

(5) **Mumrills**, 32 *Polmont Rd, Laurieston* (NS 9159 7940): several trenches³² in the garden revealed an early phase of activity linked to the putative early fort, succeeded by two substantial timber buildings flanking a road, each containing a probable iron-smelting furnace. It confirms the developing picture of an intensively build-up industrial annexe.³³

(6) **Bo'ness**, *Kinglass* (NT 003 810): resistivity survey³⁴ located anomalies consistent with the south-west corner of the camp³⁵ close to its anticipated line. Survey and excavation of the postulated north-east corner found no traces, but the northern ditch line was located running slightly further south and east than expected.

SOUTH OF THE ANTONINE WALL

WEST LOTHIAN

(1) **Castle Greg** (NT 0502 5925): geophysical survey³⁶ identified what is probably a pair of conjoined buildings³⁷ within the fortlet³⁸ and a possible oven between them. Results correlate well with an earlier resistivity survey.³⁹

SUPPLEMENTARY MATERIAL

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ENGLAND

3. HADRIAN'S WALL

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CUMBRIA

(1) **Birdoswald** (*Banna*) (NY 615 633):⁴⁰ work continued in the two areas of the extramural settlement of the fort which were begun in 2022, and a further area to the north of the fort and Wall was also excavated. In Area A (FIG. 3) further work on the major building to the south of

³² Excavations for Falkirk Local History Society were led by G. Bailey, who sent a report.

³³ G. Bailey, *The Antonine Wall in the Falkirk District* (2021), 251–310.

³⁴ Led by I. Hawkins of Edinburgh Archaeological Field Society, with excavation led by G. Bailey of Falkirk Local History Society; both sent reports.

³⁵ R.H. Jones, *Roman camps in Scotland* (2011), 244.

³⁶ By N. Hannon and H. Blake of Historic Environment Scotland; Dr Hannon sent a report.

³⁷ An arrangement with some wider parallels: M. Symonds, *Protecting the Roman Frontier* (2018), figs 8, 44a and c.

³⁸ RCAHMS, *Tenth Report and Inventory of Monuments and Constructions in the Counties of Midlothian and West Lothian* (1929), 140–1 no. 177.

³⁹ *Britannia* 44 (2013), 284, fig. 2; however, the lack of magnetic response indicates that anomalies previously interpreted as ovens on the resistivity survey are most likely related to tumble from the ramparts.

⁴⁰ Excavations carried out by Newcastle University School of History, Classics and Archaeology, and the Historic England Archaeological Projects Team under the direction of T. Wilmott and Professor I. Haynes. Information provided by M. Jecock.



FIG. 3. Birdoswald. Area A stone building the heated room can be seen at the far left of the image.
(© HE Archaeological Projects Team)

the area confirmed that it survived to a height of 2 m. At the eastern end of the building a subdivided room contained a hypocaust based on ceramic tile pilae, and a complete box-flue tile was recovered. The water-main from the north was traced in the direction of this hypocaust, which showed signs of extreme burning (FIG. 4). It is possible that this pipeline supplied a water boiler, and that this structure was part of a fort bath-house complex.

In Area B (FIG. 5) the excavation of a long, narrow building facing onto the north side of the road from the principal gate was completed. Area D (FIG. 6) was opened to the north of the fort. The road from the north gate was not encountered, but a series of ditches and clay foundations for timber buildings were examined. These structures were associated with industrial features, and with a substantial artefactual assemblage reflecting domestic and industrial occupation from the second to the fourth century.

NORTHUMBERLAND

(1) **Vindolanda**, *the south-western quadrant of the last stone fort* (NY 769 663):⁴¹ the penultimate work took place on the project entitled: Understanding Communities and Identities in 2022 within the south-western quadrant of the last stone fort at Vindolanda. The excavations primary goals were to explore the remains of the foundations of the last stone fort dating between *c.* A.D. 212/13 and *c.* 280 and the Severan circular hut complex buried below it (*c.* A.D. 200–21). Several interesting artefacts were recovered from first- to third-century contexts, and this included a carved

⁴¹ Information sent by Dr A Birley and the Vindolanda Trust.



FIG. 4. Birdoswald. Heated room of stone building in Area A. (© HE Archaeological Projects Team)

phallus on a block of sandstone with the inscription 'Secundinus Cacor'.⁴² The remains of six more circular hut foundations were encountered to the immediate north of those excavated in 2000,⁴³ although most were poorly preserved and partial. Traditionally located in rows of five, back-to-back, with roads and drains between them, an unusual addition of a single and isolated circular hut of an otherwise unique design was also discovered below the walls of third- and

⁴² Published in this volume of *Britannia* by Alexander Meyer, Alex Mullen and Joonas Vanhala.

