Archaeological Investigations

Cliffe

North Yorkshire

November 2018

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Front Cover: Metal Detecting at Cliffe: The probable artillery platform in the woods: The Metal Detecting team

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Summary

This report describes the methodology and results of archaeological investigations led by Tees Archaeology at Cliffe, North Yorkshire. The site is centred on National Grid Reference NZ 210 154. The fieldwork was undertaken in November 2018 and was part of the National Lottery Heritage Fund, River Tees Rediscovered Landscape Partnership Project.

The site occupies a cliff overlooking the crossing point of the River Tees at Piercebridge (Co Durham). Most of the area is long-term pasture with ridge and furrow clearly visible. Part of the northern edge of the area examined has a relatively dense managed woodland which extends to the west along the side of a stream valley known as 'The Glen'. There is cultivated land to the immediate south-east and the whole area is bounded to the east by the B6275, the former Dere Street. The area also contains Betty Watson's Hill, a Bronze Age round barrow which is a scheduled monument

The archaeological investigation, comprised a geophysical survey, a metal detector survey and a walk over survey.

The work identified a ditch around Betty Watson's Hill; the presence of previously identified Romano-British activity; the possible site of a English Civil War artillery platform and a distribution of lead shot and other artefacts that throw light on an encounter between Royalist and Parliamentary forces in the area.

Acknowledgements

We would like to thank the landowner Richard Wilson for permission to carry out the wok and for his enthusiastic assistance. Historic England provided the licence to carry out the geophysical survey over Betty Watson's Hill and Ben Westwood, the Portable Antiquity Scheme, Finds Liaison Officer for the area facilitated the recruitment of metal detectorists, and supported the metal detector survey.

Volunteers assisted with the geophysical survey, carried out the metal detector survey and the associated archaeological recording. The geophysical survey was led by Alice James and Oskar Sveinbjarnarson of Northern Archaeological Associates with the voluntary help of Jane Alderson, Luke Collin, Charles Newsholme, Helen Rowlands, Rob Scaife, Kay Sharp, Lindsay Teasdale.

Those involved in the metal detector survey included Judith Arber, Andy Bridger, Stephen Brown, Kevin Claxton, David Dance, J Fenwick, Kevin FitzPatrick, Louise Gosling, Ian Hawkins, Colin Henderson, Arthur Kindred, David and George Marley,J Mc Millan, Charles Newsholme, David Phillips, Helen and John Rowlands, Dave Smith, Unity Stack, Lindsay Teasdale, David Thompson, K Wallis, John Whitfield.

Phil Philo of the Battlefields Trust provided detailed information about the civil war engagement based on his own researches and kindly commented on this report. The whole project was led by Robin Daniels with the help of Janice Adams who also produced the illustrations, funding was provided by the River Tees Rediscovered Project, a Heritage Lottery funded Landscape Partnership Project.

1. Introduction

Archaeological investigation of land at Cliffe, North Yorkshire (Figures 1 & 2) was led by Tees Archaeology between 8-17th November 2018 as part of the River Tees Rediscovered, Community Archaeology programme. The fieldwork was led by Robin Daniels, with the help of Janice Adams (Tees Archaeology), Ben Westwood (Portable Antiquities Scheme) and the geophysical survey was commissioned from Northern Archaeological associates and led by Alice James.

2. Location and Geology

The irregularly shaped area of *c.4*.5ha is bounded to the north by a cliff edge overlooking the crossing point of the River Tees at Piercebridge, to the east it is bounded by the B6275, the former Dere Street and to the west it is bounded by a wooded stream valley 'The Glen'. The land stretches away to the south, gently rising, with a ploughed field on the south eastern side and further pastureland and a cricket pitch to the south west (Figures 1 & 2).

The site lies between the 80 and 75m contours and comprises long-term pasture with ridge and furrow clearly visible. Part of the northern edge of the area examined has a relatively dense managed woodland which extends to the west along the side of 'The Glen'. The area contains Betty Watson's Hill, a Bronze Age round barrow which is a scheduled monument.

The area is a glacial till, which has been eroded by the passage of the river to create the present cliff edge. The underlying geology is dolostone, a sedimentary carbonate rock.

3. Historical and Archaeological Background

The earliest evidence from the area, comprises the surviving Bronze Age round barrow at Betty Watson's Hill and a further, unnamed barrow to the south-west. The archaeology of the area is however dominated by the Roman (and possibly earlier) river crossing at Piercebridge. The current evidence points to Iron Age and early Roman settlement on the south side of the river with the development of a vicus on the north side once Dere Street and a bridge were established (Cool and Mason 2008).

