Altogether Archaeology

Digging our heritage in the North Pennines

Gueswick Hills, Teesdale:

Report on 2019 evaluation excavation

ALTOGETHER ARCHAEOLOGY

A UNESCO Global Geopark

Exploring the NORTH PENNINES

Area of Outstanding Natural Beauty

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With contributions by
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Version 1.6 (28 January 2020)

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

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: https://qgis.org

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

Cover image: Drone photograph of the excavation in progress. A 1m^2 test pit on a terrace is seen on the left side of the image. Trenches shown are A1 (top) and A2 (bottom).

Contents

1 SUMMARY

This is a report on excavations carried out over a week in autumn 2019 (28 October to 3 November inclusive) by the community group Altogether Archaeology (AA) to investigate the Gueswick Hills. Participants are listed in the Acknowledgements Section. The "Hills" are a line of moraines crossing Teesdale between Cotherstone and Romaldkirk, sculpted on their south side by terracing. There is a cairn on the summit plateau which may be Bronze Age (on the basis of a nearby cup-marked boulder and the finding of a cup-marked portable stone beside the cairn). Structures to the east of the cairn were noted by the Lidar Landscape Survey, site number #00212, and evaluated as being a possible prehistoric or Romano-British enclosure (Frodsham 2017). The area had become of interest to AA members following guided walks by Harriet Sams of archaeological features in the area. In addition, the ongoing doctoral archaeology research by another member of the group, Perry Gardiner, focuses on this part of Teesdale as a sample area. However, the Gueswick Hills site has not been previously investigated archaeologically and the only entries for it in the Historic Environment Record relate to the cairn and rock art.

AA organised initial investigation by walk-over and magnetometry surveys in June 2019. This showed complex anomalies at the possible occupation site seen on lidar. In addition, there was a probable large sub-rectangular ditched enclosure on the plateau, and a small C-shaped ditch to the west of the cairn. None of these structures could be ascribed a date without excavation, although the intensive medieval arable agriculture in this area of Teesdale made it likely that at least some of the features were medieval. Iron Age structures are also to be expected as the Lidar Landscape survey showed extensive Iron Age occupation in Teesdale, where the evidence for it has not been obliterated by later medieval ploughing.

The Gueswick Hills are in the parish of Hunderthwaite, although the nearest village is Cotherstone which lies 1.5km south-east of the site. This area was in Yorkshire (North Riding) until transferred to County Durham in 1974. The site is close to, but not within, the North Pennines Area of Outstanding Natural Beauty (AONB). Public footpaths pass near, but none run across the site. It lies in fields used for grazing and is not subject to protection as nature reserve or historic site.

Figure 1: Location of the Gueswick Hills site, showing relationship to nearby villages.
The Tees is on the east side of the site, flowing south-east. The Balder flows east across the image centre, joining the Tees north of Cotherstone.

Two documents relating to the Gueswick Hills site are downloadable from the AA website (reports page), https://altogetherarchaeology.org These are:
Gueswick Hills, Teesdale: Fluxgate Gradiometer Survey June 23rd 2019 (Eastmead 2019)
Gueswick Hills, Near Cotherstone, Teesdale, Project Design for Research and Excavation (Green 2019)

The detailed results of the magnetometry survey and the historical and archaeological background to the site will not be repeated in this report, so these two documents should be consulted for full details. This report will concentrate on the findings of the Autumn 2019 excavations, but also give background information which has become available recently.

2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

These are given in the Project Design (Green 2019) so will only be summarised here. However, the section on the roadside crosses and place-names is new and not contained in the Project Design

2.1 Ordnance Survey and Estate Maps

A copy of an estate map of Doe Park has been supplied by the current owners.

Figure 2: Doe Park estate map of 1761 with photograph of Doe Park house.
The house is below the label "Hall Garth". The Gueswick Hills site is in the north-east, around the junction of "Reins", "High Geswick" and "North-East Geswick".

Ordnance Survey (OS) maps show that the field boundaries have hardly changed around the site since the Estate Map However, one detail that does change is the small structures at the summit of the hills by the cairn (where the field boundaries join). On the estate map there is a square over the junction (this could represent the cairn, a building, or a small stock enclosure). On the 1850s OS map

there are no structures. By the 1890s and 1910s OS maps there is a narrow rectangular structure running east-west along the south side of boundary to the east of the cairn. However, by the 1940s OS there is, in addition, a rectangular marked over the location of the cairn itself. Wartime (1945) aerial photographs (accessed via GoogleEarth) are low resolution, but show no buildings on the hills. Possibly the long narrow rectangle was a fenced enclosure for livestock processing. See the Project Design for OS map images.

2.2 Known nearby archaeological features

The site is part of the Doe Park estate: the house itself (built circa 1700) is 700m to the south. As the name implies, a medieval deer park was located here. Close to the house is a complex of 19th century farm buildings. Field names on the estate map (Figure 2) suggest that the Deer Park was beside the house and quite small at that time, not extending on to the Gueswick Hills.

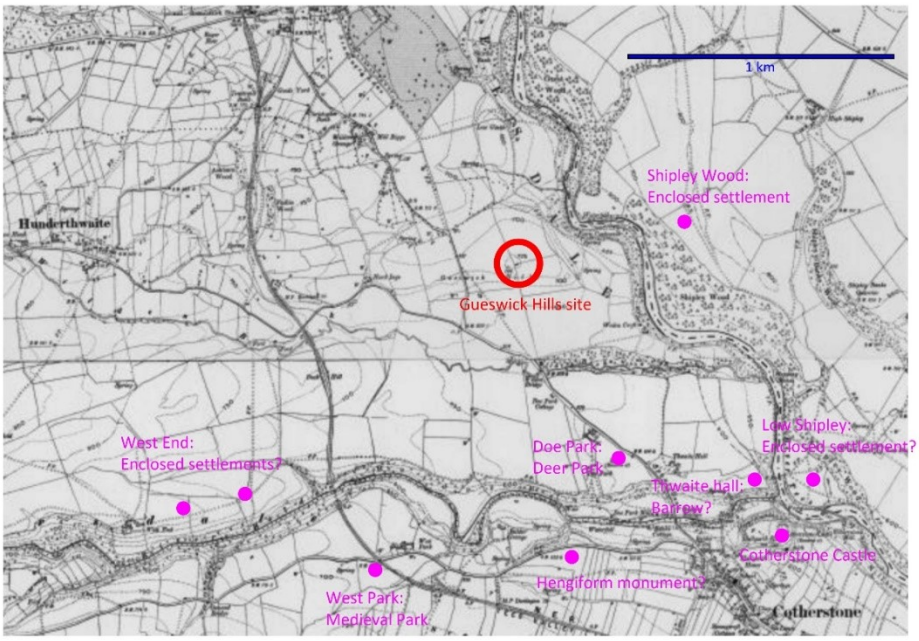


Figure 3: Ordnance survey 6-inch map (surveyed 1913) with significant nearby sites marked.
Map reproduced with the permission of the National Library of Scotland.

