local origin (Holbrook and Bidwell 1991, 141). Although most sherds of the fine white flagon fabric were found in phase 2 contexts (Table 81), 15 of these belong to the lower part of a single vessel found in pit 4315. The other two sherds, both very abraded, from phase 2 were found in pit 3495.

Only two sherds of the fine pink flagon fabric were found in phase 2, in segment 958 of the outer defensive ditch 3057. Most were from a slighting deposits in primary cut 785 of the outwork/annexe ditch 4715 and it is probable that the majority are from a single vessel. Two small rim sherds from a ring-necked flagon, were found in layer 780, while seven body sherds from layer 3687 joined 138 sherds from layer 3692. All the sherds are very abraded so no attempt was made to reconstruct the vessel. A later 1st–early 2nd century AD date would be appropriate.

A third fabric may also be attributable to an Exeter source. The hard, slightly sandy fabric (Q119) may be encompassed by Exeter fortress ware 'D' (Holbrook and Bidwell 1991, 153) but no vessel forms were present to aid identification. Although only present in small quantities most of these sherds were found in phases 2 and 3, so a military connection and 1st century AD date would be appropriate.

The fabrics of the North Gaulish wares correlate with the mortaria produced in northern France from the mid 1st–3rd centuries AD (Davies and Seager Smith 1993, 281; Davies *et al.* 1994), here recorded as fabric I100. Only three featured sherds were identified, a flagon rim (Fig. 157, type R148), found in a slighting

Table 87: Pomeroy Wood, quantity of oxidised coarseware vessel forms

		Phase				
Fabric	*Form*	*2*	*3*	*4i*	*4ii*	*Total*
Fine pink flagon	Exeter 1	–	1	–	–	1
Fine micaceous	R116	–	–	1	–	1
	R122	1			–	1
Fine sandy	R145	–	1	–	–	1
	R153	–	–	1	–	1
	R157	–	–	–	1	1
Soft, fine sandy	R109	–		1	–	1
	R105	–		2		2
	R146			2	–	2
	R152	–	–	–	1	1
N. Gaulish	R148	–	1	–	–	1
New Forest parchment	Fulford 89	–	–	–	1	1
	Fulford 96	–	–	–	1	1
Total		1	3	7	4	15

For vessel forms see Appendices 5 and 6, except for:

Fulford 89 Bowl with an internal flange beneath the rim; horizontal grooves may occur outside and opposite the flange, *c.* AD 270–400 (Fulford 1975, 70)

Fulford 96 Candlesticks, *c.* AD 270–380 (*ibid.*, 74)

deposit in segment 916 of the inner defensive ditch, a strap handle (feature 840, phase 2), and a base from layer 967 overlying the defensive ditches (phase 4ii). The handle and base as well as most of the body sherds probably derive from flagon forms.

One form, a disc-mouthed flagon (Fig. 156, type R109) from segment 852 of ditch 4734 (phase 4i), is the only form in the soft, fine sandy ware fabric. The 'catch-all' fabric groups were mostly found scattered, generally in ones or twos, in features belonging to each of the Roman phases with no particular concentrations in any one feature or part of the site being apparent. The butt beaker rim (Fig. 157, type R145), found in a slighting deposit in primary cut 785 of the outwork/annexe ditch 4715 (Fig. 160, 8), is similar in form and probably in fabric to one from Topsham (Bidwell 1975, fig. 11, 20). Bidwell (*op. cit.*, 236) notes that these vessels occur only rarely in military and immediately post-military contexts at Exeter but are unlikely to be continental European imports. The small globular-bodied beaker form (Fig. 156, type R116) was also made in the local colour-coated ware fabric (Q118), suggesting that this micaceous fabric may also be of local origin, and is probably of 2nd–3rd century AD date. The virtually flat discs (Fig. 157, type 146), made in coarse sandy fabrics, may be lids for amphorae or other forms but, as they cannot be correlated with any particular amphora type, they have been included in this group. A large flat-bottomed base in a coarse sandy fabric, found in a slighting deposit (966) in segment 958 of the outer defensive ditch, might be from a *Cam.* 139 flagon.

The presence of New Forest parchment ware represents a very westerly occurrence of this fabric (Fulford 1975, fig. 52) which does not appear to have been identified at Exeter. The candlestick, found in layer 961 (phase 4ii) within working hollow 4706 (Fig. 164, 6 and 7), although never a common form, had a long date range *c.* AD 270–380 (Fulford 1975, 74). These sherds offer the only ceramic evidence for any form of lighting in the Pomeroy Wood assemblage. The internally flanged bowl, sherds of which were found in cess pit 819, was much more common and was made throughout the life of the New Forest industry (Fulford 1975, 72).

Grey coarsewares

The assemblage was overwhelmingly dominated by the grey coarsewares which comprise 86% of the Roman sherds (68% of the weight). For ease of discussion the fabrics have been divided into six main groups: miscellaneous wares, micaceous greywares, sandy grey wares, south-western grey storage jar fabrics, gritty grey wares, and Black Burnished wares. Twenty-five fabrics were identified, including seven that can be directly paralleled at Exeter. The Exeter fabrics, as well as the South-western grey storage jars and Gritty grey wares, were recorded using the Exeter vessel type series (Holbrook and Bidwell 1991), with any additional forms not represented at Exeter being included in the site-specific type series where necessary. The Exeter forms present at Pomeroy Wood are illustrated by fabric type in Figures 152–5 and listed in Appendix 5. The remaining fabrics could not be paralleled elsewhere in the vicinity, and were recorded using the site-specific

Table 88: Pomeroy Wood, Roman pottery, quantities of coarseware vessel forms

Form	*Gabb.*	*Grog temp.*	*Mica. grey*	*CS grey*	*FS grey*	*Other Sgrey*	*Total*
Bowls							
R103	–	–	–	1	–	–	1
R111	–	–	–	–	–	2	2
R136	–	–	1	–	5	1	7
R141	–	–	1	4	3	3	11
R156	–	–	–	–	1	–	1
Bowls/dishes							
R101	–	–	1	7	6	–	14
R107	–	–	–	5	1	1	7
R110	–	–	–	4	–	1	5
R117	–	–	2	–	–	–	2
R118	–		1	3	1	2	7
R126	–	–	–	–	1	–	1
R128	–	–	–	2	–	–	2
R132	–	–	–	1	–	–	1
R135	–		–	–	2	–	2
R154	–	–	–	1	–	–	1
Jars							
R104	–	–	–	1	1	–	2
R105	–	–	1	15	6	3	25
R106	–	–	–	14	5	–	19
R108	–	–	–	–	1		1
R114	–	1	1	1	–	–	3
R115	–	–	–	3	–	–	3
R120	–	–	2	8	4	20	34
R121	1	–	2	24	11	7	45
R133	–	–	2	4	2	–	8
R138	–	–	1		–	–	1
R153	–	–	–	–	1	–	1
Miscellaneous forms							
R102	–	–	1	2	–	–	3
R127		–	1	2	1	–	4
R109	–	–	1	–	–	–	1
R112	–	–	–	2	–	–	2
R122	–	–	–	–	1	–	1
R100	–	–	1	70	32	19	122
Total	1	1	19	174	85	59	339

Gabb. = gabbroic wares; Grog temp. = grog tempered wares; Mica grey = micaceous greywares; CS grey = coarse sandy greywares; FS grey = fine sandy greywares; Other Sgrey = other sandy greywares

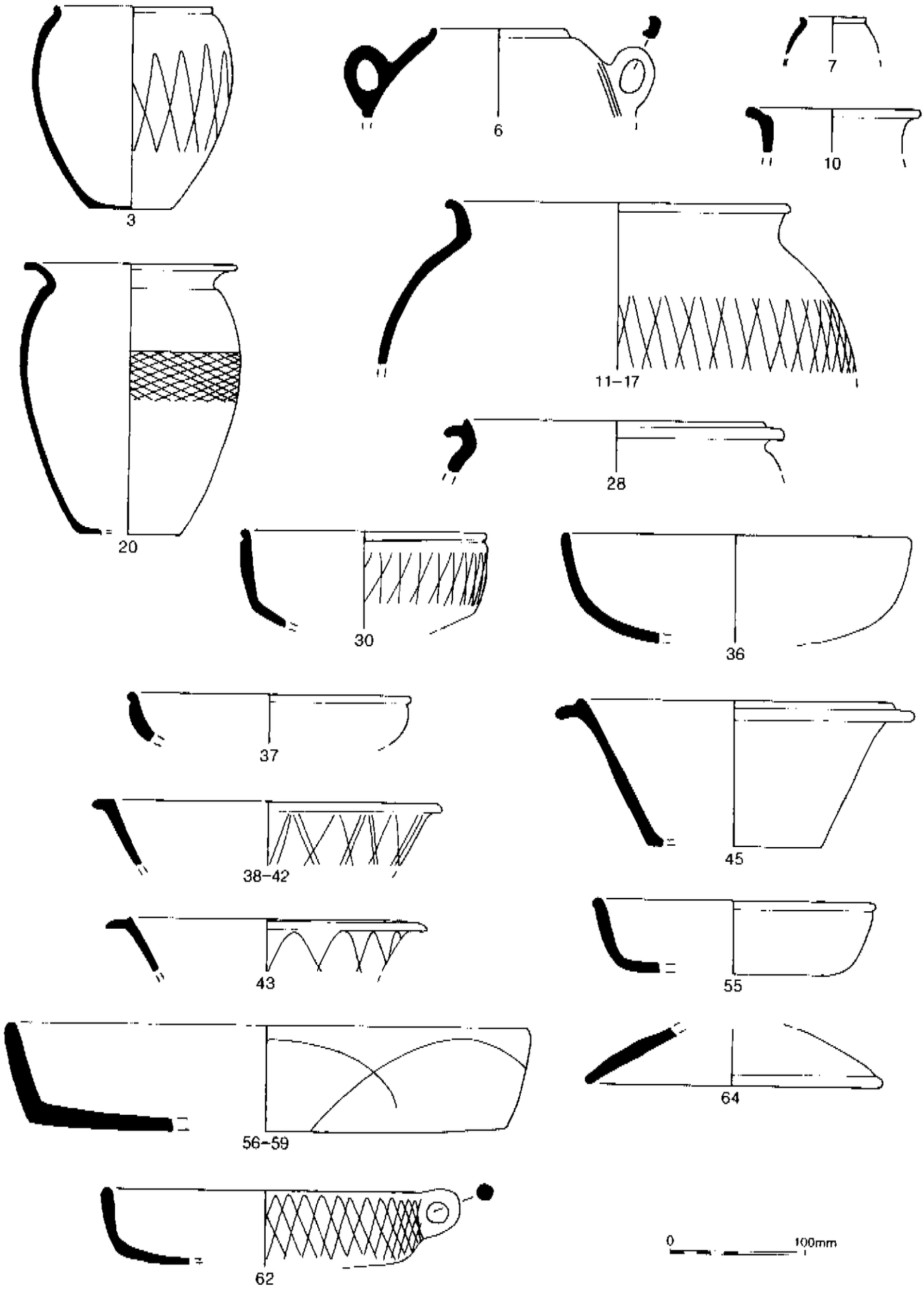


Figure 152 *Pomeroy Wood Roman pottery: vessels in the Exeter type series found at Pomeroy Wood – South-east Dorset Black Burnished ware*

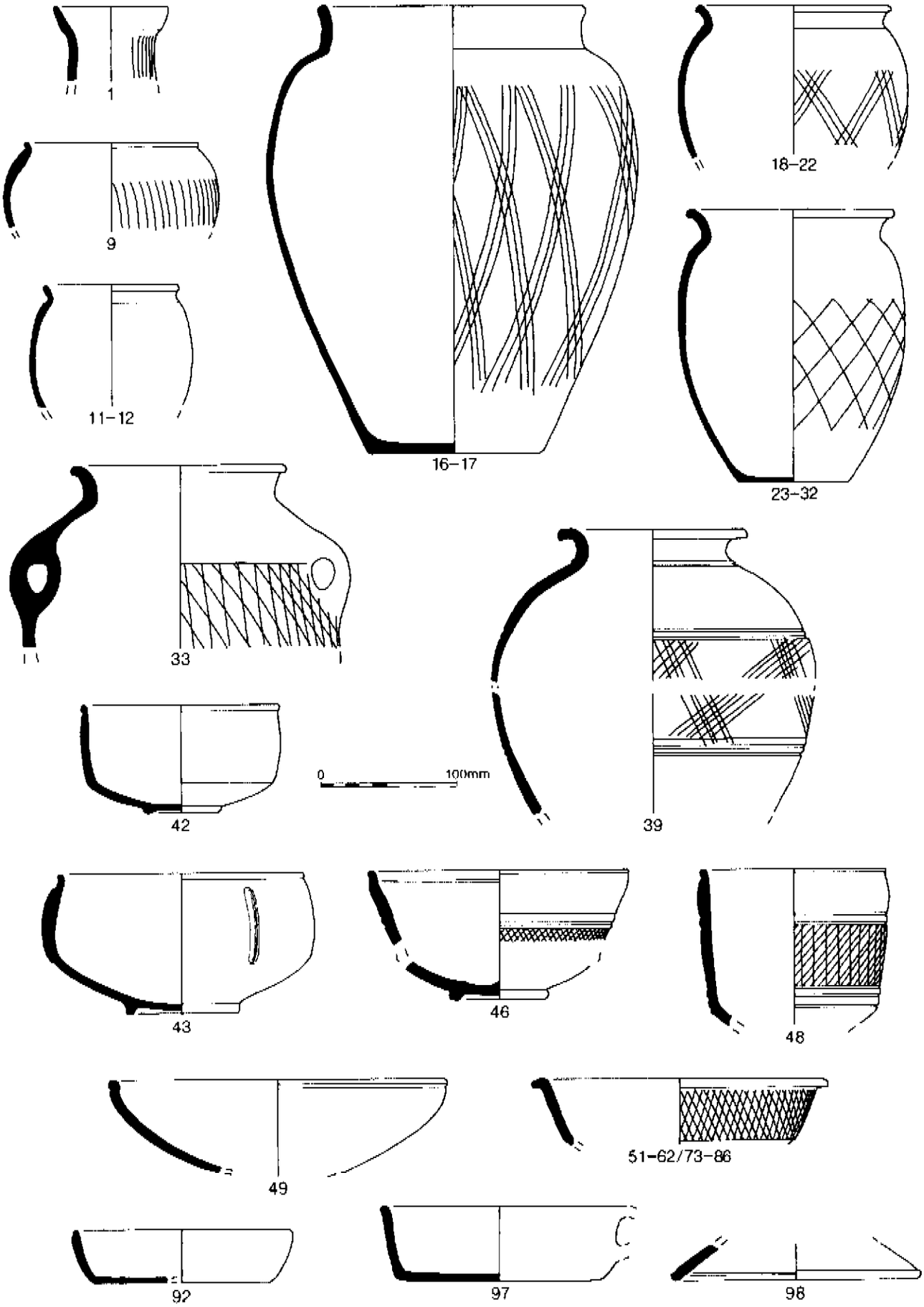


Figure 153 Pomeroy Wood Roman pottery: vessels in the Exeter type series found at Pomeroy Wood – South-western Black Burnished ware

type series (Fig. 156–7; Appendix 2). The vessel forms present are shown in Tables 88–93.

Miscellaneous wares
Four fabrics were present in this group:

Exeter fortress ware 'B' (Holbrook and Bidwell 1991, 149, fabric 190).
Gabbroic wares (Holbrook and Bidwell 1991, 183, fabric 2).
G100 'Catch-all' group for a range of grog-tempered fabrics. Other inclusions may include quartz, iron oxides, fine white mica and soft, rounded fine-grained speckled inclusions, silver or pink in colour also present in fabrics Q103, Q123, and M103.
South Devon wares (Holbrook and Bidwell 1991, 177, fabric 5).

Exeter fortress wares of all types were very poorly represented at Pomeroy Wood with only one sherd (from the unphased gully 3936) of the 'B' ware being positively identified. This is even fewer than at Greyhound Yard, Dorchester (Davies and Seager Smith 1993, 282). The distribution of these wares is apparently restricted to sites with a military interest (Holbrook and Bidwell 1991, 16) and therefore they could be expected in much larger quantities at Pomeroy Wood. At Tiverton, for instance, these wares were only slightly less common than in Exeter itself (Holbrook 1991, 69). While it is possible that their recognition has been hampered by the very poor condition of the assemblage, it seems unlikely that the distinctive hardness and texture of the 'B' wares especially, should have been completely destroyed. While at least some of these wares may have been included in the sandy greyware fabric groups, it is perhaps more likely that their virtual absence is related to the general paucity of pottery from the military contexts examined at this site.

One gabbroic ware sherd is known from Tiverton (Holbrook 1991, fig. 17, 1) and small quantities have been found in Exeter, restricted to 1st and 2nd century AD contexts (Holbrook and Bidwell 1991, 183–4). The body and base sherds from a small jar form found in a slighting deposit in segment 4582 of the inner defensive ditch 748 are therefore probably contemporary with the deposit, while the rim although intrinsically of similar date, occurred residually in layer 3320 (phase 4i).

Although only present here in small quantities (Tables 81 and 88), grog-tempered wares apparently do not occur on other Roman sites in Devon. It is however possible that the use of this temper type represents a continuation of the Iron Age ceramic tradition of the area, at least one grog-tempered sherd of Late Iron Age date being found at Blackhorse (Chapter 8). Only the bead rim jar (Fig. 158, 4), from well 4152, is datable. The form was made in many fabrics in the south-west from at least the middle of the 1st century BC, if not before, and lasted well into the 1st century AD but is unlikely to outlast the first quarter of the 2nd century at the very latest. The stratigraphic position of this vessel suggests that it was deposited during the military occupation of the site and this may have been the time at which the other vessels in this fabric arrived.

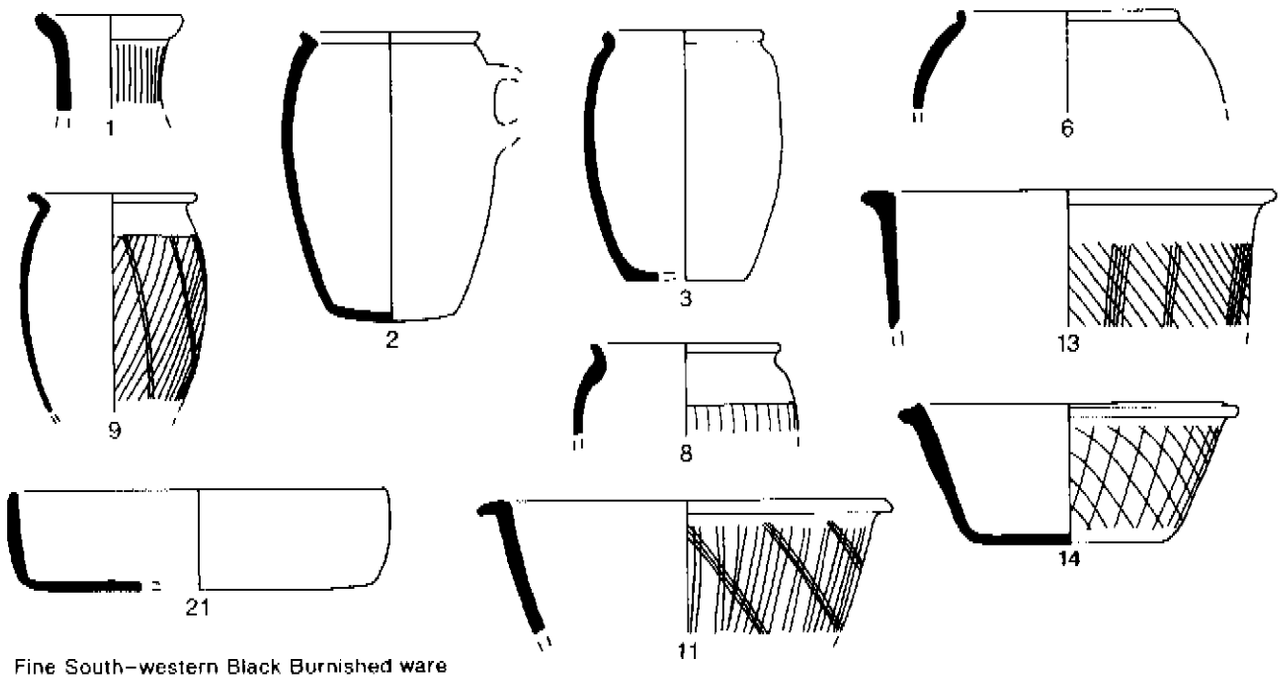
Table 89: Pomeroy Wood Roman pottery, quantities of South Devon ware vessel forms

	Phase			
Exeter type	*3*	*4i*	*4ii*	*Total*
Jars				
1	–	–	3	3
4	–	1	10	11
6	–	–	2	2
7	1	–	–	1
8	–	2	5	7
Straight-sided bowls and dishes				
13	–	–	2	2
15	–	–	6	6
17	–	–	2	2
unassigned rims	–	1	4	5
Total	1	4	34	39

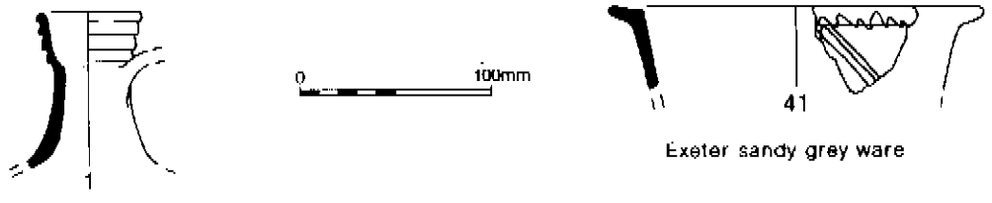
The South Devon wares appear to have reached the site during the later 2nd and early 3rd centuries AD, at a time comparable to their introduction at Exeter (Holbrook and Bidwell 1991, 178). Although never an important part of the pottery supply to Pomeroy Wood, these wares represented nearly 4% of the later 3rd and 4th century (phase 4ii) coarseware sherds (5% of their weight), compared with less than 1% of both the number and weight of the coarsewares in phase 4i. A total of 39 vessels were recognised (Table 89), 34 of these being found in phase 4ii contexts. Nearly 47% (120 sherds) of the South Devon wares were found in the layers infilling working hollow 4706.

Micaceous greywares
Exeter micaceous grey ware (Holbrook and Bidwell 1991, 163, fabric 125).
M104 Fine, with common mica. Moderately hard with common white mica and rare ferrous particles and quartz, all <0.5 mm across. Dark grey surfaces, with buff margins and a grey core. Wheelmade.
M105 Coarse with mica and shiny black grains. Common to abundant quartz, shiny black non-magnetic particles both < 0.75 mm across, and fine white mica. Generally unoxidised. Wheelmade.
M106 Soft, highly micaceous fabric. Very fine-grained (<0.125 mm) with abundant mica; no other visible inclusions. Wheelmade.

These wares formed only a minor component of the pottery supply at all times during the lifespan of the settlement. The Exeter micaceous greywares are very poorly represented (Table 81) although this may be due to problems of recognition stemming from the condition of the assemblage. All the phase 2 sherds are from a single small beaker of a type paralleled at Exeter and dated *c.* AD 160–80 (Holbrook and Bidwell 1991, fig. 63, 4.1). This vessel was found on the edge of one of the bowls

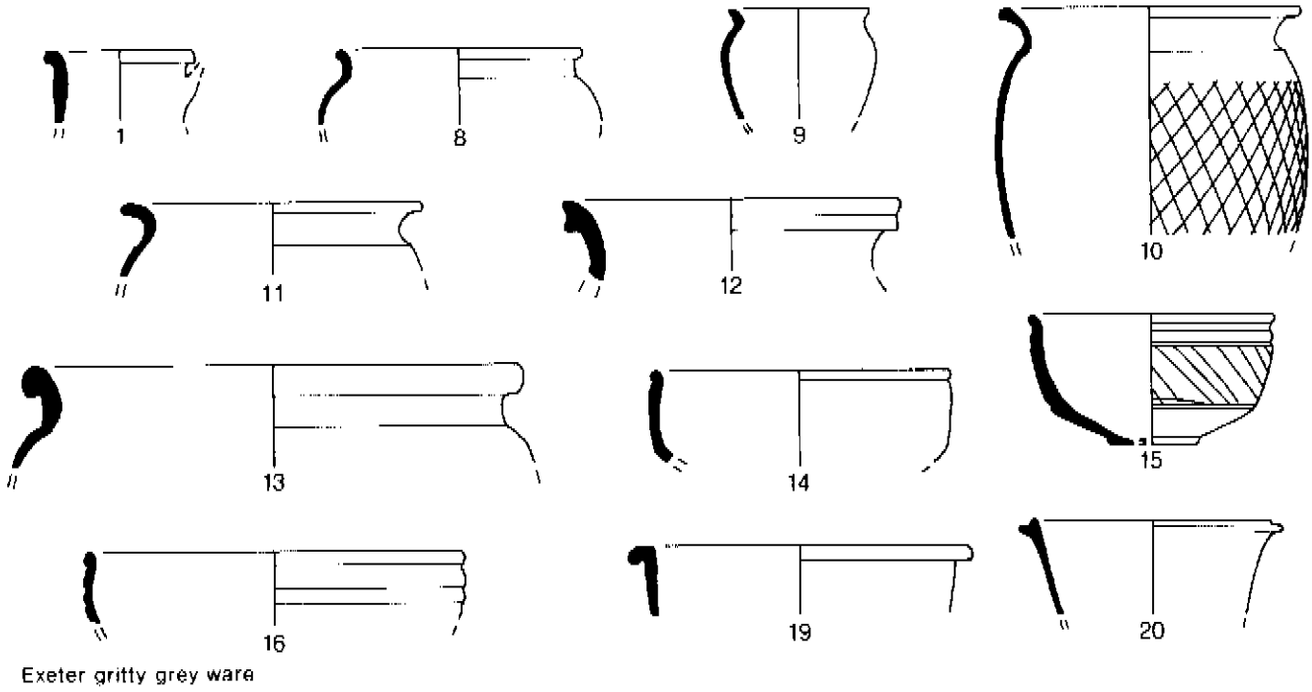


Fine South-western Black Burnished ware



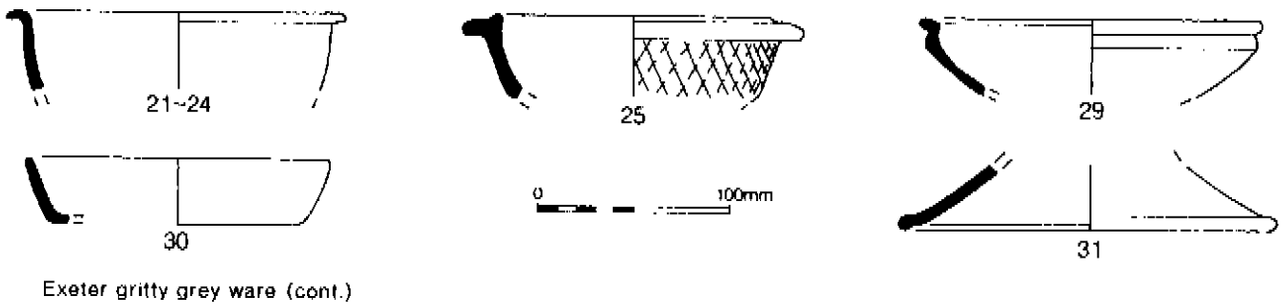
Exeter flagon fabric

Exeter sandy grey ware

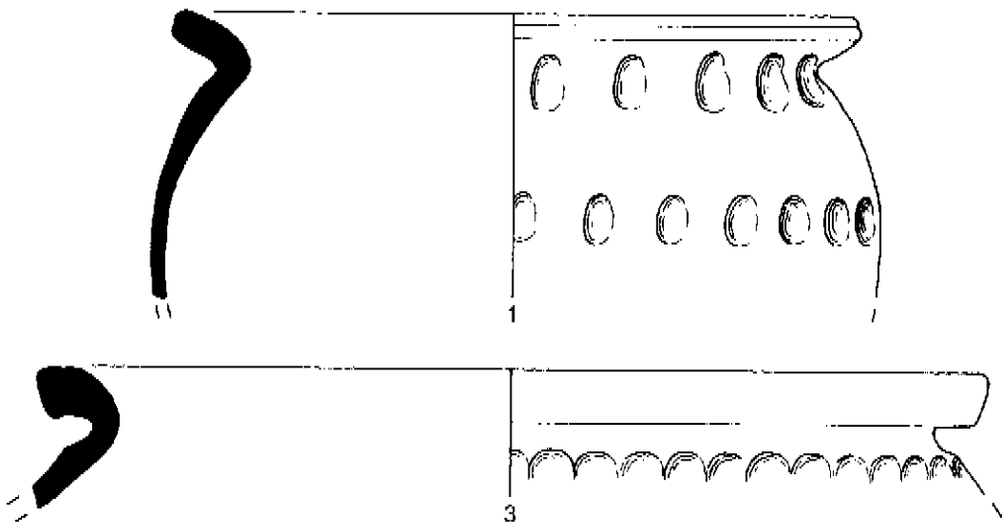


Exeter gritty grey ware

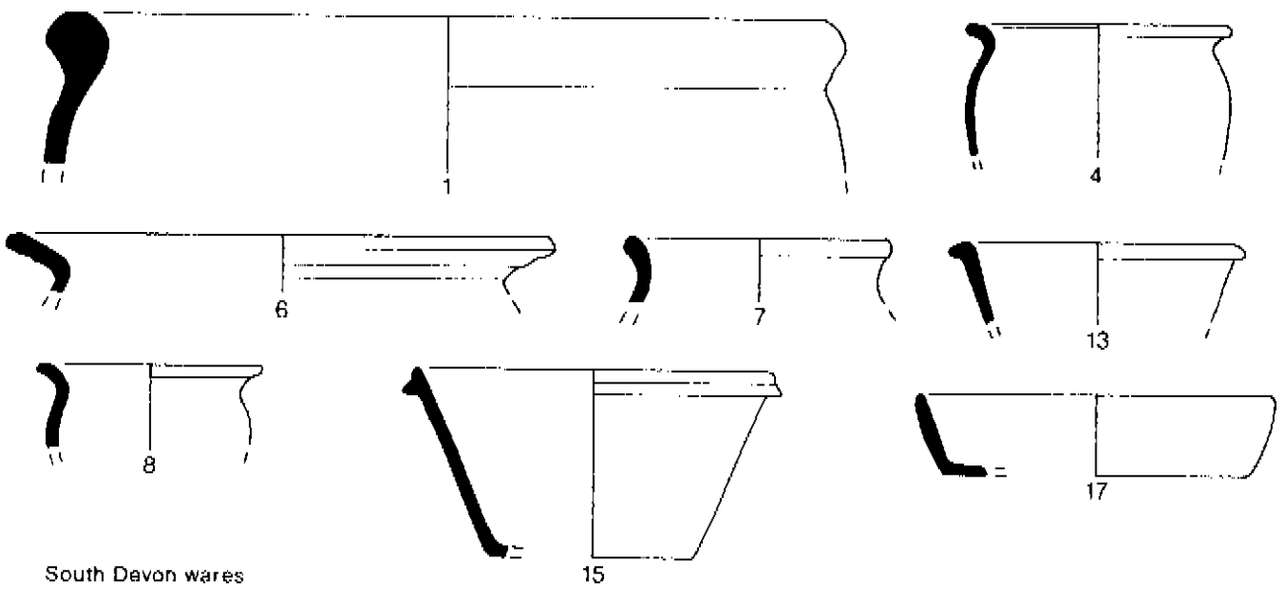
Figure 154 *Pomeroy Wood Roman pottery: vessels in the Exeter type series found at Pomeroy Wood*



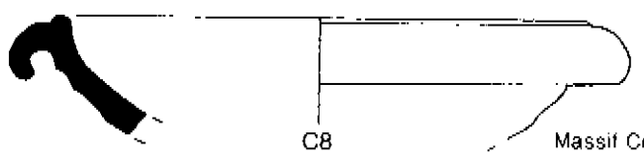
Exeter gritty grey ware (cont.)



South–western grey ware storage jars



South Devon wares



Massif Central mortaria

Figure 155 *Pomeroy Wood Roman pottery: vessels in the Exeter type series found at Pomeroy Wood*

(4520) of grain drier 4123, although it may originally have been deposited, perhaps in a small ephemeral cut, after the feature had gone out of use. The distinctive feature of all the other micaceous wares from Pomeroy Wood is the presence of common visible mica plates within the fabric, a feature not apparent in the Exeter micaceous grey ware series (*op. cit.*, 163). Nineteen vessels were recognised, mostly smallish jars (Table 88). The distribution of the micaceous grey wares (which represent 3.5% of the coarseware sherds in phase 2, and nearly 2% in phase 4i but only negligible amounts in phase 4ii contexts), suggests that they are all of later 1st to later 2nd or early 3rd century AD date, contemporary with the Exeter micaceous greywares (*op. cit.*, 163–5).

Sandy greywares

The difficulties of recognising specific fabric types among sandy grey coarsewares are well known and at this site they are exacerbated by the condition of the material. Two broad fabric groups that contain the products of several centres spanning a wide date range, were recognised, together with seven more distinctive fabric types.

Exeter sandy grey ware (Holbrook and Bidwell 1991, 154, fabric 151).

Q100 'Catch-all' group for coarse (grain size > *c.* 0.5 mm) sandy grey wares.

Q101 'Catch-all' group for fine (grain size < *c.* 0.5 mm) sandy grey wares.

Q104 Fine sandy ware with dark grey/black slightly micaceous surfaces and a red or brown core.

Q105 Very coarse, quartz grits. Moderate large (<2 mm across) rounded translucent quartz inclusions in a fine (0.25 mm or less across) sandy matrix. The large quartz protrude through the surfaces. Can be grey or red/brown in colour, generally with darker surfaces.

Q107 Hard, dark blue–grey ware. Closely textured with abundant quartz (<0.5 mm across) and rare to sparse black ferrous inclusions, giving a speckled appearance, sometimes with fine black streaks on the surface.

Q108 Fine, smooth fabric with rare rounded quartz (<0.75 mm across). Dark grey/black slightly micaceous surfaces with a red or brown core.

Q111 Coarse sand with shiny black grains. Hard to very hard gritty fabric, dark grey brown in colour. The proportions of inclusions vary even with a single vessel but consist of common or very common subrounded quartz, often white or translucent in colour and hard shiny black angular inclusions, both <1 mm across, in a fine, slightly micaceous matrix.

Q115 Fine, smooth, slightly micaceous sandy fabric with rare to sparse ferrous particles and scattered quartz <0.5 mm across. Colour varies from orange to dark brown or grey, occasionally with a strange yellow tint. No surfaces survive.

A full range of bowl, straight-sided bowl/dish and jar forms is present, together with lids, flagons and jugs (Table 88). Although all traces of manufacturing technology have often been obliterated by the condition of the sherds, the majority of vessels are probably wheelmade, but a few handmade examples were also noted. Both sherds of Exeter sandy grey ware (Fig. 161, 20) had the distinctive combed decoration typical of a small group of vessels introduced to Exeter during the late 1st or early 2nd century AD, which may even be imports from South Wales (Holbrook and Bidwell 1991, 155). It is probable that many other sherds of this fabric type have been included among the coarse and fine sandy ware 'catch-all' groups, the 'micaceous surfaces but no visible mica plates' typical of the Exeter fabric (*op. cit.*, 154) having been destroyed by the acidic soils. Sherds of other Exeter fabrics, such as the hand-made grey burnished ware (*op. cit.*, 163) and Fortress wares 'A' and 'B' (*op. cit.*, 145 and 149) may also be included in these groups. The sources of the other fabrics are unknown.

Together the sandy grey wares represent 30% of all the coarseware sherds (20% of the weight) and clearly formed a significant component of the ceramic assemblage at all times. In contrast, these wares represented only 9% of the weight of quantified sherds from Exeter (*op. cit.*, M1:17–20). However a steady decline in their importance through time is apparent (Fig. 166) at Pomeroy Wood. Given the quantity of residual material present in phase 4ii, as indicated by the more closely datable imported finewares for instance (Table 81), the sandy grey wares may have been of even less significance by the later 3rd and 4th centuries AD. This decline may be linked to the rise of the South-east Dorset Black Burnished ware industry supplying superior quality cooking wares (Farrar 1973, 71) although it could also be related to the chronology. Production of the Exeter sandy grey wares for instance, probably ceased during the second half of the 2nd century (Holbrook and Bidwell 1991, 155). However, the sandy grey ware fabrics present at Hayes Farm, Clyst Honiton (Holbrook 1989, 16, tab. 1), occupied from the first half of the 2nd century into the later 3rd or 4th century, suggest that production did continue in this region. The sources of these wares, which fall outside the range of the Exeter fabric series, are not known but Holbrook (*ibid.*, 16) notes that all the forms present are known in greyware fabrics in other assemblages from south Somerset and east Devon, and therefore they are likely to be of relatively local origin. It is probable that greywares were made on the Brue and Axe levels (Holbrook and Bidwell 1991, 19), for instance.

South-western grey storage jars and Gritty grey wares

These wares represent the products of a series of interrelated industries producing coarseware vessels for local markets in Somerset and east Devon between the 2nd and the 4th centuries AD. Although considerable variation exists, two related fabric types were identified at Pomeroy Wood.

South-western grey storage jars:

Q103 Type A. Coarse, often slightly micaceous fabric with variable quantities of quartz, red/black ferrous particles, soft, rounded, fine-grained speckled inclusions generally silvery–grey or pink (if oxidised) in colour and often rather flaky in appearance. Other hard brown rock fragments probably derive from the Permian lava or Trap deposits. Inclusions may be up to 5 mm across. Rather lumpy texture. Colour

Table 90: Pomeroy Wood, Roman pottery, quantities of vessel forms present in the South-western storage jar (A) and Gritty grey ware (B) fabrics

	Phase										
	2		*3*		*4i*		*4ii*		*Unphased*		*Total*	
Fabrics	*B*	*A*	*B*	*A*	*B*	*A*	*B*	*A*	*B*	*A*	*B*
South-western grey ware storage jars											
1	–	–	–	2	–	3	–	–	–	5	0
3	–	1	–	5	–	13	23	–	–	19	23
Total	0	1	0	7	0	16	23	0	0	24	23
Gritty grey wares											
Bowls											
14	2	–	–	–	–	–	–	–	–	0	2
15	–	–	–	1	–	2	–	–	–	3	0
16	–	–	–	1	–	–	–	–	–	1	0
Straight-sided bowls and dishes											
19	–	–	–	–	1	–	–	–	–	0	1
20	–	–	–	–	–	1	–	–	–	1	0
21–4	–	–	–	1	–	1	2	–	–	2	2
25	–	–	–	–	–	–	1	–	–	0	1
30	–	–	–	1	1	1	–	–	–	2	1
Jars											
8	–	–	1	–	2	1	2	1	–	2	5
9	–	–	–	1	–	–	–	–	–	1	0
10	–	–	–	5	8	17	7	4	1	26	16
11	–	–	–	–	–	–	2	–	–	0	2
12	–	–	–	–	2	5	3	1	1	6	6
13	–	–	–	–	1	1	–	–	–	1	1
R131	–	–	–	–	–	2	–	–	–	2	0
R139	–	–	–	–	–	–	2	–	–	0	2
R143	–	–	–	–	–	–	2	–	–	0	2
Miscellaneous forms											
1	–	–	–	–	1	2	11	–	–	2	12
29	–	–	–	3	–	5	5	1	–	9	5
31	–	–	–	–	–	–	1	–	–	0	1
R155	–	–	–	–	–	1	–	–	–	1	0
R100	–	–	–	2	–	8	4	–	–	10	4
Total	2	0	1	15	16	47	42	7	2	69	63

ranges from bright orange to buff, and brown through to light or dark grey.

Q121 Type B. Coarse and generally micaceous with a lumpy texture. The inclusions consist of rounded white or translucent quartz <2 mm across, often protruding through the surface, white mica flecks <0.125 mm across, red and black ferrous particles and other rock fragments. Colour varies from bright orange to buff to brown to very dark grey.

Gritty grey wares:

Q123 Type A. Finer version of South-western grey storage jar fabric (Fabric Q103).

Q122 Type B. Finer version of South-western grey storage jar fabric (Fabric Q121).

Although very similar in the hand-specimen, examination under the x20 microscope revealed distinctive inclusions characteristic of each type; soft, flaky, silver or pink, rather speckled inclusions in the Type A wares and white mica flakes and large rounded, white or translucent quartz in the Type B wares. The mica present in the Type B fabrics is not mentioned in the published descriptions of the south-western storage jar or gritty grey ware fabric (Holbrook and Bidwell 1991, 171, fabric 101 and 175, fabric 107; Bidwell 1981,

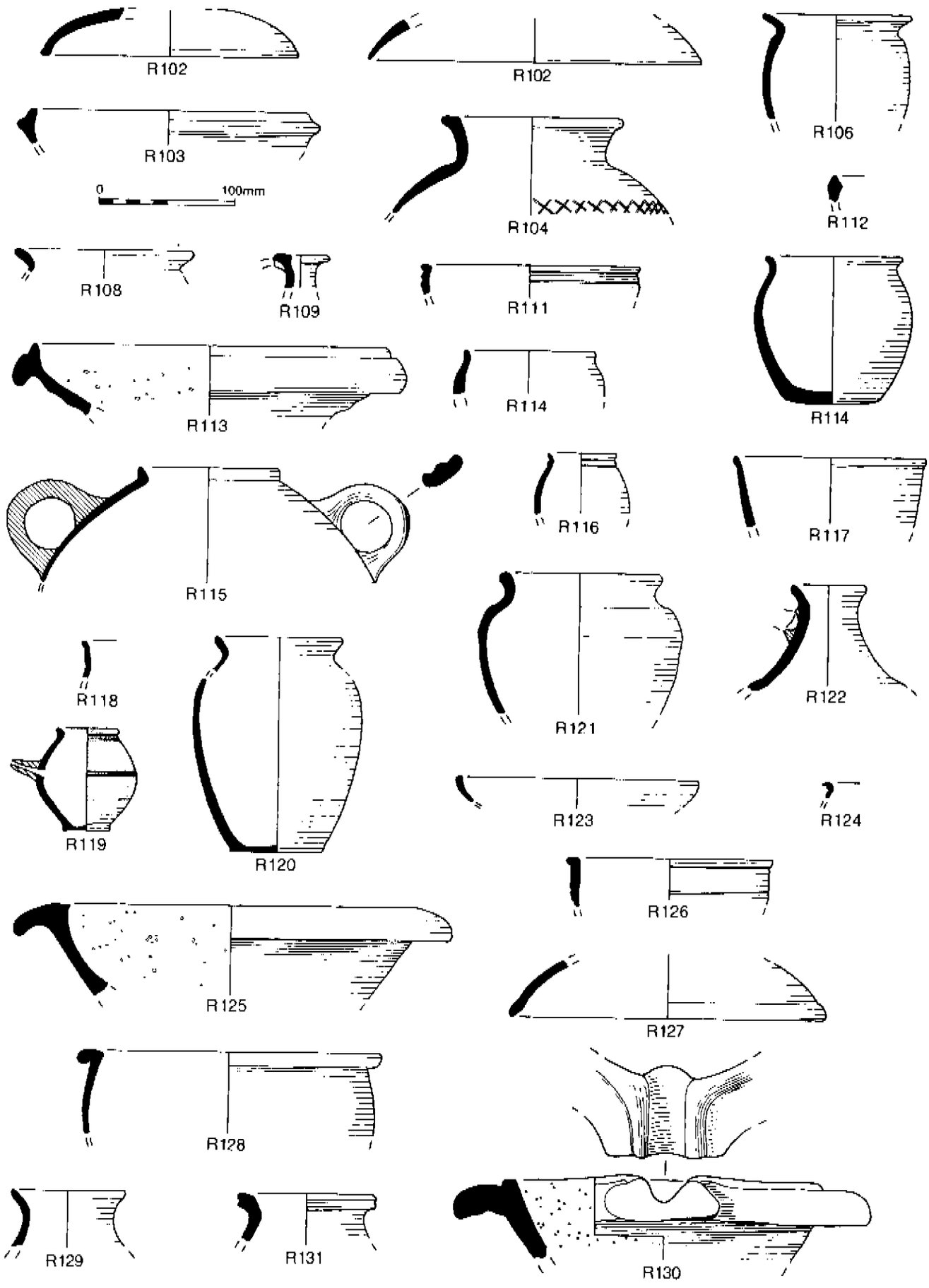


Figure 156 Pomeroy Wood: Site specific type series

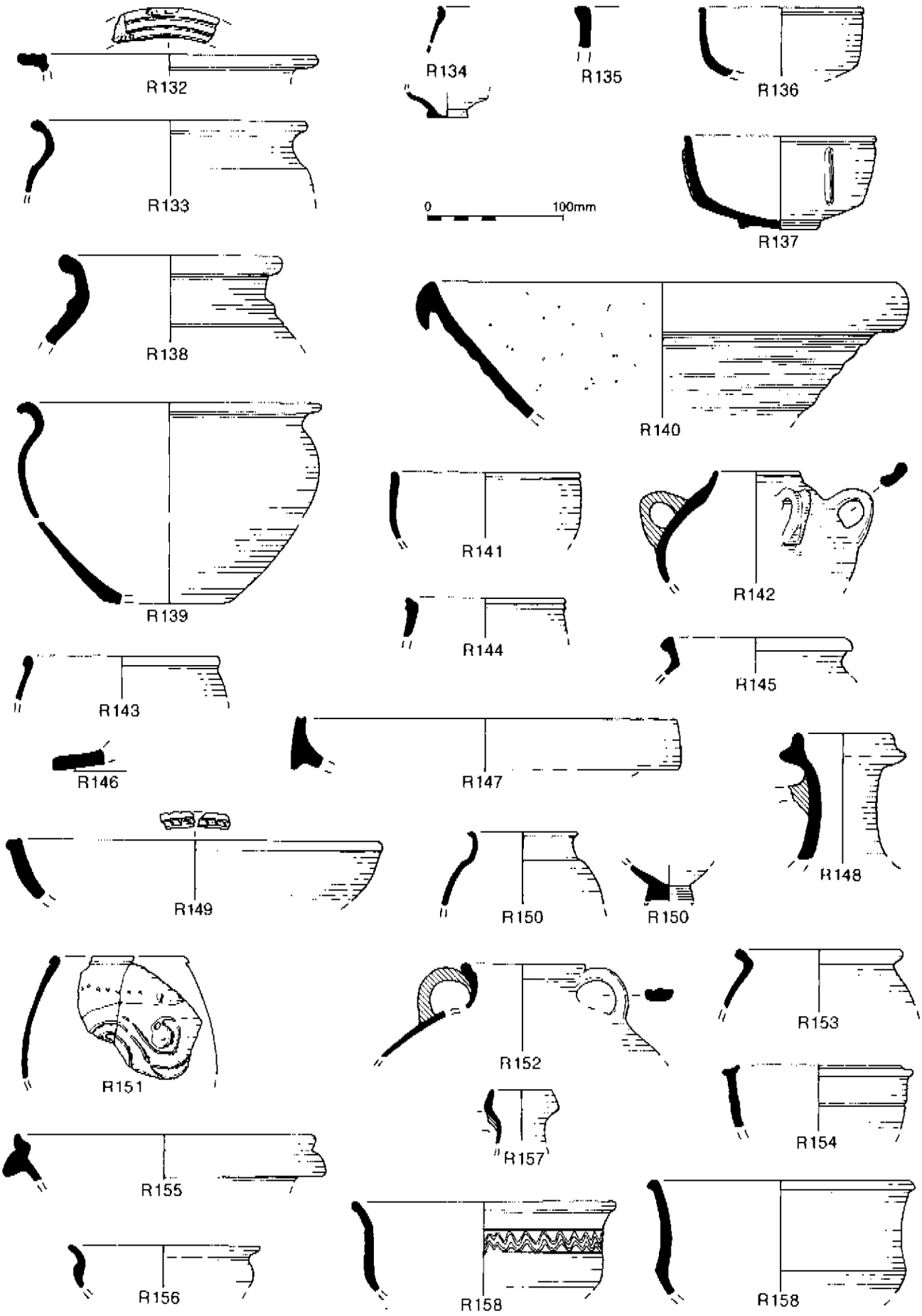


Figure 157 Pomeroy Wood: Site specific type series

Table 91: Pomeroy Wood, Roman pottery, quantities of vessel forms present in South-east Dorset Black Burnished ware

	Phase						
Form	*2*	*3*	*4i*	*4ii*	*6*	*Unph.*	*Total*
Bowls							
30	–	–		1	–	–	1
36	1	3	2	–		1	7
37	1	2	–	1	–	–	4
R137	–	–	1		–	–	1
Straight-sided bowls and dishes							
38–42	2	2	14	10	–	7	35
43	–	–	7	14	–	–	21
45	–	–	15	122	–	16	153
55		–	1	–	–	1	2
56–9	2	1	47	119	–	6	175
62	–	–	1	–	–	–	1
Jars							
3	6	1	7	6	–	–	20
6	–	–	–	2		1	3
10	–		2	1	–	–	3
11–17	8	5	21	12	–		46
20	2	3	43	227	1	11	287
28	–	–	–	3	–	1	4
R104	2	1	6	2	–	2	13
Miscellaneous forms							
64	2	1	2		–	–	5
7	–	–	–	1	–	–	1
R122	–		–	1	–	–	1
R100	15	3	56	93	–	23	190
Total	41	22	225	615	1	69	973

68, fabric 105; Holbrook 1993, 97) and the affinities of this group have yet to be established. It is probable that the Type A fabric equates with the Norton Fitzwarren ware (Holbrook and Bidwell 1991, 175, fabric 107), although this is far from the closest source. The fabric accounted for 1.4% of the coarsewares at Woodbury (Silvester and Bidwell 1984, 41) but was present only in very small quantities at Exeter (Holbrook and Bidwell 1991, 175). The range of inclusions similar to those in the Type A wares were also noted in the oxidised fineware fabric M103, while the presence of the mortarium or mortarium-style bowl rim (Fig. 157, type R155) may indicate mortarium production around Norton Fitzwarren too. The production of storage jars, and possibly finewares and mortaria forms in association with each other is known to have occurred at Woodbury Great Close (Holbrook 1993, 97). Both the mortarium-style bowl (Fig. 157, type R155) and the beaker (Fig. 156, type R116) in the oxidised fineware fabric M103 can both be broadly paralleled at this site (*ibid.*, fig. 34, 20, 22). While it is possible that at least some of the Pomeroy Wood vessels could derive from this source, comparison of actual sherds from each of the source areas and perhaps petrological analysis would be needed to confirm this.

Production of the Exeter gritty grey ware fabric began during the early 2nd century AD and continued into the late 3rd or early 4th century (Holbrook and Bidwell 1991, 171). The south-western grey storage jars were present at Exeter from the late Antonine period into the 4th century (*ibid.*, 175). The concept of the ceramic storage jar may also have been new at this time as very large jar forms are absent from 1st and 2nd century assemblages in the area, implying the use of non-ceramic storage containers. The small quantities of these fabrics present in the earlier phases are probably intrusive, caused by the reworking or disturbance of the earlier deposits during the 2nd–3rd centuries or later Roman periods.

Although the Type A wares are more numerous, 9% of the coarseware sherds (18% by weight), compared with 6% (9% by weight) for the Type B fabrics (Table 81), approximately equal numbers of vessels were recognised in both fabrics (Table 90). The widest range of vessel forms was present during the later 3rd and 4th centuries AD (phase 4ii). The majority are copied from Black Burnished ware types while the similarities between the large gritty grey wares jars (Holbrook and Bidwell 1991, types 12 and 13) and the south-western grey storage jar types further reinforces the link between these two fabric groups. One interesting feature of all the storage jars from this site is the relative thinness of the base compared to the vessel walls, which must have resulted in a point of weakness, especially if the vessels were ever moved when they were full.

Black Burnished wares

As at most sites in the south-west (except those in Cornwall), the Black Burnished wares are the principal coarsewares at this site, forming 51% of the coarseware sherds (48% by weight) or 44% (32% by weight) of the entire assemblage.

All the major fabrics were present, the South-east Dorset (Wareham/Poole Harbour) Black Burnished ware (Holbrook and Bidwell 1991, 106, fabric 31), the South-western Black Burnished ware (*ibid.*, 114, fabric 40) and the fine south-western Black Burnished ware (*ibid.*, 135, fabric 60). The vessel forms present in each of these fabrics are shown by phase in Tables 91–3, although for quantification purposes (except in Table 81), the South-western Black Burnished ware and the fine south-western fabric have been combined.

In addition, a few sherds of a very coarse, often oxidised, Black Burnished ware fabric (Q116) containing sparse but highly visible shale fragments, were also present. This fabric has been recognised in Dorchester (Davies and Seager Smith 1993, 249, fabric 31; Seager Smith 1997, M11, fabric Q107) and is probably a very late product, perhaps even representing the degeneration of the Wareham/Poole Harbour industry during the 4th century AD. Most of these sherds derived from two vessels, a handled jar (type R115, Fig. 163, 2) and a flanged rim jar (Holbrook and Bidwell 1991, fig. 29, 28.1), both found in ditch 3247 (phase 4ii). Although shown separately in Table 81, this

Table 92: Pomeroy Wood, Roman pottery, quantities of vessel forms present in South-western Black Burnished ware

	Phase					
Form	*2*	*3*	*4i*	*4ii*	*Unph.*	*Total*
Bowls						
42	2	1	1	1	–	5
43	2	–	1	4	–	7
46	–	1	–	–	–	1
48	–	1	–	–	–	1
Straight-sided bowls and dishes						
51–62/73–86	4		7	1	2	14
92	1	–	10	3	2	16
97	–	–	–	1	–	1
Jars						
9	–	–	2	–	–	2
11–12	–	–	1	1	–	2
16–17	2	3	5	1	1	12
18–22	2	–	6	3	–	11
23–32	1	–	3	3	–	7
33	–	1	–	–	–	1
39	–	–	1	–	–	1
Miscellaneous forms						
1	–	–	–	–	1	1
98	2	1	–	–	–	3
R100	–	–	4	2	–	6
Total	16	8	41	20	6	91

Table 93: Pomeroy Wood, Roman pottery, quantities of vessel forms present in Fine South-western Black Burnished ware

	Phase					
Form	*2*	*3*	*4i*	*4ii*	*Unph.*	*Total*
Bowls						
R149	–	–	–	1	–	1
Straight-sided bowls and dishes						
11/17	–	1	10	4	1	16
13	–	–	2	–	–	2
14	–	–	–	1	–	1
21	1		3	2	–	6
Jars						
2	1	–	1	–	–	2
3	–	–	4	3	–	7
6	2	1	1	–		4
8	–	–	1	–	–	1
9	1	–	3	2	–	6
R142		–		2		2
Miscellaneous forms						
1	–	1	–	–	–	1
R100	1		5	1	–	7
Total	6	3	30	16	1	56

fabric is otherwise included with the South-east Dorset Black Burnished wares.

The proportions of the South-east Dorset and the South-western Black Burnished wares, together with the sandy grey wares, are shown in Figure 166. The composition of the coarseware assemblage is interesting, not only for the quantity of sandy grey wares present (discussed above), but for the overwhelming dominance of the South-east Dorset Black Burnished wares and the corresponding scarcity of the South-western fabric types (Fig. 167). In contrast, the South-western Black Burnished wares were by far and away the commonest coarseware at Exeter, never representing less than 20% of the 1st–late 2nd century AD groups (Holbrook and Bidwell 1991, mf. 1:17–20). In one large mid-2nd century group, these wares accounted for 61% of the overall weight (*ibid.*, fig. 5, M1:18, group 7). At Tiverton, the South-western Black Burnished wares represented over half of the coarsewares (Holbrook 1991, 69, tab. 7).