The known fort at Piercebridge dates to the late 2nd century and it is generally acknowledged that there should be an earlier military establishment in the area and one of the objectives of the project was to seek any evidence for an earlier fort in this area. It should however be noted that it has been recently suggested that the earlier fort lies under the later (Adams and Daniels 2018).

Medieval activity is evidenced by the ridge and furrow occupying the area of the survey and by the medieval village of Cliffe which lies to the west of the survey area. The crossing was important in the medieval period and the present bridge is a re-build of the medieval, while the present village of Piercebridge is medieval in origin and sited within the ramparts of the later Roman fort.

The civil wars of the mid-17th century led to a minor battle in the area. This involved the newly formed Royalist Northern Army which was being marched from Newcastle to York to protect the city. This was intercepted at the bridge by a small Parliamentarian force. This resulted in an engagement on 1st December 1642 during which the smaller Parliamentarian force was pushed back and retreated in good order back down Dere Street (Daniels and Philo 2018).

4. Aims and Objectives

There were two key Aims of the project:-

To better understand the archaeology and history of the area

To involve members of the public and particularly metal detectorists in the project

The Objectives were:-

To look for any evidence of further Prehistoric activity in the vicinity of Betty Watson's Hill, Bronze Age round barrow.

To look for any evidence of an earlier Roman fort occupying this location

To look for any evidence relating to the 17th century civil war engagement in the area

To involve as many people as possible in the project

5. Methodology

The investigation involved three different methodologies, a geophysical survey, a metal detector survey and a walk over survey. The geophysical survey was commissioned from Northern Archaeological Associates and included Betty Watson's Hill scheduled monument and a licence for this was obtained from Historic England. The geophysical work involved a gradiometer survey and this was complemented by a drone survey (James 2018). The survey took place on the 8th and 9th of November 2018 and was assisted by volunteers.

The metal detector survey took place on the 16th and 17th November 2018. Detectorists were asked to work on transects about 4m apart. Once a reading had been obtained any object was retrieved. Each detectorist was accompanied by a volunteer archaeological recorder who assigned an individual number to each find and bagged it (Figure 6). The find was then pinned to the ground until recorded using GPS at which point it was lifted. No metal detecting took place over or within at least 5m of the scheduled monument and this was monitored throughout the survey. Detecting took place in three different directions, from south to north, from west to east and then diagonally from south-west to north-east. This approach was adopted on the advice of the detectorists who indicated that it was the best way to get the most effective recovery of objects. The experience of this survey bore this out with significant amounts of material being recovered on the second and third transects.

In addition to the organised transects an ‘ad hoc’ survey was carried out on a putative artillery platform (see below ‘Walkover survey’) but the very disturbed nature of the ground and amount of tree roots and brash made this very difficult.

The walk over survey was intended to identify any earthwork features not previously noted.

6. Results

Geophysical Survey

A full report on the geophysical survey has been produced and it is only intended to summarise the results in this report (Figure 5 and James 2018).

In addition to the clear impact of the ridge and furrow, the survey identified a pair of linear ditches, A1 which previous work had identified as relating to Dere Street and it is possible that A2 also relates to the road as may D, although Alice James raises the possibility of this being a medieval headland (James 2018, 7).

Features B and C are also identified as being of Iron Age or Romano-British date and were also investigated previously (James 2018).

Features labelled as E are focussed on Betty Watson’s Hill round barrow and Alice James suggests that there may be a burial structure of some kind in the barrow, E1, she also notes a possible encircling ditch, E2, and this is visible in part on the ground (James 2018). It is possible that the funerary structure may be a cist, however the barrow has clearly been dug into and has a significant depression in its centre and the structure identified in the geophysical survey may relate to this activity. Local folklore has it that the depression was made by Parliamentarians to accommodate their artillery but the site is too far back from the side of the river for this position to have had any effective artillery cover of the bridge (pers comm P Philo).

There are two linear anomalies, F1 and F2, of these F1 is closely aligned to the transition between two furlongs of ridge and furrow and may represent a boundary between them (James 2018). F2 does not however align with any medieval features and no function is assigned to it in the report. It may however relate to the complex of Iron Age / Romano-British features identified as B and C.