Significant archaeological sites (taken from the HER and Lidar Landscapes survey) are shown on Figure 3. There are several possible enclosed settlements (probably late Iron Age or Romano-British) nearby, including one at a similar altitude to the Gueswick Hills site on the opposite side of the Tees. About 1.5km south of the site, the lidar survey identified a hengiform monument.

This part of Teesdale is mostly covered by traces of ridge and furrow, assumed to originate from between 900AD and 1400AD. The GoogleEarth view of the area (Figure 1) shows that nearby villages such as Cotherstone and Hunderthwaite are surrounded by narrow curving, fields. These are the "fossil" remains of the ploughed strips that formed the medieval open fields around the villages, later taken into private ownership and hedged. This pattern of strip fields is less obvious along the banks of the River Balder (running from west to east across the centre of Figure 1), probably at least partly due to these fields being meadows, rather than ploughland.

On the Gueswick Hills the fields are rectangular, but have evidence of terracing (see Figure 4) and there is cultivation ridging of the fields on and around the Gueswick Hills, some of which is broad and curving (hence probably medieval) and some is narrow and straight (so post-medieval).

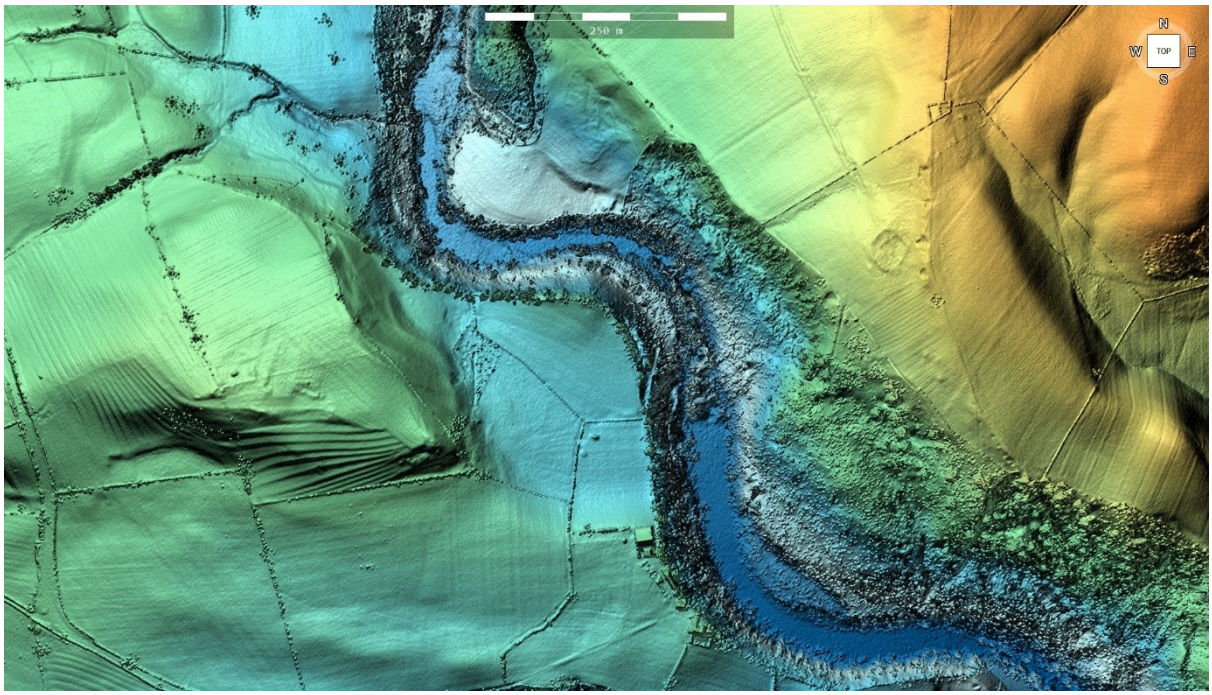


Figure 4: The Gueswick Hills and Tees on lidar, coloured by altitude. The site is at the west centre. To the east of the Tees, the 40mx40m banked feature is an enclosed settlement at Shipley Wood.

The terraces on the south side of the hills are about 8m wide (see Figure 22 at the end of Appendix 1). On the west side of the hilltop they are narrower and the slope less steep. At the south-east end of the summit plateau, overlooking the Tees, is a large mound seen on Figure 4 at the east end of the large terraces.

Figure 5 (left): The cairn on the summit. The mound at the plateau's SE corner is seen at top left.
Figure 6 (right): The cup marked boulder near the cairn.

It is tempting to assume that the terraces are effectively ridge and furrow that happens to be on a steep slope, and hence are medieval (or late early-medieval) in date and associated with intensive arable agriculture. However, excavations at Plantation Camp in the Breamish Valley Northumberland (Frodsham and Waddington 2004) showed that the terraces there had a long history of use from the

early Bronze Age onwards (and possibly even earlier). The international TerrACE Project, https://www.terrace.no/england, carried out further excavations there in 2019, so more detailed information should be available soon. Hence, there is a possibility that the terraces, even if part of the medieval ridge and furrow arable cultivation of the area, had origins much further back, before the introduction of the heavy plough.

Overall the impression is of a landscape dominated by medieval villages and their field systems with, in a few places, hints of older settlement. None of these have been excavated so dating is speculative. However, there is much evidence that the area was settled in the Neolithic and early Bronze Age. This includes the rock art, the possible hengiform monument, the cairnfield 2.5km to the north at Bracken Heads and the possible burial cairns on prominent sites at Thwaite Hall and Gueswick itself.

2.3 Domesday, roadside crosses and place and field names *(Rob Pearson)*

There are the remains of two standing crosses close to the Gueswick Hills site (Coggins and Fairless 1999). The first (Durham HER: 2507 at NZ0007521020) is half of the chamfered base stone which is set into the dry-stone wall in the side of a stile by the road, only 200m from the excavation site. It is 90cm long by 38cm wide (going back into the wall) and 45cm deep. There are two holes in the face towards the road, presumably to fix it to another stone. This stone is like a half of the second stone.

The second stone (Durham HER: 2502 at NZ0074420272) is a similarly chamfered stone in one of Doe Park's fields. It is quite close to the road at the top of a hollow way coming up from the River Balder. It measures 90cm by 75cm by 40cm high. There is a socket in the upper surface which measures 30cm by 20cm by 14cm deep. It has been known locally as the "Christening Stone". This base stone is about 120m from Thwaite Hall, on the opposite side of the road. In the past, the owners of this property also owned Doe Park. This stone is 700m from the Gueswick Hills site. In 1986, during work on outbuildings at Thwaite Hall, a section of the shaft of a stone standing cross was discovered, acting as a lintel. This was identified by Professor Rosemary Cramp as being from the 9th Century. It measures 44cm high, 31cm wide and 20cm thick (Durham HER: 5431).

