SCOTTISH BORDERS

(1) **Easter Happrew** (NT 19 40): metal-detecting in the vicinity of the fort complex uncovered an Iron Age linch pin and seven coins, the datable ones all late first century.[24]

(2) **Bemersyde Hill** (NT 5990 3440): excavation[25] within the larger of two later prehistoric enclosures revealed a trumpet brooch and a small sherd of fineware.[26]

SUPPLEMENTARY MATERIAL

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ENGLAND
3. HADRIAN'S WALL

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(1) **Carvoran** (*Magna*), *Milecastle 46* (NY 66467 66015):[27] 2023 was the first year of excavation at Magna focusing on the fort and its wider landscape setting. This started with the excavation of the eastern half of milecastle 46 and the extramural area to the south and east (FIG. 5). The main objective was to understand the nature of the relationship between the occupation of Milecastle 46 and the fort of *Magna* and the Stanegate and to explore the extramural landscape between Milecastle 46 and the start of the Vallum diversion. It is likely that the most systematic demolition and removal of material from the site took place during the medieval and post-medieval periods. A rare dual balance beam made of copper alloy with circular silver insets along one arm was recovered from one of the later demolition layers. This is the first dual balance to be found on Hadrian's Wall, used to weigh small quantities of high-value materials, such as precious metals and stones or medicines. It has been disturbed from its original context.

In the final phases of the Roman occupation of the milecastle the internal and external yard surfaces were left to silt up. The only significant alteration to the extramural area during the third and fourth centuries was the construction of a large stone foundation or plinth across the top of the infill of a large pit using reused Roman masonry blocks. These were laid to form a clear faced eastern edge on the structure, with a smaller buttress of stone blocks built onto the northern section. Inside the milecastle, two short east–west oriented trenches were cut through the road. Between them lay a small area of cobbling which may have represented the insertion

[24] Four copper-alloy coins (Flavian as, as of Domitian, three unidentified) and two denarii (Nero, Vespasian). Allocated to Peebles Museum *via* Treasure Trove.

[25] By T. Romankiewicz, A. Lawrence, and S. Campbell for the Universities of Edinburgh and Bern and the Trimontium Trust. The site had seen previous investigation as part of the Newstead Environs Project; J.S. Dent in F. Hunter and L. Keppie (eds), *A Roman Frontier Post and Its People: Newstead 1911–2011* (2012), 216.

[26] Few stray finds associated with Roman sites were reported this year, the only instance being a trumpet brooch found south of Port Seton (East Lothian) in an area of known later prehistoric activity; *Discovery and Excavation in Scotland 2023*.

[27] Information provided by Rachel Frame for the Vindolanda Trust.

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FIG. 5. Carvoran. General aerial view of the excavation area. (© *The Vindolanda Trust*)

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of a temporary structure. Two short paths were built within the milecastle; however, the purpose of these remains uncertain. Refurbishments and improvements were made to the central road during the later Roman occupation, mostly likely the Severan period, with resurfacing and a new stone-lined drain installed. A surviving section of the drain crossed through the road surface from the direction of the unexcavated western half of the milecastle before exiting through the southern gate.

The most significant find from the later Roman period was a cist burial to the east of the milecastle. The grave had been positioned in the corner formed by the junction of the east milecastle wall and Hadrian's Wall and the sides of the burial had been carefully lined with large flat stones to form a cist. The grave was oriented east–west, parallel with Hadrian's Wall, and this, combined with the lack of grave goods accompanying the remains may suggest this was an early Christian burial. A single inhumation was present within the grave though the remains were poorly preserved. The burial can be dated to *c*. A.D. 370–410 due to the spread of Roman material, including Huntcliff ware pottery, in a context which partially covered the top of the burial, as well as a single sherd found within the burial context.

The first major resurfacing of the central road was carried out during the Antonine period. A new layer of tightly packed cobbles was laid, and a stone box drain was built along the eastern edge of the road. Other alterations to the internal spaces could also be dated to the latter half of the second century. A row of four post-holes was recorded along the inside face of the milecastle's east wall, some of which retained their packing stones, and may have supported a frame for an awning or roof covering this half of the internal area.

The most substantial later-second-century addition was the insertion of a well into the milecastle. This was situated under the covered area of the yard adjacent to the eastern wall. This is at present the only known well to have been discovered inside a milecastle. The well was deliberately backfilled during the third century using whinstone boulders and dressed stone blocks. This provided the conditions for the lower deposits to remain sealed, waterlogged, and semi-anaerobic, preserving organic material such as fragments of wood, leather and rope. A loose spread of cobbling to the east of the milecastle was cut by several large pits. Three of these pits are of comparable diameter and depth, suggesting they were all for the same purpose and likely in use at the same time or immediately after one another. A fourth pit was excavated to the north of this cluster: it differs from the others in both shape and fill, suggesting it was not part of the main group. This eastern area is best interpreted as an industrial zone, although the specific functions of the pits are not yet clear beyond the extraction of clay and stones.

