ART. XI – *Excavations at Brougham Castle, 1987*

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BROUGHAM Castle lies about a mile and a half south of Penrith on the banks of the river Eamont at the point where it is joined by the river Lowther. Immediately to the south-east of the castle, and in fact encroached upon by the outer bailey ditch of the castle, is the site of the Roman fort of *Brocavum* which still survives as an earthwork. The castle itself was one of the most important strongholds of the great Clifford family who owned no less than four castles in the county, namely Brougham, Appleby, Brough under Stainmore and Pendragon, and also Skipton in Craven.

In 1984 English Heritage invited the Cumbria and Lancashire Archaeological Unit, now the Lancaster University Archaeological Unit, to undertake a detailed survey of the historic fabric of Brougham Castle. The survey has involved a variety of techniques, including photogrammetry, rectified photography and hand survey, in the production of stone by stone drawings of the various elevations of the castle. The drawings will provide a basis for the analysis and phasing of the successive building periods of the castle and will also be used for design and monitoring purposes in any future consolidation work. The excavation described in this report, which was undertaken from 6 September to 2 October 1987, was the response to the detailed analysis of the buildings and curtain wall at the south-east corner of the bailey where it was thought that a free-standing hall perhaps predated the curtain.

It was originally intended that the report of the excavations should be part of a volume covering all aspects of the fabric survey of the castle; with the impending departure from the Unit, in 1989, of the author, who was responsible for the Brougham project, it was decided that the fabric survey should be completed by another member of the Unit but that the excavation report should be published separately.

The main text of this report discusses the structural evidence recovered from the excavation and summarises the evidence of the finds. Within the accompanying microfiche are to be found a detailed layer list and catalogues of the samian pottery, the glass and the metalwork. The site paper archive has been deposited in the Cumbria Record Office at Carlisle and the finds in the Tullie House Museum, Carlisle.

Historical Background

The history and archaeological development of the castle has been discussed in a number of papers (Charlton 1985; Clare 1981, 64–75; Clark 1881–2; Curwen 1913, 87–94, 455; Curwen 1922; Hutchinson 1794–7, 294–299; RCHM 1936, 57–62; Simpson 1942; Taylor 1892, 35–37; Whyte 1903). As a consequence of the current survey a full reappraisal will be both possible and necessary but it would be inappropriate in this

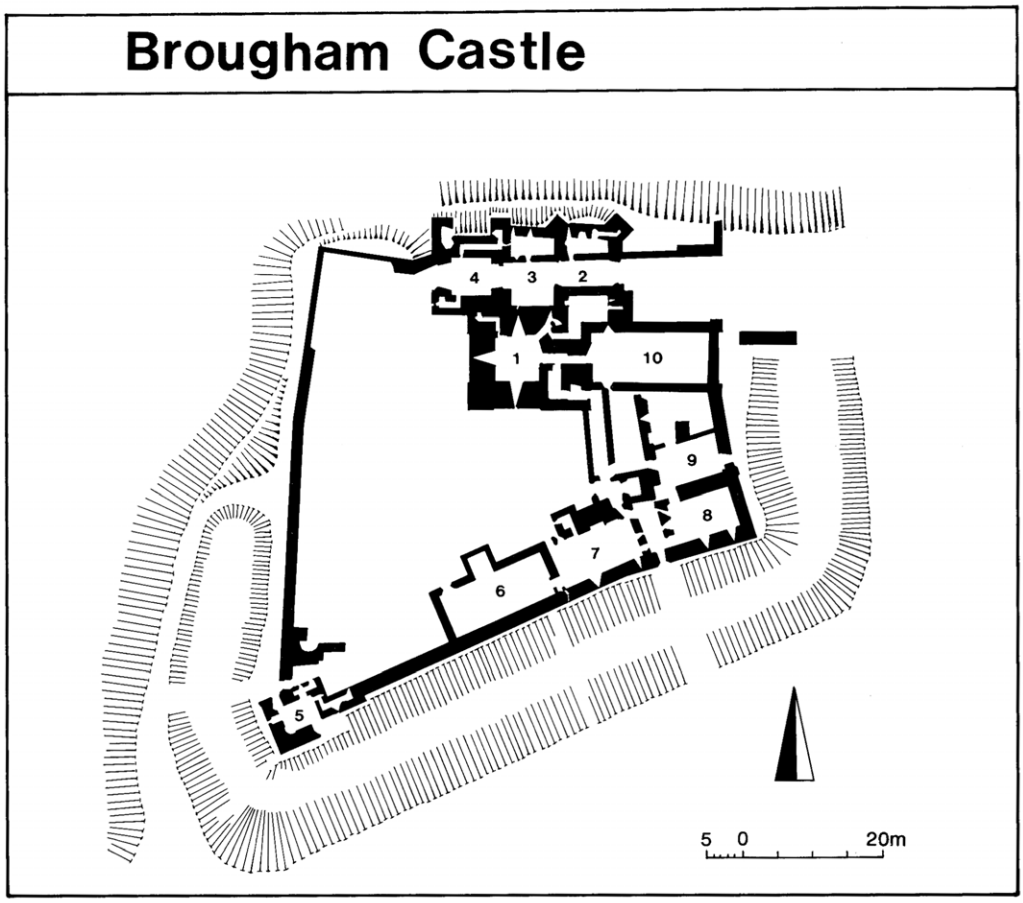

FIG. 1 General plan of Brougham Castle.

paper to anticipate the detailed survey results. Accordingly the description and discussion of the 1987 excavations will be prefaced only with a summary of the received interpretation of the castle's development based mainly on Charlton (1985).