Figure 7: The cross bases: in a roadside wall close to site (top left), near Doe Park house (top right). The Thwaite Hall cross-shaft (bottom). Shaft photographs: Durham County Council

Hunderthwaite in the 13th century belonged to the FitzAlan family. Alan, son of Brian, complained that Henry, son of Ranulf, entered into his free warren in Hunderthwaite and captured hares and wild goats there. In Domesday, 1086, the Tenant in Chief was named as Count Alan of Brittany and in that year the Lord was Bodin, brother of Bardulf. The Lord in 1066 was Thorfin of Ravensworth, in the Hundred of Count Alan.

The origins of the place name **Hunderthwait**e have led to much discussion. In Domesday it is spelt *Hundredestoit,* in 1184 *Hundresthuait,* in 1208 *Hunderthuait, -thwayt,* in 1285 *Hundrethwaite,* in 1316 *Hundredthwaite* and in 1400 *Hondirthwayt.* There is a description of the Scottish king, Malcolm having laid waste to Teesdale in 1070, at a place called *Hundredeskelde* or *Centum Fontes* both meaning 100 springs. Hundredeskelde may be Hunder Beck, derived from a personal name. It has been suggested that Hunderthwaite might relate to "Hundred", which was a land division, and mean "the clearing of the Hundred (or its court)". But, as such, this does not carry through into any other North Riding of Yorkshire place names. Perhaps more likely, the clearing "thveit" of "Hunrothr" a personal name. Perhaps we will never be certain.

Field Names on the estate map

High Geswick	
North-East Geswick	
Low Geswick	
East Geswick	
High Crow Nest	"crow" could refer to rook, hooded or carrion crow and
Low Crow Nest	suggests places frequented by "crows", e.g. rookery
Reins	"*rein*" is an Old Norse (550-750 AD) word for boundary land
Little Close	
Middle Park (divided into north and south)	
Low Buck Hill (divided)	*bucc(a)* Old English (450-1150 AD) male deer or he-goat
Low Park (divided)	
Low Corn-Field	
Holm	*holm*, Old Norse (550-750 AD), "raised land in marsh or water-meadow"
Hall Garth	"house and land attached to it"
Home Close	"enclosed land" near to main house
Hall Bank	
Bottom	"*botm*" Middle English (1150-1500) valley bottom
Holm Bank	along river from *Holm*, flat low-lying land by river or stream
Raine's Pasture	"grazing land", Middle English (1150-1500). Raine was a tenant
High Buck Hill	
Thwaite Intack	"*Inntak*" Old Norse (550-750 AD), "land taken in from waste"
High Corn-Field	
High Parks	"*park*" field, enclosed estate

The map shows a red line, indicating that the following fields are held separately:

Well End Pasture	"*wella*" Old English (450-1150 AD) "spring, underground water, stream"
Hay Close	
Brecken Hill	"*brec*" could either mean newly broken land or, in this context, "*brekken*" Old Norse (550-750 AD) "land on a steep slope"
West Pry Field	"*pre*" Middle English (1150-1500) meadowland (prae, prey, pray)
East Pry Field	
North Brecken Bed	maybe "*bedd*" Old English (450-1150 AD), a small plot of land for plants
South Brecken Bed	

The **Gueswick Hills** have appeared with three different spellings in the past 250 years:

- On the 1761 Doe Park Estate Map it is spelt "*Geswick*"
- In an article in the Laithkirk Parish Magazine in 1869/70 it is spelt "*Ghestwick*"
- On the current Ordnance Survey maps it is spelt "*Gueswick*".

Guest and Ghaist can both mean ghost or spectre. There have been speculative comments that the Gueswick Hills were associated with ghosts and spirits, even suggesting that the crosses were positioned where they were to counteract this. There is a "*Guestwick*" in Norfolk: "*Geghestueit"* in Domesday, *"*clearing belonging to Guist*".* This is recorded as *Geistweit* in 1203, *Geystweyt* in 1242 and *Geystethweyt* in 1254. Official documents recorded names that often came from an alien language, hence the variation and tidying up on occasion.

2.4 Findings of geophysics and lidar

In the June 2019 Altogether Archaeology geophysics (magnetometry) survey of part of the site, six grids were surveyed, each 30m x 30m, plus one of 10m x 10m. The detailed results of this survey, plus lidar imagery, is given in a report (Eastmead 2019) available on the reports page of https://altogetherarchaeology.org, hence only a brief summary of results will be given here.

Prior to geophysics being carried out, members of AA did a preliminary walk-over survey of the site to identify possible features. The geophysics was targeted at the areas identified in the walk-over as being of most interest, fairly level, and not obviously disturbed by ploughing. One area that was avoided was that between Sites B and C which the farmer believed had been used for burying dead livestock at one time (the pit seen on lidar may be this burial site).

Figure 8 shows the areas chosen for magnetometry, overlaid on lidar. The prominent east-west boundary seen on lidar is a tumbled wall. A few metres to the south and almost parallel to the wall is a wire fence. The magnetometry sites A (60 x 30m) and C (90 x 30m) are placed to avoid interference from this fence. At the west end of the fence and tumbled wall is the large cairn. Here the wire fence turns northwards and the tumbled wall southwards.

Site A is located over an area of disturbance seen on lidar, with no cultivation ridges across it. On walkover survey, the feature was easily seen as irregular, roughly rectangular, earthworks.
Site B was placed on a fairly flat area close to the cairn, to include the cup-marked stone. The lidar is fairly featureless in this area, apart from faint modern cultivation ridging running NNW-SSE.
Site C examined the large area to the north of the tumbled wall and fence: On lidar there are faint post-medieval cultivation ridges running ENE-WSW, which overlie broader features running on the general orientation NNE-SSW, but further apart than expected for medieval ridge and furrow.
Site D was placed on the mound at the SE tip of the plateau.

Position and results of the magnetometry for A and B. are shown below (more detail is given in the report). See the magnetometry report (Eastmead 2019) for the results from C and D.

