

Gueswick Hills, Teesdale:

Interim report on 2022 excavation (GH22)



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Archaeological Services Durham University reported on palaeoenvironmental samples and charcoal species.

Queens University Belfast 14CHRONO carried out the radiocarbon dating.

SWAAG (Swaledale and Arkengarthdale Archaeology Group) allowed use of their magnetometer and expertise in geophysical survey.

Version 2.8 (12 July 2023)

Site location: NZ 0036 2104, 1.5km north-west of the village of Cotherstone, Teesdale, in the parish of Hunderthwaite.

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The Lidar Landscapes survey was a project of the North Pennines AONB Partnership
<http://www.northpennines.org.uk>

Drone images and processing of lidar data by **Stephen Eastmead**, <https://eastmead.com/>

QGIS Free and Open Source Software was used: <https://qgis.org>

Please note: The features described in this report lie on private farm-land with no public access

Cover image: Excavating Trench 4, looking south-west. The summit cairn is on the central skyline.



Contents

1	Introduction	5
1.1	The site	5
1.2	2019 excavation	6
1.3	2021 excavation	6
1.4	Aims.....	7
1.5	2022 trenches	7
1.6	Excavation of trenches	9
2	Excavation Findings, Trench 4	10
2.1	Trench 4: excavation	10
2.2	Trench 4: finds	17
	Brooch.....	17
	Roman coin.....	17
	Spindle whorls	18
	Spearhead	18
	Iron nails.....	19
	Coal, cinder, and industrial waste	19
	Mortaria	20
	Other pottery	20
	Glass bangles	21
	Other glass	21
	Flints.....	22
2.3	Trench 4: radiocarbon date	23
2.4	Trench 4 discussion	23
3	Excavation Findings, Trench 5	24
3.1	Trench 5: excavation results.....	24
3.2	Trench 5: finds	28
	Upper contexts	28
	Southern ditch	29
	Middle ditch	29
	Northern ditch.....	29
	Cup-marked boulder.....	29
3.3	Trench 5: radiocarbon dates and palaeoenvironmental results.....	30
	Southern ditch	30
	Middle ditch	30
	Northern ditch	30
3.4	Trench 5 discussion	30
4	Discussion.....	32



5	Acknowledgements	32
6	References.....	33
7	Appendix 1: Context table	35
8	Appendix 2: Harris matrix for both trenches.....	40
9	Appendix 3: Small finds tables.....	41
10	Appendix 4: Charcoal and bulk samples tables	55
11	Appendix 5: Radiocarbon dates	57
12	Appendix 6: Drone photographs of trenches	60
13	Appendix 7: Palaeoenvironmental Report (Durham University)	66
14	Appendix 8: Co-ordinates of trench corners	73
15	Appendix 9: Plans and section drawings	74



The view from the Gueswick Hills: looking south-east with the terraced hillside in the foreground and Doe Park house at the top

1 INTRODUCTION

1.1 The site

This is a report on excavations carried out over 3 weeks in 2022 by the community group Altogether Archaeology (AA) at a site on the Gueswick Hills (grid reference NZ 0036 2104), which AA has been investigating for several years. It lies on the plateau top of a low hill close to the River Tees, between Cotherstone and Romaldkirk. There is scanty surface indication that this is a significant site, just a small area of uncategorisable “lumps and bumps”; it was only AA’s magnetometry survey that demonstrated the extent of the hidden archaeology. Excavation has shown that it is a Middle Iron Age settlement, which continued in occupation into the Romano-British period.

Investigation of the site started with a walkover survey, a magnetometry survey of the hilltop (extended in Spring 2022 to 1.1 hectares in total), and a brief evaluation excavation: all taking place in 2019. Subsequently, AA excavated the site for three weeks in August 2021. Reports of these, plus the Project Design, are published on the AA website (Eastmead 2022, Green 2019, 2020, 2022). As extensive background information was included in those reports, it will not be repeated here.

The 2022 excavation took place from 8th to 28th August. Participants are listed in the Acknowledgements Section of this report. Further magnetometry was carried out in May 2023 to extend the survey northwards to cover more of the summit plateau. Excavation of the site is planned to continue in August/September 2023.

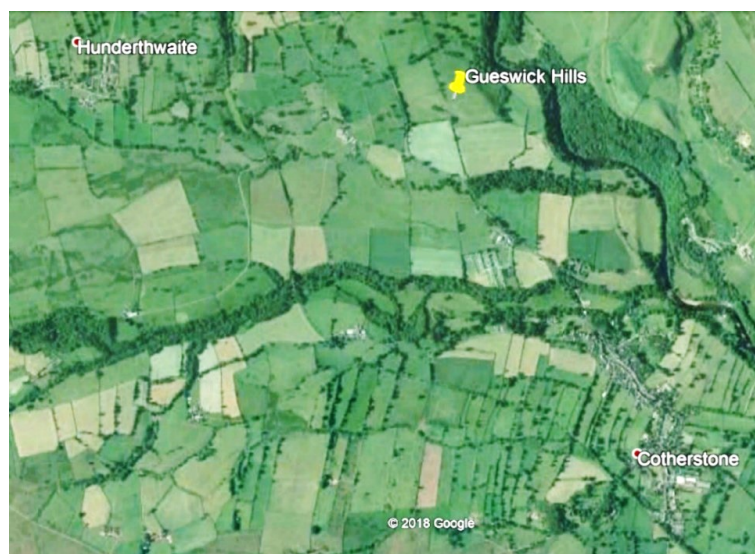


Figure 1: Location of the Gueswick Hills site on farmland now used for grazing. Surrounding the nearby villages are medieval field-systems, fossilised in the hedge pattern. The River Tees flows in the deep valley to the east of the site. (Google Earth)

The Gueswick Hills are a line of terminal moraines across Teesdale, marking the position where the Teesdale glacier paused in its retreat up the dale at the end of the last Ice Age (Evans 2017, 2018). For a short period, the hills acted as a dam, causing the formation of a lake. Despite the glacial origin

of the hills, the large terraces on their southern flank have a considerable depth of soil. Excavation in 2020 had to be cancelled due to the pandemic, but members of the TerrACE project team (www.terrace.no) were able to dig test-pits on the terraces below the site in September 2020. This international project is investigating the soils of agricultural terraces in several countries of Europe, using Optically Stimulated Luminescence (OSL), ancient DNA, and other techniques. The team is yet to publish results for this site, so the age and use of the Gueswick terraces are unclear. However, terraces in Northumberland seem to have been in use (though not continuously) from the early Bronze Age through to the Medieval period (Frodsham and Waddington 2004, Brown et al 2023).

1.2 2019 excavation

The evaluation excavation in 2019 had three small trenches:

2019 Trench B1, over an area to the west of the hilltop cairn, found no significant features.

2019 Trench A1, over the line of a probable ditch seen on magnetometry (but not visible on the ground), found a discontinuous flagstone and cobble surface extending across the line of the ditch, buried beneath 0.5m of topsoil. In the topsoil was a stony layer below turf level, covering the whole trench. The fill of the ditch itself was not excavated. Two pot-sherds were found in the soil above the paving. One was late medieval, the other of uncertain date.

2019 Trench A2, was located at the west end of a rectangular feature visible on the ground, and seen on lidar and magnetometry images. This exposed a stony surface in the southern half of the trench, to the north of which was a gravelly deposit which contained three Iron Age (IA) or Romano-British (RB) pot-sherds, a stone spindle whorl, and an iron blade.

Thus, although the summit cairn and rock-art suggested a Bronze Age presence, and the surrounding ridge and furrow suggested occupation in the medieval period, the excavation finds were mainly of the Iron Age or Romano-British (IA/RB) period.

1.3 2021 excavation

The excavation in 2021 had two trenches:

2021 Trench 1 was a re-opening and deepening of the 2019 Trench A1, investigating the ditch seen encircling the hilltop on magnetometry (but with no indication of it on the ground surface). The flagstone and cobble surface 50cm below ground level was re-exposed. Under it, a 1.5m deep ditch was excavated. This had a palisade slot in its base, full of butchered animal bones and stones. Radiocarbon dates for these were Late Iron Age, with radiocarbon dating of the upper ditch fill and pot-sherds from the paving showing the ditch was covered over around the start of the Roman period.

2021 Trench 3 examined an area inside the palisade ditch, extending 2019 Trench 2 to the east and south, opening nearly all of the rectangular feature visible on lidar. This proved not to be a building. There was a wide low stony bank running across the southern half of the trench. Across the centre of the trench was a gravelled area, to the north of which was a band of stones and then an area devoid of structures and with only scanty finds. Most finds in the trench were in its western end, particularly the northern corner adjacent to 2019 Trench 2. Finds were largely Iron Age or Romano British, including pot-sherds, a spindle whorl, and a blue glass bead decorated with white spirals. A very significant find, just under the turf on the stony bank, was a copper-alloy annular brooch from the post-Roman period.



1.4 Aims

Previous years' excavations have proved that there was an Iron Age / Romano-British presence on the site, with pot-sherds and a spindle whorl. The excavations also confirmed the existence of the large ditch suggested by the magnetometry survey; the ditch was overlain by a flagstone and cobble surface, suggesting that this was a multi-phase site. It is "special" in that it is a high point of the valley floor, commanding views up and down the river valley and dominating the road along the valley that connects a chain of villages. Thus, further research into the Gueswick Hills site is clearly warranted, with aims:

- to enable dating of the phases of the site
- to investigate the surface features seen on lidar, and below ground on magnetometry
- to locate and investigate evidence of domestic occupation
- to enhance engagement of people (both AA members and local residents) with their historic environment.

1.5 2022 trenches



**Figure 2: Aerial view (Bing) of site. The 2022 trenches are outlined in green
Trench 4 is to the south of Trench 5.
Previous years' trenches are in yellow (2021) and blue (2019).**

Two trenches were excavated, in total 195 square metres. They were about 20m apart. Both were excavated throughout the three-week season. The GPS co-ordinates of the trenches are given in Appendix 8. All sides of both trenches were aligned either north-south or east-west.

Trench 4: This was a roughly square trench 7m x 15m with a 6m x 4m extension to the west and a 10m x 3m extension to the east, both at its south end. (Total 159 sq m). It lay in the centre of the “settlement” area inside both the palisade ditch and the inner rectangular ditch seen on magnetometry. The area covered was “busy” on the magnetometry survey, with curving anomalies, possibly the trace of circular structures. The trench exposed a spread of rubble, under which were two areas of paving, both of which incorporated pairs of quern stones re-purposed as flagstones. One area of paving also included a fire-blackened hearth stone. Finds were many, and largely Iron Age / Romano-British. At the end of the excavation, the western part of the trench, including the paved surfaces were covered in geotextile before back-filling, with the intention of re-opening and extending the trench in 2023.

Trench 5: This was 18m x 2m rectangular trench (Total 36 sq m), sited to cut separately the three ditches seen on lidar about 6m from each other. The only surface feature visible was a shallow gully, probably post-medieval drainage, on a different alignment to the three ditches, none of which were apparent at the surface. All three ditches were located on excavation, with the 1.6m deep middle ditch cut being similar in form to the palisade ditch excavated in 2021. The southern ditch cut was narrower and 1m deep, and the northern ditch only 0.5m deep.

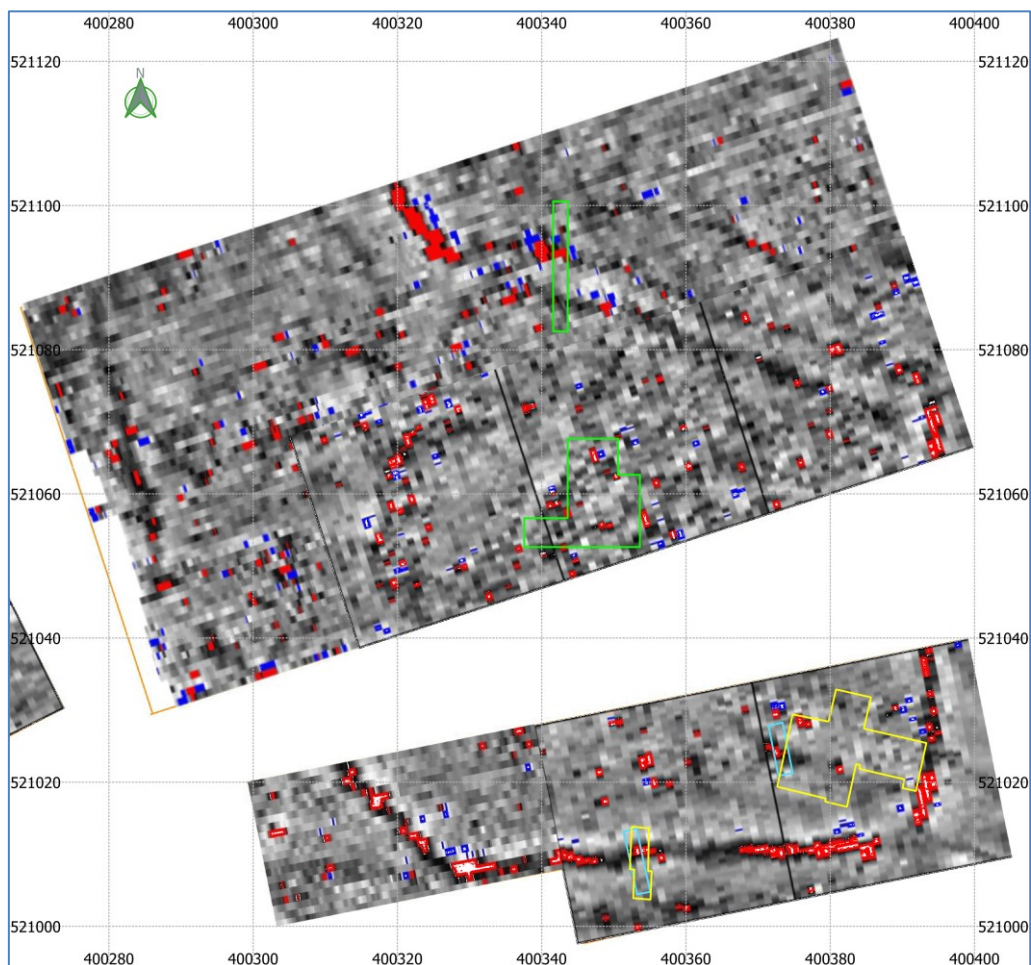


Figure 3: Trench positions (2022 in green) superimposed on magnetometry survey.

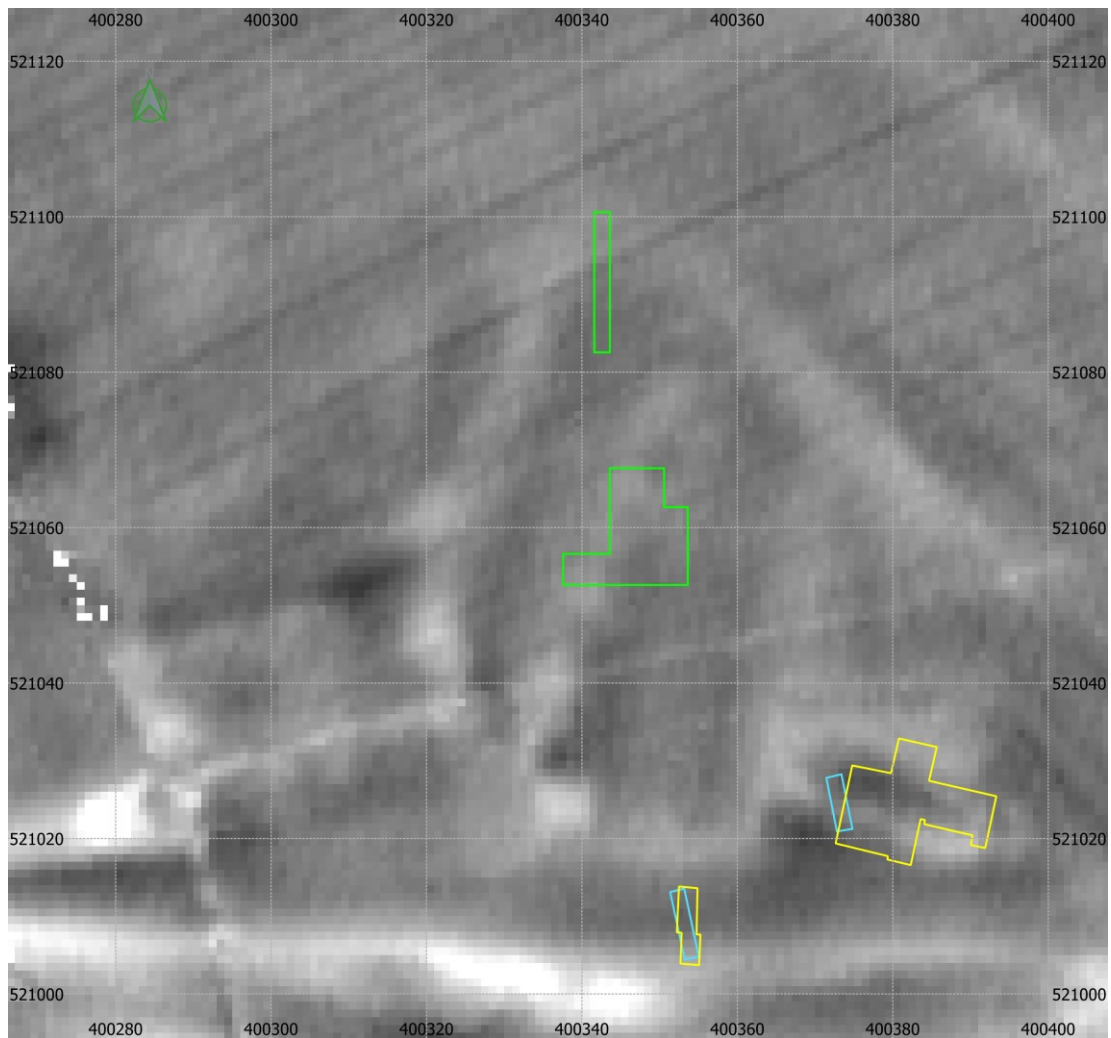


Figure 4: Trench positions superimposed on a lidar (local relief) image.

1.6 Excavation of trenches

See the Project Design (Green 2019) for details of excavation methods, access, and health and safety. The trenches were both excavated by hand. Turf, stones, and soil were stacked separately. The site was fully restored at the end of the dig. Recording was by high-definition drone photography and by photogrammetry using a hand-held camera. Photogrammetry enables scale-correct images to be obtained, but definition is not as good as obtained from drone images. In addition, hand drawing was used for recording.

Professional supervision was by Rob Young, who was on site throughout the excavation. Management of the dig was by Martin Green and Tony Metcalfe, with surveying and drone photography by Stephen Eastmead (all members of the AA fieldwork task group).

Context numbers are given in *italics* in the description of the trenches: see the context tables (Appendix 1) for further details.

2 EXCAVATION FINDINGS, TRENCH 4

2.1 Trench 4: excavation

The trench was sited to examine a “busy” area in the magnetometry survey image, within the circuit of the palisade and inner ditches; so possibly the main settlement area on the site. The magnetometry anomalies include curving features, suggestive of roundhouses, though no complete clear rings. The site has been subjected to post-medieval ploughing, though is now permanent pasture, making interpretation of the magnetometry image difficult.

