

NOTES

Three Recent Roman Finds from Burgh-by-Sands, Cumbria¹

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THIS note covers three separate finds, all Roman in date, which were found or recorded in the neighbourhood of the Roman forts and *vicus* at Burgh-by-Sands. It is also, perhaps, indicative of the quantity of Roman material still awaiting discovery by the casual observer at Roman sites in Cumbria, a county still relatively sparsely populated and little touched by modern development and urban encroachment on the countryside.

1) A Roman Window Head from Monkhill (Fig. 1)

This previously unrecorded architectural stone has been re-used to form a cornerstone in the rear wall of an outbuilding of the Drovers Rest public house at Monkhill² (Fig. 1), a small village five km. west of Carlisle (NGR NY 3447 5864). The buildings of the property lie only a few metres north of the Vallum of Hadrian's Wall. The Vallum ran in a straight line from Kirkandrews-on-Eden through Monkhill and Wormanby to Burgh-by-Sands, lying south of the modern Burgh road as far as Monkhill and then



FIG. 1. Roman window head at 'The Drovers Rest', Monkhill, Cumbria. (the scale measures 500 mm).
(Photograph: P. Cracknell)

north of it. However, the line of the Wall deviates from the Vallum, turning north west at Kirkandrews-on-Eden and tracing an arc that initially follows the bend of the River Eden, before passing through the village of Beaumont and turning west to rejoin the Vallum east of the fort at Burgh-by-Sands. Monkhill is only 800m from Kirkandrews, 700m from Beaumont and 1.5km from Burgh. Along this arc of Hadrian's Wall lay Turrets 69B, 70A, 70B and 71A, all built of stone at the inception of the Wall and Milecastles 70 and 71, initially constructed of turf and timber, but replaced in stone along with the western turf section of the Wall by the early third century at the latest,³ and also the stone buildings of the fort at Burgh. All of these sites are potential sources for the window head.

The red St. Bees sandstone block measures 1.17m (length) by 590mm (height), with at least a further 50mm buried below ground, by 230mm (thickness). The width of the window opening is 570 mm. The surface of the block is in good condition, with only slight weathering or damage, apart from a vertical lamination of the sandstone on the exposed edge, and much of the original diagonal tooling survives (Fig. 1).

A number of window heads have been recovered on the Wall and at South Shields. At Birdoswald three different types were present: monolithic (carved from a single block of stone, as with this example), bilithic (carved from two stones, joining at the centre), or made up of a series of voussoirs. All had semi-circular openings of broadly similar width, around 660mm.⁴ At South Shields two monolithic examples, one with painted lines of pure lime and the second with incised lines imitating the joints between voussoirs, had openings measuring 595mm and 600mm respectively.⁵

The closest parallel for the Monkhill window head can be found at Chesters fort in the bath-house outside the east gate. In the changing room, ranged along the western wall, there is a row of seven niches (Fig. 2) which have been interpreted as either 'changing room lockers' or to house statues representing the guardian deities of the seven days of the week.⁶ The monolithic head of each niche measures, on average, 1.12m (length) by 61mm (height), by 250mm (thickness) with a semi-circular opening 580mm in width. They appear to have been re-used in the changing room of the existing bath-house, and were perhaps window heads from an earlier bath-house on the site. These



FIG. 2. Niche in the bath-house at Chesters fort (the scale measures 500mm). (Photograph: P. Cracknell)

niche heads closely resemble, in appearance and dimensions, the Monkhill window head, and raise the possibility that its original source was the stone bath-house sited east of the stone fort, Burgh II,⁷ only 1.6km west of the stone's present site.

2) A Sculptured 'Niche' or Household Shrine (*lararium*) from Burgh-by-Sands

This small niche of red St. Bees sandstone (Fig. 2) was found in August 1999, partly buried, in the garden of Number Two, White Row, Burgh-by-Sands⁸ (NGR NY 3259 5915). It has been broken across the two side pillars, but what remains is in good condition, showing little sign of weathering and with only slight damage to the abacus (Fig. 1). The find-spot lies 200m west of the stone Wall fort, termed Burgh II, and right on the line of the Wall.⁹

The top surface and the rear face have been dressed flat and are undecorated. The front face and sides are well dressed and are decorated, which suggests that the niche or shrine (*lararium*) was free-standing, designed to be placed against a wall. Each side is decorated with a circular recess with a diameter of 65mm, pecked back to a depth of 3mm, leaving three raised extant petals from the original, probably four-petalled, rosette. On the front face the spandrels above the plain semi-circular arch are similarly pecked back to a depth of 3mm, and retain traces of a dark green pigment; but whether this is original or not, only chemical analysis may show.

Dimensions:	Width (of abacus)	240mm	Height (surviving, maximum)	176mm
	Width (of pillar)	182mm	Depth (of abacus)	120mm
	Width (of niche)	106mm	Depth (of pillar)	92mm

Fig. 3a shows only one possible reconstruction; as a small household shrine containing an appropriately-sized bronze figure of Mercury, solely as an example, and based purely on the assumption that the rosettes were positioned at the mid-point of each side. It is equally possible that the base of the 'shrine' was made up of a dedicatory panel. I have been unable to find a convincing parallel for this piece of sculpture.

If this is indeed a *lararium*, then there are few examples from Roman Britain with which to compare it. At Verulamium there are two cupboard-like structures,¹⁰ built of tile and flint, projecting from the rear wall of a building in Insula XIV; Professor Frere concluded that these structures had a religious purpose, comparing them generally to the *lararia* of Pompeii, and particularly to a similar structure at Silchester, claimed by Fox and Hope in 1895 to have been the lower part of a *lararium*.¹¹ Both structures at Verulamium were roughly one metre in width and 750mm in depth. At Catterick excavations by J. S. Wachter¹² revealed a similar niche, 1.2m wide and with a moulded plinth placed centrally against the rear wall, possibly the base for a cult statue of some description, perhaps mounted on a pillar. These examples typify the problems encountered in Britain; whereas in Pompeii the walls of buildings survive to their full height and most *lararia* were niches set into the walls at a convenient height, the walls of Romano-British houses are seldom preserved to such a height. In addition, many



FIG. 3. Wall niche in the bath-house at Ravenglass (the scale measures 500 mm). (Photograph: P. Cracknell)

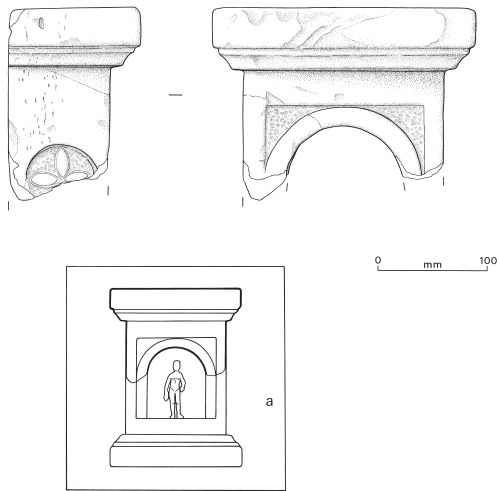


FIG. 4. Front elevation and side elevation of 'niche' or household shrine, Burgh-by-Sands (scale 1:4): a possible reconstruction (scale 1:8). (Illustration: P. Cracknell)

domestic shrines in Britain would have been the work of the cabinet-maker, rather than the mason, leaving no trace in the archaeological record. The closest extant example, however, and a local one, may be the wall niche in the bath-house at Ravenglass, Cumbria. The niche (Fig. 3), placed 1.50m above the floor level, measures 980 mm in height by 820mm in width, and possibly housed a statue of Fortuna, a common dedication in baths. The suggested reconstruction of the Burgh niche shown here (see Fig. 4) would have measured c.340mm in height.

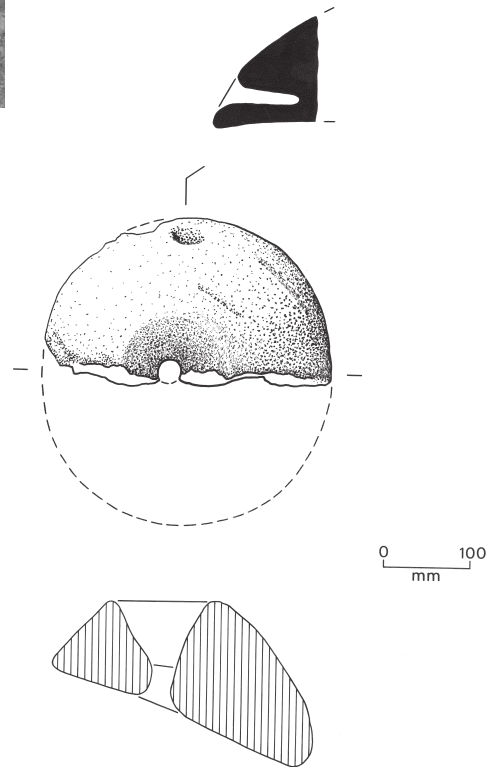


FIG. 5. Roman quernstone, Burgh-by-Sands (scale 1:8). (Illustration: A. Parsons)

3) A Roman Quernstone from Burgh-by-Sands (Fig. 5)

In November 1993, the upper stone of a beehive quern was retrieved by the author from the hedge-line (NGR NY 3244 5820) of the field containing the site of the Roman fort designated Burgh I.¹³ This fort occupied a hilltop on the line of the Burgh-Moorhouse road, approximately one km. south of the village centre. The fort overlies the site of a Roman watchtower that formed part of the pre-Hadrianic defensive system along the Solway Firth and Cumbrian coast. Excavation in 1978 suggested that the watchtower and the two subsequent phases of the fort were only occupied for a brief period within the date range AD 90-130s.

