

Further investigations within the vicus settlement at Burgh by Sands, 2006: archive report

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INTRODUCTION

This report presents the results of an archaeological excavation undertaken by CFA Archaeology at Amberfield, Burgh-by-Sands, Cumbria (NGR: NY 3265 5896) during July 2006 in advance of a proposed housing development. The site was located c.100m to the south of the line of the Hadrian's Wall Vallum, and in the immediate vicinity of previously recorded Roman remains including a Roman civilian settlement associated with the Roman fort of Aballava (Fig. 1). Masser & Evans (2005, 31–3 and fig. 1) have recently summarised current knowledge and the history of investigation of Roman features around Burgh-by-Sands.

A geophysical survey (Brooks & Law 2005) identified a number of anomalies interpreted as being of archaeological potential. Trial-trenching evaluation undertaken in January 2006 revealed a series of ditches and a pit that contained sherds of 2nd- to 3rd-century Roman pottery (Kirby 2006), and which were thought to represent a continuation of the Roman period field system found nearby in other recent excavations (Masser & Evans 2005). Further excavation took place in July 2006. With the agreement of Cumbria County Council Archaeology Service, the excavation did not cover the full extent of the evaluation as the margins around the south, west and north of the site were to be used as gardens and would not be subject to any groundbreaking works. The excavation trench measured c.100m by 70m (Fig. 2). An earth-moving machine equipped with a smooth-bladed ditching bucket removed the topsoil to reveal the subsoil surface. All archaeological features were excavated by hand and were assigned unique identifiers (F1 to F28). Deposits and layers within features were given context numbers prefixed by its unique identifier. A full register of contexts and finds can be found in the archive reports (Kirby 2006; Mitchell 2006).

The topsoil was up to 0.35m thick, and overlay a soil layer up to 0.1m thick in the south-west of the excavation area. Its absence along the north and east of the site is probably due to plough truncation at the margins of the field. The underlying natural subsoil into which the features were cut was coarse sandy gravel with flat topography. Fourteen linear ditches and several discrete features, including a tanning pit, a well, and isolated pits were revealed (Fig. 2); all cut into the subsoil and had been subject to plough truncation. Few stratigraphic relationships were evident, but two broad phases of activity could be discerned in at least isolated parts of the site. However, the remains and finds appear mainly to reflect a potentially piecemeal style of development over a period of roughly 100 years. The features are interpreted as part of a wider Roman field system containing elements of small-scale industrial and domestic activity dating from between the early to mid 2nd century AD and the first half of the 3rd century AD.

THE FEATURES

The tanning pit

A circular pit (F15), c.4m in diameter and 2.2m deep with a steep-sided central hollow, is interpreted as a tanning pit. Two *in situ* wooden stakes were set 0.35m apart, driven into the subsoil at the edge of the hollow, and associated with the remains of a wooden latticed hurdle. One stake was in a poor condition; the other remained intact and had a tooled chisel-shaped point, and appeared to have been sawn to a desired length. The hollow was filled with an organic deposit (15/004). The stakes and the remains of the hurdle were sealed by a clay-rich deposit (15/003) from which wood and a piece of leather was recovered. The upper fill (15/002) of the pit was loosely compacted dark silt up to 1.3m deep and contained sherds of a round-rimmed bowl dating to the 3rd century AD. It was cut post-deposition by a ditch (F8).

The well

The well (F14) was circular in plan and 2m in diameter. No timber or stone lining was found to be present. Two distinct fills were present within the well. The lowest excavated fill was dark grey sandy silt up to 0.9m deep and contained several lenses which indicated slump or collapse from the well sides. The upper fill was mid brown silt up to 0.15m deep and contained charcoal and sherds of Black Burnished Ware and samian ware dating from the Hadrianic to early Antonine period. The well was excavated to a maximum depth of 2m and augured to a depth of 2.55m; no change in fill character was found in the cores.

Ditches

The site was largely characterised by a series of variably-sized linear ditches aligned north to south and east to west. Four large ditches (F1, F2, F8, F9) occupied the east of the site, aligned north to south.

F1 and F2 interconnected and were each c.1.5-2m wide and had undergone several phases of recutting. The deposits in F1 and F2 varied from 0.2m to 0.6m deep and the re-cuts suggest that F1 was the earlier of the two features. The pottery recovered from the ditches dates from Hadrianic times into the 3rd century.

F7 and F9 also interconnected, further towards the north of the site, with F9 cutting F7. These ditches are likely to represent boundaries. The repeated restatement of the ditches is curious, as it would have been much less arduous to have simply re-excavated the same ditch cut. Possibly this reflects a changing ownership boundary rather than a purely functional boundary.