Four main building periods have previously been identified, although the dangers of wishfully associating building phases with known historical personages should not be forgotten. There is no mention of a castle at Brougham until 1228 when Robert de Vipont (lord of the barony of Westmorland *c.* 1203–1228) died. Charlton argues from the absence of documentary evidence that the fine Norman keep (Fig. 1, 1), the earliest surviving structure on the site, should be attributed to Robert even though some of the architectural detail would be in keeping with a late twelfth century date in a more southern context and has, in fact, been ascribed to the period *c.* 1170–1180 (RCHM 1936, 57). To Robert is also ascribed the large rectangular building to the east of the keep (10). The second major building period is associated with Roger, first Lord Clifford, who, between 1290 and 1314, is thought to have made the keep the centre of an unusual defensive complex, adding to the keep an inner and an outer gatehouse (2–4). He also

may have built or rebuilt the south-western tower (5) and probably the curtain wall. Roger, the fifth lord, perhaps changed the general lay-out of the castle in the late fourteenth century, undertaking building or rebuilding in the south-east corner of the bailey (area of 7–9). In the seventeenth century the Lady Anne Clifford, succeeding to the inheritance for which she had struggled for nearly forty years, restored the castle as an ancestral seat (Charlton 1977). The last of the Clifford line, she died at Brougham in 1676. The castle passed to the earls of Thanet and was partly demolished in 1691 but some substantial repair work is recorded in 1849 (KRO, WD/HOTH, Box 23, 1849). The castle was handed into Guardianship in 1928.

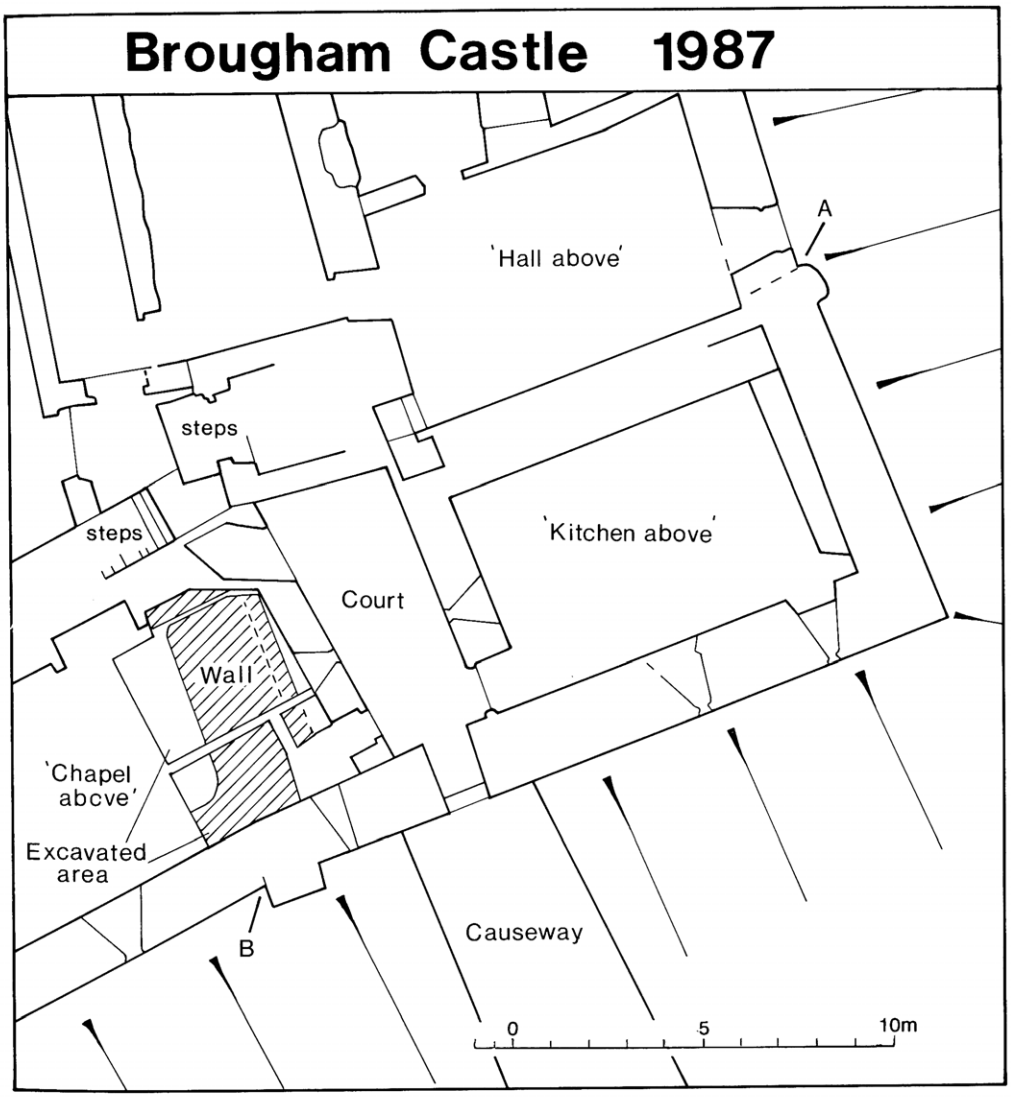

FIG. 2 The south-east corner of the castle showing the location of the 1987 excavations.

The Purpose of the Excavation (Fig. 2)

The south-east corner of the curtain wall of the castle displays a very complex building history with several periods of rebuilding over a long period of time although this present paper concerns itself mainly with the earlier part of the sequence. The basic plan of the bailey wall in this area has been interpreted as belonging to Roger, the first Lord Clifford, although a butt joint, apparently indicated in the curtain wall between the "kitchen above" (hereafter referred to as the "kitchen") and the "hall above" (hereafter referred to as the "hall") on the plans of RCHM (1936, 58) and Charlton (1985, 8–9) seems to indicate more than one phase. Clare (1981, 71) noted that there was a "suspicion" of the hall being later than the kitchen. Close examination of the fabric of the curtain seems to clarify the building sequence. At (A) in the east bailey wall, the wall of the hall does appear on its outer face to abut the wall of the kitchen, here represented by a projecting buttress. Examination of the exposed core of the wall at this point confirms this hypothesis because rough core-work in the wall of the hall can be seen to abut a smooth east–west face of a wall or buttress belonging to the kitchen. At (B) in the south bailey wall is another buttress. While the curtain to the east of the buttress seems to be bonded with the buttress, that to the west seems to abut the buttress. The character of the wall on either side of the buttress is also different and on the interior of the curtain within the "chapel above" (Charlton 1985, 9) (hereafter referred to as the "chapel") a straight joint can be seen in the lower courses of the wall. It appeared therefore that the south-east corner of the bailey originally comprised a large rectangular structure *c.* 19 m × 10 m independent of the later bailey wall. A small excavation was accordingly undertaken within the chapel in the hope of locating the west wall of the postulated early structure.