Approximately 50 per cent of the quernstone survives (Fig. 5), giving a diameter of between 340mm and 360mm. The hopper has a diameter of 112mm, narrowing to 24mm for the spindle hole. There is a cone-shaped handle hole with a maximum diameter of 20mm, and a depth of 88mm. The stone is a hard, close-grained, grey sandstone quartzite flecked with mica. The quernstone formed part (at June 2003) of the collection of archaeological material housed at Shaddon Mill, Carlisle.

Notes and References

1. Thanks are due to Cathy Brooks and Ian Caruana for their help and advice in compiling this note, and to Adam Parsons for the illustration of the quernstone.
2. Mr. Patterson, the licensee of the Drovers Rest in 1993, kindly allowed me to record and photograph the stone.
3. See C. M. Daniels (ed.), *J. Collingwood Bruce's Handbook to the Roman Wall* (13th edn., Newcastle-upon-Tyne, 1978), 19, and D. C. A. Shotter, *The Roman Frontier in Britain* (Preston, 1996), 66-7.
4. See T. Wilmott, *Birdoswald. Excavations of a Roman Fort on Hadrian's Wall and its Successor Settlements: 1987-92* (London, 1997), 63-5, and figures 38 and 39, 5-7.
5. See P. Bidwell, R. Miket and B. Ford, 'The reconstruction of a gate at the Roman fort of South Shields', in P. Bidwell, R. Miket and B. Ford (eds.), *Portae cum Turribus. Studies of Roman Fort Gates* (Oxford, 1988) (BAR Brit. Ser. 206), 171-4 and figure 7.8, 1-2.
6. Eric Birley, *Chester's Roman Fort, Northumberland*, Ministry of Public Building and Works Ancient Monuments and Historic Buildings handbook (London, 1960), 24.
7. C. Daniels (ed.), *Handbook of the Eleventh Pilgrimage of Hadrian's Wall* (Newcastle-upon-Tyne, 1989), 24.
8. The finder, Mr. Frank Giocco, has since moved to Brampton, Cumbria. The niche remains in his possession at December 2000.
9. P. S. Austen, 'Recent excavations on Hadrian's Wall; Burgh-by-Sands, 1994', *CW2*, 94 (1994), 35-54.
10. See S. S. Frere in *Antiquaries Journal* XL (1960), 9, and *Verulamium Excavations, Vol 1*, Society of Antiquaries of London Research Report 28 (London, 1972), 57-60 and plates XVII-XIX.
11. *Archaeologia* LV.1 (1896), 237-40 and plate XV.
12. See George C. Boon, 'Some Romano-British domestic shrines and their inhabitants', in B. Hartley and J. Wachter (eds.) *Rome and her Northern Provinces* (Gloucester, 1983), 36-8 and plate IV. This article is far more wide-ranging and detailed in its examination of both British and continental household shrines than the present short note.
13. C. Daniels (ed.), *Handbook of the Eleventh Pilgrimage of Hadrian's Wall* (Newcastle-upon-Tyne, 1989), 23-4.

Excavation of Hadrian's Wall Vallum, near Millbeck Farm, Kirkandrews on Eden, Cumbria

By ROSS WHITE, IAN HILL AND TIM NEIGHBOUR

THIS report presents the results of an archaeological excavation undertaken by CFA Archaeology Ltd (CFA) in August 2007 to the north-west of Millbeck Farm, Kirkandrews on Eden in Cumbria (NGR: NY 3592 5798; Fig. 1). The route of an underground electrical cable had to cross the line of the Hadrian's Wall Vallum (Breeze 2006, 349-349), which is protected as a Scheduled Ancient Monument (SAM 5782; Fig. 2); the line of the Vallum ditch can be traced as a slight surface hollow within the scheduled area.

Background

Initial construction of the Wall and its associated fortifications are believed to have commenced *c.*A.D. 120 (Breeze and Dobson 2000, 22). Modification works are believed to have continued until the end of Hadrian's reign in A.D. 138 (Gillam 1958, 60), whilst the wall remained in use into the 4th century (Breeze and Dobson 2000, 122). The Vallum was constructed to the south of the Wall along the majority of its length, being absent east of Newcastle and at Burgh Marsh where there is also no evidence of the Wall having been constructed. It has been suggested that the purpose of the Vallum was to create a controlled and guarded military zone between Vallum and Wall (Breeze 2006, 84-88; Salway 1984, 180-81), or as a response to the activities of mounted raiders who resented the building of the Wall (Breeze 2006, 87). The Vallum consists of a ditch with a mound on either side, separated from the ditch by a 9m berm. The ditch is typically 6m wide at the top, 3m deep, and between 1.2m and 2.4m wide at its base. The mounds, where they survive, are typically 6m wide at their base. Where necessary, the sides of the ditch and the mounds were revetted by turf or stone cheeks (Breeze 2006, 85). At some sectors of the Wall an additional mound, the marginal mound, has been recorded. It has been suggested that the marginal mound was formed as a result of the cleaning out the ditch on the return from the Antonine Wall (Breeze 2006, 88). Causeways across the full width of the Vallum were positioned near forts and guarded by gates (*ibid*, 85-86); other causeways were sited to the south of some milecastles, but these allowed access only to the south berm, and did not penetrate the southern mound (Salway 1984, 181). Upon completion of the Vallum, the number of crossing points across the line of the Wall had been reduced from 80 to around 16 (Breeze 2006, 86).

Archaeological Results

A trench, 1.5m wide and *c.*90m long, was excavated where the cable was to cross the Vallum (Fig. 2). In accordance with the terms of Scheduled Monument Consent, the trench was excavated to a maximum depth of 0.9m; the depth required for the cable trench. The features exposed were the upper part of the Vallum ditch and the remains of the associated north and south mounds and berms (Figs 2 to 5). The lower ditch fills are preserved undisturbed beneath the cable. A full register of contexts can be

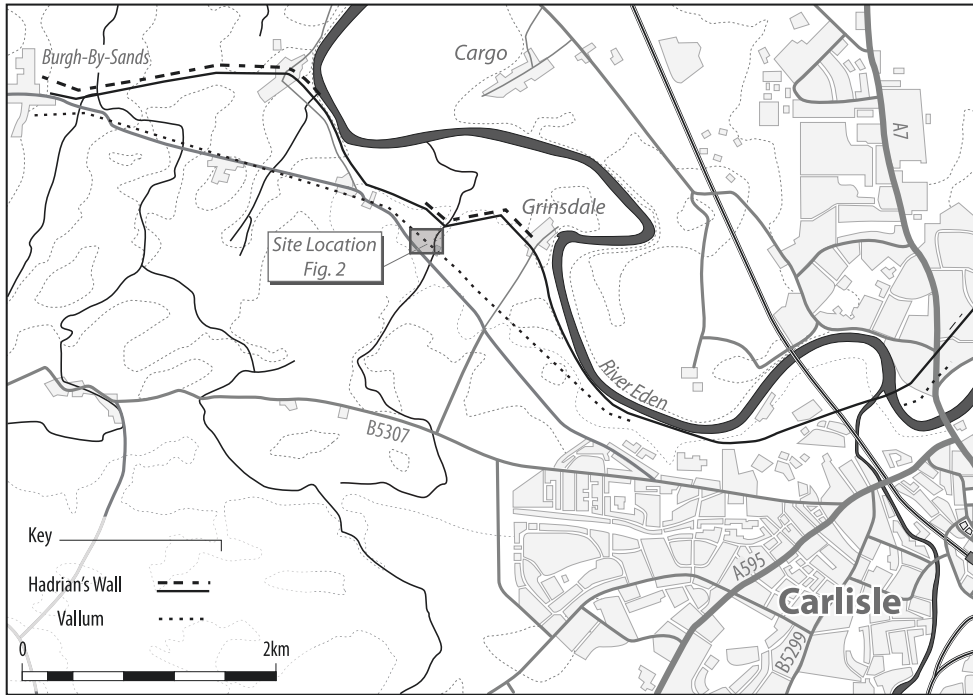
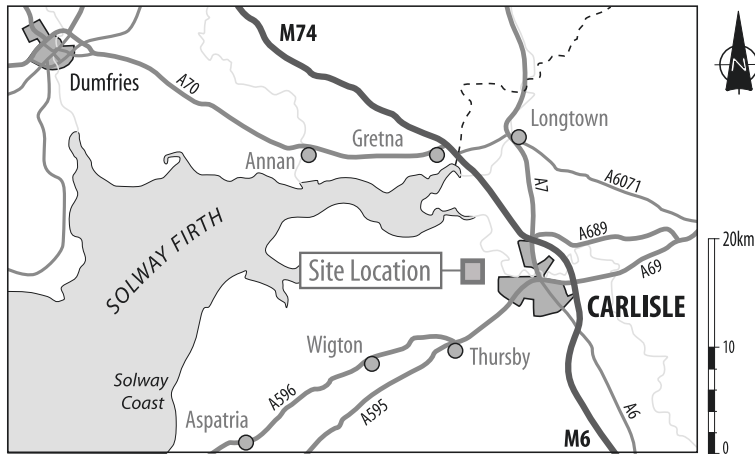


FIG. 1. Location map.

found in the archive report (White 2008); only those that are necessary to describe the results of the excavation are used in this report.