The geophysical survey also noted a group of features, G, in the south western part of the survey area however no interpretation has been put forward (James 2018).

A range of features were also identified in the western part of the survey area, these tend to be curvilinear but are relatively poorly defined (Figure 5). If these are archaeological anomalies then their shape would suggest an Iron Age or Romano-British date, but this must be regarded as being very uncertain.

Walk Over Survey

The walk over survey identified two main features, the first was a hollow (Figure 5) which

coincided with a faint geophysical anomaly. The soil in this was seen when metal detector finds were recovered from the area and was very black, indicative of burning.

The more significant observation was of a large mound within the woodland on the cliff edge overlooking the river. The western, eastern and northern sides of this mound were steep, greater than 45°. While to the south there was very gentle slope. On both the western and eastern side it appeared as though an existing rise had been cut into to make it steeper, while the southern edge had the clear appearance of a ramp. It is suggested that this may have been an artillery platform at the time of the forcing of the river on 1st December 1642 (Figures 3 & 4).

It is known that the Parliamentary force had Ordnance and that they were in position for a little time before the arrival of the Royalist forces and it seems possible that a natural hillock was re-shaped to allow ordnance to be positioned on it. This is more likely than the suggestion that Betty Watson's Hill was used.

While only one piece of lead shot was found here during the metal detector survey a detectorist did note that in previous years he had recovered a lot of shot from the location (Figure 7). It should be noted that this mound has only recently become visible due to the partial clearance of woodland here and that the location is badly disturbed by tree roots and animal burrows.

Metal Detector Survey

The recording methodology is set out above and the location of each object in three dimensions is recorded in the archive.

The finds have been separated into material, it should be noted that each recorder was allocated a set of numbers and therefore any gaps in the object numbering sequence which is in the archive just reflect unused numbers, not lost material.

Copper Alloy Objects (Tables 1 & 2: Figure 7)

Eighty-two copper alloy objects were found. These included 29 coins, 22 buttons, four rings and four buckles. The coins are set out in Table X and the rest of the copper alloy objects in Table Y

Coins
Eleven of the coins were unidentifiable, while the majority of the rest were of 18th or 19th century date. Most noticeable were a Scottish sixpence of Charles II and two of the relatively rare Irish pennies of George IV. Only the identifiable coins are listed below, details of the rest are in the archive.

Dress Items
A range of dress items were recovered these included shoe buckles, ordinary buckles and buttons. The number of buttons (21) is perhaps more than expected. Two of these are pressed metal with four thread holes (Nos 250, 356). This type of button was used by the military on various pieces of equipment from the late 19th century onwards. These are however heavily outnumbered by the fourteen flat copper alloy buttons with an attachment loop, many of which have traces of silvering. These date to the late 18th and 19th century.

There are two probable livery buttons (Nos 291, 301) probably of 19th century date which would have been part of the uniform of liveried servants.

A single, probably Victorian brooch was found and four rings, of which one (no 216) had a mount for a stone and another had traces of decoration (No 285).

Ammunition
Two bullets and two cartridges were found, one of each was 22 caliber while there ws a bullet from a hunting rifle and a shotgun cartridge. These are probably all related to hunting activity of 19th century or later date.

Miscellaneous
This covers a number of small pieces, including a spoon bowl, five decorative fittings for small pieces of furniture and various fragments of sheet. In addition there were four unidentifiable copper alloy items and these are documented in the archive.

Iron Objects (Table 3)

The majority of the iron objects were related to horses with three probable harness rings, three probable harness buckles including one (No 9) of possible 17th century date. There was also a broken stirrup (No 207) and seven complete or partial horseshoes. This assemblage cannot be dated and while it could relate to the use of cavalry in the civil war it could just as easily and probably more likely reflect agricultural activity up to the mid-20th century.

There was one iron shoe buckle (No 168) and a number of tools, a flat axe (No 262), a triangular section file (no 171) and a hammer head with the broken wooden haft surviving (No 11). While the shoe buckle could date from the 16th to 19th century the tools are almost certainly more recent and were probably lost in the 20th century.

Household items included two broken keys (Nos 349 & 176), part of a bracket or hinge (No 182) and there was also a broken agricultural gate latch (No 208). In addition there were twenty one unidentifiable pieces of iron, bits of bar, rod, sheet and slag. These are all documented in the archive.