The trench was 15m (N-S) x 16m (E-W), but with unexcavated rectangles in the north-west (11m x 6m) and the north-east (5m x 3m). The GPS co-ordinates of the trench corners are given in Appendix 8. Vertical drone shots of the trench at intervals through the excavation are given in Appendix 6.



Figure 5: Trench 4 midway through excavation (Day 12). The position of the initial 8m x 8m trench, before extension, is shown by white dots. See Appendix 6 for this image full size.

De-turfing exposed the topsoil *4000*, a friable mid-brown silty loam with infrequent angular gravel. Presumably due to plough action, this contained many finds, including a lead spindle whorl, glass bangle fragments, small pieces of slag, a whetstone, flint flakes, and many iron nails. Pot-sherds were of a wide range of types including modern and coarse “Iron Age” wares. Finds and their distributions are discussed in the next section.

Beneath this, across the whole trench was *4001*, a much stonier context: a friable mid-brown loam with frequent angular gravel up to 10mm diameter. It was not compacted. Like *4000* there were many finds, including iron nails, flint flakes, a clay pipestem, small pieces of slag and cinder, coal, and

many pot-sherds including modern, Tees Valley ware, coarse “Iron Age” ware, as well as Romano-British sherds including Piercebridge and Catterick ware (among which were sherds of mortaria).

Beneath 4001 was a 10cm-15cm deep spread of cobbles 4003 across the whole trench, in a friable medium brown silty-loam matrix. The stones were mostly rounded cobbles, but with some angular stones. Stone sizes ranged from 25cm long dimension down to 8cm. 4003 contained a wide range of finds, similar to those in 4000 and 4001 including: a lead spindle whorl, a whetstone, cinder, coal, slag (possibly iron and copper), flint/chert flakes, a Roman coin, a penannular brooch, and glass bangle fragments. Pottery sherds included Romano-British sherds (Black Burnished and Catterick), some of mortaria.



Figure 6: Trench 4 before being extended (Day 6). Layer 4003 across whole trench being cleaned.

Beneath the spread of cobble 4003, structures became apparent. There were two areas of flagstone flooring: 4002 in the south-west part of the trench and 4004 in the north-west part. Between them was 4010, a well-bedded surface of cobbles adjoining the two paved areas. The stones were from 10cm to 25cm diameter. Running eastwards from 4004 was a discontinuous irregular paved surface 4008, about 1.8m x 1m. The slabs in it were smaller (up to 15cm) than those in the paved floors 4002 and 4004. It may be a pathway from the structure with paved floor 4004. The only significant find from 4008 was a blob of melted copper found between the slabs.

Floor 4002 extended 6m x 2m in the trench, but on its north side it continued beyond the side of the trench, so its full extent is uncertain. Slabs in it were up to 80cm across. Most of the edges were ill-defined and irregular, with no evidence of a surrounding wall. Near its west end was the largest slab. This was an irregular square, side 90cm, and was fractured in situ into four pieces, with heat-blackening in the central portion. No burnt material was found on it, but it is probably a hearth. Also included in the stones of the floor were two circular quern stones. One (Q1/4A291) was 34cm in diameter with a 1.8cm diameter central hole and some edge damage. It was located immediately to the east of the hearth stone. The other (Q2/4A292) was 35cm diameter with a 2.5cm central hole. It was cracked across through the centre. The two quern stones were 90cm (centres) apart. Both seemed to be of medium gritstone, finely pecked. They have not yet been lifted, so a full description is not yet possible.

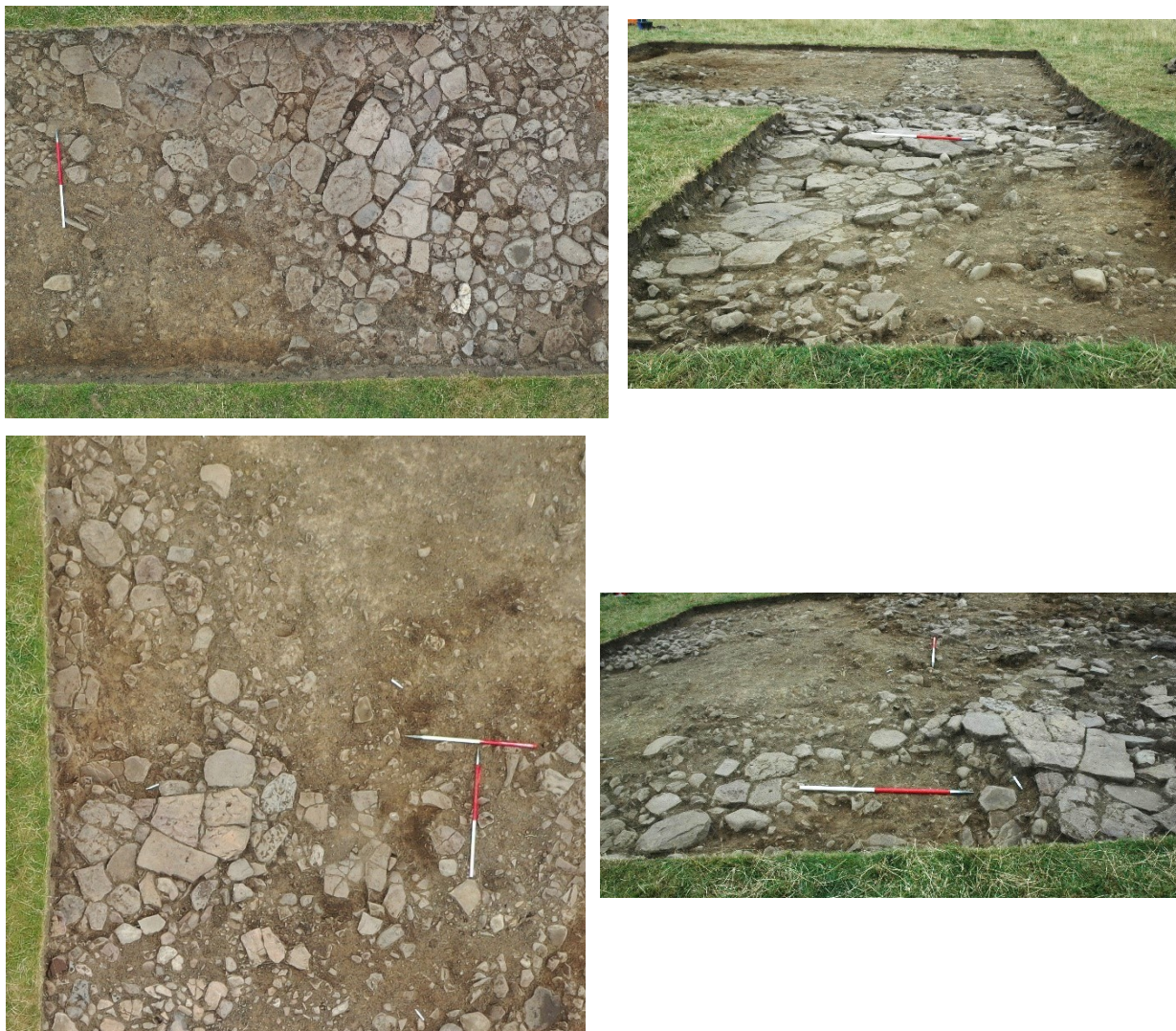


Figure 7: *top:* Floor **4002** vertical view and view looking east. Beyond it, the spread of stones in loam **4005** has been removed, except in a 1m wide strip.
bottom: Floor **4004** vertical view and view looking east, beyond it, in the corner of the trench are pebbles **4009**.

The other paved floor, **4004**, was approximately 3m x 2m, but it continued under the west side of the trench so may be much larger. Slabs in it were up to 70cm across. Only the south-east edge was well-defined. It included among the floor slabs two circular quern stones. One (Q3/4A293) was 35cm in diameter with a 2.5cm central hole. It was of coarse gritstone, finely pecked, and had suffered much damage with most of the rim lost. The other (Q4/294) was 35cm diameter with a 2.0cm central hole. It was of fine gritstone, pecked and worn with two areas of damage to the rim. It extended under the side of the trench. Neither quern stone has been lifted as yet.



Figure 8: *top:* Quern stones 1 and 2 in situ (2 on left, 1 on right with hearth stone above).
bottom: Close-ups of stones 1 and 2.



Figure 9: *top:* Quern stones 3 and 4 in situ (3 on left, 4 on right at trench edge).
bottom: Close-ups of stones 3 and 4.



Figure 10: Central parts of paved surfaces:
top: 4002 looking north, bottom: 4004 looking south, with cobbled surface 4010 beyond.

In the north-east corner of the trench was a semi-compacted patch of pebbles, *4009*, up to 6cm diameter. It was about 3m x 1.5m, but it extended beyond the northern edge of the trench. The ground surface here is a slight hollow, with the north-east corner of the trench approximately in the centre of the hollow (See Figure 4, where the hollow is visible in the lidar image). This may therefore be the floor of a structure, though no post-holes or evidence of walls were noted. There were no finds in this context.



Figure 11: Patch of pebbles *4009* looking north (top) and looking east (bottom).

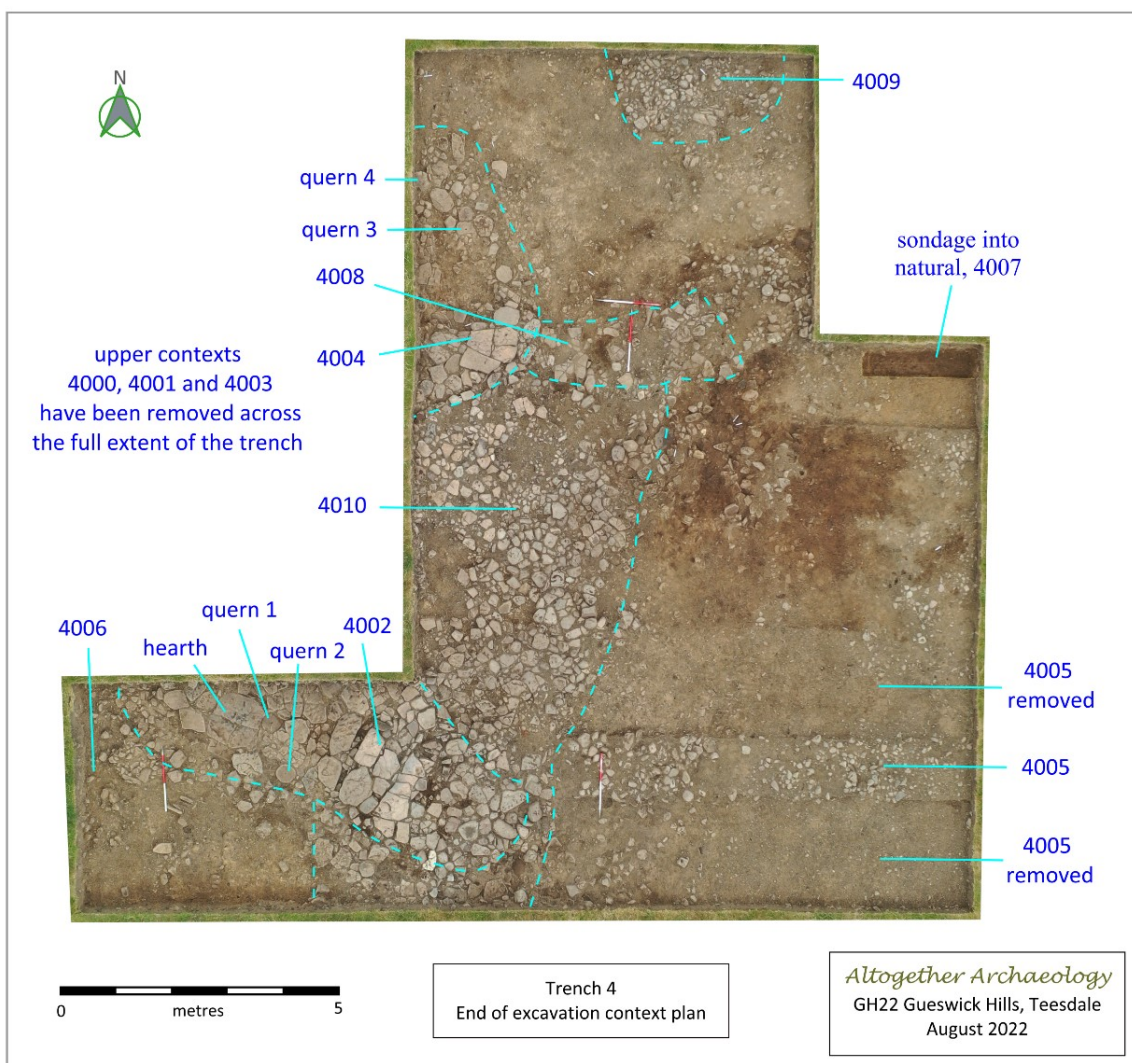


Figure 12: Drone photograph at end of excavation with contexts and querns marked.

East of the paved surfaces 4002 and 4004 and the cobbled surface 4010 was an uncompacted spread of pebbles and angular gravel up to 6cm diameter in friable silty loam, 4005. It was up to 8cm deep and not clearly differentiated from the cobbles-in-loam 4003 above it. It was excavated in three rectangular areas of the eastern half of the trench; in all of these areas it lay directly over the probable natural. 4005 contained a smaller range of finds than higher contexts, none were post-Roman. They included coal, cinder and small pieces of slag. Pot-sherds included coarse "Iron Age" ware and a mortarium rim.

To the west of paved surface 4002 was a context of friable yellow-brown clay/silt 4006. It contained stones (some angular, some rounded) of all size up to 15cm (with a few slightly larger). 4006 contained a Roman-type iron spearhead, beside which was charcoal with a radiocarbon date of 180 calAD. There were also coarse "Iron Age" pot-sherds and a fragment of a Romano-British glass bangle. There were no post-Roman finds.

The probable natural, 4007, lay beneath all contexts, where removed. It was a yellow-brown sandy/silty clay, containing angular fragments of broken stone, with some larger rounded small cobbles. A sondage 2m x 0.6m was dug 50cm into 4007 in the north-east corner of the trench and found nothing of note.



2.2 Trench 4: finds

Brooch

Part of a copper alloy brooch, find 4A204 from context 4003, is a penannular brooch. The brooch is broken, with only just over half of the hoop present and the pin absent. This style of brooch has a circular cross-section and grooves around the hoop (Booth 2014). They have been found in wide distribution across England, Wales, and Scotland, though with a high concentration around Somerset. The date range is wide as well: they have been found in contexts from the late Iron Age (e.g. hillforts) to the second century AD, with a few later examples. Booth notes that there was “a slight intensification of numbers during the first century AD. Quantities decline thereafter”.



Figure 13: Penannular brooch after conservation.

Roman coin

A Roman coin, probably a nummus of Galerius (caesar and emperor 293-311), was found in context 4003 (find 4A171). It is very worn and damaged. It has been conserved by the Durham labs. Another Roman coin, of Marcus Aurelius (emperor 161-180), had been found in the 2021 season excavation.



Figure 14: Roman coin after conservation.

Spindle whorls

Finds included two lead spindle whorls (finds 411, 4A180), both are undecorated. In the 2019 and 2021 excavations, spindle whorls were also found, but in both cases these were of stone, not lead.

Spearhead

An iron spearhead, find 4A286 from context 4006, has been x-rayed and conserved at the Durham labs. It is of the of the Roman split-socket leaf-shaped type. This is consistent with the radiocarbon dating of an adjacent piece of hazel charcoal to 180calAD (2 σ range 127-223). It is very similar to a Roman spearhead found at South Shields (Marchant 1991, p253)



Figure 15: Spearhead. top: after conservation, bottom: X-ray image, right: close-up of split-socket.

Iron nails

Many iron nails and other small iron fragments were found, over 30 in all. Most were in 4000, but some in lower contexts. Some have been x-rayed. Their distribution is uneven across the trench, concentrated in a band running diagonally across the trench from the south-west corner (see Figure 16 below). This may be the trace of a wooden structure, possibly a fence.

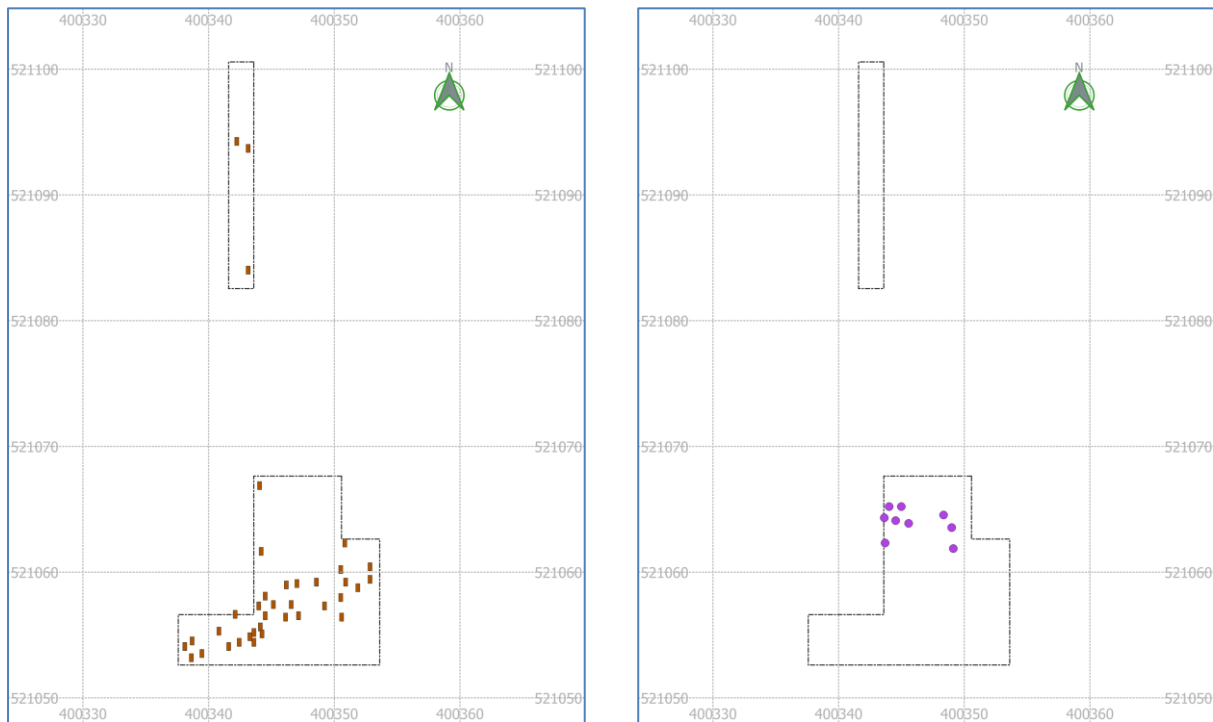


Figure 16: left: The distribution of iron nails. right: The distribution of definite mortarium sherds
Trench 4 at bottom, Trench 5 at top.

Coal, cinder, and industrial waste

Many of the contexts included coal and cinders. That these were indeed late prehistoric (not intrusive) was confirmed by the presence of both materials in environmental samples taken from the fill of the Iron Age ditches in Trench 5. Several small pieces of slag were found, probably from iron working.

In addition, there were four finds (from contexts 4003 and 4008) of possible copper slag, in two cases with clear blobs of copper alloy (4A151/4A306/4A310/4A314).