The Vallum Ditch

Two breaks of slope were revealed that coincide with the extrapolated line of the ditch (Figs. 4 and 5). The northernmost break of slope was steep (Fig. 4) and is considered likely to have been the northern ditch cut. The slope on the south side was gradual and

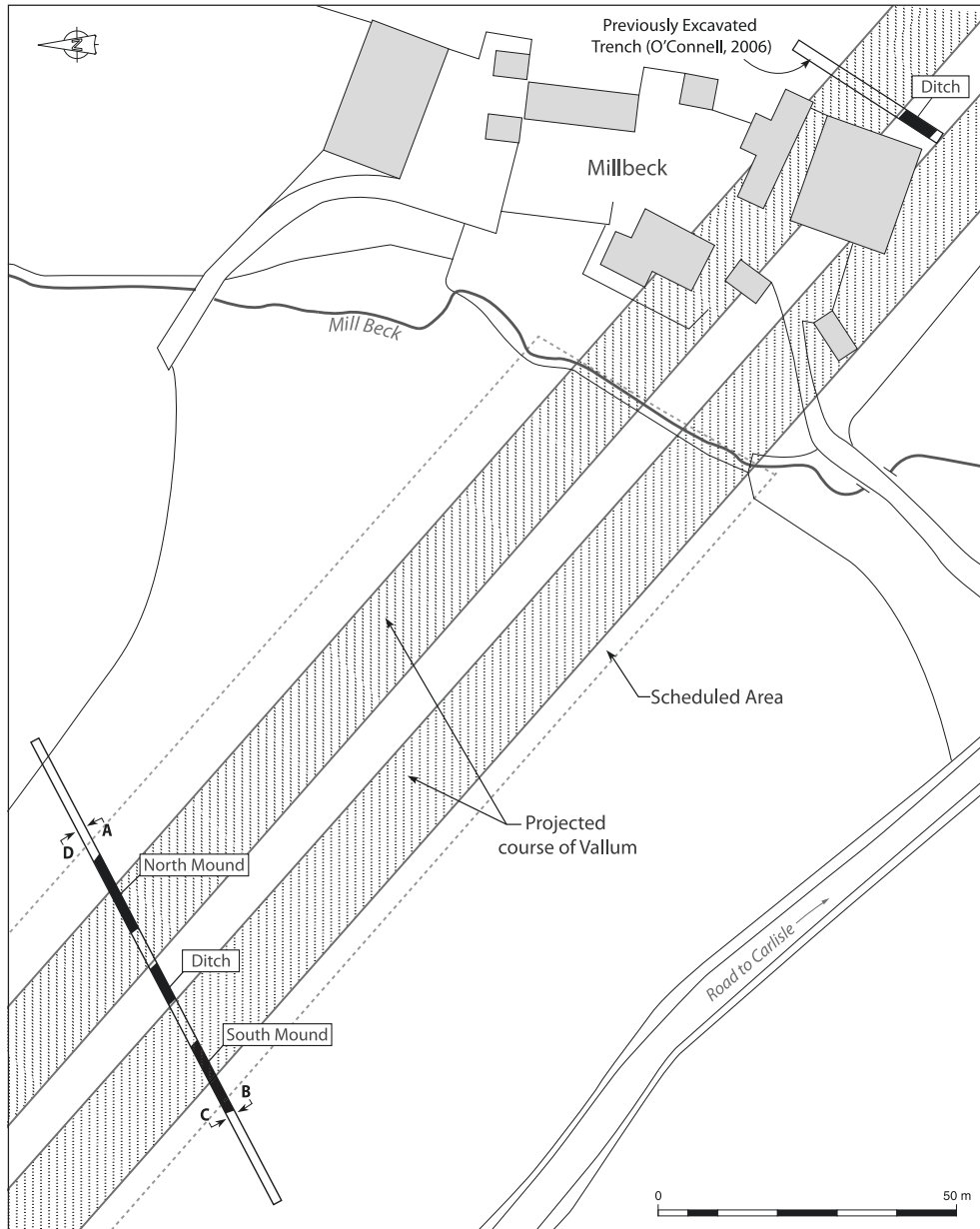


FIG. 2. Trench location.

it appears that the true southern edge of the ditch was not exposed. If the ditch here has a 6m width, similar to that recorded at Millbeck Farm, c. 140m to the south east (O'Connell, 2006 and Fig. 2) and elsewhere along the Vallum (Breeze, 2006, 85), the southern ditch edge would start to slope down steeply at the locations indicated on Figs. 4 and 5. The four layers that filled and sealed the ditch all had a silty sand matrix (164, 162, 203 and 204 on Figs. 4 and 5). Post-medieval potsherds were recovered from

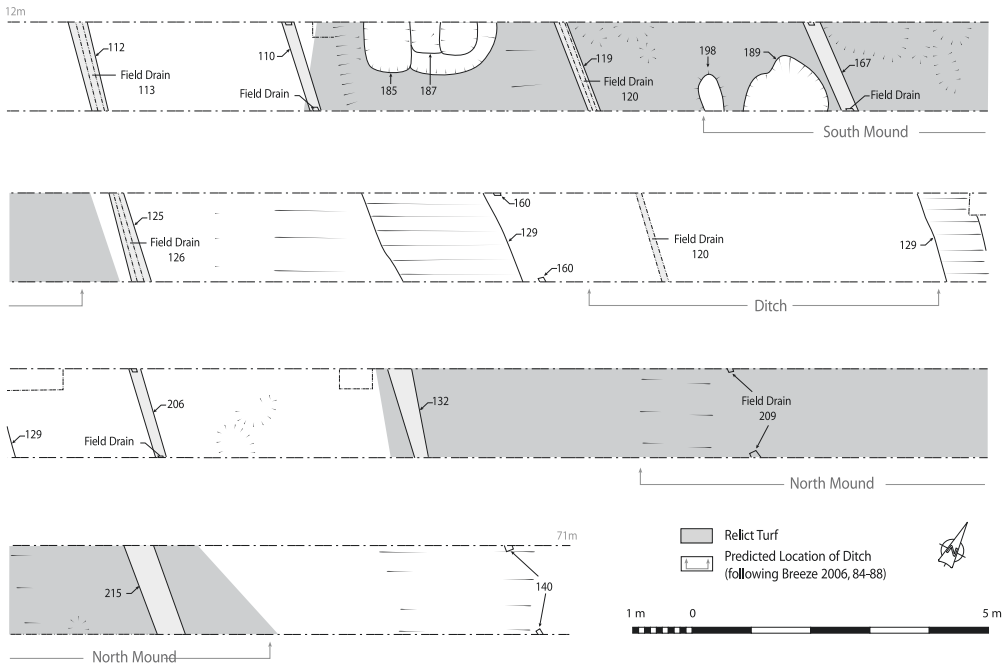


FIG. 3. Post-excavation plan of trench across Vallum.

all four layers, and a flint pebble that shows possible traces of working was recovered from the lower one. The potsherds are most likely to have been incorporated into the soil as a result of the spreading of manure in the post-medieval period.

The Mounds and Berms

The mounds did not survive as surface traces. However, the basal layers of the mounds were recorded as a sequence of probable relict turf layers (shaded contexts on Figs. 4 and 5). The turf layers in the presumed region of the north mound had a combined width of *c.* 11m and those for the south mound were *c.* 10m wide. Since the mounds are recorded elsewhere as being typically 6m wide (Breeze, 2006, 85), this indicates that the mounds had been spread by ploughing.

The surface of the south berm survived as a solidly compacted brownish red silty sand matrix with over 40 per cent sub-rounded pebbles (Figs. 4 and 5, 152). Evidence for a metalled track has been recorded at several locations along the Vallum (*ibid*), and it is probable that this layer was the foundation for just such a track. The layer on the surface of the north berm was a mid-orange to yellow silty sand with less than 5% small pebbles (213). Evidence for a track on the north berm has not been recorded at any point along the line of the Vallum (*ibid*); the deposits to the north of the ditch at Millbeck confirm this as a further location at which a track is absent.

Using the standard Vallum measurements given in Breeze (*ibid*), the likely locations of the berm and mounds are shown on plan (Fig. 3) and in section (Figs. 4 and 5).

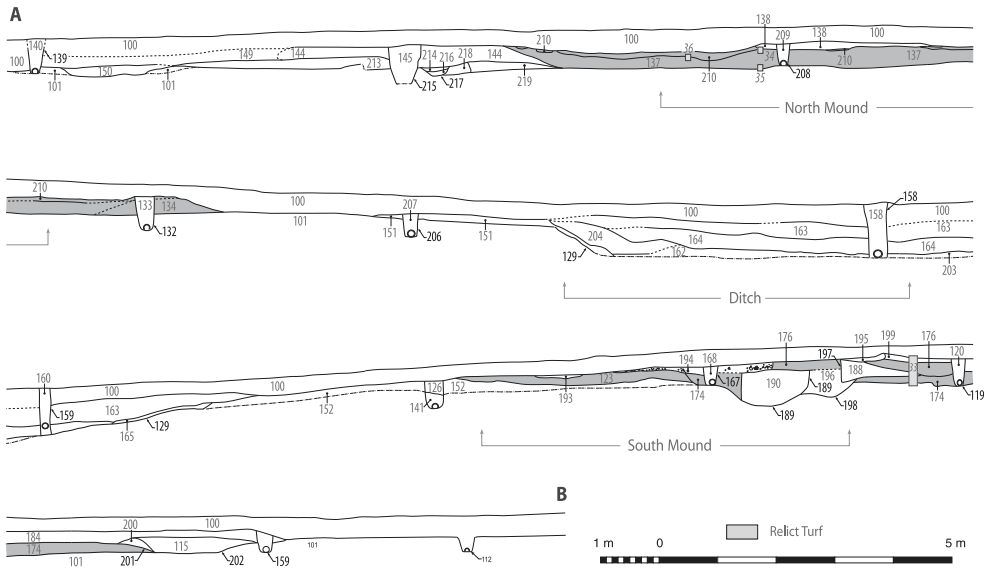


FIG. 4. North-west-facing section.