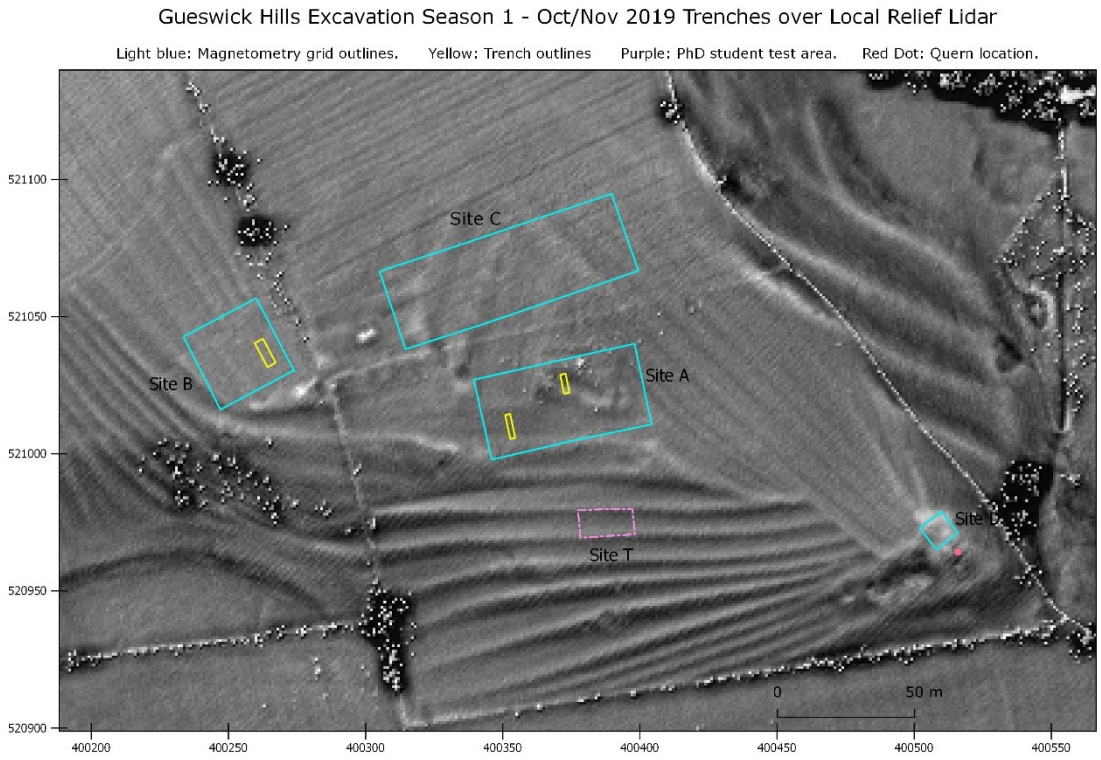


Figure 8: Magnetometry sites (blue) with trench positions (yellow): from left to right: B1, A1, A2. Overlaid on lidar (local-relief processed). Site B is by the cairn at the west end of the summit. Site D is on the mound at the SE end of the plateau. Sites A and C are on the summit plateau. A pink dot by Site D marks the find-location of a quern (see Section 4.7)

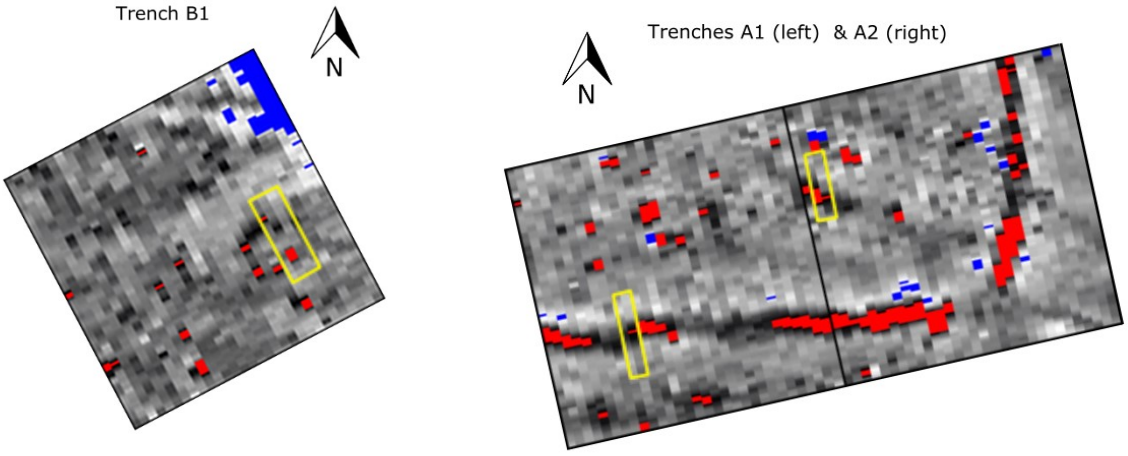


Figure 9: Magnetometry of Sites A and B with trench positions (from left to right: B1, A1, A2). Magnetometry images show high flux areas in black and very high flux areas in red. Magnetometry is in 30 metre squares. Trenches outlined in yellow.

Magnetometry of Site A showed a positive rectangular feature, in the same position as the roughly rectangular 20mx6m feature seen on lidar and on the ground. Its long axis is roughly NW-SE and it has a gap midway along the southern side (possibly an entrance). The strongest magnetometry feature in Site A is a probable enclosure ditch which runs eastwards then turns through a right angle (and has a possible gap) at the south-east corner of site A to run northwards for another 70m into Site C. Here it turns through less than a right-angle to run WNW, leaving Site C in the middle of its northern edge. Another ditch runs roughly parallel and on the south side of this; the ditches converge slightly to the west. There is a possible ditch seen returning southwards from the parallel ditches, suggestive of the western side of a sub-rectangular ditched enclosure, about 80x70m in size.

These ditches are not seen on lidar, nor on the ground, suggesting an early date. Site B shows a scatter of spots of high intensity readings, including a C-shaped structure about 20m north-west of the cairn. This is about 6m in diameter.

3 EXCAVATION

3.1 Aims

The site has strong indications that it is multi-period, with both medieval and prehistoric features. It is a "special" site 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, but the project is still at an early stage. This excavation was carried out as part of this research:

- to investigate the state of preservation of structures on the site which are visible on geophysics and/or lidar
- to assess the depth of archaeological deposits, and to gain clues about the nature and date of any features.
- to help formulate a better understanding of the site and help to decide what further investigations would be productive.
- to enhance engagement of people (both AA members and local residents) with their historic environment.

As this is only an initial evaluation, the trenches only covered a small proportion (less than 1%) of the area of interest.

3.2 Trench siting

All three trenches were within the magnetometry areas and aligned parallel with their sides to enable correlation of the trench positions with magnetometry features. Trenches were positioned by re-establishing the corners of the magnetometry squares using high-accuracy GPS, then off-setting to the trench positions by tape-measure. The trench positions were then confirmed by GPS measurement (see Figure 10). The trench locations, relative to features on lidar and magnetometry images are shown in Figures 8 and 9.

Trench A1: A 2m x 9m trench (with long edge nearly north-south) was laid out so the ditch seen on magnetometry crossed its centre. The western half (a 1m wide strip) was only excavated to the first deposit below topsoil, the eastern half was excavated to lower levels. The south edge of Trench A1 was 6m from the south edge of the magnetometry 30m x 30m square, the west edge was 8m from the west edge of the square.

Trench B1: A 10m x 7m rectangle was laid out over the C-shaped magnetometry feature in magnetometry (B). The eastern half of this, 10m x 3.5m was then excavated (aligned with long edge NNW-SSE). The south edge of Trench B1 was 6m from the south edge of the magnetometry 30m x 30m square, the east edge was 5m from the east edge of the square.

Trench A2: A 7m x 2m trench (with long edge north-south) was laid out across western end of the rectangular feature seen in lidar and magnetometry (A), crossing its southern bank/wall. The north edge of Trench A2 was 6m from the north edge of the magnetometry 30m x 30m square, the west edge was 1m from the west edge of the square.