The terminals of two smaller ditches (F4, F6) were located extending from the east edge of the excavation area. F4 was extended for 4.5m and had a rounded terminal. It was 0.2m wide and 0.15m deep with a single fill of light brown silt. Pottery dating to the Antonine period at the earliest, but more than likely into the 3rd century, was recovered. It may have originally cut the edge of F2 but this cannot be ascertained, if so the relationship has been truncated out. F6 extended for 2m and cut the edge of F2. It was 0.7m wide with a steep sided profile. A further linear ditch (F3) ran north to south and cut F4, but was revealed to be a more recent rubble drain.

Two large parallel ditches (F8, F10) c. 0.8m-1.6m wide occupied the north-west of the site. They were aligned east to west intersected the edge of F7. No stratigraphic relationship could be discerned in the intersection between F8 and F7. F10 appeared to cut F7, however this is far from certain as the fills of both ditches were identical and the horizon was tenuous. F8 cut the infilled tanning pit (F15), and F10 cut F11 and F22. Both ditches were 0.3m deep and had moderately sloping sides and flattish bases. F10 contained a single fill (10/002) of mid brown sandy silt that contained the base of a Moselkeramik beaker dating to after AD 180 and possibly into the 3rd century. Their size and form suggests they acted as boundaries and/or drainage.

Complex of linear features

The south-west corner of the site was occupied by a complex of two pairs of smaller intersecting ditch alignments, one aligned north to south (F11, F13, F20 & F21, F22) and the other (F12 & F24) east to west.

F21 and F22 are elements of the same feature; a linear ditch aligned north-south with sloping sides and a concave base extending from the south edge of the site for a total of 21.5m, and measuring 0.5–0.6m wide and 0.1–0.2m deep. It was cut by F10 close to its northern terminal. F21 contained bone and fragments of Roman pottery.

F11, F13 and F20 appear to comprise segments of an alignment parallel to F21/F22. F11 was a short linear ditch forming the northern segment of the alignment. It had sloping sides and a concave base containing dark sandy silt. F13 lay c.1.5m to its south and was a 3m long slightly curvilinear slot located on the east side of the well F14. It was 0.7m wide and 0.3m deep with irregular sides and a slightly concave base. Its form differs slightly from that of the more regular linear ditches, so it is unclear whether it formed an element of a segmented feature with F11 and F20, a feature such as a screen, possibly to protect the well from contamination or to prevent people and animals falling in, or both. F20 was situated to the south of F13 and continued for 9.5m to beyond the south edge of the site. It was curvilinear in plan, turning slightly to the south-west. It was 1m wide and 0.3m deep and had a 0.2m deep primary fill of mid-brown silt underlying a 0.1m thick layer of firm dark grey silt. It had a rounded terminal at its north end extending just beyond its intersection with F12.

F12 was aligned east to west and had a rounded terminal at its eastern end. It cut the northern terminal of F20 and terminated at an intersection with F21/F22. The ditch was 1.2m wide and 0.3m deep with a slightly stepped profile on its north side, which may indicate that it was used as a beam slot, although equally it may simply be a drainage or boundary ditch. A steep-sided oval pit was cut within the eastern terminal. Fragments of a roughcast beaker found in F12 date to the late Hadrianic period.

F24 comprised a shallow parallel double ditch merging to a single ditch which intersected F11. It had a rounded terminal to the east and had steep sides and a slightly concave base. No stratigraphic relationship could be discerned with F11.

Several smaller features were associated with the parallel ditches occupying the south-west corner.

F25 was a narrow linear slot aligned north to south and extended c.2.5m from its intersection with the north edge of F12. It had a 'U' shaped profile and had been cut by F19 and F12. Its profile suggests it may have been a timber beam slot, however this is far from certain.

F23 was an irregularly curving ditch which intersected F21. It was aligned roughly south-east to north-west and extended for c.8m in length and measured up to 0.6m wide and 0.4m deep. It had been disturbed by rabbits with significant disturbance to both the cut and the fills. The identical fills of F21 and F23 make their relationship uncertain.

F18 and F19 were shallow, narrow slots aligned east to west. F18 cut F12 and F21, whilst F19 cut F22. These two features post-date F12, F21/F22 and F25 and appear to indicate continuing piecemeal modification to the enclosures in this area. Their narrow profiles suggest they may have been beam or palisade slots, but they have been truncated to an extent that this interpretation is speculative.

A small linear ditch F27 was aligned north-west to south-east to the east of F20. It was in close association with a small pit F28, both of which were cut by a second small pit F26.

Isolated features

A range of isolated and undated features were also revealed. F16 and F17 were small pits located close to the east and west side of F22 respectively and were c.6m apart. Both were circular in plan with steep to vertical sides and were 0.17 to 0.3m deep.

F5 was a discrete oval pit located between F21 and F7. The fill contained a concentration of cattle bones including teeth, a mandible and a single long bone. No artefacts were recovered from the fill.