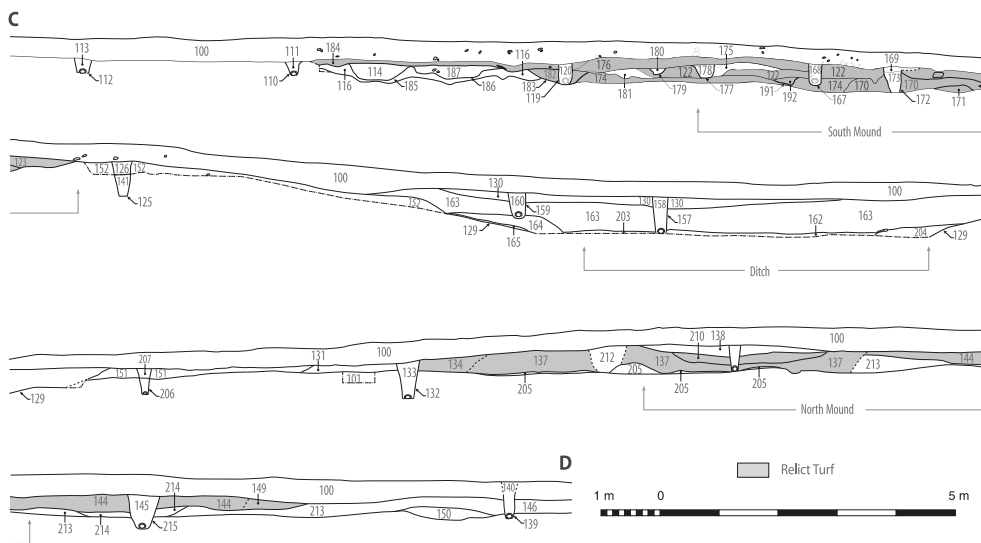


FIG. 5. South-east-facing section.

Two shallow, irregular pits (185 and 187) to the south of the south mound were sealed by relict turf layers that had probably been spread by ploughing. It is impossible on the basis of the stratigraphic information to propose a date for the original excavation of these pits, beyond the trivial fact that they must have been excavated at some point before the south mound was spread by ploughing. Two further irregular pits (189 and 198), which were also sealed beneath relict turf layers of the south mound, seem likely

to have lain beneath the south mound as it was constructed, rather than its plough spread extent (Figs. 3 and 4) and, on that basis it can be suggested that they are of Roman or earlier origins. It is not unlikely that all four pits were excavated during the construction of the Vallum, although there is a possibility that the pits are unrelated to the construction of the Vallum and may be prehistoric in origin.

No trace of the marginal mound was revealed.

Radiocarbon Dates

Two radiocarbon dates were obtained, one from a sample of hazel (*Corylus avellana*), the second from an unknown species of wood (Table 1). The samples were chosen as they came from what were believed to be a relict turf layer forming the north mound (context 210 on Fig. 5) and a relict turf layer derived from the south mound (context 176 on Fig. 5). Whilst the dates from both contexts should provide a *terminus post quem* for the construction of the mounds, it was recognised that the radiocarbon dates would not necessarily reflect the date the mounds were constructed, but could relate to earlier activity; the fills from near-surface pre-Roman archaeological features rich in charcoal could easily have been incorporated into the turf mat during mound construction.

The samples were dated by the Scottish Universities Environmental Research Centre (SUERC). The calibrated dates in Table 1 were obtained using the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

The radiocarbon dates indicate that charcoal derived from Bronze Age activity is incorporated within the foundation layers of the mounds. Pollen analysis (McCullagh, 2008) was carried out on soil samples from five contexts (137, 138, 176, 188 and 210). However, the radiocarbon dates indicate that the sampled material could be of any date between the Bronze Age and the construction of the Vallum and, thus, the results of the pollen analysis cannot be used to reconstruct the local environment in any meaningful way. Nevertheless, the pollen analysis indicates that a period of woodland clearance occurred prior to the construction of the Vallum, based on the absence of pollen from woodland species such as oak and elm and a significant proportion of pollen from grasses. If the radiocarbon dates are assumed to reflect the deposition of the pollen, then the results of the pollen analysis can be taken to indicate that the process of woodland clearance had begun in the vicinity of Millbeck in the Bronze Age. Similar results obtained from Glasson Moss, the nearest long-pollen record to Millbeck, suggests that the process of woodland clearance had already started and was well under way by the Iron Age (Dumayne, 1993).

TABLE 1: Radiocarbon Dates: all dates calibrated using OxCal3.

Lab No	Context	Species	BP	1 σ cal date range	2 σ cal date range	$\delta^{13}\text{C}$ (‰)
GU-16917	210	Unknown	3810 \pm 30	2295–2200BC	2400–2130BC	-25.4
GU-16918	176	<i>Corylus avellana</i>	4450 \pm 30	3320–3020BC	3340–2960BC	-26.6

Conclusion

The excavation across the Vallum to the north-west of Millbeck Farm is the first in this part of Cumbria to explore the full width of the Vallum. It has confirmed that the extrapolated line of the Vallum between Millbeck Farm and Burgh-by-Sands as shown in Breeze (2006, 346–9) is correct and has demonstrated that the Vallum probably possessed the standard dimensions summarised by Breeze (2006, 84–88). Whilst the mounds on either side of the Vallum ditch had been ploughed flat, the limits of the turf foundations, as spread by ploughing, were readily discernible, and the metalled surface of the southern berm was revealed, indicating that the ditch is preserved to its full depth and has not been horizontally truncated. Radiocarbon dating of charcoal from the turf foundations of the mounds demonstrated that deposits of Bronze Age date must have been disturbed during the construction of the Vallum.

Two irregular pits, which were sealed by the Vallum south mound, pre-date the construction of the mound; a further two pits of similar morphology were sealed beneath plough-spread mound material. A similar pit has been recorded during excavations across the Vallum to the east at Knockupworth Farm (Fraser Brown *pers comm*). It seems likely that the irregular pits were *ad hoc* quarries excavated to provide sand during the construction of the Vallum.

Pollen analysis of deposits that formed the mounds indicates that a period of woodland clearance had occurred sometime prior to the construction of the Vallum, perhaps as far back as the Bronze Age. If this was the case, the wood needed for the construction of the Vallum and Wall would have had to have been imported from further afield. However, the radiocarbon dates for the layers within which pollen analysis was conducted at Millbeck cannot be viewed as taphonomically secure and therefore, the proposition that woodland clearance began in the Bronze Age must be treated with caution; future pollen work would be needed to test this hypothesis.

Acknowledgements

The excavation was commissioned by Story Homes. The illustrations were prepared by Leeanne Whitelaw and Kevin Hicks. Sue Anderson and Chris O’Connell (CFA); Jeremy Parsons (Cumbria County Council Archaeologist); and Mike Collins, (English Heritage Hadrian’s Wall Archaeologist) provided comments on earlier drafts of this report. Fraser Brown (Oxford Archaeology (North)) provided information on excavations along the Carlisle Northern Development Route. Whilst thanks are due to the above, the final responsibility for the form and content of this report lies with the authors and CFA Archaeology Ltd.

Technical reports detailing the excavation (White 2007) and pollen analysis of the turf layers (McCulloch 2008) have been lodged with the Cumbria County Council Sites and Monuments Record.

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A Hoard of *Denarii* from Crosby, Near Maryport

DAVID SHOTTER

IN 2012, a metal-detectorist, working near Crosby, north of the site of the Roman fort and extramural settlement at Maryport, unearthed a hoard of 91 *denarii*, which ranged in date from the late Roman Republic (32–1 BC) to the reign of the Emperor, Marcus Aurelius (AD 161–80). The coins, which were in a generally good condition, will be discussed more fully when it has been possible for them to be cleaned, thus facilitating the completion of the process of detailed identification. This note, therefore, represents a preliminary account and assessment of the find.

In the following list, those coins marked with an asterisk require cleaning prior to final identification:

Republic	3	RRC 544, 21; 544 (2 coins)
Nero	2	RIC 1 ² (Nero), 53, 60
Galba	2	RIC 1 ² (Galba), 167 (2 coins)
Vespasian	20	RIC 2 ² (Vespasian), 2, 21, 23, 29, 360 (3 coins), 362, 513, 545, 683, 772 (2 coins), 777, 849, 943 (2 coins?), 1431; plus two illegible coins*
Titus (as Caesar under Vespasian)	4	RIC 2 ² (Vespasian), 863, 948, 986, 1073
Domitian (as Caesar under Vespasian)	2	RIC 2 ² (Vespasian), 1081 (2 coins)
Titus	1	RIC 2 ² (Titus), 119
Domitian	4	RIC 2 ² (Domitian), 670, 733, 742, 789
Nerva	1	RIC 2 ¹ (Nerva), 4
Trajan	15	RIC 2 ¹ (Trajan), 38, 61, 107, 114, 119, 122, 125 (2 coins), 131, 154, 292, 332, 337, 357; plus one illegible coin of AD 100*
Hadrian	15	RIC 2 ¹ (Hadrian), 11, 42, 45 (2 coins), 52, 80, 100, 110 (2 coins), 141, 173, 237, 241A, 296, 336
Sabina	1	RIC 2 ¹ (Hadrian), 398
Antoninus Pius 1		RIC 3 (Antoninus), 137, 167, 176, 177, 219, 220, 239, 249, 285, 293a