The overall proportions of the Black Burnished wares at Pomeroy Wood are better paralleled in the assemblages from Otterton Point (Brown and Holbrook 1989, tab. 1) and at Woodbury (Silvester and Bidwell 1984, tab. 1, group 3). However, at both these sites, the relative scarcity of the South-western fabrics can be explained by chronology; production of these fabrics had more or less ended by the middle of the 3rd century (Holbrook and Bidwell 1991, 93–4) while the assemblages from Otterton Point and Woodbury were predominantly of 3rd and mid 3rd–4th century date respectively. Obviously, chronology cannot be held responsible for the paucity of the South-western fabrics in phases 2, 3, and 4i at Pomeroy Wood (Fig. 166).

At Pomeroy Wood, there is some sign of the increased popularity of the South-western fabrics during the later 1st century AD (phase 3; Fig. 166). At Exeter, this has been linked to a new reliance on local suppliers after an immediate decline in coastal trade, caused by the departure of the army, reduced the availability of the South-east Dorset Black Burnished wares (Holbrook and Bidwell 1991, 19). However, the reasons for the general paucity of South-western Black Burnished wares at Pomeroy Wood are unclear. It could be that even at this early period, at least some South-east Black Burnished wares, and maybe other types of pottery too, were being transported along the Dorchester to Exeter road. Certainly by the mid 3rd century there is evidence to suggest that South-east Dorset Black Burnished wares were being transported across Somerset by road. These wares occur in significant quantities on sites on or near the road from Dorchester to Ilchester (Margary route 51) and beyond to the mouth of the River Parrett, perhaps for shipment to Wales and the north, but are relatively scarce away from this route (Holbrook and

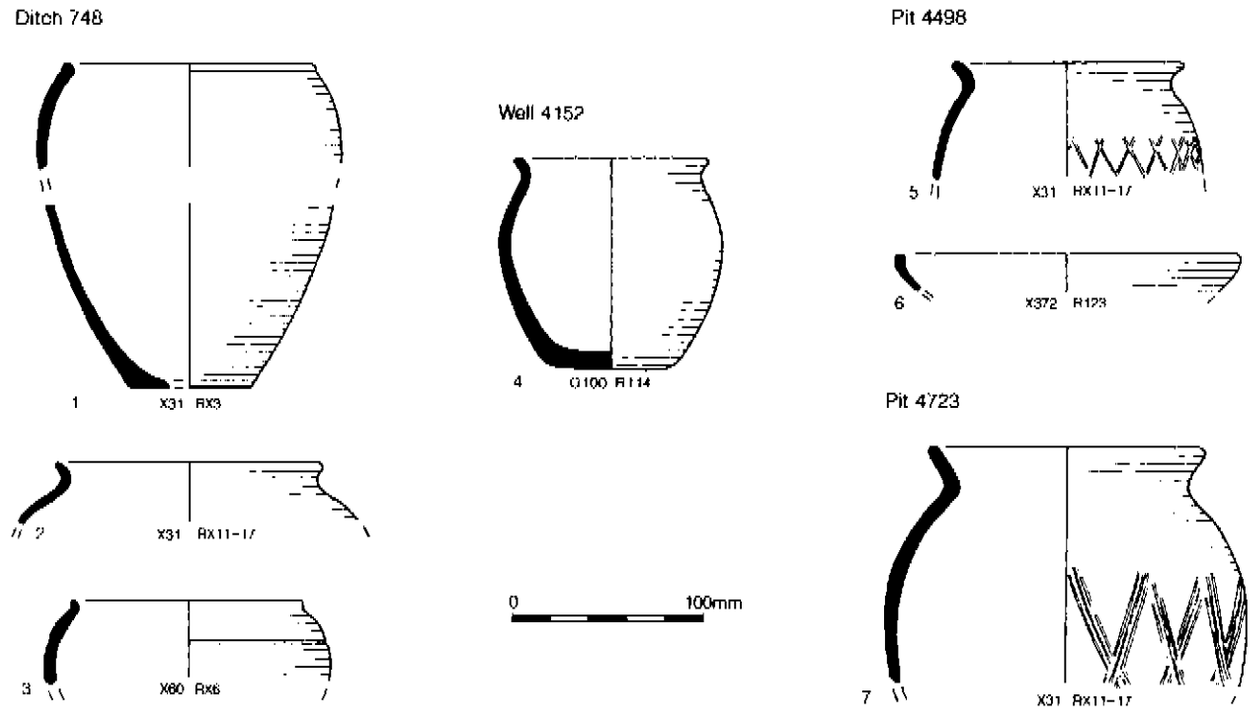


Figure 158 Pomeroy Wood: Roman pottery groups, phase 2; defensive ditch 748, well 4152, pit 4498, recut 4723 (scale 1:4)

Bidwell 1991, 23). Alternatively, there could be a much simpler explanation. Given the relatively small proportion of the site investigated, it could be that our sample (although large – especially for Devon) is unrepresentative, and that, for whatever reason, these wares were perhaps used and discarded more commonly in another part of the site. Certainly, features that can be dated to the 1st and 2nd centuries AD within the excavated area are relatively few in number compared with those of later periods.

The continued dominance of the South-east Dorset Black Burnished ware in the later Roman period suggests that the Pomeroy Wood settlement continued to enjoy a relatively high status well into the later 3rd–4th centuries. At this time, Exeter was the major market for South-east Dorset Black Burnished ware in Devon, although it still formed a significant component of the ceramic assemblages from the more Romanised sites such as Otterton Point, Seaton, Woodbury, Holcombe, and Membury Crib House (Holbrook and Bidwell 1991, 23). However, it was generally scarce at the lower status, rural enclosures in Devon such as Hayes Farm, Clyst Honiton (Holbrook 1989, tab. 1) and Rewe (Holbrook and Bidwell 1991, tab. 6), where the South Devon wares and sandy grey wares predominated.

An analysis of the types of coarseware vessels present by phase has been attempted (Fig. 168). Jars overwhelmingly dominated the assemblages of every fabric type (Tables 87–93) and period. The straight-sided bowls and dishes gradually became more common through time, reflecting the genesis of the Black Burnished ware series of 'casserole'-type vessels (i.e. Holbrook and Bidwell 1991, South-east Dorset BB1 types 38–63) and their imitation in other fabrics. Perhaps naturally, as coarsewares are inherently biased towards food preparation and storage roles, none of the other vessel types, which may have functioned in food serving roles, ever formed more than minor components of the coarseware assemblage. Of course, the range of bowl and beaker types would be widened by the inclusion of the fine tablewares in the imported and British fineware fabrics. Flagons seem to be very poorly represented in all periods, but this can be explained by the small number of rims from these vessels present, a far greater range of flagons being represented only by featureless body and base sherds. However, this analysis has also served to emphasise the discrepancies in the amount of material from each phase.

Illustrated feature groups
(Context numbers in brackets)

Phase 2
(Fig. 158)
Segment 3019 of the inner defensive ditch 748
1. Exeter type 3, South-east Dorset Black Burnished ware. (3024).
2. Exeter type 11-17, South-east Dorset Black Burnished ware. (3024).
3. Exeter type 6, fine South-western Black Burnished ware. (3024).

Well 4152
4. Type 114, grog-tempered ware. (4664).

Pit 4498
5. Exeter type 11–17, South-east Dorset Black Burnished ware. (4544).

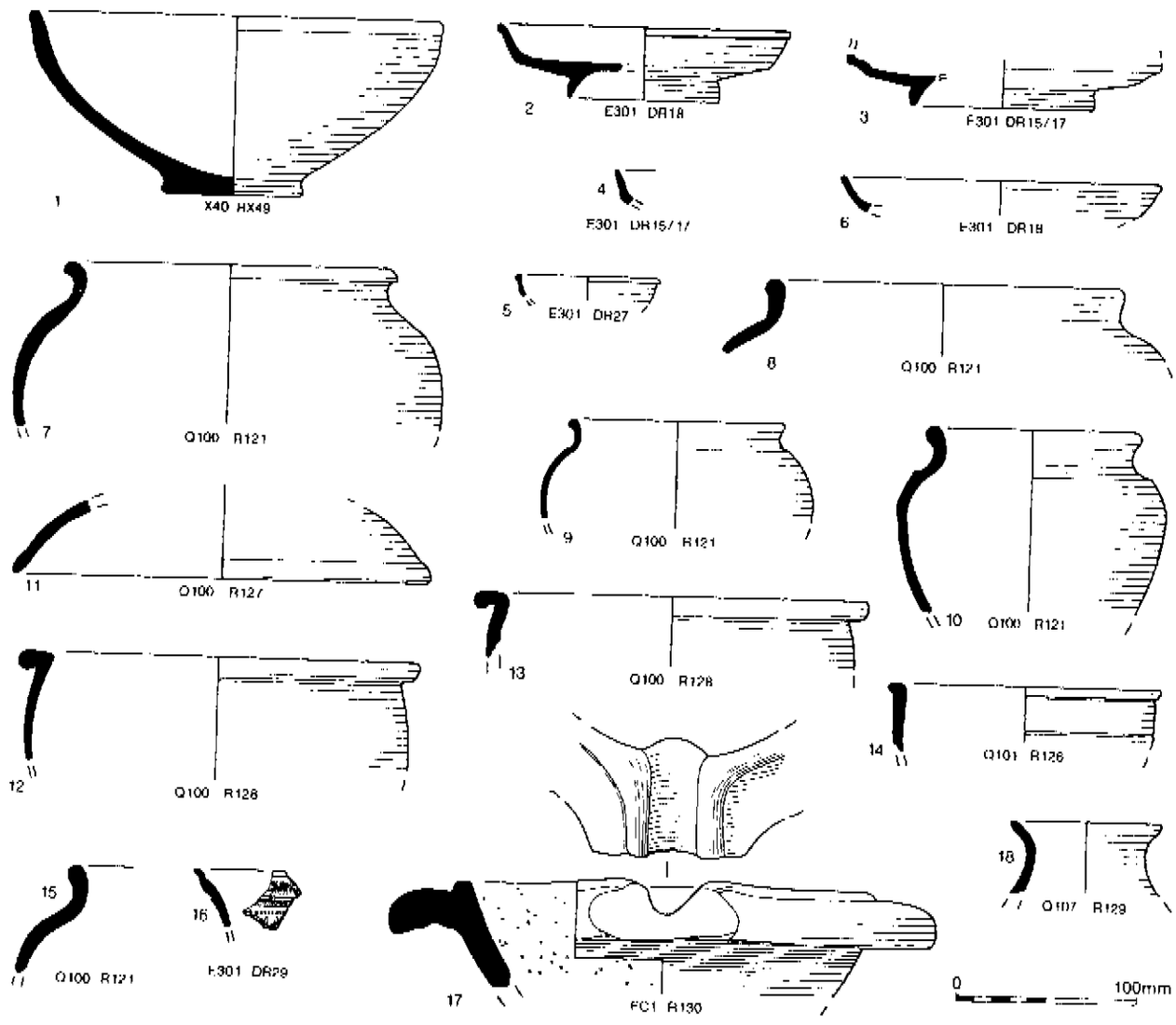


Figure 159 *Pomeroy Wood: Roman pottery groups, phase 2; well 3047 (scale 1:4)*

6. *Cam.* 16 platter (type R123), *Terra Nigra* type (Holbrook and Bidwell 1991, fabric 372. (4544).

Pit 4723 (recut of 4498)

7. Exeter type 11–17, South-east Dorset Black Burnished ware. (4542).

(Fig.159)

Well 3047

1. Exeter type 49, South-western Black Burnished ware. (4686).
2. Samian form 18, Southern Gaul. (4686 and 4686).
3. Samian form 15/17, Southern Gaul. (4681 and 4690).
4. Samian form 15/17, Southern Gaul. (4681).
5. Samian form 27, Southern Gaul. (4681).
6. Samian form 18, Southern Gaul. (4690 and 4692).
7. Type R121, coarse sandy grey ware. (3087).
8. Type R121, coarse sandy grey ware. (3087).
9. Type R121, coarse sandy grey ware. (3087).
10. Type R121, coarse sandy grey ware. (3087).
11. Type R127, coarse sandy grey ware. (3087).
12. Type R128, coarse sandy grey ware. (3087).
13. Type R128, coarse sandy grey ware. (3087).
14. Type R126, coarse sandy grey ware. (3087).
15. Type R121, coarse sandy grey ware. (3086).
16. Samian form 29, Southern Gaul. (980).
17. Type R130, Spanish fabric. (980).
18. Type R129, hard, dark blue–grey ware. (980).

Phase 3

(Fig. 160)

Segments 958 and 3151 of the outer defensive ditch 3057

1. Type R154, coarse sandy grey ware. (960).
2. Exeter type 7, South Devon ware. (966).
3. Exeter type 11–17, South-east Dorset Black Burnished ware. (966).
4. Exeter type 11–17, South-east Dorset Black Burnished ware. (3149).
5. Exeter type 16–17, South-western Black Burnished ware. (966).
6. Exeter type 33, South-western Black Burnished ware. (966).
7. Exeter type 48, South-western Black Burnished ware. (3120).

Primary cut 785 of the outwork/annexe ditch 4715

8. Type R145, fine sandy oxidised ware. (780).
9. Exeter type 16–17, South-western Black Burnished ware. (3687).
10. Exeter type 42, South-western Black Burnished ware. (783).

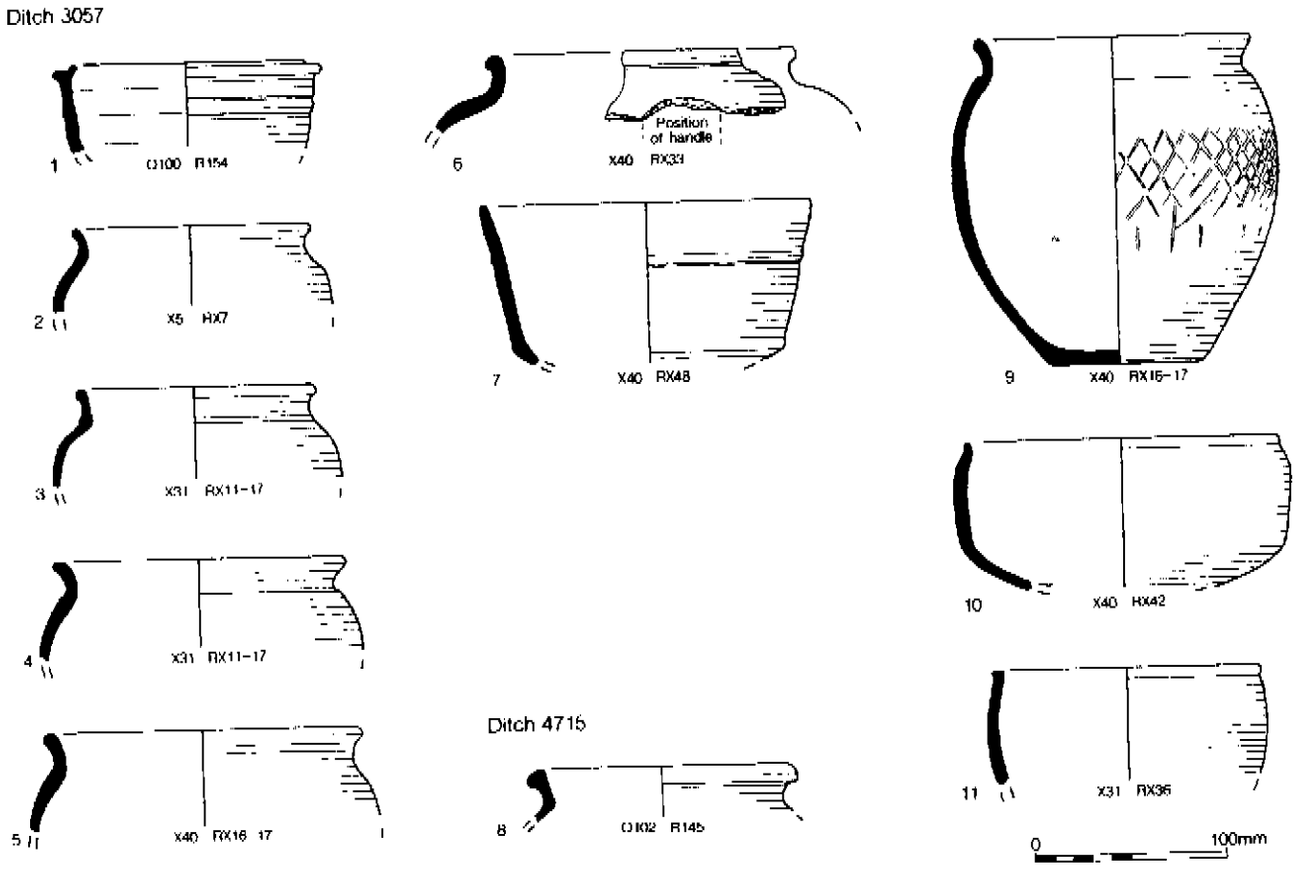


Figure 160 Pomeroy Wood: Roman pottery groups, phase 3; defensive ditch 3057, outwork/annexe ditch 4715 (scale 1:4)

11. Exeter type 36, South-east Dorset Black Burnished ware. (780).

Phase 4i
(Fig. 161)
Layers over building 4725
1. Beaker base, North Gaul fabric 1. (3384).
2. Samian form 33, Central Gaul (Lezoux). (769).
3. Type R120, coarse sandy grey ware. (3384).
4. Exeter type 1, Type A South-western grey storage jar fabric. (769).
5. Type 146, coarse sandy oxidised fabric. (769).
6. Type 147, coarse sandy mortaria fabric. (769).
7. Type R111, fine, smooth sandy grey ware with micaceous surfaces. (3384).
8. Type R116, local colour-coated ware. (3384).
9. Exeter type 10, Type B gritty grey ware. (3384).
10. Exeter type 29, Type A gritty grey ware. (3384).
11. Type R137, South-east Dorset Black Burnished ware. (769).
12. Exeter type 11–17, South-east Dorset Black Burnished ware. (3384).
13. Exeter type 11–17, South-east Dorset Black Burnished ware. (3384).
14. Exeter type 18–21, South-western Black Burnished ware. (3384).
15. Exeter type 39, South-western Black Burnished ware. (3384).
16. Exeter type 92, South-western Black Burnished ware. (3384).
17. Exeter type 16, *Terra Nigra* type (Holbrook and Bidwell 1991, fabric 375). (769).

Round-house 3415
18. Type R119, local colour-coated ware. Pit 4691, (4680).
19. Type R104, South-east Dorset Black Burnished ware. Segment 4140 of gully 4727 (4141).
20. Exeter type 41, Exeter sandy grey ware. Segment 3496 of gully 4727 (3497).

Round-house 4642
21. Type R146, coarse sandy oxidised fabric. Inner ring gully 4655.
22. Exeter type 10, Type B gritty grey ware. Segment 4646 of the outer ring gully 4643 (4647).
23. Exeter type 16, Type A gritty grey ware. Segment 4646 of the outer ring gully 4643 (4647).
24. Exeter type 18–22, South-western Black Burnished ware. Segment 4646 of the outer ring gully (4647).
25. Exeter type 11–17, fine, South-western Black Burnished ware. Segment 4646 of the outer ring gully (4647).

(Fig. 162)
Ring ditch 4063 of round-house 4103
1. Exeter type 12, Type B Gritty grey ware. (4062).
2. Exeter type 3, Type A South-western grey storage jar fabric. (4062).
3. Exeter type 3, Type A South-western grey storage jar fabric. (4062).

Segment 3315 of ditch and bank 4720
4. Fulford type 44, New Forest colour-coated ware. (3307).
5. Exeter type 29, Type A gritty grey ware. (3307).

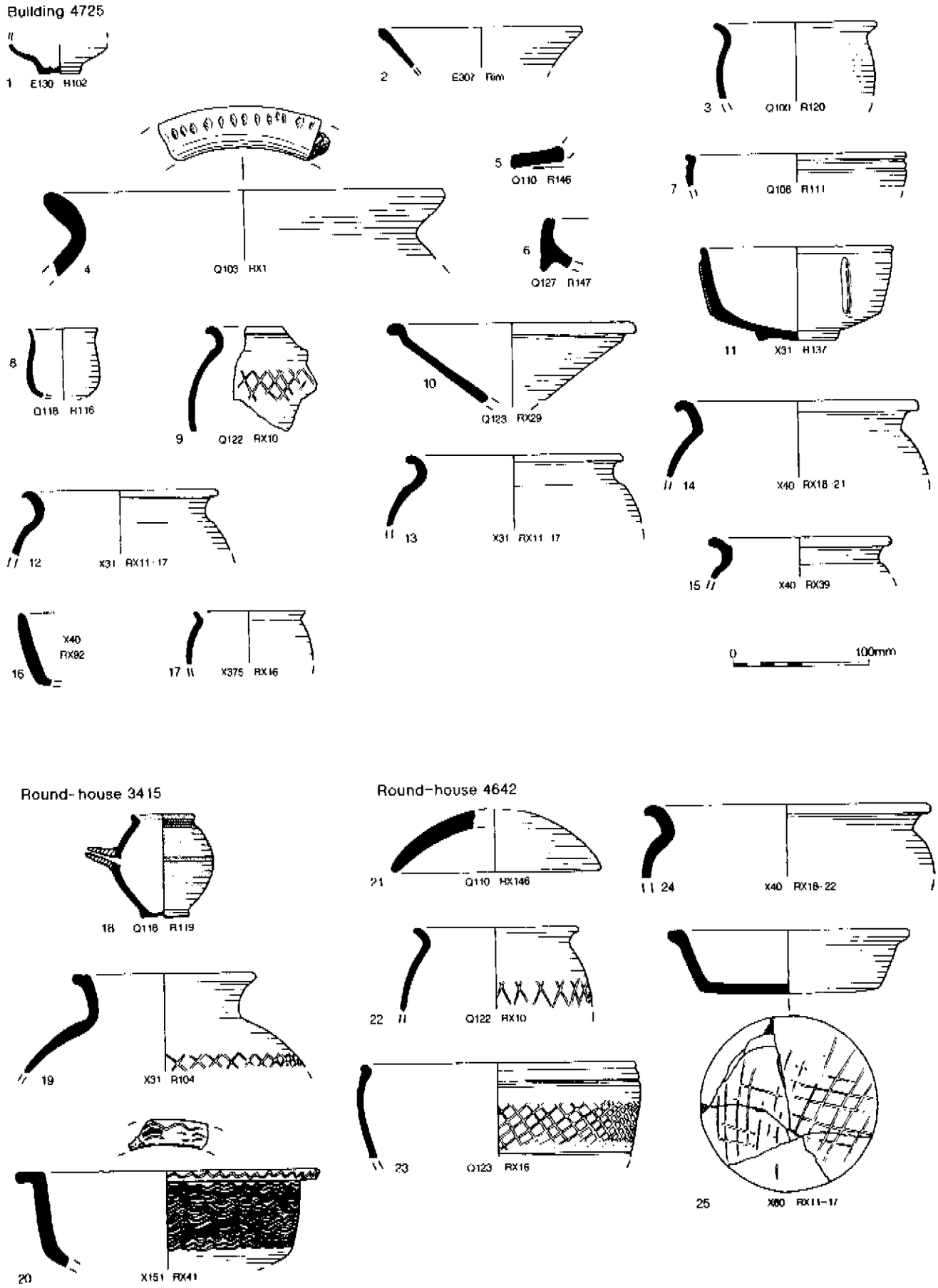


Figure 161 Pomeroy Wood: Roman pottery groups, phase 4i; layers over building 4725 and round-houses 3415, 4642 (scale 1:4)

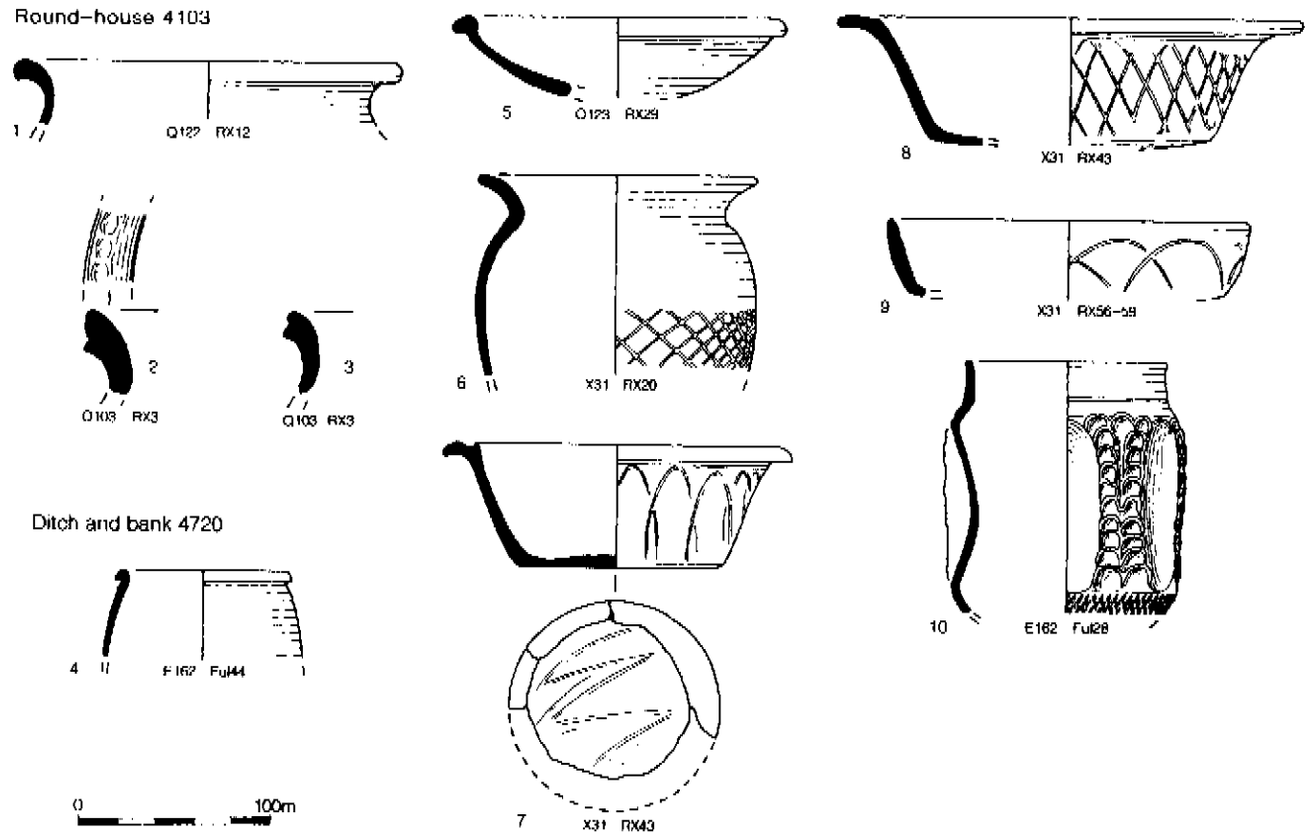


Figure 162 Pomeroy Wood: Roman pottery groups, phase 4i; round-house 4103, ditch and bank 4720 (scale 1:4)

6. Exeter type 20, South-east Dorset Black Burnished ware. (3307).
7. Exeter type 43, South-east Dorset Black Burnished ware. (3307).
8. Exeter type 43, South-east Dorset Black Burnished ware. (3307).
9. Exeter type 56–59, South-east Dorset Black Burnished ware. (3307).
10. Fulford type 28, New Forest colour-coated ware. (3306).

Phase 4ii
(Fig. 163)
Ditch 3247
1. Exeter type 3, Type A South-western grey storage jar fabric. (3249).
2. Type R115, very coarse South-east Dorset Black Burnished ware. (3249).
3. Exeter type 4, South Devon ware. (3249).
4. Exeter type 17, South Devon ware. (3249).
5. Exeter type 4, South Devon ware. (3250).
6. Exeter type 45, South-east Dorset Black Burnished ware. (3249).

Hearth 3014
7. Exeter type 3, Type A South-western grey storage jar fabric. (3010).
8. Type R105, coarse sandy fabric with shiny black grains. (3013).
9. Exeter type 29, Type A gritty grey wares. (3012).

(Fig. 164)
Layers within Working hollow 4706
1. Fulford type 63, New Forest red slipped ware. (961).
2. Fulford type 67, New Forest red slipped ware. (961).
3. Fulford type 67, New Forest red slipped ware. (961).
4. Fulford type 73, New Forest red slipped ware. (986).
5. Fulford type 67, New Forest red slipped ware. (986).
6. Fulford type 96, New Forest parchment ware. (961).
7. Fulford type 96, New Forest parchment ware. (961).
8. Young type C51, Oxfordshire red colour-coated ware. (986).
9. Beaker base, very hard-fired sandy colour coated ware. (961).
10. Exeter type 1, Type B gritty grey wares. (961).
11. Exeter type 3, Type B south-western grey storage jar fabric. (961).
12. Exeter type 11, Type B gritty grey wares. (961).
13. Type R143, Type B gritty grey wares. (961).
14. Exeter type 1, Type B gritty grey wares. (986).
15. Exeter type 29, Type B gritty grey wares. (961).
16. Exeter type 31, Type B gritty grey wares. (986).
17. Exeter type 20, Type A gritty grey wares. (961).
18. Exeter type 29, Type A gritty grey wares. (961).
19. Type R140, ?local sandy mortarium fabric. (961).
20. Exeter type 4, South Devon ware. (986).
21. Exeter type 15, South Devon ware. (986).
22. Exeter type 1, South Devon ware. (986).
23. Exeter type 20, South-east Dorset Black Burnished ware. (961).
24. Exeter type 20, South-east Dorset Black Burnished ware. (961).
25. Exeter type 20, South-east Dorset Black Burnished ware. (961).

(Fig. 165)
26. Exeter type 20, South-east Dorset Black Burnished ware. (3680).

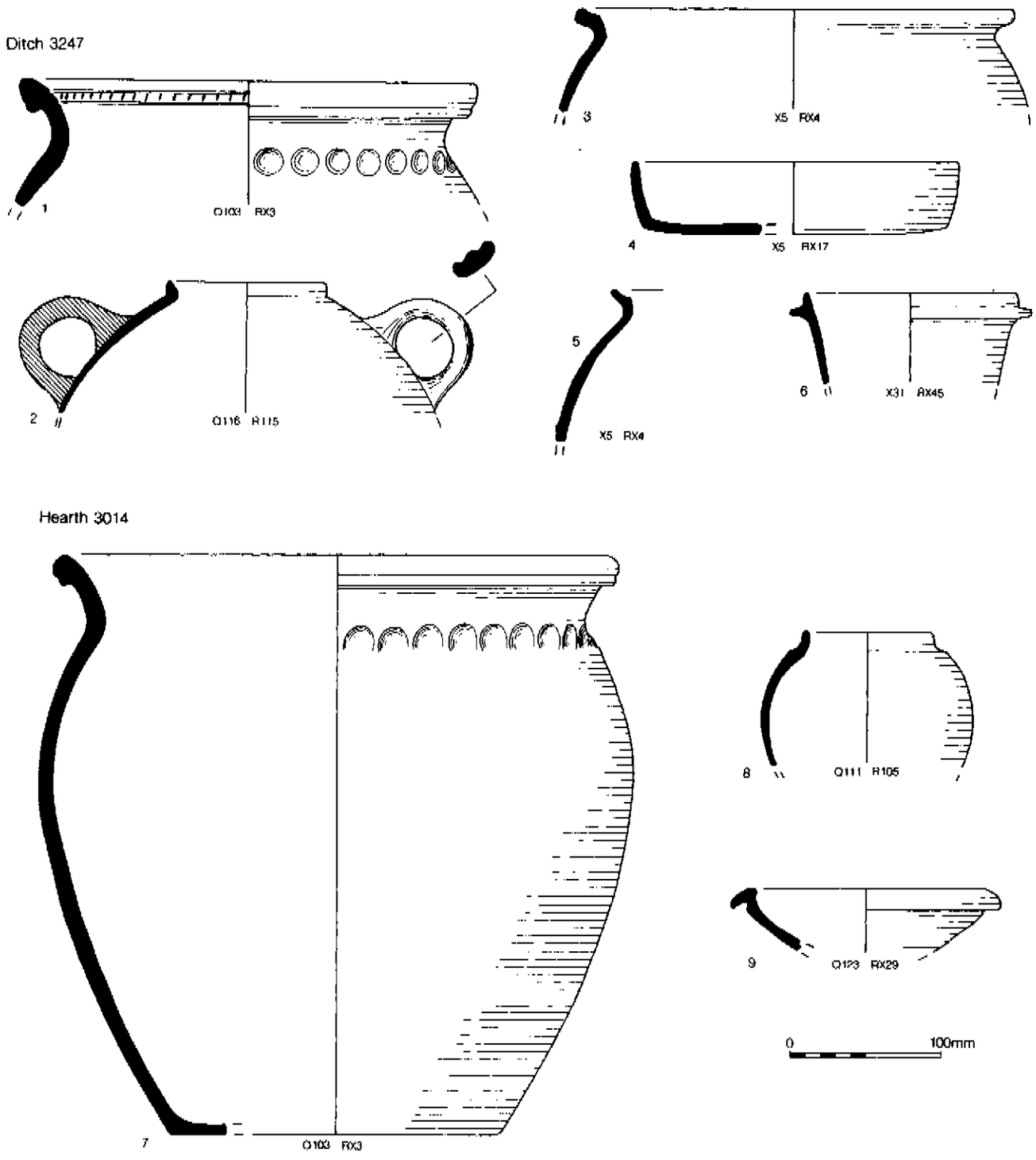


Figure 163 Pomeroy Wood: Roman pottery groups, phase 4ii; ditch 3247, hearth 3014

27. Exeter type 20, South-east Dorset Black Burnished ware. (3680).
28. Exeter type 45, South-east Dorset Black Burnished ware. (961).
29. Exeter type 45, South-east Dorset Black Burnished ware. (961).
30. Exeter type 45, South-east Dorset Black Burnished ware. (3680).
31. Exeter type 56-59, South-east Dorset Black Burnished ware. (961).
32. Exeter type 56–59, South-east Dorset Black Burnished ware. (961).
33. Exeter type 56–59, South-east Dorset Black Burnished ware. (3680).
34. Type R122, South-east Dorset Black Burnished ware. (961).
35 Type R142, fine south-western Black Burnished ware. (961).
36. Graffiti on the shoulder of a South-east Dorset Black Burnished ware jar form. (961). (See Fig. 170)

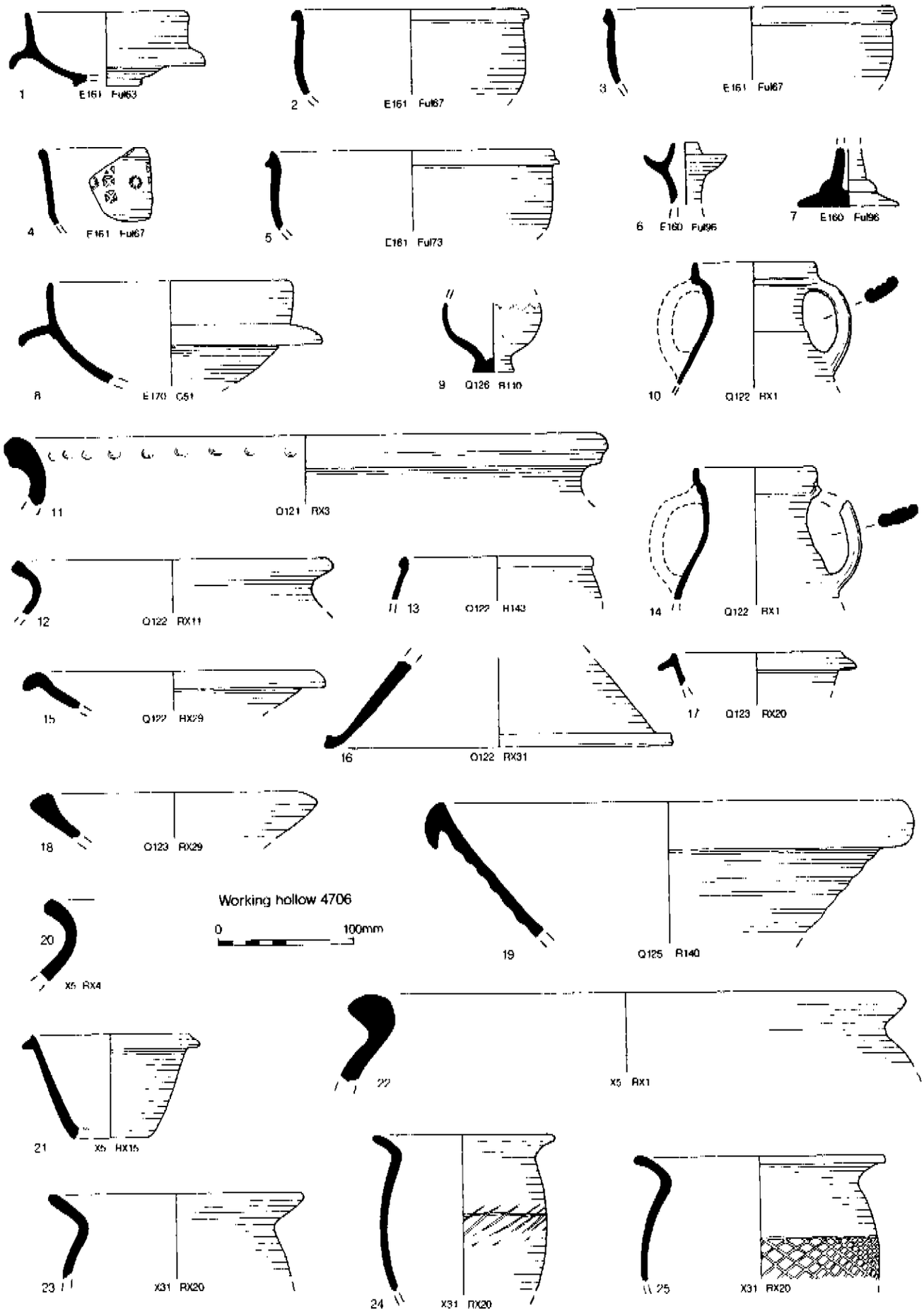


Figure 164 Pomeroy Wood: Roman pottery groups, phase 4ii; working hollow 4706 (scale 1:4)

Working Hollow 4706 (Continued)

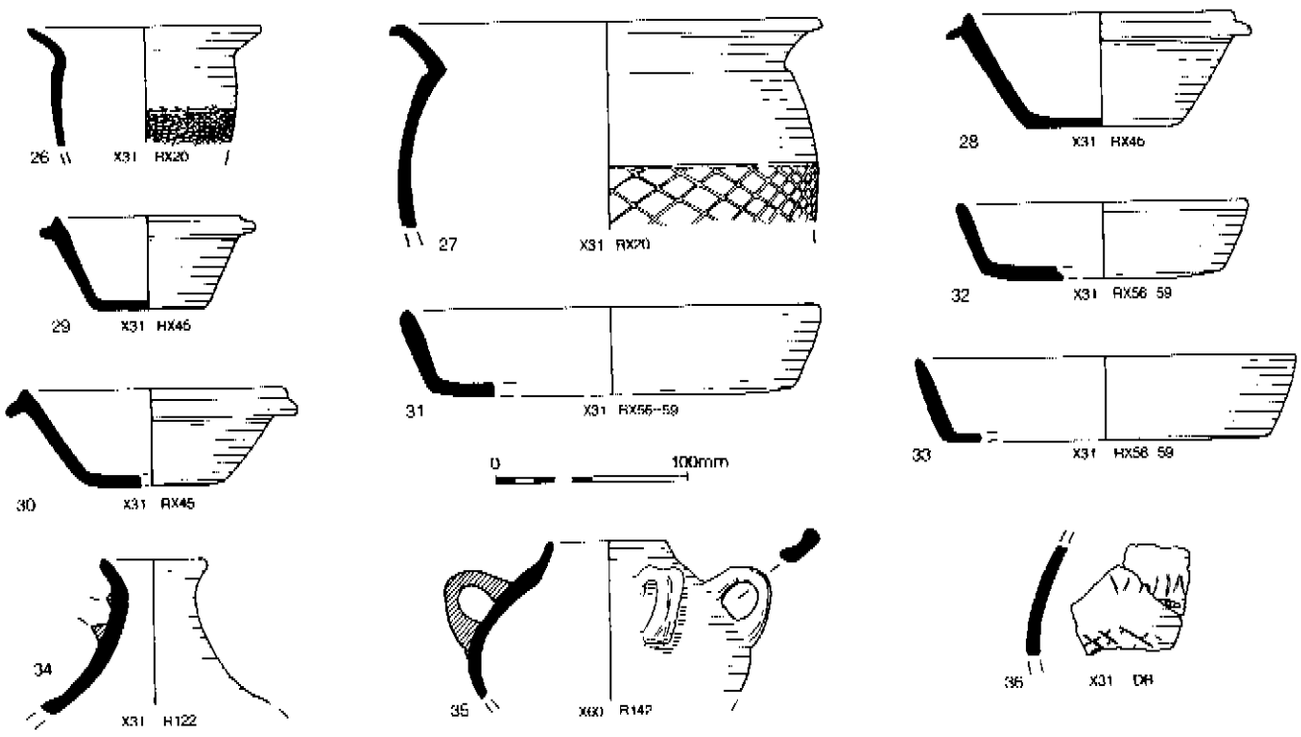


Figure 165 Pomeroy Wood: Roman pottery groups, phase 4ii; working hollow 4706 (scale 1:4)

Discussion

The proportions (based on the number of sherds) of the various fabric groups present in each phase are shown in Fig. 167.

Phase 2

Unfortunately, relatively little of the pottery recovered from Pomeroy Wood was from features associated with the military base. Only 9% (of both the number and weight) of the overall assemblage was found in phase 2 contexts. The mean sherd weight of this material is 15 g, just slightly above average for the assemblage as a whole. Consequently the determination of the military period at this site largely depends on a consideration of the samian.

All but two of the samian sherds from this phase are from Southern Gaul and are predominantly of Neronian or Neronian to early Flavian date. Most of this material was found in well 3047. Material from this feature included a form 29 bowl stamped by Niger ii (No. 5; Fig. 151, 5), for which a date of AD 50–65 has been suggested. Although it is known that Niger patronised a particular mould-maker or group of mould-makers, the style of this vessel is quite different from these. At least seven stamps of Niger ii are known at Exeter (Dickinson 1991, no. 61, 62/3, 141, 172–4; 1992, 52, no. 41), and one from Tiverton (B. Hartley 1991, 62, no. 29).

A date in the mid-AD 60s for the foundation of the military base would best fit the samian evidence, and is comparable with the establishment of the military base at Tiverton (Maxfield 1991). The two Central Gaulish sherds are Hadrianic or Antonine in date and are probably intrusive.

The assemblage of other imported finewares is too small to offer much support or otherwise to the samian dating, although neither the Pompeian red ware or the Lyons ware would be out of place at this time. The *Terra Nigra* sherds occurred most frequently in phase 2, and rims from *Cam.* 16 platters, which date from *c.* AD 45–85, were found in pits 3495 and 4498.

The other coarse pottery provides little assistance in determining the date of the foundation of the military base but certain features are worthy of note. The early Spanish colour-coated wares present at Exeter (Holbrook and Bidwell 1991, 72), did not reach this site although a rim from a Spanish mortarium (Fig. 159, 17, type 130), dated *c.* AD 50–85, was found in well 3047.

A similar date is likely for the mortarium from the Massif Central (K. Hartley 1991, 195, type TC8) from post-hole 3427. The presence of the early amphora types (Class 10/Dressel 2–4, ?Dressel 5, and ?Class 15/Haltern 70) suggests that wine and *defrutum*, in addition to olive oil carried in the ubiquitous Class 25/Dressel 20 vessels, were available to the garrison(s) of the military base.

The reliance on the sandy grey coarsewares and, to a lesser extent, the South-east Dorset Black Burnished wares (Fig. 166–7) is also an interesting feature of the military assemblage at this site. It is not paralleled in the early (pre-*c.* AD 75) groups at Exeter (Holbrook and Bidwell 1991, mf.1:18, groups 1–3) or at Tiverton (Holbrook 1991, tab. 7), where the South-western Black Burnished wares predominate. Upright-necked jars and bead rim bowls are the dominant vessel forms at this time. A single sherd of briquetage in the Hobarrow Bay fabric, from pit 4457, indicates that salt from the Purbeck Coast was being used at this site during the military period.

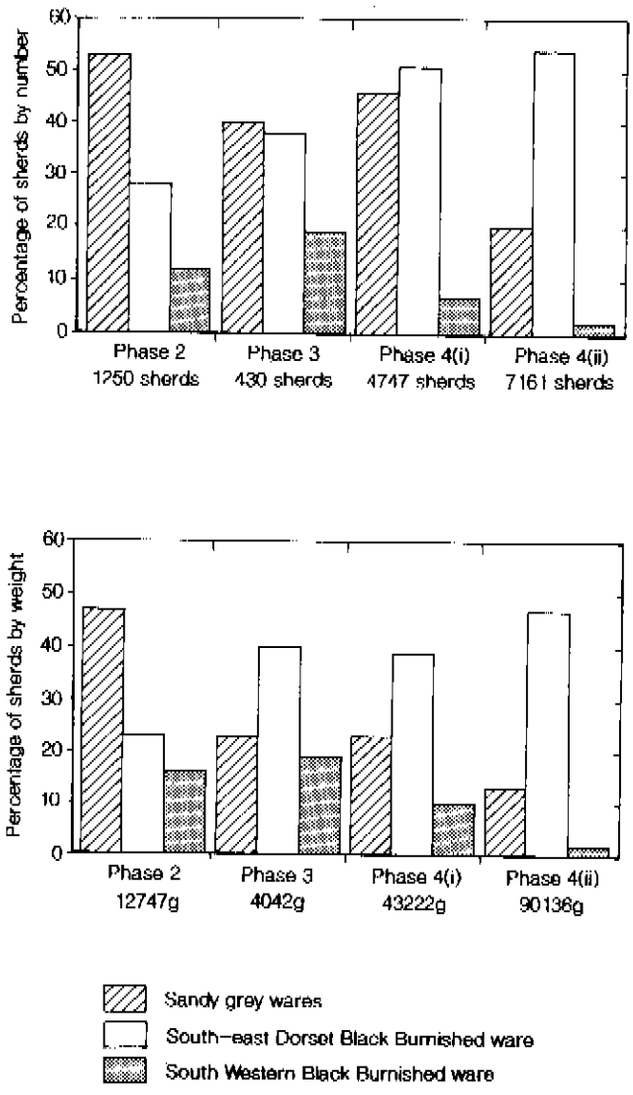


Figure 166 Pomeroy Wood: percentages of sherds of common Roman pottery fabric types by phase

Phase 3

The date at which the military base was abandoned and the defences slighted is less clear from the ceramic evidence. Only 4% (5% by weight) of the overall assemblage was found in the phase 3 slighting deposits. The mean sherd weight of this material is 15 g, equal to that from military deposits and slightly above average for the assemblage as a whole.

Only 31 sherds of samian were present, representing a maximum of 25 vessels. The date range of this material is very mixed, but mostly belongs within the later 1st century AD. Sherds from at least one Southern Gaulish form 37 bowl, dated to *c.* AD 80–100, were found in segment 3342 of the outer defensive ditch (No. 9; Fig. 151, 8). The four latest sherds, are of Hadrianic to Antonine date but as they are all very small (less than 2 g) it is probable that they were derived from above. Residual material is suggested by the form 29 sherd (No. 8) dated to *c.* AD 50–65 from segment 817 of the outer defensive ditch 3057. On balance, a date somewhere in the AD 80s for the abandonment and slighting of the military base is suggested by the samian, and this is comparable with that of the military base at Tiverton (B. Hartley 1991, 66).

Only three other fineware sherds were found in deposits belonging to this phase, all *Terra Nigra* or *Terra Nigra*-type wares. Two sherds from a *Cam.* 16 platter were found in the possible redeposited bank material (4145) in segment 4078 of the inner defensive ditch 748. In this phase, the sandy grey wares show a slight decline in popularity with a corresponding increase in the quantity of the South-east Dorset Black Burnished ware (Figs 166–7). The slightly increased proportion of the South-western Black Burnished wares at this time has already been discussed above. The importance of the oxidised coarseware present in this phase (Fig. 167) has been over-emphasised by the numerous sherds of a single, highly fragmented vessel found in segment 785 of the outwork ditch.

Phase 4i

Greater quantities of material were recovered from the 2nd–3rd century AD settlement deposits, 31% of the total number of sherds (24% by weight). However, the condition of much of this material was poor, reflected by its mean sherd weight (11 g), well below average for the assemblage as a whole.

Ceramically, these is little or no evidence for a break in the occupation at this site during the late 1st to mid 2nd century AD and it is probable that a civilian settlement was established at, or very soon after, the abandonment of the military base. The precise dating of the 2nd century AD samian was hampered by the poor condition of the material, and much of it has simply been assigned to the Hadrianic/Antonine period. None of the samian extended into the 3rd century. At least 87 samian vessels were recognised, approximately one-third of which were decorated forms. This may imply that the settlement was of relatively high status, a view borne out by the other imported finewares current at this time, the North Gaulish colour-coated ware, the Rhenish wares and the Cologne colour coated wares. Surprisingly, the quantities of these 2nd–early 3rd century finewares at Pomeroy Wood are not significantly lower than from Exeter (Holbrook and Bidwell 1991, 81, tab. 10; 1992, 54, tab. 4).

By this time, the South-east Dorset Black Burnished wares dominate the assemblage (Figs 166–7). The 2nd–3rd centuries also saw the advent of the South Devon wares, Gritty grey wares and the South-western grey storage jar fabrics in this area. The gritty grey wares seem to have been immediately assimilated into the range of coarseware types used at Pomeroy Wood (Fig. 167), and may have been at least partially responsible for the decreased importance of the sandy grey and South-western Black Burnished wares observable in this phase. The slightly later date range of the storage jars, generally later Antonine to the 4th century at Exeter (Holbrook and Bidwell 1991, 175), might account for the lesser quantity of these vessels in phase 4i. The vessel forms characteristic of this phase show a dramatic increase in the range and frequency of the straight-sided bowl/dish forms, coupled with the development of more everted rim jars.

Phase 4ii

By far the largest quantity of material was recovered from this phase, 48% of the total number of sherds present (55% by weight). Mean sherd weight for this group was higher (16 g) than for the assemblage as a whole. In general this material was in slightly better condition, with marginally less surface abrasion, probably because it has not been as extensively reworked and disturbed by later occupation as that from the earlier phases. Most of the material assigned to this phase was from the layers infilling working hollow 4706 and overlying the defensive ditches. It is probable that this material is derived from midden deposits, spread after the abandonment of the settlement. A comparable deposit, also containing late 3rd–early 4th century pottery, is also known at Woodbury Great Close (Holbrook 1993, 92).

Although predominantly of later 3rd and 4th century date, the phase 4ii deposits also contained a considerable quantity of residual material. All the samian and other imported finewares in this phase are residual but, interestingly, all the latest plain samian forms occur here, although the late decorated wares do not. The continued importance of the Class 25 and 27 (Dressel 20 and Pélichet 47/Gauloise 4) amphorae in these deposits is indicative of their long life expectancy and the quantity of residual material present. The many-handled beaker (Fig. 165, 35) in fine South-western Black Burnished ware may be another example of the small range of unusual forms that continued to be made in these fabrics into the 4th century but otherwise all the South-western Black Burnished wares are probably residual at this time.

The late 3rd–4th century material from this phase is characterised by the overwhelming dominance of the South-east Dorset Black Burnished wares, the presence of South Devon ware, and the New Forest and Oxfordshire finewares. The vessel forms are dominated by everted rim jars and the straight-sided bowl and dish forms, especially the conical flanged bowls/dishes and 'dog-dishes'.

General discussion

Detailed comparisons between the Pomeroy Wood pottery assemblage and those from other sites in the area have proved problematic. The only collection of even broadly comparable size is that from Exeter (Bidwell 1979; Holbrook and Bidwell 1991; 1992). No quantified data were presented for the assemblages from the Honeyditches villa at Seaton (Bidwell 1981) or from Holcombe (Pollard 1974) although these assemblages too span the period from the 1st to the 4th century.

Aside from Exeter, the only other military assemblage from Devon to be quantified is that from Tiverton (Holbrook 1991, tab. 7). Most of the other military sites are only known from aerial reconnaissance (Griffith 1984a) or very limited investigations and therefore few published, quantified groups are available for comparison. The situation in Dorset is little better; all the principle sites that have been published appeared some time ago without the benefit of quantification. It is only possible to say that the Pomeroy Wood assemblage is slightly later than those from Hod Hill (Richmond 1968) and Waddon Hill (Webster 1979). Returning to Devon, very little material was recovered from the military contexts at Woodbury (Holbrook 1993, 93) and quantified data is not available for the predominantly 1st century AD material from Topsham settlement (Jarvis and Maxfield 1975).

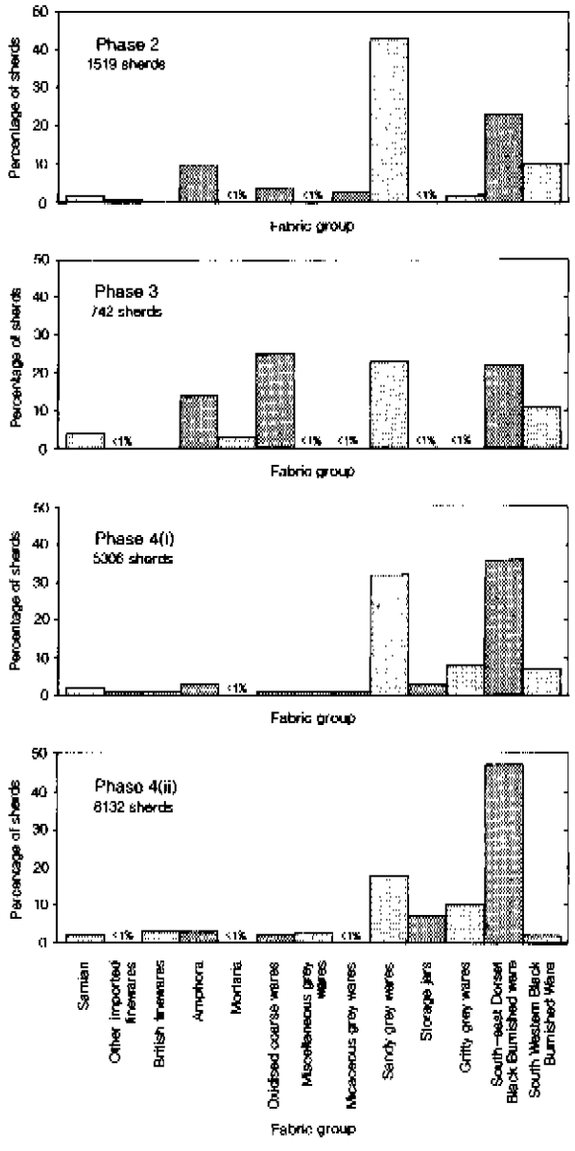


Figure 167 Pomeroy Wood: Roman pottery fabric groups by phase

Data from three small late Roman groups are available however, from Woodbury (Silvester and Bidwell 1984, tab. 1 group 3) Hayes Farm, Clyst Honiton (Holbrook 1989, tab. 1), and Rewe (Holbrook and Bidwell 1991, 23).