The earliest archaeological deposits dated to the Hadrianic period and related to the construction of the milecastle and curtain wall. Both the southern and eastern walls of the milecastle were located, along with the stretch of Hadrian's Wall. The south and east walls were found to be on average 3.2 m wide. The internal dimensions were 20 m north–south by 9.4 m east–west, providing a total potential width of 18.8 m east–west and 376 m^2 internal area. The excavations revealed no evidence of any buildings within the eastern half of the milecastle; instead, a cobbled yard was laid throughout the interior. This surface was best preserved in the northern half of the excavated area. Two buttresses, built onto the interior face of the south wall, were cut through this surface. These may have been foundations for a timber stairwell providing access from the street level to the battlements, comparable to the stone steps found at Milecastle 48. The original Hadrianic surface of the central road through the milecastle was a tightly packed surface of small, uniform cobbles which were distinct from the looser cobbling of the yard. A similar tightly packed cobbled road, linking back to the main fort at *Magna*, ran from the south gate towards the Vallum. This was abutted by an extensive later-second-century cobbled surface to the south of the milecastle, which likely functioned as a waiting or holding area for traffic crossing the Wall.

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(2) **Vindolanda**, *south-western quadrant of the last stone fort* (NY 769 663):[28] the 2023 excavations marked the end of a project which explored two key areas of the site. The first examined an area to the north-west of the period VII fort (*c*. A.D. 212/213–300), and the second took place within the same fort's south-western quadrant.

Between 2018 and 2019 fort ditches were excavated.[29] They included a section through the Severan fortlets northern ditch, Period VIB (*c*. A.D. 200–208), the Antonine period VIA triple western defensive ditches (*c*. A.D. 140–160) and the period I/V forts north defences (*c*. A.D. 85–120). Above this were the stone foundations of the third-century extramural settlement. The Severan fortlet's northern defences consisted of an 18 m wide (at its base) clay rampart and 4 m wide V-shaped ditch to the north. Artefacts from the ditch were not as numerous as those from its southern counterpart, which produced over 400 leather shoes. Excavation of the northern ditch, comparable in scale to its southern counterpart, only recovered 11 shoes. Although the material differs in quantity, the two assemblages were remarkably comparable in other ways; no more so than in the presence of human remains. A partial human skull (SF21784) was recovered from the base of the northern ditch, which is comparable to the human skull uncovered in 2002 from its southern counterpart.

The third-century extramural settlement had been constructed directly over the remains of three north/south oriented Antonine ditches, dating to *c*. A.D. 140–160,[30] and the Severan fortlets northern rampart and ditches. The cutting of the Antonine ditches, running north–south, had removed significant parts of earlier pre-Hadrianic buildings in the area (*c*. A.D. 85–120). The intensity of ditch-digging created a confluence of waterways, resulting in a very wet site which was prone to flooding. This necessitated the construction of a third-century stone causeway over the area to bring in materials for the building of the last stone fort.

In 2019 the excavations moved some 100 m south and to the interior of the third- and fourth-century fort, within the south-western quadrant. Here large fourth-century north–south oriented cavalry barracks and ancillary buildings were encountered, their deep foundations cut through earlier third-century remains. An associated fourth-century cobbled yard, located in the south-western corner of the quadrant,[31] completed the plan of the fourth-century quadrant. In 2023, below the fourth- and third-century buildings and courtyard were the remains of several early-third-century Severan roundhouses, Vindolanda Period VIB (*c*. A.D. 208–211/212). Five poorly preserved stone-built roundhouses of the typical design, 4.3 m in diameter, were identified. Among those buildings two distinctive phases of construction were detected, the primary phase being the stone foundations, which were then replaced by similar-sized timber buildings, slightly offset from the previous designs and detectable through the remains of post-pits and post-holes. The usual neat rows of roundhouses were less strictly adhered to in this secondary phase, and further broken up by the discovery of a solitary and unique roundhouse structure. This building featured a stone-lined ditch and causeway along its perimeter. It also had an associated waste pit and possible stone-lined latrine nearby. The single round structure produced a much greater variety of material culture, artefacts and ceramics than is normally encountered.