Mortaria

About twelve sherds of mortaria, not all definite, were found in contexts 4001 and 4006. These were of more than one vessel as the fabric varied, including cream and red types. Initial examination suggest that the sherds are of local wares (Piercebridge and Catterick). One sherd (find 4A171) was of a creamware (Piercebridge/Catterick) thought to date from 100 – 160 AD. The mortaria sherds were found in the northern part of the trench (see Figure 16 above).

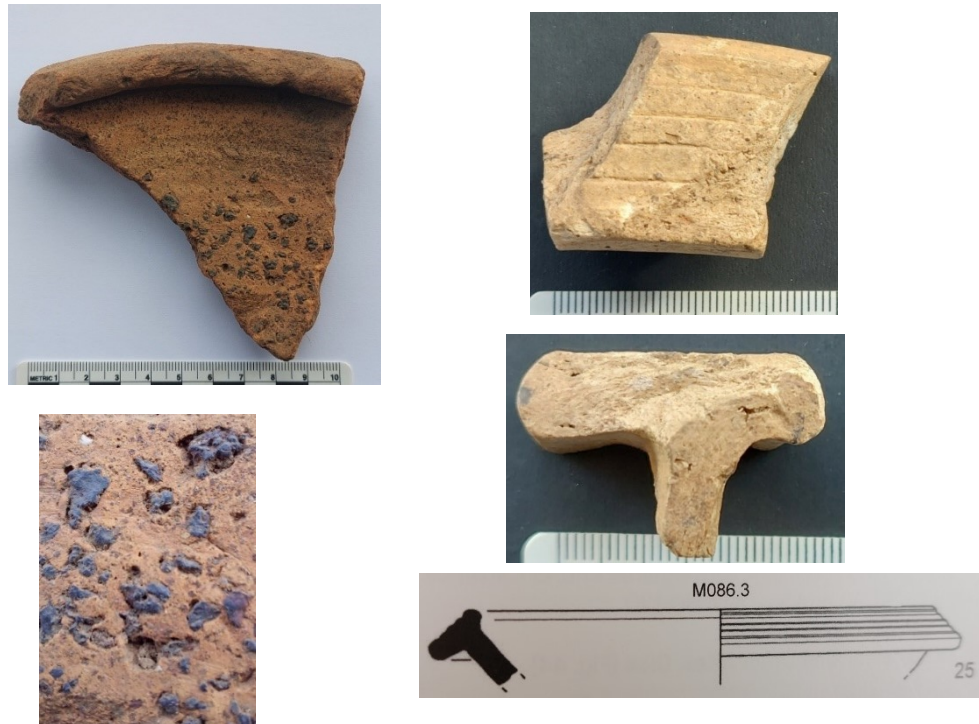


Figure 17: Mortaria sherds. top left: Probable Catterick ware sherd, bottom left: close-up, middle and top right: Probable Catterick or Piercebridge creamware sherd (2 views), bottom right: Illustration to show orientation of rim, from Ferris (2010).

Other pottery

About 200 sherds of pottery were found in total. Preliminary examination of these suggests that about 40 sherds are of crude “Iron Age” pottery (which may still have been made in the Roman period). Another 50 sherds (including the mortaria sherds) were of higher quality “Romano-British” wares, including Piercebridge, Catterick, and Black Burnished Wares. Only 3 sherds were medieval (plus one sherd of Tees Valley Ware, which may be medieval). The remaining sherds were post-medieval, uncertain, or unidentifiable. The distribution of sherds is shown in Figure 19 (below). They cluster in two areas, where the paved surfaces with quern stones were found. This suggests strongly that the paved surfaces are domestic rather than industrial.

Glass bangles

Pieces of broken glass bangles were found in Trench 4. Three pieces (4A069/72/73) were found in topsoil 4000; they may be part of the same bangle. A fourth piece (4A303) was found in context 4006: this is of a different glass type, so not from the same bangle as the other pieces. The pieces were of almost triangular cross section, made of opaque white glass.

Research on Romano-British bangles is summarised by Ivleva (2018). The Gueswick bangles are Type 3a (undecorated opaque white). Ivleva notes that it is likely that this type began to be manufactured in northern Britain around 60 AD as the Roman army occupied the area. Glass bangles disappear from Britain at the turn of the third century, as fashions changed towards black bangles of jet or shale. Hence our specimens were probably made in the date range 60 – 200 AD.

The distribution of Romano-British glass bangles is interesting as they have been largely found from the Humber north to the Antonine Wall in Scotland. Far fewer have been found in southern England and the Midlands. Large numbers have been found at military settlements such as Corbridge and Vindolanda, but they are also found at “native” settlements such as Traprain Law. They appear to have been widely available, not a luxury item.

The production site is unknown. Similarly, it is not clear how the bangles were worn: they come in a wide range of sizes. Ivleva, after trials with volunteers, concludes that they could have been worn on the upper arm as well as the wrist, and could have been part of a hairstyle (e.g. around a ponytail gathered up into a bun). Alternatively, some may have been used to decorate horse’s harnesses.



Figure 18: Fragments of white glass bangle.

Other glass

Several small fragments of glass were found. These are yet to be identified.

Flints

In all 19 pieces of probable flint and chert were found in the trench. All were small flakes, some broken (possibly debitage). The assemblage hasn't yet been analysed. The distribution appears to be random across the trench, as would be expected if they were residual from pre-Iron Age periods. The fairly high density of these artefacts may be the result of the Bronze Age presence on the site suggested by the summit cairn with cup-marked stones, by the cup-marked boulder found in Trench 5, and by the middle Bronze Age radiocarbon date for the packing material in the bottom of the palisade trench (see Trench 5 description, below).

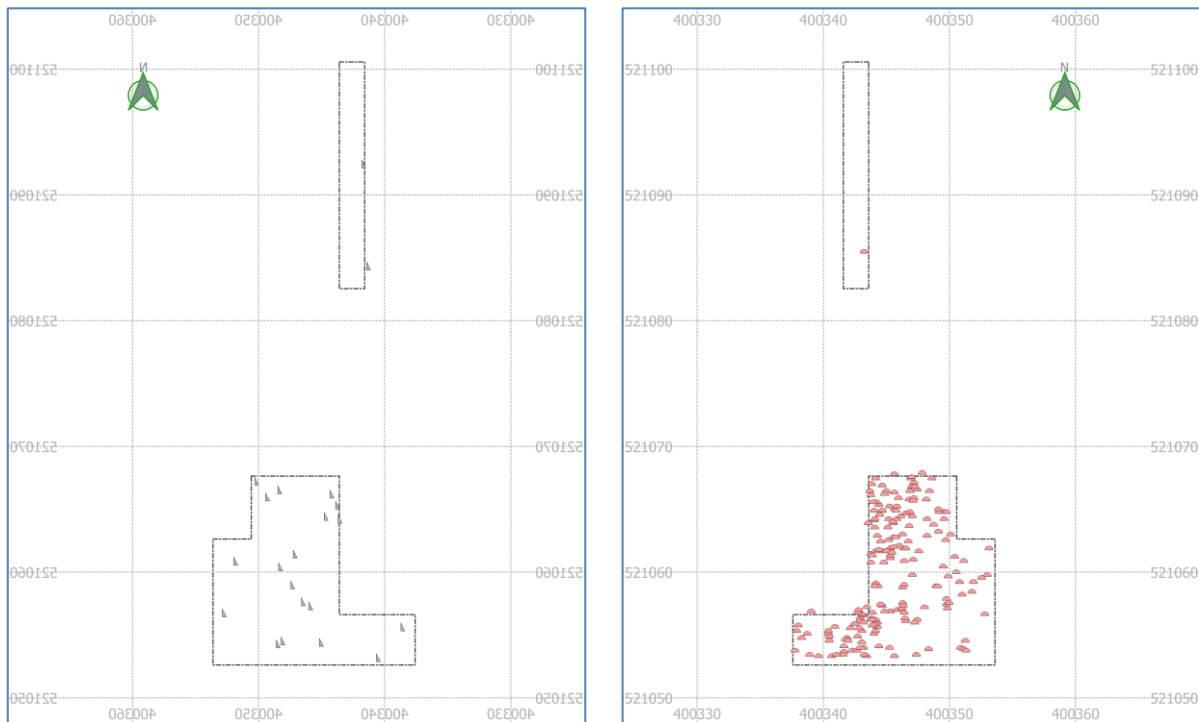


Figure 19: left: The distribution of flint/chert. right: The distribution of pot-sherds.
Trench 4 at bottom, Trench 5 at top.

2.3 Trench 4: radiocarbon date

Further information about the radiocarbon date, including certificate, radiocarbon age, and probability graph and ranges are given in Appendix 5. The Durham University full report on charcoal species identification is reproduced in Appendix 7.

A radiocarbon charcoal sample (hazel) from context 4006 gave a median date of **180 calAD** (2 σ range: 127-223). This was found adjacent to the Romano-British iron spearhead (find 4A285).

No other radiocarbon dates were obtained for this trench, nor were palaeoenvironmental samples taken, in view of the lack of well-sealed contexts and the intention to re-open and extend the trench in 2023.

2.4 Trench 4 discussion

As the trench is to be re-opened and extended in the 2023 summer excavation, it would be premature to discuss findings fully. In particular, the layout of structures is unclear as yet. The spread of stony layer 4003 across the trench, in which were finds dating from the Iron Age to the present, shows that the site has been much affected by ploughing. The lower contexts, however, seem to be intact, and do not contain post-Roman artefacts. The possibility of early medieval occupation of the site was hinted at by the annular brooch found in the 2021 excavation in the topsoil. However, no further evidence for this came to light in 2022, with the latest datable artefact being a Roman coin circa 300 AD.

The large number of finds, with dozens of pot-sherds of both Iron Age and Romano-British wares, is in excess of that normally found on upland northern sites. Some adoption of aspects of Roman culture is evident. The glass bangle fragments are of a type found in large numbers in Roman military sites (such as Corbridge and Vindolanda). The sherds of mortaria show that Roman-style cooking vessels were used. In addition, the Roman spearhead found next to charcoal dated to 180AD, also demonstrates contact: this could have been peaceful (e.g. an ex-soldier living in the settlement) rather than a sign of conflict. The two Roman coins (one found in 2021, the other in 2022) are also unusual finds for an upland northern site, suggesting close contact.

The distribution of pot-sherds, see Figure 19, shows concentrations on and around the two paved areas, strongly suggesting that these were in domestic buildings. The inclusion of four quern stones in the paving, and a hearth, makes it unlikely that they were just paved yards.

The environmental samples, the querns, and the spindle whorls demonstrate that this was an active settlement practicing mixed farming, with a full range of livestock, and growing spelt wheat and barley. There may also have been some industrial activities on the site, as shown by the slag (including melted copper) and glass droplets. Fuels used included coal, peat, and wood from a range of trees.



3 EXCAVATION FINDINGS, TRENCH 5

3.1 Trench 5: excavation results

This was excavated to explore the three ditches. The trench was placed to cross them separately with about 6m between their centre lines, based on the magnetometry survey since none of the ditches appear as surface features. There is a straight drainage gully (presumably post-medieval) cut into the topsoil running diagonally across the trench and obvious at the surface.

De-turfing exposed the topsoil 5000, a friable mid-brown silty loam. This was removed, below which was a plough-soil 5001, a dark grey/brown silty loam with small sorted stones across the whole trench. This was also removed, exposing the natural 5004 into which the three ditches were cut. The natural here is a yellow-brown sandy clay with inclusions of angular gravel; it is glacially-deposited moraine material. The superficial drain across the trench was found to be cut into the plough-soil 5001. On its north side was a wide thin lens of upcast material (1.5m wide, 8cm maximum height) which was loose light brown silty/sandy loam.



Figure 20: Trench 5 at completion of excavation, looking north-west.

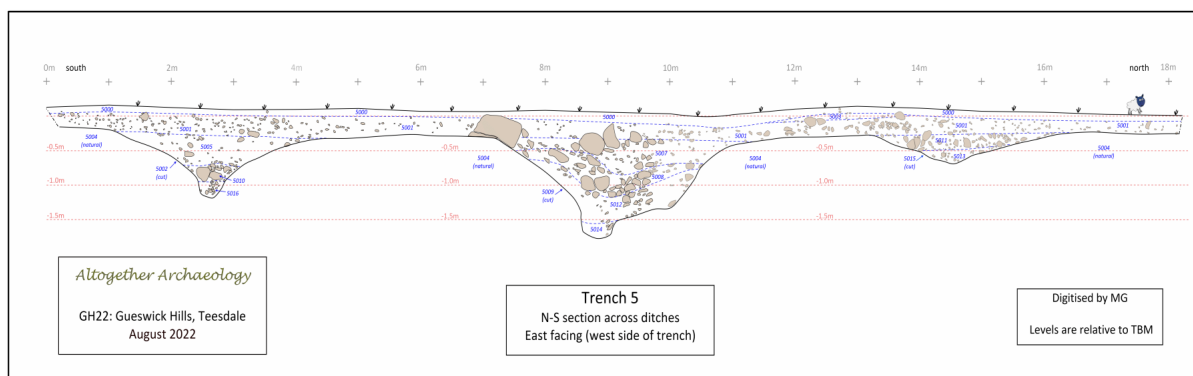


Figure 21: Section of full length of trench (west side). See Appendix 9 for enlarged version.

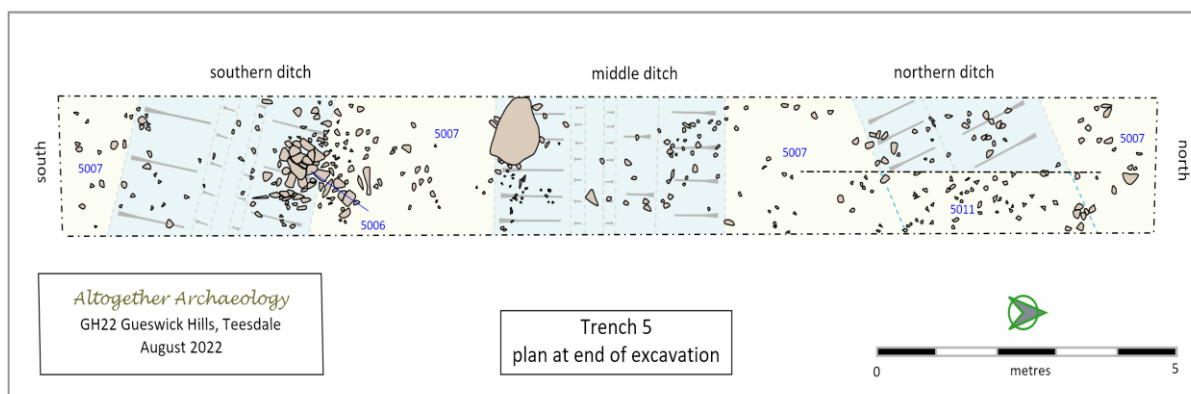


Figure 22: Trench 5 plan at end of excavation. See Appendix 9 for enlarged version.

The southern ditch, cut 5002, was 3.0m wide at its top. and cut 1.0m deep into the natural at its centre. It crossed the trench at a slight angle (WNW-ESE) as expected from the magnetometry survey. The slope of the sides steepened with depth and the ditch had a 30cm wide rounded base. On the northern edge of the ditch-cut was a slab 5006 of degraded and delaminating sandstone, probably glacially-deposited. Some split pieces of it had slid down the side of the ditch-cut.



**Figure 23: Southern ditch looking east (on left) and west (on right)
Vertical view (bottom) with north to right.**

There were three distinguishable contexts of the fill of the southern ditch. The uppermost context 5005 was a mid-brown silty loam that was very friable and had infrequent small rounded stones. It was about 40cm deep. The middle context 5010 was a 20cm deep layer of rounded cobbles, up to 20cm in diameter, set in a mid-brown silty clay matrix with some pebbles. The lowest context 5016 was a 20cm deep layer of angular pebbles up to 5cm diameter in a dark-brown silty clay matrix.

The middle ditch, cut 5009, was 4m wide at its top, and cut 1.6m into the natural at its centre. The southern side of the cut was of a consistent gradient for the top two thirds of the ditch, steepening to become near vertical in the bottom third. The northern side of the cut steepened with depth, then flattened out to form a platform at 50cm above the ditch's base, then steepening again to give a 50cm wide slot at the base of the ditch. On the southern edge of the cut was a sandstone boulder, which had split horizontally with the upper portion sliding by a few cm into the ditch cut. On its upper surface were multiple parallel score marks, probably from plough-damage.



Figure 24: Middle ditch, photographs looking east (*top left*) and west (*top right*).
Middle: Vertical photograph with north to right. White tags at top of section are at 2m intervals.
Bottom: Photogrammetry orthographic images looking east (*upper*) and looking west (*lower*).

There were four distinguishable contexts of the fill of the middle ditch. The uppermost context 5007 was a brown silty loam similar to the plough soil 5001 that lay over it, but with frequent stones of all sizes from 2cm to 20cm. It was 55cm deep in the centre of the ditch, but shallower at the edge. Below it was 5008, a 30cm deep band of rounded cobbles up to 25cm diameter (mostly about 10cm) in a brown silty matrix. It dipped towards the centre of the trench. Underneath it was the fill 5012 which was a mid-brown silty soil with some rounded cobbles up to 10cm. It was 50cm deep and dipped in the centre of the ditch. The lowest context 5014 filled the 25cm slot at the base of the cut. This was yellow silty clay with flecks of charcoal and many rounded cobbles from 6cm to 20cm diameter.



Figure 25: Middle ditch, before excavation of stones 5014 from slot at base of ditch.



Figure 26: Middle ditch, taking samples from section at end of excavation.

The northern ditch, cut 5015, was 3m wide at its top, and cut 50cm into the natural. The sides were shallow, with the edges of the cut difficult to distinguish. This ditch was only excavated in the western half of the trench (unlike the other two ditches which were excavated across the full width of the trench). Two contexts were noted in the fill. The upper context 5011 contained 50% cobbles mostly about 8cm diameter, though with some up to 15cm and all sizes down to 1cm gravel. Most were rounded, though some were angular. The matrix was a non-compacted pale brown silty loam. Below 5011 was the lower fill 5013, which was a yellow-brown compact silty clay with about 35% inclusions: angular stones up to 8cm diameter. It contained many small pieces of shaley coal and flecks of charcoal.



Figure 27: Northern ditch, looking west. White tags at top of section are at 2m intervals.
Top left: Photograph), Top right: Photogrammetry orthographic image.
Bottom: Trench 5 looking south-west, northern ditch in foreground.

Sequential vertical drone images of Trench 5 are shown in Appendix 6.

3.2 Trench 5: finds

Upper contexts

The topsoil 5000, contained a few modern finds: a pocket knife, some modern glass. The plough-soil 5001 contained a few finds: some modern pottery, an iron nail, cinder, a flint flake, and a small piece of lead sheet. The lens of upcast from the drain contained cinder, charcoal, coal, and an iron nail. There was also a blob of glass (find 510), suggesting glass working or re-working had taken place on the site; a similar blob was found during the 2021 excavation.

Thus, there were no definite medieval or pre-medieval finds from these upper contexts apart from a flint flake.

Southern ditch

The uppermost fill 5005 contained charcoal but no other small finds. The middle fill 5010 included charcoal fragments and a cup-marked boulder (find 544, described below). The lowest fill 5016 contained no finds.