Consequently, the overall profile of the Pomeroy Wood assemblage can only be compared with that from Exeter, it being the only one for which quantified data is available that spans the entire Roman period. The

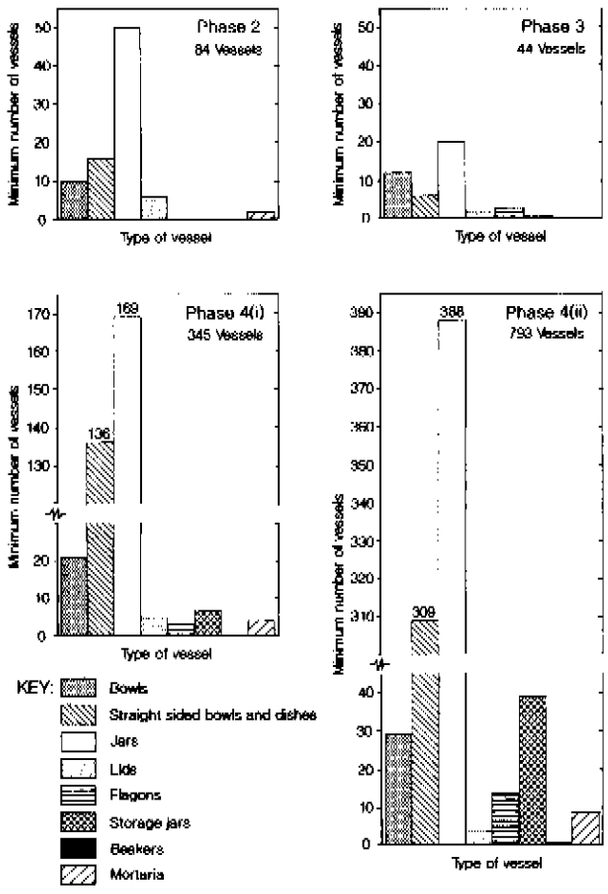


Figure 168 Pomeroy Wood: Roman pottery vessel types by phase

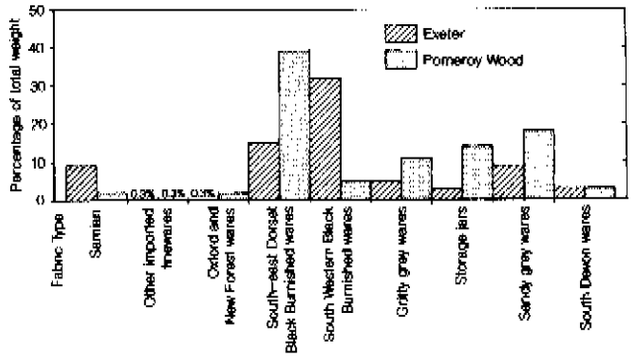


Figure 169 Pomeroy Wood: Roman pottery; comparison between Pomeroy Wood and Exeter assemblages

Exeter data has been drawn from the selected quantified groups (Holbrook and Bidwell 1991, M1:17–20); the Pomeroy Wood figures exclude the amphorae and mortaria because they were not included in the quantification at Exeter.

Significant differences between the assemblages are apparent (Fig. 169) although the conclusions that can be drawn from them are currently limited by the absence of other comparable assemblages. Perhaps the most striking differences occur in the proportions of the coarseware fabrics, only the South Devon wares being anything like equal at the two sites. Although the relative proportions of the storage jars present are likely to be correct (only 11 vessels were recognised in the quantified groups from Exeter compared with 47 at Pomeroy Wood), quantification by weight means that these fabrics may be over-represented in the assemblages as a whole.

Although not as common as on sites such as Ilchester (Leach 1982, tab. 5–6) further east, samian and the other imported finewares were more readily available in Exeter, where a far wider range of types was also recognised (Holbrook and Bidwell 1991, 72–87), than at Pomeroy Wood. This is perhaps not unexpected given the location of these south-western sites on the extreme limits or even just outside, most of the known early Roman distribution zones. In fact, imported finewares were probably only present in Roman Devon at all as a direct result of the demand from, and the enhanced buying-power of, the large garrison of the area (perhaps as many as 10,000 men – Holbrook and Bidwell 1991, 16). During the late Roman period, however, the Oxfordshire and New Forest finewares occur with far greater frequency at Pomeroy Wood than they did in Exeter. It should also been noted that many of the amphora types present in Exeter at all periods did not reach Pomeroy Wood.

The differing assemblage profiles might suggest that at all times during the Roman period, the residents of Pomeroy Wood were not dependent on Exeter as a redistributive centre, but may have had access to trading networks, of which the pottery supply is merely the most visible, in their own right. The location of this site alongside the Roman road is obviously of crucial importance here. It has been suggested above that the South-east Dorset Black Burnished wares may have been travelling to Exeter along that route. There is also evidence to suggest that during the late Roman period, the occupants of rural sites like Hayes Farm, Clyst Honiton, and Rewe may have by-passed the pottery markets in Exeter, and traded directly with itinerant potters and peddlers, perhaps without recourse to the monetary economy (Holbrook 1989, 16; Holbrook and Bidwell 1991, 23). It may be possible that similar factors of cheapness, and the possibility of exchange by socially embedded means, may have been in part responsible for the increased importance of South-western Black Burnished wares after the departure of the legion and the subsequent rise of other local pottery industries during early 2nd century AD. The extent to which these ideas are applicable to the wider Exeter region await the recovery of new and similarly large assemblages and the reappraisal of those already excavated.

The graffito, by R.S.O. Tomlin

Two sherds from the shoulder of a late 3rd–4th century Black Burnished Ware 1 jar with VIIA scratched after firing, perhaps *VII Ia[nuari]*, '7' and '(property) of Ianuarius (Fig. 165, 36; 170). *Veia[]* might be read, as part of the rare name *Veiatus*, but a line has been scratched underneath VII, which is on a slightly different alignment from that of IA[], and the forward slope of II differs from that of I, which is vertical.

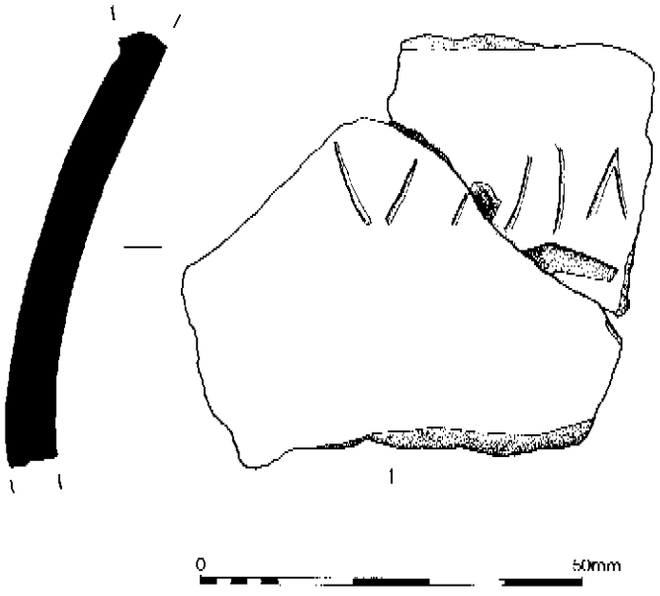


Figure 170 Pomeroy Wood: graffito (scale 1:1)

Therefore since Ianuarius is such a common name, we prefer to read VII as a numeral.

Ceramic Building Material, by M. Laidlaw

A total of 65,745 g of Romano-British ceramic building material was recovered, consisting of a minimum of 812 fragments (the very small fragments retrieved from sieving have not been quantified).

The assemblage has been divided into diagnostic forms and grouped by broad fabric types. The forms defined comprise *tegula*, *imbrex*, flue tile, undiagnostic tile, and undiagnostic brick/tile. A large proportion of the material comprises featureless, often abraded, fragments. No detailed fabric analysis was undertaken but macroscopically six fabric groups could be identified. These range in coarseness from a soft, fine sandy, orange fabric (fabric 1), a moderately hard, darker orange fabric (2), and a very hard, reddish fabric (3), to a coarse, sandy, orange fabric (4). Fabric 5 contains frequent grog inclusions in a fine, sandy, orange matrix and fabric 6 has a distinctive hard, fine, matrix, purple in colour, with abundant quartz inclusions. Table 94 presents the correlation of fabric and form.

By far the most common form identified was flat tile fragments, particularly in fabric 1. A moderate quantity of *tegula* fragments are also recorded in fabric 1 and the slightly harder fabric 2. Only small quantities (<5 fragments) are recorded for the other fabrics. The *tegula* fragments are all flanged, four are cut away, and one fragment has the trace of a nail hole. Sixteen fragments are derived from *imbrices* and occur mainly in fabric 1. By contrast 15 of the 18 flue tile fragments, all of which have traces of keying for plaster, are in fabric 2. A total of 47 fragments were recorded as unspecified brick/tile fragments and occur most frequently in fabric 3.

The bulk of the ceramic building material recovered was dispersed in small quantities across a large number of features. Larger groups were recovered from the dumped layer 965 (*c.* 16.5 kg) and from the fill of cess pit 819 (*c.* 10 kg) in which they had apparently been used as packing (p. 260). Smaller concentrations (1–3 kg) were noted from phase 4ii spreads 733, 961, 967, 986, and 3116, from the top fill of ditch 3057 and from unphased cleaning layers 983 and 3002.

Table 94: Pomeroy Wood ceramic building material types by fabric (no. pieces)

Fabric	*1*	*2*	*3*	*4*	*5*	*6*	*Total*
Tegula	36	23	5	5	4	4	77
Imbrex	10	4	2	–	–	–	16
Flue tile	3	15	–	–	–	–	18
Brick/tile	–	14	21	8	4		47
Tile	233	91	13	10	25	–	372
Frag.	–	–	–	–	–	–	282
Total	282	147	41	23	33	4	812

Objects of Fired Clay and Ceramic, by M. Laidlaw

Three ceramic objects and a large quantity of fired clay fragments (46,614 g) were recovered. The ceramic objects are one complete and two broken spindlewhorls, all made from Romano-British pottery sherds. The complete example is in a Class 25/Dressel 20 amphora fabric (phase 4i layer in ditch 3265); the partial whorls are in, respectively, sandy grey ware fabric Q100 (phase 4i layer in structure 3265) and gritty grey ware fabric Q122 (phase 4ii occupation debris over defensive ditches).

The bulk of the fired clay fragments are small, featureless and often abraded. In some cases it was difficult to classify the small fragments and these may in fact be abraded ceramic building material, particularly the fine sandy fabric 1 (see above).

All of this material is assumed to be of structural origin, from upstanding structures or from pit/hearth linings; no objects such as loomweights or spindlewhorls were recognised. A small proportion of fragments (102 fragments) have traces of surviving surfaces, and 26 fragments bear wattle or possibly finger impressions. A significant proportion has a powdery, porous texture consistent with subjection to high temperatures, although whether through accidental burning or from incorporation in an oven or hearth is uncertain. Moderately large quantities (>1 kg) were collected from phase 4ii spreads 961, 965, 986, and from grain driers 3279 and 913.

Wooden Object, by Emma Loader

A thin circular disc of oak was found in well 4152 (phase 2) (Fig. 171). Rowena Gale writes that 'although difficult to ascertain from the anatomical features, the macroscopic appearance of the wood suggests that it

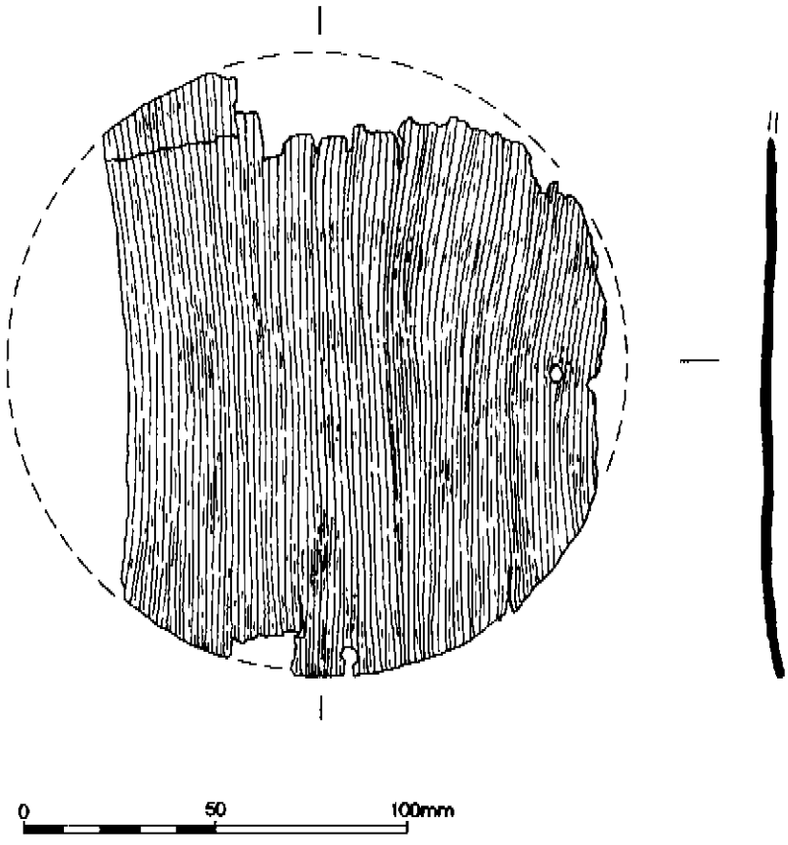


Figure 171 Pomeroy Wood: wooden object (scale 1:2)

includes both sapwood and heartwood, and had been radially split along the broad rays of the wood.' The disc is *c.* 160 mm in diameter with two small circular perforations near to the edge, *c.* 100 mm apart. It is likely that there were originally another two holes, probably symmetrically arranged, in the now missing areas of the edge of the disc.

The purpose of the disc is not known. There are not enough holes for the object to have been the base of a vessel such as a bentwood box in which the base and sides were sewn together (Earwood 1993, 43, 57). While the diameter of the disc is comparable with those of tankards, the metal handles from which have been recorded in a number of 1st century AD Roman military contexts (e.g. MacGregor 1976, 147–9, 166–8, map 19; Jackson 1990, 44–6; Earwood 1993, 73–5), it seems too thin to have been the base of this or any other coopered vessel. It is possible that it was the backing for a circular fitting.

Illustrated object
(Fig. 171)
Oak disc. ON 2377, context 4652, well 4152, phase 2.

Environmental Analyses

As with the sites of prehistoric date, animal bone and shell were very badly preserved at Pomeroy Wood. Only a small quantity of animal bone survived – a mere 18 identifiable fragments – and usually only when it had been burnt. Some unidentifiable fragments of bone and pieces of fish vertebrae were also recovered from the organic remains in the phase 2 well 3047, and fish vertebrae were identifed in the phase 4i round-house 3415. Wells 3047 and 3791 provided the only organic remains recovered in the current project. Several contexts were assessed for pollen preservation and environmental reconstruction, including cess pit 819, the material in the outwork or annexe which is considered to be turf (1457) and well 3047. Of these samples only that from well 3047 merited analysis.

As the suites of evidence from these wells are complementary and particularly valuable, all the environmental evidence from them is presented by feature at the beginning of the environmental reports. The reports on charred plant remains and charcoal from the other features and deposits are presented by phase and by type of feature, following the same order as the stratigraphic report.

Well 3047

Well 3047 lay within the interior of the military base (Fig. 114; Pl. 38). Insect, plant and pollen remains were preserved in the lower fills, below a clay capping which was laid in the 1st century AD and which is likely to have created anaerobic conditions. The pit that overlay this capping, 819, and which is thought to be a cess pit did not contain waterlogged remains. Charred plant re-

Table 95: Pomeroy Wood, stratigraphic sequence of samples analysed for insect remains in well 3047

Context	*Sample*	
4690	1788	Top
4692	1802	
4683	1784	
4684	1785	
4686	1787	Bottom

mains and charcoal were also recovered. The evidence from the insects, waterlogged plant remains, pollen, and charcoals from the well are all consistent in suggesting that soiled animal bedding was dumped into it at the end of its use. These data provide some of the most important evidence recovered about the possible garrisoning of the military base for at least one phase of occupation. The beetle assemblage from the later well, 3791 is quite different, reflecting clearly the different character of the civilian settlement.

Insect remains, by Mark Robinson

During the assessment phase of the project, the organic sediments were observed to contain Diptera (fly) puparia and the macroscopic plant remains from these deposits had already shown much waterlogged animal bedding-type material, with cereal remains and bracken. It was therefore decided to analyse samples from the well for insects to help elucidate the origin of the material.

Methods and results

Five samples of organic sediment, each of 1 litre, had been floated onto a 0.25 mm sieve for the analysis of macroscopic plant remains. The organic material so recovered was also sorted for insect remains and the methods are given in Appendix 7. The samples formed a stratigraphic sequence (Table 95)

The results have been recorded for Coleoptera (Table 96) and for other insects (Table 97) and are displayed by species groups as a percentage of the total number of terrestrial individuals (Fig. 172) largely following Robinson (1991, 278–81). The synanthropic species of Species Group 9, however, have been divided into Species Group 9a (general synanthropic species such as *Typhaea stercorea*) and Species Group 9b (serious pests of stored grain, for example *Oryzaephilus surinamensis*).

Interpretation

The most numerous insect remains from the well were puparia of Diptera, particularly Sphaeroceridae. The larvae of these flies feed on decaying organic material. Over a quarter of the Coleoptera fall into Species Group 7, beetles of foul organic material. Insects likely to have lived in the well were almost entirely absent, there was only a single aquatic insect, the water beetle *Helophorus aquaticus* or *grandis*. Numbers of Coleoptera which do not belong to decomposer communities were also relatively low.

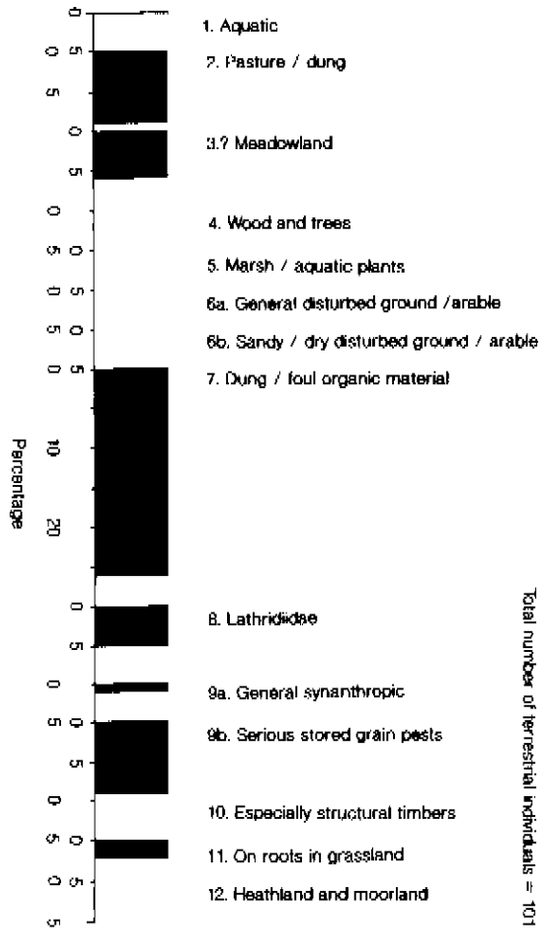


Figure 172 Pomeroy Wood: coleoptera from well 3047 by habitat classification

Many Sphaeroceridae feed on dung but unfortunately it was not possible to identify the puparia to species. More precise information on the nature of the organic material is given by the fly puparia that could be fully identified. The most numerous of these belonged to *Musca domestica* (house fly), whose larvae occur in a wide range of decaying plant and animal remains. *Stomoxys calcitrans* (stable fly) was also identified. It is more fastidious, being particularly common in old straw which has been enriched with animal urine and faeces (Colyer and Hammond 1951, 252; Edwards *et al.* 1939, 116–7; Pont 1973, 263–3; Smart 1948, 58–61). *M. domestica* often occurs alongside *S. calcitrans*. The adult *S. calcitrans* is a blood-sucking fly and can be a nuisance biting both humans and stock.

The most abundant Coleoptera from the well were *Cercyon analis* and *Megasternum obscurum*, both members of Species Group 7, which occur in a wide range of dung and foul organic material habitats including stable manure (Kenward 1982; Koch 1989, 143–4). Most of the other members of Species Group 7 from the samples, comprising other species of *Cercyon*, *Cryptopleurum minutum* and *Anotylus sculpturatus* gp., also commonly occur in stable manure and dung heaps. Another of the beetles, *Xylodromus concinnus*, commonly occurs in habitats such as old hay and straw, in granary refuse and in stable debris, although not in such wet, foul material as the members of Species Group 7. Taken in combination with the botanical evidence, the

Table 96: Pomeroy Wood, coleoptera from well 3047

	Minimum no. of individuals						
Context	*4686*	*4684*	*4683*	*4692*	*4690*	*Total*	*Species group*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*		
Vol (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*5.0*	
Notiophilus sp.	1	–	–	–	–	1	
Trechus obtusus Er. or *quadristriatus* (Schr.)	1	–	1	–	–	2	
Bembidion properans Step.	–	1	–	–	–	1	
B. guttula (F.)	–	–	1	–	–	1	
Pterostichus cf. diligens (Sturm)	–	–		–	1	1	
P. melanarius (Ill.)	1	–	–	–	–	1	
Acupalpus exiguus Dej.	–	–	1	–	–	1	
Helophorus aquaticus (L.) or *grandis* (Ill.)	1	–	–	–	–	1	1
Cercyon analis (Pk.)	1	1	1	1	3	7	7
C. haemorrhoidalis (F.)	–	1	2	–	1	3	7
C. lugubris (Ol.)	–	–	–		1	1	7
C. pygmaeus (Ill.)	–	1	–	1	1	3	7
C. terminatus (Marsh.)	–	1	1	–	–	2	7
Megasternum obscurum (Marsh.)	1	–	3	–	1	5	7
Crytopleurum minutum (F.)	1	1	–	–	1	3	7
Choleva or *Catops* sp.	1	–		–	–	1	
Lesteva longoelytrata (Gz.)	–	1	–	–	–	1	
Omalium sp.	1	–	–	–	–	1	
Xylodromus concinnus (Marsh.)	–	1	–		–	1	
Carpelimus bilineatus Step.	–	1		–	–	1	
Platystethus nitens (Sahl.)	1	–	–	–	–	1	
Anotylus sculpturatus gp.	–	2	–	–	–	2	7
Stenus sp.	1	–		–	–	1	
Lathrobium sp.	–	–	2	–	–	2	
Leptacinus batychrus (Gyl.)	–	1	–	1	–	2	
Gyrohypnus angustatus Step.	1	1	–	–	–	2	
Philonthus sp.	–	2	–	–	1	3	
Tachinus sp.	1	–		–	–	1	
Cilea silphoides (L.)	–	2	–	–	–	2	
Aleocharinae indet.	2	1	–	–	–	3	
Geotrupes sp.	–	–	1	–	–	1	2
Coloboterus erraticus (L.)	1	–	–	–	–	1	2
Aphodius cf. *granarius* (L.)	–	1	2	–	–	3	2
A. cf *sphacelatus* (Pz.)	1	–	1	1	–	3	2
Onthophagus similis (Scrib.)	–	1	–	–	–	1	2
Simplocaria maculosa Er. or *semistriata* (F.)	–	–	1	–	–	1	
Agrypnus murinus (L.)	1	–	–	–	–	1	11
Agriotes sp.	1	–	–	–	–	1	11
Kateretes rufilabris (Lat.)	–	–	2	–	–	2	
Cryptolestes ferrugineus (Step.)	–	–	–	1	–	1	9b
Oryzaephilus surinamensis (L.)	–	2	–	2	–	4	9b
Ephistemus globulus (Pk.)	–	1	–	–	–	1	
Cryptophagidae indet. (not *Atomaria*)		–	1	–	–	1	
Lathridius minutus gp.	–	–	–	–	–	1	8

Table 96: (continued)

	Minimum no. of individuals						
Context	*4686*	*4684*	*4683*	*4692*	*4690*	*Total*	*Species group*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*		
Vol (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*5.0*	
Eniemus transversus (Ol.)	1	–		–	–	1	8
Corticariinae indet.	1	–	1	–	1	3	8
Typhaea stercorea (L.)	–	1		–	–	1	9a
Palorus ratzeburgi (Wiss.)	–	1	1	–	–	2	9b
Bruchus rufimanus Boh.	–	1	–	–	–	1	
Phyllotreta atra (F.)	–	–	1			1	
Longitarsus spp.	–	–	1	–	–	1	
Apion craccae (L.)	–	1	–	–	–	1	3
Apion sp. (not craccae)	1	–	1		–	2	3
Otiorhynchus scaber L.	–	–	1	–		1	
Brachysomus echinatus (Bons.)	1	–	–	–	–	1	
Sitona lepidus Gyl.	1		1		–	2	3
S. suturalis Step.	–	–	1			1	3
Sitophilus granarius (L.)	–	4	–			4	9b
Ceuthorhynchinae indet.	–	–	1	–	–	1	
Total						102	

entomological results strongly suggest that decaying stable manure was the major component of the fill to the well.

There was also a significant component of grain beetles in the samples. Four species of serious pests of stored grain comprised 9% of the terrestrial Coleoptera (Fig. 172, Species Group 9b): *Cryptolestes ferrugineus*; *Palorus ratzeburgi*; *Oryzaephilus surinamensis*; and *Sitophilus granarius*. All these species were probably Roman introductions. *S. granarius* is the only one of them which can readily attack intact grain in good condition, but once the surface has been nibbled, it is then rendered liable to attack by the other species. Damp conditions which cause fungal growth can render grain liable to attack by *O. surinamensis* and once infestation has begun, sufficient warmth and moisture is released by the metabolism of the beetles to enable the spoilage of further grain and for the infestation to become self-sustaining.

There are three possible explanations for the occurrence of these beetles in the well. It is possible that there was a granary adjacent to the well and the beetles crawled from it to the well. Grain spoilt by a serious infestation with these beetles could have been disposed of into the well. Finally, and most likely, infested grain could have been amongst the fodder fed to the domestic animals responsible for the stable manure. Grain beetles from fodder are characteristic components of stable manure biota (Hall and Kenward 1998).

An example was found of *Bruchus rufimanus* (bean beetle), which attacks *Vicia faba* (field/broad bean). It is often a pest of stored beans but infestation only occurs when the parent plants are flowering, so cannot spread amongst dried beans (Metcalf *et al.* 1962). Its presence suggests that beans as well as cereals were fed to the animals which generated the manure.

One element of the insect death assemblage that is usually found in stable manure was missing. Synanthropic beetles, which commonly occur inside buildings, were almost completely absent apart from the specialised pests of stored grain. There is usually a significant component of beetles which attack structural timbers (Species Group 10) especially *Anobium punctatum* (woodworm beetle) and general synanthropic beetles (Species Group 9a), particularly *Ptinus fur* and often *Tipnus unicolor*. Only a single individual of Species Group 9a was found, *Typhaea stercorea*, a fungal feeder which is often associated with old hay and straw. Members of the Lathridiidae (Species Group 8), for example species of Corticariinae, comprised 5% of the terrestrial Coleoptera (Fig. 172). They are also fungal feeders that likewise are favoured by old damp hay and straw. However, they do not necessarily occur indoors. It is possible that domestic animals were kept on the site in a yard where litter was put down, with only stone walls to provide shelter. It is also possible that the stable manure was from a new timber building which had not had sufficient time for an indoor fauna to develop in it.

Scarabaeoid dung beetles (Species Group 2) were, at 9% of the terrestrial Coleoptera, relatively abundant. Although some of them, for example *Aphodius* cf. *sphacelatus*, are attracted to manure heaps, their usual habitat is individual animal droppings on the ground.

Table 97: Pomeroy Wood, other insects from well 3047

		Minimum no. of individuals					
	Context	*4686*	*4684*	*4683*	*4692*	*4690*	*Total*
	Sample	*1787*	*1785*	*1784*	*1802*	*1788*	
	volume (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*5.0*
Heteroptera indet.		–	–	–	–	1	1
Shaeroceridae indet.	puparia	–	136	3	1	–	140
Musca domestica L.	puparia	–	4	–	10	2	16
Stomoxys calcitrans (L.)	puparia	–	1	–	1	–	2
Diptera indet.	puparia	5	9	52	3	1	70
Myrmica sp.	worker	–	–	2	1	–	3
Lasius flavus gp.	worker	1	–	–	–	–	1

Other species that were preserved, for example *Geotrupes* sp., stock tunnels beneath droppings with dung and never occur in stable manure. It is likely that there was some pastureland in the vicinity of the well from which these beetles had been derived rather than that they were amongst the organic refuse which had been dumped in the well. Other beetles that were probably derived from the surrounds to the well included some carabids, for example *Bembidion properans* and *Pterostichus melanarius*, which occur in a wide range of terrestrial habitats, and the elaterid beetle *Agrypnus murinus*, whose larvae feed on the roots of grassland herbs. The clover and vetch-feeding weevils of Species Group 3, including *Apion craccae* and *Sitona lepidus*, comprised 6% of the terrestrial Coleoptera. They flourish in hay meadows and it is possible that there was some ungrazed grassland nearby. However, they could also have been introduced in cut hay used as fodder.

The insect assemblages from the five samples were not uniformly similar. Samples 1785 and 1802 from contexts 4684 and 4692 gave the strongest evidence for stable manure, with the highest concentrations of muscid fly puparia and grain beetles. Samples 1787 and 1784, from contexts 4686 and 4683 had rather higher numbers of Coleoptera likely to have entered the well through natural agencies. These differences were probably reflections of episodes of dispersal of stable refuse, set against a background of insects from the surrounding landscape falling into the well.

Discussion

The insect evidence has helped to characterise much of the organic material in the well as stable manure although, rather surprisingly, the insects gave no evidence for the presence of timber buildings on the site. It is likely that grain infested with grain beetles had been fed to the domestic animals, four species being identified. Exotic pests of stored grain were spread rapidly throughout England with the Roman conquest. *Sitophilus granarius* was recorded from late 1st century AD sediments in the bottom of the ditch of the legionary fortress at Exeter (Straker *et al.* 1984). All four species recorded from Pomeroy Wood were part of a severe infestation of a late 1st century AD granary in the fortress at York (Kenward and Williams 1979). Early records of exotic grain beetles from Roman Britain tend to be from military sites and towns, rather than rural settlements. It is possible that fully cleaned grain, which would be much more vulnerable to attack, was only stored in quantity on such sites (pers. obs.). Hulled wheat, for example, was perhaps stored in spikelet form on rural settlements until it was needed for use.

It is very likely that horses were kept on the site and the range of remains from the samples would be consistent with stable waste of horses given grain amongst their fodder. The well itself was perhaps situated close to where the animals grazed and were housed.

Waterlogged and charred plant remains, by Alan J. Clapham

The majority of the plant remains in the five samples analysed were preserved by waterlogging (Table 98), although some charred remains were recovered and these are reported separately at the end due to the different circumstances of preservation. The methods used are given in Appendix 7. The samples were, in general, very rich with a total of 149 categories of biological material recovered, the majority being of plant origin. It was originally intended to analyse all of the samples but due to the exceptional richness of the material two of the contexts were sub-sampled (4692 and 4690) and 100 ml analysed.

The plant remains were very well preserved and in most cases species identifications were possible. One of the striking features of these samples was the presence of large quantities of uncharred cereal chaff remains. In general, the samples contained taxa of similar habitats, although in differing proportions. The richest sample, with 101 categories, was from context 4683 (which was also the richest in the total number of remains).

Cereal remains

The samples were dominated by the remains of wheat cereal chaff (Table 98). The wheats are emmer (*Triticum dicoccum*) and spelt (*T. spelta*). Spelt wheat was the dominant wheat, represented by spikelet forks, glume bases, and a single charred rachis fragment. Emmer wheat was poorly represented by finds of

Table 98: Pomeroy Wood, waterlogged and charred plant remains from well 3047

Context	*4686*	*4684*	*4683*	*4692*	*4690*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*
Sample size (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Flot size (ml)				*100*	*100*
Cereal remains					
Triticum dicoccum grain, sprouted, charred	–	–	1	–	–
spikelet forks	–	–	1	–	–
glume bases	–	–	8	33	6
rachis fragments	–	–	–	–	–
T. spelta spikelet forks	–	–	80	115	–
glume bases	–	–	320+1ch	407+1ch	29
rachis fragments	–	–	–	–	–
Triticum sp. glume bases	2	12	1302	1009	61
Triticum sp. rachis fragments	1ch	–	1	13	.
Hordeum vulgare rachis fragments	1ch	15	5	–	1
Hordeum sp. coryposes	–	–	–	48f	–
Cerealia caryopses	–	2	****	–	–
pales & lemmas	..	2+2f	9	–	–
Cerealia indet. charred	1f	.	..	1f	1f
Cerealia rachis fragments	–	-	..	..	–
Arable habitats					
Ranunculus subgenus *Ranunculus*	2f	1	29+12f	2+4f	5+2f
R. sardous	–	–	8	–	12+7f
R. parviflorus	..	–	2+4f	–	.
Papaver argemone	-	1	1	-	–
Fumaria officinalis	3f	2	.	1f	..
Urtica dioica	2	4	9	.	1
U. urens	6+2f	9+1f	2+1f	8	..
Chenopodium polyspermum		.		3	..
C. album	23+75f+2ch	17+16f	5+2f	3+4f	1
Stellaria media	4+4f	5	7+1f	3	2
Cerastium glomeratum	–	1	4+1f	–	–
Spergula arvensis	1+83f	5	5f	1f	–
Agrostemma githago	1f	2f	12f	1f	..
Persicaria maculosa	..		2	–	1f
P. lapathifolia	3+1f	1+1f	1	1+2f	.
Persicaria sp. immature	1	.	–	–	..
Polygonum viculare	1	8+1f	1	4	–
Fallopia convolvulus	–	–	4f	2f	1
Rumex acetosella	46+16f	140+7f	13+1f	1	–
R. crispus	–	–	5	3+2f	–
Rumex sp.	2	6	28+36f	5+3f	3+1f
Rumex sp. perianth/fruit fragments	4	2	–	–	..
Viola sp.	3f	1+1f	–	1	..
Geranium dissectum	1f	-	.	–	..
Raphanus raphanistrum capsule fragments	–		1+2f	4	6
seed fragments	–	12	–	–	–
Anagallis arvensis	–	–	1	..	-
Aphanes arvensis	496	129	23	6	1
Hyosycamus niger	2+2f	–	2	–	–

Table 98: (continued)

Context	*4686*	*4684*	*4683*	*4692*	*4690*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*
Sample size (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Flot size (ml)				*100*	*100*
Solanum nigrum	2+2f	4+1f	2+1f	68	5+1f
Myosotis sp	–	–	–	–	–
Galleopsis specioisa/tetrahit	8+23f	8+6f	2+2f	–	1
Mentha arvensis	–	–	–	–	1
Plantago major	–	–	–	1	1
Veronica serphyllifolia	1	3	5	–	–
Galium sp.	–	–	2	1	–
Valerianella dentata	–	–	1	–	–
Cirsium arvense	–	–	–	–	2
Cirsium sp.	–	–	1	–	–
Cirsium sp. small	–	–	1	–	–
Sonchus arvensis	–	–	2	5	–
S. asper	1	–	–	–	–
Senecio cf vulgaris	2	3	–	–	–
Arrhenetherum elatius caryopses	–	12+1f	–	–	–
A. elatius rootlets, charred	–	2+2uc	–	–	–
Avena sp. charred	1f		–	–	–
Hordeum marinum	–	1+2f	–	–	–
Grassland habitats					
Stellaria graminea	–	1	4	2	2
Potentilla erecta	–	7+3f	12+4f	–	–
Potentilla sp.	4+1f	–	–	3	1+5f
Trifolium sp. petals	7	3	9	3	–
calices	2	1	5	4	–
Linum catharticum	–	–	1	–	–
Pastinaca sativa	–	–	1	–	–
Prunella vulgaris	3	4	27+6f	4	8+4f
Plantago lanceolata charred	–	–	1	–	–
Odonites vernus	–	–	–	–	1
Rhinanthus sp.	–	1	5	1	5
Centurea nigra	–	–	4	–	1
phyllaries	–	–	9	–	4
Hypochaeris radicata	–	3	1	2	–
Leontodon autumnalis	–	1+1pap	3+1f	–	3f
L. saxatilis	–	–	2	3	–
Bellis perennis	–	2	1	–	–
Luzula campestris	–	–	44+52f	–	–
Carex spicata	–	–	1	–	–
C. ovalis	–	–	52+15f	–	–
C. cf hirta	–	–	2	–	–
C. cf flacca	–	–	4	–	–
C. pilulifera	8+15f	–	–	–	–
Festuca sp.	–	1	3	5	–
Lolium sp.	–	–	–	–	2*
Poa sp.	11	1	****	–	–

Table 98: (continued)

Context	*4686*	*4684*	*4683*	*4692*	*4690*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*
Sample size (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Flot size (ml)				*100*	*100*
Agrostis sp.	**	***	****	*****	*****
Large Poaceae	–	–	22	20	2
Small Poaceae	–	12	–	–	–
Poaceae indet.	–	–	–	10	–
Wetland habitats					
Sphagnum sp. leaves	–	–	–	3	–
Ranunculus flammula	1f	3	13+2ch+2f		2
Ranunculus subgenus *Batrachium*	–	–	2f	–	–
Montia fontana ssp. *chondrosperma*	2	–	3+2f	–	–
M. fontana ssp. *amporitana*	–	–	–	–	2
Stellaria neglecta	1	1	7	–	–
S. uliginosa	–	7	–	–	
Lychnis flos-cuculi		–	3+1f	1f	–
R. conglomeratus	–	1	20+8f	–	1
Hypericum undulatum	–	1	–	–	
H. tetrapterum	–	–	–	–	1
Filipendula ulmaria	3+1f	7+1f	48+15f	1	4
Conium maculatum		1	2	2	–
Apium nodiflorum	–	4	4	7	1
Lycopus europaeus	–	–	–	–	1
Mentha arvensis/aquatica	–	–	3+1f	–	–
Juncus sp.	8	9	32	–	***
Eleocharus palustris	1	3	15+1f	4	1
Scirpus sylvaticus	–	–	1	2	–
Isolepsis setacea	1		–	–	–
C. paniculata	–	–	5	1	
C. cf dioica	–	1	–	–	–
C. riparia	–	–	2	–	–
Carex sp (biconvex)	–	2	–	12+1f	8
Carex sp. (trigonous)	1	11+8f	1+16f	5+2f	3+1f
Glyceria declinata	–	3	–	–	–
Woodland/scrub habitats					
Corylus avellana	–		1f	–	–
H. hirsutum	–	3	–	–	–
Sambucus nigra	–	–	1	–	–
Lapsana communis	–	–	–	1	–
Heathland habitat					
Pteridium aquilinum pinnules, charred	–	–	–	–	1
pinules	9f	37	224	46	1
H. humifusum	6	15	–	–	1
H. pulchrum	3	–	–	–	
Erica tetralix leaves	–	–	10	1	–
Calluna vulgaris leaves	–	–	2	–	–
shoots	–	–	1	–	–
branches	–	–	3	–	–
Danthonia decumbens	–	2	2	–	–

Table 98: (continued)

Context	*4686*	*4684*	*4683*	*4692*	*4690*
Sample	*1787*	*1785*	*1784*	*1802*	*1788*
Sample size (litres)	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Flot size (ml)				*100*	*100*
Miscellaneous					
Polygonaceae indet.	–	–	2f	–	–
Rosaceae thorn	–	2	1	1	–
Vicia / Lathyrus / Lotus pod fragments	–		2	–	–
Ononis / Ulex type thorn	6	7	–	–	–
Fabaceae tendril fragments	–	–	1	–	–
Coriandrum sativum	–	–	1	–	–
Foeniculum vulgare	–	–	1	–	–
Culm nodes	2	4	40+2ch	11	2
Unident.	1	1	2	–	4
Buds	–	–	3	–	1
Budscales	–	–	–	–	1
Leaf fragments	–	–	4	–	–
Anthers	1	–	–	19	–
Musci	*	*	***	***	–
Worm coccoons	10	21	4	5	2
Fish vertebrae	–		6	–	–
Bone		–	–	1f	–

ch = charred; f = fragment; pap = pappus; uc = uncharred
* = very rare; ** = rare; *** = occasional; **** = common; ***** = abundant

spikelet forks and glume bases. A single charred grain of emmer recovered from context 4683 was sprouted and this may be spoilt grain fed to animals rather than evidence for malting.

Other cereals include hulled barley (*Hordeum vulgare*), rachis fragments of which were found in two contexts and caryopses were also found. Cereal grains were rarely found in these contexts, which is usual in waterlogged material, although possible cereal caryopses represented by the testas were identified from context 4683. Charred processing debris from barley was very rare, suggesting that though the remains may derive from crop processing waste, there may have been another use for the cereal chaff before being discarded.

Other plant species

The other plants can be classified as wild species, and in the majority of cases these were the dominant remains, representing a wide range of habitats.

Arable habitats: The majority of the wild species (a total of 47 taxa) were those which are associated with arable habitats and which were probably deposited along with the cereal remains. The most common arable weeds were fat hen (*Chenopodium album*), sheep's sorrel (*Rumex acetosella*), docks (*Rumex* sp.), parsley-piert (*Aphanes arvensis*), black nightshade (*Solanum nigrum*), and hempnettle (*Galeopsis speciosa / tetrahit*). The majority of the arable weed seeds can be classified as being small and therefore tend to be removed at the fine sieving stage of crop processing. However, the presence of larger seeds (such as corn cockle, *Agrostemma githago*) and other plant disseminules, such as the pod fragments of wild radish (*Raphanus raphanistrum*) suggests that the coarse sievings are also present.

Grassland habitats: This habitat is the second most common, with a total of 29 taxa. The dominant species were tormentil (*Potentilla erecta*), clover (*Trifolium* sp.) which in all cases was represented by the presence of petals and calices, self-heal (*Prunella vulgaris*), yellow rattle (*Rhinanthus* sp.), black knapweed (*Centaurea nigra*), field wood-rush (*Luzula campestris*), oval sedge (*Carex ovalis*), and the grass genera of fescue (*Festuca* sp.), meadow grass (*Poa* spp.), and the bents (*Agrostis* spp.). Although the majority of the species that are interpreted as representing a grassland habitat can be found growing in a wide variety of grassland types, some of are more specific in their habitat requirements. Tormentil, for example, is used to indicate more acidic conditions, as is *Carex pilulifera*, the pill sedge. A more damp grassland is represented by the presence of the sedge species such as *Carex cf hirta*, (hairy sedge) and *Carex cf flacca* (glaucous sedge), although this latter sedge is usually found on base-rich soils. Indications of the presence of a shorter grassland are given by the presence of sheep's sorrel (although this is usually

interpreted as being an arable weed it can also be found in short acid grassland), daisy (*Bellis perennis*), and field wood-rush. Therefore a mosaic of grassland habitats probably was either present around the site or was being exploited.

Wetland habitats: This habitat was represented by 26 taxa., the commonest of which were lesser spearwort (*Ranunculus flammula*), greater chickweed (*Stellaria neglecta*), bog stitchwort (*Stellaria uliginosa*), clustered dock (*Rumex conglomeratus*), meadowsweet (*Filipendula ulmaria*), fool's water-cress (*Apium nodiflorum*), rushes (*Juncus* spp.), common spike-rush (*Eleocharis palustris*), greater tussock sedge (*Carex paniculata*), and sedges (*Carex* spp.). Most of the species can be found where the watertable is at, or close to, the surface or in some cases at the edge of ponds and rivers, e.g. lesser spearwort, fool's water-cress and greater pond sedge (*Carex riparia*). Some species such as greater tussock sedge, and dioecious sedge (*C. dioica*) prefer a base-rich substrate. Some species such as blinks (*Montia fontana* ssp. *chondrosperma* and *M. fontana* ssp. *amporitana*) can survive on bare muddy areas.

This wetland habitat may well be from part of the grassland one, where these species become more dominant as the grassland reaches the watercourse.

Woodland / scrub habitats: This habitat was the most poorly represented in this category of evidence (Table 98) and in most cases the habitat was represented by single finds, though considerable quantities of charcoal were also recorded (below). The waterlogged plants included hazel (*Corylus avellana*), hairy St John's wort (*Hypericum hirsutum*), elder (*Sambucus nigra*), and nipplewort (*Lapsana communis*). The low occurrence of these taxa suggests that they could have been deposited naturally. The hazel nutshell was charred and may represent the gathering of a wild food source.

Heathland habitats: Six taxa of heathland species were found, the dominant one being bracken represented by pinnules (*Pteridium aquilinum*). Other species included leaves of cross-leaved heath (*Erica tetralix*) and shoots, leaves and branches of ling (*Calluna vulgaris*). Caryopses of the heath grass (*Danthonia decumbens*) were also found (Table 98).

Miscellaneous: The miscellaneous section of Table 98 can be of some use. The category Polygonaceae indet. can in reality be assigned to the arable weed habitat, whilst the Rosaceae thorns could be part of the woodland/scrub habitat type and the finds of the *Vicia / Lathyrus / Lotus* pod fragments and the Fabaceae tendril could belong to the grassland category. The presence of coriander (*Coriandrum sativum*) and fennel (*Foeniculum vulgare*) may represent the remains of food flavourings.

Charred plant remains

These were also common in the one sample analysed, 1230 from context 3087 (Table 104, below). Spelt, including glume bases and a spikelet fork was the dominant wheat. *Triticum* sp. was represented by grain and glume bases, and barley by grain and rachis fragments and an awn fragment. Cereal coleoptiles were also found. Other cultivated plant species found were cotyledons of pea.

Non-cultivated species again include bracken (*Pteridium aquilinum*), buttercup (*Ranunculus* subgenus *Ranunculus*), hazel nutshell, blinks, sheep's sorrel, dock, wild radish, cross-leaved heath, leaves, a cinquefoil (*Potentilla* sp.), clover, medick, self-heal (*Prunella vulgaris*), ribwort plantain, soft rush (*Juncus effusus*), sedge, false oat-grass, oat awn fragments, and heath grass. Other non-cultivated plant remains identified were small-seeded grasses, culm nodes and grass stem fragments.

Interpretation

The plant remains found in the well derive from backfilling. Relatively few of the cereal remains were charred but the evidence they yield is consistent with the uncharred remains. The presence of uncharred cereals, the products of both coarse and fine sievings (as determined by the size of the weed seeds), and the presence of grassland, combine to suggest that the plant remains are the remains of animal fodder. This fodder was composed of crop-processing waste and what may be hay or simply the remains of the grazing of a mosaic of local grasslands. The presence of some species that indicate short grassland suggests that there may have been some well-grazed areas.

The large quantities of bracken pinnules may be from bedding and the mixing of this with the remains of fodder suggests that the material represents spoiled animal bedding. This material, once cleaned from the area where the animals were kept, was then dumped in the well. This is consistent with the evidence of the insects and the pollen.

Pollen, by Robert G. Scaife

Absolute pollen frequencies ranged from 91,000 grains/ml at 50 cm to 1.16 million grains/ml at 35 cm. Pollen preservation was excellent and the relatively high APF values allowed pollen counts to be readily achieved. The methods used are set out in Appendix 7. A total of 76 pollen and spore taxa was recorded. In addition, the ova of intestinal parasites *Trichuris* (whip worm) and *Ascaris* (round worm) were also recorded in the lower fills (especially at 95cm).

Overall, trees and shrub pollen are present only in very small numbers whilst herbs are markedly dominant (Fig. 173). A variety of spores of ferns and intestinal parasite ova was also recorded in the sequence. Pollen zonation has not been carried out since the changes which are present are not marked. However, there is some stratigraphical variation which may relate to changes in the local ecology or may be due to different phases of sediment filling. These tentative divisions are characterised from the base of the profile upwards as follows.

Unit 1: 110–80 cm (contexts 4685, 4684, 4683). Contains greater numbers of *Pteridium aquilinum* (bracken), *Lactucae* (dandelion types), cereal types and intestinal parasite ova of *Trichuris* (whip worm) and *Ascaris* (round/maws worm). *Poaceae* are dominant (to 80%). A single peak of *Cyperaceae* (sedges to 85%). There are

slightly higher values of trees – *Quercus* (oak), *Alnus* (alder), and *Corylus avellana* (hazel) than in levels above 80 cm.

Unit 2: 80–50 cm (Contexts 4683, 4681). *Poaceae* are dominant (c. 70%) with a substantial peak of *Plantago lanceolata* at 75 cm to 28%. There are fewer cereal grains but increases in *Filipendula* and an overall increase in the diversity of herb taxa.

Unit 3: 50–15 cm (Contexts 4692, 4690). These upper levels are characterised by expansions of *Lactucae* (10%), Cereal type (5%) while *Poaceae* remains dominant (95%) throughout. There is also an increase in spores including *Sphagnum*, *Pteridium aquilinum*, and *Dryopteris* type. APF values are high at 95 cm (to >1 million grains/ml).

The first two units span a number of contexts (4685–4682). There appears to be little correspondence with these contexts and changes in the pollen assemblages. The third unit (50–15 cm) may be associated with the change from context 4681 to 4092 and 4690.

Tree and shrub pollen: Overall quantities of tree and shrub pollen are extremely small with a maximum of 5% at 95 cm. Those taxa which are present comprise largely sporadic occurrences of *Betula* (birch), *Pinus* (pine), *Quercus* (oak), *Alnus* (alder), and *Corylus avellana* type (hazel but which may also include sweet gale in certain ecological conditions). These are all wind pollinated (anemophilous) and are usually represented in much greater numbers if any substantial local growth occurred. Also present are individual occurrences of *Fraxinus* (ash), *Fagus* (beech), *Rhamnus catharticus* (alder buckthorn), *Rubus* type (brambles), *Sorbus* type (whitebeam and hawthorn), and possibly *Euonymus* (spindle). These taxa are usually more poorly represented in pollen spectra and may imply some local growth.

Herbs: Herbs are totally dominant with *Poaceae* (grasses) the most important pollen taxon (to 83%). In addition there are diverse assemblages of weeds that are typical of archaeological assemblages/human activity. The taphonomy of these pollen and spores may, however, be complicated (see below). The pollen spectra contain both pastoral and arable indicators. The former is obviously dominated by grasses but with other taxa also including *Medicago* type, *Trifolium* type, *Rumex* spp., *Plantago lanceolata* (ribwort plantain), *Ranunculus* type (buttercups), possibly *Lactucae* (dandelion types) and sporadic occurrences of other herbs not definable to species or even generic level.

Arable indicators: Arable indicators include cereal pollen (to 8%) mainly at the base of the profile (unit 1) and top of unit 3 along with segetal herbs: *Polygonum aviculare* type (knotweed), *Persicaria maculosa* type (redshank), *Fallopia convolvulus* (black bindweed), and possibly other less taxonomically definable taxa (e.g. Asteraceae types such as *Anthemis*). Some other taxa may be indicative of disturbed ground and include *Plantago* major type, *Spergula* (spurrey), *Artemisia* (mugworts), Chenopodiaceae (goosefoots and oraches), and *cf. Papaver* (poppy).

Marsh: Only at 85 cm is there any significant evidence for wetland plants. Here, Cyperaceae (sedges) reach 20% of tdlp + marsh types. Otherwise, there is a small but consistent presence of sedges throughout. There is a single record of *Typha latifolia* at the base of the sequence.

Spores: There is a consistent but small presence of a variety of fern types. These include *Equisetum* (horsetails), *Pteridium aquilinum* (bracken), especially in unit 1, *Dryopteris* type (monolete 'typical' ferns such as male fern) and *Polypodium vulgare* (common polpody).

Discussion

The taphonomy of pollen in features such as wells is complex. There have been few studies with which to compare the data obtained from well 3047 although the potential for preservation of environmental remains in wells has been previously recognised. Dimbleby (1985, 42; 1989, 75–8) demonstrated that pollen can be preserved in deep wells such as the Bronze Age Wilsford Shaft, Wiltshire, and pollen has been recovered from wells of Roman date at Farmoor, Oxfordshire (Dimbleby 1979, 82–3) and Portchester Castle, Hampshire (Barber 1976). These sites have all produced pollen assemblages of a similar character to that obtained here; that is, a paucity of tree and shrub pollen and a marked dominance and diversity of herbs. Multidisciplinary data has also been obtained from a Roman well in York (Kenward *et al.* 1986, 241–67), and although pollen was not examined at this site, the heterogeneity of the organic remains in the fills is of note and is comparable with remains at Pomeroy Wood in containing faecal material, intestinal parasites, and cereal remains.