⁴³ *Britannia* 32 (2001), 330.



FIG. 5. Birdoswald. Strip buildings fully excavated in Area B. (© HE Archaeological Projects Team)

fourth-century barrack adjacent to the *via decumana* (FIG. 7). Unlike its counterparts, this structure provided no evidence of having had a stone wall foundation and was bordered by a circular cut filled with turf and soil, possibly the foundation for a wattle and daub wall. This fill was secured by a one-course, non-facing stone line of medium-size rubble stones 40 cm diameter. Like its more traditional counterparts, this building had an internal diameter of *c.* 4.50 m and an external diameter of *c.* 5 m, with a floor composed of crushed sandstone and pebbles. Two stone-lined access paths, one facing east to the *via decumana* and the other facing north, were also associated with this hut, as was a stone-lined waste pit constructed from the same rubble material as the outer foundation of the hut. The area surrounding the circular hut, including the waste pit, produced a quantity of material culture previously unattested from Severan hut contexts at Vindolanda. Artefacts included several carved bone tools, a twisted copper-alloy bracelet, a quern stone, two knife blades, a scabbard chape and a copper-alloy decorative hinge in the shape of a duck (SF 23350). The purpose of this building remains uncertain, but the lack of a domestic hearth may suggest that it may not have been used as a dwelling, and instead served another purpose for the Severan circular hut community.

The foundations of the circular huts had been placed over the thoroughly demolished remains of the second-century stone forts at the site. Distinctive for its use of a soft yellow sandstone, the small cut blocks of the buildings surrounded a colonnaded area to the south (FIG. 8) and a roadway which ran to a large gate situated to the north. The use of large foundation stones as column bases, like those recorded in the Antonine temple and tomb complexes to the west of the site⁴⁴ in the extramural areas of the settlement, show that this area was highly decorative and had an unusual layout. The unusually hot summer with record-breaking temperatures

⁴⁴ A. Birley and J. Blake, *Vindolanda Research Report, The Excavations of 2005–2006* (2007), 79–84.



FIG. 6. Birdoswald. Area D, north of the fort and Hadrian's Wall showing clay-sill foundations for timber buildings. (© HE Archaeological Projects Team)

impacted the ability of the archaeological team to penetrate the underlying anaerobic layers of the site as the hot dry weather had a detrimental effect on the preservation of the waterlogged deposits. However, once the weather broke the northern half of the excavation established the presence of wattle-and-daub fences belonging to a succession of six timber layers of occupation, dating from the late first to mid-second century. Eleven writing tablets, 40 shoes and boots and several other well-preserved items were recovered which included branded barrel staves, tools and many arrow and lance heads. In 2023 the final season in this part of the site will complete the excavation of this quadrant and will conclude with the installation of ground monitoring equipment to continue to monitor the impact of climate change on the sensitive buried remains.

TYNE AND WEAR

(1) **Newcastle-upon-Tyne, Turret 3a**, former site of Norris House, Crawhall Road, Ouseburn (NZ 2598 6450):⁴⁵ the remains of Turret 3a of Hadrian's Wall were discovered along with six berm obstacle pits and a section of the northern ditch during an excavation in 2021. As per the request of the client, it is only now that the discovery can be made public.⁴⁶ Turret 3a was

⁴⁵ Information sent by Scott Vance, Project Officer at Pre-Construct Archaeology Durham.

⁴⁶ Property & Design Associates Ltd, on behalf of Cassidy Group (Norris House) LLP funded the works. Previously the site had been partially excavated in 1928 by G. Spain, who only found remains of the northern ditch (*PSAN* 1928 (241), 7–273, 246) and was further evaluated in 2015 by Northern Archaeological Associates, who uncovered Hadrian's Wall in two trenches, the northern ditch and a possible berm obstacle pit (NAA, *Hadrian's Wall, Crawhall Road, Ouseburn, Newcastle upon Tyne: Archaeological Evaluation* (2015), unpublished report). The reports on PCA's 2021 scheme of works will be available on Archaeological Data Service in due course (OASIS reference number preconst1-430130).