The Excavation (Figs. 2–5)

A trench *c.* 6 m × 4.2 m was excavated immediately to the west of the east wall of the chapel. The various deposits have been grouped into seven phases. Deposits of Phases 1 and 2 were only present in the western third of the trench in that the construction of the Phase 3 wall (9) had either removed or obscured them elsewhere.

Phase 1

A short length of a small ditch of U-shaped profile, which cut into the natural clay subsoil, could be seen running east to west. To the north and south of the ditch were compact metalled surfaces of water-worn cobbles and some sandstone (89, 102). In the north face of the ditch approximately twelve circular patches of dark soil between *c.* 0.07 and 0.10 m in diameter were thought to represent stake-holes or root holes but on excavation they were found to penetrate the natural clay to a maximum depth of 0.13 m. The lower fills of the ditch (103, 104) contained no pottery but the ditch is thought to be Roman. On the basis of the seven sherds of Samian found in other deposits a date in the second half of the second century may be suggested.

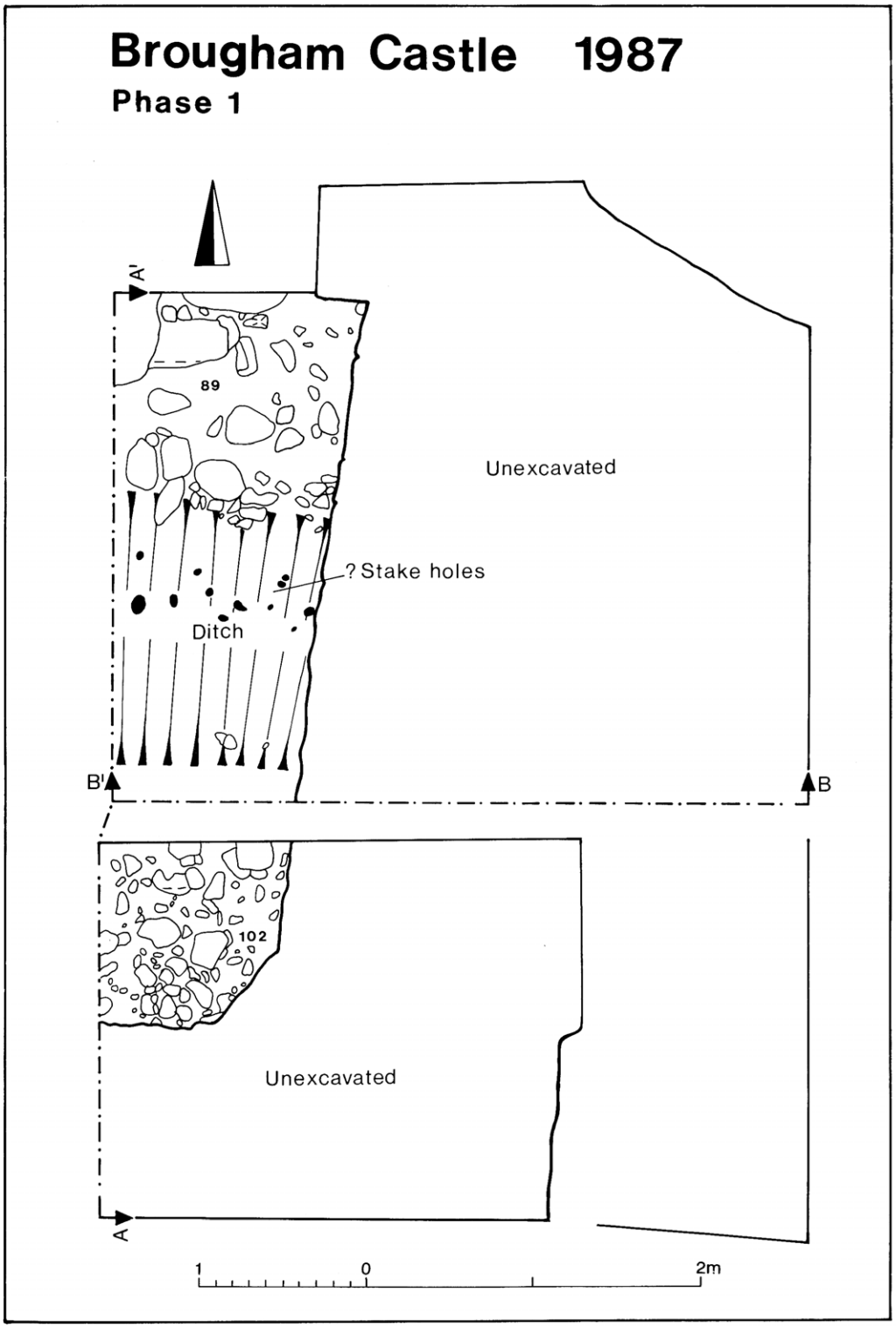

FIG. 3 The 1987 excavations, Phase 1.