As noted, the taphonomy of pollen in such archaeological ditch, pit or well contexts is complex, with contained pollen and spores possibly coming from a variety of sources. Pollen derived from 'normal' airborne means or insect vectors is likely to derive from areas close to the site. However, given the archaeological nature of this feature such contexts are highly likely to contain pollen from secondary sources. These sources can be very varied and include human and animal faeces, offal, domestic waste including floor coverings and food remains. All of these may contain considerable quantities of pollen which can strongly influence and bias pollen assemblages (Greig 1981; 1982; Scaife 1983). This may be the case here where crop processing debris (Robinson and Hubbard 1977) and faeces can contain substantial quantities of cereal pollen and associated arable weeds. These taphonomic factors are clearly in evidence in the pollen obtained here and strongly correlate with the plant macrofossils and insects, for example, Robinson has demonstrated from the insects in well 3047 the presence of animal bedding including cereal remains, old straw, stable manure, and the possibility of grain infested with grain beetle having been fed to animals which contributed to the manure. This material which was subsequently dumped into the

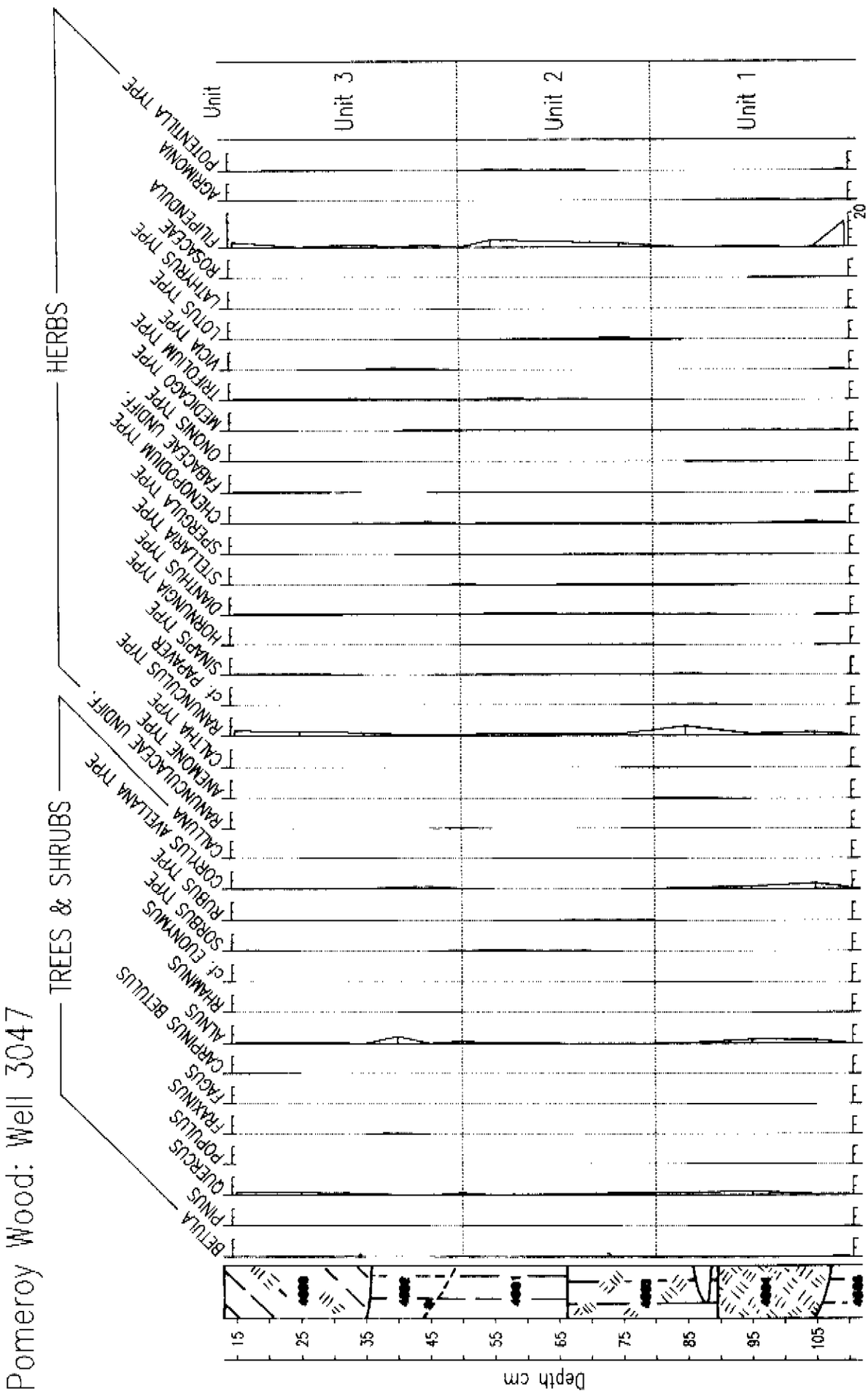


Figure 173 Pomeroy Wood, pollen from well 3047

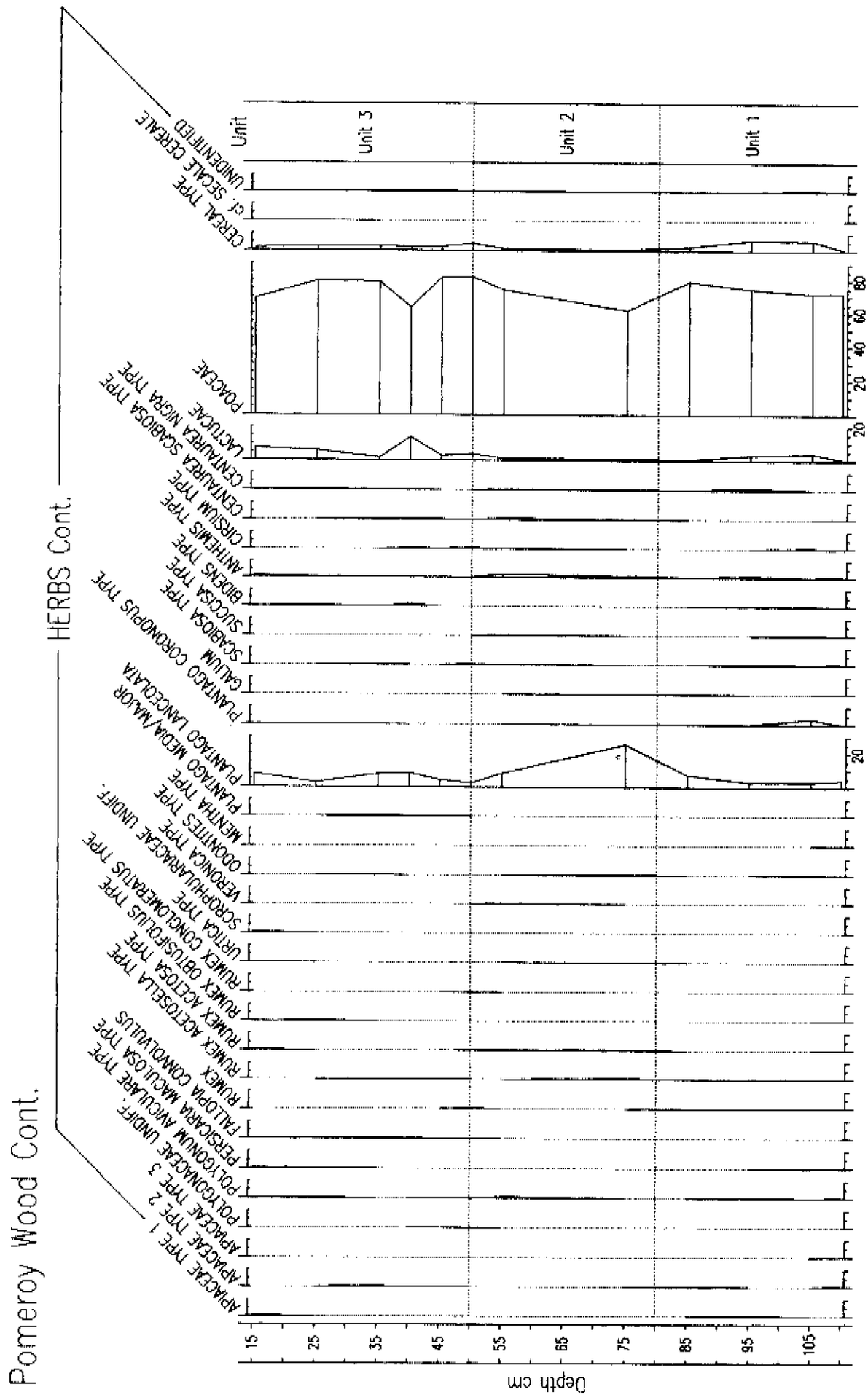


Figure 173 Pomeroy Wood pollen from well 3047 (continued)

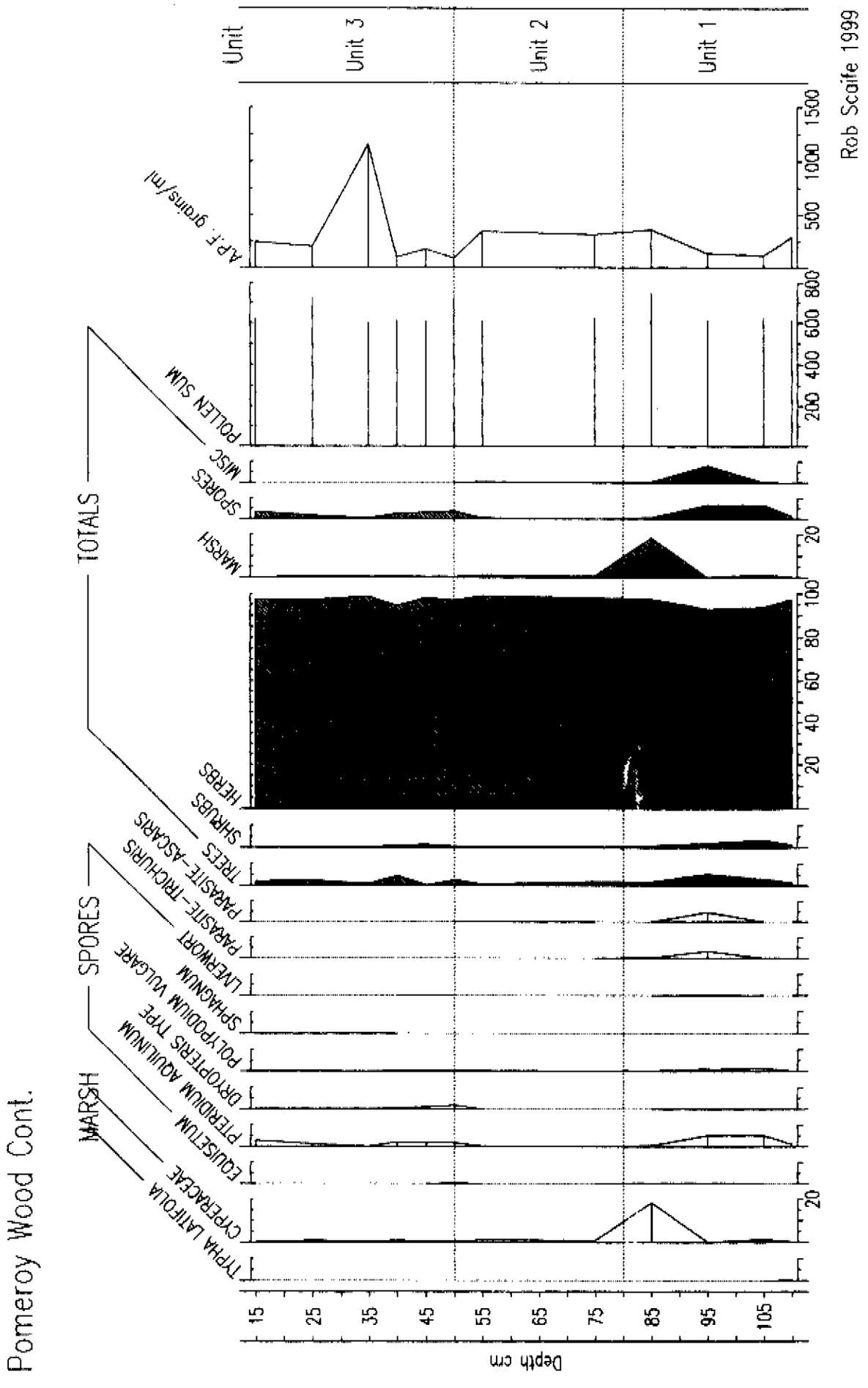


Figure 173 Pomeroy Wood pollen from well 3047 (continued)

well, will have contained many of the pollen taxa recorded here. The presence of such secondary/derived pollen complicates the interpretation, since the possibility of the overriding dominance of this element may have masked 'naturally' derived pollen from which interpretations of the local environment can be made.

Grassland/pastoral habitats: The waterlogged plant remains show this group as being second to arable in terms of the plant macrofossils recovered. The pollen, however, suggests the dominance of pasture elements. Pollen of *Poaceae* is dominant with Ranunculaceae/*Ranunculus*, Caryophyllaceae (*Dianthus/Silene*), Fabaceae (medicks and clovers), *Rumex* spp. (docks), *Plantago lanceolata* (ribwort plantain), *Scabiosa* (scabious), Lactucae (dandelion types), and possibly herbs of wet pasture/marsh such as *Filipendula* (meadow sweet), *Succisa* (devil's-bit scabious), and Cyperaceae (sedges). These data suggest that the habitat surrounding the well was dominant tall pasture. Robinson has similarly also suggested local pasture land from the insect assemblages which include vetch feeding weevils. However, as with the insects, it should be considered that cut hay or fodder may have been dumped in the well which contained very substantial numbers of secondary pollen. Whichever case is correct, local pasture is evidenced.

Cereals and cultivation: Cereal pollen and associated segetals are well represented in the basal zone 1 and upper zone 3. Weeds of arable and disturbed ground are similarly found and include Polygonaceae spp. (*Persicaria maculosa* type, *Polygonum aviculare* type and *Fallopia convolvulus* and possibly some *Rumex* spp. – docks), *Urtica* type (nettle/pellitory), *Plantago major*, *Plantago coronopus* (hoary plantain), Chenopodiaceae (goosefoots and oraches), Brassicaceae (charlocks), and *Spergula* type (spurrey). Cereals are predominantly *Triticum* and/or *Hordeum* (wheat and barley) with a tentative identification of *Secale cereale* (oat).

As with pastoral taxa, several interpretations can be considered. First, the pollen may derive directly from local cultivation. Second, that the pollen may derive from animal fodder, stable bedding and manure. Third, pollen may derive from crop processing waste, the pollen incorporated in the cereal spike being disseminated with threshing and winnowing. Fourth, pollen from human domestic waste, including food, and cess where pollen ingested travels freely through the gut (Greig 1981; 1982; Scaife 1986; 1995). There is substantiating macrofossil and beetle evidence for old stable straw, animal dung and cereal processing waste, all of which could contribute pollen. This is clearly so in contexts 4684 and 4692 where pollen units 1 and 3 have more cereal pollen and in the former, intestinal parasite ova (*Trichuris* and *Ascaris*). This correlates with the interpretation of the insects as showing that these contexts contained manure. *Pteridium aquilinum* (bracken) is also more important in unit 1 and may also come from floor covering/stabling. In conclusion, it seems probable that the bulk of cereal pollen and segetal weeds are derived from these secondary sources rather than directly from local cultivation. However, evidence of cereal cultivation is still present and must suggest local agriculture even though the crop remains arrived in an indirect fashion.

Because of the overwhelming possibility that most of the pollen has been introduced into these contexts via secondary routes, it is clear that pollen from the surrounding environment will be proportionally under-represented and skewed in favour of the secondary material. This is especially pertinent to the tree and woodland elements since pollen percentages are here calculated as a percentage of the total pollen resulting in the extremely high percentages of *Poaceae* (grasses) suppressing the percentage values of all other 'within sum' taxa. Thus, the albeit small percentages of tree and shrub taxa may be indicative of the local and regional tree growth with oak and hazel as the principal background elements and also occasional, local ash and beech. The extent and importance of such woodland remains unclear due to the taphonomic and interpretative complexity of this site. To establish the general vegetation habitat, pollen analysis of a nearby wetland site with peat is required.

Charcoal, by Rowena Gale

Bracken, grass, and other organic remains including a single fragment of charred alder (*Alnus*) roundwood (lining context 980), were preserved in the waterlogged base of the well (Table 123). A minimum diameter of 30 mm was estimated for the roundwood, with at least 10 moderately wide growth rings. Alder wood is extremely durable when wet and has traditionally been used for revetting river banks, etc. (Edlin 1949). A huge amount of charcoal (sample 1230, context 3087) was preserved in the backfill of the well, probably from the disposal of refuse, and some fragments were haphazardly embedded in a hard matrix.

Most of the charcoal consisted of fragmented roundwood, mainly oak (*Quercus*) (e.g. diameter 8 mm, 7 growth rings) and hazel (*Corylus*) (e.g. diam. 10 mm, 4 growth rings), but also fast-grown ash (*Fraxinus*) (eg diam. 10 mm, 2 growth rings) and alder (*Alnus*). Birch (*Betula*), hawthorn type (Pomoideae) and a small amount of oak heartwood were also present. The diameters of fast-grown oak and alder roundwood from context 3087 measured 20 mm (3 growth rings) and 10 mm (3 growth rings), respectively.

Well 3791

Insect remains, by Mark Robinson

Three samples of organic sediment from well 3791, each of 1 litre, had been floated onto a 0.25 mm sieve for the assessment of macroscopic plant remains and in view of the results from well 3047 it was decided during the Analysis stage to investigate the insect remains from 3791 to confirm the origin of the material (Table 99).

Methods and results

The same methods were employed as for the anslysis of well 3047 (Appendix 7) but well-preserved insect remains were only found in sample 1707 (Tables 100 and 101) Although the sample was small, the concentration of Coleoptera was sufficiently high for a useful interpretation to be made. These results have

Table 99: Pomeroy Wood, stratigraphic sequence of samples analysed for insect remains in well 3791

Context	*Sample*	
4475	1704	Top
4476	1705	↓
4478	1707	Bottom

been displayed by species groups as a percentage of the total number of terrestrial individuals (Fig. 174) largely following Robinson (1991, 278–81). The synanthropic species of Species Group 9 have, however, again been divided into Species Group 9a, general synanthropic species such as *Ptinus fur* and Species Group 9b, serious pests of stored grain (not present).

Interpretation

The most numerous insect remains from the well were Coleoptera, some of which probably fell into the well, others of which were perhaps amongst refuse dumped in the well. There was only a single water beetle, *Helophorus cf. brevipalpis* which as likely flew into the well as lived in it. However, there were also four pupae of *Psychoda cf. alternata* (trickling filter fly). The larvae of *Psychoda* feed on decaying matter, usually in water, and the common name of *P. alternata* has arisen because it is often abundant in sewage filter beds. The larvae of this species also occur in rotting seaweed, disused farm feeding troughs, washings from animal cages, and kitchen sink U-traps (Smith 1989, 37). They tend to favour dark habitats. The occurrence of the pupae suggests either the water in the well was foul or foul washings were poured into it. Such conditions would certainly be appropriate to the organic content of context 4478.

Amongst the Coleoptera, the most numerous species was *Anobium punctatum* (woodworm beetle). It was the only member of Species Group 10, beetles which attack structural timbers, and comprised 17% of the terrestrial Coleoptera (Fig. 174). It does also occur in dry, seasoned dead branches on trees, but such a habitat is rare in nature. In contrast, structural timbers provide the ideal habitat for *A. punctatum* to flourish in abundance. Either the well was situated close to a severely infested building or, more likely, sweepings from a timber building were thrown into it. General synanthropic beetles (Species Group 9a), such as might live in a building, were represented by *Ptinus fur* but were not particularly abundant. Beetles from the family Lathridiidae, such as *Lathridius minutus* gp. (Species Group 8) comprised 9% of the terrestrial Coleoptera (Fig. 174). They are fungal feeders which are favoured by old damp hay and straw including thatch. They were sufficiently abundant to suggest a significant presence of their habitats and it is possible that they too had been amongst refuse thrown in the well.

Members of Species Group 7, such as *Megasternum obscurum* and *Anotylus sculpturatus* gp., which occur in a wide range of dung and foul organic material habitats,

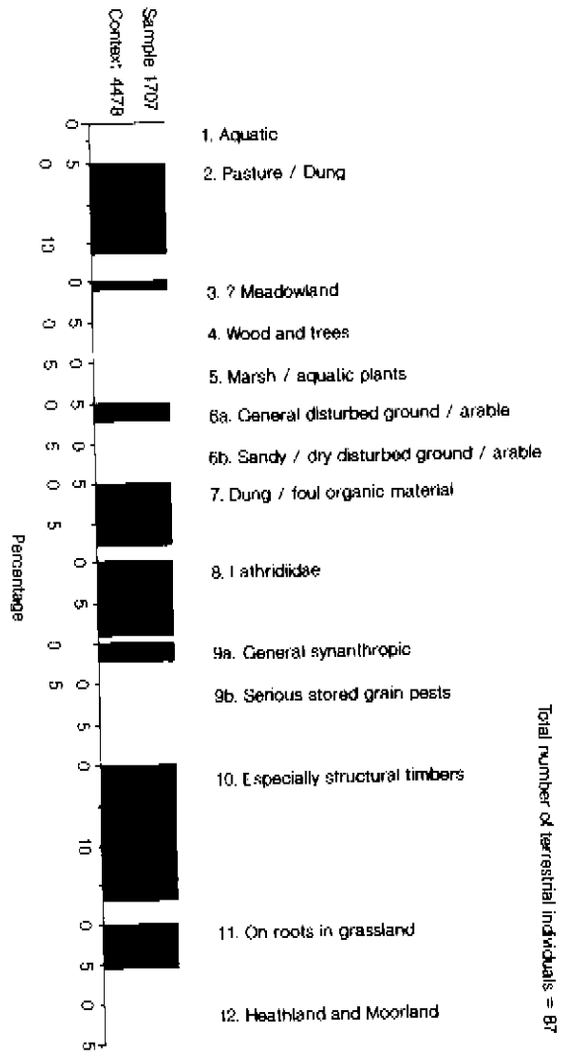


Figure 174 Pomeroy Wood coleoptera from well 3791 by habitat classification

comprised 8% of the terrestrial Coleoptera. This value is typical of a rural archaeological deposit, especially if domestic animals were present (below) and does not imply any high concentrations of decaying organic material or the proximity of a manure heap. There were few fly puparia likely to have been derived from such material; for example there was only a single puparium of *Musca domestica* (house fly). The original suggestion that animal bedding or stable manure was dumped in the well cannot be sustained from the entomological evidence.

Many of the Coleoptera seem to have been derived from the surrounding landscape and to have entered the well by natural agencies. Chafer and claterid beetles with larvae that feed on the roots of grassland herbs, including *Athous hirtus*, comprised almost 6% of the terrestrial Coleoptera. The scarabaeoid dung beetles of Species Group 2 were, at over 11% of the terrestrial Coleoptera, sufficiently abundant to suggest a concentration of domestic animals grazing grassland in the vicinity of the wells. *Aphodius rufus* was the most numerous, but other species of *Aphodius*, *Geotrupes* sp., *Colobopterus erraticus* and *Onthophagus* sp. were also present. Although the Chrysomelidae and Curculionidae which make up Species Group 5, Coleoptera which

Table 100: Pomeroy Wood, coleoptera from Well 3791

	Minimum no. of individuals	
Context	4478	Species group
Sample	1707	
volume (litres)	1.0	
Carabus sp.	1	
Trechus obtusus Er. or *quadristriatus* (Schr.)	1	
Clathus melanocephalus (L.)	1	
Agonum dorsale (Pont.)	1	6a
Amara sp.	1	
Harpalus rufipes (Deg.)	1	6a
Helophorus sp (*brevipalpis* size)	1	1
Cercyon analis (Pk.)	1	7
C. haemorrhoidalis (F.)	1	7
Megasternum obscurum (Marsh.)	3	7
Ptenidium sp.	1	
Omalium sp.	2	
Xylodromus concinnus (Marsh.)	1	
Coprophilus striatulus (F.)	1	
Anotylus sculpturatus gp.	2	7
Stenus sp.	2	
Leptacinus pusillus (Step.)	1	
Philonthus sp.	2	
Staphylinus olens Müll.	1	
Tachinus sp.	1	
Aleocharinae indet.	2	
Geotrubes sp.	1	2
Colobopterus erraticus (L.)	1	2
Aphodius granarius (L.)	1	2
A. cf prodromus	2	2
A. rufus (Moll)	3	2
A. cf sphacelatus (Pz.)	1	2
Onthophagus sp. (not *ovatus*)	1	2
Phyllopertha horticola (L.)	1	11
Agrypnus murinus (L.)	1	11
Athous hirtus (Herbst.)	2	11
Agriotes lineatus (L.)	1	11
Anobium punctatum (Deg.)	15	10
Ptinus fur (L.)	2	9a
Ketereles rufilabris (Lat.)	3	
Brachypterus sp.	1	
Rhizophagus sp.	1	
Atomaria sp.	2	
Orthoperus sp.	1	
Coccidula rufa (Herbst.) or *scutellata* (Herbst.)	1	
Crytophagidae indet. (not *Atomaria*)	3	
Lathridius minutus gp.	4	8
Corticaria punctulata (Marsh.)	1	8
Corticariinae indet.	3	8
Longitarsus spp.	2	
Chaetocnema concinna (Marsh.)	1	
Apion sp. (not *craccae*)	1	3
Hypera punctata (F.)	1	
Ceuthorhynchinae indet.	1	
Total	88	

Table 100: (continued)

feed on marsh and aquatic plants, were abundant, several examples of the nitidulid beetle *Kateretes rufilabris* were found. It feeds on the pollen of *Juncus* spp. (rushes) and *Carex* spp. (sedges), which were perhaps growing in wetter areas of the pasture.

Some of the carabid beetles, for example *Agonum dorsale* and *Harpalus rufipes*, are favoured by sparsely vegetated weedy ground and arable fields. These beetles (Species Group 6a) were most likely to have been living in weedy areas in the settlement. There were a few phytophagous beetles characteristic of such vegetation including *Brachypterus* sp., which feed on *Urtica* spp. (nettles) and *Chaetocnema concinna*, which feeds on *Polygonum* spp., and *Rumex* spp. (knotgrass, docks etc).

Table 101: Pomeroy Wood, other insects from well 3791

		Minimum no. of individuals
	Context	4478
	Sample	1707
	Volume (litres)	1.0
Forficula auricularia L.		1
Drymus sylvatica (F.)		1
Aphrodes sp.		1
Psychoda cf alternata Say.	pupa	4
cf. Calliphoridae indet.	puparium	1
Musca domestica L.	puparium	1
Diptera indet	puparia	4
Diptera indet.	adult	1
Myrmica rubra (L.) or *ruginodis* Nyl.	female	1
Myrmica sp.	male	6

Discussion
The entomological evidence from well 3791 emphasised two aspects of the environment of the civil settlement. The well was probably close to a timber building infested with woodworm and there was probably pastureland grazed by domestic animals nearby. However, in contrast to well 3047 in the earlier military base, there were no exotic pests of stored grain, which were likely to have been amongst fodder for domestic animals and there was no strong evidence from the insects for stable manure. Indeed the results from well 3791 are entirely typical of low-status Roman rural settlements.

Charred plant remains and charcoal,
by Alan J. Clapham and Rowena Gale
Sample 1370/context 3798 (Table 112) was dominated by cereals; an emmer rachis fragment along with *Triticum* sp. grains and glume bases being recorded as well as fragments of grain and coleoptiles. The only other find was that of oat/brome grass. It can be suggested that this assemblage represents a 'background flora' of the activities occurring on-site such as crop processing, the waste of which was probably used as tinder.

This context also produced a large quantity of charcoal (Table 124) which mostly contained oak (*Quercus*), probably from a widish branch/trunk including heartwood, birch (*Betula*), alder (*Alnus*), hazel (*Corylus*), holly (*Ilex*), willow/poplar (*Salix/Populus*), and gorse/broom (*Ulex/Cytisus*). It should be noted that a number of hearth bottoms from smithing were also found in the well (p. 259) and the charcoal may have been introduced into the well alongside them.

Charred Plant Remains, by Alan J. Clapham

A total of 97 samples were analysed from the phases of Roman date and in general, the remains were well preserved throughout the different phases, allowing identification to species. The same methods were used as for the sites of prehistoric date, though the identification of oats as a crop is not without difficulty (Appendix 7). The results are presented by phase and within that by type of feature, following the order of the stratigraphic report. The cereal chaff remains were exceptionally well preserved. This large and well dated assemblage is important not just within Devon but in the south-west as a whole.

Phase 2: 1st century AD military base
Fifteen samples were analysed. These included a number from vertical sequences from the defensive ditches of the military base in order to establish if there was any variation through time (Tables 102–4).

Inner defensive ditch 748/3019
Five samples from phase 2 contexts in this ditch were analysed and they are here described, presented in Table 102, from top to bottom. Context 3025 contained small quantities of cereal remains and the only non-cultivated remains present were single finds of a rootlet of false oat-grass.

Context 3026 was a rubbly, poorly consolidated layer which again contained very few remains, although more crop categories were recovered. These included indeterminate wheat (*Triticum* sp.) and pea (*Pisum sativum*). Non-cultivated species were also rare but included fat hen, ribwort plantain (*Plantago lanceolata*), and a rootlet of false oat-grass. Dock (*Rumex* sp.) nutlets were also found in this context. Due to the small number of charred plant remains present within this context it is difficult to determine the activities represented by them and they may only reflect the background flora of the site. Context 3027 yielded only a small number of remains including *Triticum* sp. and fragments of cereal grain, fat hen, ribwort plantain, and false oat-grass rootlets which were the commonest find.

Context 3024 also contained very few charred plant remains. Two possible caryopses of millet (*Panicum* sp.) were found (though it is possible that these are from wild grasses), along with fragments of indeterminate cereal grains and were the only cultivated crops. Other finds include hazel (*Corylus avellana*) nutshell, fat-hen (*Chenopodium album*), and two rootlets of false oat-grass (*Arrhenatherum elatius*).

The presence of the possible millet caryopses can be considered unusual, as there are no native members of the genus *Panicum* in Britain. If the identification is correct, it can be assumed that the caryopses arrived along with the Roman garrison.

Context 3028, the primary fill, proved to be the richest context from this phase of the ditch. Crops were represented by finds of chaff fragments (spikelet forks and glume bases) of two species of glume wheat, emmer (*Triticum dicoccum*) and spelt (*T. spelta*). Hulled barley (*Hordeum vulgare*) was represented by rachis fragments and grain. Non-cultivated species were also better represented. The most common find was false oat-grass rootlets, with culm nodes, grass stem fragments, and fat hen also being common. Sheep's sorrel (*Rumex acetosella*), redshank (*Persicaria maculosa*), dock, hazel, clover (*Trifolium* sp.), and small-seeded grasses were also present. This charred plant assemblage appears to represent crop-processing remains that have been dumped or redeposited into the ditch.

Outer defensive ditch 3057/3151
Context 3246 was the primary fill of the ditch. Only non-cultivated species were present; a single find of a pearlwort (*Sagina* sp.), two finds of sheep's sorrel, and false oat-grass rootlets. This assemblage may represent a 'background flora.'Context 3150 was probably of redeposited natural material contained very few remains (Table 102). A single spelt wheat glume base, two *Triticum* sp. glume bases, and cereal grain fragments were the only crops. Non-cultivated species were represented by ling leaves (*Calluna vulgaris*), scentless mayweed (*Tripleurospermum inodorum*), false oat-grass rootlets, and small seeded grasses and culm nodes.

Building 4725, tower 4724, and associated features
Seven samples were analysed from this group (Table 103).

Context 4597 was the upper fill of a north–south running, and perhaps secondary, slot 4598 on the

Table 102: Pomeroy Wood, charred plant remains from phase 2 contexts in defensive ditches 748 and 3057

Feature group	*748*	*748*	*748*	*748*	*748*	*3057*	*3057*
Feature type			*Defensive ditches*				
Feature / section	*3019*	*3019*	*3019*	*3019*	*3019*	*3151*	*3151*
Context	*3025*	*3024*	*3026*	*3027*	*3028*	*3150*	*3246*
Sample	*1205*	*1204*	*1206*	*1207*	*1208*	*1334*	*1389*
Sample size (litres)	*10*	*10*	*10*	*10*	*15*	*15*	*10*
Flot size (ml)	*3*	*1*	*40*	*20*	*20*	*2*	*1*
Cereal remains and other crops							
Triticum dicoccum spikelet forks	–	–	–	–	1	–	–
glume bases	–	–	–	–	4	–	–
T. spelta grain	1	–	–		–	–	–
glume bases	–	–	–	–	3	1	–
Triticum sp. spikelet forks	–	–	–	–	1	–	
glume bases	1	–	2	1	4	2	–
Hordeum vulgare rachis fragments	–	–	–	–	1	–	–
grain	–	–	–	–	1	–	–
cf. Panicum sp.		2	–	–	–	–	–
Cerealia indet.	7f	3f	5f	1f	6f	10f	–
Pisum sativum	–	–	1c	–	–		–
Weeds							
Ranunculus subgenus *Ranunculus*	–		–	–	1	–	–
Corylus avellana	–	2f	–	–	1f	–	–
Chenopodium album	–	2	1	1f	12	–	–
Sagina sp.	–	–	–	–	–	–	1
Persicaria maculosa	–	–	–	–	3	–	–
Rumex acetosella	–	–	–	–	6	–	2
Rumex sp.	–	–	2	–	1	–	–
Calluna vulgaris leaves	–	–	–	–	–	2	–
Trifolium sp.	–	–	–	–	1	–	–
Plantago lanceolata			1	1	–	–	–
Tripleurospermum inodorum					–	1	–
Arrhenatherum elatius rootlets	1	2	1	12	44	1	2
Small Poaceae	–	–	–	–	1	2	–
Culm nodes	–	–	–	1	20	3	–
Poaceae internodes	–	–	–	–	12	–	–
Unident.	–	–		–	2		
Buds			–	–	1	–	–

f = fragment, c = cotyledon

eastern side of building 4725. This context was rich in crop remains and contained few non-cultivated species. The dominant crop was spelt, with sprouted grains being more common than unsprouted, and spelt glume bases were also recovered. Fragments of *Triticum* sp. were very common, glume bases, rachis fragments, and detached embryos were also found, including a large quantity of cereal grain fragments. Oats (*Avena* sp.) was also a common find; cereal coleoptiles (sprouts) were also identified. The only non-cultivated plant species to be recovered was that of vetch/vetchling (*Vicia / Lathyrus* sp.).

The domination of cereal remains in this context suggests that the building was either used for storage or that cereals were used extensively in it. The lack of glume bases and large seeded weed species suggests that the grain was stored as clean grain rather than as spikelets. The presence of a large number of sprouted spelt grains may represent the malting of spelt for brewing, as has been recorded at Catsgore, Somerset by Hillman (1984), but it is considered more likely it was animal feed. The presence of oats which, on the basis of its size rather than the presence of chaff, may well be a cultivated variety, also suggests that the crops were

Table 103: Pomeroy Wood, charred plant remains from contexts associated with phase 2 building 4725 and tower 4724

Feature type	*slot*	*post-holes*				*hearth*	*post-hole*
Feature	*4598*	*3488*	*3591*	*4307*	*4366*	*3971*	*4249*
Context	*4597*	*3489*	*3588*	*4308*	*4202*	*3973*	*4250*
Sample	*1754*	*1377*	*1501*	*1602*	*1631*	*1507*	*1589*
Sample size (litres)	*4*	*10*	*10*	*10*	*10*	*10*	*15*
Flot size (ml)	*25(50)*	*25(100)*	*30(198)*	*20(90)*	*25(400)*	*60*	*18*
Cereal remains and other crops							
Triticum dicoccum glume bases	–	1	1	–	–	7	–
T. spelta grain	2		–	2	1+86f	6	–
sprouted grain	20	–	–	–	27	26	–
spikelet forks	–	1		–	–	–	–
glume bases	8	13	25	19	11	37	10
rachis fragments	–	–	5	3	–	3	3
Triticum sp. grain	207f		–	12f	332f	181f	–
spikelet forks	–		–	–	1	3	2
glume bases	6	8	32	70	9	87	36
rachis fragments	1	–	–	–	1	6	–
embryos	1	–	–	1	–	–	–
Hordeum vulgare rachis fragments	–	–	–	–	–	–	1
grain	–	–	–	–	–	–	1
Avena sp.	16+28f		–	–	–	–	
Cerealia indet.	1000+	18f	5f	1000+	1000+	1000+	46f
Cerealia coleoptiles	6	–	–	5	22	42	–
Basal rachis fragments		–	1	–	–	–	–
Pisum sativum		–	–	–	–	–	1
Weeds							
Corylus avellana		–	–	6f	2f	1f	–
Chenopodium album	–	–		–	1	2f	–
Rumex sp.	–	–		1	1	2+1f	1
Vicia/Lathyrus sp.	2c	1c	–	–	–	–	–
Medicago sp.	–	1	1	2		–	–
Trifolium sp.	–		–	–	–	3	–
Apiaceae indet.	–	1	–	–	–	–	
Plantago lanceolata	–	2	–	–	–	–	–
Luzula campestris	–	–	1	–		–	–
Eleocharis palustris	–		–	–	–	1	–
Carex sp. (trigonous)	–	–	1f	–	–	–	–
Arrhenatherum elatius rootlets	–	–	5	–	–	1	–
Avena/Bromus sp.	–	1f	3+1f	9	12+12f	25+77f	15f
Avena sp. awn	–		–	1f	–	–	3f
Large Poaceae	–		1f	–	–	–	–
Small Poaceae	–	–	3	3	1	2	–
Culm nodes	–	–	13	4	–	–	–
Poaceae internodes	–	1	5	6	4	–	5
Unident.		1	1	–	–	–	–
Buds	–	1	–	–	–	–	–

f = fragment; c = cotyledon

stored for animal feed. Oats has a similar size grain to that of wheat, suggesting that, although the crop was stored as clean grain, hand cleaning had not taken place. This would further support the interpretation of the crops as animal fodder. Hearth 3971 in building 4725 produced emmer glume bases and spelt grain (dominated by sprouted grain), glume bases, and rachis fragments. *Triticum* sp. grain fragments were the dominant wheat category, along with spikelet forks, glume bases, and rachis fragments. Cereal coleoptiles were also recorded. The non-cultivated element consisted of hazel nutshell, fat hen, dock, clover, common spike-rush (*Eleocharis palustris*), false oat- grass rootlets, and oats/brome grass caryopses (the commonest find). Small-seeded grasses were also recorded.

Context 3489 is the fill of post-hole 3488 in the southern part of 4725. Non-cultivated species were much more common here. Emmer wheat was represented by glume bases and spelt by spikelet forks and glume bases, *Triticum* sp. glume bases were also present. Non-cultivated species included finds of vetch/vetchling, medick (*Medicago* sp.), indeterminate Apiaceae (carrot family), ribwort plantain, and oats/brome grass caryopses. The lack of grain in this context and the presence of chaff and weed seeds suggests that this assemblage is from crop processing.

The cultivated remains from context 4250, post-hole 4249 in building 4725, included spelt wheat glume bases and rachis fragments, as well as *Triticum* sp. spikelet forks and glume bases. Barley was represented by single finds of a rachis fragment and grain. The non-cultivated plant species identified included dock, oats/brome grass (the most common find) and oat awn fragments, while grass stem fragments were also found. This material probably represents crop-processing waste.

Context 3588 was the fill of the south-eastern post-hole (3591) of interval tower 4724. This assemblage comprised both cultivated and non-cultivated elements. The cultivated element was again dominated by cereal chaff remains, which included glume bases of emmer, spelt and *Triticum* sp. Spelt rachis fragments were also identified. Non-cultivated species were medick, field wood-rush (*Luzula campestris*), sedge (*Carex* sp.), false oat-grass, and oats/brome grass caryopses. Other finds included large- and small-seeded grasses, culm nodes and grass stem fragments. The lack of cereal remains again suggests that this material is crop processing debris. Context 4308, the fill of the north-western post-hole, 4307, of the interval tower, produced both cultivated and non-cultivated plant species. The cultivated element consisted of grains of spelt wheat with the corresponding glume bases and rachis fragments; no spelt spikelet forks were recovered. Other cereal remains consisted of *Triticum* sp. wheat grains, glume bases, and embryos. Cereal coleoptiles were also identified and are most likely to be wheat. Uncultivated species identified included hazel nutshell, dock, medick, and oats/brome grass caryopses. Awn fragments of oats were also identified. Other finds included indeterminate grass caryopses and culm nodes. This assemblage, with the small numbers of grain present, along with the larger quantities of chaff fragments most likely represents crop processing waste.

Context 4202 is from the post pipe of the north-eastern post (4366) of the interval tower. This was by far the richest context in terms of charred plant remains from this group of features and the charcoal, all oak, suggests that the post may have been burnt *in situ* (see below, pp. 372–3). Cereal remains dominate the context with few uncultivated species being present. The main wheat was spelt, most of which was sprouted, and glume bases were identified. *Triticum* sp. grains were very common, and spikelet forks, glume bases, and rachis fragments were also recorded. The non-cultivated element of the assemblage consisted of hazel nutshell, fat hen, dock, and oats/brome grass caryopses. Small-seeded grasses and grass stem fragments were also identified.

The dominance of the cereal element suggests the storage of spelt grain. It seems that the spelt was semi-cleaned, with only the larger seeded weeds being left and which would have been removed just prior to use by hand cleaning. As the spelt was again predominantly sprouted, it is likely that this represents a spoiled crop being used as fodder

The similarity in composition between this and context 4202 suggests that they could be related and that the assemblages represent spoiled spelt wheat that had been stored as semi-clean spikelets.

Grain drier 4123

Two contexts were examined from 4123, which could belong to phase 4i rather than phase 2 (Table 111). Context 4126 was from the uppermost layer in the southern end of the drier. Spelt spikelet forks, glume bases (which were more numerous), and rachis fragments, along with *Triticum* sp. spikelet forks and glume bases were identified. Other remains included hazel nutshell, dock, vetch/vetchling, black medick (*Medicago lupulina*), ribwort plantain, and oat/brome grass caryopses. Context 4129, the upper layer of the northern end of the grain drier also produced spelt wheat, along with glume bases of spelt and *Triticum* sp., *Triticum* sp. rachis fragments were recovered as was a detached embryo. Other finds included hazel nutshell, dock, and oat/brome grass caryopses. Awn fragments of oats were also found. The profusion of cereal chaff, especially glume bases and the weed seeds in these two samples suggests that crop-processing waste was used to fire the furnace, perhaps as tinder.

Pit 4498

Sample 1731/context 4547 represents the charcoal rich fill of pit 4498 (Table 104). Wheat species were represented by spelt glume bases and rachis fragments, and bread wheat (*Triticum aestivum*) grain. The commonest cereal remain was grains of hulled barley. Non-cultivated plants found included black bindweed (*Fallopia convolvulus*), vetch/vetchling, sedge, and oats/brome grass. Fragments of oat awns and grass stems were also found. This assemblage may be crop-processing waste, although the presence of the barley grain could suggest a storage function of a mix of crop processing waste and barley for animal feed.

Table 104: Pomeroy Wood, charred plant remains from other phase 2 contexts

Feature group		4731	
Feature type	pit	gully	well
Feature	4498	4301	3047
Context	4547	4241	3087
Sample	1731	1583	1230
Sample size (litres)	4	15	10
Flot size (ml)	22(90)	30(60)	86(700)
Cereal remains and other crops			
Triticum spelta spikelet forks		1	1
glume bases	2	–	48
Triticum aestivum grain	1	–	
Triticum sp. grain	1	–	2+1f
glume bases	–	1	25
Hordeum vulgare rachis frags	–	–	9
grain	6+1f	–	9+2f
Hordeum sp. awn frags	–	–	1
Cerealia indet.	5f	1f	16f
Cerealia coleoptiles		–	1
Pisum sativum	–	–	1c
Weeds			
Pteridium aquilinum pinnules	–		4
Ranunculus subgen *Ranunculus*	–	–	1
Corylus avellana	–	–	1f
Chenopodium album	–	1	1f
Montia fontana ssp. *chondrosperma*		–	1
Fallopia convolvulus	1		–
Rumex acetosella	–	–	1
Rumex sp.	–	–	2+2f
Raphanus raphanistrum capsule frags		–	1
Erica tetralix leaves	–	–	1
Potentilla sp.	–		2
Vicia tetrasperma		1	–
Vicia/Lathyrus sp.	1	–	–
Medicago sp.	–	–	5
Trifolium sp.		–	2
Prunella vulgaris	–	–	4
Plantago lanceolata	–	–	4
Juncus effusus fruits	–	–	3f
Carex sp. (biconvex)	–	–	1
Carex sp. (trigonous)	2	–	–
Arrhenatherum elatius rootlets	–	–	3
Avena/Bromus sp.	3	–	–
Avena sp. awn	1f	–	1+2f
Danthonia decumbens	–	–	1
Large Poaceae	1f	–	–
Small Poaceae	–	–	11
Culm nodes	–	–	13
Poaceae internodes	1	–	99
Unident.	–		3
Buds	–		5

Building 4731

Context 4241 from gully 4301 contained few remains (Table 104): spelt spikelet forks, *Triticum* sp. glume bases, and cereal grain fragments. A non-cultivated element comprised, fat hen and smooth tare (*Vicia tetrasperma*).

Well 3047

The charred remains from this feature are reported on above along with the waterlogged material (p. 337).

Phase 3 (infill of defensive ditches of the military base)

Phase 3 represents the abandonment and slighting of the military base. Ten contexts from this phase were analysed (Tables 105–6).

Outer defensive ditch 3057/3151

As with other the samples from the defensive ditches (Table 105), that from context 3120 in ditch 3057/3151 contained few remains; possible spelt wheat grain and a single *Triticum* sp. glume base. Non-cultivated species include single finds of clover and oat/brome grass, while culm nodes and grass stem fragments were also found. In context 3122 (below 3120) charred remains were again scarce, but more common than the upper contexts Eight grains of possible spelt wheat along with a spikelet fork and two glume bases of spelt were identified. *Triticum* sp. grain fragments and a glume base were also recovered. Context 3149, below 3122, consisted of a mixed rich organic deposit with abundant charcoal. This sample was by far the richest of the three analysed from this ditch section. The dominant wheat was emmer, which consisted of finds of grain, some of which were sprouted; emmer glume bases were also identified. *Triticum* sp. grains, spikelet forks, glume bases, and rachis fragments were also found. Non-cultivated species were rare, with finds of hazel, wild radish (*Raphanus raphanistrum*) and oats/brome grass (*Avena/Bromus* sp.) being the only finds.

This assemblage could represent the dumping of spoiled grain. The lack of weed species, especially small seeded species and the presence of the capsule of wild radish and oats/brome grass which are of a similar size to wheat grains, suggests that this material was dumped prior to hand-picking.

Outer defensive ditch 3057/958

The silty loam fill of the south-western ditch segment 958, context 960, contained dense concentrations of charcoal and was the richest of the phase 3 ditch contexts sampled for plant remains (Table 105). Cereals include possible emmer wheat grains, along with spelt glume bases, and *Triticum* sp. glume bases were also identified. Barley was represented by both grains and rachis fragments. Non-cultivated species identified included; chickweed (*Stellaria media*), dock, Brassica sp. (cabbage family), vetch/vetchling, ribwort plantain, a bedstraw (*Galium* sp.), nipplewort (Lapsana communis), false oat-grass, heath grass (*Danthonia decumbens*) and awn fragments of oats. A small-seeded grass was also recovered along with grass stem fragments. Although a great number of plant remains, mostly crop-processing waste from fine sieving, were

Table 105: Pomeroy Wood, charred plant remains from phase 3 contexts in defensive ditches 748 and 3057

Feature group	3057	3057	3057	3057	748	748	748	748
Feature type				Defensive ditches				
Feature/section	3151	3151	3151	958	3019	3019	916	3257
Context	3120	3122	3149	960	3022	3023	984	3241
Sample	1330	1332	1333	1228	1202	1203	1089	1421
Sample size (litres)	15	15	15	15	15	10	10	10
Flot size (ml)	10	6	30(270)	70(230)	2	4	25	7
Cereal remains and other crops								
Triticum dicoccum grain	–	–	4	1		–	–	–
sprouted grain	–	–	7	–	–	–	–	–
glume bases	–	–	3	–	–	–	–	–
T. spelta grain	2	8	–	–	–	–	4	–
spikelet forks	–	1	–	–	–	–	5	–
glume bases	–	2	–	1	–	–	6	–
Triticum aestivum grain	–	–	–	–	–	–	2	–
Triticum sp. grain	–	2f	4+6f	–		–	4f	–
spikelet forks	–	–	1	–	–	–	–	
glume bases	1	1	1	3	–	–	22	3
rachis fragments	–	–	1	–	–	–	–	–
Hordeum vulgare grain	–	–	4	4+3f	–	–	–	–
rachis fragments	–	–	–	2		–	1	–
Cerealia indet.	7f	25f	28f	5f	–	–	70f	–
Cerealia coleoptiles	–	–	–	–	–	–	2	–
Linum usitatissimum	–	–		–	–	1f	–	–
Pisum sativum	–	–	–	–	–		–	–
Weeds								
Corylus avellana	–	1f	1f	–	–	1f	3f	–
Chenopodium album	–	–	–	–		–	–	3f
Stellaria media	–	–	–	1	–		–	–
Persicaria lapathifolia	–	–		–		–	1+1f	–
Rumex acetosella	–	–	–	–	1	–		–
Rumex sp.		–	–	4	–	–	1	
Brassica sp.	–	–	–	1	–	–	–	–
Vicia/Lathyrus sp.	–	–	–	1	–	–	–	–
Trifolium sp.	1	–	–	–	–	1	–	–
Apiaceae indet.	–	–	–	–	–	1	–	–
Plantago lanceolata		–	–	1		–	–	–
Galium sp.	–		–	3	–	–	–	–
Lapsana communis	–	–	–	1	1	–	–	–
Arrhenatherum elatius rootlets	–	2		1	1	1	–	–
Avena/Bromus sp.	1f	2f	4f	–	1f	–	–	–
Avena sp. awn	–	–	–	2	–	–	–	–
Danthonia decumbens	–	–		1	–	–	–	–
Small Poaceae	–	–	–	1	–	1	–	–
Poaceae	–	–	–	–	–	–	–	–
Poaceae indet.	–	1f	–	–	–	–	–	–
Culm nodes	1	–	–	3	–	–	–	–
Poaceae internodes	5	–	–	–	–		–	–
Leaf fragments	–	–	–	–	–	–	–	1

found, it is likely that the material is tinder from a hearth.

Inner defensive ditch 748

No cultivated plants were recovered from context 3022 in ditch section 3019 though sheep's sorrel, nipplewort (*Lapsana communis*), false oat-grass rootlets, and oats/brome grass were all identified (Table 105).

Cereal remains in context 3023 consisted of a single find of a cereal basal rachis fragment. Non-cultivated plant species were also rare, comprising single finds of hazel nutshell, clover, indeterminate Apiaceae, false oat-grass rootlet, and a large-seeded grass.

Context 984, the subsidence fill of ditch 748 in the south-west section (916) produced spelt and bread wheat grain. *Triticum* sp. grain and glume bases were recovered, as was a single rachis fragment of barley. The dominant find was fragments of cereal grains; cereal coleoptiles were also found. Non-cultivated species were rare, though hazel nutshell, pale persicaria (*Persicaria lapathifolia*), dock, false oat-grass, and oat/brome grass were identified. Although richer in plant remains than

Table 106: Pomeroy Wood, charred plant remains from phase 3 contexts in outwork/annexe ditch 785

Context	*780*	*3835*
Sample	*1380*	*1388*
Sample size (litres)	*15*	*10*
Flot size (ml)	*28*	*10*
Cereal remains		
Triticum dicoccum grain	37+17f	1
spikelet forks	6	–
glume bases	29	6
T. spelta glume bases	1	–
Triticum sp. grain	14f	
spikelet forks	–	1
glume bases	11	3
embryos	2	–
Hordeum vulgare rachis frags	5	3

Table 112: Pomeroy Wood, charred plant remains from phase 4i and 4ii contexts in wells 920 and 3791, and cess pit 819

Phase	*4i*	*4i*	*4i*	*4ii*	*4ii*	*4ii*	*4i*
Feature	*920*	*920*	*3791*	*819*	*819*	*819*	*819*
Context	*3379*	*4621*	*3798*	*970*	*972*	*978*	*3049*
Sample	*1761*	*1813*	*1370*	*1080*	*1082*	*1084*	*1133*
Sample size (litres)	*5*	*10*	*15*	*15*	*15*	*10*	*15*
Flot size (ml)	*40*	*39(78)*	*30(270)*	*48*	*48(96)*	*40(230)*	*32*
Cereal remains and other crops							
Triticum dicoccum grain	–	–	–	1	–		10+10f
sprouted grain	–	–		–	–	–	4+1f
glume bases		–	–	–	–		4
rachis fragments	–	–	1	–	–	–	–
T. spelta grain	–	3	–	10	–	–	–
sprouted grain	–	2	–	1	–	–	–
spikelet forks	–		–	1	–	–	–
glume bases	6	2		18	–	–	–
Triticum sp. grain	4		1+1f	13+2f	1+6f	–	18f
sprouted grain	–	–	–	–	1		–
spikelet forks	–	–	–	7	3	–	5
glume bases	14	5	9	36	4	1	19
embryos	1	–	–	3	–	–	–
Hordeum vulgare grain	–	–		3+1tg	–	–	1
Avena sp.	2+1f	–	–	21+27f		–	
Cerealia indet.	41f	23f	10f	315f	26f	11f	72f
Cerealia coleoptiles	–	–	1	18	–		1
Vicia faba	1c	–				–	–
Pisum sativum	–				2c	–	–
Weeds							
Corylus avellana	1f	1f	4f	4f	2f	–	5f
Rumex sp.	–	–	–	1	–		3
Rosaceae thorn	1			–	–	–	–
Vicia/Lathyrus sp.	–	1c	–	–	1	–	–
Medicago sp.	–	–				–	2
Trifolium sp.				–	–	–	3
cf Oxalis acetosella	–	–	–	1	–	–	–
Conium maculatum	–	–	–	–	1		
Rhinanthus sp.				–	–	–	1
Plantago lanceolata			–	–	–	–	1
Cirsium sp.	–	–	–	1	–		
Eriophorum latifolium	–			–	–	–	1
Eleocharis palustris	1	–			1	–	–
Lolium sp.	–	–	–	–	–		1
Danthonia decumbens	–	–	–	1	–		
Arrhenatherum elatius rootlets	1	–	–	–		–	–
Avena/Bromus sp.		–	1f	–	3	2	2+4f
Avena sp. awn	–	1f	–	–	2f	–	–
Small Poaceae	–	1	–	–	2	–	3
Culm nodes		1	–	–	–	–	6
Poaceae internodes	–	–		1	–	–	6

tg = tail grain

Table 113: Pomeroy Wood, charred plant remains from phase 4i pits and layer overlying building 4725

Feature / group	*4120*	*4061*	*3545*
Feature type	*pit*	*pit*	*layer*
Context	*4466*	*4060*	*3388*
Sample	*1701*	*1538*	*1274*
Sample size (litres)	*2*	*5*	*15*
Flot size (ml)	*2*	*20(86)*	*67(134)*
Cereal remains			
Triticum spelta grain	–	–	
glume bases	–	14	41
rachis fragments	–	–	2
Triticum sp. grain		–	2+10f
glume bases		8	26
embryos	–	–	–
Hordeum vulgare grain		16+7f	–
Cerealia indet.	2f	13f	52f
Cerealia coleoptiles	–	1	2
Weeds			
Ranunculus flammula	–	1	–
Corylus avellana	–	–	4f
Prunus spinosa	–	–	–
Chenopodium album	–	1	–
Rumex sp.	–	2	1
Raphanus raphanistrum capsule frag.	–	1f	–
Rosaceae thorn	–	1	1
Vicia / Lathyrus sp.	–	2	
Plantago lanceolata		9	–
Centaurea nigra	–	1	–
cf Picris heiracoides	–	1	
Luzula campestris	–	1	
Arrhenatherum elatius rootlets	–	1	–
Avena / Bromus sp.	-	1f	2+4f
Small Poaceae	–	4	–
Culm nodes	–	6	–
Poaceae internodes	–	6	2
Budscales	–	1	–

Table 114: Pomeroy Wood, charred plant remains from phase 4ii contexts associated with grain drier 637 and enclosure 4713

Feature group	*637*	*637*	*637*	*4713*
Feature type	*grain drier*			*enc.*
Feature / section	*631*			*655*
Context	*638*	*625*	*634*	*685*
Sample	*1011*	*1007*	*1061*	*1043*
Sample size (litres)	*5*	*10*	*10*	*10*
Flot size (ml)	*20*	25(100)	45(90)	*20*
Cereal remains				
Triticum spelta grain	2+5f	2	1	–
sprouted grain	2	3	5	–
spikelet forks	–	1	1	–
glume bases	29	4	164	2
rachis fragments	–	1	7	–
Triticum sp. grain	–	6	23f	1
spikelet forks	3	–	2	1
glume bases	26	8	79	4
Hordeum vulgare grain	–	–	3	–
Avena sp.	5+4f	1+3f	18+13f	–
Cerealia indet.	38f	16f	5f	7f
Cerealia coleoptiles	5		14	–
Weeds				
Pteridium aquilinum pinnules	–		2	–
Corylus avellana	9f	2f	8f	–
Rumex sp.	–	–	–	1
Raphanus raphanistrum capsule (whole)	–	1	–	–
Rosaceae thorn	–	–	1	
Lolium sp.		1	1	–
Cirsium sp.	–	–	–	1
Avena sp. awn	–	–	2	–
Buds	–	–	1	–

reworked from the upper layers, which probably represent a later phase of dumping after the cess pit fell into disuse.

Context 3049 was a silty grey fill relating to the construction of cess pit 819. The charred plant remains include emmer grain, sprouted grain and glume bases, *Triticum* sp. grain fragments, spikelet forks and glume bases, and hulled barley grain, along with cereal grain fragments and cereal coleoptiles. Hazel nutshell, dock, clover, medick, yellow rattle, ribwort plantain, broad-leaved cotton grass, a rye grass, and oat/brome grass were also identified along with small-seeded grasses and culm nodes. The presence of both sprouted and unsprouted emmer grain, along with the chaff fragments, suggests that this assemblage represents the dumping of a spoiled stored crop of emmer. It was stored at a quite late stage of processing, most likely prior to the second series of sieving.

Overall, the contexts from the cess pit reflect a secondary use of the feature, perhaps for the dumping of debris from domestic fires. The small number of charred remains in the primary fill hints at some reworking of the upper deposits.