FIG. 7. Vindolanda. The unusual circular hut. (© *The Vindolanda Trust*)



FIG. 8. Vindolanda. An annotated corrected image with the first stone fort buildings marked in orange. (© *The Vindolanda Trust*)

located at the top of the western bank of the Ouseburn valley just to the south of Stepney Bank within the Ouseburn area of Newcastle, surprisingly some distance away from its assumed location that lay 300 m to the south-west of the site. The aim of the 2021 phase of works was



FIG. 9. Turret 3a showing berm obstacle pits to the north. (© Pre-Construct Archaeology Ltd)

only to expose the remains of Hadrian's Wall with excavation limited to any berm obstacle pits and the northern ditch. Any remains relating to Hadrian's Wall itself were to remain *in situ* with the development designed to avoid these archaeologically sensitive areas.

Turret 3a was located at the northeast end of the excavation area (FIG. 9). Only the northern half of the turret was exposed following Historic England's request for it to be preserved *in situ* with the development redesigned to avoid the internationally significant remains. The north wall of the turret was exposed for a maximum length of around 12 m. The turret itself was over 10.26 m wide east–west by 1.82 m north–south (continuing past the limit of excavation). Only the foundations survived with all the facing stones of the upper walls being robbed out during later periods of activity, although several small areas of wall-core did survive along the northern wall. No remains of an internal floor surface survived either, with a large post-medieval pit truncating the south-west corner of the exposed remains.

Turret 3a's foundations were more substantial than expected when compared to other known turrets. The foundations of the north wall were recorded at 2.46 m wide, the east wall at over 2.4 m wide and the west wall at 2.36 m wide. Other turrets have foundations ranging from around 0.91 m (T24b's east wall and T50b's east and west walls) to 2.23 m (T27a's north wall included the footing of the curtain wall). The average width when excluding T3a's wider foundation falls at about 1.21 m wide which is significantly narrower. Turret 3a's foundations are therefore more comparable to the width of the curtain wall foundations found east of Newcastle, i.e. 2.30 m to 2.65 m rather than the usual dimensions of other known turret foundations. Finds from the turret were sparse (due to the limitations of the investigation) with only a single fragment of Roman *tegula* recovered from the foundations of the northern wall

during cleaning. Prior to the discovery of T3a, the largest known turret was at Melkridge (T40b)⁴⁷ which was 0.03 m wider internally at 5.79 m; however, externally the turret was at least 2.05 m narrower east–west than T3a (T3a was 10.26 m wide and T40b was 8.21 m wide). The reason for this was that the foundations for T3a’s walls were twice as wide at around 2.4 m than T40b’s which were 1.21 m wide.

The unusually large size of Turret 40b is thought to be attributed to the wide area within view of the structure, with Milecastle 30 and Milecastle 50 being clearly visible in good weather.⁴⁸ Viewshed analysis of T3a⁴⁹ (6 km search radius with ‘eyeball’ height set to 7.6 m) demonstrates that *Pons Aelius* Roman fort is within view but *Condercum* and *Segedunum* are not. To the east, T3a would have had clear views towards T2a, T2b and MC3 and to the west there would have been clear sightlines towards all Wall installations up to perhaps T5b/MC6.

The original plan for Hadrian’s Wall was a system of milecastles and turrets, built to standardised dimensions, along a turf or stone wall, with the forts and Vallum added before the original system was completed. The stone Wall was also amended from a ‘broad’ wall to a narrower wall, with the narrow wall installed in some places on the originally intended broad wall foundations. Within the Newcastle to Wallsend section, Hadrian’s Wall was built using only the later narrower gauge of wall. With the evident variation in size of turrets, especially within the central sector, it is possible that this represents another amendment to the original plan in the form of having non-standardised dimensions for turrets.⁵⁰ The discovery of T3a at the top of the Ouseburn valley has provided new insights to the construction of Hadrian’s Wall and its installations. It indicates that local factors influenced the positioning of structures along the Wall and that strategic interests outweighed the original spacing scheme. Our investigation clearly demonstrated that significant remains relating to the Wall can and do survive within the more built-up areas of urban Tyneside.

SUPPLEMENTARY MATERIAL

None submitted

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4. NORTHERN ENGLAND

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CUMBRIA

(1) **High Street**, *Roman Road*, Margary 74:⁵¹ with the release by Defra of Lidar data for the full length of this road a reappraisal was undertaken. A 3D model of the route was assembled enabling

⁴⁷ R.P. Wright, ‘Roman Britain in 1946: I. Sites Explored: II. Inscriptions’, *Journal of Roman Studies* 37 (1947), 165–82.

⁴⁸ R.P. Wright, ‘Roman Britain in 1946: I. Sites Explored: II. Inscriptions’, *Journal of Roman Studies* 37 (1947), 165–82.

⁴⁹ Undertaken by Erik Graafstal.

⁵⁰ David Breeze pers. comm.

⁵¹ Information provided by D. Ratledge.