Middle ditch

The uppermost fill 5007 contained coal, cinder, and charcoal. The upper-middle fill 5008 contained coal, slag, and charcoal. The lower-middle fill 5012 contained sherds of coarse pottery probably Iron Age, a flint flake, some fragments of animal teeth and bones, and charcoal. The lowest fill 5014 contained sherds of coarse pottery (probably Iron Age), charcoal, and pieces of burnt limestone.

Northern ditch

The uppermost fill 5011 contained no finds. The lower fill 5013 contained shaley coal fragments, charcoal, and sections of a probable mineralized stake with a pointed end. Laboratory examination by microscope failed to find any surviving structure in the mineral, so further identification is not possible.

Cup-marked boulder

A cup-marked boulder (find 544) was found in the middle fill 5010 of the southern ditch. It is gritstone, flat and irregular in shape (about 45cm x 40cm x 12cm). On one of the faces are several cups, which appear to have been pecked into its surface. There are three definite cups and two more possible ones. A cup-marked stone was previously found in the ruined wall by the summit cairn on the site, and there is a ground-fast cup-marked boulder close to the cairn (Brown and Brown 2008). Rock art in and near the site is discussed in the Gueswick Project Design (Green 2019)



Figure 28: The cup-marked boulder. On right are close-up views of the three definite cups, showing peck marks.

3.3 Trench 5: radiocarbon dates and palaeoenvironmental results

Further information about the five radiocarbon dates, including certificates, radiocarbon ages, and probability graphs and ranges are given in Appendix 5. The Durham University full report on the four palaeoenvironmental samples is reproduced in Appendix 7.

Southern ditch

A radiocarbon charcoal sample (hazel) from the upper fill 5005 gave a median date of **293 calBC** (2σ range: 358-169). A sample (salicaceae) from the middle fill 5010 gave a median date of **237 calBC** (2σ range: 357-108).

A palaeoenvironmental sample from the middle fill 5010 found coal, cinder, charcoal (mostly hazel and maloideae, with some oak, alder and ash), a charred hazel nutshell, and a barley grain.

Middle ditch

A radiocarbon charcoal sample (hazel) from the upper-middle fill 5008 gave a median date of **7 calBC** (2σ range: 92BC-71AD). A sample (maloideae) from the lowest fill 5014 gave a median date of **1260 calBC** (2σ range: 1386-1129).

A piece of charcoal found in the uppermost fill 5007 was identified as elm (sample C508a).

A palaeoenvironmental sample from the lower-middle fill 5012 found charcoal (mostly maloideae, with some hazel, oak, ash, and heather), a brome grass caryopsis, and spelt wheat chaff. A sample from the lowest fill 5014 found charcoal (mostly maloideae, with some hazel and heather), a brome grass caryopsis, and spikelet (?spelt wheat).

It was noted that the flots from these two contexts were similar, both being typical of the Late Iron Age and Roman period.

Northern ditch

A radiocarbon charcoal sample (hazel) from the lower fill 5013 gave a median date of **13 calBC** (2σ range: 97BC-68AD).

A palaeoenvironmental sample from the lower fill 5013 found charcoal (a few small fragments of prunus, oak, and heather) and shaley coal, but no plant remains.

3.4 Trench 5 discussion

The successful location of the three ditches, based purely on the magnetometry survey, validates the survey's accuracy and increases confidence in the existence of other features seen on it.

The nature of the southern ditch was uncertain before excavation, though it seemed possible that it was the ditch of an enclosed late prehistoric farmstead. The magnetometry survey suggests that it encloses a rectangular area about 50m x 60m, with rounded corners. However, the survey is not complete, with the expected south-east part of the enclosure not-surveyed due to the presence of a wire fence. This size and shape is consistent with its identification as being a late prehistoric settlement, though far from proving it. Such settlements in the North Pennines have a range of sizes, and can be curvilinear (predominating in e.g. Teesdale) or rectilinear (predominating in e.g. Weardale). Hamilton (2011) re-analysed data from enclosed settlements from the Tees to the Forth and suggested that many were founded in the Middle Iron Age, in the decades around 200BC.

The radiocarbon dating of two contexts of fill of the southern ditch to the third century BC fits well with this picture. The higher fill gave an earlier date than the lower fill, but the radiocarbon ages



differ only by 15 years, less than the uncertainty in each age, so the difference in dates is not significant. The species of wood are short-lived (hazel and salicaceae) so there is little doubt that the ditch fills do date from the Middle Iron Age. The environmental sample was consistent with this dating, as was the lack of any later finds in the fills. Any bank associated with the ditch has been lost by later occupation and by later ploughing across the site. Once again, as previously noted on the site, there was coal and cinder in the fills, showing that the use of coal as a fuel here pre-dated the Roman era.

The middle ditch was suspected to be a continuation of the palisade ditch excavated in 2021. The results of the excavation support this, with the ditch being of a similar size (significantly deeper than the southern ditch), and profile. The Late Iron Age radiocarbon date from the fill, 7cal BC, was also similar to that found in 2021. The environmental samples from two levels of the fill were also typically late prehistoric.

The palisade packing was different in the two stretches of ditch. In the 2021 excavated stretch, the palisade slot contained both stones and butchered animal bones. In 2022 there were only rounded cobbles. A radiocarbon date for charcoal in this packing was Middle Bronze Age; this strongly suggests that Bronze Age cairn stones were re-used as the packing material for the palisade. The cairns (one of which still exists on the hill, with associated rock art) would have been an obvious source of the cobbles, as the river is further away and 50m lower in altitude. Further evidence for a Bronze Age (or earlier) presence at Gueswick is the cup-marked stone found in the fill of the southern ditch. The alternative explanation, that the ditch is Bronze Age, was re-cut over a thousand years later, and then re-filled with Late Iron Age material, is not impossible but seems far less likely.

The northern ditch which was an enigma before excavation remains one. Its curving course on the magnetometry survey, crossing the palisade ditch at an acute angle, suggested that it belonged to a different phase, but it wasn't clear if it was earlier or later. Excavation found that it was broad and shallow, with a stony fill containing little organic material, scanty charcoal, and shaley coal. This seemed different in nature to the other two ditches. A radiocarbon date, however, of charcoal from the fill gave an almost identical Late Iron Age date to the fill of the palisade ditch. This doesn't of course mean they were cut at the same time. The range in the calibrated dates is over a century (at 95% probability) and in any case the dates of the fills may be significantly later than the date when the ditches were cut. The ditch is shallow and therefore there is more chance (though still not very likely) that the charcoal used for dating was intrusive. Overall, there is a strong likelihood that this ditch was constructed in or before the late Iron Age, but where exactly it fits into the phasing of the site is uncertain.

4 DISCUSSION

Further excavation is planned, so fuller discussion will follow later.

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7 APPENDIX 1: CONTEXT TABLE

This is the context table for both 2022 trenches

The details given of charcoal and bulk samples are brief summaries, see Appendix 7 for full details of the laboratory analysis.

Small finds are described in more detail in the Finds Table, Appendix 3, and the text. Only significant ones are listed here for each context.

NB plant species: *maloideae* is e.g. hawthorn or apple, *prunus* is e.g. blackthorn, *salicaceae* is e.g. willow or alder.

Context #	Type	Trench	Is above	Is below	Adjoins	Description
4000	Topsoil	4	4001	-		Topsoil over all of trench. Friable, mid-brown silty/sandy loam with a few small angular stones. Small finds: lead spindle whorl, pottery (modern, Tees Valley, Piercebridge, Catterick, Iron Age coarse ware, mortarium), slag, Fe nails, glass bangle fragments (R-B), whetstone, flint flakes
4001	Deposit	4	4003	4000		Soil beneath 4000 over all trench. Loose, friable matrix similar to topsoil 4000, but with frequent gravel up to 10mm, mostly angular. Small finds: pottery (modern, Tees Valley, medieval, Piercebridge, Catterick, Iron Age coarse ware, mortarium), slag, cinder, Fe nails, clay pipestem, flint flakes Charcoal samples: C1, C2
4002	Surface	4		4003		Flagstone floor surface in SW part of trench. Includes two quern stones (#1 and #2) used as flagstones, and a hearthstone: centrally blackened and fractured. Its S side is a laid cobble surface. See photographs and plans. Small finds: pottery (Romano-British)
4003	Deposit	4	4002 4004 4005 4006 4008 4010	4001		Cobbles (rounded and some angular) over surface 4002 and rest of trench. In matrix of mid-brown friable silt. Stones 8cm to 20cm. Forms uncompacted layer 10cm to 15cm thick. Small finds: lead spindle whorl, whetstone, pottery (Romano-British, Black Burnished, Catterick, mortarium, Iron Age coarse ware), cinder, coal, slag, copper slag, Roman coin (circa 300AD), penannular brooch (1 st century AD?), worked flint/chert flakes Charcoal samples: C3, C6, C8, C10, C12, C14, C17



Context #	Type	Trench	Is above	Is below	Adjoins	Description
4004	Surface	4		4003		Flagstone surface under 4003 in NW part of trench. Includes two quern stones (#3 and #4) used as flagstones. Not lifted, left in situ for next season. See photographs and plans. Small finds: flint flake Charcoal samples: C19
4005	Deposit	4	4007 4009	4003		Small angular stones, 3cm to 10cm. Underneath the spread of larger cobbles 4003 in the E side of the trench. Appears featureless spread. Three areas of it excavated to show natural 4007 beneath. Small finds: pottery (Iron Age coarse ware, mortarium), coal, slag, cinder
4006	Deposit	4	4007	4003		Yellow/brown clay/silt. Beneath 4003. To W of floor surface 4002 in SW part of trench. Not compacted. Includes small medium rounded & and angular stones. Overlies probable natural, as described in 4007. Small finds: pottery (Iron Age coarse ware), glass bangle fragment (R-B), spearhead (circa 180AD), Fe nail Charcoal sample: C21a (hazel, radiocarbon dated to 180 calAD)
4007	Natural?	4		4005 4006		Yellow/brown silty clay with sand and some angular (broken) stones and larger rounded stones. Below 4005. Natural? Small finds: chert flake
4008	Surface	4		4003		Irregular flagstone surface to E of surface 4004. Not closely laid. Set in mid-brown silty clay. Possibly a pathway from building floor 4004. Small finds: corroded copper blob, copper slag?
4009	Deposit	4		4005		Rounded patch of small to medium cobbles at N end of trench. Is in a hollow in the ground surface (seen on lidar image, Figure 4). See photos/plan. Small finds: none
4010	Surface	4		4003		Well-bedded well-laid cobble surface between flagstone floors 4002 and 4004. Stones 10cm to 25cm. runs from W edge of trench eastwards. Small finds: none
5000	Topsoil	5	5001 5003	-		Topsoil, over whole trench. Friable, mid-brown silty/sandy loam with a few small angular stones. 10cm deep. Small finds: modern pocket knife, modern glass



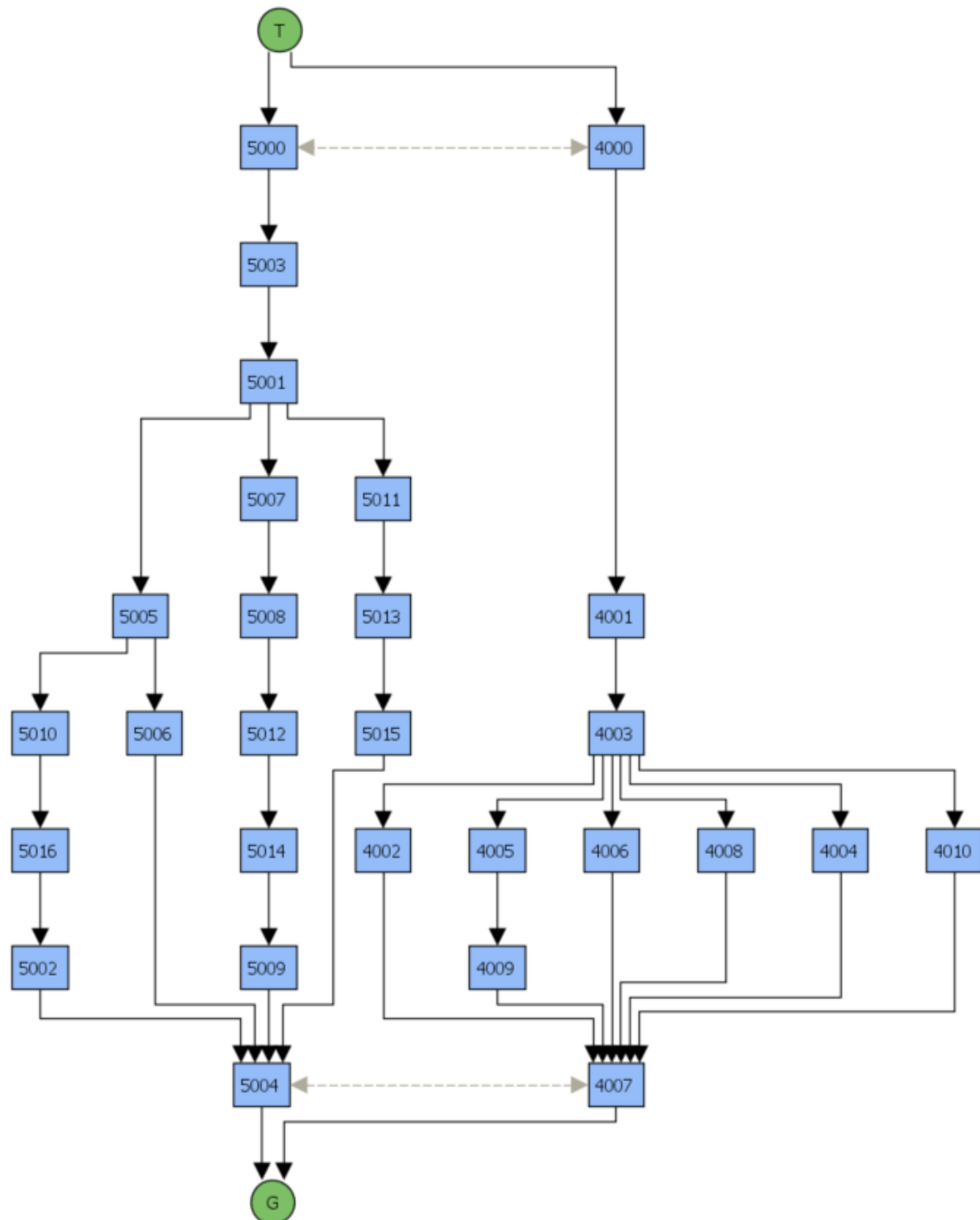
Context #	Type	Trench	Is above	Is below	Adjoins	Description
5001	Deposit	5	5005 5007 5011 5006	5000 5003		<p>Plough sorted layer under topsoil across whole trench, and over ditch cuts and their fills. Grey/dark-brown silty, with small angular sorted stones. Medium compaction. 30cm deep.</p> <p>Small finds: cinder, fragment of lead sheet, pottery (modern), Fe nail, flint flake, glass blob.</p> <p>Charcoal samples: C501</p>
5002	Cut	5	5004	5016		<p>South ditch: cut of ditch. See section drawing. Wide (3m) and fairly deep (1m). Sides shallow at top, steepening towards base.</p> <p>Small finds: none (cut)</p>
5003	Deposit	5	5001	5000		<p>Lens of soil under topsoil, probable upcast from post-medieval drainage ditch, or a plough rigg. Light brown, friable, silty/sandy. Runs in 1.5m wide band E-W across trench, parallel and to N of linear depression (seen on lidar and on the ground).</p> <p>Small finds: Fe nail, cinder, coal, charcoal</p>
5004	Natural	5		5002 5006 5009 5015		<p>Yellow-brown sandy clay and angular gravel. Natural, glacial moraine deposit. Ditches are cut into this.</p>
5005	Deposit	5	5006 5010	5001		<p>South ditch: upper fill. Mid-brown soft silty soil, friable, including a very few small rounded stones. Approx 50cm deep.</p> <p>Small finds: none</p> <p>Charcoal sample: C509 (hazel, radiocarbon dated to 293 calBC)</p> <p>Bulk sample: 503 (charcoal (hazel, maloideae, oak, alder, ash), coal, cinder, hazel nutshell, barley, grass)</p> <p>DNA sample sent (no result notified)</p>
5006	Geology	5	5004	5001 5005		<p>Area of fragmented sandstone on N edge of South ditch. Shattered de-laminated boulder, held fast in the natural 5004. It is overlain by the upper fill 5005 of the ditch</p> <p>Small finds: none</p>

Context #	Type	Trench	Is above	Is below	Adjoins	Description
5007	Deposit	5	5008	5001		<p>Middle ditch: upper fill. Mid-brown soft loam with some small and larger stones to 20cm. Under plough-soil 5001. 35cm deep. Over Stony fill 5008.</p> <p>Small finds: coal, cinder</p> <p>Charcoal samples: C504, C507, C508 (elm)</p> <p>DNA sample sent (no result notified)</p>
5008	Deposit	5	5012	5007		<p>Middle ditch: middle fill. Over fill 5012. Large rounded cobbles 10cm to 25cm in a matrix of loam similar to the fill above, 5007. Probably cobbles tipped into ditch. 35cm deep.</p> <p>Small finds: coal, slag</p> <p>Charcoal samples: C506, C510, C511, C520, C521, C522, C512 (hazel, radiocarbon dated to 7calBC)</p>
5009	Cut	5	5004	5014		<p>Middle ditch: cut of ditch. See section drawing. Wide (4m) and deep (1.5m). The bottom is fairly flat apart from a 25cm deep, 40cm wide, slot cut into its S side (for palisade?).</p> <p>Small finds: none (cut)</p>
5010	Deposit	5	5016	5005		<p>South ditch: middle fill. Above fill 5016. Medium rounded cobbles 10cm, in a mid-brown sandy/silty/clay matrix. Approx 25cm deep.</p> <p>Small finds: cup-marked stone</p> <p>Charcoal samples: C525, C513 (salicaceae, radiocarbon dated to 237calBC)</p>
5011	Deposit	5	5013	5001		<p>North ditch: upper fill. Medium stones, all sizes 1cm to 15cm, some rounded, some angular. In loose pale brown silty loam. 25cm deep.</p> <p>Small finds: none</p>
5012	Deposit	5	5014	5008		<p>Middle ditch: lower fill. Below fill 5008 and above the stones 5014 in bottom of ditch. Brown silty sandy loam. Contains charcoal. 40cm deep</p> <p>Small finds: animal teeth, animal bone, pottery (unidentified red ?coarse Iron Age ware), flint flake</p> <p>Charcoal samples: C515, C530, C 528 (oak)</p> <p>Bulk sample: 505 (charcoal (maloideae, oak, ash, hazel, heather), spelt wheat, brome grass)</p> <p>DNA sample sent (no result notified)</p>



Context #	Type	Trench	Is above	Is below	Adjoins	Description
5013	Deposit	5	5015	5011		<p>North ditch: lower fill. Fine silty yellow-brown clay. With 35% small angular stones. 25cm deep.</p> <p>Small finds: mineralised stake, shaley coal</p> <p>Charcoal sample: C514 (hazel, radiocarbon dated to 13calBC)</p> <p>Bulk sample: 507 (charcoal (prunus, oak, heather), coal</p> <p>DNA sample sent (no result notified)</p>
5014	Deposit	5	5009	5012		<p>Middle ditch: lowest fill: rounded cobbles, 6cm to 20cm, in slot-like base of ditch-cut. In yellow clay matrix. Contains charcoal. Fill of palisade slot? 25cm deep.</p> <p>Small finds: burnt limestone, pottery (unidentified ?Iron Age coarse ware),</p> <p>Charcoal sample: C531 Hazel charcoal from flot radiocarbon dated to 1260calBC</p> <p>Bulk sample: 501 (charcoal (maloideae, heather, hazel), spelt wheat (?), brome grass).</p> <p>DNA sample sent (no result notified)</p>
5015	Cut	5	5004	5013		<p>North ditch: cut of ditch. See section drawing. Wide (3m) and shallow (50cm)</p> <p>Small finds: none (cut)</p>
5016	Deposit	5	5002	5010		<p>South ditch: lowest fill. Small rounded gravel 5cm, in a mid-brown sandy/silty/clay matrix. Approx 25cm deep.</p> <p>Small finds: none</p>

8 APPENDIX 2: HARRIS MATRIX FOR BOTH TRENCHES



9 APPENDIX 3: SMALL FINDS TABLES

The finds are shown in a separate table for each of the two trenches. Finds are cross-referenced in the context table. Preliminary pottery identification by Tony Metcalfe. Tees Valley Ware is an ill-defined category, due to lack of comparison sites; it is based on the fabric of the pot and, although originally used for medieval pottery, may also include earlier wares. Black Burnished Ware, Piercebridge Ware and Catterick Ware are all Romano-British pottery wares. The “description as logged” may not be accurate as it was noted by the finder before the find was washed.