Trenches A1 and B1 were commenced on the first day of the excavation. By the fifth day, B1 was completed and recorded. A2 was commenced on the fourth day of the excavation.

ID	LOCATION	Easting	Northing
1	PERRY'S LOCATIONS	400397	520978
2	PERRY'S LOCATIONS	400398	520969
3	PERRY'S LOCATIONS	400388	520968
4	PERRY'S LOCATIONS	400378	520968
5	PERRY'S LOCATIONS	400377	520978
6	PERRY'S LOCATIONS	400387	520978
7	TRENCH A2	400372	521020
8	TRENCH A2	400371	521027
9	TRENCH A2	400373	521028
10	TRENCH A2	400374	521021
11	TRENCH A1	400354	521004
12	TRENCH A1	400353	521004
13	TRENCH A1	400351	521013
14	TRENCH A1	400353	521013
16	TRENCH B1	400267	521032
17	TRENCH B1	400264	521030
18	TRENCH B1	400259	521039
19	TRENCH B1	400262	521040
GPS BASE	GPS BASE	400378	521041
FENCE CORNER POST	FENCE CORNER POST	400284	521019
QUERN	QUERN	400516	520963

Figure 10: GPS readings of trench location. Accuracy better than 1 metre. The find position of quern fragment is also shown. “Perry’s Locations” are the position of the test-pit and investigation grid on the terrace; the results will be given in a separate report.

3.3 Excavation of trenches

See Project Design (Green 2019) for details of excavation methods, access, and health and safety. The trenches were both excavated and back-filled by hand, with no use of machines. Turf, stones and soil were stacked separately. 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 an important section.

Professional supervision was by Harriet Sams, present most days. Management of the dig was by AA members: Martin Green, Stephen Eastmead and Tony Metcalfe with advice from Paul Frodsham (AA’s Archaeological Advisor).

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

4 EXCAVATION FINDINGS

4.1 Trench A1: excavation

The whole 9m x 2m was de-turfed and cleaned. Below the topsoil *A101* over the whole area of the trench was a loose deposit *A102* of fairly large stones of mixed sizes and shapes (mostly rounded) in a topsoil-like matrix. The western side of the trench was not excavated further (apart from removal of this stony layer at the most northern 1m). Below the stony deposit, in all of the trench was a loose brown topsoil-like deposit *A105* containing fewer stones. In it was found two sherds of pottery, one late medieval, the other a wheel worked sherd of unknown date (see next section). It overlaid, at the north end of the trench, a flagstone surface *A106* with a sandy silt *A112* between and beneath the flags (probably glacial till subsoil as a levelling layer) To the south of this, in the middle of the trench, was a deposit of rounded stones in a dark matrix *A107*, with a thin deposit of dark brown silty material over it, *A111*.

This band of darker stony deposit *A107* running across the middle of the trench is at the expected position of the probable ditch feature seen on magnetometry. It is consistent with a ditch fill and is seen clearly crossing the trench on vertical views of the trench (Figure 11). Its upper surface is about 0.5m below ground level. The thin darker deposit *A111* overlying it probably formed when the ditch-fill slumped, leaving a depression in the ground surface. To the south of this possible ditch fill was a more compacted band of stones *A108*, looking placed, possibly a deliberate surface. On this surface a piece of worked stone was found, possibly a quern fragment. Yet further south was a patch of small rounded pebbles in a single compacted layer *A109*. This patch was above and surrounded by a brown deposit of silty clay material *A110* with some rotted stones. This may be a fill or subsoil (either in situ or re-deposited). There were several patches *A113* of darker brown uncompacted soil in the layer *A110*: these were not excavated so their interpretation is unclear.

The surfaces found each side of the ditch (a flagstone surface *A106* to the north and a surface of small cobbles *A109* to the south) were unexpected and not predicted by magnetometry. Although intriguing (trackways?, yard surfaces?), interpretation is unclear due to the small size of the trench. As this excavation was a limited initial evaluation of the site, the trench was not excavated further since it had confirmed the depth and probable presence of the ditch and located other significant features. It was backfilled after placement of a geotextile layer across the trench base.

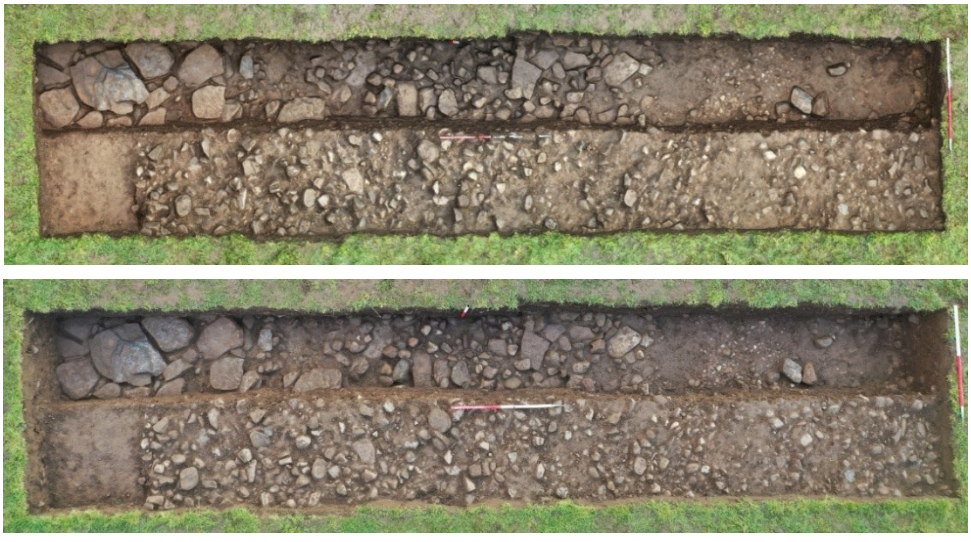
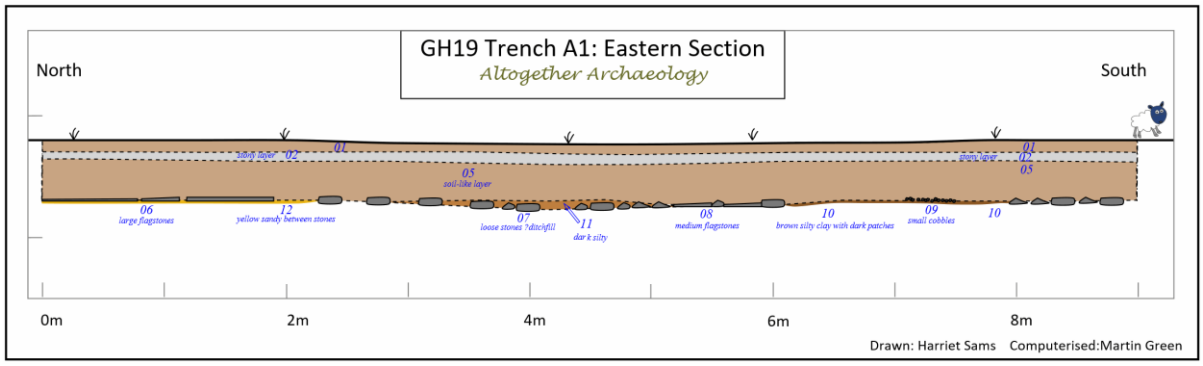