Marcus Aurelius (as Caesar under Antoninus)	5	<i>RIC</i> 3 (Antoninus), 423a, 429a (3 coins), 453a
Faustina I	2	<i>RIC</i> 3 (Antoninus), 346a, 394a
Faustina II (under Antoninus)	1	<i>RIC</i> 3 (Antoninus), 495
Marcus Aurelius	1	<i>RIC</i> 3 (Marcus), 441
Faustina II (under Marcus Aurelius)	2	<i>RIC</i> 3 (Marcus), 711, 728

This gives the following distribution by reign:

	No.	%
Republic (- 27BC)	3	3.30
Nero (AD 54-68)	2	2.20
Galba (AD 68-9)	2	2.20
Vespasian (AD 69-79)	26	28.56
Titus (AD 79-81)	1	1.10
Domitian (AD 81-96)	4	4.39
Nerva (AD 96-8)	1	1.10
Trajan (AD 98-117)	15	16.48
Hadrian (AD 117-38)	16	17.58
Antoninus Pius (AD 138-61)	18	19.78
Marcus Aurelius (AD 161-80)	3	3.30

Hoards of *denarii* are relatively common in north-west England, accounting for nearly 25 per cent of all Roman hoards reported from the region (Shotter 2011, 132); their frequency, particularly in Britain (Casey 1994, 8; Reece 2002, 94), perhaps mirrors a decline in the volume of smaller denominations in circulation. Many of these *denarius*-hoards terminate in the Antonine period, and it has been suggested that this was a response to a major upheaval amongst the Brigantes in the mid-second century (Robertson 1988, 29). It is, of course, true that the second century witnessed changes in Roman frontier policy, which involved the movement of troops and presumably also of those who depended on them. Further, it was a period of military upheaval in various parts of the Empire. However, the evidence for long-term and widespread military disturbance in northern Britain through this period cannot be regarded as secure.

Indeed, a study of second-century hoard terminations in the North West shows that these terminations were by no means limited to the reign of Marcus Aurelius; rather, they are spread through the reigns of Hadrian, Antoninus Pius, Marcus Aurelius, and Commodus, with a slight peak in the reign of Antoninus (Shotter 2011, 133f). Further, even within the reign of Marcus himself hoard terminations occur at various points in the reign. Surprisingly, in fact, terminations of the Antonine period appear to have been at their lowest in the reign of Commodus, a period which, as we learn from literary sources (Dio Cassius *History of Rome* 73. 8), was certainly marked by disturbances in Britain. It would appear, therefore, that factors other than military security need to be

taken into consideration in any discussion of second-century hoarding. Obviously, the troop movements occasioned by changes in frontier policy will have contributed to a sense of social and domestic uncertainty amongst both soldiers and civilians. However, the long chronological spread of hoard terminations suggests that the factors which may help to explain it were themselves long term in nature. This is emphasised by the fact that terminations continued in significant numbers into the Severan period and, of course, beyond.

There is no doubt that, despite the tendency of our Classical sources to see the second century as a 'golden age' in Rome and the Empire, there were already disturbing signs of problems that were to escalate. Most obvious of these was the instability of some of the existing frontiers, which in its turn inevitably emphasised the importance of the Roman army and its commanders. This developing prominence of the army will have seemed like the reappearance of an old problem, and was to grow to damaging proportions in the third century, due in no small part to the reforms of Septimius Severus (Birley 1971, 283ff) and the serious effect that they had on military, political and economic stability throughout the Empire. Severus' deathbed advice to his sons, as reported by Dio Cassius (*History of Rome* 77. 15, 2), was 'to enrich the soldiers and scorn all other men'. The price of this policy would prove to be extremely high.

Signs of economic fragility were already developing early on in the second century, becoming visible in the coinage itself, with the gradual disappearance from use of the lower denominations and principal reliance coming to rest on the *denarius* and the *sestertius* – coins of higher face value. The effect on the economy of military expenditure involved in defending the frontiers in the second century is seen most obviously in the progressive debasement of the *denarius*, allowing more coins to be struck from the same amount (or less) precious metal (Casey 1994, 8). By the close of the second century AD, the *denarius* contained no more than 50 per cent of silver (Boon 1974) and, by the middle years of the third century, a coinage that was nominally silver contained little or no silver (Shotter 2009, 372). The inflationary trend continued into the third century, with the disappearance from use of the *denarius* and the introduction of new denominations, such as the radiate (presumably double) *sestertius* and the *antoninianus* (or double *denarius*).

Such developments inevitably contributed to an age when the old certainties seemed suddenly fragile (Reardon 1973); it is not surprising, therefore, that people came to hoard coins which they perceived to be of greater integrity and reliability – that is, particularly earlier *denarii* – thus providing early evidence of the validity of the 'law' of the Tudor financier, Sir Thomas Gresham, that 'bad money drives good money out of circulation'. Thus, the hoarding that we see in Roman Britain during the second century may have had more to do with people's perception of a deteriorating 'feel-good factor' than with a fear of local tribal uprisings.

The present example is of average size for a hoard of *denarii*; these normally vary in size between a handful of coins and 200 to 300 (Shotter 2011, 131). In view of the fact that the latest datable coin in this hoard is a commemorative piece issued by Marcus Aurelius for his predecessor and father-in-law, Antoninus Pius, its date of deposition

should be placed very early in the reign of Marcus Aurelius, probably no later than AD 161 or 162. Although the coins of Faustina II could have been issued at any time prior to her death in AD 176, the absence of any other coins of Marcus himself (or of his co-Emperor, Lucius Verus) would favour termination at a very early point in Marcus' reign.

As often with hoards of the mid-second century, the present example contains some coins of significantly earlier date – in this case, three *denarii* of Marcus Antonius and two each of the Emperors, Nero and Galba. Trajan had, in *c.* AD 110, recalled from circulation worn silver coins – that is, coins that predated Nero's debasement of the silver coinage in AD 64. This was to allow these older (and better) coins with a higher silver content to be melted down and reissued to preserve the metallic integrity of the contemporary coinage (Dio Cassius *History of Rome* 68. 15, 3; Mac Dowell 1979, 135ff; Reece 1988, 91f). It is, therefore, rare in contexts later than Hadrianic to find silver coins issued earlier than AD 64; the only exception to this were the legionary *denarii* of Marcus Antonius (issued in 32-1 BC), which escaped Trajan's recall owing to the belief that their metallic integrity had been seriously compromised (Pliny *Natural History* 33. 132; Reece 1988, 92). Indeed, these particular coins continued to circulate well into the third century, often, by that time, worn almost smooth.

More common amongst older coinage circulating in the mid-second century were *denarii* of the Flavian period. However, a notable feature of this mid-Antonine hoard is the unusually substantial presence of Flavian coins – in excess of 34 per cent of the whole. Although Flavian silver remained in circulation into the late second and early third centuries, it is not often seen in quite such large proportions in a hoard of the mid-second century. One would have expected that, in such a hoard, coins of Trajan, Hadrian and Antoninus Pius would have featured rather more strongly – and certainly more strongly than those of Flavian date; coins of Vespasian, for example, tend to peak in hoards of Trajanic date (Reece 1988, 87ff). Unfortunately, it is difficult in the present case to make numerical comparisons with other *denarius*-hoards from north-west Cumbria (Shotter 1990, 214), as details are very incomplete for most of those that have been recorded. Generally, Flavian coins appear in substantial numbers in hoards up to the reign of Hadrian, but decline thereafter. The exceptionally strong showing of Flavian coins in the present case might possibly suggest that this hoard 'started life' as an earlier hoard to which later coins were subsequently added; alternatively, it could point to a later saver who had decided to retain earlier coins which he perhaps regarded as being of greater intrinsic value than contemporary issues – or finally, perhaps, it might hint that there are further coins awaiting discovery.

Lancaster University

Note: The coins, which have been reported through the Portable Antiquities Scheme will be processed in accordance with the Treasure legislation.

A Late Roman Coin Hoard From Newby, Cumbria

DAVID SHOTTER

THIS coin hoard was recovered in 2010 by a metal-detectorist near Newby in the Eden Valley; it was reported through the Portable Antiquities Scheme, and adjudged by H.M. Coroner (12 October, 2010) to constitute Treasure. The hoard has now been acquired by Penrith and Eden Museum, thanks to a grant from the Friends of the Museum. Full details of the findspot are not given here, but are available on the database of the Portable Antiquities Scheme.

The find consists of 62 loose coins, together with a large ‘ball’ of coins fused together by corrosion products. It is understood that no attempt will be made to separate the coins in the ‘ball’, which will be placed on display in the Museum as found. The ‘ball’ may reflect the shape of the container in which the coins were concealed, and the reported presence at the findspot of a dark deposit suggests that the original container may have been a leather purse or bag. There were no signs of pottery fragments at the site. Some of the loose coins are single pieces, but others consist of small fused groups of between two and 13 coins, which have evidently broken away from the main ‘ball’.

The weight of the fused ‘ball’ is approximately 1,150gms, which suggests that it may consist of as many as 500 to 600 coins; thus, taking the loose coins into account, it would seem that this hoard may have contained as many as 650 coins. All of these appear likely to be Constantinian *nummi* within a date-range of *c.*AD 320-50; identifiable issuers include Constantine I and his sons, Crispus, Constantine II and Constantius II. The suggested date-range is based upon the dates of the loose coins and those on the surface of the ‘ball’ that can be visually dated. Hoards with this narrow date-range are not common in north-west England, though a smaller hoard, but with a similar date-range, was reported in 2007 from Barbridge, near Nantwich in Cheshire (Shotter 2011, 129).