Latitude and longitude are given in decimal degrees.

Prefix longitude by “-1.99” and latitude by “54.58” to give full values.

e.g. the full co-ordinates for find 401 are: longitude -1.996164 and latitude 54.584766

Abbreviations used:

IA Iron Age

CBM ceramic building material

Cu copper

BA Bronze Age

Fe iron

RB Romano-British

Trench 4

Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
8	401	4000	6164	4766	bone	AN	bone?	
8	402	4000	6152	4756	pot	SB	rim, unglazed red	
8	403	4000	6153	4745	pot	SB	rim, some glaze, cream ?medieval	
8	404	4000	6089	4738	pot	MC	small frag orange. ?CBM	
8	405	4000			pot	MJ	small frag orange. ?CBM	
8	406	4000			Fe	MM	gate hanger ?post- med	
9	407	4000	6170	4729	Fe slag?	MM	slag	slag
9	408	4000	6093	4764	pot	RY	willow pattern	TM: transfer pattern
9	409	4000	6102	4769	glass	US	modern fragment	
9	410	4000	6097	4730	Fe	MC	hand drawn nail	
9	411	4000			lead	SB	perforated weight	TM: spindle whorl
9	412	4000			pot	US	modern white/blue glaze	
9	413	4000	6097	4750	Fe	RY	corroded unidentifiable	
9	414	4000	6119	4755	pot	MM	modern	
9	415	4000	6123	4753	CBM	MM	fragment tile?	
10	416	4000	6132	4752	flint	SB	part of flake	MG:broken flake 1.5x1x0.4
10	417	4000	6129	4751	pot	SB	willow pattern	
10	418	4000	6132	4750	stone	SB	natural stone	MG: natural stone. disposed
10	419	4000	6127	4741	Fe	US	corroded fragment	MG: rusty Fe, 3x1x0.3
10	420	4000	6117	4724	Fe	AN	nail shaft?	
10	421	4000	6128	4726	glass	US	very thin frag	
10	422	4000	6077	4756	Fe	MM	nail	
10	423	4000	6140	4735	Fe	An	knife blade?	
10	424	4000	6164	4739	flint	KF	flint fragment	
10	425	4000	6061	4743	slag	SB	slag	slag
10	426	4000	6149	4717	Fe	SE	nail tip?	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
10	427	4000	6138	4722	Fe	MG	bent nail, rect cross-section	
10	428	4000	6124	4737	Fe	SB	nail	
10	429	4000	6122	4737	Fe	KF	corroded fragment	
10	430	4000	6092	4769	Fe	SB	nail	
10	431	4001	6129	4751	pot	MM	tiny red sherd unglazed	
11	432	4001	6132	4750	pot	AJ	?RB	TM: Iron Age
11	433	4001	6127	4741	pot	AJ	?RB/IA	TM: Iron Age
11	434	4001	6117	4724	Fe	MG	nail	
11	435	4001	6115	4751	pot	US	black ?RB	
11	436	4001			CBM	AN	?CBM	
11	437	4001	6109	4744	pot	KF	rim or base, parallel lines, cream	TM: mortarium – probably Piercebridge or Catterick Ware
11	438	4001	6101	4758	pot	BA	pot	TM: Iron Age
11	439	4001	6109	4736	Cu alloy	AN	Cu alloy	
11	440	4001			pot	AJ	pot	
11	441	4001	6094	4765	Fe oxide	BA	bit of ochre	
11	442	4001	6090	4755	pot	BA	pot	
11	443	4001	6109	4731	ceramic	BM	clay pipe	
11	444	4001	6107	4736	daub	AJ	daub	
11	445	4001	6095	4740	pot	KF	pot rim, R-B?	TM: Romano-British, 14cm diameter rim
11	446	4001	6091	4741	Fe	KF	corroded fragment	
11	447	4001	6109	4707	ceramic	MG	pipe stem	
11	448	4001	6084	4741	slag	KF	slag	MG: slag, 3x1x1
11	449	4001	6096	4716	Fe		nail shaft	
11	450	4001	6078	4740	pot	KF	black, coarse	
11	451	4001	6080	4733	pot	AJ	black, coarse	
12	452	4001	6077	4738	Fe	AJ	hook	
12	453	4001	6076	4737	Fe	AJ	?small nail	
13	454	4001	6085	4716	glass	JA	small frag, clear	
13	455	4000	6145	4762	pot	VS	black burnished?	
13	456	4000	6061	4745	pot	KF	green-glaze medieval?	
13	457	4001	6150	4761	chert	VS	small piece	
13	458	4001	6055	4756	Fe	BA	corroded	
13	459	4001	6163	4755	pot	VS		TM: rim of pot 20cm diameter. Cream ware covered in brown slip. Probably Piercebridge Ware.
13	460	4001	6059	4766	charcoal	BA	charcoal	
13	461	4001	6168	4735	Fe	DG	small fragment	
13	462	4001	6164	4764	pot	VS		TM: Iron Age
13	463	4001	6158	4725	Fe	KF	nail?	
13	464	4001	6161	4764	pot	US	small, IA?	
13	465	4001	6161	4712	pot	AJ	small, glazed	
13	466	4001	6162	4714	pot	AJ	rim, black-brown	
13	467	4001	6163	4718	pot	KF	base, small red	
13	468	4001	6160	4723	Fe	KF	flat fragment	
13	469	4001	6165	4774	pot	US	base	TM: probably Catterick Ware



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
14	470	4001	6088	4698	pot	BA	poor quality ?IA	
14	471	4001			Fe	VS	nail	
14	472	4001	6094	4693	pot	MS	green-glaze	TM: medieval
15	473	4001	6059	4691	glass	SB		
15	474	4001	6129	4697	flint	CB	small piece	
15	475	4001	6090	4692	pot	BA	IA type	
15	476	4001	6128	4693	stone	CB	"uneven material" (?)	
15	477	4001	6100	4693	stone	MS	small whetstone	
15	478	4001	6148	4688	pot	MJ	thin orange	
15	479	4001			slag	BA	slag	
15	480	4001	6175	4687	pot	BM	IA type	TM: Iron Age
15	481	4001	6180	4719	pot	RV	natural stone	MG: natural stone. disposed
15	482	4001			pot	RV		
15	483	4001	6190	4717	Fe	HV	nail?	
15	484	4001	6187	4719	pot	RV		
15	485	4001	6282	4709	flint	MJ	scrap	
15	486	4001	6063	4719	flint	SB		
15	487	4000			coal	HV		
15	488	4000	6196	4711	pot	BV		
15	489	4000	6173	4756	CBM	SA	worn tile	
15	490	4000	6202	4718	pot	MA		
15	491	4000	6227	4691	pot	HV		TM: 18cm diameter rim. Buff. Probably Piercebridge Ware
15	492	4000	6196	4709	Fe	BV	nail	
15	493	4000	6289	4695	Fe	AB	nail	
15	494	4000			Fe	DG		
15	495	4000			Fe	DG	angled	
15	496	4000	6202	4700	glass	BM	fragment	
15	497	4000	6196	4708	pot?	BV		
15	498	4000	6227	4718	Fe	DG	nail or hook?	
15	499	4000	6295	4705	pot	CB	unglazed	
15	4A001	4000			Fe	AB	hook	
15	4A002	4000	6190	4715	Fe	MA	part of tool?	
15	4A003	4000	6199	4710	pot	BV	glazed green/blue, white stripe	
15	4A004	4000			flint	DG	small fragment	
15	4A005	4000	6202	4709	pot	BV	glazed green/blue, white stripe. 4 sherds	
15	4A006	4000			flint	MV		
16	4A007	4000	6211	4716	glass	HV	glass with bubbles	TM: early glass
16	4A008	4000	6217	4714	pot	HV	white	
16	4A009	4000	6186	4712	pot/CBM	US	orange pot or CBM	
16	4A010	4000	6217	4712	pot	HV	blue & white	
16	4A011	4000	6203	4714	pot	BV	thrown	TM: Tees Valley Ware
16	4A012	4000	6211	4714	slag	BV	large lump	
16	4A013	4001	6172	4720	pot	RP		TM: Iron Age
16	4A014	4000	6228	4719	Fe?	RV	?Fe	
16	4A015	4000	6180	4709	slag	US		
16	4A016	4000	6213	4711	pot	BV	?IA	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
16	4A017	4001	6289	4701	stone	MA	natural stone	MG: natural stone. disposed
16	4A018	4001	6281	4702	clinker	MJ		
16	4A019	4001	6247	4706	Fe	SB	nail?	
16	4A020	4000	6215	4705	pot	HV	IA?	TM: Iron Age
16	4A021	4001	6280	4699	Fe	MJ	nail	
16	4A022	4001	6255	4703	glass	SB		
16	4A023	4000	6211	4711	stone	BV	natural stone	MG: natural stone. disposed
16	4A024	4000	6283	4689	slag	MJ	metal slag	
16	4A025	4000	6224	4714	slag	BV	tapping slag	
16	4A026	4000	6224	4714	metal	BV	metal	
16	4A027	4001	6074	4699	charcoal	BA		
16	4A028	4001	6166	4721	Fe	RP	sliver	
16	4A029	4001	6166	4721	pot	RP	glazed	
16	4A030	4001	6235	4695	Fe	SB	nail?	
16	4A031	4001	6165	4725	pot	RP	crude	TM: Iron Age
16	4A032	4000	6224	4710	pot	BV		TM: Iron Age
16	4A033	4001	6228	4697	stone	SB	carved?	
16	4A034	4000	6224	4709	slag	BV	non-metallic	
16	4A035	4001	6097	4711	stone	BA	natural stone	MG: natural stone. disposed
16	4A036	4000	6223	4709	metal	BV		
16	4A037	4001	6064	4717	pot	US	spout?	TM: pot rim
16	4A038	4001	6167	4728	cinder	RP		MG: cinder, 3x2x1
16	4A039	4000	6262	4696	slag	MA	metal slag	
16	4A040	4000	6223	4708	metal	BV		
16	4A041	4000	6210	4688	daub	HV		
16	4A042	4000			pot	MC		
16	4A043	4000	6209	4687	pot	HV		
16	4A044	4000	6212	4688	pot	HV		TM: small fragments earthenware
16	4A045	4000	6180	4764	pot	MJ	cream	TM: Cream ware with remains of brown slip. Romano-British, Probably Catterick Ware
16	4A046	4001	6099	4747	pot	BA	earthenware	
16	4A047	4000	6233	4700	pot	BV	glazed	TM: cream glazed interior
16	4A048	4000	6180	4757	pot	MJ	cream	TM: rim of pot 20cm diameter. Cream ware covered in brown slip. Probably Piercebridge Ware
17	4A049	4000	6209	4702	Fe	US	nail	
17	4A050	4001	6200	4703	pot	MA	IA base	TM: Iron Age
17	4A051	4001	6220	4701	pot	US	IA	TM: Iron Age
17	4A052	4001	6180	4725	Fe	RP	nail	
17	4A053	4001	6213	4699	Fe	US		
17	4A054	4001	6213	4716	pot	US	degraded	TM: Probably Catterick Ware with brown slip
17	4A055	4001	6204	4698	Fe	MA	nailhead?	
17	4A056	4001	6198	4739	pot	JR		TM: Brown glaze on interior
17	4A057	4001	6214	4714	Fe	US	same as 4A053	TM: Creamware fabric
17	4A058	4001	6196	4723	Fe	RP	thick, corroded	
17	4A059	4001	6190	4723	pot	RP	plough tip?	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
17	4A060	4000	6155	4816	pot	GF	modern	
17	4A061	4000	6191	4745	pot	MA	modern	TM: Brown glaze on interior
17	4A062	4001	6211	4694	Fe	MA		
17	4A063	4001	6213	4693	pot	MA		
17	4A063 A	4000	6204	4760	pot	SW		TM: Iron Age
17	4A064	4001	6218	4707	pot	US		TM: Tees Valley Ware?
17	4A065	4001	6221	4691	pot	US		TM: Iron Age
17	4A066	4001	6190	4731	Fe	JR	nail	
17	4A067	4001	6209	4689	Fe	MA		TM: Iron Age pot fragment
17	4A068	4001	6192	4733	glass	JR		
17	4A069	4000	6207	4749	glass	SA	RB bangle fragment	TM: Width 14.00mm, diameter 9.18mm Glass bangle, same colour as 4A072
17	4A070	4001	6215	4697	pot	US	IA	
17	4A071	4001	6198	4724	Fe	RP	2 nails & slag	
17	4A072	4000	6131	4776	glass	SC	RB bangle fragment	TM: Width 15.67, diameter 8.64mm Glass bangle, same colour as 4A069
18	4A073	4000	6190	4781	glass	SW	RB bangle fragment?	
18	4A074	4000	6176	4783	pot	VS	mortarium	TM: mortarium rim, 35.35mm. Probably Catterick/Piercebridge Ware
18	4A075	4000	6192	4785	pot	SW	poss same as 4A074	TM: mortarium
18	4A076	4001	6182	4770	pot	KF	black, coarse	TM: Iron Age
18	4A077	4001	6192	4769	pot	KF	black coarse base IA?	TM: Iron Age, good example
18	4A078	4001	6181	4794	pot	US		TM: part of a rim, creamware
18	4A079	4000	6197	4810	Fe	RP	nail?	
18	4A080	4000	6202	4759	pot	BJ	IA	TM: Iron Age, fragment
18	4A081	4001	6114	4785	pot	US	coarse IA	TM: mortarium
18	4A082	4002			pot	SC	orange rim	TM: Romano-British, traces of slip
18	4A083	4001	6114	4790	pot	HV		
18	4A084	4001			stone	BA	natural stone	MG: natural stone. disposed
19	4A085	4001	6170	4800	pot	VS	orange	
19	4A086	4001	6193	4788	?pot	PG	black?	
19	4A087	4001	6157	4799	pot	BS	orange	
19	4A088	4001	6120	4790	pot	SC	orange	
19	4A089	4001	6190	4788	stone	PG	natural stone	MG: natural stone. disposed
19	4A090	4001	6188	4788	flint	PG	struck flake	
19	4A091	4001	6174	4804	slag	US	blue	MG: slag, partly glassy, fairly low density, 2.5x2x2cm
19	4A092	4001	6121	4792	pot	SC	orange	
19	4A093	4001	6175	4804	pot	PG	degraded, abraded	
19	4A094	4001	6190	4791	pot	PG	black curved	
19	4A095	4001	6190	4791	pot	US	IA	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
19	4A096	4001	6151	4800	pot	BS	orange	
19	4A097	4001	6185	4805	pot	US	IA	
19	4A098	4001	6195	4763	Fe	KF	nail head, in 2 pieces	
19	4A099	4001	6202	4796	flint	SC		
19	4A099 A	4001	6119	4801	coal	EY		MG: coal
19	4A100	4001	6194	4795	pot	EY	degraded abraded grey-black	
19	4A101	4001	6200	4797	slag/Fe	EY	smelting or casting waste	
19	4A102	4001	6201	4796	cinder	EY		MG: cinder, 2x2x1.5
19	4A103	4001	6154	4808	pot	BS	IA	
19	4A104	4001			pot	SC	orange	
19	4A105	4001	6116	4802	flint	JA	microlith?	
19	4A106	4001	6147	4806	pot	BS	Samian?	TM: Rim 16cm diameter, not Samian
19	4A107	4001	6189	4762	pot	KF	coarse, black inside	
19	4A108	4003	6222	4691	stone	KH	whetstone	
19	4A109	4003	6222	4690	stone	KH	quern?	
19	4A110	4003	6222	4698	Fe	RH	nail	
19	4A111	4003	6220	4690	Fe	KH	large bolt?	
19	4A112	4003	6217	4693	pot	KH	black burnished	
19	4A113	4001	6180	4809	glass	US		
19	4A114	4001	6150	4808	bone	BS	burnt bone?	
19	4A115	4001	6188	4791	stone	PG	soft makes marks	
19	4A116	4001	6221	4687	glass	US		
19	4A117	4001	6182	4810	stone	SC	whetstone	
19	4A118	4001	6132	4805	pot	GF	black burnished	
19	4A119	4003	6213	4693	Fe	KH	bolt?	
19	4A120	4001	6172	4785	pot	PG	black tempered curved	
19	4A121	4003	6196	4773	pot	KF	degraded, Samian?	
19	4A122	4003			pot	KH	black burnished	TM: Black Burnished Ware
19	4A123	4001	6129	4814	pot	SC	black burnished	
19	4A124	4001	6175	4792	pot?	PG	very degraded, cream	
19	4A125	4001	6131	4807	flint	JS		
19	4A126	4001	6155	4814	pot	BS	orange	
19	4A127	4001	6151	4811	pot	BS	black burnished	
19	4A128	4000	6201	4799	stone	JC	natural stone	MG: natural stone. disposed
19	4A129	4001	6172	4794	pot	PG	black inclusions in fabric	TM: Mortarium
19	4A130	4001	6154	4815	pot	BS	black, IA?	
19	4A131	4005	6204	4708	slag	UF		
20	4A132	4003	6059	4764	pot	DC	white	
20	4A133	4003	6185	4762	pot	AJ	rim, white with dark glaze	TM: Probably Catterick Ware with brown slip, 25cm diameter
20	4A134	4003	6188	4754	pot	BS	base sherd, orange	TM: Probably Catterick Ware, similar fabric to mortaria