Figure 11: Trench A1 at completion. North is at left, trench is 9m x 2m.
top: vertical photogrammetry (scale correct) *bottom*: vertical drone photograph

Figure 12: Trench A1 at completion: oblique photogrammetry image to show eastern section



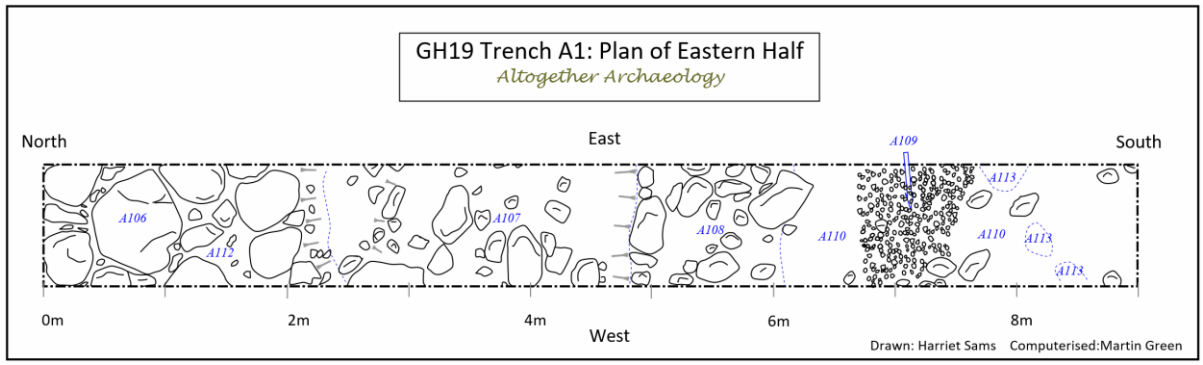


Figure 13: Drawn plan and section of Trench A1.

The western half of A1 was only excavated down to the stony layer, A102, and not shown on plan. Number in blue are context numbers: see text and Context Tables (Appendix 1).

4.2 Trench A1: finds *(Tony Metcalfe)*

Finds from sealed soil *A105,* above paved and cobbled surfaces *A106, A108, A109:* two pot-sherds

1) A sherd of glazed pottery with handle base. 15th – 16th century (scale is millimetres).

2) A sherd of wheel-worked pottery. Date unknown

Finds laying on paved surface *A108*, at base of sealed soil layer *A105*: a piece of worked stone

A broken piece of worked stone (possible quern fragment). Weight 2.05kg.

4.3 Trench A2: excavation

This evaluation trench was located at the west end of the rectangular feature seen in lidar and magnetometry (see Section 2.4). The trench crosses a strong positive magnetic anomaly. With limited time and the threat of poor weather only a 7 m x 1 m trench was excavated. After de-turfing, the initial clean revealed a cobbled layer *A203* in the southern half of the trench.

Figure 14: Trench A2, looking north, after cleaning of western 1m strip, showing stony layer *A203*.

A topsoil-like layer *A202* about 0.05m to 0.07m thick lay under the cobbled layer *A203*. Elsewhere it lay, as did the cobbles, under the topsoil *A201*. At its base *A202* became admixed with the deposit below, *A204*. This context, a gravely soil, varied between 0.14m to 0.17m in depth. Underlying all contexts was a yellowish-brown, probably natural glacial till layer *A205* with a well-defined upper surface. All the finds were contained in either context *A202* or *A204*. The finds consisted of three sherds of Iron Age/Romano-British (IA/RB) pottery, a stone spindle whorl and an iron blade (see next section). Context *A205* was excavated in a sondage to 0.73 m below the turf with no sign of change. Within the limits of this trench, this layer appeared to be sterile of archaeological finds.

The cobble layer *A203* corresponds to the slight bank defining the south side of the rectangular feature seen on lidar, and as a high magnetism feature on the magnetic plot (see Figure 9).

Figure 15: Images of Trench A2 at completion.
North is at top in all cases. Trench is 7m x 2m, but only western half excavated below topsoil.

left: vertical drone photograph, all trench including uncleaned eastern half
centre: vertical photogrammetry image (scale correct)
right: oblique drone photograph, close-up

4.4 Trench A2: finds *(Tony Metcalfe)*

Finds from topsoil-like deposit *A202,* below cobble bank layer *A203*: two pot-sherds

Pottery (two sherds)






The two pot-sherds are crude with a coarse fabric. They are probably Iron Age (or Romano-British).

Finds in *A204*, a gravelly soil below *A202:* A spindle whorl, a pot-sherd and a blade

Spindle Whorl



Pottery (one sherd)

Blade (65 mm)

The spindle whorl is fairly crude, made of a dark-grey fine-grained sedimentary rock. Its design is consistent with whorls from the Iron Age (and Romano-British) However, spindle whorl design changed only slowly, so an earlier or later date cannot be excluded.

The pot-sherd is a similar Iron Age type to those found in the overlying context, *A202* (see above).

4.5 Trench B1: excavation

Figure 16: oblique drone photograph of location of B1, looking west

Trench B1 was located to investigate a weak 'C' shaped positive magnetic anomaly. It was midway between a possible Bronze Age cairn to the south east and an earth-fast cup marked stone to the north west. The anomaly plus one metre border covered an area of 10.0 m x 7.0 m. The north-eastern half was de-turfed (10.0 m x 3.5 m); the other half was not excavated. The blue area on the magnetometry image was due to corrugated iron sheeting in a sheep pen.