A large ditch was identified in the north of the site during the evaluation. It measured c.7.6m wide and lay parallel and immediately alongside the route of the former railway and canal. The dimensions were similar to ditches previously excavated on the supposed line of the vallum (Breeze 2006, 353), although these lay c.75m to the north of the current site and on the north side of the canal and railway. The ditch, while probably associated with the former railway and canal, could potentially be of Roman origins, if not the actual vallum. The ditch was not fully excavated as it lay within the area excluded from the excavation. The exact location of the vallum in Burgh-by-Sands remains unknown with any certainty.

THE FINDS

Roman pottery

R.M. McBride

The site produced 459 sherds weighing 8.253kg (Table 1). The pottery dates from the Hadrianic or early Antonine period to the first half of the 3rd century. There is no pottery characteristically earlier than the Hadrianic period and the latest pottery dates to 220 or later.

Fabric	Weight (%)	Sherds (%)	EVEs (%)
Samian	23.37	27.27	26.40
<i>Moselkeramik</i>	0.05	0.31	-
North Gaulish fabric 2	0.07	0.94	-
Unsources fine ware	0.58	1.25	3.88
Mortarium Fisher Street fabric 1	5.89	1.25	4.19
Mortarium: North-west	11.11	3.76	5.43
Mortarium: Unsources	0.49	0.31	-
Fisher Street Fabric 1	1.00	1.25	-
Fisher Street Fabric 4	0.49	0.31	-
Severn Valley ware	1.82	2.19	-
Flagon G	0.24	0.31	-
Local fine oxidised	0.29	0.63	-
Local oxidised ware	1.19	2.19	2.02
Unsources oxidised	5.50	11.91	3.42
South-east Dorset BB1	29.16	22.26	30.75
BB2	0.49	1.25	0.62
Grey ware 2	1.61	1.88	4.19
Local gritty grey	0.85	0.63	4.81
Unsources reduced	15.81	20.06	14.29
Totals	4.112kg	319	644%

Table 1: Stratified Roman pottery (excluding amphora) given as a percentage of the totals

The quantity of samian ware (89 sherds) is comparable to that found in previous studies at Burgh-by-Sands (Ward 2005, 37). There are no vessels from the South Gaulish kilns, the presence of which can be indicative of an early date. The majority came from the Central Gaulish kilns and consisted of bowls, dishes and cups. Two stamps were recovered; the first from ditch fill F1/002 reads PAT[, probably Paternus, and the second from well fill

F14/002 has only a single legible letter,]N[. Both are on the bases of Central Gaulish dishes, probably form 18/31, dating to the Hadrianic-early Antonine period.

The amphorae (26 sherds) consist entirely of the common southern Spanish Baetican form, Dressel 20, known to carry olive oil and exported from the first to at least the mid-third century. No rims or stamps were present.

The mortaria (28 sherds) are predominantly of regional manufacture dating to the Hadrianic-Antonine period. Ditch F1/F2 included a Carlisle mortarium stamped on either side of the spout, reading DOC[(Fig 3.1). This can be confidently assigned to the potter Docilis who is known to have had a workshop and kilns at Fisher Street, Carlisle, which operated between 120 and 160 (Hartley forthcoming). Other examples of mortaria include sherds in Fisher Street mortarium fabric 1, with the same date range as Docilis. Other sources of mortaria included one sherd from Corbridge also likely to date to the Hadrianic-Antonine period.

Aside from samian there was very little fine ware from the site. A base of a Moselkeramik beaker, manufactured in the Trier region of Germany, was found in ditch fill F10/002. This ware was first manufactured in 180, but does not appear to have been imported to Cumbria until the 3rd century AD. Four sherds of a roughcast beaker in North Gaulish fabric 2, a type imported until the late Hadrianic period, were recovered from the fills of ditches F1 and F12. There was a single body sherd from an unknown beaker with the unusual combination of painted dots and rouletting (Fig. 3.2) from the secondary fill of ditch F2.

South-east Dorset BB1 pottery makes up nearly 30% of the assemblage by weight and over 25% by sherd count. This is consistent with previous studies at Burgh-by-Sands (26% by sherd count; Masser and Evans 2005, 38) and the north-west as a whole (Evans & Rátkai forthcoming; Philpott 2004, 20). For example, Carlisle, the major population centre in the north-west, has just over 24% (by weight) at its peak in the mid to late second century (Swan and McBride forthcoming, period 5). BB1 also provides the assemblage with its latest datable pottery. An upper fill of the intercutting ditches at the eastern side of the site (F1 and F2) contained a plain-rimmed dish (Fig. 3.3), which had its currency from the Antonine period onwards, and a grooved flat-rimmed bowl (Fig. 3.4) was recovered from the upper fill of F1 (F1/003), a form which did not become common until the late Antonine period and was produced to at least the mid-third century and probably later. Context F1/003 produced a body sherd of a cooking pot decorated with obtuse-angled lattice decoration, a style introduced around 220. There are also several rim sherds from cooking pots with characteristics of the early 3rd century (Fig. 3.5–6).