Other phase 4i contexts

The basal fill of pit 4061 (context 4060), below building 4103, included glume bases of spelt wheat as well as those of *Triticum* sp. (Table 113) The most common cereal was hulled barley. Non-cultivated plants include lesser spearwort (*Ranunculus flammula*), fat hen, dock, wild radish, vetch/vetchling, ribwort plantain,

Table 115: Pomeroy Wood, charred plant remains from phase 4ii graindrier 3845 and phase 4ii gullies and ditches

Feature group	*3843*	*4025*	*826*	*826*	*4714*	
Feature type	*grain drier*	*gully*		*ditches*		
Feature / section		*3965*	*824*	*4086*	*3732*	*3247*
Context	*4018*	*3966*	*3814*	*4207*	*3731*	*3249*
Sample	*1530*	*1498*	*1366*	*1678*	*1351*	*1482*
Sample size (litres)	*15*	*10*	*15*	*15*	*15*	*15*
Flot size (ml)	*30(300)*	*45(90)*	*56*	*40(290)*	*50*	*40(550)*
Cereal remains and other crops						
Triticum dicoccum grain	–		4	–	–	–
T. spelta grain	8+1f		17	1	3+3f	3+1f
sprouted grain	–	–	–	–	1	–
spikelet forks	1	–	4	–	1	–
glume bases	14		89	18	33	15
rachis fragments	2		11		1	1
Triticum sp. grain	–	3	11f	3f	–	–
spikelet forks	2		4	–	7	1
glume bases	7		104	11	48	3
embryos	–	–	–		2	–
Avena sp.	4		9+18f	3+1f	4+7f	–
Cerealia indet.	14f	17f	106f	16f	57f	7f
Cerealia coleoptiles	–		–	2	2	1
Vicia faba	–		4f	–	–	–
Weeds						
Corylus avellana	2f	1f	12f	2	1f	–
Chenopodium album	–	–	1	–		–
Polygonum aviculare	–		2f	–	–	–
Rumex acetosella	1	–	1	–		–
Rumex sp.	1	–		–	–	1
Vicia / Lathyrus sp.	–	–	2	–	–	–
Trifolium sp.	–	–	1	1	–	–
Conium maculatum		–	–	–	1	
Plantago lanceolata	1	–	–	–	–	–
Galium aparine	1	–	–	–	–	–
Carex sp. (biconvex)	1	–	–	–	–	–
Danthonia decumbens		–		1	–	
Arrhenatherum elatius rootlets	–	–	–	2	–	–
Avena / Bromus sp.		–		–	–	2f
Avena sp. awn	–	–	–	–	1f	–
Small Poaceae	–	–	2	1	–	–
Culm nodes		–	1	2	1	–
Poaceae internodes	–	–	1	–	1	
Buds	8	1	1	–	2	–
Parenchyma	–	–	1f	–	–	–

knapweed (*Centaurea nigra*), possible hawkweed oxtongue (*cf. Picris hieracioides*), field wood-rush, false oat-grass, and oats/brome grass. Small-seeded grasses, culm nodes and grass stem fragments were also recorded. The presence of barley and the weed species suggests that the feature could have been a storage pit at some stage, though if so, the crop was stored semi-cleaned.

The charred plants from sample context 3388 overlying building 4725, included glume bases and rachis fragments of spelt wheat. (Table 113) *Triticum* sp. was represented by grain and glume bases.

Uncultivated plant species were rare, but hazel nutshell, dock and oat/brome grass were recorded. Grass stem fragments were also found.

Context 3121 in outer defensive ditch 3057 produced only single finds of spelt wheat and *Triticum* sp. glume bases together with oats/brome grass.

Summary of phase 4i

In general, the plant assemblages from all the features comprised similar kinds of plant remains. Few grains of cereals were recovered, most being chaff fragments, such as spikelet forks, glume bases, and rachis fragments. The dominant cereal of this sub-phase was spelt wheat, although emmer, bread wheat, and barley were present in small quantities. Because of this dominance it might be safe to assume that the majority of the *Triticum* sp. remains were of spelt wheat. A cultivated oat was also present.

There was a lack of weed seeds and those present were as large as the cereal grains themselves (at least in one dimension). This suggests most of these plant assemblages represent the final stages of crop-processing such as hand-sorting and parching prior to pounding. As this was the dominant crop-processing stage present on the site, it can be suggested that the crops were stored at this stage and that the earlier processing stages had either been carried out on some other part of the site or had been carried out prior to being brought onto site. Other crops present, but in small quantities, were peas and field bean.

Phase 4ii (3rd–4th century occupation)

Grain drier 637

Context 638,the clay lining to drier 637, included spelt grain, sprouted grain, and glume bases, *Triticum* sp. spikelet forks and glume bases, oats, cereal grain fragments, and cereal coleoptiles (Table 114). Otherwise only hazel nutshell was identified. As this assemblage comes from a fire pit it may reflect the function of the feature. The presence of the grain and glume bases and other chaff fragments, along with the other remains, may suggest a parching function. The lack of weed seeds tends to rule out an origin as crop-processing waste.

The upper fill of the drier, context 625 was charcoal rich and the charred plant remains again included spelt grain, sprouted grain, spikelet forks, glume bases, and rachis fragments, *Triticum* sp. grain, glume bases, oats and cereal grain fragments. Hazel nutshell, whole capsules of wild radish, and a rye grass were also identified. It is possible that the assemblage represents a spoiled crop (the sprouted grain) used as tinder. Another possibility is that the feature may have been used to dry out (the presence of sprouted grain) a damp crop before further processing and storage took place. The presence of the larger seeded weeds suggests that the crop-processing had reached hand-cleaning stage. Another possible use is for parching the spikelets prior to pounding, although the former scenario is considered the most likely.

Context 634 was the fill of the rake pit of 637. The charred plant assemblage is very similar to that of context 625, although in many regards it is far richer, especially in spelt glume bases and *Triticum* sp. glume bases. Cereal coleoptiles (sprouts) are also more common. Other species include bracken, hazel nutshell, a rose thorn (possibly from the fuel supply), a rye grass, and oat awn fragments.

If the interpretation of the assemblage in context 625 is correct and it represents the drying of a damp crop, then similar species and chaff remains would be expected in this context and there is a good correlation between the two contexts. It may be that the feature became too hot and charred the crop which was then raked out, although not completely, as some was still left in context 625.

In context 685, the primary fill of the enclosing ditch 655, plant remains were present only in small numbers (Table 114). Spelt was represented by glume bases and grain; spikelet forks and glume bases of *Triticum* sp. were also found. Other species present include dock and thistle (*Cirsium* sp.).

Grain drier 3843

Context 4018, was the primary fill of 3843, in which the cereals were spelt grain, spikelet forks, glume bases, and rachis fragments along with *Triticum* sp. sprouted grain and spikelet forks, cultivated oats, and cereal grain fragments (Table 115). Non-cultivated species included hazel nutshell, sheep's sorrel, dock, ribwort plantain, cleavers, and sedge.

The assemblage appears to represent the final stages of crop-processing, with the large number of glume bases present. Although this sample was split (Table 115), if

Table 116: Pomeroy Wood, charred plant remains from phase 4ii pits and hearths

Feature type	*pit*	*hearth*	*hearth*	*pit*
Feature	*3146*	*3014*	*3085*	*3073*
Context	*3143*	*3012*	*3084*	*3074*
Sample	*1286*	*1109*	*1221*	*1238*
Sample size (litres)	*15*	*15*	*15*	*15*
Flot size (ml)	30(250)	30(130)	30(120)	50(230)
Cereal remains				
Triticum spelta grain	–	–	–	3+2f
spikelet forks	–	–	1	–
glume bases	3	2	55	4
rachis fragments	–	2	2	1
Triticum sp. grain	1+3f	–	1f	–
spikelet forks	–	–	1	–
glume bases	1	4	45	6
Avena sp.	–	–	–	1+2f
Cerealia indet.	–	13f	19f	3f
Weeds				
Corylus avellana	1f	–	–	–
Rosaceae thorn		1	–	
Vicia / Lathyrus sp		–	–	1
Trifolium sp.		1	–	1
Avena / Bromus sp.		4+3f	9f	
Buds	–	–	1	1

Table 117: Pomeroy Wood, charred plant remains from phase 4i and 4ii contexts in defensive ditches 748 and 3057

Phase	*4i*	*4ii*	*4ii*	*4ii*	*4ii*	*4ii*	*4ii*
Feature group	*3057*	*748*	*748*	*3057*	*3057*	*3057*	*3057*
Feature/section	*3151*	*3019*	*3019*	*3151*	*3151*	*3151*	*3151*
Context	*3121*	*3020*	*3021*	*3116*	*3117*	*3118*	*3119*
Sample	*1331*	*1200*	*1201*	*1326*	*1327*	*1328*	*1329*
Sample size (litres)	*10*	*15*	*15*	*15*	*15*	*15*	*15*
Flot size (ml)	*6*	*70(140)*	*60*	*50(100)*	*45(90)*	*50(100)*	*60(120)*
Cereal remains and other crops							
Triticum dicoccum glume bases	–	–	3	1	–	–	–
T. spelta grain	–	–	8+11f	2	–	–	1+4f
spikelet forks	–	–	1	1	–	–	–
glume bases	1	12	7	5	1	14	7
rachis fragments	–	–	1	–	–	–	–
Triticum sp. grain	–	4+7f	–	3	1+3f	3f	–
spikelet forks	–	3		2	1	3	–
glume bases	1	8	9	14	7	12	7
rachis fragments	–	4		–	–	–	–
Hordeum vulgare grain	–	–	–	–	–	1f	–
Avena sp.	–	2+8f	–		–	3+7f	–
Cerealia indet.	7f	44f	–	28f	18f	15f	22f
Pisum sativum		1	–	–	–	–	–
Weeds							
Ranunculus subgenus *Ranunculus*	–	–	–	–	–	1	–
Corylus avellana	–	1f	–	1f	–	1f	3f
Chenopodium album	–		–	–	–		1
Rumex sp.	–	3	1	–	6	1	1
Polygonaceae indet.	–	–	1f	–	–	–	–
Vicia/Lathyrus sp.	–	2	–	1c	–	–	–
Trifolium sp.	–	–	–	–	–	–	2
Galium aparine	–	1	–	–	–	–	–
Carex sp. (trigonous)	–	–	–	1	–	–	–
Avena/Bromus sp.	2f	–	2f	2+7f	1+1f	–	1+8f
Avena sp. awn	–	1f	1f	–	1f	–	–
Large Poaceae	–	–	1	–	–	–	
Small Poaceae	–	–	2	–	–	–	–
Poaceae indet.	–	–	1	–	–	–	–
Culm nodes	–		1	–	–	–	–
Poaceae internodes	–	1	–	–	–		–
Buds	–	–	–	–	–	1	1

the remains are recalculated, it is possible that this assemblage represents a final stage of processing, with the presence of weed seeds being reduced to a minimum. One possible function of this feature was to parch the spikelets of spelt wheat in order to loosen the enclosing glumes around the grain. The presence of the plant assemblage in this context suggests that at some time an accident had occurred and the spikelets being parched were burnt and then raked out.

Gullies and ditches

Context 3966 of gully 3965/4025 was charcoal rich but plant remains were rare and included *Triticum* sp. and cereal grain fragments, and hazel nutshell (Table 115).

Plant remains from the lower fill of segment 824, context 3814, of ditch 826 included grains of emmer and spelt wheat along with spikelet forks, glume bases, and rachis fragments of the latter species, glume bases being the most abundant. *Triticum* sp. grain, spikelet forks,

and glume bases were also identified. Oats and fragments of cereal grain were also present as were cotyledons of field bean, hazel nutshell, fat hen, knotgrass, sheep's sorrel, vetch/vetchling, and clover. Small-seeded grasses, culm nodes and grass stem fragments were also recovered.

The large numbers of glume bases of spelt and *Triticum* sp., linked with the other chaff remains, suggests that this assemblage is from one of the later stages of crop-processing, i.e. parching. This is also supported by the general lack of weed seeds in the assemblage which would have been eliminated earlier in the processing. The presence of the grain, in such low numbers compared to the chaff fragments, suggests that they were accidentally charred at parching. The crop appears to have been stored at a late stage of processing, whereby most of the weed seeds and other matter had been discarded.

In context 4207, the upper fill of ditch 4086, the plants were spelt grain and glume bases, *Triticum* sp. grain and glume bases, oats, fragments of cereal grain and coleoptiles. Non-cultivated species included hazel nutshell, clover, heath grass, and false oat-grass rootlets. Small-seeded grasses and culm nodes were also recorded.

Context 3731 from ditch 4714 included spelt grain, sprouted grain, spikelet forks, glume bases, and rachis fragments, with glume bases being dominant. Spikelet forks, glume bases, and detached embryos of *Triticum* sp. were also recovered, along with oats, hazel nutshell, hemlock (*Conium maculatum*), and oats/brome grass. This assemblage again appears to consist of the waste products of the final stages of crop-processing.

The uppermost fill of ditch 3247, context 3249, included spelt grain, glume bases, and rachis fragments, *Triticum* sp. spikelet forks, glume bases, cereal grain fragments, and cereal coleoptiles. Other plants include dock and oat/brome caryopses. This assemblage, which is rich in chaff, could represent the final stages of processing, with some of the grain not being picked out. It is possible that it represents the dumping of a stored product which had in some way been burnt or spoiled. The lack of weed seeds suggests that the crop was stored as clean spikelets.

Pits and hearths

Pit 3146 (context 3143) produced only a few remains, including spelt glume bases, *Triticum* sp. grain and glume bases and hazel nutshell (Table 116). Hearth 3014 (context 3012) also produced few remains – chaff fragments were the main element, including glume bases and rachis fragments of spelt wheat and glume bases of *Triticum* sp. The only other taxon was oat/brome grass.

The cereals from hearth 3085 (context 3084) consisted of spelt spikelet forks, glume bases, and rachis fragments along with *Triticum* sp. grain, spikelet forks, and glume bases. This assemblage again appears to represent the final stages of crop-processing. The assemblage from pit 3073 (context 3074) possibly represents a charred storage product of virtually clean spikelets of spelt wheat, perhaps at the parching stage of processing. Spelt grain, glume bases, and rachis fragments along with *Triticum* sp. glume bases, oats, and fragments of cereal grain were recovered. Other species included vetch/vetchling and clover. This assemblage appears to have been dumped in the pit, the charring not having taken place *in situ* and it is possible that two elements are present, one of which is the grain which has already been processed, and the other crop-processing waste.

Table 118: Pomeroy Wood, charred plant remains from unphased beam slot 3789

Context	*3804*
Sample	*1341*
Sample size (litres)	*15*
Flot size (ml)	*44*
Cereal remains	
Triticum spelta glume bases	6
Triticum sp. grain	2f
spikelet forks	1
glume bases	6
rachis fragments	2
Hordeum vulgare rachis	1
Cerealia indet.	17f
Weeds	
Corylus avellana	1f
Rumex sp.	1
Vicia / Lathyrus sp.	1
Trifolium sp.	1
Arrhenetherum elatius rootlets	2
Buds	1

Defensive ditches

Context 3020, the uppermost fill of ditch section 748/3019 is part of a homogeneous spread across the site (Table 117). The plant remains included spelt wheat glume bases, *Triticum* sp. grain, spikelet forks, glume bases, and rachis fragments, cultivated oat and pea. Uncultivated species included hazel nutshell, dock, vetch/vetchling, cleavers (*Galium aparine*), oat awn fragments, and grass stem fragments. This assemblage appears to be crop-processing waste and is likely to have been dumped in the ditch after being used as tinder. Context 3021 included emmer wheat in the form of glume bases, spelt wheat as grain, spikelet forks, glume bases and a rachis fragments, and glume bases of *Triticum* sp. The non-cultivated species present include dock, and oats/brome grass. A fragment of an oat awn and large- and small-seeded grasses and indeterminate grasses along with a culm node were also recorded.

Four contexts from ditch 3057/3151 were examined. Context 3116 in ditch segment 3151 contained many finds and much charcoal. The plant remains include emmer glume bases, spelt grain spikelet forks and glume bases, and *Triticum* sp. grain, spikelet forks, and glume bases. Uncultivated species recorded included hazel nutshell, vetch/vetchling, sedge, and oat/brome grass. Context 3117 was immediately below 3116 and,

Table 119: Pomeroy Wood, identified plant species by phase

Phase	*2*	*3*	*4i*	*4i*	*unphased*
Triticum dicoccum grain		■	■	■	
sprouted grain		■	■		
spikelet forks	■	■	■		
glume bases	■	■	■	■	
rachis fragments			■		
T. spelta grain	■	■	■	■	
sprouted grain	■		■	■	
spikelet forks	■	■	■	■	
glume bases	■	■	■	■	■
rachis fragment	■		■	■	
T. aestivum grain	■	■	■		
Triticum sp. grain	■	■	■	■	■
sprouted grain			■	■	
spikelet forks	■	■	■	■	■
glume bases	■	■	■	■	■
rachis fragments	■	■	■	■	■
embryos	■	■	■	■	
Hordeum vulgare rachis fragments	■	■			■
grain	■	■	■	■	
Hordeum sp. awn fragments	■				
Avena sp. (cultivated)	■	■	■	■	
cf Panicum sp.	■				
Cerealia indet.	■	■	■	■	■
Cerealia coleoptiles	■	■	■	■	
Basal rachis fragments	■				
Linum usitatissimum		■			
Pisum sativum	■	■	■	■	
Vicia faba			■	■	
Pteridium aquilinum pinnules	■		■	■	
Ranunculus subgenus *Ranunculus*	■	■		■	
R. flammula			■		
Corylus avellana	■	■	■	■	■
Chenopodium album	■	■	■	■	
Atriplex sp.		■			
Montia fontana ssp. *chondrosperma*	■				
Stellaria media		■			
S. uliginosa			■		
Sagina sp.	■		■		
Geranium cf robertianum			■		
Persicaria maculosa	■		■		
P. lapathifolia		■	■		
Polygonum aviculare			■	■	
Fallopia convolvulus	■		■		
Rumex acetosella	■	■	■	■	
Rumex sp.	■	■	■	■	■
Polygonaceae indet.			■	■	
Brassica sp.		■			
Raphanus raphanistrum capsule fragments	■	■	■	■	
Erica tetralix leaves	■				
Calluna vulgaris leaves	■		■		
Filipendula ulmaria		■			
Prunus spinosa			■		
Potentilla sp.	■		■		
Rosaceae thorn			■	■	
V. tetrasperma	■				
V. cracca			■		

Table 119: (continued)

Phase	*2*	*3*	*4i*	*4i*	*unphased*
V. hirsuta			■		
Vicia/Lathyrus sp.	■	■	■	■	■
Trifolium sp.	■	■	■	■	■
Medicago lupulina			■		
Medicago sp.	■		■		
Oxalis acetosella				■	
Ilex aquifolium			■		
Conium maculatum				■	
Apiaceae indet	■	■			
Prunella vulgaris	■				
Rhinanthus sp.			■		
Plantago lanceolata	■	■	■	■	
Galium aparine			■	■	
Galium sp.		■			
Cirsium sp.				■	
Centaurea nigra			■		
Tripleurospermum inodorum	■				
Lapsana communis		■			
cf Picris hieracoides			■		
Asteraceae indet.			■		
Juncus effusus fruits	■				
Luzula campestris	■		■		
Eriophorum latifolium			■		
Eleocharis palustris	■		■	■	
Carex sp. (biconvex)	■			■	
Carex sp. (trigonous)	■		■	■	
Lolium sp.		■	■	■	■
Arrhenatherum elatius rootlets	■	■	■	■	■
Avena/Bromus sp.	■	■	■	■	
Avena sp. awn	■	■	■	■	
Danthonia decumbens	■	■		■	
Large Poaceae	■		■	■	
Small Poaceae	■	■	■	■	
Poaceae indet		■	■	■	
Culm nodes	■	■	■	■	
Poaceae internodes	■	■	■	■	
?	■	■	■		
Buds	■	■	■	■	■
Budscales					
Leaf fragments		■			
No. of categories	*59*	*49*	*71*	*50*	*13*
No. of samples	*17*	*10*	*44*	*24*	*2*

again, included spelt glume bases, and *Triticum* sp. grain, spikelet forks, and glume bases, with dock, oat/brome grass, and oat awn fragments. The other two contexts (3118 and 3119) also produced similar cereal remains to context 3116 with the addition of hulled barley and cultivated oats. Other species included buttercup, hazel nutshell, fat hen, dock, clover, and oat/brome grass (Table 117). The dumping of burnt crop-processing material or reworking of material in the ditches is again represented.

In general, the two main wheat species were recorded from the ditch samples, emmer and spelt, together with barley. The only other crop species was pea. The uncultivated species are usually found as weeds of crops and it can be therefore assumed that the two elements are related. The interpretation that fits all the contexts analysed from the ditches is that the charred plant assemblages indicate crop-processing waste which after being used as tinder has been dumped into the ditches.

Unphased

Two contexts were analysed for charred plant macrofossils, only one of which contained identifiable remains (Table 118).

Beam slot 3789

Context 3084 contained a small amount of spelt glume bases, *Triticum* sp. grain, spikelet forks, glume bases, and rachis fragments, and a barley rachis fragment, together with hazel, dock, vetch/vetchling, clover, and false oat-grass rootlets.

Table 120: Pomeroy Wood, identified weed species by habitat and number of species per habitat by phase

Phase	*2*	*3*	*4i*	*4ii*	*unphased*
Arable Habitats					
Ranunculus subgenus *Ranunculus*	■	■		■	
Chenopodium album	■	■	■	■	
Atriplex sp.		■			
Stellaria media		■			
Sagina sp.	■		■		
Persicaria maculosa	■		■		
P. lapathifolia		■	■		
Polygonum aviculare			■	■	
Fallopia convolvulus	■		■		
Rumex acetosella	■	■	■	■	
Rumex sp.	■	■	■	■	■
Polygonaceae indet			■	■	
Brassica sp.		■			
Raphanus raphanistrum capsule fragments	■	■	■	■	
Galium sp.		■			
Galium aparine			■	■	
Cirsium sp.				■	
Tripleurospermum inodorum	■				
Arrhenatherum elatius rootlets	■	■	■	■	■
Avena/Bromus sp.	■	■	■	■	
Avena sp. awn fragments	■	■	■	■	
Grassland Habitats					
Potentilla sp.	■		■		
Vicia tetrasperma	■				
V. cracca			■		
V. hirsuta			■		
Vicia/Lathyrus sp.	■	■	■	■	■
Medicago lupulina			■		
Medicago sp.	■		■		
Trifolium sp.	■	■	■	■	■
Prunella vulgaris	■				
Plantago lanceolata	■	■	■	■	
Rhinanthus sp.			■		
Centaurea nigra			■		
cf Picris heiracoides			■		
Luzula campestris	■		■		
Lolium sp.		■	■	■	
Large Poaceae	■		■	■	
Small Poaceae	■	■	■	■	
Poaceae indet		■	■	■	
Wetland Habitats					
Ranunculus flammula			■		
Montia fontana ssp. *chondrosperma*	■				
Stellaria uliginosa			■		
Filipendula ulmaria		■			
Conium maculatum				■	
Juncus effusus fruits	■				
Eleocharis palustris	■		■	■	
Eriophorum latifolium			■		
Carex sp. (biconvex)	■			■	
Carex sp. (trigonous)	■		■	■	

Table 120: (continued)

Phase	*2*	*3*	*4i*	*4ii*	*unphased*
Woodland/Scrub Habitats					
Corylus avellana	■	■	■	■	■
Prunus spinosa			■		
Ilex aquifloium			■		
Oxalis acetosella				■	
Geranium cf robertianum			■		
Lapsana communis		■			
Heathland Habitats					
Pteridium aquilinum pinnules	■		■	■	
Erica tetralix leaves	■				
Calluna vulgaris leaves	■		■		
Danthonia decumbens	■	■		■	
Miscellaneous					
Rosaceae thorn			■	■	
Culm nodes	■	■	■		
?	■	■	■	■	■
Buds	■	■	■		
Budscales		■			
Leaf fragments					
Habitat/no. of species per phase					
Arable	12	13	14	12	2
Grassland	10	6	16	7	2
Wetland	5	1	5	4	0
Woodland/scrub	1	2	4	2	1
Heathland	4	1	2	2	0
Total	32	23	41	27	5

Discussion

A total of 96 plant categories were identified, of which 28 were cultivated and 68 were non-cultivated. Phase 4i produced the highest number of categories (71) followed by phases 2, 4ii, and 3. Table 119 shows the presence/absence of categories for each phase.

Cultivated species

Wheat types were the dominant cereals in all four major phases (2–4ii), with spelt being the most common, represented by grain, spikelet forks, and glume bases in all phases, along with sprouted grain and rachis fragments in phases 2, 4i, and 4ii. Bread wheat grain was found in phases 2, 3, and 4i; emmer wheat grain in phases 3, 4i, and 4ii; sprouted grain in phases 3 and 4i, spikelet forks in phases 2, 3, and 4i; and glume bases in all phases, while rachis fragments were only found in phase 4i. Indeterminate wheat (*Triticum* sp.) was represented by grain, spikelet forks, glume bases, rachis fragments, and embryos in all four major phases, with sprouted grain in phases 4i and 4ii. Hulled barley was represented by grain in all phases, by rachis fragments in phases 2 and 3, and by an awn fragment in 2. Other cereal remains included what may be cultivated oats, which were present in all phases. Other cultivated species recovered from the contexts included flax from phase 3, Celtic field bean from phases 4i and 4ii and peas from all phases.

The dominant remains were cereals, with spelt wheat the major crop, followed by emmer. Hulled barley was only rarely recorded and the possibly cultivated oats were better represented than both the barley, flax and peas/beans.

Non-cultivated species

Fourteen categories were common: hazel, fat hen, sheep's sorrel, dock, wild radish, vetch/vetchling, clover, ribwort plantain, false oat-grass, oats/brome grass, oat awn fragments, small-seeded grasses, culm nodes, and grass stem fragments.

The majority of the non-cultivated categories can usually be found growing in arable or disturbed environments, suggesting that they are associated with the cereal remains (Table 120). Most seeds of the weed species have a similar size in at least one dimension to the crops, which suggests that the assemblages represent the final stages of crop-processing after the cereals had been stored as semi-cleaned spikelets. It is considered likely that the crops were grown locally and processed off-site until the later stages of crop-processing. They were then brought to Pomeroy Wood where they were stored until required and the final stages of cleaning took place piecemeal. There are, however, some categories that are unlikely to derive from crop-processing, suggesting that the detritus from a number of different activities may be present in some contexts. The presence of hazel nutshell throughout the occupation of the site may suggest that this species continued to be used as a wild food resource.

Although there is some variation in the species present in each of the phases, they represent a generally similar habitat, suggesting that there was little change in the species cultivated in the area. As there are no indicators of different soil types being used as there was for the sites of prehistoric dates examined in the course of the project, it is possible that there was no expansion of the areas cultivated during the Roman period.

Habitats

Table 120 shows the presence/absence of non-cultivated species and the habitats in which they can be found, though as Tables 102–18 show, the weed species are recorded in low numbers. Five types of habitat appear to be represented; arable, grassland, wetland, woodland/scrub, and heathland. Some of the species designated to certain habitats can also occur in others, but what is considered to be the most likely source of each species has been chosen in each case. The arable habitat is the most common with 21 taxa. The second most common is grassland, followed by wetland, woodland/scrub, and heathland respectively. Phase 4i contained the highest total number of taxa, followed by phases 2, 4ii, and 3.

Arable: Although not all of the taxa were found in all phases, perhaps as a result of taphonomic processes, it can be seen from Table 120 that there appears to be little change through time. Most species are general indicators of arable habitats, with none showing any preferences for different soil conditions or any other environmental variable.

The majority of the 21 taxa have seeds that can be considered to be large. During crop-processing these seeds would be retained with the cereal crop and only removed at the final stages of processing, usually just before preparation for consumption. This suggests that the crops were stored either as semi-cleaned spikelets or as near-clean spikelets. It is most likely that the majority of the processing was carried out off-site.

Some of the seeds from this habitat are small-seeded, e.g. pearlwort, sheep's sorrel, and scentless mayweed. However, these seeds may have been part of larger body, i.e. pearlwort may have originally been present as capsules, sheep's sorrel may have been enclosed within its perianth, and scentless mayweed may have been part of a seed head, all of which would have been a similar size to the crop being processed. It is only in the process of charring that these larger bodies were destroyed and the smaller seeds left intact.

Grassland: Eighteen taxa of grassland habitats were recorded (Table 120) and, although not all of them occur throughout, little or no change in the habitat is indicated. In general, the species indicate a rough grassland which could have been present bordering the fields and in the area surrounding Pomeroy Wood. The association of this habitat type with the cereals can be explained by their incorporation with the crop harvested at the edge of the field or with a secondary source such as hay, which has become mixed at the time of deposition. It is difficult to decide which reason is the more likely but it may be safe to assume that this habitat type was incorporated at the time of harvest as most of the species present can tolerate some disturbance, and can be found growing at the edge of cultivated land today, especially if they are protected by hedges.

Wetland: Nine taxa representing wetland habitats were recovered, mainly from phases 2, 4i, and 4ii (Table 120). Most grow in a wide variety of habitats. Meadowsweet, hemlock, and common spike-rush are often found in ditches or close to areas of standing water, whilst lesser spearwort, bog stitchwort, soft rush, and sedges can be found at the water's edge. It is possible that these species represent a part of the flora growing in and at the edge of the ditches on the site. Another possibility is that the crops may have been grown in areas where the water table was high, perhaps close to the River Otter and its tributaries, creating waterlogged conditions, and the wetland species may have become incorporated with the crops during harvesting.

The presence of blinks suggests that some areas had muddy bare patches, which could coincide with the tops of ditches or arable fields. One species, broad-leaved cotton grass, is usually associated with marshy areas and may, in fact, be part of the heathland/moorland component of the assemblages.

Woodland/scrub: Six taxa were recovered. As only hazel occurred throughout, it may represent the continuing use of a wild food resource. It is most likely that the other species (Table 120) were part of the fuels used on site. The presence of wood sorrel and herb-robert is less easily explained.

Heathland: The bracken, cross-leaved heath, and ling may represent the remains of bedding, flooring, or roofing. Another possible, though remote, source is that they were part of turves that were used as a roofing material or to face the ramparts of the military base, or were burnt as fuel. Heath grass can also be found in arable fields but the small numbers found suggest that it is most likely to have been derived from its primary habitat. The heathland habitat, which is also attested amongst the charcoals, may have been present in the locality or slightly further afield, e.g. the upland heathlands to the south or the Blackdown Hills to the north but, in the absence of pollen diagrams from the vicinity, it is not possible to determine the likely location.

The charred plant assemblages are dominated by cereal remains, of which the commonest is of spelt grain and chaff, with emmer and oats also being present. Other crops include barley, which is not present in large quantities, flax, peas and beans. The weed assemblages are dominated by species that are associated with arable conditions.

Overall, the charred plant assemblages from all of the contexts analysed from phase 3 correspond to a phase of dumping/backfilling. The plant remains from well 3047 are ascribed to phase 2 as it is not known exactly when during the use of the military base the well went out of use, but the materials from context 3087 suggest that animal bedding had been burnt and dumped in the well.

The assemblages from Pomeroy Wood compare favourably with the rather small number of analyses in the area. The settlement at Hayes Farm, Clyst Honiton produced cereal, chaff, and grassland weeds, with spelt the dominant cereal. As at Pomeroy Wood there was a small amount of barley and oats were common (Pearson 1989). A similar flora was recovered at Woodbury Great Close (Straker and Jones 1993) where spelt wheat was the most common cereal, with some emmer. Barley was again present but only in small numbers.

The assemblages at Pomeroy Wood are also typical of those from the Romano-British period as a whole,

with spelt and barley being the main crops, with some emmer and bread wheat (Greig 1991). Although flax was present it was not recorded in large quantities, as were peas and beans, suggesting that these crops were not as important as the cereals. The lack of non-arable weeds makes it difficult to determine what types of habitat were exploited in the region around the site. It is possible, however, to say that the crops were grown locally and that grassland and scrub, and perhaps some heathland, were present in the vicinity.

The supply of the military base

The archaeobotanical evidence for the Roman military diet has been examined at a series of sites in Britain, including sites such as the Flavian fort at Elginhaugh, Midlothian (Hanson in prep.), the late 1st–2nd century warehouses in Coney Street in the legionary fortress of York (Williams 1979), and the 3rd–4th century supply base at South Shields, Tyne and Wear, where the majority of the remains were found between the walls of the stone built granaries (van der Veen 1988; 1994, 243-58). The majority of the cereal remains from both York and South Shields are spelt wheat, with bread wheat and a little barley (Greig 1991). Van der Veen (1988; 1994) suggests that the spelt wheat at South Shields was grown locally, whilst the less abundant bread wheat was probably imported to the site, though from where is not known. At least some of the wheats from York may have come from continental Europe. Spelt wheat, mainly represented by chaff, dominated the waterlogged materials from the defensive ditch of the legionary fortress at Exeter and with which the base at Pomeroy Wood is, in part, contemporary (Straker *et al.* 1984).

As might be anticipated this pattern is not entirely consistent across the British Isles. At Elginhaugh a Flavian auxiliary fort, with which the base at Pomeroy Wood is also partly contemporary, was almost entirely excavated (Hanson in prep.). The main cereal recovered was barley, with some spelt wheat also present. The predominance of barley at this site is unusual and may be explained in one of two ways. The dominance of barley may be due to the local environment, with conditions being more suitable to the growing of barley than wheat. The second possibility is that the greater amounts of barley suggest another function for the cereal, such as animal feed rather than for human consumption. The second explanation may be the more likely, as Dickson (1989; forthcoming) has noted that spelt occurred everywhere in Scotland, that emmer was also present and that barley and the other cereals were a minor element. Barley may also have been grown as a crop for fodder in the early Flavian phase (80s AD) at Loughor, West Glamorgan, though spelt was again the single most important crop (Probert 1997).

The assemblage from Pomeroy Wood suggests that the major cereals were grown locally. The lack of small weed seeds, which is usually taken to indicate local production, can be explained by the fact that these stages of crop-processing were carried out off-site and only semi-cleaned spikelets were brought onto site. These would then be stored and the final stages of processing carried out piecemeal. Some species though, for example the millet caryopses from the outer defensive ditch (if they are not from wild grasses), and perhaps the waterlogged coriander from well 3047

Table 121: Pomeroy Wood, identified plant species in the inner defensive ditch 748 by phase

Phase	*2*	*3*	*4ii*
T.dicoccum spikelet forks	■		
glume bases	■		■
T. spelta grain	■	■	■
spikelet forks		■	■
glume bases	■	■	■
rachis fragment			■
T. aestivum grain		■	
Triticum sp. grain		■	■
spikelet forks	■		■
glume bases	■	■	■
rachis fragments			■
Hordeum vulgare rachis fragments	■	■	
grain	■		
Avena sp. (cultivated)			■
cf Panicum sp.	■		
Cerealia indet.	■	■	■
Cerealia coleoptiles		■	
Linum usitatissimum		■	
Pisum sativum	■		■
Ranunculus subgenus *Ranunculus*	■		
Corylus avellana	■	■	■
Chenopodium album	■	■	
Persicaria maculosa	■		
P. lapathifolia		■	
Rumex acetosella	■	■	
Rumex sp.	■	■	■
Polygonaceae indet			■
Vicia/Lathyrus sp.			■
Trifolium sp.	■	■	
Apiaceae indet		■	
Prunella vulgaris			
Plantago lanceolata	■		
Galium aparine			■
Lapsana communis		■	
Arrhenatherum elatius rootlets	■	■	
Avena/Bromus sp.		■	■
Avena sp. awn			
Large Poaceae			■
Small Poaceae	■	■	■
Poaceae indet			■
Culm nodes	■		■
Poaceae internodes	■		■
?	■		
Buds	■		
Leaf fragments		■	
No. contexts	*5*	*4*	*2*
No. categories	*25*	*22*	*25*

Table 122: Pomeroy Wood, identified plant species in the outer defensive ditch 3057, by phase

Phase	*2*	*3*	*4i*	*4ii*
Triticum dicoccum grain		■		
sprouted grain		■		
glume bases		■		■
T. spelta grain		■		■
spikelet forks		■		■
glume bases	■	■	■	■
Triticum sp. grain		■		■
spikelet forks		■		■
glume bases	■	■	■	■
rachis fragments		■		
Hordeum vulgare rachis frags		■		
grain		■		■
Avena sp. (cultivated)				■
Cerealia indet. charred	■	■	■	■
Ranunculus subgen. *Ranunculus*				■
Corylus avellana		■		■
Chenopodium album				■
Stellaria media		■		
Sagina sp.	■			
Rumex acetosella	■			
Rumex sp.		■		■
Brassica sp.		■		
Calluna vulgaris leaves	■			
Vicia/Lathyrus sp.		■		■
Trifolium sp.		■		■
Plantago lanceolata		■		
Galium sp.		■		
Tripleurospermum inodorum	■			
Lapsana communis		■		
Carex sp. (trigonous)				■
Arrhenatherum elatius rootlets	■	■		
Avena/Bromus sp.		■	■	■
Avena sp. awn		■		■
Danthonia decumbens		■		
Small Poaceae	■	■		
Poaceae indet		■		
Culm nodes	■	■		
Poaceae internodes		■		
Buds				■
No. contexts	*2*	*4*	*1*	*4*
No. categories	*10*	*30*	*4*	*20*

which may have been used for flavouring food, were introduced to the site.

A comparison between the assemblages in defensive ditches 748 and 3057

Although ditch fills are not necessarily the ideal context from which to examine charred plant remains, the fills of the defensive ditches of the military base do provide a stratigraphic sequence that spans much of the Roman period. This provides the clearest opportunity to examine any changes through time in the charred plant remains at Pomeroy Wood. The presence of the charred plant remains within the ditches is either due to deliberate dumping (and the continued dumping of material) or the redeposition of material either by wind or run-off.

Phase 2 represents the garrisoning of the military base, phase 3 its deliberate slighting and abandonment, and phase 4 the succeeding civil settlement. The civil occupation was considerably more intensive in phase 4i, which dates to the 2nd–3rd centuries, than in phase 4ii which is of 3rd–4th century date. It should be borne in mind that the phase 3 fills are largely represented by the slighting of the earthen rampart which was used to backfill the ditches.

Inner defensive ditch 748: Eleven contexts were analysed for charred plant remains, five from phase 2 which is the occupation of the military base, four from phase 3, and two from phase 4ii (Table 121). The number of categories per phase was similar, with phase 2 and 4ii both yielding 25 categories, and phase 3, 22 categories. The relationship between the non-cultivated and cultivated species was also similar through all the phases (Table 119). Cereal remains were found in all phases and the dominant wheat was spelt. Emmer wheat was found in phases 2 and 4ii, although no grains were recovered, and bread wheat was only recovered from phase 3. Other cultivated species recovered were peas in phases 2 and 4ii and flax in phase 3.

Twenty-four non-cultivated plant species were found. The only common species found in all phases were hazel, dock, and small-seeded grass. In general, the non-cultivated species are representative of arable/disturbed conditions and they are most likely to have been associated with the cereal remains.

Outer defensive ditch 3057: Eleven contexts were examined, two from phase 2, four from phase 3, one from phase 4i, and four from phase 4ii. The number of categories per phase varied, with four from phase 4i, 10 from phase 2, 20 from phase 4ii, and 30 from phase 3. Table 122 shows the presence/absence of categories for each phase.

Spelt and emmer wheat were found in all four phases; other cereals included hulled barley grain, in phases 3 and 4ii, and a possible cultivated oats in phase 4ii. No other crops were recovered from these ditch contexts.

None of the non-cultivated species was found in all four phases. With the exception of ling and sedges, all species are of cultivated/disturbed ground and are most likely to have been be associated with the crops. The ling leaves and sedge nutlets suggest that a moorland/heathland habitat was exploited, perhaps to provide bedding for animals; another possibility is that some of the crops were grown close to the heathland edge and became incorporated with the crop at harvest. If there is a separate origin for the heathland plants it can be assumed that there has been some mixing of the assemblage.

As with the inner defensive ditch, most of the assemblages represent the final stages of crop processing with the cereals being stored as semi-cleaned spikelets. The lack of variation in terms of habitats represented and cereals grown between phases again suggests that the cereals were grown by the local population and then brought onto site in a semi-cleaned state.

Conclusion: There appears to be few differences between the phases of occupation of the site, suggesting that there was no real change in the economy of the area during the occupation of the site. While this conclusion may in part be due to the nature of the ditch contexts, it would appear that most of cereals that the garrison(s) of the Roman military base required were acquired locally or, if not, from environs which are not distinguishable from them, perhaps further to the east.

Charcoal, by Rowena Gale

Charcoal occurred in a wide range of contexts in the Roman phases and in common with most other plant remains the charcoal at Pomeroy Wood was well preserved and usually very abundant. The charcoal residues, mainly from domestic and industrial fuel, provide evidence of the woodland environment of east Devon during the Roman period. Features from which charcoal was studied were specifically selected to indicate the use and possible management of woodland resources. A total of 106 samples was examined (Table 123–5).

Materials and methods

The same methods were used as for the other sites examined in the project (Appendix 7). Most samples included relatively large amounts of charcoal (i.e. >50 fragments measuring >2 mm square in cross-section). The charcoal was generally well preserved and firm. Some particularly large samples were sub-sampled as follows: 50% sub-sample – 1508, 1731, 4301, 1228, 1270, 4593, 1197, 1809, 1490, 1264, 1370, 1287, 1160, 3675, 1096, 1678, 1410, 1530, 1238, 1286, and 1402; 25% sub-sample – 1230, 1482, and 1277. Measurements of roundwood diameters were recorded where possible; it should be noted that when living these dimensions would have been up to 40% wider.

The results of the analysis are shown with contextual details in Tables 123–5 and the taxa identified are listed below:

Aceraceae. *Acer* sp., maple
Aquifoliaceae. *Ilex* sp., holly
Betulaceae. *Alnus* sp., alder; *Betula* sp., birch
Caprifoliaceae. *Sambucus* sp., elder
Corylaceae. *Corylus* sp., hazel
Fagaceae. *Quercus* sp., oak
Leguminosae. *Ulex* sp., gorse or *Cytisus* sp., broom (these genera are anatomically similar).
Oleaceae. *Fraxinus* sp., ash
Rosaceae: Pomoideae which includes *Crataegus*, hawthorn; *Malus*, apple; *Pyrus*, pear; *Sorbus*, rowan, service tree and whitebeam. These genera are anatomically similar.
Prunoideae *Prunus spinosa*, blackthorn
Salicaceae which includes *Salix* sp., willow, and *Populus* sp., poplar. These genera are anatomically similar.
Ulmaceae. *Ulmus* sp., elm

Phase 2 (1st century AD military base)

Seventeen samples were analysed from phase 2 contexts. The results are presented in Table 123.

Inner defensive ditch 748

The sample from the primary fill (3028) of ditch 3019 (Table 123) included oak heartwood and narrow roundwood (diam. 5 mm), ash sapwood, hazel, birch, and willow/poplar. Oak sapwood and heartwood, hazel, and willow/poplar were also identified from the secondary fill of the western section, 744 (context 3266), with, in addition, gorse/broom and the hawthorn group.

Building 4725

Charcoal was examined from post-holes and slots to identify structural components but, since most proved to consist of multiple species, it was more likely to have been hearth debris (see below). This suggestion was endorsed by the frequent inclusion of other materials such as pottery, burnt clay, and charred cereal grains and chaff. A sample from the upper fill of a north–south slot 4598, possibly a repair of the east wall of the building (context 4597) included oak heartwood and narrow roundwood, birch, hazel, hawthorn type, and some unidentified bark. The sample from the fill of post-hole 3488 contained mostly oak sapwood and heartwood but also birch, hazel, ash sapwood, alder, blackthorn, and gorse/broom. Feature 3971 contained a large amount of charcoal, most of which was too fragmented to identify but that which was consisted mainly of oak sapwood, and birch roundwood. The diameter of the birch was estimated at 20 mm and most pieces included three wide growth rings. Ash, sapwood and heartwood, hazel, hawthorn type, and willow/poplar were also identified.

Tower 4724

Post-hole 3591 formed part of the later interval tower; charcoal occurred throughout, both above and below the packing stones. Handpicked charcoal from the upper fill (3383) consisted of thick (unidentified) bark, probably from a fairly mature tree. The sample from the post-hole included oak sapwood and heartwood, alder, willow/poplar, blackthorn, birch, and hawthorn type. In addition, three pieces of ash roundwood were present; two with diameters of 15–20 mm and three wide growth rings, while the third included seven rings.

Post-hole 4307 contained a mass of what appeared, on excavation, to be charred degraded material from the post. Subsequent examination suggested fuel debris as more likely. The taxa identified included oak roundwood, sapwood and heartwood, ash, birch, and alder. However, a large volume of charcoal in the upper fill of post-hole 4366 of the tower consisted of oak sapwood, with some pieces measuring up to 20 mm in width and probably from a fairly wide, fast-grown pole/s. It is feasible that this represents the burnt remains of a post, perhaps from one of the main structural components of the building. The wood appeared to have been in good structural condition prior to burning, i.e.

Table 123: Pomeroy Wood, charcoal from phase 2 and 3 contexts (no. identified fragments)

Feature / section	*Context*	*Sample*	*Ac*	*Al*	*Bet*	*Cor*	*Fx*	*Il*	*Pom*	*Pru*	*Quer*	*Sal*	*Sam*	*U/C*
Phase 2														
Defensive ditch 748														
3019	3028	1208	–		3	2	6s	–	–	–	9rh	1	–	–
744	3266	1405	–	–	–	2	–	–	1	–	5sh	1	–	1
Building 4725 / Tower 4724														
4598	4597	1754	–	–	7	1		–	2	–	24rh	–	–	
3488	3489	1377	–	1	6	6	5s	–	–	3	45sh	–	–	2
3591	3588	1501	–	21	4	–	4r	–	1	10	27sh	8	–	–
4307	4308	1602	–	6	4	–	2	–	–	–	30sh	–	–	–
4366	4202	1631	–	–	–	–		–	–	–	110s	–	–	–
3971	3972	1508	–	–	21	4	3sh	–	2		24s	3	–	–
	3383	HP	unidentified bark											
Grain drier 4123 (phase 4i layers)														
4123	4126	1572	–	–	1	1	–	–	–	–	134rsh	–		–
	4129	1580	–	–	–	–	–	–	–		7sh	–	–	1
Gully 4301 / building 4731														
	4298	1592	–	–	–	–	–	–	–	–	78sh	–		–
Well 3047														
3046	980	HP	–	1r	–		–	–	–	–	–	–	–	–
3047	3087	1230	–	5r	16	31r	2r	–	2	–	52rh	–		
	3087	HP	–	1r	–	–	–	–	–	–	1r	–	–	–
Pit 4498														
	4547	1731	–		–	–		–	–	–	43s	–	–	–
	4544	HP	–		–	–		–	–	–	1s	–	–	–
Phase 3														
Defensive ditch 748														
916	984	1089	–		1	2		1	–	1	21rh	–	–	–
3257	3241	1421	–	–	–		–	–	–	2	3sh	–	–	–
Defensive ditch 3057														
3151	3122	1332	–	–		2	1s		–	–	12sh	–	–	–
3342	3378	1270	–	–	12	9r	–	–	–	–	29r	–	–	–
958	960	1228	–		–	21r	1h	–	–	1	15r	–	–	–
817	3261	1433		–	–	2	–	–	1	?1	7sh	–	–	
Outwork / annexe ditch 4715														
785	780	1380	6	13r	8	–	2s	–	–	1	24sh	–	–	–

Key: Ac = Acer; Al = Alnus; Bet = Betula; Cor = Corylus; Fx = Fraxinus; Il = Ilex; Pom = Pomoideae; *Pru = Prunus spinosa; Quer* = *Quercus*; Sal = Salicaceae; *Sam = Sambucus; U/C = Ulex / Cytisus*
r = roundwood (diam. < 20 mm); s = sapwood; h = heartwood; HP = handpicked charcoal

no evidence of insect or fungal attack. This could suggest that the structure/ building had been destroyed by fire while still relatively intact. Sound structural timbers would probably have been re-used rather than burnt unless the intent was to destroy them in the slighting of the base.

Grain drier 4123
Charcoal from the upper (phase 4i) ash layer in feature 4123 probably resulted from the last phase of its use. The fuel from context 4126 was almost entirely of oak roundwood, sapwood, and heartwood, with small quantities of birch and hazel. The use of oak would be consistent with high temperature firing, particularly if charcoal was used. Handpicked pieces of charcoal from context 4129 were initially thought to be part of the superstructure but overall charcoal was comparatively sparse. It included small fragments of oak sapwood and heartwood, and gorse/broom which could also be anticipated in fuel deposits.

Gully 4301 / 4731
The charcoal from the foundation trench of this building (context 4298) was oak sapwood. The proximity of this

building and pit 4498 (below) and the similarity of the charcoals from them suggest a common association or origin for the residues.

Pit 4498
The large volume of charcoal (context 4547) consisted entirely of oak sapwood as was a piece of handpicked charcoal (context 4544). When compared with charcoal from most other contexts on the site (which included multiple taxa) it seems likely that this derived either from some activity for which oak was specially selected, or from a single structural component.

Phase 3 (abandonment of the military base)
Samples from seven phase 3 contexts were analysed for charcoal remains (Table 123).

Inner defensive ditch 748
Charcoal from two sections of the ditch was examined. Charcoal from 916 in the south-west corner of the ditch consisted of oak roundwood (e.g. diam. 15 mm, six growth rings), sapwood and heartwood, also hazel, blackthorn, birch and holly. A smaller sample from section 3019 in the south-east corner of the ditch, consisted of oak sapwood and heartwood, and blackthorn.

Outer defensive ditch 3057
Charcoal was particularly abundant in the two western sections of the outer defensive ditch and included a high proportion of roundwood. Backfilling probably incorporated any handy material, including discarded fuel debris. It is possible that the charcoal represents the remains of hurdles, etc., used in or near the ramparts, perhaps as part of the superstructures associated with the walkway or towers although the principle timbers and planking would undoubtedly have been much more substantial. Four sections were sampled at intervals from west to east.

A high proportion of fragmented roundwood was recorded from samples from contexts 960 and 3378. These included hazel (e.g. diam. 10 mm, three growth rings), oak (e.g. diam. 10 mm, two growth rings), blackthorn, ash and birch.

Oak, sapwood and heartwood, and hazel were identified from the upper fill of section 3151 (context 3122) and from the south-eastern corner, section 817 (context 3261); and, in addition, ash sapwood in section 3151, and hawthorn type and possibly blackthorn from 817.

Outwork/annexe ditch 4715
The charcoal from the ditch consisted of oak sapwood and heartwood, alder roundwood, ash sapwood, maple, birch and blackthorn. It is possible that some or all of this discarded fuel may have resulted from smithing waste.

Phase 4i (2nd–3rd century occupation)
A total of forty-five charcoal samples from phase 4i contexts was examined (Table 124).

Round-house 3415
Round-house 3415 (Table 124) was built over the infilled defensive ditches and while charcoal was recovered from the drip gully and several internal features including hearths, some of it may be redeposited.

Domestic waste appears to have accumulated in the outer ring of the round-house, as indicated by deposits of charcoal (context 3510), probably from fuel debris. Charcoal mostly consisted of oak, sapwood and heartwood, but also hazel, ash, blackthorn, hawthorn type, alder, willow/poplar, holly, and possibly birch.

Hand-picked charcoal from the inner gully 4727, which secured the walls, included three large wedges of alder roundwood. Although incomplete, it was evident that the roundwood (possibly from a single piece) measured at least 60 mm in diameter (with 14+ growth rings), and would probably have been 100+ mm when freshly felled – sizeable enough to have provided hefty poles for structural elements.

The upper fill of hearth 4134 (context 4135) inside the round-house contained large fragments of charcoal, predominantly oak, sapwood and heartwood, but also hazel, birch, blackthorn, holly, and gorse/ broom. With the exception of hazel and holly, charcoal residues (context 4139) from the lower fill of the hearth, were more or less similar. Fuel evidently consisted of oak, probably from roundwood or billets wide enough to have developed heartwood. This was supplemented by wood from numerous other species.

Charcoal was identified from several post-holes within the building. Oak was dominant in all contexts. In addition to oak the following taxa were identified. In post-hole 3486: hazel, and ash. In post-hole 4208: blackthorn, hazel, alder, maple, and gorse/broom. In post-hole 4214: birch and hazel. The similarity of this material to fuel residues from the hearth 4134 suggests a common origin.

Charcoal from the fill of the north-west inner ring gully segment consisted mostly of oak sapwood and heartwood; other taxa included hazel, alder, birch, willow/poplar, hawthorn type, ash, holly, and gorse/ broom.

The fill of a slot 4695, sited between round-houses 4642 and 3415 contained pottery, slag, and charcoal. Taxa identified included oak sapwood and heartwood, birch, alder, ash, willow/poplar, gorse/broom, and hawthorn type.

Other round-houses
Charcoal was examined from the fills of gullies 4655 and 4643 of round-house 4642. The charcoal was similar in character to that from the adjacent round-house and it seems reasonable to also attribute these deposits to local (?domestic) fuel refuse. Oak sapwood and heartwood (predominantly), hazel and ash were common to both contexts. In addition, fill of the outer gully 4643 included blackthorn, and hawthorn type; and fill of inner gully 4655 included alder.

The charcoal residues from the fill of curvilinear ring ditch 4063, round-house 4103 (context 4062) and from the fill of hearth 4110 (context 4109), probably from spent fuel, were very comparable to those from other round-houses (e.g. 3415 and 4642). Oak predominantly, but also willow/poplar and hazel were common to both samples. In addition, birch, and ash were identified in ring ditch 4063 and maple, hawthorn type, and blackthorn in hearth 4110.

Table 124: Pomeroy Wood, charcoal from phase 4i contexts (no. identified fragments)

Feature/ section	*Context*	*Sample*	*Ac*	*Al*	*Bet*	*Cor*	*Fx*	*Il*	*Pom*	*Pru*	*Querc*	*Sal*	*Sam*	*U/C*	*Ul*
Round-house 3415															
3509	3510	1339	–	1	?1	12	10	1	2	2	67sh	1		–	–
3550	3351	HP	–	3r	–	–	–	–	–	–	–	–	–	–	–
4134	1435	1550	–	–	12	10	–	6	–	1	65sh		–	3	–
4138	4139	1152	–	–	6	–	–	–	–	3	33sh		–	1	–
3486	3487	1312	–	–	–	4	4	–	–	–	22sh		–	–	–
4208	4209	1557	1	2		–	4	–	–	1	51sh	–	–	1	–
4214	4215	1559	–	–	1	1	–	–	–	–	31sh	–	–	–	–
4693	4694	1809		1	2	10	3	1	1	–	52sh	1	–	2	–
4695	4696	1810		4	1	–	2	–	2	–	20sh	1	–	1	–
Round-house 4642															
4646	4647	1763	–	–	–	19	2	–	1	1	33sh	–	–	–	–
4658	4659	1768	–	3		2	1	–	–	–	34sh	–	–	–	–
Round house 4103															
	4062	1539	–	–	4	6	1	–	–	–	35rsh	2	–	–	–
	4109	1563	1	–		1	–	–	2	1	33sh	1	–	–	–
	4060	1538	1	–	24r	27	–	1	5	–	14sh	3	–	–	–
Round-house 3671															
3720	3721	1302	–	1	–	3	–	–	–	–	26rsh	–	–	–	–
3670	3669	1156	–	–		–	–	–	–	–	23r	16	–	22r	–
Round-house 3724															
4736	3763	1290	–	–	–	10	1s	–	–	–	21s	1	1	–	–
Round-house 3053															
3071	3072	1197	–	–	1	25	21s	–		–	34rsh	4	–	4	–
Ditch 103															
	101	HP	–	–	–	3r		–	–	–	2r	1r		1r	–
Ditch 4085															
4406	4405	1663		–	–	12	1	–	1	–	42sh	–		–	–
	4405	HP	–	–	–	–	–	–	–	–	1s	–	–		–
4085	4593	1748	–	6	2	1	1	–	–	1	76rsh	3	–	3	–
Ditch 4720															
3407	3405	1232	–	10	8	5r	1	–	3	6	34rh	–		–	–
	3406	HP	–	1	–	–		–	–	–	–	–		–	–
Ditch 3265															
	3102	1224	–	–	–	5	36s	–	–	–	42rsh	3	–	1	–
3105	3104	1235	–	–	3	–	1s	–	–	–	33rh	–	–	8r	–
Grain drier 3145															
	3147	1287	–	–	–	12	–	–	–	3	46rs	–	–	3	–
Structure 3042															
3043	3044	1552		–	–	–	1	1	–	1	28sh	–		–	–
Pit 3159															
	3157	1277	–	–	–	–		–	–	–	118r	–	–	–	–
Ditch 4711															
3926	3925	1490	–	12	2	–	2	–	–	–	63sh	–	–	2	–
Working hollow 4706															
	3786	1340	–	–	4	1	4	–	1	1	12sh	–	–	–	2
	986	HP		–	–	2r	–	–	–	–	1r	–	–	–	–

Table 124; (continued)

Feature / Context		*Sample*	*AC*	*Al*	*Bet*	*Cor*	*Fx*	*Il*	*Pom*	*Pru*	*Querc*	*Sal*	*Sam*	*U/C*	*Ul*
section															
Grain drier 913															
3666	3676	1160	–	–	5	3	..	..	–	1	72rh	2	..	–	–
913	3608	1112	–	12	.	..	–	–	–	–	13rsh	51	–	–	–
3618	3675	1159	–	–	5r	21r	–	–	–	–	105r	2r	–	1	–
Oven 988															
	3739	1264	–	–	1	10	4r	.	4r	12r	41rs	2r		16r	–
Well 920															
	4621	1813	1	.	1	1	2	–	1	–	40sh	–	–		.
Well 3791															
	3798	1370	–	1	2	6	–	1	..	–	42sh	1	–	1	..
Cess pit 819															
	970	1080		–	6	8	3	2	..	4	47rsh	1		–	–
	978	1084		–	–	15r	–	..	.	–	43rsh	–		–	–
	3049	1133	.	..	–	3	–	–		–	15rsh	–	–	.	–
Spreads over building 4725															
	3388	1274	–		–	15	5s	–	..	1r	53sh	–	–		..
	769	HP	bark, probably modern												
	3387	HP	–	–		–	–	–	–		1r	–	–	–	
Defensive ditch 3057															
	3118	HP	–	–	–	..		–	–	–	1s	..	–	–	–

For key see Table 123. *Ul* = *Ulmus*

Charcoal rich deposits were found in the basal fill of pit 4061 which round-house 4103 was built over. The pit is ascribed to phase 4i, but the possibility that it was associated with the military occupation cannot be excluded. Numerous taxa were identified including oak, sapwood and heartwood, birch roundwood (e.g. diam. 40 mm, eight+ growth rings), hazel, maple, willow/ poplar, holly, and hawthorn type.