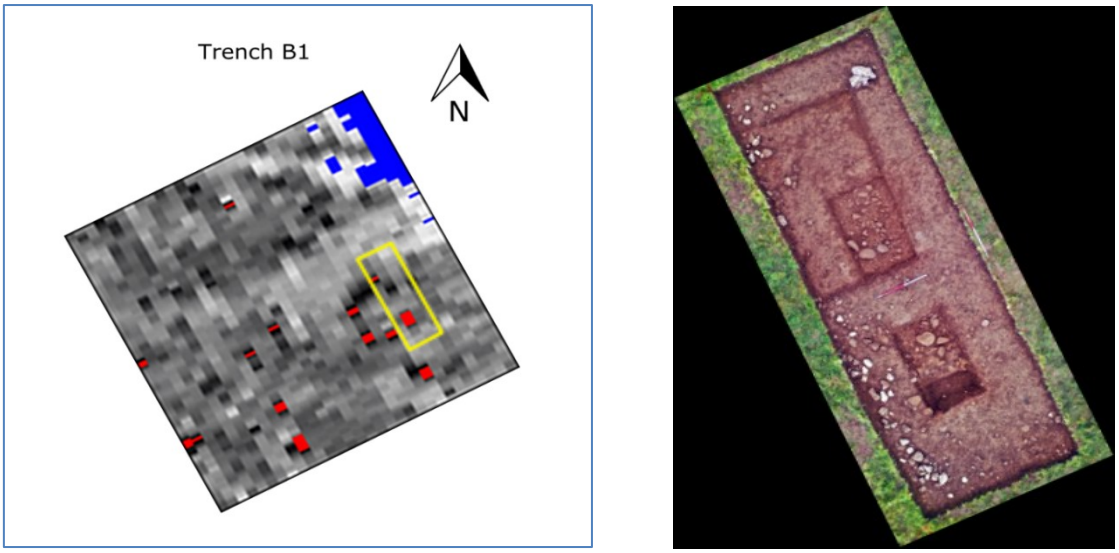


Figure 17: Magnetometry and photogrammetry (scale-correct) of Trench B1

Below the topsoil *B101* was a more gravelly, top-soil like layer, *B102*. This lay over *B103*, a yellow-brown glacial subsoil with stones. This was cleaned but no archaeological features found. Two sondages were excavated into it, to a total depth of 0.74m, without further findings of interest. Before closure the group of stones in the south corner of the trench was excavated. They were grouped around a rotted iron-rich boulder, probably a natural deposit. This trench was closed and re-turfed.

Figure 18: Trench B1. North is at top. Vertical drone photographs.
left: fence and wall junctions to east of trench *right:* during excavation...
The same spoil heap is in both images. The cairn is to the left of the angle in the fence.

Figure 19: Trench B1 on excavation. Vertical drone photograph, with plan of contexts.

4.6 Trench B1: finds *(Tony Metcalfe)*

The only finds were in the unsealed layer *B102* and were either post 18th century in date or, in the case of the flint, showing no evidence of being knapped. The subsoil-like context, *B103*, appeared to be sterile within the limits of excavation.

4.7 The quern-stone found near to the trenches

During the dig, an upper quern-stone was found by Rob Young at NZ0051620963, about 170m ESE of the excavations. It was exposed in an area of animal disturbance at the south-east side of the base of the mound at the east end of the summit plateau. The position is marked by a dot on Figure 8.

Figure 20: Upper quern-stone (YQS:8277).
Views (clockwise from top left): oblique, side, top, bottom.

The stone is a little less than half of an upper stone, broken through the central hole. It weighs 18kg, so the whole stone would have weighed approximately 40kg. It is made of a fine-grained sandstone and has a convex upper surface, a flat lower surface and would have been about 60cm diameter. The central hole is 7cm diameter and there is a blind, slightly conical, 3cm diameter handle hole on the upper surface about 8cm from the rim. The stone's thickness is 10cm maximum.

The stone has been registered with the Yorkshire Quern Survey YQS:8277. Information from John Cruse of the YQS is that Roman hand quern-stones are normally smaller diameter than this stone (40cm average, some up to 55cm) and also lighter, with the assumption that stones over 35kg are too heavy for convenient rotation by hand. Roman querns are also normally flat on the upper surface.

This stone therefore is unlikely to be Roman, and is not of the Iron Age “beehive” form”; it is most probably medieval. As it is too large and heavy for convenient hand rotation, it may have been from a mill. Alternatively, it could have been hand-turned using a lever system: a long vertical pole with one end pivoted at a roof beam and the other inserted in the handle hole near the rim. The operator pushes the pole backwards and forwards, twisting the stone. The handle hole, if it was in a mill, would have been used by the miller to manipulate the stone, and could have housed a peg to engage with the grain hopper above the stone: the central hole in this stone is too small to be an effective grain hopper itself.

Figure 21: Windmill sites on the County Durham and Northumberland Historic Environment Record (from www.keystothepast.info).

The find location makes it unlikely that the stone was from a watermill as it is 60m in altitude above the Tees. One possibility is that the mound that the stone was found beside was used as a windmill mound (this doesn’t exclude the mound having an older origin). Windmills were introduced around 1200AD and were wooden post-mills at first. They were generally less powerful than watermills, so presumably had smaller stones. However, given that the River Tees is nearby, it is difficult to see why a wind (or animal-powered) mill would have been constructed on the Gueswick Hills, and known windmill sites (see Figure 21) are almost without exception on the coastal areas, not in dales like Teesdale.

5 DISCUSSION

Photogrammetry models (3-D) can be accessed for each of the trenches using the following links:

Trench A1 https://skfb.ly/6OCoE
Trench A2 https://skfb.ly/6OCPW
Trench B1 https://skfb.ly/6OCEo

A test-pit dug on one of the terraces is being written up separately; a report will be placed on the AA website.

Trench B1, between the summit cairn and the cup-marked stone, found nothing of note. Finds were scanty and none were pre-modern. The areas of high magnetometry readings may have just been due to iron-rich stones in the top of the glacial till subsoil: one of these was excavated. No evidence of either medieval or prehistoric activity was found.

Trench A1 was placed across the probable enclosure ditch seen on magnetometry. This ditch was not apparent on lidar, or on inspection in the field, so was expected to be covered by later deposits. In fact, the top of the ditch, with dark stony ditch-fill was found about 0.5m below the ground surface. It was overlain by a soil buried under a thin stony layer at the base of the topsoil. Unexpectedly, a flagstone surface was found on the north-side of the ditch, and to the south of the ditch was a less well-defined stony surface, and a patch of a single layer of small cobbles.

The magnetometry showed about 100m of this ditch: the 1m length of it excavated was typical on the image. Hence, since it showed archaeological surfaces on both sides of the ditch, it seems probably that the site is rich in archaeological features. Finds were sparse in the trench, although a possible quern fragment was found on the flagged surface. There was a late-medieval potsherd in the buried soil above the ditch. The ditch itself was not excavated, so it cannot be dated (except that it must be medieval or earlier). The form of the enclosure, and the depth of the ditch below other deposits strongly suggest that it is pre-medieval, however.

Trench A2 was excavated across part of one end of a 20m x 6m feature seen on both magnetometry and lidar (as well as being visible on site). This sub-rectangular feature was formed of a low bank around a slightly sunken area, with a gap in middle of the south (long) side. Excavation showed the low bank to be formed of a cobble layer *A203*, with no evidence of wall foundations. A soil-like layer *A202* was found under the bank. In this, the finds were three pot-sherds of Iron Age or Romano-British (IA/RB) type, but no later artefacts. Similarly, the finds in *A204* (a gravelly layer under *A204* and just above probable subsoil) were also IA/RB (pot-sherds and a spindle whorl) with no medieval material.