Nails, there were twelve nails, of which one was round and all the others square section. Square section nails can date from any time from the Roman period up to the 20th century when they were replaced by the modern round section wire nail. The nails and their dimensions are listed in the archive.

Lead Objects (Tables 4 & 5: Figures 8 - 12))

Shot and Related Material
Twenty four pieces of shot were recovered and three objects that are probable impacted shot. The shot has been classified based of Harding (2012). Based on this classification there were four pieces of Carbine shot, eleven Pistol balls and nine pieces of Buckshot, two of these, (Nos 201 and 221) are a different colour to the rest and may represent more modern birdshot . The weight of the three pieces of possible impacted shot would suggest possible pistol balls. Significantly there are no musket balls present. The implications of the shot will be discussed further below.

In addition to the shot there were three possible powder horn caps (Nos 251, 189 & 123) and twenty four pieces of scrap lead. It is probable that the later were intended to be melted down and cast into shot.

Comparing the weights to the weights of the formed shot:-

- 0 to 5grams, buckshot, no pieces found
- 5 to 29g pistol/ carbine shot, twenty one pieces found
- 35 to 50g musket shot, four pieces of this size were found and there was a single melted lump of lead weighing 627g

Larger piece could of course be used to make multiple smaller shot and small pieces combined to make larger shot, nevertheless the sizes generally support the presence of pistol and carbine shot rather than musket ammunition.

Other Lead Objects
A single medieval spindlewhorl (No 87) was recovered as was a cast weight that probably served as a plumb bob (No 298). There were three strips of lead (Nos 175, 186 & 188), 186 and 188 joined while 175 may have been part of a handle.

Object 93 is as yet unidentified, it was circular and comprised two thin sheets of lead, soldered together with a shallow square indentation on one side, it is broken in two. No 256 is alsl a flat circular piece of sheet. Finally there is a hollowcast toy horse which retained traces of paint and is of 19th century date

Miscellaneous Materials

Silver
Sixpence of George V, 1936 (No 333)
Silver Groat of Ed III, 1327 -1377 (No 82)

Pewter
Fork with the two outer tines broken (No 224)
A button, fork and unidentified fragment.

Tin
Spindle / Bobbin (No 261)

EPNS
Spoon handle

In addition there were two pieces of unidentified metal and a few fragments of pottery. These are all documented in the archive/

Finds Discussion

While not a vast number there is a significant quantity of finds and this reflects the proximity of the site to the important approach route from the south to the bridge at Piercebridge as much as any military action.

The majority of the finds fall into one of three categories; personal items; horse fittings and military material. There are a significant number of personal items being primarily buttons, buckles and coins, but as noted above this probably represents people travelling to cross the river. The presence of two, rare Irish pennies of George IV must hide a story but none of the coins can be related to the 17th century skirmish in the area.

It is tempting to read much into the quantity of horse shoes and harness fittings and it is tempting to interpret these as representing a 17th century cavalry presence. Such items are however virtually undatable and they are more likely to represent country pursuits and

agricultural activity.

The quantity of shot recovered from the site, while not great, is sufficient to point to military activity. Two aspects of the collection are particularly noteworthy, the predominance of unfired shot and the amount of scrap lead ready to be turned into shot. These do suggest an encampment rather than a confrontation.

The second aspect of note is the small size of the shot, based on Harding (2012) there is no musket shot present but predominantly pistol and carbine ammunition. It is tempting to see this as representing cavalry activity rather than infantry.

Finally it is worth considering the material that is not present, conversations with the metal detectorists who were involved in the survey indicated that a quantity of lead shot had been found and removed from the site previously. Unfortunately this missing assemblage cannot be quantified or characterised, however it can be presumed that it was collected randomly and that clearly identifiable shot, rather than impacted shot was probably preferred. On this basis it is tempting to see the material reported on above as a representative sample of the type of material deposited on the site.

7. Discussion

The project has provided a raft of new information related to the prehistoric and later landscape and usage of the site.

Prehistoric
The geophysical survey of Betty Watson's mound indicated an internal structure within the Bronze Age barrow. There are two main possibilities as far as these structures are concerned. The first is some kind of cist structure in the centre of the structure and the second is that the antiquarian digging in the centre of the mound has created a feature identified by the geophysical survey.

In addition, the survey identified an external ring ditch around the barrow and there is no evidence of this on the ground. The presence of such ditches is not uncommon and apart from any other function it would provide a source of spoil for the creation of the mound.