Ditch F2 and the upper fill of ditch F15 (F15/002) had sherds of a BB2 rounded-rimmed bowl (Fig. 3.7). The *floruit* of BB2 in the north is in the 3rd century, though it is comparatively rare in the north-west. BB2 first appears in the north around the mid 2nd century on the Antonine Wall in Scotland, but this particular form has been dated to the Severan period or later at the eastern end of Hadrian's Wall (Bidwell and Speak 1995, 227).

A lamp in a hard red-brown fabric with a lug on the rim above the *discus* was found in ditch F1/002 and is dated to the 2nd century (Fig. 3.8).

Conclusion

The assemblage is essentially of domestic character with a predominance of cooking types. Cooking pots and bowls displayed evidence of cooking over a fire. There is an absence of any clearly late 1st- to early 2nd-century material especially amongst the samian. The pottery from the earlier features indicates, quite consistently, that they were filled around the mid-second century and the later features were filled during the late 2nd and early 3rd centuries. This excavation advances the date of extra-mural activity at Burgh-by-Sands from the Antonine period as recently reported (Masser and Evans 2005, 41) into the early 3rd century.

Ceramic building material and fired clay

Sue Anderson

Ceramic building material

Forty-one fragments (2,636g) of ceramic building material (CBM) were collected. Of these, 40 pieces were certainly or possibly Roman, the remaining fragment being an unstratified piece of compressed shale brick. A full report with catalogue is available in archive.

Only one definite flanged tegula was present, identified by the presence of a cut-away on the underside of one broken edge. The fragment was 35mm thick and had a curving finger-mark 'signature' on the surface. An abraded fragment of possible flange was an unstratified find; the flange height was 53mm and the top edge appeared to have been knife-trimmed. A fragment of possible imbrex was found in pit fill F12/002, although the sanded underside is more typical of later roof tiles.

Four box-flue tiles were identified. Two of these (unstrat and F13/002) had knife-cut lattices on the surface. Brodribb (1987, 109) suggests this may have been an early practice. Two other possible fragments came from pit fill F12/002: one was abraded but appeared to show evidence of combing, and the other had groups of short knife-cut marks. The latter would be an unusual method for keying of box-flue tiles (or indeed any form of tile), so its identification is uncertain. The more certain fragments varied in thickness from 17 to 24mm.

All other fragments were of uncertain type, and many were abraded pieces for which thickness measurements could not be recorded. Four fragments were measurable and varied from 28 to 32mm in thickness. This range is commonly found in flanged tegulae and wall bricks. A fragment which measured more than 37mm in thickness from F12/002 may have been used as a floor tile, as the surface showed signs of wear.

The fabrics present are comparable with a larger group from Carlisle (Anderson 2006). The majority of tiles were in medium sandy fabrics with a range of locally-available inclusions, suggesting that they were manufactured in the area. Identifiable forms included roofing tiles, fragments from a hypocaust system and a possible floor tile. These would have come from a substantial building or buildings somewhere in the vicinity, but such a structure was not identified within the confines of the site.

Most fragments were recovered from ditches, particularly F1 and F12, but the quantities were generally small and it is likely that pieces were incorporated accidentally rather than being deliberately deposited as hardcore during backfilling.

Fired clay

The site produced 56 fragments of fired clay (1197g), collected from five ditches (F1, F2, F10, F12, F21) and a pit (F26). All fired clay fragments were in fine or medium sandy fabrics with background inclusions of sandstone pebbles and granitic fragments.

Most of the fragments were of two basic types, surface pieces and inner fragments. The surface fragments showed signs of smoothing and were dense, reduced and often partially vitrified. Inner fragments were softer, abraded, less well fired and generally oxidised. Some larger fragments had both attributes. Straw impressions could be seen in some pieces. One piece from F1/002 was a thin, reduced slab similar to the outer surface fragments but more carefully smoothed. Although only a few pieces were heavily vitrified, it is likely that much of this material represents hearth linings, broken up and redeposited in nearby open features.

Small finds

Dawn McLaren & Fraser Hunter

Iron

A small assemblage of everyday, prosaic iron objects was recovered (F. Hunter, in archive). Nails predominate, but there is a limited range of fittings including a ring, a hooked terminal, a bar and a loop-headed spike with ring. Most of the finds were recovered from the fill of linear ditches, although a rectangular bar came from the upper fill of a probable tanning pit. None of the objects are chronologically diagnostic, but they are consistent with the Roman date suggested by the pottery.