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
20	4A135	4003	6192	4764	stone	JC	natural stone	MG: natural stone. disposed
20	4A136	4003	6235	4699	pot	AB		
20	4A137	4003	6194	4694	pot	KH	red	
20	4A138	4003	6204	4705	Fe	RH	nail head	
20	4A139	4003	6180	4759	pot	AJ	black burnished?	
20	4A140	4003	6177	4759	CBM	AJ		
20	4A141	4001	6134	4809	bone	JS		
20	4A142	4003	6178	4761	pot	AJ	rim	
20	4A143	4003	6237	4690	pot	CB		
20	4A144	4003	6215	4717	pot	DC		
20	4A145	4003	6194	4704	Fe	RH	nail	
20	4A146	4003	6220	4718	pot	DC	poor quality	
20	4A147	4003	6198	4762	pot	JC	black burnished?	
20	4A148	4003	6169	4766	pot	AJ	rim, black	
20	4A149	4003	6219	4720	pot	DS	brick colour	TM: Iron Age probably
20	4A150	4003	6182	4698	flint	RH	worked?	TM: worked flint
20	4A151	4003	6175	4768	Cu	AJ	copper slag & surrounding soil	MG: amorphous lump Cu alloy, one ended blobby; melted? NB, metallic on detector testing. 3x1.5x1
20	4A152	4001	6135	4773	pot	JA		
20	4A153	4003	6178	4773	glass	AJ	blue/green	
20	4A154	4000	6262	4718	stone	SS	whetstone	TM: whetstone
20	4A155	4003	6208	4717	clinker	AJ		MG: cinder
20	4A156	spoil- heap			pot	BA		
20	4A157	4001	6178	4774	stone	BA	stone with plough wear	
20	4A158	4003	6061	4752	Fe	DC	part of nail?	
20	4A159	4003	6204	4713	pot	DC		
20	4A160	4003	6202	4709	pot	DC		TM: mortarium probably Catterick Ware
20	4A161	4003	6198	4705	pot	DC		
20	4A162	4003	6176	4772	pot	AJ	rim, black/green	
20	4A163	4003	6173	4772	pot	AJ	rim, black	
20	4A164	4003	6141	4818	pot	JS	rim	
20	4A165	4003	6194	4763	pot	JC	"base, BB ware" bag labelled "165" contains a stone (disposed)	
20	4A166	4003	6209	4722	pot	JS		TM: daub
20	4A167	4003	6158	4776	bone	AJ		
20	4A168	4003	6196	4707	Fe	DC		
20	4A169	4003	6175	4701	slag	RH	iron slag?	
20	4A170	4001	6121	4776	pot	JA		
20	4A171	4003	6165	4786	Cu alloy	AJ	coin	TM: Roman coin. Nummus of ? Galerius 293-305
20	4A172	4003	6198	4713	pot	DC		
21	4A173	4003	6237	4689	slag	CB		
21	4A174	4003	6157	4780	pot	AJ	rim, black	TM: 11cm diam rim, slip covered, probably Romano- British
21	4A175	4003	6167	4787	pot	AJ	red	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
21	4A176	4003	6238	4688	pot	CB	rim	TM: Iron Age, 14cm diam rim
21	4A177	unstrat			pot? stone?		broken whorl?	
21	4A178	4003	6154	4778	bone?	AJ		
21	4A179	4003	6193	4719	Fe	KF		
21	4A180	4003	6266	4711	lead	AB	spindle whorl	TM: lead spindle whorl
21	4A181	4003	6176	4782	pot	AB	body	
21	4A182-7	not used	-	-				
21	4A188	4003	6190	4718	Fe	KF		
21	4A189	4003	6169	4784	CBM	AJ		
21	4A190	4003	6252	4687	flint	CB		TM: flint
21	4A191	4003	6252	4687	pot	CB	black	TM: Romano-British
21	4A192	4003	6202	4713	glass	RH	Roman?	
21	4A193	4003	6153	4787	CBM? pot?	AJ	corner? base?	
21	4A194	4003	6144	4784	stone	US	pot lid?	TM: probable pot lid
21	4A195	4003	6157	4788	stone	AJ	bit of burnt stone	MG: bits of heat altered sandstone
21	4A196	4003	6161	4789	pot	AJ	black	TM: Black Burnished Ware
21	4A197	4003	6192	4724	pot	KF	rim, black	
21	4A198	4003	6229	4707	pot	PG	?R-B	
21	4A199	4003	6156	4790	pot	AJ	red, Roman? CBM?	
21	4A200	4003	6189	4726	daub	KF	reddish	
21	4A201	4005	6268	4687	pot	CB	orange	
21	4A202	4003	6268	4690	Fe	CB	square nail	
21	4A203	4003	6127	4781	pot	US	IA? poor quality	TM: Iron Age probably
21	4A204	4003	6191	4730	cu alloy	KF	part of pen-annular brooch?	TM: part of penannular brooch, 1st century AD?
21	4A205	4003	6279	4688	pot	CB	orange	
21	4A206	4001	6123	4780	pot	JA	mortarium	TM: Mortarium. Probable Catterick Ware
21	4A207	4001	6133	4789	pot	US	mortarium, same as 4A206?	TM: Probable Catterick Ware
21	4A208	4005	6289	4700	pot	DR		
21	4A209	4001	6135	4785	pot	US	IA type	TM: Iron Age
21	4A210	4003	6181	4787	glass	AJ	small fragment, Roman?	
21	4A211	4003	6182	4785	pot	AJ	IA?	
21	4A212	4003	6202	4713	pot	AB		TM: Base of pot, probably Catterick/Piercebridge Ware, 30cm diameter
21	4A213	4003	6297	4691	pot	CB		
21	4A214	4001	6195	4737	pot	KF	cream	
21	4A215	4003	6183	4779	pot	US	rim. dark, IA	TM: Iron Age
22	4A216	4001	6193	4734	Fe	KF	blade?	
22	4A217	4003	6169	4724	flint	MJ	worked	TM: brown chert
22	4A218	4003			pot	SC	black burnished	
22	4A219	4003	6165	4736	pot	BS	orange, slight rim	
22	4A220	4003	6164	4723	pot	MJ	black burnished?	
22	4A221	4003	6163	4738	pot	JS		
22	4A222	4003	6199	4737	pot	KF	red & black, coarse	
22	4A223	4005	6137	4692	coal	PW		MG: coal



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
22	4A224	4005	6173	4791	pot	MG	IA coarse	TM: Iron Age
22	4A224 A	4003	6165	4716	Fe	SC	nail	
22	4A225	4003	6197	4797	pot	US	mortarium	TM: Probably Catterick/Piercebridge RB ware 34 cm diam Rim: 34.86mm
22	4A225 A	4003	6185	4795	pot	BA	cream glazed, 2 sherds	
22	4A226	4003	6136	4799	pot	CB		
22	4A227	4003	6200	4791	pot	BA	IA?	
22	4A228	4003	6201	4797	pot	BA	IA?	TM: Iron Age
22	4A229	4003	6133	4692	pot	SC	black	
22	4A230	4003	6204	4802	pot	US	black, IA?	
22	4A231	4003	6152	4798	pot	KF	rim, red	
22	4A232	4003	6147	4739	flint	JS		
22	4A233	4003			pot	BA	poor quality	
22	4A234	4003	6145	4802	cinder	KF		MG: cinder
22	4A235	4003	6156	4805	pot	EV	black	
22	4A236	4003	6127	4721	glass	MJ	green	
23	4A237	4003	6203	4809	Fe	BA	very corroded	
23	4A238	4003	6111	4724	pot	MJ		
23	4A239	4003	6108	4725	pot	MJ	rim, Roman?	TM: Romano-British, 14cm diameter
23	4A240	4003	6200	4810	charcoal	BA	charred hazelnut?	
23	4A241	4003	6110	4721	pot	MJ	abraded, Samian?	TM: Not Samian, probably Catterick Ware
23	4A242	4003	6232	4698	pot	SC	black burnished?	
23	4A243	4003	6147	4814	cinder			MG: cinder
23	4A244	4003	6198	4814	pot	BA	black	TM: Iron Age
23	4A245	4003			Fe	BA	"square iron in stone"	
23	4A246	4003	6149	4817	slag	KF		
23	4A247	4003	6248	4708	pot	US	lid	
23	4A248	4003	6207	4782	pot	BA	red earthenware, in 2 sherds	
23	4A249	4003	6200	4784	pot	BA	black	TM: exterior surface blackened
23	4A250	4003	6250	4696	bone	SC		
23	4A251	4003	6199	4785	pot	BA	black	TM: Iron Age, burnt
23	4A252	4003	6205	4769	pot	US	mortarium	TM: Mortarium. Probably Catterick/Piercebridge Ware, rim 34.86mm
23	4A253	4003	6206	4787	pot	BA	yellow, rim, mortarium?	TM: Creamware with incised grooves on rim. Probably Piercebridge Ware mortarium.
23	4A254	4003	6112	4770	pot	RH	red, mortarium?	TM: Probable mortarium. Large inclusions of fluorspar.
23	4A255	4005	6088	4689	stone	MG	natural stone	MG: natural stone. disposed
23	4A256	4005	6087	4691	pot	MG	coarse, black	TM: Iron Age pot



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
23	4A257	4003	6197	4814	stone	BA	2. gaming pieces? tesserae?	TM ??? counters
23	4A258	4003	6175	4817	pot	EV	modern?	
23	4A259	4003	6154	4743	slag	PW	iron slag 2cm	
23	4A260	4003	6277	4719	pot	BA	black, coarse	
23	4A261	4003	6256	4703	pot	SC	rim	TM: Probable Catterick Ware, 20cm diameter
23	4A262	4003	6278	4699	stone	KH	lid?	
23	4A263	4003	6273	4704	stone	RH	lid?	
23	4A264	4003	6256	4705	pot	SC	black, IA?	TM: Iron Age rim
24	4A265	4003	6246	4688	pot	SC	Samian fragment?	
24	4A266	4003			coal	JS		MG: coal
24	4A267	4003	6285	4694	slag	JR		
24	4A268	4003	6179	4751	stone	PW	heat-shattered	
24	4A269	4003	6237	4694	pot	SC	black	
24	4A270	4003	6160	4727	flint	US	white	
24	4A271	4003	6153	4755	slag	PW	15mm cube	
24	4A272	4003	6164	4720	stone	MG	piece of ironstone	
24	4A273	4003	6151	4740	Fe	EV	nail	
24	4A274	4003	6135	4699	chert	JR	worked	TM: piece of stone
24	4A275	4003	6147	4713	pot	US	red	TM: probable Catterick Ware
24	4A276	4003			pot	MG	black/red	
24	4A277	4003	6111	4728	pot	VS	black	TM: Iron Age
25	4A278	4005	6177	4783	pot	SB	black	TM: Iron Age. Fabric contains high quantity of quartz
25	4A279	4006	6255	4698	pot	US	black	TM: Iron Age
25	4A280	4003	6128	4789	slag	SW	black	
25	4A281	4006			charcoal	US		TM: Iron Age pot fragment
25	4A282	4005	6187	4803	pot	SB	black	
25	4A283	4006	6255	4701	pot	VS	black	
25	4A284	4003	6181	4693	pot	US	Roman?	
25	4A285	4006	6276	4699	Fe	VS	spear-head	TM: Roman spearhead, around 180 AD. Conserved (Durham labs)
25	4A286	4006	6275	4698	charcoal	VS	adjacent to spearhead 4A285 =C21	
25	4A287	4006	6293	4709	pot	KF	rim, red	
25	4A288	4006	6282	4703	pot	VS	black	TM: Iron Age
25	4A289	4006	6150	4711	pot	VS	white/black	
25	4A290	4003	6199	4779	pot	US	orange, base	Partially covered with brown slip
26	4A291		6249	4715			Quern 1, diam 34cm, central hole 2.5cm, finely pecked, cracked across diameter	
26	4A292		6245	4708			Quern 2, diam 35cm, central hole 1.8cm, finely pecked, some edge damage, medium gritstone	

Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description as logged	Assessment TM: Tony Metcalfe MG: Martin Green
26	4A293		6194	4791			Quern 3, diam 35cm, central hole 2.5cm. finely pecked, very damaged: much of rim lost, coarse gritstone	
26	4A294		6206	4799			Quern 4, diam 35cm, central hole 2.0cm, surface pecked, then worn, two damaged areas at rim, one edge in section so not seen, fine sandstone	
26	4A295	4003	6205	4786	flint	US	small flake	
26	4A296	4003	6195	4804	glass	AJ	fragment of bangle?	MG: 5 small (0.8cm) pieces of rounded chert, no signs working.
26	4A297	4007	6103	4813	flint		flake	TM: chert
26	4A298	4003	6205	4805	pot	AJ	RB?	
26	4A299	4003	6190	4809	pot	EY	RB?	
26	4A300	4003	6203	4810	pot	AJ	RB?	
26	4A301	4006	6291	4699	daub	KF		
26	4A302	4003	6205	4812	slag	AJ		
26	4A303	4006	6280	4692	glass	US	fragment of bangle	TM: fragment of RB glass bangle. Not same glass as 4A069 and 4A072
26	4A304	4006	6281	4687	Fe	SC	nail?	
26	4A305	4003			pot	AJ	RB	
26	4A306	4008	6176	4766	Cu	KF	Cu slag?	MG: corroded copper blob 2x1x0.8
26	4A307	4008	6176	4765	pot	KF	red, degraded	
26	4A308	4003	6184	4807	daub	AJ		
26	4A309	4003	6200	4795	pot	US	small, base mortarium??	
26	4A310	4008	6170	4766	slag	KF	Cu slag?	
27	4A311	?	6158	4755				TM: Probable Piercebridge Ware, slip covered
27	4A312	4008	6158	4769	pot	KF	red, degraded	
27	4A313	4003	6106	4774	pot	RP	early. IA?	
27	4A314	4003	6138	4759	slag	AJ	Cu slag?	
27	4A315	4003	6111	4790	pot	RP	2 sherds	
27	4A316	4005	6092	4731	pot	MS	black	
27	4A317	4005	6068	4743	pot	BM	IA	
27	4A318	4005	6121	4765	pot	US	rim, orange, mortarium?	TM: mortarium rim, 24cm diameter
	C20	4005			cinder			MG: cinder
	C11	4003			cinder			MG: cinder
	C9	4003			coal			MG: coal
	C13	4005			cinder			MG: cinder
	C15	4003			soil			MG: stones in dark soil: disposed
	C16	4003			charred stick			MG: non-metallic on detector, disposed





Trench 5

Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description	Assessment TM: Tony Metcalfe MG: Martin Green
9	501	5000	6238	5079	Fe	KH	Modern pocket knife	TM: folding pocket knife
10	502	5001	6235	4984	Pb	VT	Lead sheet	re-allocated from 5002
	503	5003	6234	5076	Fe	KH	Rivet	
	504	5003	6214	5069	stone	KH	Stone with hole	
	505	5003	6225	5056	Fe	BH	2 nails	
	506	5003	6211	5051	Fe	BH	Nail	
	507	5001	6212	4976	pot	DC	Slip-trailed brown glaze	re-allocated from 5004
	508	5001			glass	MR	Small fragment	"
	509	5001			pot	MR	Small sherd	"
	510	5001	6221	5016	glass	VT	Blob melted glass	"
	511	5001	6211	4964	Fe	RY	Nail	"
	512	5001	6240	4967	flint	PW	Flake	"
	513	5007	6211	4964	coal	PW	Coal	
	514	5000	6237	5080	glass	PG	?Part of bottle neck	TM: Appears to be modern glass
	515	5007			CBM	AJ	Small fragment	
	516	5003	6233	5078	slag	JA	Weakly magnetic	MG: coal in bag, labelled context 5013, find 516
	517	5003	6231	5076	stone	PG	Natural stone fragment	MG: natural stone. disposed
	518	5003	6236	5078	charcoal	JA		MG: shale/coal
	519	5003	6238	5081	cinder	JA		MG: cinder
	520	spoilheap			Fe	MA	Nail (metal detected)	
	521	5008			stone	SL	Natural stone fragment	MG: natural stone. disposed
	522	5008			?stone ?pot	SL		
	523	5012			stone	SL	?worked	
	524	5013	6238	5083	stone	BA	Mineralised stake?	MG: possibly mineralised wood. Labs exam: no structure so not analysable.
	525	5013	6237	5079	stone	BA	Mineralised stake?	as 524
	526	5013	6229	5079	stone	BA	Mineralised stake?	as 524
	527	5013	6231	5081	stone	BA	Mineralised stake?	as 524
	528	5008			slag	SL		
	529	5012	6234	5040	flint	DC	flake	TM: flint
	530	5012			bone?	DC	fragments	MG: small fragments teeth
	531	5012			stone	SL	Natural stone fragment	MG: natural stone. disposed
	532	5012			tooth	DC	Animal teeth ?horse	MG: large animal tooth fragments, no interior
	533	5012			tooth	DC	Animal tooth ?sheep	MG: small fragments teeth
	534	5012			tooth	DC	Animal tooth ?horse	MG: large animal tooth fragments, no interior (?)
	535	5013	6237	5085	stone	PG	Burnt stone amid coal	
	536	5013	6230	5095	clinker	PG		
	537	5014			stone	BS	Burnt limestone	MG: eroded limestone
	538	5014			stone	SL	Burnt limestone	MG: eroded limestone
	539	5014			stone	SL	Burnt limestone	MG: eroded limestone
	540	5014			stone	SL	Burnt limestone	MG: eroded limestone
	541	5014			?	SL	?	
	542	5014			pot	SP	?red pot-sherd	



Date Aug 2022	Find #	Context #	Long- itude	Lat- itude	Made of	Finder	Description	Assessment TM: Tony Metcalfe MG: Martin Green
	543	5014			pot	BS	Red pot-sherd	
	544	5010			stone	PW	Large cup-marked stone	MG: shallow cups in boulder
	545	5012			pot	PW	Red pot-sherd	
	546	5012			pot	PW	Red pot-sherd	
	547	5012			bone	PW	Bone at base of E-facing section	
	C526	5008			coal			MG: coal & cinder
	C527	5013			coal			MG: coal & cinder
	C508b	5007			cinder			MG: cinder
	C524	5013			shale			MG: shale/coal
	C529	5013			shale			MG: shale/coal
	C523	5013			shale			MG: shale/coal
	C519	5013			coal			MG: coal
	C502	5001			cinder			MG: cinder
	C517	5013			shale			MG: shale/coal
	C514	5013			coal			MG: coal
	C518	5013			coal			MG: shale/coal
	C506	5010			stone			MG: natural stone. disposed

Finds bagged by context only, not given finds numbers:

4003 coal
5013 coal
5013 shale/coal
5013 shale/coal
5003 coal
5007 cinder
5001 cinder
5003 cinder



10 APPENDIX 4: CHARCOAL AND BULK SAMPLES TABLES

Charcoal samples Cross-referenced in the context table. See Appendix 7 for lab identification

Context #	Trench #	Bag #	No. of bits	Biggest bit cubic mm	Notes	Lab species ident
4001	4	C1	1	7x6x4	Between stones	
4001	4	C2	3	6x5x2	Between stones	
4003	4	C3	1	7x5x3	Between small stones	
4003	4	C6	1	15x9x	Between stones	
4003	4	C8	2	6x4x2	Under stone	
4003	4	C10	2	12x6x3	Under small stone	
4003	4	C12	1	11x5x3	In between slabs	
4003	4	C14	1	10x5x3		
4003	4	C17	2	10x4x3		
4004	4	C19	5	10x6x3		
4006	4	C21=Find 2A286	3	8x5x3	By spearhead. (Find 4A285)	hazel. sent to radiocarbon
5001	5	C501	1	15x5x4	On top of S ditch	
5003	5	C532	3	6x6x4		
5005	5	C509	1	7x4x2	Well down in S ditch upper fill	hazel sent to radiocarbon
5007	5	C504	2	10x10x5		
5007	5	C507	4	10x5x3	Top of M ditch upper fill	
5007	5	C508	7	10x8x4	In M ditch upper fill	elm
5008	5	C506	3	10x6x6		
5008	5	C510	1	12x12x6	Near top of context	
5008	5	C511	2	8x6x3	Among large stones	
5008	5	C512	1	10x6x5	M ditch middle fill: among large stones	hazel sent to radiocarbon
5008	5	C520	2	5x3x2	30cm down in context	
5008	5	C521	1	4x4x1.5	30cm down in context	
5008	5	C522	1	9x6x3	50cm down in context	
5010	5	C513	7	7x6x3	Well down, on large stones	salix sent to radiocarbon I
5010	5	C525	3	5x4x2		



Context #	Trench #	Bag #	No. of bits	Biggest bit cubic mm	Notes	Lab species ident
5012	5	C515	5	10x5x3		
5012	5	C528	9	12x5x4	In lower part of context	oak branch
5012	5	C530	2	8x5x2		
5013	5	C514	2	10x5x3	Centre N ditch	hazel sent to radiocarbon
5014	5	C531	7	6x5x2	Bottom of M ditch	
5005	5	flot			From flotation of bulk sample	maloideae hazel
5012	5	flot			From flotation of bulk sample	maloideae heather
5013	5	flot			From flotation of bulk sample	prunus heather
5014	5	flot			From flotation of bulk sample	maloideae (K501, sent to radiocarbon) heather

Bulk samples. These are cross-referenced in the context table.