Under the Severan layers, the well-preserved remains of the Antonine stone fort, Period VIA (*c*. A.D. 160–200), was encountered. The foundations for this first stone fort had sliced through earlier timber buildings to a depth of 1–1.5 m, often reaching deposits of natural boulder and the pre-Roman landscape. Two impressive Antonine stone buildings were uncovered in 2023.

[28] Information sent by Andrew Birley, Marta Alberti and the Vindolanda Trust.
[29] *Britannia* 51 (2020), 395–7.
[30] *Britannia* 50 (2019), 416–19.
[31] *Britannia* 53 (2022), 410–20.

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Near the southern gate a large, east–west oriented, and buttressed building was backed onto the *via praetoria*. This building's dimensions were 13.5 m long by 8 m wide, with wall foundations 0.7 m thick. The front of the building was constructed with a portico with two large pillar bases facing onto a well-made side street. Across the street were the remains of an equally impressive rectilinear structure. Remodelling of the fort had stripped this building down to its rubble foundations, and unlike its colleague to the east, this building had the remains of two internal column platforms. This structure was partially encountered in the 2005 excavations and wrongly interpreted as a possible rubble-filled drain by the excavators at the time (FIG. 6).

Below the Antonine remains were traces of two earlier mid-second-century timber forts (periods V–VIA, *c.* A.D. 120–160). Both were in very poor state of preservation. Most of the remaining timber uprights, floorboards and walls were badly decomposed and shrunken.

The remains of Period I–IV forts below (*c.* A.D. 85–120) retained more of their structure, but it became clear that the process of degradation witnessed above had also started in these deposits. Leather preservation was generally poor, and no traces of textiles remained within the buildings. A timber-framed period IV barrack (*c.* A.D. 105–120) was located with well-defined rooms. This produced some very fine material including a silvered 60 mm diameter phalera with the embossed head of Medusa (FIG. 7) from a floor context. Below the barrack a 4.30 m wide, 3.15 m tall section of collapsed wall was preserved *in situ*. This may have been associated with the south-east wing of the period III *praetorium* (*c.* A.D. 98–105).

below this the remains of the earliest forts, Vindolanda periods I and II, stood just above their foundation levels (*c.* A.D. 85–98). The excavation of those periods produced a wide variety of wooden and organic artefacts and were extensively sampled for ecological material, some of which have produced the earliest examples of Roman bed bugs from Britain. Artefacts included branded barrel staves, a variety of tools, locks and fittings and personal adornments.

CUMBRIA

(1) **Birdoswald** (*Banna*) (NY 615 633):[32] work continued in the extramural area of the fort. Work in Area A, to the east of the fort, was begun in 2021 and continued through 2022 and 2023.[33] This area was chosen as a result of the examination of the results of the geophysical survey, and in order to examine a stone-walled building first discovered by Ian Richmond in 1930. It is now confirmed that this structure was the *praefurnium* of the fort bathhouse, and that it is in an extraordinary state of preservation (FIG. 8). The walls of the structure survived to a height of 2 m, and the building measured 9.8 by 5.5 m internally. At the east end of the room the flue featured three intact and *in situ* iron fire-bars laid horizontally to support a metal half-cylindrical *testudo* over the fire.

To the south of the flue was a raised stand upon which a metal boiler would have stood, and the steps up to this boiler platform survived to the west of the flue (FIG. 9). At the west end of the room was a dump of ash and charcoal representing the rake-back from the firing of the system. Outside the building to the west was a substantial dump of ash and charcoal some 0.60 m deep, which had clearly been removed from the building over time via the doorway in the north-west corner. At the east end of the flue was a hypocaust which would have supported a hot bath. North of Hadrian's Wall, work on Area D continued, confirming the existence of a sequence of clay-sill buildings associated with industrial activity. One building may have been a smithy – work on the hammerscale samples continues.

[32] Excavations carried out by Newcastle University School of History, Classics and Archaeology, and the Historic England Archaeological Projects Team under the direction of Tony Wilmott and Professor Ian Haynes. Information provided by M. Jecock.

[33] *Britannia* 53 (2022), 410–12; 24 (2023), 341–5.