Charcoal from the fill of gully 4730, round-house 3671 (context 3721), consisted mostly of oak roundwood (e.g. diam. 7 mm, four growth rings), sapwood and heartwood but also some alder and hazel. A large pit 3670, lying immediately outside the gully, contained a single fill. The function of the pit is unknown but a dense patch of charcoal in it (context 3669) consisted mainly of fragments of narrow roundwood, measuring up to 15 mm in diameter and identified as oak, gorse/broom, and willow/poplar.

The fill of outer gully 4736 (segment 3764) of round-house 3724 contained oak sapwood, hazel, ash, willow/poplar, and elder. A sample (context 3072) from the northern terminal 3071 of the round-house ditch 3053 included a large amount of poorly preserved oak roundwood (e.g. diam. 10 mm, three growth rings), sapwood and heartwood, hazel, ash, birch, willow/poplar, and gorse/broom. It seems likely that the deposit accrued from general (fuel) debris.

Ditches

The charcoal-rich upper fill (4405) of segment 4406, ditch 4085 (Table 124) included oak, mostly sapwood, which was frequent. Other taxa included hazel, ash, and hawthorn type. Handpicked charcoal from the same area consisted of a wedge of oak sapwood with a radius of 20 mm and 21 growth rings; the early rings were wide and characteristic of timber from managed woodland. Fill 4593 from the eastern end of the ditch included ashy material, charcoal, and fired clay. The charcoal (context 4593) was mainly oak roundwood, sapwood, and heartwood but also included alder, birch, hazel, ash, willow/poplar, and gorse/broom.

Nine handpicked pieces of charred roundwood (context 101) from ditch 103, included hazel, ranging from 10–15 mm in diameter, with 6–10 growth rings; oak, diam. 15 mm, five growth rings; willow/poplar, diam. 25 mm, five wide growth rings; and gorse/broom, diam. 10 mm.

Charcoal was particularly rich on the west side of ditch 4720 where a dark layer suggested localised burning. Taxa identified included oak roundwood (e.g. diam. 10 mm, eight growth rings) and heartwood, alder (including a handpicked piece from 3406), birch, hazel, ash, hawthorn type, and blackthorn.

Charcoal from ditch 3265 (context 3102) was mainly oak roundwood (e.g. diam. 12 mm, five growth rings), sapwood and heartwood, and ash sapwood. Smaller quantities of hazel, willow/poplar, and gorse/broom were also identified. Charcoal excavated from an upper fill (context 3104) included fast-grown oak roundwood (e.g. diam. 10 mm, three growth rings) and heartwood. Also present were ash, birch, and gorse/broom.

Charcoal from the fill of gully 3042 (context 3044) was fairly abundant but rather comminuted. Oak sapwood and heartwood predominated over small amounts of ash, blackthorn, and holly. Charcoal from ditch 4711 (context 3925) was frequent but poorly

preserved and included oak sapwood and heartwood, alder, birch, ash, and gorse/broom.

Grain drier 3145
The fill of the flue from the bowl (context 3147) contained spent fuel deposits. Oak roundwood (e.g. diam. 20 mm, five growth rings), sapwood, and heartwood was most frequent, but blackthorn, hazel, and gorse/broom were also recorded.

Pit 3159
The secondary fill of the pit (context 3157) consisted of a dense layer of charcoal which appeared to have been thrown into the pit. The charcoal was composed of fragmented oak roundwood and some pieces still retained bark. The roundwood was relatively fast-grown particularly in the early years, and characteristic of coppice growth. Some diameters equalled 20 mm and included 13 growth rings. Although the exact use of this fuel is unknown, the evident preference for oak roundwood in favour of other species suggests an activity that required good quality, high energy fuel, rather than, for example, a domestic hearth or bonfire (in which mixed wood species would be usual).

Working hollow 4706
The fill of post-hole 3786 included glass, pottery, and charcoal. The charcoal included oak sapwood and heartwood, ash, birch, elm, hazel, hawthorn type, and blackthorn. Three handpicked pieces of roundwood (context 986) from a large spread of burnt material consisted of hazel (diam. 30 mm, eight growth rings) and oak (est. diam. 15 mm, four growth rings).

Grain drier 913
A blackish deposit within pit 3666 (part of 913) was interpreted as the possible rake pit for the adjacent fire-pit within the west end of the feature. Oak made up the bulk of the fuel residues, with a high proportion of roundwood (probably fairly narrow but the material was too fragmented to be certain) some of which was mature enough to include heartwood. The oak was supplemented with birch, hazel, willow/poplar, and blackthorn.

Charcoal associated with the fire-pit of 913 (context 3608) differed slightly in composition from that in rake-out pit 3666 in that, although it consisted mainly of roundwood, willow/poplar appeared to be most frequent with oak and alder also present. Willow/poplar roundwood included fast-grown wood (e.g. diam. 20 mm, six growth rings) whereas oak roundwood was considerably older (e.g. diam. 30 mm, 18 growth rings) and also included some heartwood. The apparent paucity of willow/poplar and alder identified in probable fuel deposits throughout the site suggests that these taxa were not rated highly as fuel. The conspicuous disparity of the residues from context 3608 to those from the adjacent rake-pit and fire-pit suggests an origin either from a different use of the kiln or possibly a structural origin, such as from the superstructure of the kiln. Since both alder and willow have long traditions of use for construction work, e.g. wattle hurdles etc, it is possible that the charcoal was related to this event or to a shelter or hurdles associated with the feature.

Charcoal was extremely abundant in a possible fire pit within 913; context 3675. The sample was composed predominantly of oak roundwood, probably up to 20 mm in diameter and relatively fast-grown (e.g. diam. 20 mm, seven growth rings). Roundwood from other taxa included hazel (e.g. diam. 15 mm), birch, willow/poplar and gorse/broom.

Oven 988
Charcoal was frequent and consisted mainly of narrow roundwood from numerous taxa. These included oak, gorse/broom, hazel, blackthorn, hawthorn type, birch, ash, and willow/poplar. Although much of this material was relatively juvenile (mostly <10 mm diam.), none of it appeared to contain fast-grown wood.

Well 920
The stone-lined well was sited just south of building 4103. Charcoal from the fill (4621) was predominantly oak sapwood and heartwood but also included birch, hazel, ash, maple, and hawthorn type.

Cess pit 819
Hearth and domestic waste was dumped in this pit. Charcoal was common throughout the fills and samples from three distinct layers were examined. The most diverse range of taxa was identified from the upper layer 970, which also included burnt clay and pottery. The charcoal consisted of oak roundwood, sapwood, and heartwood, ash, blackthorn, hazel, birch, holly, and willow/poplar.

Charcoal from layer 978 consisted of oak roundwood, sapwood, and heartwood, and hazel roundwood (e.g. diam. 12 mm, 13 growth rings with rapid early growth). It is unlikely that the suggested wattle lining of the cess pit would have been burnt *in situ*, so it seems more probable that the charcoal is dumped fuel debris. Context 3049 was situated beneath this layer but above the clay capping of the well and the charcoal was similar in content and character to that from the layer above.

Layers overlying building 4725
Charcoal in context 3388 was mostly fast-grown oak sapwood and heartwood, but also hazel, ash sapwood, and blackthorn roundwood (diam. 5 mm, four growth rings). The deposit also included several pieces of thick bark (12 mm) estimated to have originated from trunks/branches probably exceeding 100 mm in diameter. Possible origins include either burnt structural material or fuel residues. Two hand-picked fragments of charcoal were associated with a spread over building 4725 and tower 4724. The charcoal (context 3387) included oak roundwood, diameter 30 mm with 15 growth rings indicative of moderate growth. The stem had been felled in early spring. The second sample (context 769) included a piece of bark, probably of modern origin.

Outer defensive ditch 3057
Oak roundwood from a layer abutting the southern bank of 3151 (context 3118) although incomplete, had a minimum diameter of 50 mm and included at least 26 growth rings. The growth pattern suggested an origin from managed woodland.

Table 125: Pomeroy Wood, charcoal from phase 4ii, phase 6, and unphased contexts (no. identified fragments)

Feature/ section	*Context*	*Sample*	*Ac*	*Al*	*Bet*	*Cor*	*Fx*	*Il*	*Pom*	*Pru*	*Quere*	*Sal*	*Sam*	*U/C*
Phase 4ii														
Enclosure 4713														
655	685	1043	–	–	–	2	–	–	–	2	9s	2	–	–
Grain drier 637														
	638	1011	–	–	1	14r	–	–	–	–	15r	1	–	–
	625	1007	–	–	1	15	1	–	2	–	45r	–	–	–
790	634	1061	–	–	–	14		–	–	–	51r	–	–	2
Grain drier 3843														
	3851	1410	–	–	–	25	–	–	–	–	45rs	1	–	–
	4018	1530	–	–	3	5	–	–	–	–	39rsh	5	–	–
Gully 4025														
4024	4023	1526	–	–	–	10	–	–	1	–	81rsh		–	–
Ditch 826														
824	825	1096	–	–	–	3	3r	–	–	5	59rsh	3r	–	–
4086	4207	1678	–	1	–	6	1	–	2	1	69rsh	10	–	–
Ditch 4714														
3730	3731	1351	–	–	–	6	4	–	1	4	46rsh	2	1	–
Ditch 3247														
	3249	1482	–	–	19s	14r	–	–	2	5	53rsh	–	3	1
	3250	HP	–	–	4r	1r	–		–	–	1h	–	–	–
Pit 3146														
	3143	1286	–	–	1	21	1	8	1	–	85sh	–	–	12
Hearth 3014														
	3012	1109	–	?1	–	3	3s	–	3	–	121sh	2		
Hearth 3085														
	3084	1221	–	–	–	2	–		1	1	77r	–	–	1
Pit 3073														
	3074	1238	–	–	1	16	–		–	–	56rsh	3	–	1
Spread over 3057														
	765	HP	–	–	1r	–	–	–	–	–	3s	–	–	
Spread over 4706														
	961	HP	1r	–		–	–	–	–	–	–	–		–
Phase 6														
Well 920														
3382	921	HP	?coal											
Unphased														
Beam slot 3789														
	3804	1341	–	–	?1	25	2	–	–	3	13sh	?3	–	–
Burnt feature 3566														
	3565	1402	–	–	1	3		–	–	–	106sh	–	–	

For key see Table 123

Phase 4ii (3rd–4th century occupation)

Eigheen phase 4ii charcoal samples were analysed (Table 125).

Grain drier 637

The remains of this feature occurred within the phase 4ii enclosure 4713 and consisted of a possible oven/drier with collapsed superstructures. Associated slag suggested its use for metalworking, but an agricultural use is probable. Numerous clay layers testified to fairly continuous use. Charcoal was relatively sparse from context 638 at the base of the feature and consisted mainly of narrow roundwood (up to 7 mm diam.) from oak and hazel. These typically included seven or eight

growth rings and did not appear to be from fast-grown stock (possibly implicating the use of brushwood). Birch and willow/poplar were also present.

Charcoal was more abundant in the upper fill, 625. Here again the charcoal was predominantly oak roundwood, ranging from 5 mm to 20 mm in diameter. In this instance the roundwood was mostly fast-grown (e.g. three and five growth rings, respectively) and characteristic of coppice growth. Other taxa included ash, birch, hazel, and hawthorn type. A small pointed fragment of hazel appeared to have been worked and was possibly the base tip of a narrow stake or post. If from structural origins, the collapsed/burnt superstructure of the oven would be an appropriate source.

Similar fuel residues to those from the main bowl were found in the rake-out pit 790 (context 634) at the mouth of the feature. The sample was composed predominantly of narrow oak roundwood up to about 10 mm in diameter, and fast-grown hazel and gorse/broom were also identified.

Enclosure 4713

Poorly preserved charcoal from the bottom fill of the ditch included oak sapwood, willow/poplar, hazel, and blackthorn.

Grain drier 3843

A sample from the primary use of the oven (context 4018) was taken from outside the mouth of the structure and within the stoke-hole structure 4043. An ash deposit (3851) in a rake-out hollow contained fragments of fired clay and pottery mixed with charcoal. Not unexpectedly, similar taxa were identified from the two contexts, demonstrating that oak formed the primary fuel. This consisted of roundwood, often fairly narrow (e.g. diam. 12 mm, seven growth rings), although some was wide enough to have developed heartwood. In addition, small quantities of hazel and willow/poplar were recovered, as well as birch from context 4018.

Ditches

Poorly preserved charcoal from the southern terminal of ditch group 4025 (context 4023) included mostly oak roundwood, sapwood, and heartwood, but also hazel and hawthorn type.

Charcoal was fairly abundant in ditch 826, and was identified from samples from the centre of the excavated stretch, context 825, and from the southern end, context 4207. Both samples were dominated by relatively narrow, fast-grown oak roundwood (e.g. diam. 12 mm, five growth rings), although small quantities of oak heartwood from wider wood or timber was also present. Other taxa included hazel, ash roundwood, blackthorn, and willow/poplar roundwood and from context 4207, alder, and hawthorn type.

Charcoal from the lower fill (3731) of ditch 4714 consisted mostly of oak roundwood, sapwood and heartwood, but also ash, hazel, blackthorn, willow/poplar, elder, and hawthorn type.

Charcoal and other finds were especially frequent in the fill of context 3249, from the central region of ditch 3247. Many of the charcoal fragments were large and well preserved. Oak and hazel roundwood up to about 30 mm in diameter was fairly common but none appeared to have been particularly fast grown, and some oak fragments included heartwood. Material from other taxa, but probably from wider stems, poles, or branches, included blackthorn, elder, and fast-grown birch. Smaller fragments of hawthorn type and gorse/broom were also present. Of the taxa identified here, those most usually associated with construction work, e.g. for posts or hurdles, include oak and hazel (Edlin 1949). Species such as blackthorn, birch, elder, gorse/broom, and members of the hawthorn group tend to be used more sporadically or casually, or for specific artefactual purposes, e.g. tool handles. All these woods, however, provide high-energy fuel and, by implication, at least some of the charcoal probably derived from fuel debris.

Some large handpicked pieces (context 3250) produced similar results to those above, with birch roundwood (diam. 60 mm), hazel roundwood (diam. 22 mm), and a piece of oak heartwood from a wide pole/branch.

Pit 3146

Charcoal occurred throughout the fill of the pit. Oak sapwood and heartwood predominated; other taxa included hazel, birch, ash, holly, gorse/broom, and hawthorn type.

Hearths 3014 and 3085

Hearth 3014 was set into a natural scoop in the upper fill of the ditch 3057. Fuel residues *in situ* demonstrated that fuel had consisted mainly of oak sapwood and heartwood (with some fast-grown wood) but also ash, hawthorn type, hazel, willow/poplar, and possibly alder.

Shallow, circular hearth 3085 contained charcoal and burnt clay. The stones at the base of the feature were not scorched, and suggested that the fire was either short-lived or burnt at low temperatures. The fuel residues were predominantly fast-grown oak roundwood, up to about 20 mm in diameter. Other taxa included hazel, blackthorn, gorse/broom, and hawthorn type. Roundwood burns through relatively quickly and, unless supplies are frequently replenished, fires are short-lived. The use of oak roundwood, however, which provides a high caloric fuel, would almost certainly have produced a fairly intense fire, hot enough to scorch stones if the hearth had had prolonged or repeated use. The evidence supports the suggestion that the hearth was used for a single event and was probably short-lived.

Pit 3073

The function of pit 3073, a shallow cut in the fill of ditch 3057, was unclear. It had been filled with a single deposit (3074) and although this included numerous burnt fragments, the material did not appear to have been burnt in the pit. Charcoal consisted of oak sapwood and heartwood, birch, hazel, and willow/poplar.

Spread over 3047

Four large fragments of charcoal were handpicked from a spread of debris (765). The charcoal, birch, and oak sapwood, originated from fairly wide poles/stems (e.g. birch diameter 80 mm, 22+ growth rings).

Spread over 4706
A piece of roundwood charcoal (961) from a large spread of burnt material was identified as maple. It measured 25 mm in diameter and included approximately 15 growth rings.

Unphased
Charcoal from a possible beam slot (3789) in working hollow 4706 to the west of the military base, consisted of oak sapwood and heartwood, hazel, ash, blackthorn, and possibly birch, and willow/poplar. The taxa identified could equally represent either spent fuel or burnt structural remains, e.g. posts/ hurdles, roofing, or a combination of both.

The fill (3565) of a small depression (3566) consisted of a densely compacted layer composed of highly burnt material with charcoal and burnt clay. The charcoal was mostly oak sapwood and heartwood, with only small amounts of hazel and birch. Oak charcoal (particularly heartwood) has, traditionally, formed the primary fuel for metallurgy (Edlin 1949).

Phase 6: post-medieval
Two handpicked pieces from the uppermost fill (921) of well 920 were visually comparable to coal, although other tarry or highly carbonised materials could not be ruled out.

Discussion
Charcoal was sampled from a range of contexts from four Roman phases. By implication some charcoal has been interpreted as domestic debris since it occurred in deposits with other dumped rubbish such as pottery, burnt flint or stones, or possible waste from food preparation (charred cereal grains), in the fills of ditches, post-holes, pits, and depressions. Some charcoal deposits with associated slag or other industrial artefacts have been attributed to industrial waste. Evidence of wooden structural components was sparse although some charred remains were tentatively assigned to these origins. Comparative analyses of the unusually large quantities of charcoal have provided data on the woodland economy and management.

Phase 2: the 1st century AD military base
Waterlogged organic deposits from the well 3047 suggest that animals, probably horses, were accommodated in at least one part of the southern area of the base. Although on-site smithing facilities would almost certainly have been available, no evidence of such was recorded or, indeed, of any other industrial activity within the base. Charcoal deposits were frequent and abundant, and although it is probable that most of the material examined originated from domestic contexts such as hearths for heating or cooking, there was some slight evidence for specialised use of fuel (see below). The main elements of the base from which charcoal was examined included the defensive ditch 748, building 4725 and tower 4724, well 3047, gully 4301, and pit 4498 from within the enclosure.

Domestic fuel: The fuel apparently consisted mainly of fairly narrow roundwood, although oak roundwood was often wide enough to include some heartwood. Charcoal deposits, interpreted as probably from domestic waste, from the fills of the ditch 748 and features associated with buildings 4725 (slots/post-holes 4598, 3488, 3591, 4307, and 3971) were predominantly oak but all contexts included small amounts of material from other species. These included alder, birch, hazel, ash, hawthorn type, blackthorn, willow/poplar, and gorse/ broom. Charcoal deposits from the infill of the well 3047 included a high proportion of fragmented roundwood, predominantly oak but also from other species.

Structural components: A single post-hole (4366) from the interval tower 4724 included what may have been the remains of an oak post. The bedding thrown into the well 3047 may also have included the piece of burnt alder roundwood. The charred diameter (30+ mm) of the wood indicated dimensions that would have been suitable for a narrow post/pole – but could also have provided roundwood for fuel.

The presence of oak in both the pit 4498 and nearby building 4731 may be coincidental, but could indicate a common origin for the charcoal. The large deposit of charred oak in the foundation trench tends to support this suggestion and this may relate to the deliberate destruction of the building. Other origins are possible though, as single species deposits were rare on site and when of oak, could also imply its selection for a specific activity requiring high calorie fuel.

As could be anticipated, deposits in the fuel grain drier 4123 consisted almost exclusively of oak (including some heartwood), and would almost certainly have been used as charcoal if for smelting or smithing.

Phase 3: the abandonment of the military base
Fuel residues: The two main ditches, 748 and 3057, were substantial and deliberate backfilling would have involved considerable effort. Charcoal from six contexts of infill from the ditches was similar in dominance and range of taxa to those attributed to fuel residues in phase 2, and probably arose from similar origins. Some may have resulted from burning waste materials from the demolition of the site, although these would probably have been more usefully employed as bulk material for infill. The absence of alder and willow/poplar (species more commonly used for structural components than firewood) tends to endorse the suggestion of fuel residues.

Industrial fuel: The outwork/annexe ditch 4715 to the west of the base was also filled in at this time. The occurrence of slag in the same context as charcoal suggests a common origin. If from smithing fuel residues it is interesting to note the wide range of species used: oak sapwood and heartwood, alder, maple, birch, ash, and blackthorn.

Phase 4i: 2nd–3rd century occupation
There was no evidence from the charcoal record to indicate the function of the round-houses built in this phase. Charcoal deposits from them (e.g. round-house 3415) suggested that the fuel debris might have been domestic in origin. Numerous kiln/furnace type structures across the site underlined the importance of industrial work in the local economy.

Domestic fuel: Charcoal sampled from gullies and post-holes associated with round-houses 3415, 4642, 4103, and 3724 may have originated from domestic or subsistence type fuel, although the similarity of this fuel to that from some apparent industrial contexts (e.g. ditch 3265, see below) calls for caution in interpretation. Samples from hearth contexts in round-houses 3415 and 4103 can be securely identified as fuel deposits, and the similarity of these with charcoal from associated post-holes suggested a common origin. Oak evidently provided the bulk of the fuel but was routinely mixed with other woods from a wide range of taxa. These included hazel, birch, ash, gorse/broom, blackthorn, alder, hawthorn type, and (less frequently) maple, holly, and willow/poplar. The fuel consisted of roundwood (see below).

Charcoal from infilled enclosure and boundary ditches, e.g. 3057 (the outer defensive ditch), 4085, 4720, and 3265, where there was no evidence to suggest industrial origins, may also have resulted from deposits of domestic fuel or other local hearths or fires. Charcoal from well 3791 can also be included in this group. The charcoal from all these features was similar in type and character to that from round-house contexts. Fuel residues from ditch terminal 3407 of linear feature 4720 were comparable to the round-house deposits.

Industrial fuel: The working hollow 4706, sited relatively closely to the round-house group 3415is assigned to phase 4i. Within the grain drier 913 the similarity in the type and character of the fuel debris from its rake-out pit 3666 and the fire-pit 3618 is unequivocal (Table 124). Charcoal is not strictly necessary to fuel industries other than metal-smelting and it is possible (although probably unlikely) that fuel used in these structures consisted of wood rather than charcoal. There is clear evidence for the preference of high-energy woods such as oak, birch, hazel and gorse/broom, with the emphasis on oak (which would have provided a longer-lasting heat source). The fuel seems to have consisted mainly of faggots (narrow roundwood). The fuel residues from these features contrasted sharply with those from context 3608, which contained a high ratio of alder and willow/poplar with oak. When used as wood fuel the lightweight woods of alder and willow/poplar compare poorly with, for example, birch, hazel and gorse/broom, which evidently formed part of the fuel load in the furnace. When used as charcoal, however, the calorific value is significantly higher. Although different types of fuel may have been selected for firing, an alternative origin seems likely for the charcoal from context 3608, e.g. from part of the collapsed superstructure, which may have incorporated some type of wattle-work or hurdle. The construction of hurdles has traditionally incorporated fast-grown rods from both willow and alder (Edlin 1949), for which they are ideally suited. This was the only context from Pomeroy Wood from which elm was identified.

The function of a circular oven-type feature 988, on the west bank of ditch 785, was probably associated with some type of commerce or industry. Charcoal deposits here contrasted with fuel residues from probable domestic contexts (e.g. hearths in round-houses) in the evident selection and use of very narrow roundwood (<10 mm). This type of fuel would have produced a hot but very short-lived heat-source (unless the fire was constantly fed with fuel). It seems unlikely that this material would have been used for smelting activities since this process requires prolonged high temperatures only obtained through the use of charcoal, and charcoal production in clamps usually employed much wider roundwood or cordwood (Armstrong 1978). Smithing hearths operate at lower temperatures, and although it was probably possible to work using well-seasoned, high-energy wood, fuels traditionally associated with smithing have included a good proportion of oak heartwood (Edlin 1949) – an element apparently absent from this context.

Although the function of the large pit 3670, close to the round-house 3671, is unknown, the dense layer of charred roundwood from within its fill appeared to have been used more selectively than fuel in the round-houses. It was generally narrower in diameter and included only oak, gorse/broom and willow/poplar.

The analysis of charcoal from contexts associated with possible industrial contexts was sometimes inconclusive. For example, the character of the fuel associated with smithing slag in the linear ditch 3265, did not differ significantly from that identified from the round-house deposits (Table 124); and similarly, the fill of a flue from an oven bowl 3145. The fuel within pit 3159 related to a single deposit and demonstrated the exclusive use of oak roundwood; industrial waste therefore seems a strong possibility.

Phase 4ii: 3rd–4th century occupation

Domestic fuel: In common with the previous phases, the charcoal deposits were abundant and well preserved. Fuel residues from the enclosure ditch 826 and ditch 4714 were dominated by oak, mostly roundwood of various widths, but also included alder, hazel, ash, hawthorn type, blackthorn, willow/poplar, and elder. Similar species were identified from rubble and other debris in ditch 3247 and the components of the charcoal suggested that it probably accrued from domestic, subsistence or industrial fuel. Charcoal from pits 3073 and 3146, lying relatively close together in the south-east corner of the site, also included a diverse range of taxa. Fuel residues from burnt feature 3014 were comparable to the round-house deposits.

The 1st century well 3047 was capped and then later recut as a latrine 819. This was, in turn, later used as a rubbish pit. Charcoal from an upper fill (970) was comparable to the multi-taxa type of fuel identified from other features possibly containing domestic fuel (Table 125). A different origin, however, may be implicated for charcoal from two lower fills (from the layer 978 and an underlying context 3049), since these contained only oak and hazel. This combination is more characteristic of fuel from industrial activity, as indicated, for example, in the remains of the feature 3843 (sited at the western end of the area). If from industrial waste, it would infer that industrial activities probably operated in the immediate vicinity, otherwise waste deposits could be anticipated from a range of occupations including domestic fires. An interesting possibility arises here in the possible use of charcoal to abate and purify the foul

odours from the cess pit. This method of deodorising was possibly used in a Roman cess pit at Salford Priors in the Arrow Valley, Warwickshire, where layers of cess alternated with carbonised material (pers. obs.).

Industrial fuel: Industrial fuel residues (charcoal) from grain drier 3843, at the western end of the site, were obtained from within the stoke-hole structure 4043 and the rake-out hollow. The latter also included fired clay and pottery. The fuel from both contexts was similar and indicated that the fuel has consisted mostly of oak roundwood, with some wood mature enough to have developed heartwood. Other taxa included hazel, birch, and willow/poplar.

A burnt feature 3566 (sited close to 3843 but of uncertain date) consisted of a small depression with compacted contents containing slaggy material, charcoal and burnt clay. Fuel deposits composed predominantly of oak, including heartwood (see below), and associated slag, suggested an origin from metalworking. Grain drier 637 sited within enclosure 4713 had required several replacement superstructures during its lifetime. The feature had been fired with roundwood, predominantly with oak but also quite a high proportion of hazel. Other species used less frequently included birch, ash, hawthorn type, willow/poplar, and gorse/ broom.

Burnt feature 3085 was a shallow, circular hearth. Although there was no evidence to indicate its purpose, the stones at the base remained unscorched, suggesting that the fire had been short-lived, perhaps relating to single event. The use of narrow roundwood mostly from oak would have provided a hot fire, and the bias towards oak indicated that this was the preferred fuel.

Comparison of fuels used

Since only a small fraction of the site was excavated, it was impossible to estimate population levels and the corresponding demands on the woodland resources. Charcoal deposits were unusually abundant and frequent throughout the site. Despite the unknown origins of some charcoal deposits, others could fairly confidently be assigned to either domestic or industrial use. Few deposits appeared to have structural derivations. The excellent preservation of the charcoal and the large numbers of samples available for examination provided an opportunity to compare the character and type of fuel used at the site.

The similarity in the type of fuel used throughout the four centuries remained constant, despite what must have been continuous and heavy demands on local wood reserves. It is clear that oak provided the bulk of the fuel in all contexts. This usually consisted of a high proportion of fairly narrow roundwood (probably up to about 25 mm in diameter when freshly cut or felled) although some was wider and contained heartwood. Some stems included fast-growth typical of trees grown in managed conditions while others indicated slower growth patterns (possibly brushwood).

In probable domestic contexts (e.g. hearths in round-houses), oak wood was supplemented with roundwood from alder, birch, hazel, ash, hawthorn type, blackthorn, willow/poplar, gorse/broom, and rather less frequently from elder, holly, and maple. Birch, hazel, alder, ash, and willow/poplar frequently included fast-grown wood.

Fuel for grain driers and/or ovens also consisted mainly of roundwood but usually contained a higher proportion of oak. The use of other species was often minimal. For example, the fire-pit of 913 (phase 4i), contained fast-grown roundwood, with a high ratio of oak (charred diameter <20 mm), but also small amounts of hazel, birch, gorse/broom, and willow/poplar. The differences between probable domestic and industrial fuels were sometimes rather slight or subtle. For example, residues from the circular oven-type feature 988 (phase 4i) appeared to have consisted of very narrow, slow-grown roundwood (charred diameter <10 mm) from a wide range of taxa. This could infer either the deliberate selection of this type of fuel or that wide bore wood was scarce – the first suggestion would seem to be the most likely.

The use of single species fuel (i.e. oak) was rare and suggested the need for high temperature firing. Such use was demonstrated by the dense deposit of narrow fast-grown roundwood (charred diameter of roundwood <20 mm) found in pit 3159 (phase 4i), although there was no evidence to indicate its particular function. Slag present in the double-bowled feature 4123, however, was more securely indicative of metalworking. The fuel consisted almost entirely of oak roundwood and heartwood, although very small quantities of hazel and birch were also recorded – if used as charcoal fuel, it would have been the most appropriate fuel for either smelting or smithing (Edlin 1949; Armstrong 1978).

Wood fuel and charcoal fuel: Although it is impossible to ascertain from charred fuel residues whether the material had been used as charcoal or wood fuel, some indications may be gleaned from the character of the fuel and the context to which it related.

Faggots (small bore wood and brushwood) would certainly have been used for domestic hearths and ovens, and also (probably supplemented with wider logs) for industrial kilns and ovens for uses other than metalworking. Open fires and braziers for heating would also have required wood fuel and charcoal respectively. With the exception of metal-smelting (for which sufficiently high temperatures could only be achieved with charcoal in the oxygen-reduced atmosphere of the furnace) most industrial activities could have been fuelled with wood. The use of roundwood, with its high ratio of surface area to atmospheric oxygen, has the potential to produce intensely hot, although relatively short-lived fires. In some areas these traditional methods are still in use today. For example, in tile kilns in northern Italy, where narrow roundwood is used to give the temperature a final boost (I. Freestone, pers. comm.).

Good quality charcoal produces a hot smokeless heat-source and was in general use in Roman Britain to heat braziers and cooking stoves (Allason-Jones 1989). Similar uses seem likely at Pomeroy Wood, particularly in the Roman military base where large-scale food preparation would have been required for the garrison. In some domestic situations small quantities of suitable charcoal may have been raked from the main fire for this purpose – much as was practised in more recent centuries (Hartley 1954).

Traditional methods of charcoal-making using clamps employed wide roundwood or billets of cordwood up to about 180 mm in diameter (Edlin 1949; Armstrong 1978), although narrower roundwood was frequently placed round the outside of the wood stack to fill in gaps. So-called small charcoal could be made in small quantities by setting light to bundles of faggots and then extinguishing them by dowsing with water (Hughes 1954). Charcoal was expensive to make in terms of man-hours and wood reserves (the process consumes approximately 6–7 tonnes of wood to produce 1 tonne of charcoal). It would have been economically preferable to use wood fuel at Pomeroy Wood unless the activity involved dictated otherwise.

Fuel sources

Almost without exception the charcoal deposits were composed of relatively narrow roundwood. Diameters and growth rates varied enormously and where possible these were recorded. There was no discernible bias of preference towards specific stem diameter or age (rotational cycle) during the phases of occupation. For example oak stems ranged in diameter from 5–50 mm (charred) but most occurred in the 10–20 mm diameter, and hazel was roughly similar. A high proportion of the roundwood included wide early growth rings characteristic of coppice growth, although some stems were comparatively slow-growing. This could suggest that fuel was supplied from both managed and unmanaged woodland. It is probable that the provision of fuel, particularly for industrial purposes which would have required a high proportion of charcoal fuel, could only have been maintained through regular coppicing/pollarding of managed woodland – especially since the production of charcoal would have consumed large quantities of seasoned wood. It seems probable that by the Roman period the conversion of woodland to agricultural land and stock/horse grazing would have reduced most natural or local woodland to managed copses, strips of woodland, shaws or shelter belts and this is consistent with the evidence of the charred plant remains.

During the 2nd–4th centuries, smithing may have formed an important part of the economy, and without the use of coppiced wood, foresters would probably have been hard pressed to meet the fuel requirements, particularly if charcoal was used. The consistent use of relatively narrow roundwood was probably due to regional preferences rather than to diminishing wood supplies. It seems unlikely that iron-smiths would have continued to work for such a long period in an area with inadequate wood resources.

Hedgerows and hedgerow trees may have provided an additional source of rods/poles. Hedgerow management by layering and laying has been practised in Europe since pre-Roman times (Landsberg n.d.). Since the medieval period, and probably based on more ancient practices, hedges were managed on about a 20 year cycle, by which time numerous sturdy poles and abundant brushwood had been produced. Ancient boundary hedges have traditionally included mixed species depending on the local geology, but usually with a good proportion of oak, whereas stock-proof hedges were composed largely of thorn bushes (e.g. hawthorn and blackthorn). Most taxa identified from Pomeroy Wood are suitable for hedging (although birch, gorse and broom would have been unlikely). Ditches were a common feature of the site and may have run adjacent to hedgerows.

Environmental evidence

Historically Devon has been noted for its coppiced oak woods, which have served fuel, tanbark, and other products to woodland industries (including metallurgy) for centuries (Marren 1992). Evidence from charcoal deposits at Pomeroy Wood suggests that managed oak woodlands were in existence in this region since at least the Roman period. It seems likely that the abundance of oak in the charcoal reflects its abundance in the environment – oak was commonly available and frequently used. Oak was almost certainly the dominant woodland element on the clay soils of the region. Other woodland components included birch, hazel, ash, maple, holly and elm. The paucity of maple, holly, and elm in the charcoal could be indicative of the selective use of certain species or, alternatively, could suggest low distribution patterns in the environment. Shrubby species/small trees included blackthorn, elder, gorse/broom, and members of the Pomoideae which includes hawthorn, apple, pear, rowan, service tree, and whitebeam. Damp or wetland species included alder, willow and/or poplar. The species named above typically grow in acid to neutral soils, although holly, elder, hazel, field maple, and whitebeam also tolerate calcareous conditions, and elder often frequents nitrogen-rich soils in areas of habitation. The presence of lighter, impoverished or poor/acidic soils is indicated by birch and gorse/broom, although gorse tends to be ubiquitous particularly on disturbed soils. Hawthorn, blackthorn and elder suggest areas of marginal wood, scrub, or possibly hedgerows. The charred plant remains demonstrate a similar diversity of habitats.

Woodland species identified from the pollen profile taken from the waterlogged 1st century AD well 3047 included oak, birch, alder, hazel, ash, beech, alder buckthorn, pine, and possibly spindle. Alder buckthorn and spindle are more characteristic of calcareous soils. In an area of coppiced woodlands pollen deposits may not be representative of the tree flora, particularly when coppice stools are harvested on a short cycle (some species will not flower on juvenile wood).

During the Roman occupation of the site the social and economic success of the community may have been dependent on local wood reserves. The importance of supplying fuel to industrial activities appears to have ensured the survival of a stable woodland environment, in which the relative distribution of tree species probably remained unchanged throughout the centuries.

Conclusion

Comparative analysis of the charcoal from three main phases of occupation indicated that despite the change of use from Roman military occupation to a civilian settlement, the character and type of fuel used remained the same throughout this time. Most fuel reserves were supplied from managed woodland. The charcoal deposits identified a wide range of tree and shrub species growing in the local environment. Oak was the

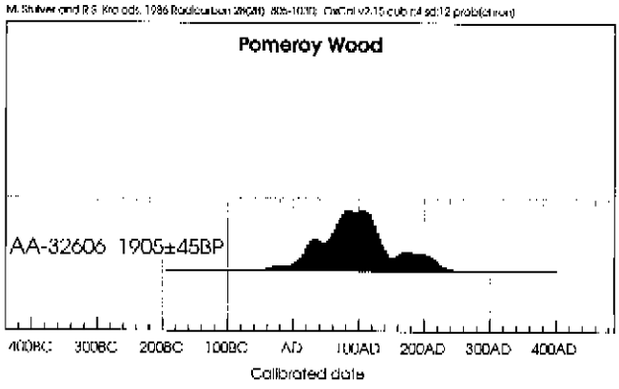


Figure 175 Pomeroy Wood, probability distribution of radiocarbon date

dominant woodland element and provided the bulk of the fuel, mostly as coppiced/pollarded roundwood. Other woodland components consisted of birch, ash, hazel, alder, maple, elm, holly, and willow/poplar. Shrubbier species included hawthorn type, blackthorn, elder and gorse/broom.

Radiocarbon Date

As the round-houses at Pomeroy Wood are the first known from Roman Devon but may also be compared with examples of 5th–6th century date at Cadbury–Congresbury, North Somerset (Rahtz *et al.* 1992, 193–203, fig. 139–41, 147), the possibility was considered that some were of post-Roman date and the Roman pottery associated with them residual.

Due to the limited time available for the Analysis and Dissemination stages it was necessary to submit any samples for radiocarbon dating at the beginning of the Analysis stage. Accordingly charcoal from the upper fill (4135) of a recut hearth, 4134 within round-house 3415 was submitted for radiocarbon dating (Fig. 175). The pit was chosen as it is cut into the natural ground in contrast to many of the round-houses that overlie features associated with the military base. It is, of course, possible that the charcoal was redeposited, but the date range 1–240 cal. AD (AA-32606; 1905±45) is consistent with the other evidence in indicating that the round-houses at Pomeroy Wood all date to 2nd–3rd centuries.

Magnetic Susceptibility, by Hayley F. Clark

Sub-samples for magnetic susceptibility were systematically taken from the standard bulk environmental samples. As no significant difference between the high and low readings were revealed only the high frequency readings were plotted on site plans to assess the relative density of the distributions. The interquartiles were statistically calculated for each phase (Table 126).

Table 126: Pomeroy Wood, magnetic susceptibility quartiles by phase

Phase	*No. readings*	*Quartiles* 1	2	3	4
2	163	3–15	16–28	29–69	70–2514
3	45	6–14	15–20	21–43	44–616
4i	252	3–28	29–46	47–118	119–962
4ii	133	8–24	25–44	45–101	102–1015
Unph.	139	6–14	15–23	24–39	40–547

Results

Phase 2
The 163 readings varied from 3 to 2514. They were centred around and inside the two defensive ditches of the military base, 748 and 3057, with only six to the west of the base. Within the military base a cluster of high readings relate to grain drier 4123, which may in fact be slightly later in date. The foundation trenches and post-holes of buildings 4724–5 carry both high and low readings but with no clear pattern. Building 4731 also had a mixture of readings along the foundation trench. The readings from the defensive ditches themselves were generally low as were those from the outwork/annexe ditch 4715.

Phase 3
Forty-five readings were taken from phase 3 giving a span of 6–616. The reading from grain drier 4123 was again high as were those from the western area of defensive ditches which contained quantities of charcoal. The other readings from the ditches and the outwork/annexe were quite low.

Phase 4i
The 252 readings varied from 3 to 962. The samples were distributed across the excavated area, reflecting the changing occupation pattern. The highest reading was from well 3791 and the main concentration of high readings was again around the western arm of the former defensive ditches, now associated with round-house 3415. The eastern arm of the former defences had very low readings particularly around ditch 3265 and round-house 3053. Curvilinear gully 4711, ditch 4710, and the related features gave low reading and round-houses 3671 and 3724 also had generally low results. The reading from the central part of grain drier 913 was high.

Phase 4ii
One hundred and thirty-three readings were taken with the results spanning 8–1015. The highest readings were from grain driers 637, 3843 and the phase 4ii fills of 4123. The readings from ditch 3247 and 4713, which encloses grain drier 637, were low.

Interpretation

The low results from the defensive ditches in Phase 2 suggests that they were not in use for a great length of time. The range of readings from building 4103 could be due to disturbance by a modern fence line.

The high readings from Phase 3 contexts in the western area of the defensive ditches should be related to intense burning.

The low readings from the western part of the site during phase 4i are due to occupation extending to this part of the site for the first time. Well 3791 produced a high result possibly showing a connection with the dark spread within 4706, which has evidence for widespread burning. The well itself may have been back-filled with soil from this nearby burnt deposit (hearth bottoms were found in the fill (p. 259)) within 4706. Round-house 3415 was an area of great activity and the high readings confirm the existence of high level use.

The readings from phase 4ii are mainly from areas that were shown to be areas of localised burning, such as grain driers and ovens.

Overall there does not appear to be any significant difference in the results between the military and civil phases.

11. Gittisham Forge and Nag's Head Culvert

by J. Grove

A further excavation was undertaken to the east of Pomeroy Wood, at Gittisham Forge (Plan 2), which lies on the eastern bank of the Nag's Head Culvert and is again on or close to the presumed line of the Roman road between Dorchester and Exeter (Pl. 40). A watching brief was also undertaken on a diversion channel for the brook while the Nag's Head Brook was enlarged in advance of the road building.

Gittisham Forge

The site at Gittisham Forge, centred on SY 1345 9935, was first recognised when a ditch (952) containing Roman pottery was seen in a geotechnical pit close to the old Forge site in November 1996. Following the excavation of a series of evaluation trenches which confirmed the presence of linear features in this area and the presence of a thick deposit of material closer to the stream, two areas were selected for excavation. The two areas rose up the valley side from 75.5–80 m AOD, encompassing an area of 1200 square metres, and both yielded similar information from a series of ditches and gullies. A deep deposit of dark brown–black silty loam, 837, sealed the lower, western, trench which became thicker towards the stream and contained quantities of later Roman material. Post-medieval tiles and metalwork, but only a single sherd of pottery of this date, were recovered from the cleaning layers. After the manual excavation of a series of test pits through the silty loam 837, which confirmed its character as an undifferentiated deposit, the layer was removed in 0.1 m spits using a mechanical excavator until the subsoil was exposed.

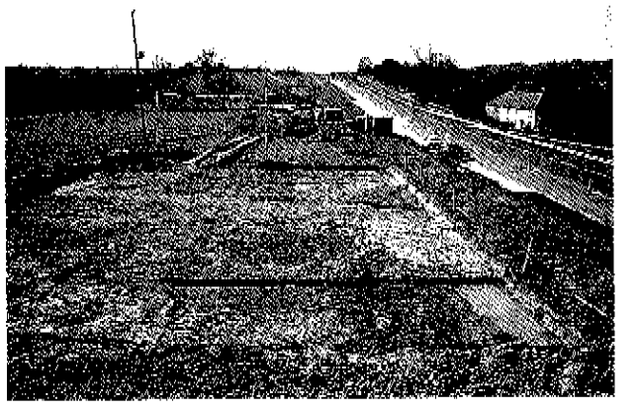


Plate 40 Gittisham Forge: looking west with the course of the Nag's Head brook marked by trees in the middle distance and Pomeroy Wood on the skyline

1st–2nd century AD

A small number of features can be attributed to the 1st and 2nd centuries AD on the basis of the pottery found in them (Figs 176 and 177). In the eastern trench, a later Romano-British ditch cut through circular pit, 814, which was 0.5 m deep. In the western area, the western-most gully, 936, was at 0.1 m deep, the shallowest of the linear features, but it described the south-eastern corner of an enclosure some 17 x 7 m. A shallow hollow, 932, immediately north and east of ditch 950 in the western area, also contained 1st–2nd century pottery and a layer in another shallow hollow, 923, on the northern edge of the area is of the same date (Fig. 177). On the basis of the pottery found in both excavation areas, there may have been a gap in the use of the site for up to a century before a series of enclosures was laid out.

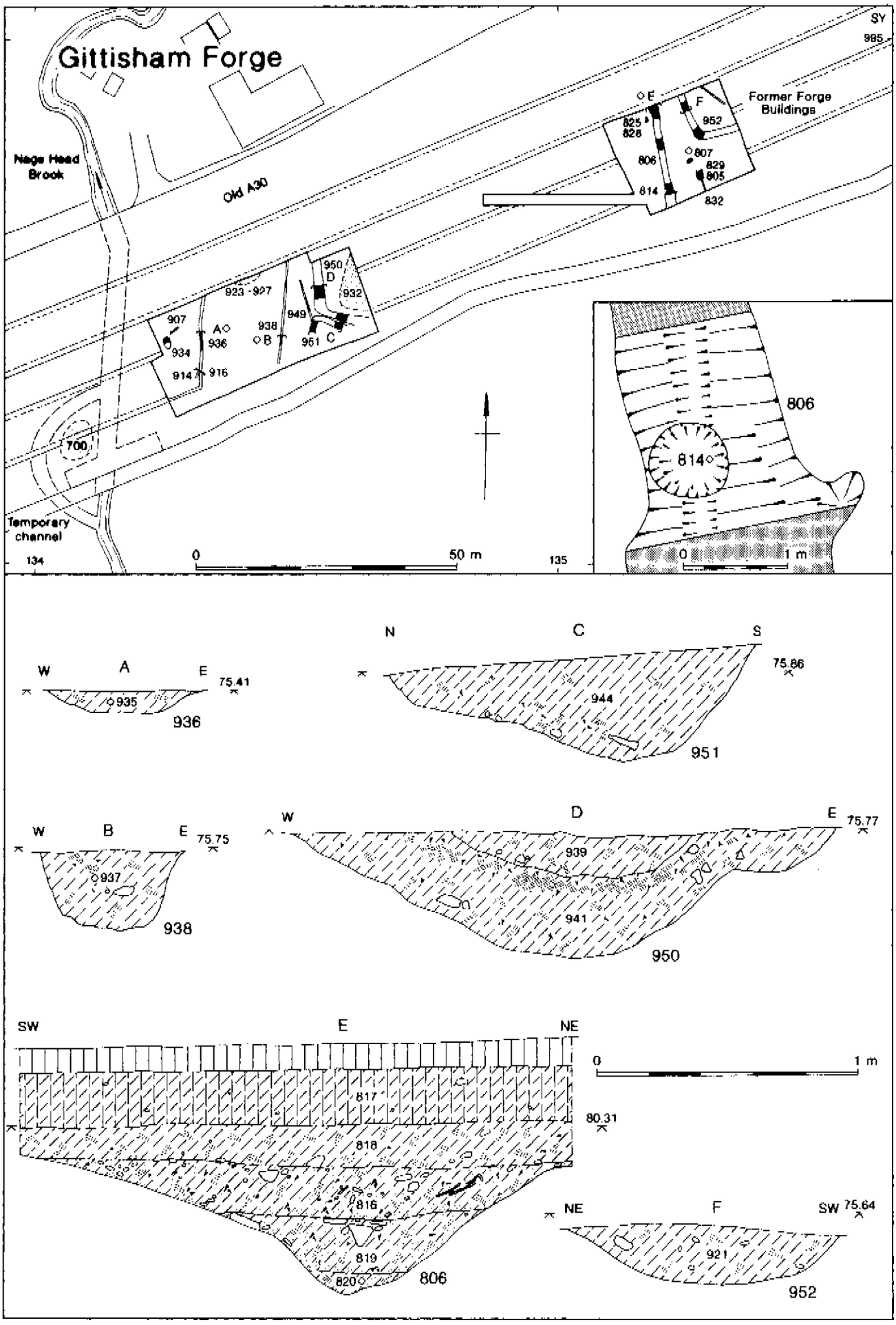
2nd–4th century

The majority of features, a series of small enclosures, date from the late 2nd–4th centuries. Three of the enclosures have right-angled corners and the alignment of five of the ditches north-north-east to south-south-west, suggests that they may be perpendicular to a road.

In the western trench two adjacent enclosures, 950 and 951, lay on a similar north-north-east to south-south-west alignment. The larger of the two, 950, was a single ditch up to 0.5 m deep which formed a right-angle with each arm visible for a length of 10 m. Ditch 951 was somewhat slighter, 0.4 m deep and mirrored the alignment of 950. A shallow north–south gully, 949, was sited at the angle of the ditch arms. Gully 938, which lay to the west, was 0.3 m deep. A single post-hole, 927, three intermittent and shallow gullies, 907, 914, and 916, and a shallow hollow, 934, were all also recorded within the western trench. These features were overlain by a dark spread, 837, which contained much later Roman material comparable to that found in the eastern excavation area. The spread was deepest over the lower parts of the area as it fell away towards the Nag's Head Culvert.

An L-shaped ditch, 952, which was up to 0.4 m deep, was found in the north-eastern corner of the eastern area and probably formed the south-western corner of an enclosure. A larger ditch, 806 (Fig. 176), had a maximum width of 2 m, was 0.6 m deep and contained a large amount of pottery which was mainly of 3rd–4th

Figure 176 (opposite) Gittisham Forge: Plan and sections


Gittisham Forge
Nage Head Brook
Old A30
Former Forge Buildings
Temporary channel
700
134
135
0
50 m
0
1 m
806
814
W A E 75.41 935 936
N C S 75.66 944 951
W B E 75.75 937 938
W D E 75.77 939 941 950
SW E NE 817 818 816 819 820 806 80.31
NE F SW 75.64 921 952

century date, like that from 952. As well as the earlier pit, 814, which was cut by ditch 806, two small, ovoid pits, 807 and 825, a shallow sub-rectangular pit, 832, a shallow scoop filled with charcoal and burnt clay, 828, and a post-hole, 829, were also identified.

Nag's Head Culvert

The watching brief over the excavation of a temporary channel for the brook was extended while the Nag's Head Culvert recorded a band of grey silty clay in the section of the newly diverted channel (Fig. 176). The deposit (700) was approximately 0.5 m above the alluvial gravels at a level of 75.2 m aOD. The silty clay was then exposed in plan using a mechanical excavator under archaeological supervision in the adjacent areas which could be damaged during further building works. The deposit was very mixed, but contained abraded Roman pottery dating to the 3rd–4th centuries, and a quantity of slag. An unstratified quern stone very probably derived from this deposit. Otherwise, no archaeological features were noted.

Finds

Coin, by Nicholas Cooke

One very poorly preserved Roman coin was found (ON 1003; context 801). It cannot be dated closely, but clearly belongs to the 1st–early 3rd centuries AD.

Metalwork, by Emma Loader

Three nails were found in ditch 806; two from the northernmost section excavated and one large square-sectioned nail from the southernmost section. Fourteen iron and one lead object from cleaning layers of post-medieval date may well derive from the old Forge, which stood immediately to the east of the site until recently (Fig. 176).

Metalworking Debris, by Phil Andrews

A small quantity of ironworking debris totalling 2.87 kg was recovered comprising smithing slag (including two small hearth bottoms) and fuel ash slag. All of the material is in an abraded condition and likely to be residual and the majority of contexts produced less than 100 g of slag. A total of 860 g of smithing slag and fuel ash slag came from the silty clay deposit at Nag's Head Culvert (700), all of which is abraded and likely to be residual.

Roman Pottery, by Rachael Seager Smith, with a contribution by J.M. Mills

A total of 744 sherds, 10,758 g, was recovered from stratified features and, with the exception of one sherd of post-medieval date, all were Roman. The small quantity of abraded material from the Nag's Head Culvert does not warrant further analysis and is not included here. The mean sherd weight for the assemblage as a whole is 14 g. In general, its condition was comparable to that from Pomeroy Wood, although larger, better-preserved sherds were found in ditch 806. The same methods, fabric, and vessel form descriptions used to analyse the pottery at Pomeroy Wood were applied here. Only one new vessel form was recognised, the carinated bead rim bowl (type 158) described at the end of the site-specific type series for Pomeroy Wood (Appendix 6). The total number and weight of sherds found in each feature is shown in Table 127. The samian is reported on separately below. All the amphorae from this site belong to Peacock and Williams Class 25 (Dressel 20).

Early Roman material was recovered from pit 814, gully 936, and layer 923 (Fig. 177). On the basis of the samian, hollow 932 has also been included in this group of early features. The preponderance of sandy grey wares in this group of features is comparable with the military deposits (phases 2–3) at Pomeroy Wood, although at Gittisham Forge it is likely that some of the features continue into the 2nd century. The complete absence of the South-western Black Burnished wares is perhaps unexpected, especially as they occur, albeit in very small amounts, in the later features, but can perhaps be explained by the small size of the assemblage. The vessel forms present in this group consist of jars with straight or very slightly curved upright rims and bead rim bowls. The carinated, bead rim bowls may have been inspired by samian form 29 vessels or *Terra Nigra* types and can be paralleled at Seaton (Bidwell 1981, 72, fig. 13, 2) and at Exeter, some in contexts as early as c. AD 55/60–75/80 (Holbrook and Bidwell 1991, 159, fig. 60, 37; 61, 43–5).

No pottery specifically attributable to the period between the early 2nd century to around the third quarter of the 3rd century has been identified, implying a gap in the activity at this site.

Pottery of later 3rd and 4th century date was found in nine features as well as the black silty layer, 837. All the characteristic elements of the late Roman (phase 4ii) assemblage at Pomeroy Wood can be seen here – the presence of New Forest and Oxfordshire wares, South Devon ware, the South-western grey storage jar fabrics, and the predominance of the South-east Dorset Black Burnished wares over the sandy grey wares. The vessel form assemblage, too, is dominated by everted rim jars, conical flanged bowls and 'dog-dishes'. The largest group came from Ditch 806 (Fig. 177).