Roman
One of the puzzles of the Piercebridge area is that there is no early fort to accompany the first Roman bridges over the river. The known fort does of course stand on the north side of the river and it has recently been suggested that there was an earlier fort in the same area (Adams and Daniels 2018). It is however reasonable to ask if there was any earlier military installation on the south bank. Unfortunately neither the geophysical nor the metal detector survey identified anything which could be construed as a Roman military installation.

The geophysical survey did suggest that there may be Romano-British settlement in the area. The single identified coin of this period is no great surprise given the amount of Roman activity in the area and the proximity of the major routeway that was Dere Street.

Medieval
Apart from a spindle whorl and a coin there were no identified finds of medieval date. The whole area had clear evidence of medieval ridge and furrow and the geophysical survey

indicated a possible headland. Medieval activity would no doubt have been focussed on the two settlements of Cliffe and Piercebridge, although Dere Street would have continued in use aa route to the medieval bridge over the Tees.

17th Century
The documented engagement at Piercebridge on 1st December 1642 is almost certainly the source of the lead shot discovered on the field (Daniels and Philo 2018). The engagement involved the 6-8,000 strong main Royalist field army commanded by the Earl of Newcastle forcing a crossing of the Tees against a relatively small Parliamentarian force.

The Royalists deployed an advance guard that attacked the bridge that was composed of Thomas Howard's dragoons (who rode to battle but fought on foot) and Lambton's foot, along with some 'great guns' and it is known that the Parliamentarian force had some Ordnance 2 light pieces. The suggested artillery platform in the woods would allow cannon to command the bridge. It is known that the Parliamentary force was able to retreat in good order, it is not known if they were able to take the ordnance with them.

The presence and distribution of lead shot suggests activity focussed in the area closest to the artillery platform. There are two points to note, firstly the size of shot, a mix of buckshot, pistol and carbine but no musket shot. This would tend to suggest an absence of infantry activity and points to the presence of cavalry.

The second point is the relative absence of fired or impacted shot and the presence of an amount of scrap lead. The shot has clearly been cleaned up ready for use, but there is little evidence that it has been used.

A possible interpretation of this information might be a parliamentary camp of cavalry. This force may have decamped very quickly when the size of the Royalist force was realised and this would explain the absence of fired or impacted shot.

8. Conclusion

The project afforded the opportunity for a wide range of volunteers to become involved in an archaeological project and more significantly has identified a previously unsuspected earthwork that may be an English Civil War period artillery platform, while the presence of carbine and pistol shot suggests an encampment of cavalry and there is no reason to doubt that this relates to the encounter in December 1642.

The project has indicated two areas which may be worth further investigation, namely the possible presence of Romano-British structures as revealed by the geophysical survey and the postulated artillery platform.

The round barrow clearly has features associated with it, but given its scheduled status it is unlikely to receive further attention.

9. Bibliography and Sources

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Soil Survey of England and Wales 1983, 1:250,000 Soil Map of England and Wales, Sheet 1 – Soils of Northern England

Tables

Table 1: Coins

Id No	Description
190	Oval shape, thin stamped coin, Roman?
126	Very worn coin, monarchs head and lettering not legible but thistle and crown visible on reverse. Scottish Sixpence of Charles II
299	George III, 'cartwheel' penny, 1797
185	Georgian Half Penny, badly eroded
169	George IV Irish penny, 1822/23. Corroded but some legibility
222	George IV Irish penny, 1822/23. Corroded but some legibility
223	Victoria, 1862 Half Penny
355	Victorian Halfpenny, 1863
206	Broken and badly damaged coin, penny?. Britannia visible but date not clear
347	Three heavily worn and badly corroded. Probable Georgian / Victorian pennies
348	Possible Georgian penny, barely legible
10	Penny of George V, date possibly 1912, last two digits obscured
4	George V, 1920 Penny
337	George V half penny, 1922
83	One pound coin of Elizabeth II, 1983
324	20p coin of Elizabeth II 2012