All samples were taken on 28 Aug 2022, except that 501 & 502 were taken on 26 Aug 2022

See Appendix 7 for details of the lab analysis. OSL and DNA samples were for the Terrace.no team.

Context #	Trench #	Sample #	No. of bags	Size litres	Type	Notes
5014	5	501	3	10	Env	To Durham labs
5014	5	502	1	5	Env	To JA
5005	5	503	3	10	Env	To Durham labs
5005	5	504	1	5	Env	To JA
5012	5	505	3	10	Env	To Durham labs
5012	5	506	1	5	Env	To JA
5013	5	507	3	10	Env	To Durham labs
5013	5	508	1	5	Env	To JA
5005	5	T5M1	1		OSL	Top 50cm below surface. Bottom 10cm probably natural. Analysis failed.
5013	5	T5M2	1		OSL	Top 50cm below surface. Upper half tube not filled. Analysis failed.
5005	5	D5005			DNA	76cm from surface
5007	5	D5007			DNA	58cm from surface
5012	5	D5012			DNA	95cm from surface
5013	5	D5013			DNA	82cm from surface
5014	5	D5014			DNA	170cm from surface



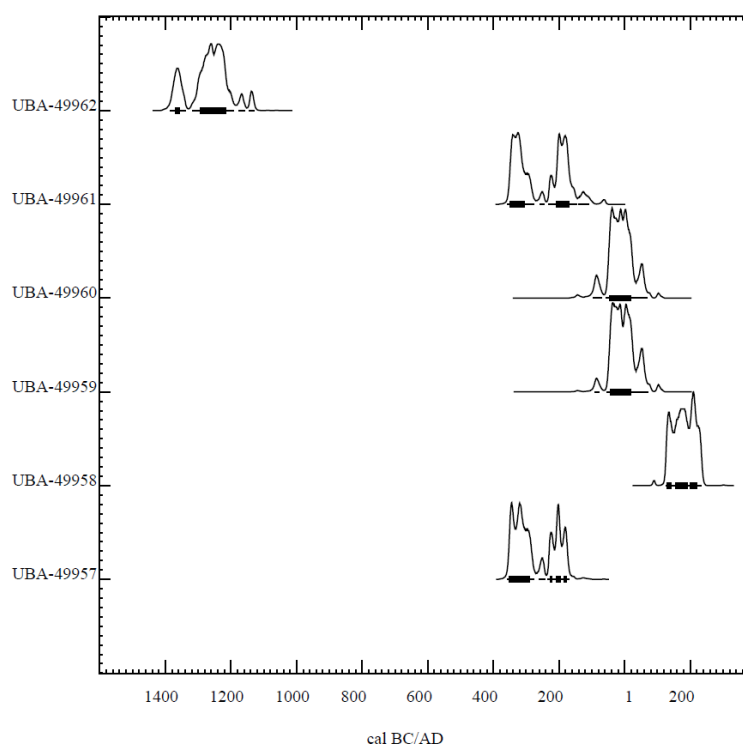
11 APPENDIX 5: RADIOCARBON DATES

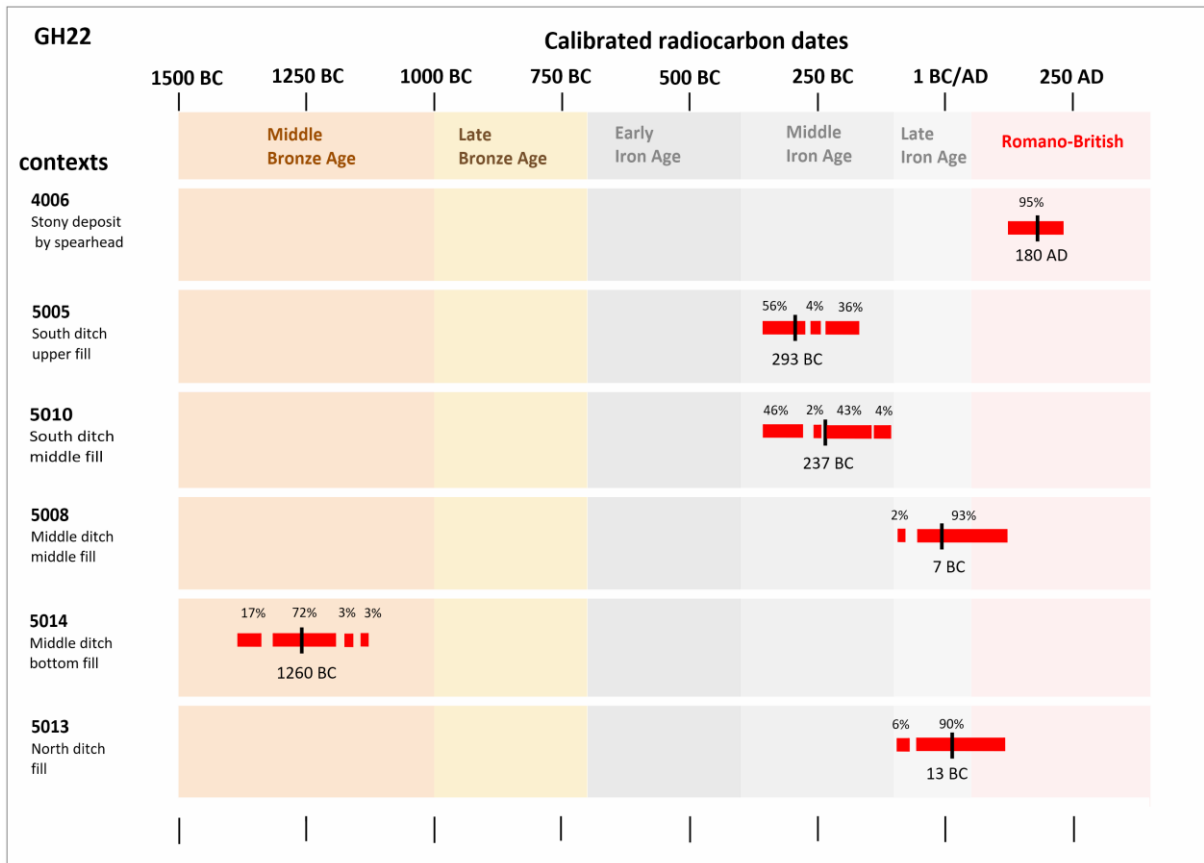
Radiocarbon dates were obtained for six charcoals. Processing was by the Queens University Belfast 14Chrono Centre. Calibration used the intcal20.14c data set.

Sample #	C509a	C21a	C512a	C514a	C513a	K501
Type	hazel	hazel	hazel	hazel	salicaceae	maloideae
Laboratory #	UBA-49957	UBA-49958	UBA-49959	UBA-49960	UBA-49961	UBA-49962
Context #	5005	4006	5008	5013	5010	5014
Context description	South ditch upper fill	Stony deposit with spearhead	Middle ditch middle fill	North ditch fill	South ditch middle fill	Middle ditch palisade slot
Radiocarbon Age	2185 ± 21	1860 ± 21	2017 ± 26	2024 ± 27	2170 ± 26	3014 ± 28
Calibrated dates (1σ)	351-290BC 49%	130-143AD 11%	43BC-20AD 68%	46BC-18AD 68%	350-30BC 37%	1370-1356BC 8%
	226-221BC 4%	156-193AD 35%			208-168BC 32%	1295-1400 6216BC 60%
	208-196BC 11%	199-221AD 22%				
	185-177BC 5%					
Calibrated dates (2σ)	358-276BC 56%	127-223AD 95%	92-78BC 2%	97-70BC 6%	357-277BC 46%	1386-1339BC 17%
	261-244BC 4%		54BC-71AD 93%	57BC-68AD 90%	259-245BC 2%	1317-1192BC 72%
	234-169BC 36%				233-146BC 43%	1177-1159BC 3%
					140-108BC 4%	1144-1129BC 3%
Median calibrated date	293 BC	180 AD	7 BC	13 BC	237 BC	1260 BC

Above: Radiocarbon dates as a table. The percentages given are the probability that the true date is within the given date range

Right: Posterior probability distributions





The 95% (2 sigma) probability ranges are shown in the above diagram. Percentages are, as before, the chance that the true date is within the red range bar. Median probability dates are shown as black vertical lines. The true date has a 50% chance of being earlier than the median date, and a 50% chance of being later.

Radiocarbon certificate

<p>Martin Green Altogether Archaeology Church House Hunstanworth Consett DH8 9UF United Kingdom</p>		<p>¹⁴CHRONO Centre Queens University Belfast 42 Fitzwilliam Street Belfast BT9 8AX Northern Ireland</p>	<p>Martin Green Altogether Archaeology Church House Hunstanworth Consett DH8 9UF United Kingdom</p>		<p>¹⁴CHRONO Centre Queens University Belfast 42 Fitzwilliam Street Belfast BT9 8AX Northern Ireland</p>												
<p>Radiocarbon Date Certificate</p>			<p>Radiocarbon Date Certificate</p>														
<p>Laboratory Identification: UBA-49957 Date of Measurement: 2023-03-06 Site: Gueswick Sample ID: GH22/5005/C509a Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.931 Submitted by: Martin Green</p>			<p>Laboratory Identification: UBA-49958 Date of Measurement: 2023-03-06 Site: Gueswick Sample ID: GH22/4006/C21a Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.952 Submitted by: Martin Green</p>														
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<p>Martin Green Altogether Archaeology Church House Hunstanworth Consett DH8 9UF United Kingdom</p>		<p>¹⁴CHRONO Centre Queens University Belfast 42 Fitzwilliam Street Belfast BT9 8AX Northern Ireland</p>	<p>Martin Green Altogether Archaeology Church House Hunstanworth Consett DH8 9UF United Kingdom</p>		<p>¹⁴CHRONO Centre Queens University Belfast 42 Fitzwilliam Street Belfast BT9 8AX Northern Ireland</p>												
<p>Radiocarbon Date Certificate</p>			<p>Radiocarbon Date Certificate</p>														
<p>Laboratory Identification: UBA-49959 Date of Measurement: 2023-03-07 Site: Gueswick Sample ID: GH22/5008/C512a Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.926 Submitted by: Martin Green</p>			<p>Laboratory Identification: UBA-49960 Date of Measurement: 2023-03-07 Site: Gueswick Sample ID: GH22/5013/C514a Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.929 Submitted by: Martin Green</p>														
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<p>Radiocarbon Date Certificate</p>			<p>Radiocarbon Date Certificate</p>														
<p>Laboratory Identification: UBA-49961 Date of Measurement: 2023-03-07 Site: Gueswick Sample ID: GH22/5010/C513a Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.898 Submitted by: Martin Green</p>			<p>Laboratory Identification: UBA-49962 Date of Measurement: 2023-03-08 Site: Gueswick Sample ID: GH22/5014/K501 Material Dated: charcoal Pretreatment: AAA mg Graphite: 0.945 Submitted by: Martin Green</p>														
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Fraction corrected	using AMS δ ¹³ C																
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Age:	3014±28 BP																
Fraction corrected	using AMS δ ¹³ C																



12 APPENDIX 6: DRONE PHOTOGRAPHS OF TRENCHES

Drone photography by Stephen Eastmead. In all images, north is at the top



Trench 4 Day 3 (10 August). Initial size 8m x 8m

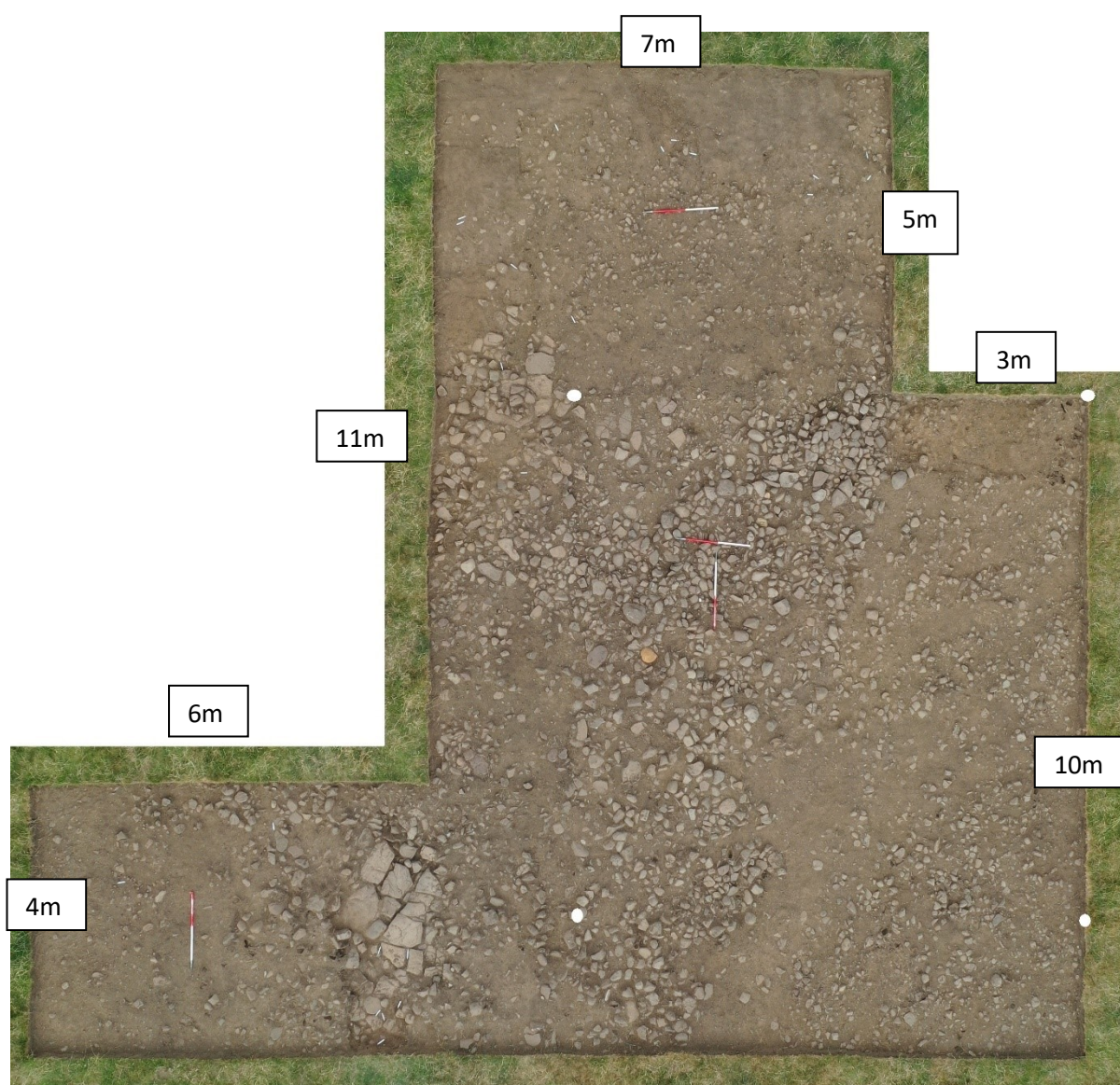


Trench 4 Day 5 (12 August)





Trench 4 Day 6 (13 August)



Trench 4 Day 12 (19 August). Trench extended to full size: white dots show initial 8m x 8m extent.



Trench 4 Day 15 (22 August)



Trench 4 Day 17 (24 August)



Trench 4 Day 20 (27 August)



Trench 5 *left: Day 9 (16 Aug) middle: Day 15 (22 August) , right: Day 20 (27 August) (ditches shown separately and enlarged).* Trench is 2m wide. White tags at top of sections are at 2m intervals.

13 APPENDIX 7: PALAEOENVIRONMENTAL REPORT (DURHAM UNIVERSITY)

This is the unedited report on the bulk samples and charcoal.

Archaeological Services University of Durham, Report 5874, January 2023

1. Summary

The project

- 1.1 This report presents a palaeoenvironmental assessment of four bulk samples and seven hand-recovered charcoal samples, taken during the 2022 excavations at Gueswick Hills, Teesdale, County Durham.
- 1.2 The works were commissioned by Altogether Archaeology and conducted by Archaeological Services Durham University.

Results

- 1.3 Palaeoenvironmental evidence from ditch fills [5012] and [5014] is comparable, but limited. The evidence is consistent with a late Iron Age or Romano-British date, based on the presence of charred spelt chaff in [5012]. The charcoal from fill [5005] has similarities with [5012], suggesting this ditch may also be contemporary, whereas ditch fill [5013] has a different character and possibly a separate origin. Every sample has suitable material for radiocarbon dating, including the hand-recovered charcoal.