Overall, before excavation, it seemed probable that most finds would be medieval, given the site position between medieval villages and beside cultivation terraces and ridge and furrow. Some IA/RB material was also thought possible, given the enclosure ditch on magnetometry and the enclosed settlement at an equivalent position the other side of the Tees. The 2019 Gueswick excavation confirmed that it was an IA/RB site, but there were surprisingly few medieval finds (fewer than IA/RB), calling into question whether there was medieval use of the site. The adjacent terraces, although beyond the strip fields of the nearby villages, had been assumed to have been used for arable farming in the medieval period (even if the terraces had an older origin); the dearth of medieval finds make it possible that in fact the terraces were not in arable use medievally, but are the fossilised remnants of prehistoric agriculture.

A return to the site for further work is clearly justified, including an attempt to examine the structure and use of the terraces. A key question will be whether the site was used in the early medieval period, about which little has been discovered in the North Pennine area. The transition date between IA/RB and medieval structures and artefacts is unknown, as is the extent to which the area was occupied at all during the post-Roman centuries.

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7 REFERENCES

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8 APPENDIX 1: CONTEXT TABLES

Site: GH19	Trench: A1				Manual Excavation
Dimensions: 9.00m x 1.00m Maximum depth: 0.55m			**Trench A1 investigates a strong positive linear magnetic anomaly, a probable enclosure ditch. The anomaly passes across the centre of the trench.**		
	Context Type	**Is above**	**Is below**	**Adjoins**	**Description**
A101	Deposit (Topsoil)	A102	-		A dark brown medium silty loose topsoil. Average depth 0.15 m..
A102	Deposit (Layer of stones under topsoil in all trench)	A105	A101		A layer of sub-rounded stones in a topsoil like matrix. Thickness 0.10m. Found under topsoil over whole of trench. Western half of trench not excavated deeper (except northern 1m, where this deposit was removed, but no deeper excavation.
A103					context number not used
A104					context number not used
A105	Deposit (Soil under layer of stones)	A106 A108 A109 A110 A111 A113	A102		A dark-brown loose deposit under stone layer *A102*. Buried soil. 0.25m thick. **Two pot-sherds, one undatable the other late-medieval. Possible quern fragment found at base of *A105*, lying on *A108*.**
A106	Deposit (Flagstone surface)	A112	A105	A107	A placed surface of flagstones, maximum 0.80m set in context *A112* (for levelling?). About 0.5m below ground surface.
A107	Deposit (Stony ditch-fill?)		A111	A106 A108 A112	An uncompacted deposit of sub-rounded stones in a dark-brown soil-like matrix. Consistent with a ditch-fill. Upper surface is about 0.5m below the ground surface
A108	Deposit (Stones in soil: a surface?))		A105	A107 A110	A semi-compacted deposit of stones in a mid-brown soil-like matrix. Possibly a placed surface, although less well-made and with smaller stones than *A107.*
A109	Deposit (Surface of single layer of small cobbles)	A110	A105		An irregular shaped patch, about 1 sq.m of small rounded cobbles (2cm to 5cm diameter) close-packed in a single layer. Cleary placed as a surface. Laid on *A110.*
A110	Deposit/ Natural (Clay/silt subsoil?)		A109 A105	A108 A113	A brown clay/silt deposit with rounded irregular stones of mixed sizes. Subsoil or deposited?
A111	Deposit (dark clay/silt lens)	A107	A105		A dark-brown silt-clay deposit in a thin lens over possible ditch-fill *A107.* Not compacted, comparatively free of stones. Possibly indicating water-logged conditions over ditch-fill when it slumped into ditch.
A112	Deposit (yellow sand/silt to level flagstones	-	A106	A107	Yellow sandy-silt under flagstones *A106*. A levelling layer.
A113	Deposit (dark brown patches)		A105	A110	Three patches, about 20cm across, of darker softer material in deposit/subsoil *A110*. Not excavated, so not clear if natural or archaeological.

Site: GH19	Trench: A2				Manual Excavation
Dimensions (m): 7.00 m x 1.00 m Maximum depth (m): 0.73 m			**Trench A2 investigates a strong positive magnetic anomaly at the western end of the main visible earthwork at Site A, Inside the probable enclosure ditch.**		
	Context Type	**Is above**	**Is below**	**Adjoins**	**Description**
A201	Deposit (Topsoil)	A203 A204	-	A202	This deposit was a blackish brown medium silty/sandy soil, with a soft texture and easily trowelled. Average depth was between 0.10 – 0.15 m. Only a very small piece of slag was found in this layer.
A202	Deposit (Soil under cobbles)	A204	A203	A201	This brown soil-like layer, about 0.10m in depth, lies below cobbles *A203* in the south end of the trench. **Two sherds of IA/RB coarse pottery.**
A203	Deposit (Cobbles)	A202	A201		A single layer of large cobbles between 0.05 – 0.22 m in width and depth approximately 0.16 m. This layer extended from the south-western end of Trench A2 for 3 m forming a low bank.
A204	Deposit (Gravelly soil)	A205	A201, A202		This had a similar soil matrix to the topsoil *A201* but with approximate 25%-30% small to medium gravel included. It lay beneath the topsoil, except under the bank, where it lay under deposit *A202*. Average depth was between 0.14 – 0.17 m. Context *A202* and *A204* contained all of the finds. **Significant finds were a greyware (IA/RB) pot-sherd, a small iron blade and a stone spindle whorl.**
A205	Natural (Subsoil)	-	A204		This was a distinct yellowish-brown in colour and the texture of a slightly clayey sand. It included approximately 30% small random stones and gravel. The depth is unknown as it was continuing when the deepest sondage had reached 0.73m below the turf. It appeared to be the natural glacial layer. The lowest find was found on *A204* / *A205* interface.

Site: GH19	Trench: B1				Manual Excavation
Dimensions: 10.00m x 3.50m Maximum depth: 0.74 m			**Trench B1 investigates a weak 'C' shaped positive anomaly present in the magnetometry results at Site B. The trench was sited to include the north-eastern half of the anomaly.**		
	Context Type	**Is above**	**Is below**	**Adjoins**	**Description**
B101	Deposit (Topsoil)	B102	-		This deposit was a blackish brown medium silty sand, with a soft texture and easily trowelled. Average depth was between 0.10 – 0.13 m. Only a very small piece of slag was found in this layer.
B102	Deposit (Gravelly soil)	B103	B101		Below *B101* small to medium sized gravel appears mixed in with the topsoil. This context contained approximately 5% large cobble inclusions approximately 0.10 to 0.20 m randomly scattered. Average depth between 0.09 – 0.17 m. This context only had 5 finds; all were of small size and post-medieval. They included: pottery x1, nail x1, glass x2 and flint (unknapped) x1.
B103	Natural (Subsoil)	-	B103		This deposit was of a glacial nature. A compact yellowish-brown coarse sand with gravel and course cobbles. These constituents varied in relative abundance continuously, often varying from near all sand to nearly all gravel within a few centimetres of each other. At its maximum it was excavated to a depth of 0.50 m and a total depth of 0.74 m with no sign of ending. No finds.

Figure 22: Terraces on the south side of the Gueswick Hills.
The summit cairn is at the top right of this drone photograph.