Only two clusters of nails are apparent; five, of Manning (1985) type 1B, were recovered from the fill of a pit (F12/002) within ditch F12. A second cluster of eight nails, including three hobnails and a T-headed nail came from deposits within and associated with interconnecting ditches F1 and F2. Quantities of Roman pottery sherds and vitrified material were also recovered within the fills of these ditches, suggesting it was a focus for the deposition of waste material.

The small assemblage of glass (eight sherds) comprised primarily window glass with one or two small sherds from well F14/002, tanning pit F15/003 and pit F26/002. There were small sherds of blue-green bottles from ditches F1/F2 and F20/002, the former from a square bottle (Price & Cottam 1998, 194-8). Most interesting was a small colourless sherd from the concave neck of a cup some 100mm in diameter, decorated with circumferential abraded lines flanking the concavity; it is too small for detailed identification.

Vitrified material

Three conjoining fragments from the upper fill of ditch F1 (F1/003) are from a small oval plano-convex hearth bottom (85g), possibly the result of iron-smithing. The hearth bottom is composed of dense grey slag with a significant quantity of small coal inclusions (average diameter 5mm) and a large quartz chip.

One fragment of vitrified material (26.5g) was unstratified but found near F1/F2. This is a non-magnetic low-density fragment of light, porous, vesicular, vitrified material, not necessarily indicative of deliberate industrial activity.

The lack of associated diagnostic ironworking micro-debris (e.g. slag spheres and hammerscale) and the recovery of the hearth bottom from a secondary context indicates that the material was residual. There is no evidence of *in situ* ironworking.

Waterlogged wood

Mike Cressey

An assemblage of waterlogged wood was recovered from the base of a possible tanning pit (F15), possibly an attempt to line the base of the tanning pit with hurdles, although there was no formal *in situ* arrangement of uprights (sails) and horizontal rods. Two samples of oak are viable contenders for sails and a piece of hazel appears to correspond with a heel, the basal portion of a straight rod removed from a hazel stool. The rest of the assemblage is too poor to provide further meaning full discussion. The two worked stakes and the presence of side-trimmed branchwood appear to represent discarded material, some of which may have originated from a hurdle panel.

Animal bone

Jennifer Thoms

Fifty-eight fragments were present in the assemblage of which 34 were tooth enamel and 24 were small (<20 mm in diameter) fragments of burnt bone. The tooth enamel all derived from cattle teeth. Burnt bone was recovered from F1/003, F2/002, F7/002, F13/002, F21/002, F22/002, F23/002 and F26/002. F5/002 provided the bulk of the tooth enamel, but also contained burnt bone. Tooth enamel was recovered from F12/002. The survival of only calcined material and enamel without any other part of the tooth indicates a degree of acidity in the soil which is not conducive to the long-term preservation of unburnt bone.

The burnt bone fragments were in general not identifiable to element, with five exceptions. Two fragments were pieces of long bone, two derived from a metapodial, and one was a piece of pelvic bone, all from medium-sized mammals, such as sheep or pig.

Only two fragments of bone displayed butchery marks, one with two cut marks and one with four. Neither of the butchered fragments was identifiable to element or species.

The assemblage probably represents the remains of material derived from household or butchery waste, as indicated by the species present, the presence of butchery marks and the fact that some fragments have experienced burning. Pit F5 appears to represent a burial of the head of a cow or ox. The size of the pit precludes the burial of the entire beast, and does not suggest a large deposit of butchery or tanning waste. Ritual deposits of cattle heads are not unusual in the Roman period, but in this case, based on preservation, it seems likely that the remains represent a calf burial of fairly recent date.

Cattle tooth enamel fragments were retrieved from the fill of a pit within ditch F12. These are smaller and fewer in number than those found in F5 so little further information can be obtained from them.

F13, a curvilinear slot, produced one small fragment of calcined bone. Ditches F21 and F22 produced small amounts of very fragmented calcined bone, as did the irregularly shaped curvilinear ditch (F23) and a pit (F26). The unfused metapodial from a sheep/goat was retrieved from ditch F21, indicating the presence of a young animal, and suggesting better preservation in this feature.

Other finds

A fragmentary sandstone disc, possibly a pot lid, was recovered from the fill of ditch F21 (A. Jackson, in archive). A flake of worked flint was recovered from the upper fill of ditch F1 (T.B. Ballin, in archive).

DISCUSSION

Excavation of the features and analysis of the material at Amberfield has revealed a small part of a probably much wider pattern of settlement and activity within or close to the vicus associated with the Burgh II fort. The remains and finds suggest a piecemeal manner of development and modification occurring over a period of roughly a century, from between the mid 2nd and the mid 3rd centuries.

The ditches appear to represent field or property boundaries, although narrower slots (F12, F18, F19, F25) may represent timber beam slots indicating the presence of buildings or structures. While any interpretation regarding structures is tentative, the presence of ceramic building material of local manufacture would suggest that these came from structures within the vicinity of the site. The presence of such waste material within the ditches also may be indicative of boundary ditches or agricultural ditches containing domestic and architectural waste material from a nearby settlement.