Recommendations

- 1.4 No further analysis is required.
- 1.5 The flots and charred plant remains should be retained as part of the physical archive of the site. The residues were discarded following examination.
- 1.6 The following plant remains are suitable for radiocarbon dating and are ranked by their likelihood to provide a reliable date:

GH22 – material from the bulk samples

[5012] <505> ditch fill – Maloideae charcoal (101mg)

[5012] <505> ditch fill – Maloideae charcoal (50mg)

[5014] <501> ditch fill – Maloideae charcoal (75mg)

[5014] <501> ditch fill – Heather basal twig (charred) (22mg)

[5005] <503> ditch fill – Hazel charcoal (74mg)

[5005] <503> ditch fill – Maloideae charcoal (68mg)

[5012] <505> ditch fill – Heather charcoal (49mg)



[5013] <507> ditch fill – Heather basal twig (charred) (15mg)

[5013] <507> ditch fill – *Prunus* species charcoal (14mg)

GH22 - charcoal samples

[4006] <C21a> rubble layer – Hazel charcoal (61mg)

[5012] <C528a> middle fill of middle ditch – Oak branchwood charcoal (301mg)

[5010] <C513a> lower fill of southern ditch – Salicaceae charcoal (55mg)

[5007] <C508a> upper fill of middle (palisade) ditch – Elm charcoal (57mg)

[5008] <C512a> middle fill of middle (palisade) ditch – Hazel charcoal (91mg)

[5013] <C514a> fill of northern ditch – Hazel charcoal (61mg)

[5005] <C509a> middle fill of southern ditch – Hazel charcoal (22mg)

2. Project background

Location and background

- 2.1 Altogether Archaeology conducted another season of excavations at Gueswick Hills Iron Age site in Teesdale. This report presents a palaeoenvironmental assessment of four bulk samples comprising the lowest [5014] and middle [5012] ditch fills of a probable late Iron Age palisade trench, a fill [5005] from the southern ditch of a possible middle Iron Age round settlement, and the fill of the northern curving ditch [5013]. Hand-recovered charcoal samples are from ditch fills [5005], [5007], [5008], [5010], [5012] and [5013], and from a rubble layer [4006] next to an iron spearhead.

Objective

- 2.2 The objective of the scheme of works was to assess the palaeoenvironmental potential of the bulk samples, identify material suitable for radiocarbon dating, and provide the client with appropriate recommendations.

Dates

- 2.3 The samples were received by Archaeological Services on 6th October 2022. Assessment and report preparation was conducted between 4th and 10th January 2023.

Personnel

- 2.4 Assessment and report preparation was conducted by Lorne Elliott. Sample processing was by Henry Morris.

Archive

- 2.5 The site code is **GH22**, for **G**ueswick **H**ills **2022** excavations. The flots, charcoal and charred plant remains are currently held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University awaiting collection or return.

3. Methods



- 3.1 The bulk samples were manually floated and sieved through a 500µm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identifications were aided by comparison with modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University, and by reference to relevant literature (Cappers *et al.* 2006; Jacomet 2006). Habitat classification follows Preston *et al.* (2002). Plant nomenclature follows Stace (2010).
- 3.2 Charcoal fragments were identified to provide material suitable for radiocarbon dating and to determine the nature and condition of the assemblages. The transverse, radial and tangential sections were examined at up to x500 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990), Gale & Cutler (2000) and Hather (2000), and modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University.
- 3.3 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Petts & Gerrard 2006; Hall & Huntley 2007; Huntley 2010).

4. Results

- 4.1 The bulk samples have produced small amounts of charcoal comprising a mix of species. In order of abundance/frequency, these include Maloideae, hazel, heather, oak, ash, alder, and *Prunus* species. Charred plant macrofossils are sparse, and they are often fragmented and in poor condition. These include brome and indeterminate grass caryopses, tiny fragments of hazel nutshell, a barley grain split in half and a spelt wheat glume base.
- 4.2 Detailed palaeoenvironmental results and a provisional date for each context are presented in Appendix 1.
- 4.3 The hand-recovered charcoal samples are predominantly from hazel branchwood. There is also elm, oak, and Salicaceae. Full descriptions are presented in Appendix 2.
- 4.4 Material for radiocarbon dating is listed in the recommendations section.

5. Discussion

- 5.1 As the bulk samples have produced relatively small flots, the palaeoenvironmental evidence is somewhat limited. That said, the flot matrices of ditch fills [5012] and [5014] are comparable. They both have charred brome caryopses and basal heather twigs, and the charcoal remains are predominantly Maloideae (hawthorn or apple). This suggests they are contemporary deposits, and as fill [5012] also has charred chaff of spelt wheat, which was the principal wheat crop for the late Iron Age and Roman periods, it shows these deposits are consistent with the provisional dating. It is worth adding that charred heather twigs and brome grass remains are also often found in late Iron Age and Romano-British deposits, particularly for this region.
- 5.2 The charcoal assemblage for ditch fill [5005] has similarities with [5012] and may therefore be contemporary, whereas fill [5013] has a different character and probably has a separate origin.



6. Recommendations

- 6.1 No further analysis is required.
- 6.2 The flots and charred plant remains should be retained as part of the physical archive of the site. The residues were discarded following examination.
- 6.3 The following plant remains are suitable for radiocarbon dating and are ranked by their likelihood to provide a reliable date:

GH22 – material from the bulk samples

- [5012] <505> ditch fill – Maloideae charcoal (101mg)
- [5012] <505> ditch fill – Maloideae charcoal (50mg)
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- [5014] <501> ditch fill – Heather basal twig (charred) (22mg)
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- [5012] <505> ditch fill – Heather charcoal (49mg)
- [5013] <507> ditch fill – Heather basal twig (charred) (15mg)
- [5013] <507> ditch fill – *Prunus* species charcoal (14mg)

GH22 - charcoal samples

- [4006] <C21a> rubble layer – Hazel charcoal (61mg)
- [5012] <C528a> middle fill of middle ditch – Oak branchwood charcoal (301mg)
- [5010] <C513a> lower fill of southern ditch – Salicaceae charcoal (55mg)
- [5007] <C508a> upper fill of middle (palisade) ditch – Elm charcoal (57mg)
- [5008] <C512a> middle fill of middle (palisade) ditch – Hazel charcoal (91mg)
- [5013] <C514a> fill of northern ditch – Hazel charcoal (61mg)
- [5005] <C509a> middle fill of southern ditch – Hazel charcoal (22mg)

7. Sources

- Cappers, R T J, Bekker, R M, & Jans, J E A, 2006 *Digital Seed Atlas of the Netherlands*. Groningen
- Gale, R, & Cutler, D, 2000 *Plants in archaeology; identification manual of vegetative plant materials used in Europe and the southern Mediterranean to c.1500*. Otley
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- Huntley, J P, 2010 *A review of wood and charcoal recovered from archaeological excavations in Northern England*. Research Department Report Series no. **68**. London
- Jacomet, S, 2006 *Identification of cereal remains from archaeological sites*. Basel
- Petts, D, & Gerrard, C, 2006 *Shared Visions: The North-East Regional Research Framework for the Historic environment*. Durham
- Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford
- Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf
- Stace, C, 2010 *New Flora of the British Isles*. Cambridge



Palaeoenvironmental data (bulk samples)

Context	Sample	Feature	Volume processed (l)	Flot volume (ml)	C14 available	Rank	Notes
5014	501	middle ditch (lowest fill)	9	20	Y	**	A small flot comprising fragmented (mainly <4mm) charcoal, sparse charred plant macrofossils and modern roots. The charcoal is mainly Maloideae (which is either hawthorn or apple as small fragment size and mineral inclusions prevent further identification). There is a fragment of hazel branchwood and several charred heather twigs, all in similarly good condition. Charred plant remains comprise a brome grass caryopsis (in poor condition) and an undeveloped spikelet that may be spelt wheat, but this is too small to positively identify and too small for dating purposes. (Finds: none). IA/RB
5005	503	southern ditch (middle fill)	9	60	Y	**	A larger flot than [5014], comprising modern roots and small amounts of fragmented (mostly <4mm) charcoal, coal and cinder. The charcoal is generally friable with mineral inclusions and contains a mix of species - mainly hazel and Maloideae branchwood, and traces of oak, alder and ash stemwood. Sparse charred plant remains include a couple of small hazel nutshell fragments, a barley grain split longitudinally in two and a few small grass caryopses (all poorly preserved and too small for dating purposes). (Finds: none). Nothing diagnostic but charcoal assemblage has similarities with [5012]
5012	505	middle ditch (middle fill)	10	30	Y	**	A small flot comprising fragmented (mainly <4mm) charcoal, a few charred plant macrofossils and modern roots. The charcoal is mainly Maloideae (which is either hawthorn or apple as small fragment size and mineral inclusions prevent further identification). There are few smaller remains of oak, ash and hazel branchwood and several charred heather twigs, all in similar condition. Charred plant remains may be sparse but are diagnostic for dating purposes - comprising part of a brome grass caryopsis (in poor condition) and a spelt wheat glume base (chaff). (Finds: none). IA/RB
5013	507	fill of northern curving ditch	10	60	?	*	The flot has modern roots and fragmented shaley coal (mainly <4mm). There are a few small charcoal fragments comprising <i>Prunus</i> species (cf. blackthorn or wild plum), oak sapwood and a few heather twigs (rootwood?). There are no charred plant macrofossils. (Finds: none). Nothing diagnostic

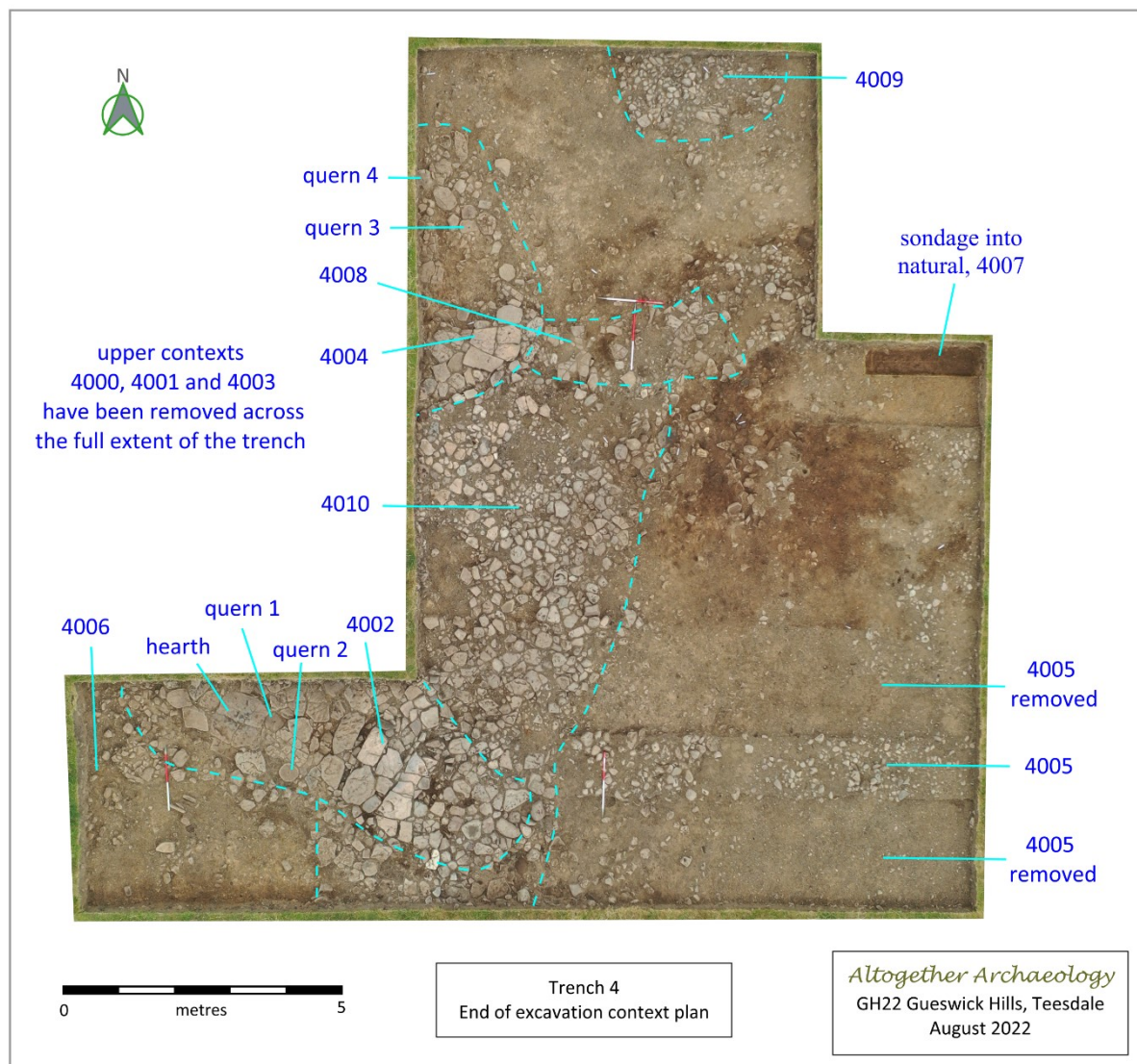
[Rank: *: low; **: medium; ***: high; ****: very high potential to provide further palaeoenvironmental information. ? = material may be unsuitable for AMS dating due to small size]



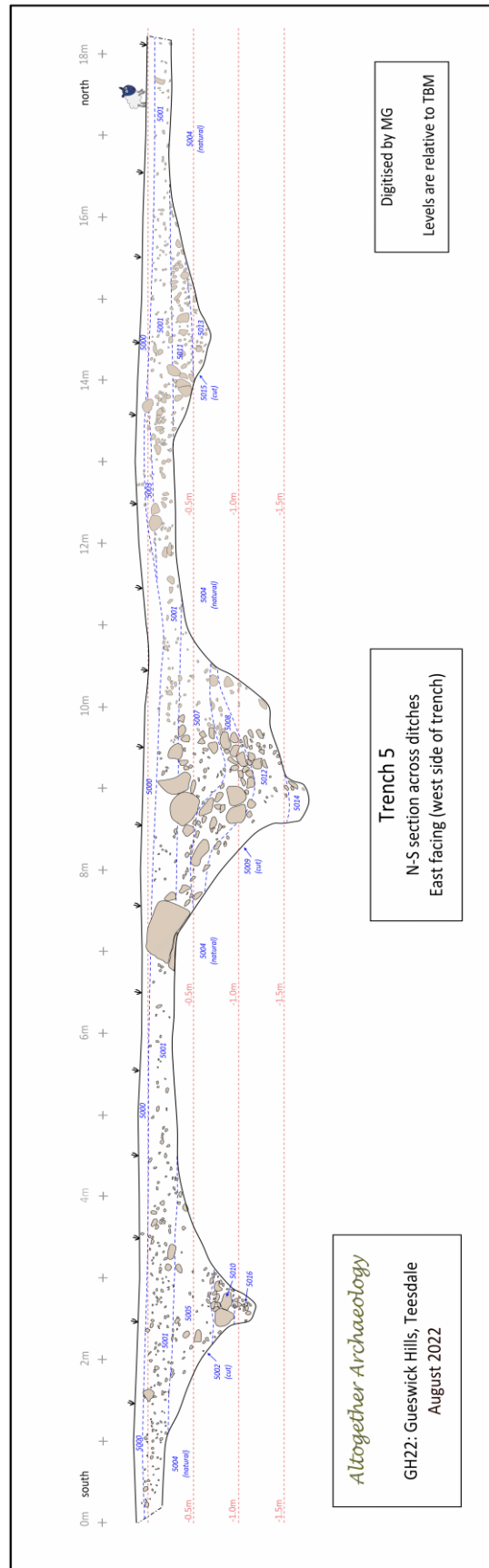
Palaeoenvironmental data (charcoal samples)

Context	Sample	Feature	C14 material	weight (mg)	Description
4006	C21a	rubble layer next to Fe spearhead	Hazel charcoal	61mg	Branchwood in good condition with only a few mineral inclusions – possibly a cleft fragment with strong growth ring curvature and 4 average growth rings.
5005	C509a	middle fill of southern ditch	Hazel charcoal	22mg	Branchwood in fair condition with some mineral inclusions, soft and slightly friable – strong growth ring curvature and 4 average growth rings.
5007	C508a	upper fill of middle (palisade) ditch	Elm charcoal	57mg	Stemwood in good condition with few mineral inclusions – moderate growth ring curvature and more than 5 short growth rings.
5008	C512a	middle fill of middle (palisade) ditch	Hazel charcoal	91mg	Stemwood with few mineral inclusions and contorted shape due to warping and radial cracking - possibly caused by burning in a highly oxygenated environment.
5010	C513a	lower fill of southern ditch	Salicaceae charcoal	55mg	Branchwood with lateral leaf scar, in reasonable condition with some mineral inclusions – moderate growth ring curvature and 4 average growth rings (this is cf. willow based on heterogenous ray cells).
5012	C528a	middle (silty) fill of middle ditch	Oak charcoal	301mg	Large branchwood in relatively good condition with some mineral inclusions – a large fragment (>10mm) with moderate growth ring curvature and 5 wide growth rings (rapid growth).
5013	C514a	fill of northern ditch	Hazel charcoal	61mg	Branchwood in fair condition with some mineral inclusions – moderate growth ring curvature and more than 12 short growth rings.

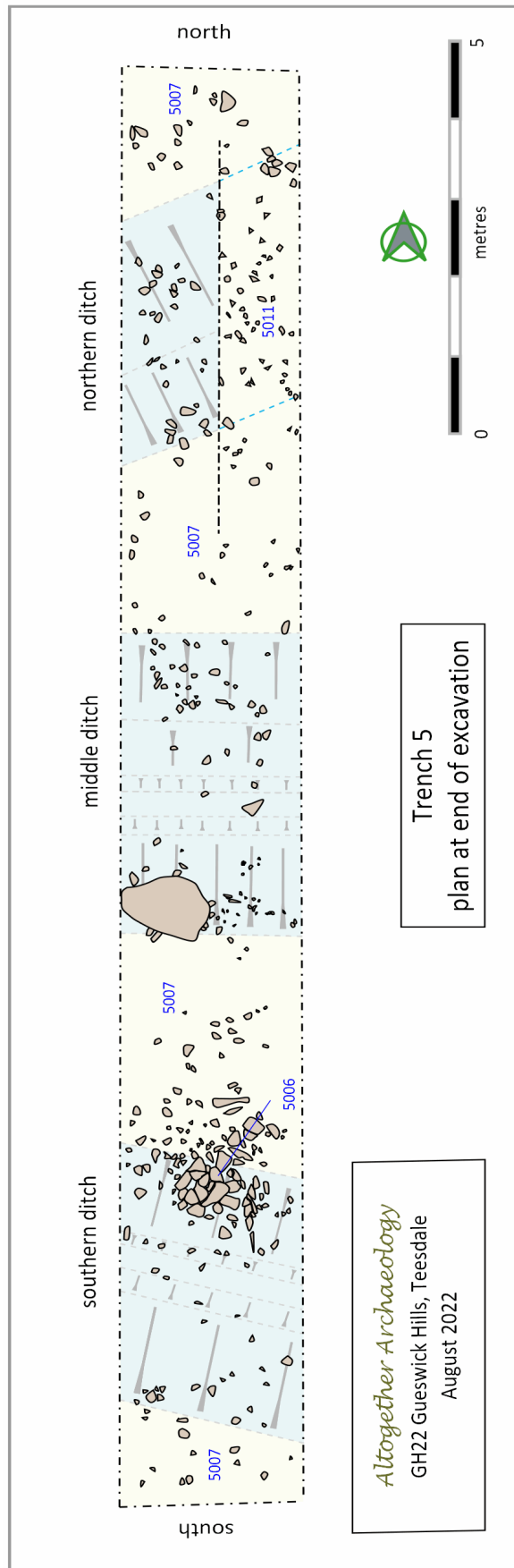
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4	-1.9962996	54.5847178
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4	-1.9960516	54.5846818
4	-1.9960516	54.5847718
4	-1.9960986	54.5847718
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5	-1.9962376	54.5851128
5	-1.9962376	54.5849508
5	-1.9962066	54.5849508



Trench 4: Drone photograph at end of excavation showing contexts and quern positions



Trench 5 North-South section of ditches



Trench 5: Plan at end of excavation