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FIG. 6. Vindolanda. The southwestern quadrant of the last stone fort under excavation in 2023. (© *The Vindolanda Trust*)

A new Area E was begun 140 m to the west of the fort This area, measuring 60 by 10 m, was intended to explore a transect of the extramural settlement, in particular looking at areas of structures on each side of an apparent open area which, on the geophysical survey looked like an oval-shaped market area, which was a broadening of the Military Way. This area (FIG. 10) revealed the open area flanked by stone-founded structures. On the southern side of the area, a broad linear band of whitish clay represented the base of the original Hadrianic turf Wall, which was replaced in stone on a line further north at the end of Hadrian's reign. It was demonstrated that the turf Wall had been slighted, the material being pushed into the ditch on

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FIG. 7. Vindolanda. The Medusa head phalera from period the period IV barracks (*c.* A.D. 105–120).
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FIG. 8. Birdoswald. Area A: the bathhouse *praefurnium* in plan showing the flue and pattern of ash disposal.
(© *Historic England Archaeological Projects Team*)



FIG. 9. Birdoswald. Area A: the *praefurnium* – view down the flue, showing the boiler stand and steps, and the *in situ* iron fire bars.
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FIG. 10. Birdoswald. Area E: Drone image, showing the base of the turf Wall, overbuilt with extramural buildings, and the open area flanked by buildings. (© *Historic England Archaeological Projects Team*)

the north side. Both turf Wall and ditch were overbuilt by the stone structures which flanked the open area.

(2) **Carlisle,** *Cricket Club* (NY 3956 9664):[34] the Uncovering Roman Carlisle project continued in 2023 with two new phases of excavation. The larger of the two excavations explored the southern limits of the monumental Severan building and its relationship to the east–west aligned Roman street (FIG. 11). This was followed up by an excavation focusing on a smaller area on the south side of the Roman street. The excavations have demonstrated that the Severan building was truly colossal in scale, with a floor plan measuring more than 60 m by 50 m. Its full extent is still unknown and involved the construction of at least three terraces on the site. The work in the first trench confirmed that the south side of the building had two projecting ranges, one of these containing a large clay and cobble base within it. Extensive remodelling of the building appears to have taken place soon after its original construction. Excavated parallels for the building's floorplan within Roman Britain proved difficult to find, the closest examples in form being villa plans rather than those of bathhouses.

The unusual nature of the building is augmented by the finds assemblage, which is not typical for a military site. Rather than military-style fittings, large quantities of items of personal adornment have been recorded, many of them indicating a female presence, including intaglios, hair pins and glass beads. One of the ranges produced a number of sculptural fragments (FIG. 12) and, at the southern edge of the excavation area on the surface of the metalled street, two sculpted stone heads were found. These latter finds may have been left by medieval stone robbers.

In the fourth century, parts of the Severan building were remodelled into a building which was more modest in style and scale and which appears to have had an administrative/military function. The finds assemblage from this phase is characterised by large quantities of Constantinian coinage, often with little to no wear, and military items, such as spearheads, bow-strengtheners and belt fittings. This building appears to have been abandoned after the mid-fourth century, with very few finds that could be dated after A.D. 340 recovered from the site. The fourth century also saw continued maintenance of the street that was first constructed

[34] Information sent by Frank Giecco of Wardell Armstrong.

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FIG. 11. Carlisle. One of the southern ranges of the Severan building. (© *Frank Giecco*)

in the Hadrianic period, as well as a resumption of road-side activity. Traces of timber buildings have been found overlying the footprint of the Severan building and to the south of the road, where the excavations took place in November. This timber phase of occupation on the site appears to have continued into the fifth century, with evidence of numerous large post-pads being recorded (FIG. 13). Some of the post-pads seal demolished, or at least partially demolished, fourth-century structural remains. A small assemblage of very late Huntcliff ware from East Yorkshire and a single sub-Roman bronze hair pin provide the dating evidence.



FIG. 12. Carlisle. Sculptural fragment from southern range. (© *Anna Giecco*)

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FIG. 13. Carlisle. Post-pads found on the south side of the Roman street. (© *Frank Giecco*)

(3) **Stanegate,** *west of Carlisle* (NZ 2598 6450):[35] The existence of a Roman road between Carlisle and Kirkbride on the Moricambe Estuary facing the Solway Firth has been demonstrated through LiDAR. Kirkbride, known as the site of a late-first–early-second-century A.D. fort, is shown through satellite imaging of crop-marks from 2018 to have had a second fort with evidence for stone-built granaries, similar to those at Severan South Shields (*Arbeia*), near the eastern end of Hadrian's Wall. Half-way between this site and the centre of Carlisle there is substantial crop-mark evidence of earthworks. North of Kirkbride, the westernmost fort on Hadrian's Wall, Bowness-on-Solway (*Maia*/*Mais*), shows substantial remains of buildings downslope from its south gate. LiDAR and ground survey demonstrates that these found their origins in a large military bath-house complex. This complex is considered to belong to a 10.5 ha vexillation fortress nearby (with a Stracathro-type south-east gateway), the ploughed-out rampart remains of which are visible on satellite imaging and LiDAR.

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[35] Information sent by Steve Dickinson.

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