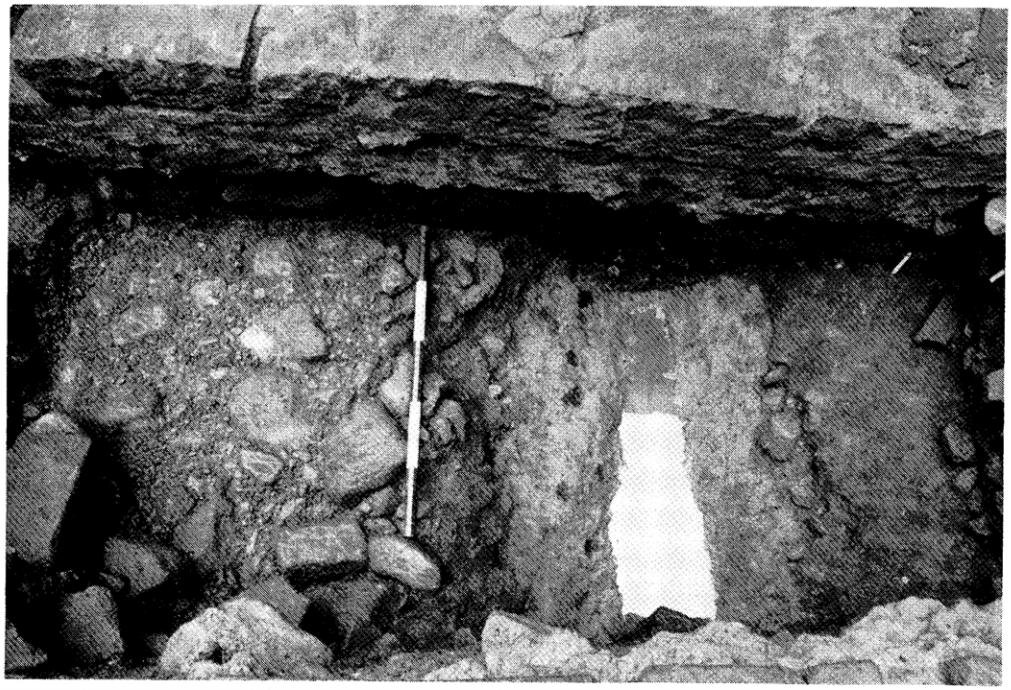

PLATE I The Roman ditch from the west with the possible stake-holes visible in its north face. To the north is cobbled surface 89. Two courses of the squared well-mortared masonry of wall 9 can be seen stepped out over rougher foundations.

Phase 2

A layer of very dark silty clay loam (90) forming the upper fill of the ditch was covered by a metalled surface (72) incorporating water-worn cobbles, sandstone fragments and pieces of Roman tile. Layer 72 contained six sherds of pottery all probably Roman but one of the two sherds from 90 was of medieval date. It is possible that this medieval sherd is in some way intrusive to the deposit but perhaps it is more reasonable to regard 72 as a medieval surface incorporating earlier material from the adjacent Roman fort. The layer above 72 (65) almost certainly represents a build-up of medieval material prior to the construction of wall 9. The single medieval sherd from 65 is dated to sometime between the later thirteenth century and *c.* 1600.

Phase 3

Phase 3 saw the construction of a substantial mortar-bonded wall (9), *c.* 2.6 m wide including an offset *c.* 0.40 m wide on its east face. At its south end, and well bonded with it, a buttress or another wall projected eastwards beyond the edge of the excavated area. Wall 9 was well faced and coursed and contained a rubble core. The construction trench for the foundations (71, 92) could be clearly seen to cut layers 65 and 75 but the relationship of the wall with layer 62 was not so clear (Fig. 5, Section B-B[1]). Spreads of

PLATE 2 The north section of metalled surface 75 from the north.

mortar, however, bonded to the west face of the wall and projecting westwards from it at the base and top of 62 indicate either that the construction trench was cut through 62 but could not be recognised as such or that 62 was deposited as a make-up level during the construction of the wall, for the mortar spreads are clearly spillage associated with the construction of the wall. At the north of the trench the wall was cut by the foundation trench for wall 52; the east side of the wall was robbed or disturbed by the construction of wall 113; at its south end the wall extended under the south wall of the chapel. The

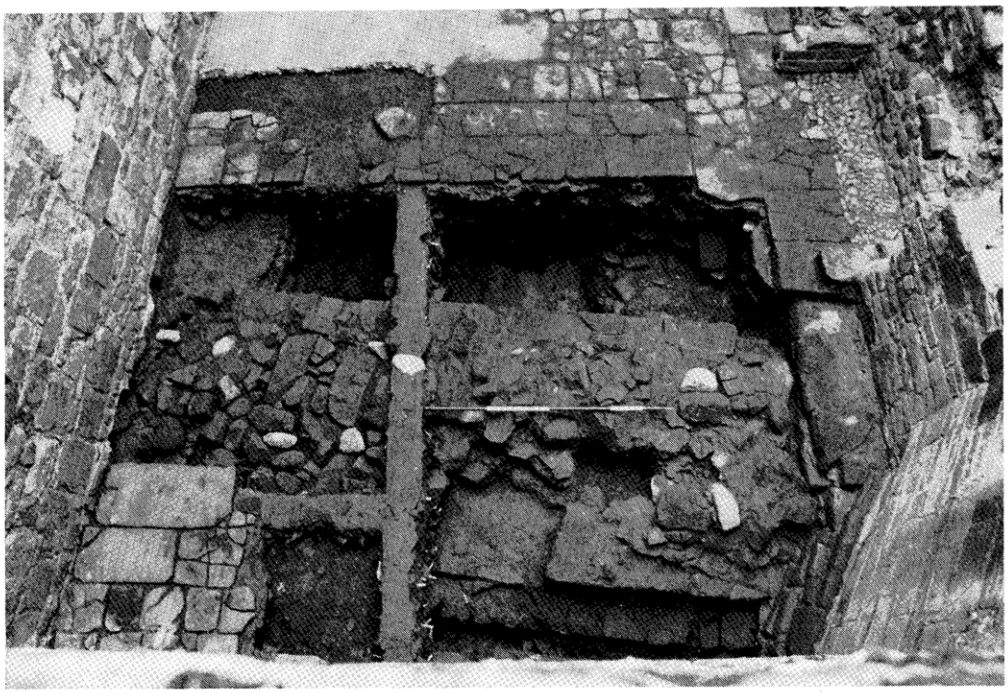

PLATE 3 The Phase 3 wall (9) from the east.

south wall of the chapel, or at least its north face, seems to have been constructed over the top of wall 9. Two observations, however, can be made: firstly, if the line of the west edge of 9 (excluding the southern projection) is extended southwards, what appears to be a butt joint is encountered in the lower courses of the south chapel wall; secondly, to the east of this "butt joint", rather small stones are to be found in the basal courses of the wall, suggesting some form of patching. It would appear that the south wall of the chapel was either refaced or partially rebuilt after the demolition of wall 9. Certainly on the evidence from the south side of the south chapel wall at least the eastern end of the chapel wall (the butt joint at B, Fig. 2) was originally erected at the same time as wall 9. The few fragments of medieval pottery from context 62 are consistent with a date sometime between the mid- to late thirteenth century and *c.* 1500.

Phase 4

Phase 4 represents the construction, following the disuse of wall 9, of the north (52, 86), north-east (53), south and east (113) walls of the chapel. Only the bases of these walls are considered for the subsequent rebuilding in the chapel area is considered to be outside the scope of this paper. Even so, Phase 4 should perhaps be divided into two sub-phases because it is uncertain whether wall 52 represents an offset foundation for wall 86 or whether it should be regarded as belonging to a phase intermediate between walls 9 and 86. The construction trench for 52 (12) was visible at a high level cutting 9.