The well and the tanning pit suggest an element of industrial activity, although the scale and importance of this cannot be ascertained from the limited nature of the excavation area. Furthermore it must be considered that this only represents a small sample from a wider settlement.

The character of the site has strong parallels with that previously excavated to the east by Masser & Evans (2002), which included possible beam slots and a well indicating a period of industrial and possibly domestic activity, post-dated by an apparent ditched field system. Furthermore, the earlier pottery dates closely coincide with this site, thus the idea that they form parts of the same extra-mural settlement outside the fort of Burgh II appears persuasive.

However, the location of Amberfield also locates the site further from the road to the Burgh II fort than the site excavated by Masser and Evans. Additionally, the pottery from Amberfield indicates activity extending into the 3rd century.

It is likely that much of the pottery was deposited during manuring of arable land within the field systems. While the abundance of cooking ware is suggestive of domestic activity, this may have occurred some distance away, possibly in houses or kitchens closer to the road, as the ditches would appear to be representative of agricultural activity, thus the presence of the pottery could be due to its inclusion in manure (Gaffney & Gaffney 1988).

It is not possible to assign definite phases in tracing the development of the site, however a broad chronology of development can be seen. The earliest features appear to be the tanning pit (F15) and ditch F21/F22. The well (F14) may also be an earlier feature; although this is largely conjecture as it has no stratigraphic relationship with any other feature. A 2nd-century potsherd recovered from its upper fill cannot be regarded as secure dating evidence. Further development of the site comprises the cutting of additional ditches and slots, which, rather than suggesting a multi-phase development model, seems to represent frequent small scale modification to a system of field boundaries. The two pairs of large intersecting ditches (F1/F2, F7/F9) occupying the east of the site may reflect a formal realignment of boundaries. Work in Germany has shown that rebuilt plots frequently respected existing boundaries, which suggests a formally administered system of property registration (Sommer 1999, 176), and the multiple restatements of, in particular, F1 and F2, may reflect such a system, the realignments possibly resulting from boundary disputes.

The poor condition of the soil resulted in the recovery of few animal bones, and unfortunately evidence to postulate a butchery site associated with the tanning pit was not forthcoming as a result.

The wide ditch observed during the evaluation to the north of the site is most likely associated with the former railway and canal, situated to the south of the Hadrian's wall vallum, although the line of the vallum here is not known with any certainty (Breeze 2006). Other features discovered during the evaluation which lie outwith the excavation area indicate a continuation of linear features beyond the excavated area.

Geophysical survey at the Maryport fort and vicus (Biggins & Taylor 2004) showed a vicus layout of buildings lining the main road to the fort with ditched field systems to the backs. It is probable that this pattern is reflected at Amberfield, as the current site is further from the road than that excavated by Masser and Evans.

The ditches observed both here and further east at Amberfield may both indicate a nucleated or 'ladder' field system (Abrams and Ingham 2008), in which fields are laid out in roughly square or short rectangular blocks which appear ladder-like in plan. They are also known as 'regular aggregate field systems' and occur throughout England (English Heritage n.d.).

The industrial and settlement phase, when viewed along with the Amberfield site, fits Taylor's (2007) observation of 'hamlet-scale' extra-mural civilian settlement associated with a nearby military base – in this case the fort of Burgh II.

It is likely, therefore, that this site represents part of a Roman field system to the rear of the vicus, that was in use and modified throughout the early 2nd to mid 3rd centuries, and had initial elements of domestic or small-scale industrial activity.