Samian, by J.M. Mills

A total of 27 sherds, 121 g, was found. Of these two were unstratified and are not considered further (Table 128). The material from layer 837 includes scraps of both Southern and Central Gaulish wares, of which two sherds from two Ludovici Tg dishes were the most noteworthy. Like the vessel of the same type from Pomeroy Wood, these were early examples of these types datable to c. AD 155–70. Hollow 932 yielded sherds from three form 37 bowls dating to the Flavian/Trajanic, Trajanic and Hadrianic/early Antonine

Table 127: Gittisham Forge Roman pottery, total number and weight (g) of sherds by feature

	Finewares						*Coarsewares*					*Storage jars*		*Gritty grey*					
Feature	*Samian*	*Unass cc*	*NF f'ware*	*Oxf cc*	*Amph*	*Mort*	*Oxid*	*Grog temp*	*S.Devon*	*Mica grey*	*Sandy grey*	*Type A*	*Type B*	*Type A*	*Type B*	*SED BB1*	*SW BB*	*Post-med*	*Total*
1st–2nd century AD																			
Pit 814	–	–	–	–	–	–	8/38	–	–	–	13/128	–	–	–	–	1/3	–	–	22/169
Gully 936	1/1	–	–	–	–	–	3/90	–	–	–	12/73	–	–	1/9	–	9/48	–	–	26/221
Layer 923	–	–	–	–	5/67	–	2/15	–	–	1/9	68/900	–	–	–	–	38/522	–	–	114/1513
Hollow 932	4/13	–	–	–	–	–	–	–	–	–	5/15	–	–	–	–	1/5	–	–	8/33
Later 3rd–4th century																			
Dark earth 837	17/79	–	3/38	–	12/699	1/16	9/84	–	5/20	–	35/217	2/14	–	1/16	8/80	40/211	–	–	133/1474
Gully 938	–	–	–	–	2/193	–	2/9	–	–	–	19/179	–	–	1/4	–	17/97	2/16	–	43/498
Ditch 806	5/28	1/2	1/16	2/27	10/1848	1/8	3/16	1/11	30/411	–	54/371	23/1040	1/108	29/1014	8/56	122/1191	6/29	1/2	298/6178
Ditch 952	–	–	–	–	–	–	4/13	–	–	–	2/12	–	–	–	–	12/152	–	–	18/177
Feature 805	–	–	–	2/35	–	–	–	–	1/7	–	14/25	–	–	2/10	–	28/239	–	–	47/316
Pit 807	–	–	–	–	–	–	1/21	–	–	–	9/40	–	–	–	–	5/18	–	–	15/79
Pit 825	–	–	–	–	–	–	–	–	–	–	1/2	–	–	–	–	–	–	–	1/2
Post-hole 829	–	–	1/7	–	–	–	–	–	–	–	–	–	1/1	1/1	–	–	–	–	3/9
Gully 907	–	–	–	–	–	–	–	–	–	2/2	8/67	–	–	2/9	–	2/6	–	–	14/84
Hollow 934	–	–	–	–	–	–	–	–	–	–	2/5	–	–	–	–	–	–	–	2/5
Total	27/121	1/2	5/61	4/62	29/2807	2/24	32/286	1/11	36/438	3/11	240/2034	25/1054	2/109	37/1063	16/136	275/2492	8/45	1/2	744/10,758

Key: Unass cc = unassigned colour-coated ware; NF f'ware = New Forest red-slipped and colour-coated wares; Oxf cc = Oxfordshire red and brown colour-coated ware; Amph = amphora (Peacock and Williams 1986, class 25); Mort = Oxfordshire red and brown colour-coated ware and ?South Wales mortaria; Oxid = Exeter fabric 435, fine micaceous+North Gaulish+coarse sandy oxidised wares; Grog temp = grog tempered coarsewares; S.Devon = South Devon wares; Mica grey = fine micaceous grey ware; Sandy grey = coarse and fine sandy grey ware, grey ware with very coarse quartz, fine smooth grey ware with micaceous surfaces; SED BB1 = South-east Dorset Black Burnished wares; SW BB = South-western Black Burnished wares; Post-med = post-medieval plain red earthenware

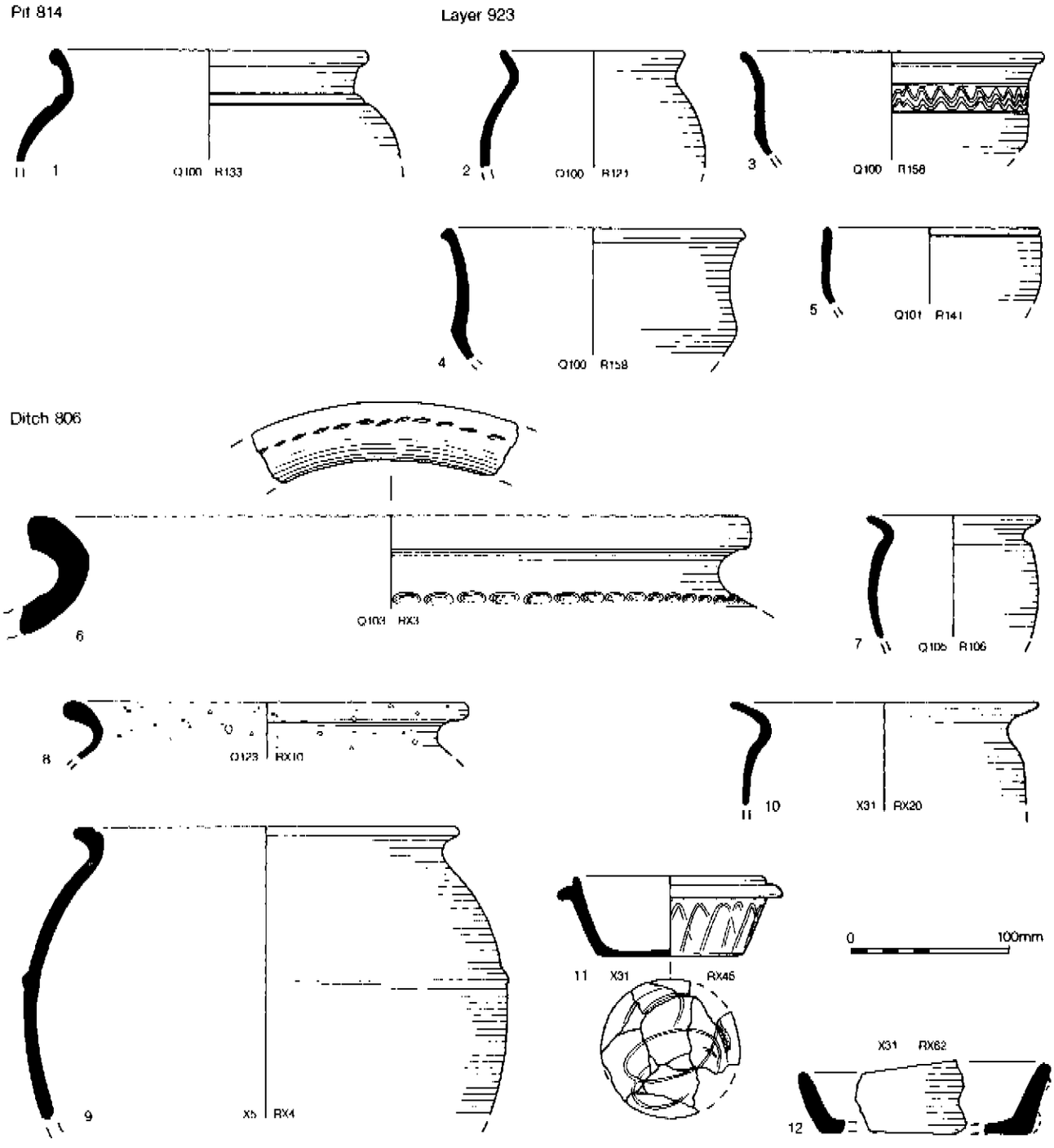


Figure 177 Gittisham Forge: Roman pottery (scale 1:4)

periods, and a scrap from a second Les Martres vessel of Trajanic/Hadrianic date. Although the coarsewares from hollow 932 are undatable, the samian suggests that it may be of late 1st–early 2nd century AD date. Fragments from an Antonine form 45 mortarium, probably the latest vessel recovered from the site, were found in ditch 806.

As the site is so close to Pomeroy Wood military base it is unsurprising that the date range of the two assemblages is the same. Neither of the early Lud. Tg sherds are from the same vessel as the one found at Pomeroy Wood, but it is possible that the three vessels were imported together.

Table 128: Gittisham Forge samian, fabrics and vessel forms

Production area	*No.*	*Wt (g.)*	*Identified forms*
S. Gaul	6	18	18, 27, 29 or 37
Les Martres	2	2	37
Lezoux	19	101	18/31, 33, 37 (x 2), Lud. Tg (x 2), bowl
Total	27	121	

Illustrated feature groups
(Context numbers in brackets)

(Fig. 177)
Pit 814
1. Type R133, coarse sandy grey ware (813).

Layer 923
2. Type R121, coarse sandy grey ware. (923).
3. Type R158, coarse sandy grey ware. (923).
4. Type R158, coarse sandy grey ware. (923).
5. Type R141, fine sandy grey ware. (923).

Ditch 806
6. Exeter type 3, Type A South-western storage jar fabric. (816, segment 815).
7. Type R106, very coarse quartz gritted fabric. (802, segment 804).
8. Exeter type 10, Type A gritty grey wares. (816, segment 815).
9. Exeter type 4, South Devon. (802 and 803, segment 804).
10. Exeter type 20, South-east Dorset Black Burnished ware. (819, segment 815).
11. Exeter type 45, South-east Dorset Black Burnished ware. (811, segment 812).
12. Exeter type 62, South-east Dorset Black Burnished ware. (816, segment 815).

Worked Stone, by Emma Loader

A single quern stone was recovered from Nag's Head Culvert. Although it was unstratified it probably came from layer 700. This is part of a lower rotary quern stone in Permian lava, and is comparable to the examples found at Pomeroy Wood.

Ceramic Building Material and Fired Clay, by M. Laidlaw

A small assemblage of ceramic building material was recovered (65 fragments; 2116 g), which consists mainly of post-medieval material with only a small number of Romano-British fragments. No diagnostic Romano-British forms were recorded. A small amount of fired clay was recovered (63 fragments, 777 g). With the exception of five fragments with surviving surfaces and one wattle-impressed fragment, all are small, featureless fragments. The fragments were found dispersed in small quantities in a number of features across the site. The associated finds indicate a Romano-British date, and a structural derivation is likely.

Environmental Analyses

Charred Plant Remains, by Alan J. Clapham

Five contexts were examined, one dating to the 1st–early 2nd century AD, the others to the 2nd–4th century. In general, though the samples were not rich in charred plant remains, those present were well preserved (Table 129).

1st–2nd century AD
Cereals, including spelt wheat (*Triticum spelta*), *Triticum* sp., and a possible example of cultivated oats (*Avena* sp.) dominated the sample from gully 936. The few weed seeds included dock (*Rumex* sp.), vetch/vetchling (*Vicia/Lathyrus* sp.), ribwort plantain (*Plantago lanceolata*), and field wood-rush (*Luzula campestre*). The domination of cereal remains, the small number of weed seeds, and the number of broken glume bases, suggests that the assemblage may be from the final stages of processing, i.e. the pounding of the spikelets after parching in order to release the grain. The remains may have been used as tinder.

2nd–4th century AD
The primary fill of ditch 806 in the southern segment excavated (context 820) contained few remains, and represents a 'background flora' of redeposited material. Grain and glume bases of spelt wheat and *Triticum* sp., and a possible cultivated oats grain were found. Non-cultivated species included buttercup (*Ranunculus* subgenus *Ranunculus*), hazel nutshell (*Corylus avellana*), dock, and clover (*Trifolium* sp.). Other finds include fragments of oat awns, culm nodes, and grass stem fragments.

Cereals were the most common find in gully 938, which might date to the 1st or earlier 2nd centuries: a sprouted grain of possible emmer wheat (*Triticum dicoccum*), spelt, and *Triticum* sp. Caryopses of a possible cultivated oats were also recovered and with the non-cultivated species of hazel nutshell, chickweed (*Stellaria media*), and sheep's sorrel (*Rumex acetosella*). The paucity of cereal remains apart from *Triticum* sp. glume bases suggests that this charred plant assemblage probably also represents crop-processing waste used as tinder. The lack of non-cultivated remains suggests that either the crop was stored as clean spikelets, or that the weed seeds did not survive the charring process.

Although few remains were found in pit 807 they were dominated by cereals with no non-cultivated species recorded. The cereals consisted of spelt grains and glume bases, *Triticum* sp. glume bases, and cereal grain fragments.

The black silty deposit, 837, contained few plant remains. *Triticum* sp. grain and glume bases and bracken (*Pteridium aquilinum*) pinnules were present but probably represent a 'background flora'.

Discussion
Although charred plant remains were sparse they show that emmer and spelt wheat, perhaps along with cultivated oats, were grown locally. The dominance of chaff suggests that remains may be from crop-processing waste used as tinder. The hazel nutshell may suggest a wild food source gathered from local scrubland. The buds from several samples (Table 129) probably derive from wood used as a fuel. The remains are generally comparable with those from the nearby site of Pomeroy Wood.

Table 129: Gittisham Forge, charred plant remains

Date	*1st–2nd century*	*2nd–4th century*			
Feature type	*gully*	*ditch*	*gully*	*pit*	*Layer / spread*
Feature	*936*	*806*	*938*	*807*	
Context	*935*	*820*	*937*	*808*	*107*
Sample	*1814*	*1809*	*1813*	*1804*	*1150*
Sample size (litres)	*10*	*15*	*15*	*15*	*10*
Flot size (ml)	*66*	*60(100)*	*64*	*75(300)*	*42(96)*
Cereal remains					
Triticum dicoccum sprouted grain	–	–	1	–	–
T. spelta grain	2	1+1f	3+3f	1	–
glume bases	22	2	10	4	–
Triticum sp. grain	–	–	2	–	2+1f
spikelet forks	2	–	–	–	–
glume bases	28	16	47	3	1
Avena sp.	3+2f	1	2+1f	–	–
Cerealia caryopses	10f	11f	30	1f	8f
Weeds					
Pteridium aquilinum pinnules	–	–	–	–	1
Ranunculus subgenus Ranunculus	–	1	–	–	–
Corylus avellana	–	1f	2f	–	–
Stellaria media	–	–	1	–	–
Rumex acetosella	–	–	1	–	–
Rumex sp.	1	1	–	–	–
Vicia / Lathyrus sp.	1f	–	–	–	–
Trifolium sp.	–	1	–	–	–
Plantago lanceolata	1	–	–	–	–
Luzula campestris	1	–	–	–	–
Avena sp. awn	–	2f	–	–	–
Culm nodes	–	2	–	–	–
Poaceae internodes	–	2	–	–	–
Buds	–	1	–	2	1

Charcoal, by Rowena Gale

Six large samples were analysed with most including >50 fragments measuring 2 mm or more in radial cross-section. The charcoal was firm and well preserved and samples 1809 and 1804 were 50% sub-sampled (Table 130).

The taxa identified are:

Aquifoliaceae. *Ilex* sp., holly
Betulaceae. *Betula* sp., birch
Corylaceae. *Corylus* sp., hazel
Fagaceae. *Quercus* sp., oak
Leguminosae. *Ulex* sp., gorse or *Cytisus* sp., broom (these genera are anatomically similar).
Rosaceae. Pomoideae which includes *Crataegus*, hawthorn; *Malus*, apple; *Pyrus*, pear; *Sorbus*, rowan, service tree and whitebeam. These genera are anatomically similar.
Prunoideae. *Prunus spinosa*, blackthorn

1st–2nd century AD

Charcoal from gully 936 consisted mostly of oak. The charcoal was fragmented but included a high proportion of roundwood, with rather less heartwood; some oak was fast grown. A twiggy piece of birch (diam. 1 mm) and possibly hazel were also present.

Pit 814 only contained sparse and fragmented charcoal including oak sapwood and heartwood, hazel, blackthorn, and possibly birch.

2nd–4th century AD

Charcoal from the primary fill of ditch 806 in the southernmost section excavated was predominantly of oak from roundwood, sapwood, and heartwood including both fast and slow-grown wood. Other taxa included hazel, birch, gorse/broom, blackthorn, and hawthorn type. A very similar range of taxa was present in the sample from gully 938 (which may be of 1st–2nd century date), with the exception of the hawthorn group, and the addition of holly. Pit 807 contained a large volume of

Table 130: Gittisham Forge, charcoal (no. identified fragments)

Feature	*Context*	*Sample*	*Betula*	*Corylus*	*Ilex*	*Pomoideae*	*Prunus*	*Quercus*	*Ulex/Cytisus*
1st–2nd century AD									
Gully 936	935	1814	1r	?1	–	–	–	35rsh	–
Pit 814	813	1811	?1	2	–		2	14rsh	–
2nd–4th century									
Ditch 815/806	820	1809	6	12		6	1	86rsh	2
Gully 938	937	1813	1	20	1	–	1	22rsh	2
Pit 807	808	1804	3	21	–	6r	–	141rsh	–
Layer 837	104	1150	3	11	–	–	1	61rsh	–

r = roundwood (diam. <20 mm); s = sapwood; h = heartwood

charcoal. Oak, mostly roundwood and sapwood (e.g. diam. 20 mm, five growth rings; diam. 7 mm, two growth rings) but also a small amount of heartwood predominated. Other taxa included hazel, hawthorn type, and birch. Charcoal from the black silty deposit 837 was also mainly oak roundwood (diam. 11 mm, four growth rings), sapwood and heartwood, but also included hazel, birch, and blackthorn.

Discussion

Charcoal from all the samples was usually abundant, with a similar range of taxa. Oak was the most frequent and consisted of a high proportion of roundwood (sometimes <10 mm in diam.) and sapwood, with a low ratio of heartwood. Other taxa usually present, albeit sometimes in very small quantities, included birch, hazel, and blackthorn, and more sporadically, hawthorn type, holly, and gorse/broom.

In view of the limited range of features in the areas excavated, it is difficult to interpret the origin of the charcoal. If it is from fuel residues, the charcoal demonstrates the consistent use of oak (in itself probably indicative of fuel debris), usually supplemented with small amounts of wood from other species. All the species, but particularly oak, would have provided a source of high-energy fuel. This is consistent with the evidence from Pomeroy Wood, and the woods at both sites would probably have been gathered from a similar catchment area.

An alternative origin worth consideration, had the site been used for gardens, cultivation or enclosures of any type, is the burning of invasive scrub or hedge trimmings. It is likely that enclosure ditches and banks supported boundary or dead hedges. Boundary hedges in cultivated areas have traditionally included oak, hazel, blackthorn, hawthorn, and holly, depending on the type of soil, although birch, gorse and broom would be less likely. Gorse and broom are quick to colonise disturbed soils.

Discussion, by A.P. Fitzpatrick

Only a small number of features can be attributed to the 1st–2nd centuries, pit 814 in the eastern trench, shallow gully 936, and hollows/layers 923 and 932 (Fig. 176). On the basis of its small size and alignment it is possible that gully 938 was contemporary with 936. Gully 936 is aligned north-north-east to south-south-west, an orientation that was followed by the later and more substantial ditches 950 and 951, and 806 and 952. It is possible that the Roman road defined this orientation. If this is so, it may be that the road approached the stream by cutting across the valley slopes rather than by going straight down them.

There is little evidence for activity on the site during most of the 2nd century and the bulk of the material is contemporary with phase 4ii at Pomeroy Wood, though as the pottery assemblage is small, the significance of this dating should not be over-emphasised. The digging of enclosures and the accumulation of dark earth deposits is characteristic of the later Roman activity at Gittisham Forge, and also in layer 700 at Nag's Head Culvert. Similarly, between phases 4i and 4ii at Pomeroy Wood the focus of settlement appears to have shifted and most of the activity is related to the extension of a series of enclosures or compounds (which the charcoal evidence hints may have been hedged), and the accumulation of significant deposits of dark earth.

The quantity of finds recovered from ditch 806 and from the layers all suggest occupation in the immediate vicinity, but not within the excavated areas. It may be that these areas represent back plots or field systems for a settlement fronting on to the road. The quantity of slag from Nag's Head Culvert would suggest that iron smithing took place nearby, as was also the case at Pomeroy Wood. All of these sites appear to have been given up at around the same time, suggesting that they were parts of the same roadside settlement.

12. Watching Brief (Roman Sites and Finds)

by R.A. Davis, A.P. Fitzpatrick and J. Grove

The location of Romano-British finds and sites in the vicinity of the route is indicated on Figure 104, above. The prehistoric finds recorded during the Watching Brief are described in Chapter 2, above.

Dart Lane/Iron Bridge Evaluation

Following the discovery of the Roman sites at Gittisham Forge and Pomeroy Wood, nine trenches were excavated using a mechanical excavator along the new line of the A30 to the west of Pomeroy Wood to establish whether the roadside settlement continued to the west of Dart Lane. No Roman features were identified in these trenches, although four sherds of South Devon ware were recovered unstratified close to Iron Bridge at Trench 8 (SY 1212 9887) (Fig. 104). Roman pottery has previously been reported from Fenny Bridges on the River Otter close to Iron Bridge (Todd 1984, 266). The only feature identified was in trench 1, nearest to the western end of the Pomeroy Wood site. This was a shallow linear feature that contained large pieces of burnt chert and flint as well as burnt stone and, as it is sandwiched between the railway line and the modern road, is as likely to be modern as prehistoric in date. On this basis the western limit of the Roman settlement may be defined as the modern route of Dart Lane (Plan 2).

The eastern extent of the settlement is less clearly defined; only a single sherd of samian was found immediately to the east of the former site of the forge at Gittisham Forge.

Brinor Evaluation

Following the discovery of a quantity of flaked stone to the east of the London–Exeter railway near Castle Hill (Fig. 2), ten evaluation trenches were opened using a mechanical excavator. A small quantity of additional flaked stone was found in the topsoil from these trenches (Chapter 2), but the only archaeological features located (within Trench 8 at SY 1111 9879) were two shallow ditches, a small pit, and a stone spread. All of these features lay close to the lane that crosses the railway and it is possible that they have been preserved by the colluvium that had accumulated against the edge of the slightly sunken lane.

Ditch 23 was 0.5 m wide x 0.15 m deep with a rounded profile; the dark greyish-brown silty clay fill contained a rim sherd from an everted Romano-British jar. Ditch 21 was 0.6 m wide and 0.29 m deep with a rounded profile, but was undated. Stone spread 32 was seen for a distance of *c.* 5.0 m x 0.6 m, was 0.05 m deep and made up of well-spaced medium to large cobbles. Two pieces of flaked stone and five sherds of South Devon Ware and grey wares were recovered from the spread. Pit 25 was 1.5 m in diameter, 0.17 m deep and had a rounded profile. The dark reddish-brown silt fill also contained six sherds of Romano-British pottery, including South Devon Ware. Fragments of stone, possibly from a quern, were also recovered from the Watching Brief immediately to the south.

It did not prove possible to undertake further work at Brinor and no further features or finds were observed during the subsequent Watching Brief on topsoil stripping. It should not be assumed that the undated features are necessarily Roman in date, as the Feniton Tithe Map of *c.* 1840 shows a barn, Down's Barn, sited at SY 1108 9880 and which is mentioned in the Apportionment as Down's Barn and Courtlage, forming part of a small holding of 12 acres (*c.* 5 ha) (Weddell 1991, 25). Although no post-medieval pottery was recovered, it is possible that some of the undated features could be post-medieval. However, to the west of the Railway Bridge at Castle Hill, sherds of Romano-British pottery were retrieved during the initial walkover survey (Weddell 1991, 24), the evaluation (Reed and Manning 1994c, 5), the excavation, and during the Watching Brief over the v-ditching (Chapter 2). All of this evidence, limited though it is individually, cumulatively suggests a Roman settlement in the immediate vicinity.

The Dorchester–Exeter Roman Road

The old A30 between Honiton and Exeter is widely assumed to follow the route of the Roman road between Dorchester and Exeter (Margary 1955, 106–7; Todd 1986, 218; *cf.* Weddell *et al.* 1993, 812). The long straight lengths of modern road between Honiton and the River Otter and between Strete Raleigh and Rockbeare, and the evidence of aerial photography all offer strong support to this view. Despite this, the remains of the road proved to be remarkably elusive.

During the Watching Brief over a road diversion at SY 0663 9644, a concentration of flint cobbling was noted. Further investigation by the excavation of three narrow trenches confirmed the presence of a 34 m length of a compact cobbled surface, though the width of the surface could not be established as service trenches adjacent to the existing A30 truncated it. The cobbling continued to the south beyond the stripped area. This surface is interpreted as the remains of the Roman road, whose route has been confirmed *c.* 300 m to the west of the site between SY 0595 9620 and 0618 9624 by aerial photography (Griffith 1984b, 27).

The cobbled surface (1122) rose by 0.10–0.15 m to the north and a second layer of smaller cobbles and pebbles (1123) could be seen in one place. The principle surface,

1122, consisted of 80% pebbles and cobbles, 0.01–0.15 m in size, with infrequent pieces of sandstone, set in a matrix of greyish–brown clayey silt. The centre of the road surface, the top of the camber, could be implied to lie to the north.

No finds were recovered to confirm the Roman date suggested here, but the observation is in line with the route of the Roman road seen on the air photograph in the field immediately to the west. The area investigated was sealed below road make-up, but not destroyed during the road diversion operations of July 1998.

No trace of the Roman road was seen elsewhere on the route. It was anticipated that the water pipeline to supply the temporary concrete works for the road building would cut through the projected line of the road at SY 0505 9004, just west of the length recorded by aerial photography, but no trace of it was seen during a Watching Brief. In this instance it is possible that the road had been destroyed by erosion caused by a stream which eventually runs into the River Clyst, or by building works at the nearby farm.

Immediately west of Honiton the Roman road was not seen when the modern road surfaces and foundations of the A30 were removed or in the excavations for a number of culverts which cut north–south across the old and new carriageways of the A30. It is possible that immediately to the west of Honiton the Roman road runs further to the south where a number of fields thought to be on a different alignment from the modern A30 and so be of prehistoric date (Weddell 1991, 31, fig. 34), could instead preserve the orientation of the Roman road.

The clearest evidence for the line of the road in this area appears to be from the orientation of the enclosures at Pomeroy Wood and Gittisham Forge, which may be aligned on the Roman road. The enclosures are, however, aligned slightly differently at both sites, endorsing the observation that Roman roads may well be straight, but often only in short lengths.

Lastly, two sherds of Roman pottery – weighing 2 g – found at the site of the slip road from the new line of the road at the junction for Exeter airport at SX 9916 9326 represent the only other Roman material recorded during the Watching Brief.

13. Discussion of the Roman Sites

by A.P. Fitzpatrick and J. Grove

Although there was clearly activity at Pomeroy Wood during the prehistoric period, perhaps of Late Neolithic/Bronze Age date, there is little evidence for any significant occupation on the site and it may be that much of the flaked stone was introduced to the site during the Roman period when the turf-faced rampart was built. The finds of Late Iron Age date are likely to have arrived with the Roman army.

The 1st Century AD Military Base

The Defences of the Military Base

The earliest certain Roman military occupation at Pomeroy Wood was a small base with two defensive ditches and probably an earth and timber rampart which was established in the 60s AD during the reign of the Emperor Nero. The phrase military base is used here as the true extent and character of the site is not known. The character and quantity of the finds suggest that it was garrisoned but other possibilities, for example that it was an annexe to a larger base or was some other military installation such as a stores compound, cannot be excluded. It is not known if the outer work or annexe was established at this time; its ditch would be very large for a marching camp, but not without precedent (Welfare and Swan 1995, 18). The date at which the base was abandoned is less clear, but by analogy with other sites in Devon, it seems likely to have been in the 80s though a slightly later date cannot be excluded. There is some evidence for different phases of use of the small part of the site that was excavated, where a timber building was replaced by an interval tower which was added to the inside of the rampart. A closer dating of these sub-phases has not been possible.

The siting of the base is 'typical' for the south-west, and indeed further afield, being on a low hill or in this case a slight promontory, adjacent to a valley or river crossing (Griffith 1997, 365; Jones 1975, 45–9). It has commanding views along the valley of the River Otter, to both the east and the west. Neither the size of the base nor of the outwork or annexe is yet known, nor is there any reason to assume that these are the only two military installations in the vicinity. There is ample room for larger camps or other bases on the flat land immediately to the south of Pomeroy Wood. The Iron Age hill fort of Hembury lies just 4 km to the north (Pl. 41) and was reused and garrisoned by the Roman army in the 50s AD. However, sited on the edge of the Blackdown Hills at a height of 270 m AOD (Fig. 104), the base at Hembury was not as accessible as the river valley siting of Pomeroy Wood, astride the major route to Exeter and the south-west peninsula.

On the evidence available, Pomeroy Wood is too large to have been a fortlet. It is certainly much larger than the fortlets known in the south-west (Fox and Ravenhill 1966; Griffith 1984b, 17) and elsewhere (Maxfield 1985, 56), but by any standard Pomeroy Wood would have been a small fort. If, extrapolating from the single known dimension at Pomeroy Wood of 75 m (measured from the inner ditch edge), a breadth:length ratio of 1:1 (square) to 2:3 (rectangular) is postulated (Jones 1975, 49, tab. 3), the size would be between 0.19 and 0.84 ha (Table 131). The projected area of the base, at a 1:1 ratio, is shown on Plan 2. This area is considerably smaller than that of most of the bases known in the south-west (Fig. 178), and indeed within Britain, where Nanstallon in Cornwall is one of the smallest at 0.86 ha. A breadth:length ratio of 2:3 is, however, exceeded by two forts of similar size in Devon, at Cullompton (Simpson and Griffith 1993, 149–59), and Okehampton (Griffith 1984b, 13). If the size range of Pomeroy Wood were similar to this, the area of the site could be almost one hectare, which is comparable to several certain or probable fort sites in the south-west; Cullompton, Clayhanger (Frere and Tomlin 1991, 281), Killerton (Griffith 1984b, 25), and Okehampton (all in Devon), and Nanstallon. If the base at Pomeroy Wood faced the line of march, the front gate was probably to the west. However, none of these possibilities detract from the point that if Pomeroy Wood was garrisoned, and it appears to have been, it was a very small base. Although it might be comparable with the possible, but undated, Roman fort at Broadbury Castle, Devon which Maxfield (1985, 56) has compared in size to the slightly later *numeruskastelle*, at present the closest comparison to Pomeroy Wood in southern England is Nanstallon.

The outwork or annexe on the western side of the base may be contemporary with the base or may represent an attempt to enlarge the defended area (Wilson 1984). The virtual absence of phase 2 features

Plate 41 Pomeroy Wood: Pomeroy Wood in the middle distance and Hembury in background (top right), viewed from the south-east. Photograph (12 March 1998) by Bill Horner, Devon County Council. Copyright reserved

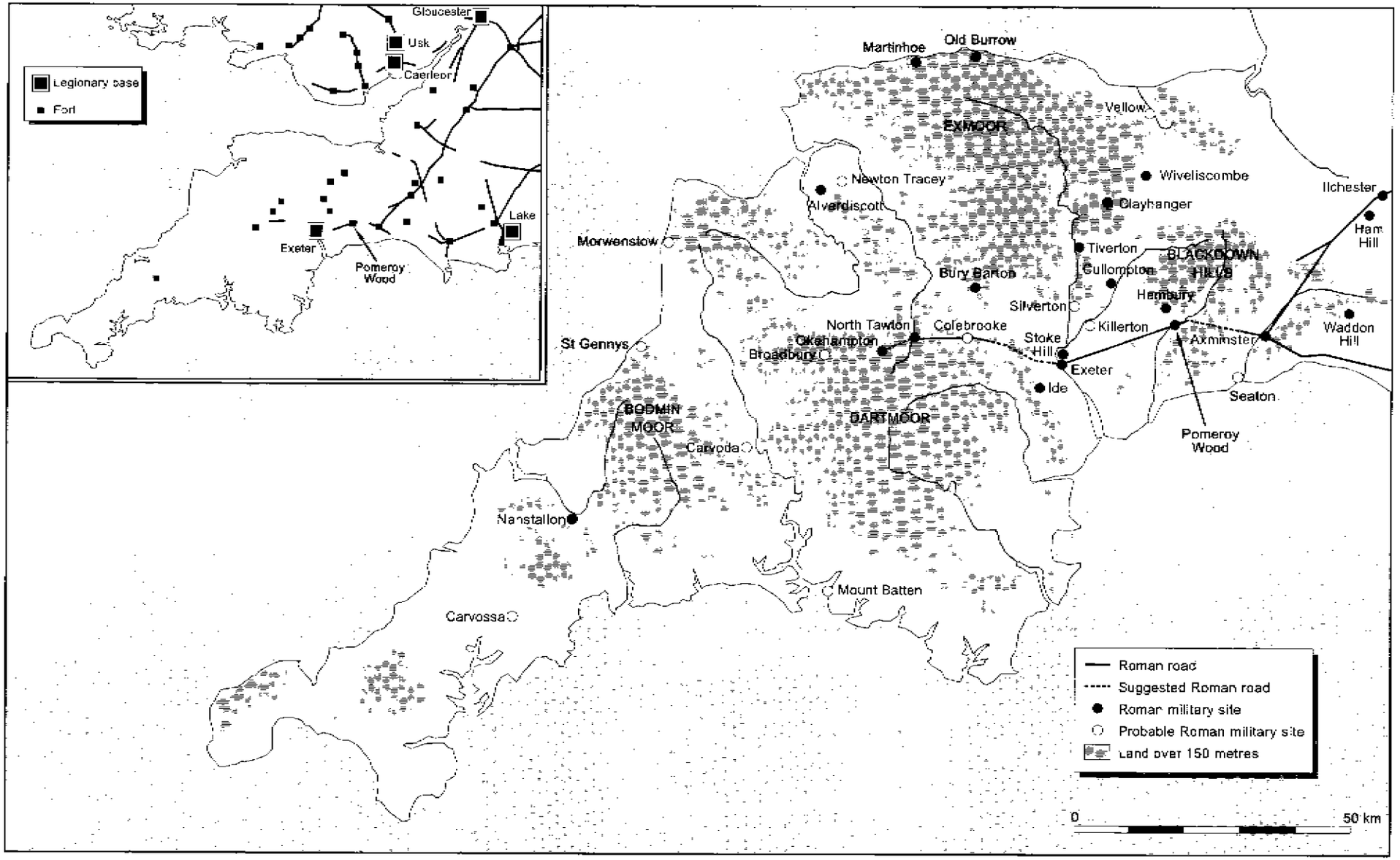


Figure 178 *Roman military sites in the south-west (based on Griffith 1997, fig. 6.29, with additions)*

Table 131: Areas of military bases in south-west England

Site	*Interior size (m)*	*Hectares*	*Acres*	*Ratio lengths*
Pomeroy Wood	75x*75*	0.56	1.40	Square
	75x*112*	0.84	2.10	2:3
	*25*x75	0.19	0.50	2:3
	75x*130*	0.97	2.40	>2:3
Okehampton	80x125	1.00	2.50	>2:3
Cullompton (i)	75x130	0.97	2.40	>2:3
Cullompton (ii)	105x180	1.89	4.67	>2:3
Clayhanger	100x110	1.10	2.75	<2:3
Killerton	90x125	1.12	2.80	<2:3
Bury Barton	100x140	1.40	3.50	<2:3
Tiverton	100x125	1.25	3.12	<2:3
Woodbury	130x140	1.90	4.55	<2:3
N. Tawton (i)	125x170	2.12	5.31	<2:3
N. Tawton (ii)	125x255	3.19	7.97	<2:3
Colebrook		2.24	5.60	
Nanstallon	86x100	0.86	2.15	<2:3

Measurements in italics for Pomeroy Wood represent possible 'standard' sizes. Military installations such as signal stations/fortlets and camps have not been included.

within the area enclosed by this defensive work appears to preclude the possibility that the rampart and ditch form part of the defences of a larger base of a different date. In Devon annexes are certainly or probably known at the sites of Cullompton (Griffith 1984b, 13; Simpson and Griffith 1993) and North Tawton (Griffith 1984b, 20–5; Welfare and Swan 1995, 54–6, fig. 46).

In many respects the defences of the site are typical of 1st century military bases, double ditched with a cleaning slot at the base of each ditch, and a narrow berm between the ditches and the rampart, which was made of earth and timber. The defences are slightly unusual, though, in the absence of a gate on their southern side. It is not considered likely that structure 4724, which is interpreted as an interval tower, could have been a small gate. The absence of a gate is by no means unknown. Tiberio–Claudian sites such as Hofheim in Germany and Valkenburg in the Netherlands only have three entrances but in Britain the layouts of some bases with three gates, such as Hod Hill or The Lunt, Warwickshire, are atypical in many other regards. The Trajanic site at Haltwhistle Burn, Northumberland, a roadside base by the Stanegate, only has three entrances and it is one of the long sides which is uninterrupted. That base, which does not appear to have any corner or interval towers, occupies less than an acre (c. 0.4 ha) (Breeze and Dobson 1978, 22–3, fig. 2). In Devon, it is possible that the small fort at Bury Barton only has three entrances (Todd 1985a, 53).

The rampart base at Pomeroy Wood appears to have been very narrow. Despite a careful search, there was no evidence for the base of the rampart, or of any timber revetment to it. The existence of a rampart is essentially inferred from the phase 3 demolition deposits in the defensive ditches, and the absence of buildings or other features within c. 4 m of the inner defensive ditch. The evidence from the south-western sites of Nanstallon and Tiverton shows that the berm between the inner ditch and the rampart need have been no more than 0.5 m. At Tiverton the rampart base was seen to be almost 6 m wide, but at the smaller site of Nanstallon it was only 3.65 m, giving a combined width for the berm and rampart of just over 4 m, virtually the same as at Pomeroy Wood. The lengths of rampart built by the Roman army at Hod Hill are only 3 m wide (Jones 1975, 69–70, fig. 14).

It remains possible that the fort originally had a single ditch with buildings 4725 and 4731 laid-out in relation to that, but that the area was subsequently reduced in size by the excavation of what became the inner ditch. The slot 3229 between the ditches could perhaps be related to an earlier rampart. There is no certain evidence for this possibility, but it should be noted that the fort at Tiverton only had one defensive ditch, as did the Exeter fortress in its first phase.

Another seemingly unusual feature of the defences at Pomeroy Wood is the absence of interval towers or angle towers at the southern corners, set within the body of the southern rampart. These towers might have been expected to have been present (Jones 1975, 92), though in reality relatively few later Neronian/early Flavian military bases have been excavated in Britain so how common they are is not known with any certainty. It may be that the addition of an interval tower (4724) on the inside of the southern rampart was an attempt to partially make good the absence of towers in the original layout, or to provide greater visibility than was possible from a rampart that may not have been as high, or the walkway as wide, as was then desired (*op. cit.*, 69–70). Phase 4i debris over phase 2 features within building 4725 provided substantive evidence that tower 4724 was not built within the body of the rampart but was free-standing, being supported on four posts. It is possible though that there were further posts which were inserted into the body of the rampart but which were not earthfast.

There is no convincing evidence for any other interval or corner towers. Pits 4187 and 4315 in the south-western corner, and 4498 in the south-eastern corner could conceivably be the post-holes of towers, only parts of which lay within the area available for excavation. However, only pit 4498 is comparable in size to the post-holes of tower 4724, but in contrast to those seen in 4724, it is oval rather than square in plan and a post-pipe was not visible.

The ditch of the outwork or annexe 785 has a Punic profile, being much steeper, though far from vertical, on its outer, western, face. Although pollen was not preserved to demonstrate this, it is probable that the characteristic greenish clay silts in the ditch are the remains of a turf-faced rampart that was reduced when the site was abandoned.

The orientation of the compounds and enclosures to the west of the base suggests that they were aligned on the Roman road between Dorchester and Exeter, even if the exact course of the road is not known. If, on the west of Nag's Head brook, the Roman road is assumed to have been on the line of the northern side of the old

A30 dual-carriageway it would run through the south side of a rectangular fort, or the centre of a square one. The building of the length of road between Axminster and Exeter is not closely dated but it may be presumed to have been during the military occupation of the south-west (Maxfield 1986b, 1–8). As the compounds or enclosures at Pomeroy Wood and Gittisham Forge are on slightly different alignments, it may be that the road approached the stream crossing on slightly different lines. At both North Tawton (Welfare and Swan 1995, 54–6, fig. 46) and Woodbury (Weddell *et al.* 1993, fig. 27) the Roman road appears to pass to the north of the base, although at North Tawton the road passes through a larger complex of sites. It may be that the bases and the road were conceived as a single programme of building.

The Internal Organisation of the Base

Too little of the interior of the base survived to adduce much of its internal organisation. What evidence there is, suggests buildings occupying part of the *intervallum*, the area between the rampart stack and the *via sagularis*. This gap might be expected to have been between 2 and 5 m wide, with the inner edge of the rampart being defined by a gully. Whilst the presence of ovens and pits in this area might be anticipated, the discovery of buildings is more unusual, although it is not known if this represents the primary layout of the base.

Although fragments of what may be buildings are represented by east–west gullies 4058 and 4721 (Plan 1), only two timber buildings can be identified with confidence, 4725 and 4731. Both fall comfortably within the range of types known from sites of this date, and the building techniques used in 4725, a construction trench with post-holes set within it, and the apparent use of oak, are typical (Hanson 1982). However, there is scant evidence for any internal sub-divisions of the buildings. The traces of burnt clay around 4731, which was found with considerable quantities of oak charcoal (which was also present in 4498), may be the remains of daub and suggests that this building may have been burnt when the base was given up. Both these buildings are *c.* 8 m wide. There is no certain evidence for internal sub-divisions of these buildings into double rooms, although there are hints of one cross-division in 4725. This lack of evidence for sub-divisions could be construed as suggesting that the buildings are stables, but in view of the difficulties of interpreting complete buildings within bases (Maxfield 1986a; Hassall 1983; 1998), let alone an incomplete plan such as Pomeroy Wood, the temptation should be avoided. Similarly the fact that the two buildings appear to have been burnt (below) is insufficient ground on which to suggest that they were contemporary.

Some of the pits attributable to the base may have been water tanks; the size, shape, and location of 4187 is also similar to features suggested to be water tanks in the cavalry base at The Lunt (Hobley 1975). No buildings contemporary with the military occupation of the base were identified within the area enclosed by the outwork or annexe. There is some inferential evidence from the charcoal for metalworking in the area defined by the ditch. This limited evidence is quite consistent with the variety of uses known, or suspected, for annexes (Bailey 1994).

Charcoal from one of the post-holes belonging to the interval tower suggests that one of the timber supports may have been burnt *in situ*, and the same applies in part to building 4731. What may be hurdling, perhaps from the superstructure of the defences or an internal building, was found in the western arm of the outer ditch along with quantities of other charcoal. All of this suggests that the final closing of the base included the burning of some or all of the structures; a well-known Roman military practice.

The Garrison(s) of the Base

Little information is available about the garrison(s) of the base. Indeed perhaps the best evidence of the military nature of the site comes from the pottery assemblage, where the range of containers for wine and foodstuffs, the food preparation vessels and the fine table wares can only be matched on military sites. Insufficient of the buildings within the base survives to allow more than the statement that they are of military type, and that the construction details of buildings like 4725 are well-known. There are few finds of military equipment. One of the spearheads (Fig. 146, 2) is of a type found commonly on forts thought to be garrisoned, at least in part, by cavalry, while another (Fig. 146, 3), may be a lance. However, the association between weaponry and types of unit is far from secure, and it is not certain that the objects at Pomeroy Wood are necessarily residual in the contexts in which they were found rather than being of later date.

The waterlogged materials, particularly from well 3047, shed some further light on this subject, showing that animals, probably horses, were stabled or tethered nearby. The beetles are not characteristic of those found in stables and it may be that animals were sometimes tethered at line perhaps in the *intervallum* (where well 3047 is sited) rather than stabled (*cf.* Glasbergen and Groenman-van Waateringe 1974, 20; Dixon and Southern 1992, 196) or that the occupation was too short lived for these fauna to have inhabited such buildings. Amongst the charred plant remains, the ling may have been used for bedding and the quantities of sprouted grain, particularly from building 4725, may have been used for fodder. While there would have been horses or mules, whether as officers' mounts or baggage animals, in almost every military base, as Wells has said 'we are again reminded that we need not necessarily expect to find permanent stabling provided for all the animals of a unit, especially one on active service' [in the sense of being on campaign] (Wells 1977, 662). However, so few stables have been identified with any degree of certainty within Roman military bases (*ibid.*; Dixon and Southern 1992, 181–94; *cf.* Schönberger 1975, 58–67, Abb. 13–14), that the most that can be said is that this limited evidence is not inconsistent with cavalry having been garrisoned within the base at some time.

The beetles that infest grain seem likely to indicate the presence of a granary within the base, though this may not have been the only place in which foods for the garrison and the animals were stored (Davies 1989, 52;

Dixon and Southern 1992, 214–5), and it may well be that the cereals were stored there before at least some of it, and the chaff from processing and cleaning, was used as horse fodder. The waterlogged remains provide further information about the environment of the base. The majority of plant species are from arable or pastoral environments, i.e. an open farmed landscape, and all the habitats could occur within a short distance of the base. The floodplain of the Otter valley would have provided grazing and perhaps hay, and the cereals appear to have been grown locally or supplied from similar environments further afield. The taxa of scrub and heathland could come from uncultivated higher ground to the south or north, perhaps brought in with bracken for bedding to absorb manure and moisture.

The grasses from a wide range of habitats, and perhaps hay also, represent animal fodder and the chaff from cereal processing may have been mixed in with some of this, though chaff is also known to have been used on the floors of stables (Dixon and Southern 1992, 209). The pollen suggests that grasslands were the most important habitat. Many of the grasses could, of course, have arrived in the base in the gut of the animals, having been eaten while grazing beyond the base. The relatively high proportion of taxa characteristic of wetlands suggests that, as might be expected (*op. cit.* 213), the lush grazing of the river valleys was used extensively as the *prata* or meadowland of the base, for the supply of the garrison whether infantry or cavalry was a major logistical exercise (Davies 1989, 52; Hyland 1990, 87–94; Dixon and Southern 1992, 206–17).

This waterlogged evidence is complemented by the charred plant remains from features around building 3545 which include quantities of oats and barley, some of which are sprouted, and are likely to represent spoilt grain used for fodder.

The Context of the Military Base

Pomeroy Wood lies within a quite dense cluster of sites in eastern Devon (Fig. 178). The military occupation of the hillfort of Hembury, some 3 km to the north has been attributed by Todd to the early phases of the occupation of Devon, which he dates to the early 50s AD (1984, 261–6). The reuse of existing defended sites by the Roman army in this way is now well-attested, with examples in south-west England known at Hod Hill, Waddon Hill, and possibly Maiden Castle, in Dorset, and Cadbury Castle and Ham Hill in Somerset (Todd 1985b, 195–6; 1987, 189–91; Sharples 1991, 40; Alcock 1995, 170). Despite the play made of the early dating of the Roman occupation of Hembury in relation to the foundation of the legionary fortress at Exeter (e.g. Todd 1982; 1984; 1987, 192; 1993), if Hembury was garrisoned during the early years of the 50s AD, it may be that this had less to do with the occupation of areas immediately to the west, than with the exploitation of the Blackdown Hills to the north (Griffith 1997, 365). At this date it is possible that many bases remained to the east in Devon, even if there was campaigning in modern Devon (Maxfield 1986b; 1987, 14). There is still some uncertainty whether the fortress at Exeter housed the entire legion, almost certainly II Augusta, or whether part of it was stationed elsewhere, perhaps at Lake Farm, Dorset (Field 1992, 44; Henderson 1991, 82–3).

Although Todd has argued that the fortress at Exeter was founded *c.* AD 50 (1987, 195–6), a date closer to AD 55 is preferred by Holbrook and Bidwell (1991, 3–6) and Maxfield (1991, 56). It has usually been presumed that most, if not all, of the other Roman bases in the south-west were established in the 50s AD (e.g. Todd 1987, 197). In fact, few of these sites are well dated, but those at Axminster (where the data are small: Holbrook 1993, 93), Tiverton and Pomeroy Wood appear to have been established in the mid-60s continuing to be garrisoned after the mid-70s, around which time the legionary fortress at Exeter was abandoned.

A number of bases are known in quite close proximity to each other (Griffith 1984b, 28). As the sites of Tiverton and Cullompton are only 8 km apart it may be thought unlikely that the two were occupied at the same time. While the base(s) at Cullompton are not well-dated (Simpson and Griffith 1993), the evidence from Tiverton would suggest that Cullompton is likely to be the earlier of the two.

All of those sites lie in eastern Devon, but it is possible that bases further to the west were also founded in the mid-60s. The evidence from Nanstallon, Cornwall is as compatible with its foundation at this time, as originally suggested by Fox and Ravenhill (1972, 88), as the date in the 50s suggested subsequently by Todd (1987, 201). It has been suggested that the base at Okehampton in west Devon might also date to the 60s, and could have superseded the base at North Tawton 7 km to the south-west (Bidwell *et al.* 1979, 258), although the range of sites which can now be seen to exist at North Tawton (Welfare and Swan 1995, 54–6, fig. 46), suggests a long and complicated history. To the north, the Neronian fortlet on the coast at Martinhoe appears, on very slight evidence, to have superseded the Claudian one at Old Burrow (Fox and Ravenhill 1966).

Too much weight should not be put on this slight evidence and inferential arguments, but it may at least be said that it is consistent with Maxfield's suggestion of a redeployment of forces in the south-west in the mid-60s, perhaps in relation to Nero's projected eastern campaigns (1991, 56; see also Holbrook and Fox 1987, 53–5). On this basis, while Pomeroy Wood may have been established after the occupation of Hembury, it need not necessarily be regarded as the immediate successor to it; there may have been a gap between the two.

The evidence from Pomeroy Wood follows that from Tiverton in some other regards. At Tiverton the defences were remodelled by the rebuilding of at least the western gate in the 70s, and this may have been associated with a redeployment of auxiliary units consequent on the Flavian advances into Wales and Scotland which may well have led to the abandonment of the fortress at Exeter. At Pomeroy Wood one of the buildings was replaced by an interval tower that was added to the southern defences, though there is no evidence for the date at which this occurred. The base at Tiverton was abandoned in the mid-80s, which Maxfield plausibly suggests may have been associated with the widespread troop movements in the western Empire in 86/7 related to the wars on the Danube (1991, 57). The date at which

Moridunum, by J. Grove

Three classical sources refer to a Romano-British settlement called *Moriduno/Moridunum*. The *Antonine Itinerary* (Rivet 1970, 60–2), a 2nd–4th century compilation of routes and journeys, twice places it 15 Roman miles from Exeter and 36 from Dorchester (both *Iter*. XII and XV). The Ravenna Cosmography, an 11th century summary of a 5th century road map, includes four versions of *Moriduno* on the route out of Exeter (Rivet and Smith 1979, 421). The *Peutinger Table* (Rivet 1970, 45), a medieval copy of a late Roman map, depicts *Moriduno/um* as being 15 Roman miles inland east of Exeter.

These sources suggest that *Moriduno* was extant in the later Roman period, as well as being a stronghold or defended place, '*dunum*', on a Roman road to the east of Exeter. The repetition of *Moriduno* as a road station (Rivet and Smith 1979, 180) between Exeter and Dorchester limits the possibilities for location of the settlement. Cases for the identification of *Moridunum* with several sites have been made previously; for Hembury by Todd (1984, 266) for Seaton by Holbrook (1987, 68), for Woodbury by Weddell *et al*. (1993, 78), for Sidford by Rivet and Smith (1979, 180), and for Fenny Bridges by Todd (1984, 266). All these locations have, in some way, not accorded with the historical context described above. Nearly 30 years ago Rivet (1970, 62) predicted a likely location for *Moriduno* as being 'in the parish of Gittisham, near Honiton'.

As far as the military base and settlement at Pomeroy Wood is concerned, its location is consistent with the historical references to *Moriduno*. It is located approximately 15 miles from Exeter, 39 (depending on route taken) from Dorchester, sited on a major Roman road, originally a military base, and with an occupation attested as continuing into the 4th century AD. The place-name evidence is the only part not to fully accord with the location, as it has been interpreted as meaning a 'sea-fort', as at Carmarthan (*Muriduno*) (Jackson 1970, 77). However, Rivet and Smith (1979, 421) point out that *mori* may also be used for inland waters, a 'river-fort' is more consistent with the location of Pomeroy Wood, which overlooks the River Otter to the north, with commanding views of the valley to the east and west. The wide flood plain is today often subject to flooding, which was possibly also the case during the Roman period.

Conclusion

by A.P. Fitzpatrick

Volume 1 of this report began with the observation that the archaeology of east Devon lay in the long shadow cast by the well-preserved prehistoric antiquities of Dartmoor. The work undertaken in association with the A30 Honiton to Exeter improvement has confirmed the long suspected archaeological potential of lowland east Devon. While the project may have met the objectives set out in the contract and Revised Research Design (pp. 3, 9), it will also enable future work to be focused more sharply. The project is also important in other ways, clearly demonstrating both the importance attached to archaeological remains as a material concern in modern developments and the continuing shift away from the funding of archaeological works by heritage agencies. The systematic archaeological evaluation of the land which was accessible by a suite of methods including fieldwalking, trial trenching and geophysical survey allowed the majority of important archaeological sites to be identified before the building work started. For those sites discovered during the road building in areas where archaeological evaluation had not been possible, additional funding was made available by the Highways Agency to record them by large scale open area excavations.

Contrast this with the situation 30 years earlier. The first length of dual carriageway in east Devon was built between Nag's Head and Iron Bridge in the 1960s. As the front cover of Volume 2 of this report illustrates, that work must have cut a swathe of destruction through the interior of the Roman military base at Pomeroy Wood but no archaeologists were present, and not a single sherd of pottery is recorded as having been found. Six years later the first by-pass in Devon was built around Honiton. Palaeontologists were delighted by the recognition and recording of the Honiton hippopotamus; but again any archaeological remains went unrecorded.

Many of the discoveries made and the excavations undertaken in the course of the works on the A30 Honiton to Exeter improvements are important in their own right. They range from the earliest evidence for the human occupation of the area in the form of the Lower Palaeolithic handaxe from Gittisham Forge, through a series of farms of later prehistoric date, to the Roman military base and a roadside settlement which may be the site of *Moridunum*.

The collective value of these sites is, however, considerably greater, particularly for the sites of prehistoric date. The evidence of ritual monuments and of farms and houses and the materials from all of them provide a broad and firmly based background against which future work, not only in the area but also in the adjoining regions, may be set. For the present many of these sites stand alone but they do not lie in the shadow of the antiquities of Dartmoor, instead they begin to demonstrate in a new light the regional characteristics of the later prehistoric and Roman periods in what is today east Devon.

the base at Pomeroy Wood was given up is less well established than that of Tiverton but it does appear to also have been at about this time.

The Civil Settlement

The Nature and Extent of the Settlement

The civil settlement at Pomeroy Wood stretched along the line of the Roman road for at least 700 m, though the evidence from Gittisham Forge is less substantial. In the later 1st and 2nd–3rd centuries (phase 4i) a series of round-houses was built on the site of the former base. Although the houses appear to occur in pairs, it is probable that this represents the replacement of single buildings. To the west a series of compounds was laid out, extending from the single military phase compound next to the outwork or annexe. There is evidence for less substantial north–south aligned divisions on the site of the base which may not have survived in the more truncated western areas of the excavation, and it may be that the buildings, which are c. 50 m apart, lay within plots. Whether there were rectangular Roman-style buildings on the road frontage is unknown.

The round-houses had passed out of use by phase 4ii and the area previously occupied by them was used for some industrial activity and the dumping of rubbish. To the west, the compounds continued in use and a number of grain driers were built. Although no buildings stood in the area of Gittisham Forge that was examined, the extensive rubbish or midden deposits also occur in phase 4ii.

The origin of this civil settlement is not known with certainty, but it seems likely that as with many other settlements it developed around the fort, probably as a *vicus*, and continued after the garrison left (Burnham and Wacher 1990, 7–9), though continuity cannot be demonstrated here. It is, however, difficult to distinguish a clear change between the military and civilian pottery assemblages other than a diminution in the quantities of amphorae, mortaria and finewares. The evidence from the civil settlement at Holcombe shows that samian was reaching such sites in the 1st century and the uncertainty of the date of abandonment of the military base combined with the relatively small samian assemblage at Pomeroy Wood makes a fine dating of the transition from the military to civilian occupations difficult. It is only possible to say that this is likely to have been in the later 1st century, even if the earliest dating in the area excavated is to the 2nd century.