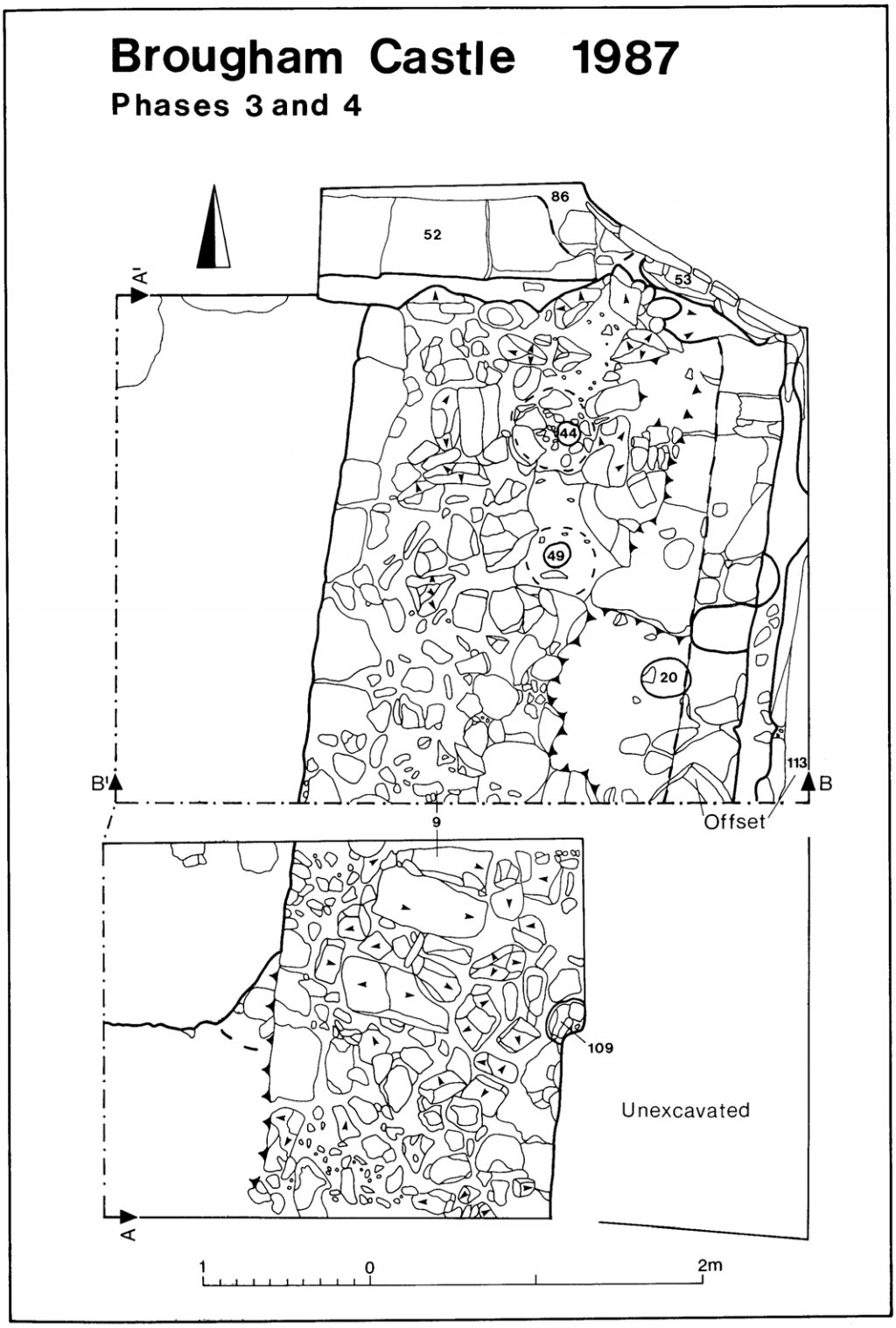

FIG. 4 The 1987 excavations, Phases 3 and 4.