There is no obvious means of determining the circumstances in which such a hoard might have been deposited: it may simply have been a saver’s hoard which was never collected, or a group which was concealed at a time of uncertainty or danger. Given the in-fighting between Constantine I’s descendants that followed his death in AD 337, it would not be difficult to speculate upon such circumstances. It is worth bearing in mind that it was presumably an emergency of some kind that brought Constans to Britain in the winter of AD 342-3 (Salway 1981, 349). The fact that Britain lay in territory overseen by Constantine II, who was killed by his brother Constans, strongly suggests a period of civil strife in the 340s – with all the bitterness that this would have entailed (cf. Shotter 2011, 137ff). The uncertainty would have continued into the 350s with the rebellion of Magnentius and Decentius; this may be reflected in the Hackthorpe hoard (Brickstock 2000; Shotter 2000, 151f), which consists entirely of coins of AD 350-3. Alternatively, the Newby coin deposit might conceivably represent a ritualistic offering, with no political overtones at all (Moorhead, Bland and Pett 2010).

It is worth noting that this is by no means the only hoard of Roman coins to have been recovered from this part of the Eden Valley; in all, 15 groups of coins have been reported from the area between Kirkby Stephen and Penrith (Table 1).

TABLE 1: Roman coin hoards from the Upper Eden valley.

Site	Find Date	Size and Type	Coin Dates	Reference
Brough-under-Stainmore (Castle)	1783	<i>Denarii</i>	1st/2nd Cents	1990, 183
Kirkby Thore (Newbiggin Hall)	pre-1865	167 <i>Denarii</i>	64-180s	1990, 185
Old Penrith	1990s	9 <i>Denarii</i>	141-222	2011, 109
Kirkby Thore (Troutbeck Bridge)	1838	83 AR/Æ	32 BC-AD 300	1990, 204,
Old Penrith	1811	AR/Æ	145-c.350	1990, 206
Brougham (Ninekirks)	c. 1914	23 Radiates	260-82	1990, 181f
Brougham (Castle Farm)	1910	500 Radiates	253-74	1990, 182
Great Strickland	1989	89 Radiates	253-75	1990, 180f
Scratchmore Scar	?	51 Radiates	260-74	1990, 198
Kirkby Stephen	1989	Radiates	260-74	1990, 192
Brough-under-Stainmore	1829	91 <i>Nummi</i> (+ 1 radiate)	268-335	2000, 153
Fremington	c. 2000	Æ	3 rd /4 th cents	2011, 114
Cliburn (Shaw Hall)	1980s	99 Æ	269-313	1990, 188f and 1995, 60
Newby	2010	c. 650 <i>Nummi</i>	c.320-50	2011, 115f
Hackthorpe	1992	164 <i>Nummi</i>	350-3	2000, 151f

(References in this Table are to Shotter D.C.A., *Roman Coins from North-West England*, Lancaster 1990 and to the three subsequent Supplements of 1995, 2000 and 2011).

As can be seen, these groups of coins have been reported over the years with varying degrees of detail; as a result, it is not always possible to achieve certainty regarding the status or contents of some of them. Nevertheless, they do appear to reflect the hoard periods and types commonly observed in the North West:

<i>Denarii</i> of the first and second centuries AD	2
<i>Denarii</i> of the late second century and the Severan period	1
Radiates and copies	5
Tetrarchic reformed issues	1
<i>Nummi</i> of the fourth century	3
Uncertain status	3

It is, of course, possible that some of those of uncertain status are poorly-recorded hoards or, at least, are groups containing some hoard-material.

These collections of coins between them point to considerable activity and prosperity in the area during the Roman period. Although we cannot be certain of the status of the owners of these coins, it should be borne in mind that this area has also provided

us with the only pieces of documentary evidence of the existence of the *civitas Carvetiorum*, the ‘unit of local administration’ established in the North West by the Roman authorities, evidently during the Severan period (Higham and Jones 1985; Edwards and Shotter 2005; Edwards 2006) – a tombstone (*RIB* I. 933) and two milestones (*RIB* III. 3525 and 3526). Of these, it is a plausible interpretation that the tombstone was raised in memory of a man, Flavius Martius, described, it appears, as a ‘senator’ of the Carvetii, a title which could have had either a military or a civilian connotation in the later Roman period.

Whilst it would seem likely that these hoards were of military origin, and that this land, of good agricultural quality, may have been reserved for military veterans, it remains possible that such wealth might signal the presence of landowning civilians of the Carvetii. Agriculture would, after all, have provided the latter with a ‘guarantee’ of the continuing wealth-creation which would have been vital if they were to play the part in local administration that the Roman authorities will have expected of them. The fact that the area has not produced large numbers of individual coin-finds might simply indicate that, on the whole, coin-loss will have occurred where coins were used – that is, in the market-places rather than in domestic locations.

The Newby coins

In view of the circumstances of the find and the condition of the coins, the following represents a summary of what can at present be asserted. The coins will be listed according to their reverse types, and full references will be given where possible:

a) The loose coins (62 coins)

DOMINORVM NOSTRORVM CAESS VOT V (AD 320-1) (<i>RIC</i> 7 (Ticinum), 134)	1
BEATA TRANQVILLITAS VOTIS XX (AD 321-3) (<i>RIC</i> 7 (Lyon), 128)	1
CAESARVM NOSTRORVM VOT X (AD 323-4) (<i>RIC</i> 7 (Lyon), 211)	1
PROVIDENTIAE AVGG (AD 324-30)	1
GLORIA EXERCITVS (2 standards) (AD 330-5) (inc. <i>LRBC</i> I. 50; 60-64; 181)	13
She-wolf and twins (AD 330-5) (inc. <i>LRBC</i> I. 51; 58)	5
Victory on prow (AD 330-5) (inc. <i>LRBC</i> I. 52)	4
GLORIA EXERCITVS (1 standard) (AD 335-41)	2
Illegible reverses	34

b) The ‘fused ball’ (41; Fig. 1)

Disappointingly few of the coins that made up the ‘ball’ could be identified from their reverses; the ‘ball’ is held together tightly by corrosion products, and the majority of the coins appear to have been fused with their reverse faces lying inwards. On the other hand, it is clear that many of the coins within the ‘ball’ are in a good state of preservation, and display relatively little wear. Thus, if a decision is made in the future to separate these coins, their legends and mint marks are likely to prove readily



FIG. 1. The Newby Hoard: 'Fused Ball' (Photograph by courtesy of Penrith and Eden Museum)

identifiable. One reverse type was noted on the exterior of the 'ball' which had not featured amongst the separated coins – a *SARMATIA DEVICTA* issue of AD 323-4.

BEATA TRANQVILLITAS VOTIS XX (AD 321-3)	2
SARMATIA DEVICTA (AD 323-4)	1
CAESARVM NOSTRORVM VOTV (AD 323-4)	5
PROVIDENTIAE AVGG (AD 324-30)	13
GLORIA EXERCITVS (2 standards) (AD 330-5)	13
She-wolf and twins (AD 330-5)	5
Victory on prow (AD 330-5)	2

Thus, none of the coins that have so far been positively identified were issued later than *c.*AD 340. In both groups, the majority (although not all) of the *visible* mint marks, all of which are from the loose coins, appear to be those of Trier and Lyon.

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Notes and References

1. Crosby

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A broken quern topstone from Lowther Park.

HARRY HAWKINS

IN 2011 workers rebuilding a wall on the south side of Greatholme Plantation in Lowther Park, Lowther, discovered half of a quern topstone that had been used in the old wall. The stone was removed to the Estate Office and used as a door stop and where, on a visit October 2011, it was pointed out to me. I took it away for examination to research its possible origins before returning it (Fig. 1).



FIG. 1. Hole for a handle.

The stone is approximately half of the topstone of a quern; it is broken along the line of the central hole through which grain was passed to the grinding surface (Fig. 2). The stone also has other pieces broken off with smooth fracture edges. The grinding surface is very smooth and slightly convex. The stone is approximately 170mm high and the roughly circular grinding surface has a radius between 130-150mm. The handle hole is 12-15mm x 40mm and the grain hole of 60mm diameter tapers to 40mm in 50mm and at 130mm depth the hole narrows to 20mm. The stone is of a crystalline rock, probably gritstone.

Quernstones of this 'flattened bee-hive' shape are associated with sites dating from the Iron Age onwards although several authors describe their use in rural areas well into the nineteenth century. A study of stone querns in North Yorkshire and southern Durham has been published by Heslop but there is as yet no corresponding work for Cumbria.



FIG. 2. The grain hole, grain was poured in the top.

There are, however, over 30 references to querns in the three series of *Transaction* of which two are mentioned here as resembling the Lowther quern: a complete topstone found at Papcastle in rubbish from the demolition of the second/third century fort and described by Walker and another complete stone found at Barbon Beck near Casterton, now in the Kendal Museum and described by Marsh. The stone from Lowther is very similar to the stones described in the two articles and may confidently ascribed to the type known as 'beehive' from the shape of the topstone.

It is only possible to speculate as to the age and origins of the stone; the find spot is close to Greatholme Romano-British Settlement and may have come from that site: however, it may also have come from the medieval village of Lowther that lay to the north of the present castle and which was demolished to enlarge the park in the seventeenth century.

Notes and References

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Cattle-droving through Cumbria, 1707-12: New Evidence from the Musgrave Estate

PETER ROEBUCK

AN article in the 2012 volume of these *Transactions* used evidence from the Musgrave estate to explore the growth of the cattle-droving trade through Cumbria after the Union with Scotland in 1707. Subsequently, in one of those serendipitous developments which researchers both suffer and benefit from, a further and remarkable cache of Musgrave documents came to light¹. They date from the same period and, as before, many are in the hand of Jeffrey Beck, newly-appointed steward of the Musgrave estate. All are working documents – either vouchers (memoranda of one or more individual transactions) or broader statements of business in a particular season. Some of the latter were compiled near, at or after the end of a season: being closer to formal accounts, they are more authoritative than documents of earlier date. All complement the original analysis; some throw fresh light on how Beck and his subordinates managed their business (including the problems which arose) with drovers; and they facilitate a re-assessment of the previous conclusions about the scale of droving.