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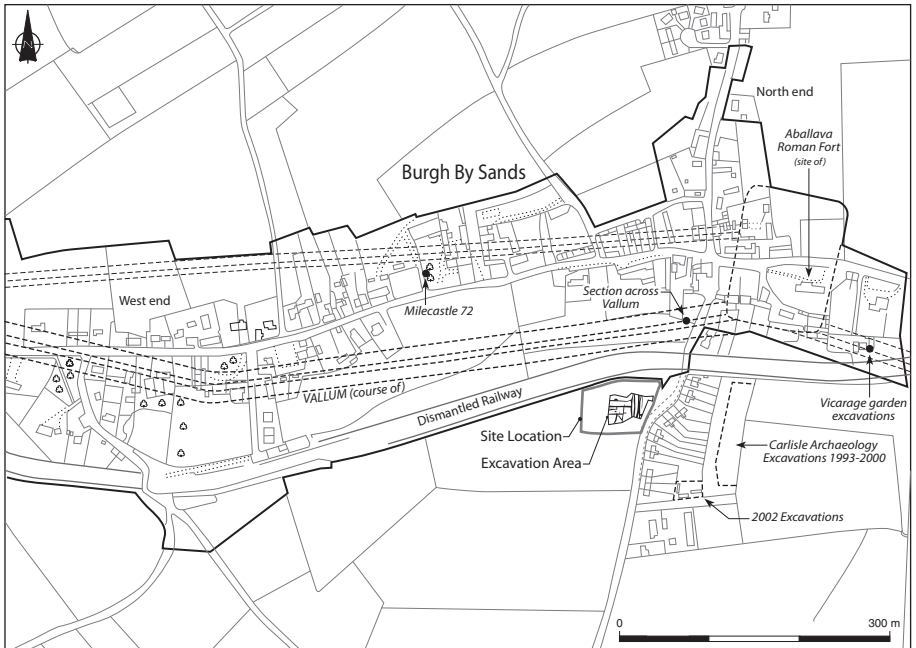
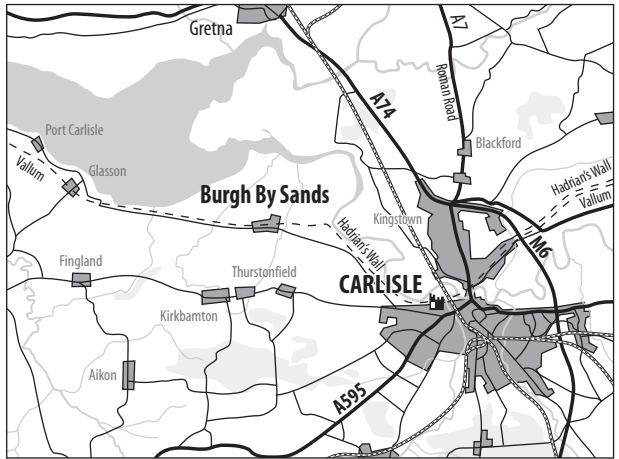
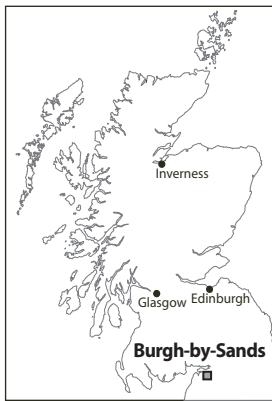
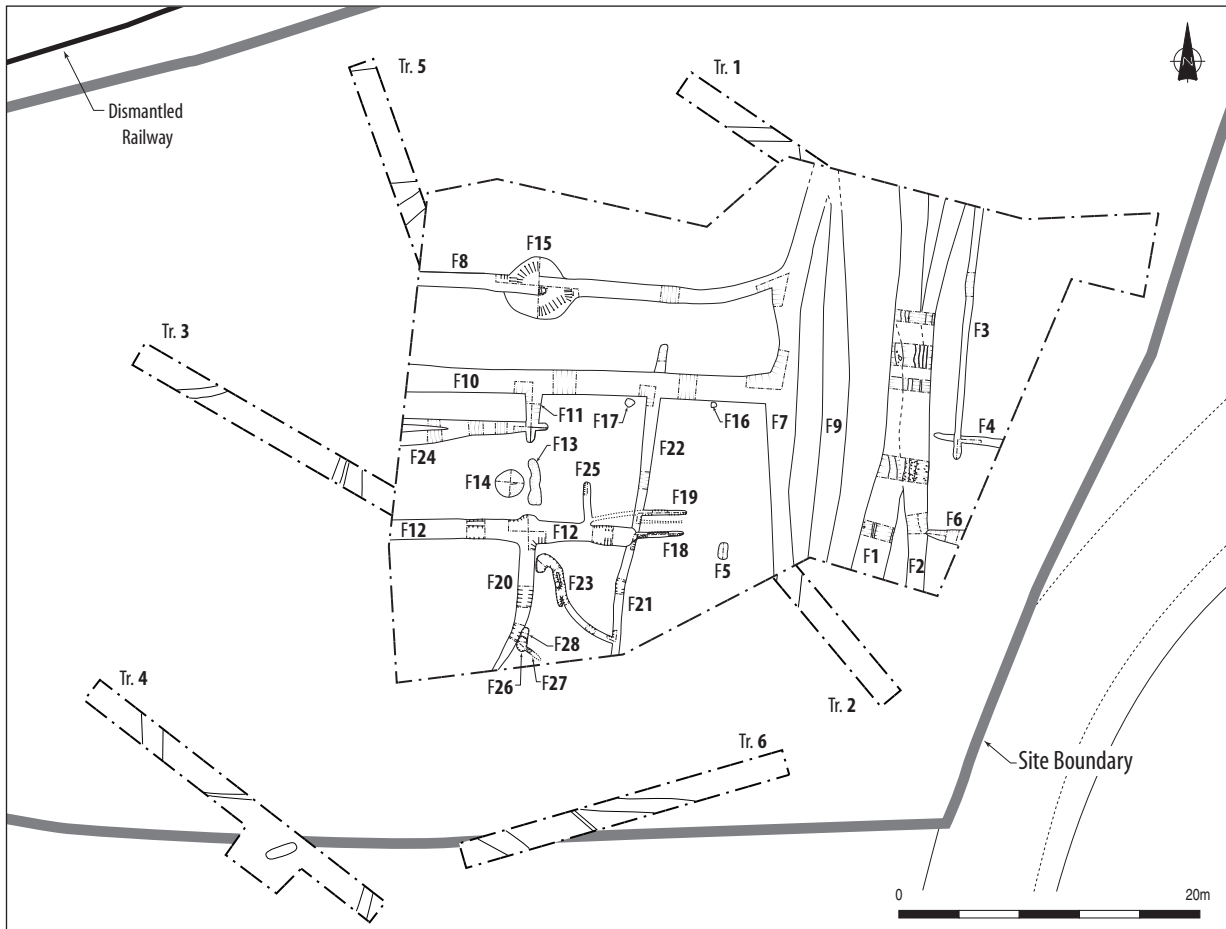