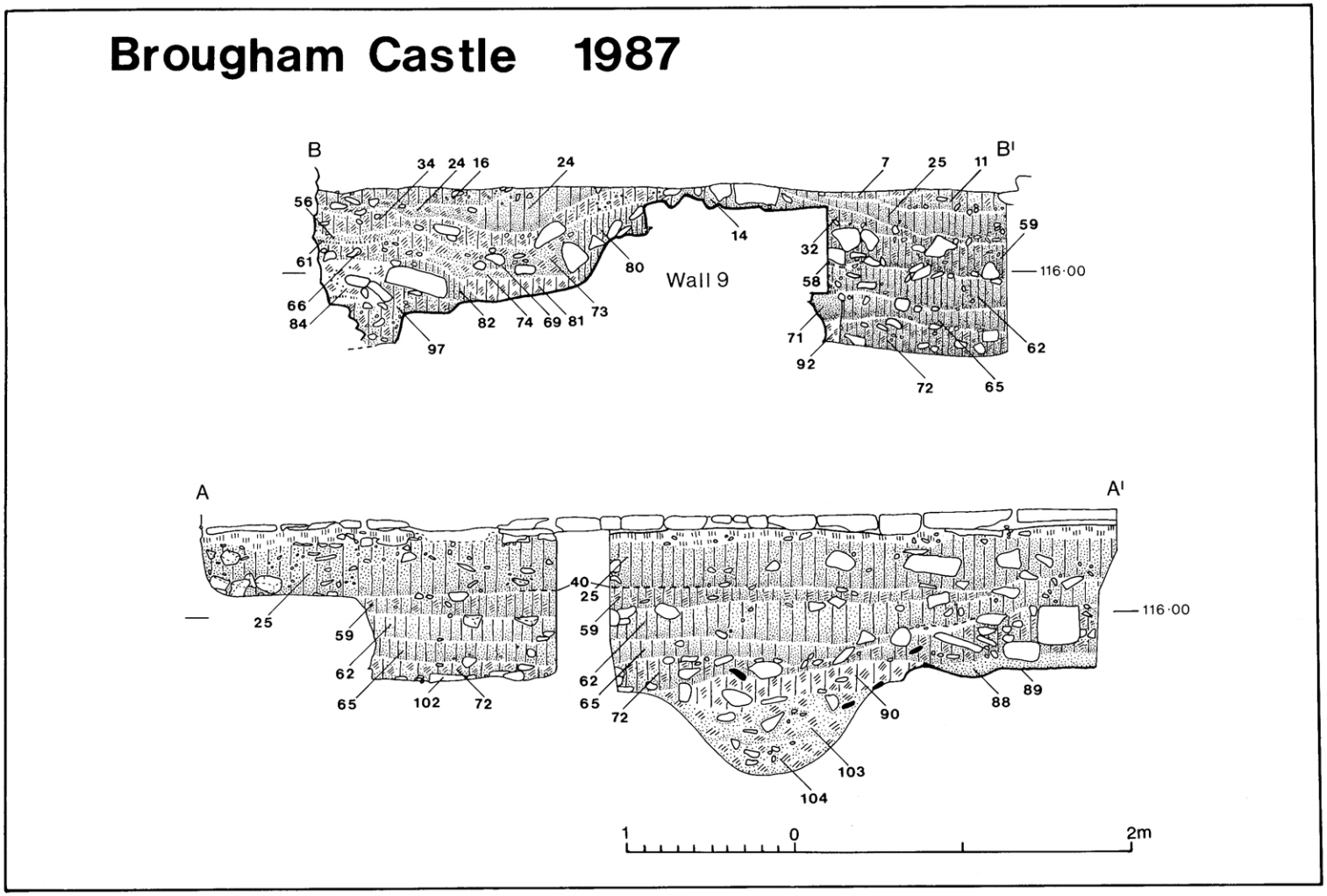

FIG. 5 The 1987 excavations, sections.

PLATE 4 Phase 3 post-hole 49 from the south.

Wall 53 appears to overlie 52 and to be bonded with walls 86 and 113. No relationship, however, could be established between construction trench 12 and the deposits filling the construction trench for walls 86 and 113. This latter construction trench was broad and sloped gradually downwards west to east towards wall 113. The trench was at least partially formed by the robbing of wall 9 and was filled with a series of lenses and dumps (see Fig. 5, Section B–B[1], contexts 24, 34, 56, 61, 66, 69, 73, 74, 81, 82, 84, 97). Cutting wall 9 or the uppermost of these deposits was a series of post-holes (20, 44, 49, 109). These probably held scaffolding uprights associated with the construction of wall 113. To the west of wall 9 Phase 4 was represented by various deposits of mixed soil and stone (25, 26, 32). The pottery could not provide a date more precise than the period between the mid- to late thirteenth and the end of the fifteenth century.

Phase 5

Mixed level 16 may well have formed a make-up level for a yellowish red sandy clay (8) which may be the very worn remains of a clay floor associated with walls 52, 53 and 86. A spread of brown plaster fragments (7) is also probably associated with this phase. These deposits contained a large quantity of window glass fragments dating to the latter part of the seventeenth century.

Phase 6

This phase is represented by the remains of a sandstone flagstone floor (3) and its make-up levels (4, 5). In the present century gaps between the flagstones have been filled in with concrete.

Phase 7

To Phase 7 are attributed the modern concrete floor level and its make-up (2).

Discussion

Excluding modern work a six-phase sequence has been demonstrated by the excavation. The Phase 1 ditch is not specifically of military character but its alignment parallel to the northern rampart of the Roman fort and its proximity to it suggest that it may have formed an outer ditch in the defensive arrangements of the fort. The possible stake-holes or root holes in the north face of the ditch were possibly the remains of a further defensive obstacle comprising rows of sharpened stakes or a thorn hedge (*cf.* Johnson 1983, 53; Jones 1975, 113).

Although there was no direct evidence from the ditch itself, the consistent dating to the second half of the second century of the seven sherds of samian ware from the overlying levels suggests that the ditch was either functioning or silting up at this period. Further chronological refinement is not possible but the confirmation of presumably military occupation at Brougham at some time in the later second century is in itself useful, bearing in mind the limited information relating to this period in Cumbria (*cf.* e.g. Shotter 1984, 37–38).

The Phase 2 accumulation relates to the early occupation of the castle prior to the construction of the Phase 3 building. It can be argued that in Phase 3 a large, free-standing, rectangular stone structure measuring *c.* 19 m × 10 m was erected, with the buttresses at A and B in Fig. 2 defining its north-east and south-west corners; the wall foundations projecting westwards at the south-west of the excavated area could, however, be the start of a wall. The castle at this time would probably have comprised the keep, the great hall to the east of the keep and this second hall. The curtain between the great hall and this second hall is certainly later than both structures but there is little evidence with which to establish a precise chronology for the sequence. Two arrangements for the castle at this period therefore seem most possible: firstly, a group of free-standing buildings relying on the massive keep for protection but without any additional defensive circuit; secondly, the same group of buildings set within a defensive enceinte, formed of earth and timber, and which has subsequently totally vanished. It would appear that at Pickering timber continued to be used in the defences of an essentially stone castle into the fourteenth century (Thompson 1985, 19; *cf.* also the continuing presence of timber in the defences of Northampton and York castles in the late thirteenth century: Brown *et al.* 1963, 752, 890). A further possibility that the butt joints related to stages within a single building campaign should not be discounted.

Based on the evidence of the pottery, Phase 3 is unlikely to have occurred much before 1300, the time of Roger, the first Lord Clifford.

With the subsequent development of the castle wall 9 was demolished and a series of buildings erected against the southern curtain wall which had by then been constructed. The east and north walls of the chapel (53, 86, 113) represent a fairly late stage in this development but wall 52 may well relate to an intermediate phase. All this development can only be dated to sometime in the fourteenth or fifteenth century.

The late seventeenth century glass found in layers 7 and 8 presumably derives from the refurbishment of the castle by Lady Anne Clifford but this then poses problems with the flooring sequence. It would seem reasonable to regard 7 and 8 as medieval floor levels, with the flagstone flooring 3 and the seventeenth century fireplace in the north wall of the room being associated with Lady Anne's refurbishing. The glass could have become embedded in 7 and 8 as a result of a process of demolition involving the contemporaneous removal of some of the floor slabbing (thereby exposing the medieval levels) and the destruction of the room's windows. Two fragments of the window glass were, however, recorded as being sealed by the flagstone floor. Unless the glass was in some way intrusive, or at least some of it represents constructional activity, this presents a problem for there is no context for the construction of the flagstone floor after the time of Lady Anne.