There are additional examples of features highlighted already. Richard Wrightman was not alone in making eight visits during a single season. William White also did so in 1709, arriving on 5 May; 3 June; 1, 18 and 30 July; 17 August; and 7 and 19 September. Similarly, William Jackson brought cattle to a Musgrave stance on seven occasions between 11 April and 19 September 1709². On outward journeys a substantial minority borrowed money from the estate (nine from a list of 25 in 1712, for example), undertaking formally to repay the debts, along with any bills outstanding for hay or grass³. The appearance of a drover's name in the documents did not necessarily signify that he led the drove in question. Some sent cattle with relatives, friends or employees. In 1711 George Calvert signed for Richard Wright, David Graham for William White, John Graham for William Graham, and Dick Ferguson for David Batty. Providing new evidence of cattle numbers in September – unrecorded in 1712 – all four deputies arrived on 7 September 1711, leading substantial droves of 500, 240, 490 and 440 cattle respectively⁴. At least 1,670 beasts spent that night on the Musgrave estate, the largest number recorded on any single occasion in this entire series of documents.

The date on which seasons started varied. In 1707 the first cattle arrived on 6 May, later than became normal, and were fed on grass. Beck had only recently started work. Drovers were unsure that he had sufficient hay in stock and waited until grass was plentiful. In 1708 the first cattle arrived on 12 April, in 1709 on 11 April, in 1711 on 9 April, and in 1712 on 8 April. The winter of 1708-9 was severe. Hay rather than grass was consumed by the first nine droves down to 7 May. The winter of 1711-12 was also long and cold: down to 9 May the first twelve droves ate hay⁵. One or other of these seasons may have been that when Beck corresponded in advance with David Batty, assuring him that 'a very good and great quantity' of hay was available⁶. Because many of these drovers made many, and some frequent, round trips, the sooner they

got started the better, as long as there was fodder for their herds. In managing the business Beck had to sell hay as well as grass, more in some years than others. Much of his success in any one season depended on the quantity of hay stored during the previous summer.

In one respect the newly-discovered documents reveal much more than their predecessors. Although Beck was liberal and progressive in his dealings with drovers – providing cash loans on request and allowing many to settle their accounts on their return journeys – he got into difficulties because many drovers failed to pay their bills. Towards or after the end of the 1709 season one list of debts for hay, grass and ‘lent money’ named 18 drovers who made a total of 40 visits to the estate between 11 April and 19 September, and who together owed £36.18s. 9d. Most of the entries were subsequently marked with a cross, suggesting that the debts were eventually discharged, but five (relating to 12 visits and debts of £14.11s. 3d.) were not marked and apparently remained unpaid⁷. Another such list, of 13 October 1710 (i.e. after that season ended) and entitled: ‘The names of the drovers that are owing for hay, grass and lent money’, reveals a deteriorating situation. 28 drovers then owed a total of £109. 1s. 8d. and only 2 entries (relating to debts of £10. 4s.11d.) were crossed⁸. Two further documents – again completed after the season’s end – indicate that the problem became even more serious in 1711. A list of the ‘persons....that have not paid’ deals with 98 visits and records debts of £124. 7s. 6d⁹. A further list, drawn up earlier, gives the slightly higher total of £130.16s. 0d¹⁰. Both figures are marginally lower than the £136. 8s. 0d. recorded in Table 2 of the original article as the overall income from droving in that year¹¹. Cumulatively, this evidence suggests that the summary figures in Table 2 record the money actually received from drovers rather than that which they owed; by 1711 there was a significant difference between the two.

There is also evidence of Beck’s response. A further list of £36. 7s. 9d. in debts for 1711 is endorsed externally with ‘1711 Arrears of Drove Cattle to be collected by Will Dalton’; and internally with:

26 October 1711 William Dalton. The severall sums particularly mentioned on the other side I desire you will collect for Sir Christopher Musgrave Bart. And your receipt shall be a good discharge to any of the persons within named for any sum p[ai]d you. I am your friend and servant. J. Beck¹².

Whether, and to what extent, Dalton was successful is unknown, although a similar problem did not arise in 1712. A final document, covering all three of the estate’s stances in 1712, records the income received for the ‘Grasse and Hay of Drove Cattle’, and reveals how much was collected at Edenhall by Beck, at Hartley by Thomas Jackson, and at the Musgraves by Mr. Sleddall. A total of £74. 5s.11d. came in, and a mere £1. 10s. 0d. ‘rests due’¹³. We do not know how Beck achieved this, though the precise details collated for Edenhall in 1712 – of names, dates, numbers and types of beasts, and ‘lent money’ – suggest much tighter surveillance. Some sanction may also have been applied. Perhaps anyone failing to pay their bill was denied access in succeeding years. Thus, while Beck persisted with liberal elements of his regime in 1712, advancing cash loans and allowing drovers to pay bills on return journeys,

virtually all the sums then recorded as due were received by the estate. For Beck and his subordinates these developments were sobering. Of much greater significance, however, are the implications for any estimate of the scale of the trade through these stances. Taken together with the old, the new evidence supports the view that the traffic was even greater than estimated originally.

If the figures in Table 2 represent the money received from drovers rather than that which they owed, the number of beasts involved was greater than hitherto supposed. In 1709 and 1710 the grazing of at least some cattle, and in 1711 of many, was not paid for by the close of those seasons, leading Beck to institute a tighter system. His remedial action led to a reduction in traffic to Edenhall in 1712 – excluding cattle paid for on outward journeys, £79.19s. 6d. accrued there as against £104.17s. 0d. in 1711¹⁴ – though the cattle numbers then recorded at Edenhall are impressive. Thus, although Table 2 demonstrates that traffic grew steadily after the Union, its figures underestimate the rate of that growth.

Further considerations relate solely to 1712. Excluding September (when numbers of beasts were unrecorded), we know (Table 4) that 11,267 cattle, 50 cows and 180 sheep used the Edenhall stance¹⁵. Allowing for September, for cattle paid for on outward journeys (which likewise were unrecorded), and for our ignorance of developments at the other stances, it was originally estimated that ‘the grand total of cattle passing through the entire estate in 1712 approached 15,000....and....may have exceeded that figure’¹⁶. This interpretation now seems unduly conservative. Excluding ‘lent money’, the new document of 1712 lists a total of £35. 7s. 5d. received from Edenhall, whereas the earlier document of that year records that £79.19s. 6d. accrued from the stance. The new document, therefore, accounts for only part of that season’s business at Edenhall: it appears to run down towards the end of July, but not further. Nevertheless, the document also reveals that, when combined and for those months at least, income from the two other stances was somewhat larger – at £39. 5s. 0d. – than that from Edenhall¹⁷. Thus, the previous supposition that Edenhall was the most lucrative stance is called into question. The figures in Table 2 down to 1711 appear to counter this: but arrears may have been greater at Hartley and the Musgraves prior to 1712 precisely because matters there were supervised by two bailiffs rather than by Beck himself; and for the same reason, following the introduction of the tighter system in 1712, traffic seems to have diverted from Edenhall to the other stances.

Both Hartley and the Musgraves were some 20 miles – or two days driving – from Edenhall. Theoretically, some drovers, having used Edenhall, may have proceeded to one of the other stances and it is, therefore, necessary to avoid double-counting. However, the new document rules out this possibility: 20 of the 25 entries were for one stance only, while the remainder were for unequally distributed sums. Moreover, in terms of ultimate destinations the stances played different roles. If the north Lancashire towns were being targeted by the drovers using Edenhall, they would have proceeded from there in a south-westerly direction, whereas the onward routes to Hartley and the Musgraves were to the south east, towards Appleby, Brough, and beyond.

Finally, the unrecorded cattle numbers for September 1712 may be approximated as follows. Leaving aside the few cows and sheep, the 11,267 cattle accommodated in other months each cost, on average, 1.37d. The income for September came to £16. 3s. 0d. which, using the same average, was equivalent to 2,800 cattle, making a total of 14,067 at Edenhall for the entire season.

This evidence leads to three conclusions. Firstly, the income figures in Table 2 underestimate the rate of growth in droving between 1707 and 1711. Secondly, allowing for the absence of numbers for those beasts which were paid for on outward journeys, the traffic through Edenhall in 1712 may now safely be estimated at between 14,000 and 15,000 beasts. Thirdly, if in that year droving through the two other stances was equal to or greater than at Edenhall, the grand total for the entire estate in 1712 must have approached 30,000. The largest, reliable figure for the scale of the entire cross-border trade dates from fourteen years previously. Although likely to be an underestimate because they took no account of smuggling, the customs returns for 1697-8 record the cross-border passage of 59,701 cattle¹⁸. The overall conclusion is that, in the light of the new evidence for this, albeit major, set of stances, this figure was well exceeded in the years immediately after the Union. This was big business indeed.