Fig. 1 - Location map



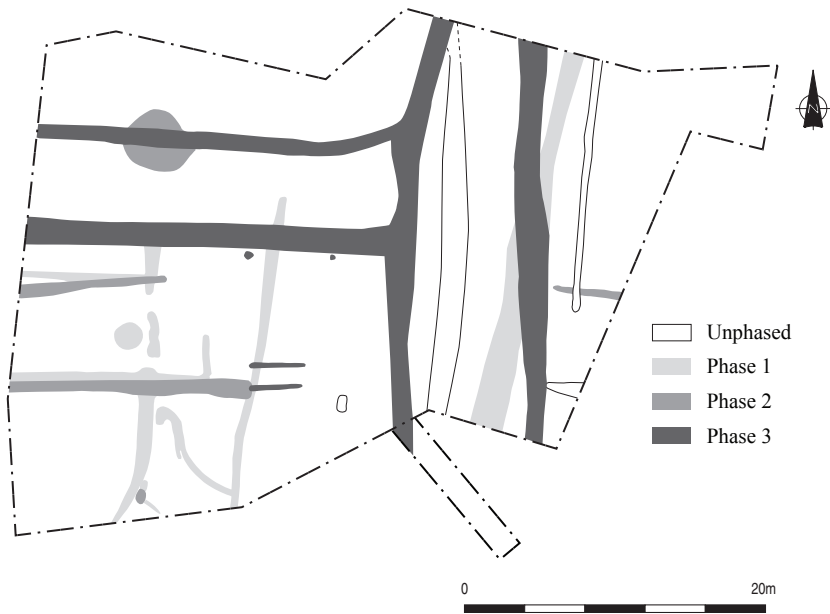


Fig. 2b - Phasing Plan

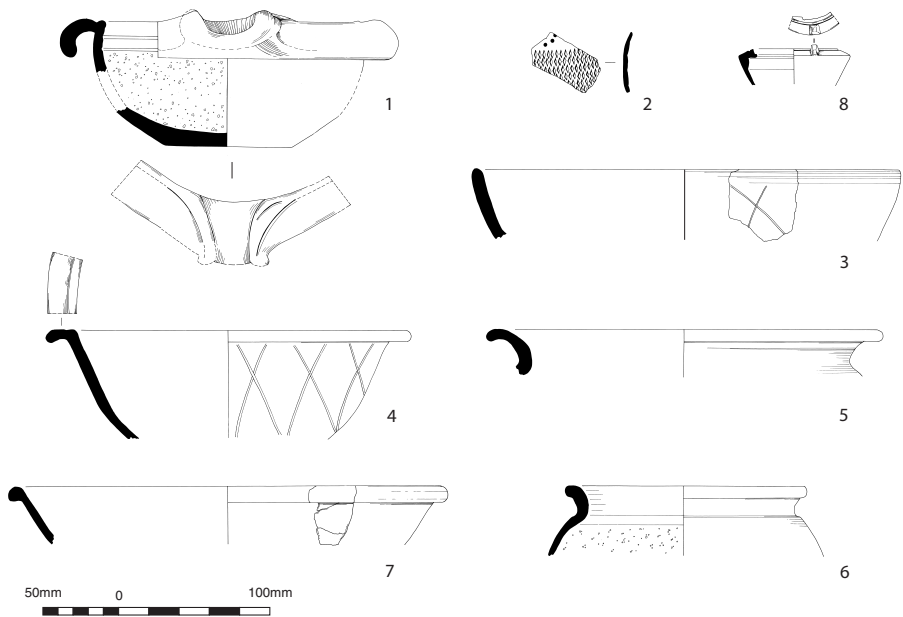


Fig. 3 - Pottery