A fuller elucidation of the later medieval and post-medieval development of the south-east corner of the bailey, incorporating the results of the historic fabric survey, must await the completion of the survey, but the initial analysis, followed by the excavation described in this report, has indicated a more complex sequence than was previously suspected.

The Pottery by M.R. McCarthy and F. Wild (the samian)

One hundred and three sherds of pottery were submitted. They include at least eighteen sherds of Roman pottery amongst which are seven sherds of samian, black burnished ware 1, oxidised jars, grey wares and a single colour-coated ware sherd, possibly of Nene Valley origin. The samian ware all dates to the second half of the second century (see microfiche). In so far as it is possible to attribute dates to the rest of the pottery a second to third-century range would be acceptable.

Table of pottery by phase

Phase	Roman	Medieval	Other
1	6	–	–
2	8	2*	–
3	2	4	1 uncertain
4	–	50	–
5	–	14	–
7	–	10	1 17/18th century
Unstrat	2	3	–
Totals	18	83	2

* 1 sherd re-used as a counter in a fabric which could be Roman or medieval in date.

Eighty-three medieval sherds were recovered. All the pottery can be attributed to the broad period between the mid-thirteenth and late fifteenth century with the exception of one sherd from context 42 (Phase 4) which could be twelfth–thirteenth century in date, although this is not certain. The collection contains nothing which is typically twelfth or sixteenth century in date, and there is only one post-medieval sherd (from context 2).

Most of the medieval pottery is probably of local manufacture and consists of reduced, sandy, green-glazed wares. Many are probably from jugs. This kind of medieval pottery is entirely typical of the period between the mid- to late thirteenth and fifteenth century in Cumbria. Examples are known from excavations at Kendal, Brough on Stainmore and Carlisle. In addition there are a small number of fine sandy oxidised wares, almost certainly from jugs, and which may be regional imports. There are at least two examples of Humber ware drinking jug sherds, possibly from the same pot, from contexts 26 and 28 (Phase 4). These are normally dated to the period between the fourteenth and sixteenth centuries, although they occur most frequently in the fifteenth century at York.

The Glass by Christine Howard-Davis

One hundred and one fragments of glass were recovered of which only four were of modern manufacture (three from context 2 and one, undoubtedly intrusive, from context 16). Only one fragment of vessel glass could be identified with confidence; any others present were so small as to be indistinguishable from window glass and have consequently been counted with it.

The window glass presented a very homogeneous group characterised by the small size of individual pieces (seldom more than 25 mm in the largest dimension), the thickness (almost all fragments are less than 2 mm thick) and the extreme degree of weathering. Most of the glass derives from what are regarded as Phase 5 contexts but material lying on the surface of such Phase 5 deposits may well relate to the very end of Phase 5. All the glass, except for the modern fragments, exhibits a pattern of weathering typical of the products of the northern glass houses in the later medieval period, with a layer of opaque, very dark brown or black staining which crumbles easily into sugar-like crystals, over a flaking opalescent surface (often pinkish or yellowish), which in turn overlies a thin and fragile, heavily pitted core. All but one fragment (context 2, SF12/1), which is pink, are of natural green, yellowish-green or yellowish-colourless metal. The nature of the weathering, considered with the predominance of thin glass (2 mm or less), would suggest a date for its production at the end of the medieval period, in the sixteenth or seventeenth centuries and the presence, in one fragment of elongated bubbles, which might indicate the use of the "muff" technique of production, narrows the date range of the glass, since the technique was not used officially for the production of window glass in England before 1567 (Charleston 1975). Ten of the fragments have grozed edges, interestingly appearing on the same pieces as cut edges (the more common technique from the eighteenth century onwards), and on one complete quarry a cut edge has obviously been tidied by grozing along half its length. Thus a date in the later part of the seventeenth century might seem appropriate for this group of window glass.

There are two almost complete triangular quarries, both right-angle triangles and

presumably from the corners of leaded lights (context 7, SF59/1, context 16, SF98/1) and approximately half of a small lozenge-shaped quarry (context 15, SF97/1). The assumption that these represent the presence of at least one domestic leaded-light window is confirmed by SF58/1 (context 7) which is part of a small lozenge-shaped quarry, still surrounded by the original lead kame, formed from two H-sectioned strips soldered at the apex. The kame is twisted and deformed, suggesting an attempt to prise the lead away from the glass, perhaps in an attempt to extract the quarries as salvage for re-use. A single fragment (context 46, SF249/1) is painted on the back with an hatched pattern in maroon or dark brown. There are traces of fine lines in white paint on the front of the piece, presumably to indicate detail. The fragment is too small to suggest a decorative scheme but the depiction of armorial bearings (common in the windows of the great houses) would not seem out of place in a castle. The fragment is generally similar to all the other window glass from the excavation, and is probably of the same date. This fragment derives from a Phase 4, rather than a Phase 5 context and may therefore be older than the main body of the glass, but it is more likely that the fragment really represents a Phase 5 deposition into a Phase 4 deposit. Of the four vessel fragments found, three are modern and require no discussion. The fourth (context 2, SF35/1) is very similar in colouring and degree of weathering to the window glass and undoubtedly lies within the same date range. The fragment is too small to allow the further identification of the vessel, although its thin walls might suggest a beaker or other vessel for drinking.

The Metalwork by Christine Howard-Davis

Sixty-seven iron objects were recovered from twenty-four contexts. All but five of the objects recovered were nail fragments, representing a minimum number of thirty-one nails. The objects were identified, measured and described, in the first place from X-radiographs supplied in the course of conservation. Physical examination of them added little to the information gathered from X-ray since all the objects were very badly corroded.

Nails were recovered from contexts within all the phases except Phase 6, but the majority were from Phase 4 – which is not surprising since it represented a period of structural alteration. Most of the nails (with flat, round heads) are incomplete but it is obvious from their size that they are of the type used in smaller-scale carpentry – door frames, furniture etc, rather than to secure major structural timbers. Many of them show signs of use, and several are clenched, indicating that they are likely to have been deposited whilst still within timber rather than having been extracted and discarded during the reuse or refurbishing of existing woodwork.