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Note and References

1. P. Roebuck, 'Cattle-droving through Cumbria after the Union: the Stances on the Musgrave Estate, 1707-12', *CW3*, xii, 143-158. There are fourteen new documents. Not part of the main Musgrave archive, these are at CAS (C), DX/986/146.
2. 'Cattle-droving through Cumbria', 149; CAS (C), DX/986/146/2, 3.
3. CAS (C), DX/986/146/14.
4. CAS (C), DX/986/146/9.
5. 'Cattle-droving through Cumbria', 149 (1708); CAS (C), DX/986/146/1 (1707); 3 & 4 (1709); 11 (1711); CB/ME 3/1/2 (1712).
6. 'Cattle-droving through Cumbria', 150.
7. CAS (C), DX/986/146/3.
8. CAS (C), DX/986/146/5.
9. CAS (C), DX/986/146/11.
10. CAS (C), DX/986/146/12.
11. 'Cattle-droving through Cumbria', 148.
12. CAS (C), DX/986/146/13.
13. CAS (C), DX/986/146/14.
14. 'Cattle-droving through Cumbria', 148; CAS (C), CB/ME 3/1/2.
15. 'Cattle-droving through Cumbria', 153. There is a misprint in Table 4. The figures for cattle from April to August are correct, as is the grand total. However, the figure for October was 798, not 79.

16. 'Cattle-droving through Cumbria', 156.
17. CAS (C), DX/986/146/14.
18. D. Woodward, 'A Comparative Study of the Irish and Scottish Livestock Trades in the 17th Century' in L.M. Cullen & T.C. Smout, (eds), *Comparative Aspects of Scottish and Irish Economic and Social History* (Edinburgh, 1977), 153.

A Pennine Fox Trap

GRAHAM BROOKS

IN this Society's Transactions for 1998 Peter Fleming described eight stone fox traps in the Lake District.¹ He does not mention any other examples. There is, however, an example of a similar stone fox trap on the north Pennines at NY 65685 38567 at an altitude of 643m. It is built against an area of loose boulders, from which it is constructed and considerably smaller than the Lake District examples.

The structure is still in very good condition (Fig. 1). It is approximately circular with an internal base diameter of 4.1m. Internal wall height remains to 1.7m with a maximum overhang of the top remaining course of stones of 30cm. The top of the walls are approximately 1m thick. These measurements compare favourably with the six traps surveyed by Fleming which had internal base diameters ranging from 1.95 to 4.3m and internal height of 1.3 to 2m. The quality of the dry stone building is very good, hence its survival in this extreme environment.



Fig. 1. The Fox Trap on Melmerby Fell

The first edition Ordnance Survey 1:10,560 map (1864) shows the structure as a fox fold; this is changed to a sheepfold on later editions (2nd Edition 1900). At some time, presumably between 1864 and 1900, the structure has been converted into a sheepfold. Part of the wall on the downhill (east) side (approximately 1.4m) has been demolished and a small entrance approximately 60cm wide by 70cm high has been constructed in the gap, with the rest of the gap being filled in with thinner walling of lower quality stonework.

Outside the trap two low stone walls have been constructed to act as a funnel into the sheepfold. To the north side of the trap a second small enclosure has been built, again the quality of the stonework in these features is poorer than in the original trap and their survival is not as good.

This structure has presumably given its name to the neighbouring lead mine and shop at NY 6569 3894. Unfortunately this is a poorly documented mine and there is no evidence to help date the structure.

This fox trap is listed on the Cumbria County Council HER². There is a note that it was used when geese were grazed on the common land of Melmerby Fell. A goose would be put in the trap, the fox would be tempted in, and because of the inward-sloping walls, it would not be able to get out again. This is similar to the description of the Lakeland fox traps being used in areas where geese were run and also the use of a goose as bait in the trap.

A search of various HERs and other archaeological databases, and numerous years of wandering the fells, has failed to find any reference to any other fox traps on the Northern Pennines. If this is a unique feature in this area then it is interesting to speculate what drove the decision to build a structure which appears to be unique to the south west Lake District.

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Notes and References

¹ P. Fleming, 'Stone fox traps, borrens and goose bields', *CW2* 98 (1998), 267-276.

² Cumbria Council HER No. 11332.

A Date for Levens Hall Ice-house

ROB DAVID

IN two articles in *Transactions* in 1981 and 1982 I wrote about ice-houses in Cumbria and about an experiment which saw the refilling of Levens Hall ice-house.¹ At that time it was not possible to say with any certainty when that ice-house had been constructed, although descriptions and illustrations in various books published around the beginning of the nineteenth century suggested that it may have



FIG. 1. Levens Hall ice-house in January 1980.

been built at that time.² Documents that have become available more recently now enable a precise date to be assigned to the ice-house.

There is, amongst a collection of letters related to the construction of a chapel at Beathwaite Green, Levens, a letter from James Brammall Toosey to Mary Howard, dated 6 January 1828. Toosey was the steward to Colonel, the Hon. Fulk Greville Howard and Mrs Mary Howard. At that time Mary Howard was living on the family's Ashted estate in Surrey, and Toosey wrote to her with an update on the progress on the building of the chapel at Beathwaite Green. At the end of a long description of building works he commented that the ice-house was under construction:

'The Ice Ho is going on & all the other works regularly both Woods; Ha Ha: & filling up with oaks where wanted'.³

An account book in the Levens Hall archive reveals that the construction of the ice-house was begun on 12 December 1827 and completed on 23 February 1828.⁴ A number of people, most of whom were regularly employed on the estate, were paid for their work on its construction. Alexander Forbes, the head gardener, was paid £4-16s-2d for 'getting stones' and John Bare, a farmer at Beathwaite Green, £15-2s-0d for carting stone to both the ice-house and the saw-pit which was being built at the same time. Robert Harrison, yeoman farmer at Low Levens, was paid £4-16s-0d for lime. The builder was Thomas Akister, a waller from Lindale-in-Cartmel who was paid £62-5s-9d for his work. The ice-house had cost about £87 to build. As well as employing a number of labourers, Akister may well have been supported by his father

Aaron who was also a waller and was frequently employed by the Levens estate on building projects. While building the ice-house Thomas was also employed working on Lawrence House, the home farm for Levens Hall, and after the ice-house was completed he worked on the construction of the saw pit. Later in the year he became unable to work. Toosey described his situation in a letter to Colonel Howard in July: '(Thomas's) rupture is immediately in the groin as low as the movement of the thigh amongst the hair – Excuse this minuteness – He has been to a Doctor Campbell of Lancaster but I fear that he has gone too long to get benefit. He can now not walk a Mile at a Time'.⁵ Thomas died on 3 August 1828, leaving a widow, Anne and four children.⁶

The ice-house was ready to be used during the winter of 1828-29, and it was filled for the first time over a two-day period on 12 January and 7 February, 1829, at a cost of £2-9s-1d, although it is unclear whether that was solely for labour or included materials such as straw, or the bonus of ale, bread and cheese such as that given later in the century on the Holker estate for 'ice-getting'.⁷ The size of this ice-house meant that the water source had to freeze twice in order to create enough ice to fill the ice pit. The sequence of account books recording expenditure on the estate continues through to 1852, but unfortunately ice-house expenditure is not listed as a separate item in any subsequent volume.

It is unclear as to where the ice that was used to fill the ice-house came from. There were only some small ponds in the vicinity, so it remains a possibility that the completion of the Lancaster-Kendal canal in 1819 which passed within a mile or so of the ice-house provided a source of water that would freeze, and may therefore have encouraged the estate to embark on its construction.

The ice-house was constructed during the time of a programme of improvements to the estate. Fulk Greville Upton had married Mary Howard in 1807 and although they lived at Levens Hall they did not inherit the estate until 1818 when work began. Colonel Howard took responsibility for improvements to the house and garden, and Mary for improving the condition of the people living on the Levens estate.⁸ The ha-ha, ice-house and saw-pit were no doubt Fulk Greville's work, the construction of the church of St John the Evangelist at Beathwaite Green and the building of a girls' school were Mary's. Amongst the Levens Hall papers is a plan of an ice-house sent by Lady Rowley.⁹ Despite the thatched roof, a style more popular in East Anglia where Lady Rowley lived, its dimensions, shape and in particular the inclusion of an unusual walk way around the pit, are so similar to that built at Levens, that it may well have influenced its design. That plan is therefore presumably from shortly before 1828.

In my earlier paper I noted that the ice-house at nearby Dallam Tower was very similar in design to that at Levens Hall.¹⁰ Therefore it might be possible to suggest that it was also constructed in the late 1820s or 1830s. However, at the moment it seems that Levens Hall ice-house may be the only Cumbrian ice-house where some documentation about its construction has survived.

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Notes and references

1. R. David, 'The ice-houses of Cumbria', CW2, 81 (1981) 137-55. R. David, 'An ice-house experiment' CW2 82, (1982), 191-193.
2. See for example the *Encyclopaedia Britannica* (1797) and *Rees Cyclopaedia* (1819).
3. Levens Hall, Levens Hall Africa Stink Wood Box iii 'Bundle of letters related to the construction of the chapel at Beathwaite Green'. I am grateful to Stephen Read for making available a transcript of this letter and providing further information about James Brammall Toosey. I am also grateful to Mrs. S. Bagot for giving me access to the whole series of account books.
4. Levens Mss., Estate Records 10/10/2
5. Surrey History Centre Howard correspondence, 203/30/24. I am grateful to Stephen Read for drawing my attention to this letter.
6. See Parson and White, *Directory of Cumberland and Westmorland with Furness and Cartmel* for information about John Bare and Robert Harrison. For the Akister family see: Lindale-in-Cartmel burial register, CAS (K), WPR99; also http://records.ancestry.com/Thomas_Akister_records.ashx?pid=88081845 (accessed 6/3/2012).
7. Levens Mss., Estate Records 10/10/3. The Gardeners wages for Holker Hall for 1883 and 1885 in the possession of Mrs Doris Wright.
8. J. F. Curwen, *Historical Description of Levens Hall*, Kendal, Titus Wilson, 1898.
9. See R. David, (1981) op.cit. 143.
10. *Ibid.* 142.