Many Roman roadside settlements with military origins only expanded significantly once the base had been given up (Smith 1987, 8–9), which is probably due to the control exercised over *vici* (Sommer 1984). Smith demonstrates that across much of Roman Britain roadside settlements expanded in the later 1st and 2nd centuries, sometimes, as at Pomeroy Wood, over considerable distances before either changing or declining in the 3rd–4th centuries (Smith 1987, 97–104). It is noticeable that there only appears to have been an increase in building in Exeter in the second half of the 2nd century (Bidwell 1980, 69–72). There was clearly a shift in settlement during the latter part of the occupation at Pomeroy Wood, where the evidence for occupation in phase 4ii is limited to a handful of features and a wealth of debris; no buildings could be identified as originating during this period. There appears to be an expansion to the west of the former military base, represented by a higher proportion of features there than within the site of the base. The quantity of finds within the upper spreads of material can be attributed to a shift in the location of occupation, possibly concentrated nearer to the roadway, perhaps with the backplots now being used for depositing rubbish.

The only comparable site in Devon is at Woodbury, Axminster, where occupation stretched along the Dorchester–Exeter road for at least 600 m and to a width of 200 m in places (Weddell *et al.* 1993, 76–7). Numerous enclosures were identified in a watching brief and by geophysical survey (Cole and Linford 1993), though apart from what may be a *mansio* on the site of the former military base, no buildings have been yet been recognised. The occupation debris dates to the 2nd–4th centuries, a range that is very similar to that of the civil settlement at Pomeroy Wood. Another parallel with the Woodbury site is the presence of a dark soil layer containing 3rd–4th century material noted as overlying or infilling many features. As at many Romano-British sites, this layer may represent the spreading of midden deposits and the decay of organic materials after the abandonment of the settlement.

At present these two Roman roadside settlements are the only ones of their kind known in Devon. On the basis of the evidence presently available it is doubtful whether either can lay claim to having been 'small towns.' Other Roman period settlement in east Devon is equally elusive. A small number of sub-rectangular and sub-circular ditched enclosures, presumably farmsteads, have been demonstrated to date to the period, for example at Hayes Farm, Overland, Rewe Cross, and Turnspit. How many of the other enclosures recorded by aerial reconnaissance are also of this date is unknown (*cf.* Fig. 3; Griffith 1994, 92). An enclosure at Pond Farm, Exminster is provisionally dated to the 2nd century AD (Jarvis 1976, 67–71), with aerial photography indicating circular features, possibly roundhouses, although these have not been investigated. Other settlements of Romano-British date are suspected from surface finds.

The Buildings

Most of the buildings at Pomeroy Wood are round-houses dating to the 2nd and perhaps 3rd centuries. The buildings are represented by two concentric gullies and it appears that the inner of these was a continuous bedding trench that was sometimes packed with stones. The outer gully may be an eavesdrip. The timber buildings found at Pomeroy Wood are first of this style of building of Romano-British date to have been found not only in Devon, but in the south-west peninsula. Some of the numerous nails, staples and iron bindings presumably derive from timber buildings, but only a single possible door key was found. There is no evidence for substantial buildings within the area excavated.

Roman domestic buildings are poorly represented in Devon, the best example being a rectangular timber building at Topsham (Jarvis and Maxfield 1975, 209–66). At Stoke Gabriel (Masson Philips 1966) an oval stone footing is dated to the 1st century. Undated round-houses, which could be either later prehistoric or Romano-British, were excavated at Honeyditches (Silvester 1981, 47), as were gullies and post-holes at Milber Small Camp (Fox *et al.* 1949–50). The round-houses at Pomeroy Wood do, however, fit into a well-known pattern in lowland Britain in which round-houses continued to be built well into the 2nd century (Hingley 1989, 30). For example at Catsgore, Somerset, two round-houses (or oval/polygonal houses) date to the 2nd century (Leech 1982, 5–17). At Pomeroy Wood it is uncertain whether any round-houses were built in the 3rd century and by the 4th century the focus of the settlement had shifted. Over much of England round-houses were superseded by rectangular buildings, though they continued to be built in Cornwall (e.g. Johnson and Rose 1982, 201; Quinell 1986), north Wales and Northumberland in the later Roman period.

Four-post structures occur frequently on rural sites, as at Topsham (Jarvis and Maxfield 1975, 215–8), and they are usually interpreted as granaries or other stores. The two examples at Pomeroy Wood, 4733 and 4302, are sited within the main area of phase 4i occupation.

There were no masonry buildings in the area examined, but the quantities of stone and clay tile in phase 4i and the presence of a single possible architectural stone point to the presence of at least one significant building in the area, presumably now collapsed or demolished. It is possible that a bathhouse associated with the military base was the source of these. Quantities of tile also occur in phase 4ii and could represent the continuing reuse of the same materials. Given the nature of the settlement the source seems unlikely to be a villa. Indeed the villa at Holcombe, close to the modern Devon–Dorset county boundary (Pollard 1974) is something of a rarity, though perhaps not as much of one as has been suggested previously (Brown and Holbrook 1989, 38–9; *contra* Todd 1987, 221).

The suggestion has been made for the Devon sites of Bury Barton (Todd 1985b, 54–5), Seaton (Holbrook 1987, 71–2; Todd 1987, 221) and Woodbury (Silvester and Bidwell 1984, 53–4; Weddell *et al.* 1993, 77), that there may have been buildings associated with the functions of provincial government in these settlements. Some of the buildings may have been *mansiones*, which were intimately linked with the *cursus publicus* (which is, after all, the context of the various Roman itineraries discussed below) and were frequently built on the sites of former military bases (Burnham and Wacher 1990, 12–13, fig. 4). Not too much emphasis should be placed on the styli from Pomeroy Wood or the graffito *Januarius* in this context, as it is clear that literacy, or at least the ability to write ones own name, was more widespread in Britain than has commonly been appreciated (Evans 1987, 200–2).

The Economic Basis

Although the beetles from well 3791 show that domestic animals, perhaps cattle, were kept at the settlement, the absence of animal bone makes any assessment of the agricultural economy of the settlement at Pomeroy Wood difficult, and there are few assemblages of animal bone of Roman date from Devon which might provide some guidance. Some of the numerous grain driers at Pomeroy Wood were rebuilt on several occasions, crop-processing residues occurred widely in the charred plant remains, and several quern stones were found, all suggesting that farming was an important part of the lives of the inhabitants. The drying of a cereal crop before threshing is, however, just one of several functions that a 'corn drier' might have performed (Smith 1987, 61; van der Veen 1989): roasting of grain, fumigating for insect pests, parching of wheat glumes, or the drying of pulses are others. An oven very similar to 988 in its size and form, with an associated ash pit, was excavated within the pre-Flavian fortress at Usk, Gwent (Manning 1989, 146). The single reaping or billhook found (Fig. 104, 4) could also have been used for a variety of purposes (Rees 1979; Manning 1985, 55–8).

The quantity of smithing slag suggests that smelted iron was probably imported from the Blackdown Hills to the north (Griffith and Weddell 1996; Reed 1997). It is possible that working hollow 4706 was associated with this but in general it is difficult to assess the significance of this smithing with which some of the abundant charcoal may be associated. Otherwise the range of tools, a few knives, a leatherworking awl, and a few needles, provide some hints as to the crafts carried out at the settlement, which are typical of those on a range of Romano-British sites in south-western England (Woodward *et al.* 1993; Smith *et al.* 1997, 240).

It is noticeable that the charred plant remains and charcoal do not suggest any significant change during the course of the Roman period. Other than in the change in the style of buildings, from rectangular to round, the change from a military garrison to a civil settlement is most marked in the disappearance of some of the imported ingredients, in food preparation vessels, and a reduction in the range of fine table wares (*cf.* Darling 1977; Hurst 1985, 123–7; Holbrook and Bidwell 1991, 16–18). Even so, a wide range of pottery and glass vessels, and up to the 2nd century at least, some Spanish olive oil and French wine were available. In the later phases it is noticeable that the quantity of finewares recovered from Pomeroy Wood is comparable to that of Exeter. This may reflect the fact that the site lies further east than Exeter, closer to the producers and perhaps that the pottery now arrived in Exeter by road rather than by sea. It may also reflect a relatively high local status for the roadside settlement, suggested by the presence of the substantial building in the vicinity, and this may also account for what is by Devon standards, a relatively long coin list.

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Appendices

Although presented in site-specific reports, the sites examined by the project were all recorded, assessed and analysed using comparable methods. To avoid the undue repetition of the methods employed, they are set out here and referred to in the individual chapters.

Appendix 1: Excavation Methods
by C.A. Butterworth

All the sites excavated were given the overall Wessex Archaeology project number W2414, with the addition, where possible, of Exeter Museums Archaeological Field Unit's original site number to identify each individual site. New sites were given the next available suffix. The sites are reported on in what is essentially chronological order, as follows;

W2414.8	Castle Hill
W2414.12	Patteson's Cross
W2414.10	Hayne Lane
W2414.15	Langland Lane
W2414.6	Long Range
W2414.1	Blackhorse
W2414.16	Pomeroy Wood
W2414.13	Gittisham Forge

The gaps in the sequence are filled by those sites at which no significant archaeological remains were found and on which no further work was recommended in the first Assessment Report (Wessex Archaeology 1998a). The principle results of the Watching Brief are summarised in Chapters 2 and 12.

All the excavation trenches set out in the *Brief and Specification* and the site specific project designs were marked out in advance by BBTA surveyors. Adjustment of the original trench layouts was made at all sites and additional areas (within a defined maximum excavation area) were stripped of topsoil on the basis of the monitoring meetings. The fully excavated trenches were surveyed by BBTA surveyors and, where necessary, by Wessex Archaeology.

All sites, with the partial exception of W2414.15, Langland Lane, were stripped of topsoil using mechanical excavators under constant archaeological supervision. Langland Lane was found during the watching brief while box-scrapers were clearing topsoil but, once identified, was similarly treated. Trenches were cleaned by hand but compressed air was used to clean parts of the sandy site at Blackhorse (Pl. 18). All post-holes and pits and an agreed percentage of linear features, including intersections and terminals, were fully excavated. The more extensive use of mechanical excavators at Pomeroy Wood is described in Chapter 10 (p. 226).

Wessex Archaeology's standard recording system was followed and bulk environmental samples were taken from the majority of post-holes and pits and, after consultation, from selected sections of linear features. Any variations from these methods are described below in the relevant chapter, but it may be noted here that at Castle Hill context numbers 1–999 and 2000–2104 were used for the (original) main excavation trench, 8B, with 1001–1121 being used for the subsequent western extension (1006–1011, 1030–1045 and 1051–1064 were used for the western Strip and Record trenches) and 1500–1811 and 5000–5242 for the subsequent eastern extension (with 1506–1517 used for the eastern Strip and Record trenches).

Appendix 2: Flaked Stone
by Peter S. Bellamy

All the flaked stone from the evaluation, the excavations and the Watching Brief has been examined. Analysis was restricted to macroscopic visual examination, cataloguing all pieces on the basis of morphological characteristics alone. No metrical analysis was undertaken. The assemblages have been classified according to widely used standard morphological classifications (e.g. Bamford 1985; Bellamy 1997). The assessment of the technology, and chronology is based on subjective observations modelled on the more rigorous analyses undertaken elsewhere, chiefly those of Harding (1991) and Brown (1991). The chert and flint have consistently been studied separately in order to determine whether there was any difference in the technology and in the products which may be a result of the differing characteristics of the raw materials.

Appendix 3: Forms and Fabrics of the Prehistoric Pottery

by Lorraine Mepham and M. Laidlaw

All retained pottery from the excavations has been included within the analysis, although only prehistoric and Roman pottery has been subjected to detailed fabric and form analysis. Prehistoric (but not later) pottery from the evaluation of sites subsequently excavated is included, but Romano-British and later pottery from those sites of prehistoric date is only tabulated here. As many of the fabrics in which the prehistoric pottery is made occur at sites of different dates, the fabric and forms of the prehistoric pottery are set out here to avoid repetition. The much larger range of Roman forms and fabrics are presented in Appendices 5–6.

The fabrics

The pottery from each site was analysed using the standard Wessex Archaeology pottery recording system, which follows nationally recommended guidelines (Morris 1994; PCRG 1997). A single fabric series was created to encompass all sites and chronological periods and thus to aid the correlation of the use of similar fabric types between different sites. The fabric series contains five broad fabric groups based on dominant inclusion type: Group G (grog-tempered), Group I (iron oxides), Group Q (sandy), Group R (rock-tempered), and Group V (organic-tempered). Using a binocular microscope (x20) these were then subdivided into a range of fabric types depending on the frequency and size of the inclusions. Pottery totals by site are presented in Table 132.

Terms describing the frequency of inclusions in the fabric descriptions are defined as follows: rare (1–3%), sparse (3–10%), moderate (10–20%), common (20–30%) and abundant (40–50%). Fabrics submitted for petrological analysis (see Appendix 4) are indicated.

Early Neolithic

Q13 Hard, fine textured matrix, containing moderate, well-sorted, sub-rounded quartz <1.5 mm; sparse, moderately-sorted, sub-angular chert <3 mm; sparse, moderate-sorted, sub-angular quartz <2 mm; rare, sub-angular, white and red conglomerate <4 mm.

Q14 Hard, fine textured matrix, containing sparse, moderately-sorted, rounded quartz 0.5 mm; rare, moderately-sorted, sub-angular, chert <6 mm; rare, sub-angular, red and white conglomerate <4 mm.

Q15 Hard, fine textured matrix, containing sparse, well-sorted, sub-angular, quartz <4 mm; sparse, moderately-sorted, sub-rounded black iron-oxide <1 mm.

Middle Neolithic

R16 *Peterborough Ware*. Soft, coarse textured matrix, containing frequent, rounded grains of orthoclase and plagioclase felspar; moderate, moderately-sorted, sub-angular tourmaline-granite <6 mm; common, moderately-sorted, rounded quartz <1 mm; sparse biotite and muscovite mica. *Appendix 4 – sherd 18.*

R17 *Peterborough Ware*. Soft, moderately coarse textured matrix, containing moderate, moderate-sorted, rounded quartz <0.5 mm; moderate, poorly-sorted, sub-angular felspar <6 mm, mainly 0.5 mm; sparse, sub-angular granite <4 mm.

Q16 *Peterborough Ware*. Soft, moderately fine textured matrix, containing moderate, well-sorted, rounded quartz <0.25 mm; sparse, sub-angular quartz <10 mm; rare, angular chert <1.5 mm.

Bronze Age

Grog tempered

G1 Moderately soft, fine textured matrix, containing moderate, moderately-sorted, sub-rounded grog <1 mm; sparse, rounded quartz <0.5 mm.

G2 Moderately soft, fine textured matrix, containing moderate, well-sorted, sub-rounded grog <1 mm; sparse, moderately-sorted, sub-angular rock fragments < 1 mm; sparse, rounded quartz 0.5 mm.

G3 Moderately hard, moderately coarse textured matrix, containing moderate, moderately-sorted, sub-rounded grog <3 mm; sparse, sub-angular rock fragments <1 mm; rare, rounded quartz 0.5 mm.

G4 Moderately soft, moderately fine textured matrix, containing common, poorly-sorted, sub-rounded grog <5 mm, mostly 1 mm; rare, rounded quartz 0.25 mm; rare, moderately-sorted, sub-angular rock fragments <4 mm. *Appendix 4 – sherds 1–2.*

G5 Moderately soft, fine textured matrix, containing common, poorly-sorted, sub-rounded grog <3 mm (noticeable black grog); moderate, rounded quartz 0.5 mm.

G6 Hard, fine textured matrix, containing moderate, poorly-sorted, sub-rounded grog <8 mm; sparse, rounded quartz 0.5 mm; rare, red ?iron-oxide. Thick walled - c. 20 mm.

Rock-tempered

R1 Hard, moderately fine textured matrix, containing sparse, poorly-sorted, sub-angular chert <6 mm; sparse, rounded quartz 0.5 mm; rare, sub-rounded grog <3 mm. *Appendix 4 – sherd 6.*

R2 Hard, moderately coarse textured matrix, containing moderate, moderately-sorted, sub-angular chert <10 mm; sparse, sub-rounded grog <5 mm. *Appendix 4 – sherd 3.*

R3 Hard, moderately coarse textured matrix, containing sparse, poorly-sorted, sub-rounded grog <4 mm; sparse, moderately-sorted, sub-angular volcanic rock fragments <10 mm; sparse rounded quartz <0.5 mm. *Appendix 4 – sherd 10.*

R4 Hard, moderately fine textured matrix, containing moderate, moderately-sorted, sub-angular chert <3 mm; sparse, rounded quartz 0.25 mm; rare mica. *Appendix 4 – sherd 4.*

R5 Very hard, moderately coarse textured matrix, containing moderate, moderately-sorted, sub-rounded quartz <1 mm; sparse, poorly-sorted, sub-rounded grog <7 mm; sparse, poorly-sorted, sub-angular granite <8 mm; rare, sub-angular felspar <8 mm; sparse mica. *Appendix 4 – sherd 16.*

Table 132: Quantities of prehistoric pottery by site (no. sherds/weight (g))

Fabric	*Blackhorse*	*Long Range*	*Castle Hill*	*Hayne Lane*	*Patteson's Cross*	*Langland Lane*	*Total*
Early Neolithic							
Q13	–	34/209				–	34/209
Q14	–	11/65				–	11/65
Q15	–	2/9	–	–	–	–	2/9
Middle Neolithic							
R16	–	–	135/1252	–	–	–	135/1252
R17	–	–	10/104	–	–	–	10/104
Q16	–	–	1/6	–	–	–	1/6
Bronze Age							
G1	–	–	111/991	4/9	5/8	–	120/1008
G2	–	–	8/58	–	–	–	8/58
G3	–	–	72/705	2/74	–	–	74/779
G4	–	–	146/2039	614/2947	14/28	1/1	775/5015
G5	–	–	22/276	2/10	46/262	–	70/548
G6	–	–	29/1143	2/176	–	–	31/1319
Q6	–	–	8/48	1/6	–	–	9/54
Q7	–	–	1/17	–	–	–	1/17
Q8	–	–	1/9	–	–	–	1/9
Q9	–	–	4/74	–	–	–	4/74
Q10	–	–	10/137	–	–	–	10/137
Q11	–	–	–	–	1/3	1/2	2/5
Q12	–	–	1/40		–	49/52	50/92
R1			29/110	26/182	–	–	55/292
R2	–	–	83/1154	46/344	140/2947	–	269/4445
R3	–	–	77/1417	11/32	–	–	88/1449
R4	–	–	3/11	5/11	–	–	8/22
R5	–		–	22/189	–	–	22/189
R6	–	–	–	2/6	–	–	2/6
R7	–	–	–	183/859	26/334	–	209/1193
R8	71/497	5/28	–	3/139	–	–	79/664
Iron Age							
G7	2/8	–	–	–	–	–	2/8
I1	3/65	–	–	–	–	–	3/65
Q1	9/61	3/38	–	–	–	–	12/99
Q2	158/1808	102/797	3/19	6/27	2/2	2/6	273/2659
Q3	–	13/45	–	–	–	–	13/45
Q4	4/43	–	–	–	–	–	4/43
Q5	46/490	–		–	–	–	46/490
Q17	7/48	1/2		–	–	–	8/50
R9	29/427	89/643	2/3	–	–	–	120/1073
R10	42/474	45/314	–	–	–	–	87/788
R11	–	67/949	–	–	–	–	67/949
R12	3/46	–	–	–	–	–	3/46
R13	128/571	1/4	–	–	–	–	129/575
R14	18/235	7/71	–	–	–	–	25/306
R15	1/15	1/7	–	–	–	–	2/22
V1	–	31/257	–	–	–	–	31/257
Later	44/515	3/23	18/88	8/47	10/43	–	83/716
Total	565/5303	415/3461	774/9701	937/5058	244/3627	53/61	2988/27,211

R6 Hard, fine textured matrix, containing common, well-sorted, sub-angular felspar <1 mm; sparse iron oxide. *Appendix 4 – sherd 17.*

R7 Hard, coarse textured matrix, containing common, moderately-sorted, sub-angular chert, mainly 5 mm; moderate, sub-rounded grog <2 mm. *Appendix 4 – sherd 5.*

R8 Very hard, coarse textured matrix, containing common, poorly-sorted, angular felspar <2 mm; moderate, poorly-sorted, sub-angular rock fragments (various) <4 mm. *Appendix 4 – sherd 8.*

Sandy fabrics

Q6 Moderately hard, moderately coarse textured matrix, containing moderate, moderately-sorted, rounded quartz <1 mm; rare, angular rock fragments <6 mm; sparse, sub-rounded to rounded red iron oxide <1 mm.

Q7 Very hard, moderately fine textured matrix,

Rock-tempered

R9 Hard, moderately fine textured matrix, containing common, well-sorted, rounded quartz <1 mm; sparse, sub-angular volcanic rock fragments; rare sub-rounded black iron-oxide. Generally unoxidised surfaces with reddish–brown core. *Appendix 4 – sherd 13.*

R10 Hard, moderately coarse textured matrix, containing moderate, well-sorted, sub-rounded quartz <1 mm, mainly 0.5 mm; sparse iron-oxide; rare, sub-angular volcanic rock fragments <5 mm. Generally unoxidised. *Appendix 4 – sherd 14.*

R11 Hard, fine textured matrix, containing sparse, moderately-sorted, rounded quartz <1 mm; moderate, moderately-sorted, sub-rounded, volcanic rock fragments <3 mm, mainly 1.5 mm. *Appendix 4 – sherds 11–12.*

R12 *Gabbroic ware.* Hard, fine textured matrix, containing moderate, well-sorted, sub-rounded

Type R119: Globular bodied spouted cup with a small beaded rim and a double incised groove around the centre of the body.

Type R120: Relatively thin-walled jars or large beakers, high shoulders, flared rims, no necks.

Type R121: Cooking pots or storage jars with upright or very slightly everted rims, often beaded. 1st–early/mid 2nd century.

Type R122: Narrow-necked flagon with a slightly cupped mouth. The rim is slightly expanded externally giving it a D-shaped cross-section. Some examples have evidence of at least one handle attached at or just below the rim.

Type R124: Cornice rimmed beaker – Cologne colour-coated ware (Tomber and Dore 1998, 57). Dated from *c.* AD 130/135–250.

Type R125: Mortarium with a small inturned bead, separated from a wide horizontal flange by a sharp groove. Upper surface of the bead and flange are level. 1st–2nd century.

Type R126: Straight-sided bowl with a flat-topped rim. Incised grooves decorate upper body.

Type R127: Lid with a beaded rim. Wide groove immediately behind the rim on the exterior surface. High, rounded body.

Type R128: Rather tub-shaped bowl or dish with a flat flanged rim and slightly curving sides.

Type R129: Thin-walled, narrow-mouthed jar or beaker with a long sloping neck and a very slightly beaded rim. Similar to Holwerda type 27c (Holwerda 1941, pl. viii, 321). A comparable form from Topsham was likened to vessels dated *c.* AD 43 -80 from a variety of sites in the south and west of Britain (Bidwell 1975, 239, fig. 12, 42).

Type R130: Thick heavy mortarium but of relatively small diameter. The bead is wide and roughly divided by an incised groove. The flange is heavy and folded under while the spout is wide, projecting and well moulded. Similar to, but not exactly paralleled by type TC2 at Exeter (K. Hartley 1991, 194, fig. 78, TC2). *c.* AD 50–85.

Type R131: Narrow-necked jar with an out-turned rim, grooved around its outer edge. Some examples are lid-seated.

Type R132: Straight-sided bowl or dish with a reeded rim. Made in a variety of centres including the Oxfordshire region from the late 2nd century onwards (Young 1977, 222–3, types R55 and 56) and in the New Forest from *c.* AD 300 -350 (Fulford 1975, 94).

Type R133: Jar with an upright neck and a very slightly everted rim. Distinguished from the type R121 jars by a distinct offset at the junction between the shoulder and neck, sometimes forming a short horizontal ledge.

Type R134: Cornice rim beaker – North Gaul fabric 1 (Anderson 1980, fig. 11, 4–7). Dated from *c.* AD 80–130/135.

Type R135: Bowl or dish with straight, upright walls and an externally thickened rim.

Type R136: Small, carinated open bowl or cup with a bead rim. Miniature version of the typical bowl form of the Durotrigian tradition (Brailsford 1958, fig. 1, 1).

Type R137: Carinated open bowl with a footring or low pedestal base and a bead rim. Differentiated from the type R136 vessels by size and from the type 141 bowl by distinctive decoration. This consists of applied vertical clay ribs arranged at intervals around the vessel. These are surrounded by various arrangements of small, impressed dots. Generally known as 'Maiden Castle War Cemetery bowls'. Characteristic Durotrigian types (Brailsford 1958, fig. 1, 1a) which continue into the late 1st and perhaps early 2nd century.

Type R138: Large, sloping-shouldered jar with a D-shaped rim above a straight, upright neck. The form is decorated with a raised cordon at the junction between the shoulder and neck with incised grooves below.

Type R139: Upright or very slightly everted necked jar with a high rounded shoulder. Similar forms are known in the Exeter sandy grey ware fabric dated from the military period to the early 2nd century (Holbrook and Bidwell 1991, 157, fig. 58, 11.1–3).

Type R140: Relatively light, thin-walled mortarium, heavily riled externally. The vessel is almost wall-sided with a sloping rather than a curving profile. All examples are very well worn but the trituration grits appear to consist of dull reddish–brown angular grits. The form is reminiscent of various types made in the Rhineland (i.e. Hartley 1991, fig. 84, C56; 85, C57) but the fine quartz grits characteristic of this area are absent. Red/brown material, possibly iron slag, was used in mortaria probably made around Exeter (i.e. K. Hartley 1991, fabrics FB9, 11–12, 15, 19–20) so this example may be from a local source.

Type R141: Carinated open bowl with a footring or low pedestal base and a bead rim. Present within the Durotrigian ceramic tradition (Brailsford 1958, fig.1, 1), continuing into the later 1st and early 2nd centuries.

Type R142: High-shouldered jar or beaker with a pulled bead rim. A multitude of small ear-shaped handles appear to be equally spaced around the shoulder of the vessel which is carinated beneath them.

Type R143: Small jar or large beaker with a sloping shoulder and a small bead rim; there is a slight thickening beneath the rim.

Type R144: Small jar or beaker with an internally bevelled rim, moulded externally. Fairly thick-walled but the type may have drawn its inspiration from imported cornice rim beaker forms.

Type R145: Butt beaker with internally bevelled, externally thickened rim. *Cam.* form 113. Similar rim at Topsham (Bidwell 1975, fig.11, 20). Made at a variety of British centres with considerable variation in form.

Type R146: A virtually flat disc, rising very slightly towards the centre. The exterior edge is neatly squared. Lid for amphora or other vessel.

Type R147: Collared mortarium with an inturned rim and a short, stubby flange; a sharp groove divides the bead.

Type R148: Flagon with a single strap handle and a heavy, triangular rim, slightly cupped internally.

Type R149: Shallow, round-bodied bowl or dish with a bifid rim decorated with impressed tear-drops. Similar vessels occur among the Fabric 40 assemblage from Exeter, dated from the conquest to the Flavian period (Holbrook and Bidwell 1991, 133, fig. 46, 87.1).

Type R150: Beaker with high, rounded shoulder, upright neck and slightly everted rim – Central Gaulish Rhenish ware (Symonds 1992, beaker form 1, group 9, fig. 9, 173–93).

Type R151: Bag-shaped beaker with a beaded rim defined by a sharply incised groove. One example has barbotine decoration. The form copies the type 44 beakers made in the New Forest (Fulford 1975, 56) and it does not appear in the repertoire of the Oxfordshire potters. Late 3rd–4th century.

Type R152: Internally lid-seated, double-handled jar or flagon. Similar to a 'honey-pot' in style but thin-walled.

Type R153: Butt beaker similar in form to the *Cam.* 112 vessels.

Type R154: Bowl or dish with straight sloping sides and a flanged rim. The exterior surface decorated with raised cordons and incised grooves. A similar vessel, drawn as a lid, in the Exeter micaceous grey ware fabric was found at Seaton (Bidwell, 1981, 74, fig. 13, 17) but is undated.

Type R155: Elaborate and finely-moulded rim for a mortarium or mortarium-style bowl (insufficient survives to preserve any grits). Although the rim and flange are less elaborately moulded, a mortaria, unlikely to date before the 3rd century, found at Woodbury Great Close, and possibly made there (Holbrook 1993, fig. 34, 22), provides a broad parallel for this form.

Type R156: Small everted rim bowl with a high, rounded shoulder and a slight neck.

Type R157: Narrow-necked, collared flagon with a cupped-mouth and at least one handle located just beneath the collar.

Type R158: Carinated bowl with a bead rim; the exterior may be decorated or plain. The type may have been inspired by samian form 29 vessels or *Terra Nigra* types. Similar vessels in Exeter sandy grey wares occurred in 1st–2nd century contexts, some as early as *c.* AD 55/60–75/80 (Holbrook and Bidwell 1991, 159, fig. 60, 37 and fig. 61, 43–5). An example in the Exeter micaceous grey ware fabric from Seaton occurs in a group probably dated to the last quarter of the 1st century (Bidwell, 1981, 72, fig. 13, 2).

General codes (used in the recording of all fabric types)

PB: plain body sherds
DB: decorated body sherds
F100: flange fragments – all types

Bases

B100 Flat bases; open forms – all types
B101 Flat bases; closed forms – all types
B102 Flat bases, slightly expanded externally to form a wedge-shape. Closed forms.
B103 Low pedestal base. Would normally belong to a bowl but may also be the 'handle' for a lid.
B104 Heavy, slightly wedge-shaped base with a recess or low footring on underside, i.e. Class 27 (Pélichet 47/*Gauloise* 4) amphora type.
B105 Low footring base.
B106 Internally hollow pedestal base. Would normally belong to a bowl but could also be the 'handle' for a lid.
B107 Mortaria base.
B108 Chamfered base.
B109 Elaborated wedge-shaped base; generally beakers or flagons.
B110 Solid, slightly splayed pedestal base.
B111 Class 25/Dressel 20 amphora spike.

Handles

H100 Simple strap handle.
H101 Grooved strap handle
H102 Very broad strap handle, at least 5 central ribs.
H103 Counter-sunk handle.
H104 Thick rod handle, circular cross-section i.e. Class 25/Dressel 20 handle.
H105 Small rod handle, circular or oval cross-section.
H106 Grooved strap handle, the upper part folded back on itself to form a thumb rest.
H107 Bifid amphora handle rising upwards from the neck of the vessel to a sharp right-angled bend, descending vertically to the lower attachment.
H605 Small rod handle, circular or oval cross section. Post-medieval.

Appendix 7: Environmental Analyses

Introduction, by Michael J. Allen and Sarah F. Wyles

The sample size for bulk samples was, where possible, 15 litres. All samples were processed by a system of standard flotation, reprocessing by bucket floatation to increase recovery and finally fractionation of the residues. All flots were retained on a 0.5 mm mesh (from both tank and bucket flotation) and resides on 1mm mesh; all coarse fractions (>5.6 mm) were sorted, weighed, and discarded. The residue fractions (5.6 mm, 2 mm, and 1 mm) of all samples selected for analysis were extracted by Sarah F. Wyles under a x10–x30 stereo-binocular microscope. One litre sub-samples for waterlogged materials were taken from the samples from the wells of Romano-British date at Pomeroy Wood. Those flots were retained on a 0.25 mm mesh and the residues on a 0.5 mm mesh and the resulting

concentrate was stored in glass jars containing Industrial Methylated Spirits (IMS).

Insect Remains, by Mark Robinson

The samples of organic sediment, each of 1 litre, had previously been floated onto a 0.25 mm sieve for the analysis of macroscopic plant remains (see below). The insect fragments, which were mostly Coleoptera and Diptera, were identified with reference to the specimens of the Hope Entomological Collections at the University Museum of Natural History, Oxford. The results have been recorded for Coleoptera and for other insects. Nomenclature for Coleoptera follows Kloet and Hincks (1977) and for Diptera follows Kloet and Hincks (1976). The results are expressed as the minimum number of individuals necessary to give the number of fragments of each species in each sample.

Concentrations of Coleoptera were relatively low but sufficiently high numbers for useful interpretation have been obtained by combining the results from the five samples from well 3047. These results have been displayed by species groups as a percentage of the total number of terrestrial individuals largely following Robinson (1991, 278–81). The synanthropic species of Species Group 9, however, have been divided into Species Group 9a, general synanthropic species such as *Typhaea stercorea* and *Ptinus fur* and Species Group 9b, serious pests of stored grain, for example *Oryzaephilus surinamensis*.

Snails, by Michael J. Allen

No samples were taken specifically for land snails, as the non-calcareous deposits are not conducive to the preservation of shells (Bell 1984). A few shells were, however, noted in some of the bulk 15 litre samples from Bronze Age contexts at Castle Hill during the Assessment stage (Wessex Archaeology 1998a), illustrating the potential for their limited survival in an area which is usually considered to be totally devoid of such evidence (*cf.* Bell 1987).

Most samples were 15 litres and all were processed by bulk flotation with the flot retained on a 0.5 mm mesh and residues on a 1 mm mesh. The loss of shells in the residue in the 0.5 mm–1 mm fraction will have occurred, but in view of the low numbers of shells and very general interpretation level undertaken this is not considered a difficulty. All shells were extracted under a x10–x 30 stereo-binocular microscope by Sarah F. Wyles.

Charred Plant Remains, by Alan J. Clapham

The unsorted flots and extracted residues were analysed using a low-powered (up to x50 magnification) binocular microscope. All critical taxa were compared with modern reference material housed in the George Pitt-Rivers Laboratory in the Department of Archaeology, University of Cambridge. All nomenclature follows that of Stace (1997).

In the absence of diagnostic rachis internodes, the bread wheat has been identified on the basis of grain morphology, although it is recognised that this is an area of some debate (Hillman *et al.* 1995; G. Jones 1998). There are related difficulties at Pomeroy Wood in the identification of the oats as a domesticated crop rather than as a pernicious corn field weed in the absence of chaff and the florets.

Waterlogged Plant Remains, by Alan J. Clapham

All the waterlogged samples were reprocessed in the George Pitt-Rivers Laboratory as some of the material had not disaggregated. To achieve complete disaggregation the samples were soaked in a super-concentrated solution of sodium hexametaphosphate for up to three hours. The samples were then sieved through a stack of sieves with mesh sizes, 2 mm, 1 mm, 0.5 mm, and 0.3 mm and sorted immersed in IMS using a low-powered stereo-microscope. As for the charred plant remains, the critical taxa were identified using the modern seed reference collection in the George Pitt-Rivers Laboratory and the nomenclature follows that of Stace (1997).

Charcoal, by Rowena Gale

The charcoal was prepared for examination using standard methods. The fragments from each sample were fractured to expose fresh transverse surfaces and sorted into groups based on the anatomical features observed using a x20 hand lens. Representative fragments from each group were selected for further examination under high magnification. Freshly fractured surfaces were prepared in the transverse, tangential and radial planes. The fragments were supported in sand and examined using a Nikon Labophot incident-light microscope at magnifications of up to x400. The anatomical structure was matched to reference material.

Where appropriate the maturity (i.e. sapwood/heartwood) of the wood was assessed and the number of growth rings recorded. It should be noted that the measurements of stem diameters are from charred material; when living, these stems may have been up to 40% wider. Classification is according to *Flora Europaea* (Tutin, Heywood *et multi alii* 1964–80).

Pollen, by Robert G. Scaife

Standard procedures were used for the extraction of the pollen and spores contained in the sediments (Moore and Webb 1978; Moore *et al.* 1992). Pollen was identified and counted using an Olympus biological research microscope at magnifications of x 400 and x1000 in plain light and phase contrast. Pollen (sum) counts of between 600 and 700 grains of dry land taxa (tdlp) per level were made plus sedges and spores. Absolute pollen frequencies were calculated using the addition of a known number of exotic markers (Stockmarr 1971;

Lycopodium spores tablets) to a known volume of sample (2 ml). Data are presented in diagram form with pollen calculated as a percentage of the sum of total dry land pollen and marsh and spores as a percentage of this sum plus the relevant sub-group. Calculation and plotting of the pollen diagram was by Tilia and Tilia Graph in the Department of Geography, University of Southampton. Pollen taxonomy follows, in general, that of Moore and Webb (1978) modified according to Stace (1991) with suggested modifications for pollen by Bennett *et al.* (1984).

Magnetic Susceptibility, by Hayley F. Clark

Sampling for magnetic susceptibility was not originally part of the excavation methods employed on the project. In consequence only a few samples were taken from the sites excavated first but sub-samples for magnetic susceptibility were systematically taken from the standard bulk environmental samples from the Neolithic and Middle Bronze Age enclosures at Castle Hill, the Middle–Late Bronze Age settlement at Hayne Lane, the Iron Age round-house at Langland Lane, and the sites of Roman date at Pomeroy Wood and Gittisham Forge. All the samples came from negative archaeological features such as pits or ditches. Apart from a few samples at Blackhorse, no samples were taken from the undisturbed natural subsoil. Full details of the readings and plots may be found in the project archive.

Ten grammes of air-dried soil from the <2 mm fraction were placed in a demagnetised pot. A Bartington magnetic susceptibility meter was then used to take the readings set at both high and low frequencies. As no significant differences between the high and low frequency readings were revealed only the high frequency readings were plotted on site plans using a rough division of interquartiles common to all three sites to assess the relative density of the distributions. The same relative density distribution scale was used for all sites. The interquartiles for the data from Hayne Lane and Pomeroy Wood were statistically calculated and replotted to try to determine areas of high activity in the clusters of features more precisely.

Appendix 8: Post-Medieval Timbers from the River Otter Bridge and the Vine Water diversion

by R.A. Davis

A series of timber stakes was examined in the floodplain of the River Otter at the site of the new bridge to carry the A30 over the river (Fig. 2), principally during September and October 1997, but with recording continuing on an intermittent basis into the early months of 1998.

The site lies within the floodplain of the River Otter (centred at ST 115 989), to the north-east of the village of Fenny Bridges. The areas where the wooden stakes were found were predominantly buried under alluvial deposits. The topography was generally flat, save for the River Otter and Vine Water channels themselves.

Historical Background

The site of the Battle of Fenny Meadow which took place during the Prayer Book Rebellion of 1549 is thought to lie nearby, centred on ST 114 989 (Reed and Manning 1995). The rebels from Cornwall and the west of Devonshire unsuccessfully laid siege to Exeter (Hoskins 1954, 232–7). During this time troops were sent with Lord Russell to suppress the rebellion. The two sides met in battle at this site just above the River Otter, with rebels attempting to block the nearby main road into Exeter. The rebels were defeated here in July 1549 and the relief of Exeter followed soon afterwards.

It seems unlikely that any fortifications of substance were erected here as the battle site was probably chosen at short notice. It is possible, though, that as has been noted previously (Weddell 1991, 24–5; Reed and Manning 1995) that there may be burials of those who fell in battle and miscellaneous finds of weapons or temporary structures on the site of the battlefield. For these reasons the timbers noted close to the new River Otter bridge are reported here.

Methods

The area of Fenny Meadow neat the River Otter works concerning the flood control of the River Otter and ground works for the new road. Several excavations took place of which two are of concern here, (i) a temporary diversion channel for the river new bridge foundation temporary diversion, and (ii), the diversion of a small tributary known as Vine Water (Fig. 179).

For a variety of reasons both these areas proved difficult to work in. The risk of flooding, unstable section faces, confined spaces, the size and (perhaps surprisingly) the lack of visibility of the heavy plant, all meant that it was not safe to enter deep excavations and that other areas were also sometimes too dangerous to enter on foot. The wet weather in September and October of 1997 resulted in the River Otter and Vine Water often being swollen and the continuing threat of flood not only hampered work on exposed timber stakes but flooding washed away whole sections of riverbank

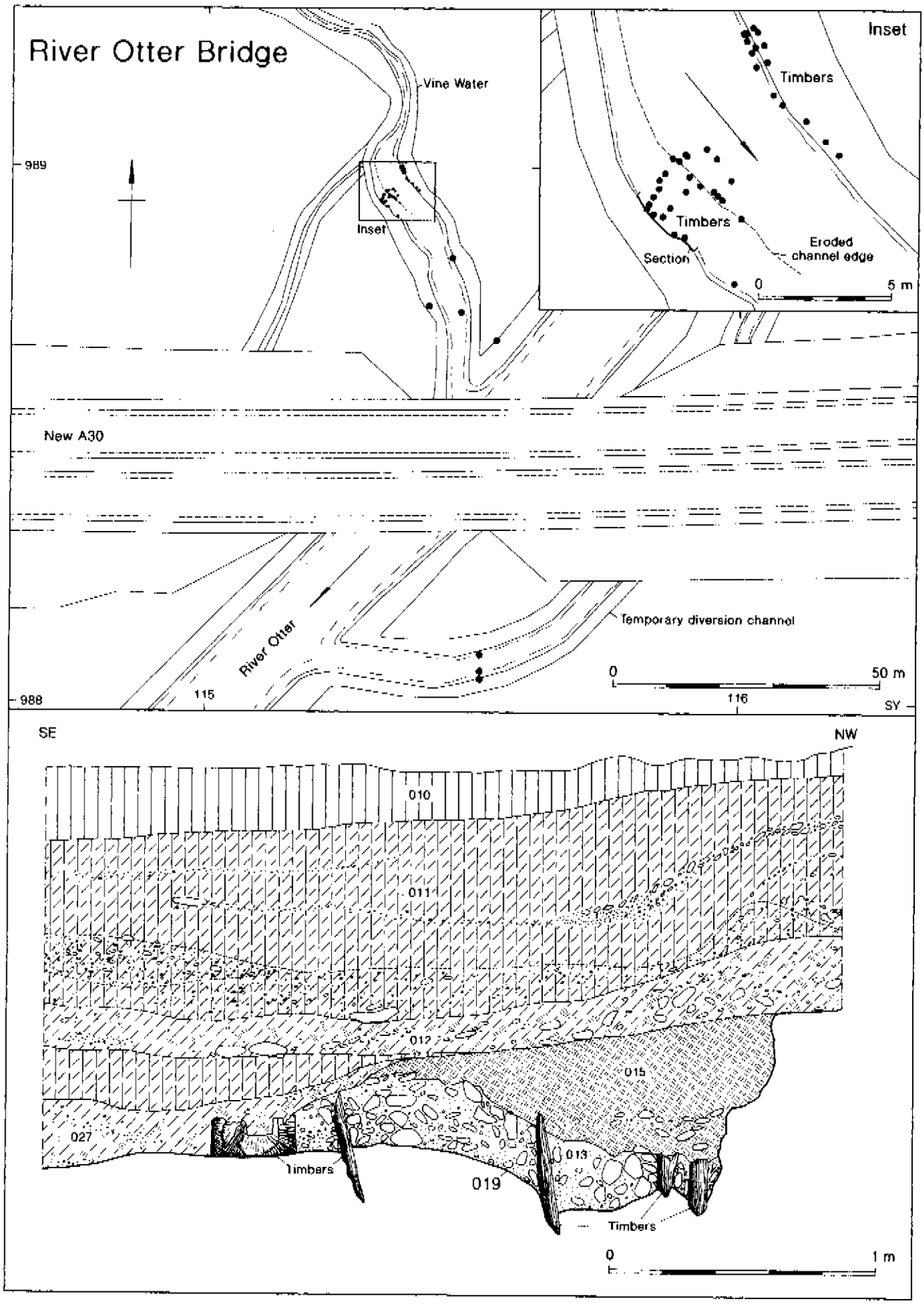

Figure 179 River Otter: location and sections of timber stakes

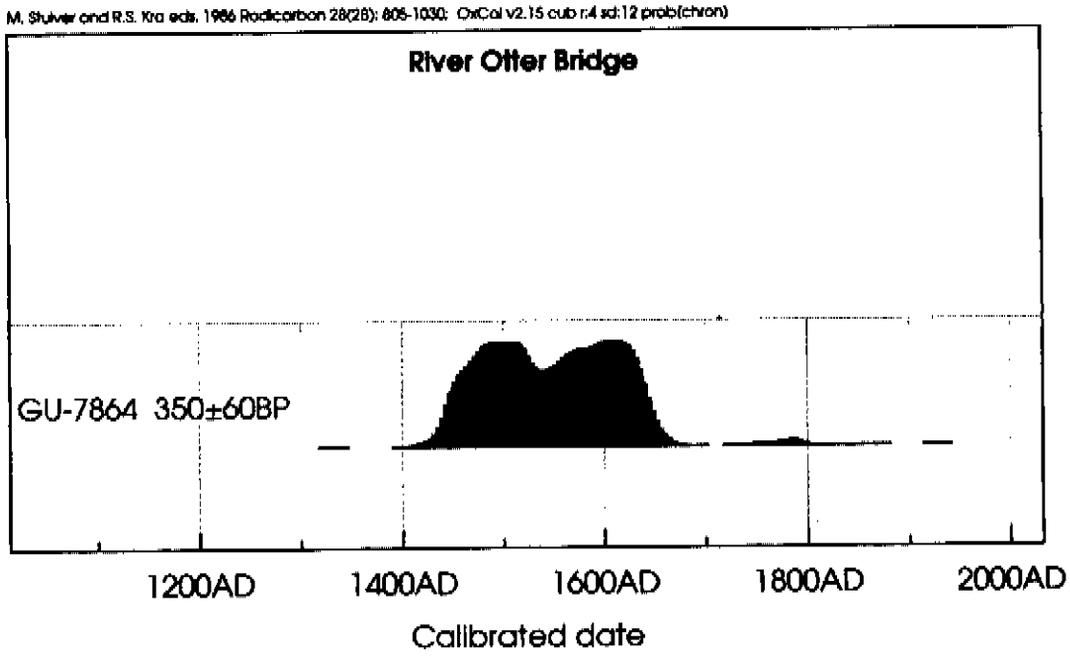

Figure 180 River Otter: probability distribution of radiocarbon date

and the timbers within them, while Vine Water eroded the southern bank of its new course before river armour was introduced. Some wooden stakes were retrieved further down the watercourse after heavy storms.

Surveying of the wooden stakes was carried out using D.G.P.S. (Differential Global Positioning System). Individual readings or point numbers were given numerically ascending numbers on site and where the positions of wooden stakes were concerned an Object Record number was issued to match the D.G.P.S number. A hand drawn reference plan was also produced locating most of the timbers that were found *in situ*.

River Otter Temporary Diversion Channel

To allow the bed of the River Otter to be altered, a channel to divert the river was excavated on the eastern bank (Fig. 179). The channel was *c.* 120 m long, 10 m wide at the top, and up to 5 m deep. Six wooden stakes and one larger wooden object were found during the excavation of the channel, unfortunately only the locations of only three of the stakes could be recorded. All the other timbers were removed by machine and collected from the spoil heap. The three stakes left in the base of the channel formed an alignment roughly north–south and were clearly buried under *c.* 1.5 m of alluvial gravel and soil.

An approximate alignment of another three stakes was noted by the machine driver who witnessed their removal. This information cannot be regarded as accurate, but the excavator indicated a south-east to north-west orientation. A large wooden object (ON 009) was found *c.* 20 m north of the second alignment, it was removed by machine bucket. Found at the same level as the stakes, it lay horizontally and shows signs of tooling on its surface. It is unlikely to be a post or stake as it does not have a characteristic point but there is evidence of considerable cutting to its surface forming a flat end, which may indicate a joint.

Vine Water Diversion

Vine Water runs to the west of the River Otter, with its old course joining the Otter just north of the railway viaduct. Its course was altered to allow it to flow into the Otter to the north of the new road bridge. During the digging of the new channel wooden stakes were discovered *c.* 1.5 m below the existing ground surface (Fig. 179).

Subsequent investigation revealed a number of wooden stakes in rough north–south alignments. It was possible to record some of the stakes *in situ*, but flash flooding washed away most of the southern bank, including some of the identified stakes. Inspection of the section face confirmed that the stakes were buried under a considerable deposit of alluvial gravels (Fig. 179). What appeared to be a faced stone structure, perhaps a leat or sluice, was seen subsequently at the western end of the diversion where a plunge pool had been created. However, because of health and safety considerations it was impossible to record this accurately. The presence of well preserved sections of tree stumps and tree trunks in the alluvial gravels suggest that at one time this area was part of an open watercourse.

Timbers from the River Otter, by M. Laidlaw

Over 100 timber fragments were recorded, of which three may be planks and 80 are stakes. Although the timbers themselves are in moderately good condition, with traces of sapwood surviving, nearly all have suffered some degree of abrasion and/or damage, and only nine can be considered to be complete, or near complete.Timbers were identified to species (mostly oak) by rowena Gale and archive sketches and record photographs were made. Full details are in the project archive.

The stake fragments range in length from 0.25 m to 1.46 m, the majority range from 0.5–0.8 m. The average width and thickness is 0.12 x 0.08 m. The conversion techniques used are predominantly simple; radial splits (62) with a small quantity of quartered (6). Some of the thinner radial splits may be planks. Two are more carefully formed, being box quartered, with longer, thinner points showing clear sequences of flat, linear facets. One is halved, and the conversion techniques of the remainder are unidentified due to the poor condition of the stakes.

The points are all worked to pencil points but vary from short stubby points with little work expended on them, to a small number of longer thinner points with clear sequences of flat linear facets. The tips of the points are mainly formed with four to five faces. A large number of stakes have flat facets mainly around the point and flat surfaces with rather squared edges. A small number have traces of flat facets on their complete length and some have jam marks. The larger facets are very flat and range from 45–60 mm wide. No assembly marks or jointing was observed. Three possible plank fragments were recovered, all are thin and rectangular in section, with slightly curved profiles and broken at both ends.

Radiocarbon Date

Six samples were submitted for dendrochronological dating to the Dendrochronology Laboratory, University of Sheffield. None of the samples possessed enough rings for counting although there was a suggestion (C. Groves pers. comm.) that the timbers are post-medieval. This is borne out by the the subsequent radiocarbon determination from one of the timbers (ON 33) which yielded a date of 1430–1660 cal. AD (GU-7864; 1905±45 BP; Fig. 180).

Conclusion

As it was not possible to obtain a plan of the timbers or to define the limits of their distribution and the structure(s) they belonged to is not known. All that is recorded is a swathe through them. It is possible that the timbers are the remains of a leat or perhaps a sluice to help drain the watermeadows, but on the basis of the radiocarbon date, it is also possible that the timbers are from some form of work associated with the Battle of Fennny Meadow of AD 1549.

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by Barbara Hird

NOTE: References in italics denote illustrations. Sites referenced are in Devon unless otherwise stated

Abbreviations: EN = Early Neolithic; LN = Late Neolithic; EBA = Early Bronze Age; MBA = Middle Bronze Age; LBA = Late Bronze Age; EIA = Early Iron Age; MIA = Middle Iron Age; LIA = Late Iron Age

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Eight excavations on sites of prehistoric and Roman date were undertaken during 1996-8 in advance of the A30 road improvement between Honiton and Exeter in Devon in south-west England. The excavated sites span the Neolithic to Roman periods, though evidence for Lower Palaeolithic and Mesolithic activity was also recorded.

At Castle Hill two Neolithic ritual monuments and a Middle Bronze Age field system and part of the associated farm compound were excavated. Bronze Age round-houses and compounds were also found at Patteson's Cross and at Hayne Lane, where an enclosed Middle-Late Bronze Age settlement was almost completely excavated. Three Mid-Late Iron Age settlements were examined; a single round-house at Langland Lane, part of an open settlement at Long Range, and at Blackhorse, where the last phase of the settlement was enclosed.

A Roman military base with an associated outwork or annexe was found at Pomeroy Wood. The base was occupied between *c.* AD 60-85 and the garrison at one stage may have been a cavalry unit. The fort was succeeded by an extensive roadside settlement, which was also examined at Gittisham Forge. It is possible that the settlement may have been called *Moridunum*.

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Plan 2 Pomeroy Wood: phase plans – minor phases and site location

Phase 1, Prehistoric

Un-phased

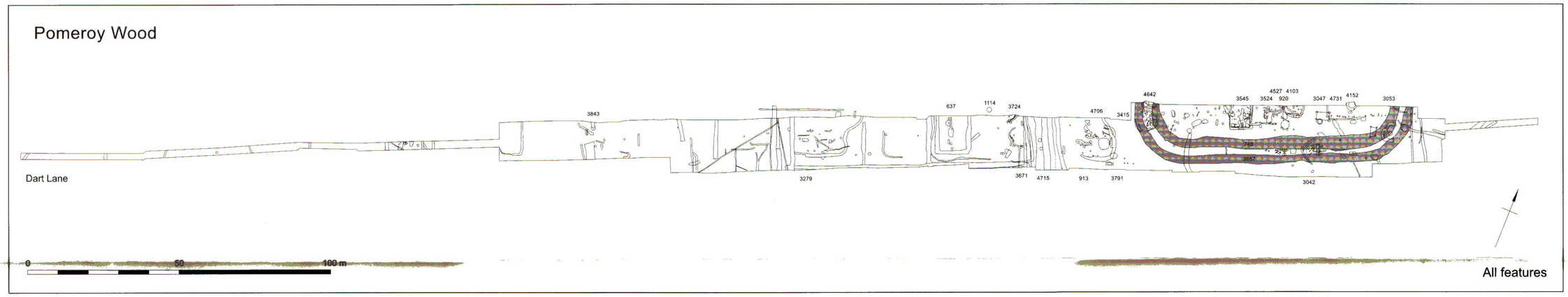
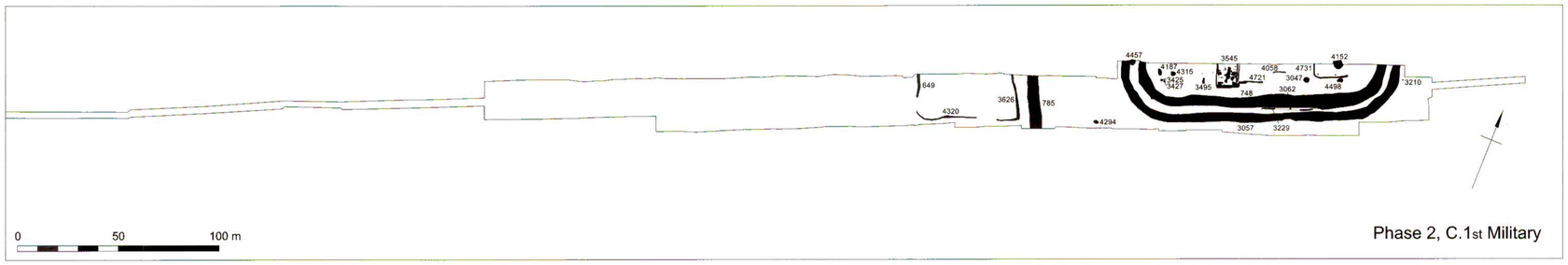
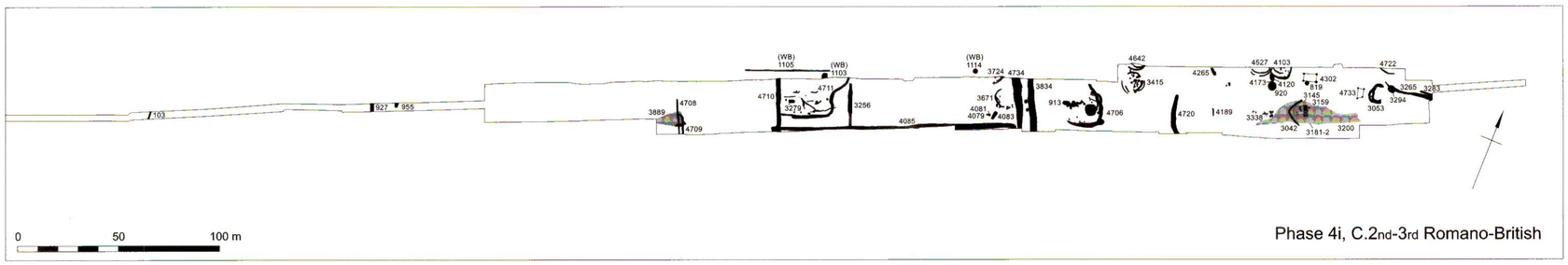
Modern/natural

Pomeroy Wood

Gittisham Forge

Old A30

Exeter-Waterloo Railway



Plan 1 Pomeroy Wood: phase plans – main occupation phases