Two of the complete specimens (SF551 and 569) are from Phase 1 contexts and can therefore be regarded as Roman in date. Both have flat, round heads and can be firmly placed within Manning's type 1b (Manning 1986).

Of the five remaining fragments, two (SF175 and 516) are amorphous scraps of sheet and do not warrant further description. SF 186, a loop hinge, is derived from a Phase 4 context (24). Such hinges are not substantial enough to bear a great deal of weight and its decorative nature suggests that it was most likely to have been used to hinge the lid of a

box or chest rather than that it was an architectural feature such as a shutter or cupboard door. SF579 and 594, may be parts of the same object, a substantial T-shaped item, now incomplete and thereby not easy to identify, but probably of a structural nature, perhaps for joining or reinforcing large structural timbers, or as a wall tie. No dating is possible.

Eight fragments of copper alloy were recovered from the site. Three of them are amorphous fragments of sheet but the other five (all from context 32, Phase 4) form a group of almost identical lace tags of simple form: a strip of thin sheet rolled in at both edges and then crimped round the lace, forming a slightly tapering cylinder. Such simple forms tend to have a long life as is demonstrated by the evidence from the St Peter's Street, Northampton, excavations (Oakley and Webster 1979, 262).

Four fragments of lead were recovered and three (all from Phase 4) are clearly small pieces of scrap of the kind to be expected during a period of building or refurbishment. The fourth fragment is a short length of window kame, underlining the presence of leaded light windows in the building.

The Roman Tiles by John H. Williams

A total of 179 tile fragments was recovered from the excavation (Phase 1: 3 fragments; Phase 2: 172 fragments; Phase 3: 1 fragment; Phase 4: 2 fragments; Phase 5?: 1 fragment), with the bulk (159 fragments) coming from the Phase 2 layers 65 and 72 which lay immediately above the Roman ditch. The pieces were all small and mainly derived from tiles of indeterminate form but fragments from perhaps five tegulae, two imbrices and three box flue tiles could be identified.

The Hone by John H. Williams with stone identification, utilising thin section, by D.T. Moore

Fragment of hone of Norwegian ragstone. Rectangular section, broad face tapering to a chisel end. L: 43 mm+; W: 7 mm; Th: 5 mm. Phase 4, context 82, SF498.

The Animal Bone by L. Gidney

A total of 462 animal bones was recovered from the excavation, of which approximately two thirds belonged to Phase 4. In view of the limited extent of the excavation and the absence of well-defined occupation deposits they were only cursorily examined in order to identify the species present. Only Phases 1 and 4 had sufficient bone to warrant further comment.

Phase 1 contains a large quantity of bone fragments from a large mammal, probably horse, and probably also from a single individual, perhaps indicating a deliberate deposition.

The great majority of bone fragments from Phase 4 is in excellent condition suggesting that it had all been deposited contemporaneously, with little surface degradation before burial and very little, if any, redeposited Roman material. All three species of deer are

present. Most of the roe and fallow deer fragments are from metatarsi and carpals and several of these have clear skinning marks on them. The absence of metacarpi and carpals is interesting. Red deer appears to be represented by tibiae and phalanges. Several of the metatarsals are intact and not broken open to extract marrow. There are remarkably few fragments of sheep/goat and pig but rather more of cattle: beef would appear to have been the most commonly consumed meat with venison being more popular than mutton and pork. Bird bones included those from the edible species of fowl, goose and pigeon. The corvid present could also have been eaten but not the white tailed sea eagle which may have been procured for its feathers, perhaps for fletching. There is a notable absence of horse and dog bones although many fragments have marks on them as a result of having been chewed by dogs. This suggests that the assemblage comprises fresh domestic waste only and does not incorporate exterior garbage accumulations with redeposited inedible corpses. Altogether the bone from Phase 4 is an interesting group of high status waste and as a microcosm may reflect consumption patterns within the castle at this time.

Acknowledgements

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Notes and References

Brown, R.A., Colvin, H.M. and Taylor, A.J., 1963 *The History of the King's Works, vol I: The Middle Ages.*

Charleston, R.J., 1975, "The Glass", in C. Platt and R. Coleman-Smith (eds.), *Excavations in Medieval Southampton 1953–1969, vol. 2, The Finds*, 204–226.

Charlton, J., 1977, "The Lady Anne Clifford (1590–1676)", in M.R. Apted, R. Gilyard-Beer and A.D. Saunders (eds.) *Ancient Monuments and their Interpretation*, 303–314.

Charlton, J., 1985, *Brougham Castle* (English Heritage Guidebook).

Clare, T., 1981. *Archaeological Sites of the Lake District.*

Clark, G.T., 1881–2, "The Castles of Brougham and Brough", *CW1*, vi, 15–37.

Curwen, J.F., 1913, *The Castles and Fortified Towers of Cumberland, Westmorland and Lancashire North of the Sands.* C.W. Extra Ser. 13.

Curwen, J.F., 1922, "Brougham Castle", *CW2*, xxii, 143–157.

Hutchinson, W., 1794–7, *The History of the County of Cumberland, 1.*

Johnson, A., 1983, *Roman Forts.*

Jones, M.J., 1975, *Roman Fort-defences to AD 117 with Special Reference to Britain.* Brit Archaeol Rep 21.

KRO Cumbria Record Office (Kendal).

Manning, W.H., 1986, *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum.*

Oakley, G.E. and Webster, L.E., 1979, "The Copper Alloy Objects", in J.H. Williams, *St Peter's Street, Northampton, Excavations 1973–1976*, 248–264.

RCHM 1936, *An Inventory of the Historical Monuments in Westmorland.*

Simpson, W.D., 1942, "Brougham Castle", *CW2*, xlii, 170–179.

Shotter, D., 1984, *Roman North-west England.*

Taylor, M.W., 1982, *The Old Memorial Halls of Westmorland and Cumberland. CW* Extra Ser. 8.

Thompson, M.W., 1985, *Pickering Castle* (English Heritage Guidebook).

Whyte, E.T., 1903, "Brougham Castle, Westmorland", *Archaeologia* 58, 359–382.