Table 2: Copper Alloy Objects

ID Number	Description	Dimensions
Buckles		
130	Shoe Buckle, with broken pin	50mm x 44mm
296	Cast buckle. D shaped with central bar for pin. Late / Post Medieval	34mm x 22mm
217	Cast, curved shoe buckle, with pin missing. Expanded sides, 17th - 18th C	55mm x 30mm
325	Large buckle with recessed bar and traces of iron pin	44mm x 52mm
Buttons		
96	Flat, silvered button, attachment loop on rear	30mm diam
191	Flat, silvered button, attachment loop on rear	17mm diam
225	Flat, silvered button, attachment loop on rear	21mm diam
250	Pressed brass button with four thread holes	17mm diam
258	Button, front is domed, attachment loop at rear broken off	20mm diam
265	Flat, silvered button, attachment loop on rear is broken	22mm diam
289	Cast domed button with moulded decoration. Attachment loop broken	13mm diam
290	Flat, silvered button, attachment loop on rear is broken	18mm diam
291	Cast, domed button with swan device, traces of gilding. Attachment loop in place. 19th century livery button	16mm diam
301	Slightly domed button with braided design at the bottom and central braided panel with bird motif. Possible livery button. Intact attachment loop	25mm diam

ID Number	Description	Dimensions
327	Flat button with broken attachment loop	18mm diam
329	Flat button with inserted attachment loop, bent over	15mm diam
332	Broken button, with intact attachment loop	14mm diam
340	Flat button with attachment loop	25mm diam
346	Flat button with attachment loop	28mm diam
356	Pressed brass button with four thread holes	18mm diam
356	Flat button with broken attachment loop	28mm diam
129	Flat button with traces of silvering and intact attachment loop	20mm diam
257	Flat button with traces of silvering, attachment loop broken	23mm diam
1	Flat button with traces of silvering, attachment loop intact	14mm diam
6	Back of two piece button with iron attachment loop	24mm diam
Brooch		
89	Back of oval brooch with clip fitting, no pin and decorative face missing. Probably Victorian	40mm x 27mm
Rings		
216	Finger Ring, shows signs of wear, with mount to take stone, now empty	22mm diam
285	Cast ring with traces of decoration	28mm diam
351	Possible finger ring	15mm diam
166	Cast ring with opposing ends flattened	25mm diam
Ammunition		
282	Hunting Rifle Bullet 0.264 inch diameter.	30mm x 6mm diam
172	Bullet, .22	12mm x 0.224 diam
243	.22 cartridge	15mm x 6mm diam
41	Possible shotgun cartridge	27mm x 13mm diam
Miscellaneous		
218	Oval spoon bowl	48mm x 24mm
88	Cast decorative fitting with cast in attachment spikes to rear, Double waisted shape with three lobed plant decoration on either end and top and bottom of central section	50mm x 27mm
241	Probable decorative fitting or scabbard chape.	40mm long, tapering from 15mm wide to 4mm
14	Fitting for box	33mm x 20mm
341	Bracket / fitting, Rectangular sheet with holes in all four corners	58mm x 43mm
283	Strip with one pointed end and one square end turned over with hole of 5mm diameter. Possible fitting	75mm x 25mm

ID Number	Description	Dimensions
205	Nail & Washer	Washer 19mm diam with central hole 3mm diam to take copper alloy nail 20mm long 1mm diam
162	Piece of sheet	Irregular shape 35mm x 20mm
194	Folded strip	25mm x 14mm
292	Fragmentary strip of cast object	20mm x 9mm
8	Broken piece	15mm x 15mm
197	Circular clip with looped terminals	22mm diam, wire is 3mm diam
84	Screw cap with rubber washer	19mm diam, 9mm long

Table 3: Iron Objects

ID No	Object	Dimensions
Horse Fittings		
350	Horse Harness ring	74mm diam
121	Horse Harness ring	48mm diam
300	Broken ring, possible horse harness	52mm diam
9	Rectangular buckle, possible horse harness, 17th century?	34mm x 44mm
286	Rectangular buckle with turned over hook at one end, possible horse harness	60mm x 47mm
352	Rectangular buckle, possible horse harness	40mm x 58mm
207	Stirrup, sides are round iron bar, flattened at the tread and the top. Suspension loop is broken	Tread is 105mm wide, length of stirrup is 125mm. Bar is 8mm diameter, tread is 25mm wide
92	Broken horseshoe with one arm missing	130mm long, 30mm wide. End turned over
177	Broken horseshoe with half missing	120mm long, 30mm wide.
187	Broken horseshoe, two thirds missing	110mm x25mm
244	Horse Shoe	135mm across, 138 long. Each arm thickens at the ends to a maximum width of 40mm.
288	Horse Shoe, end turned over	135mm across, 140mm long. Each arm 25mm across.
343	One arm of horseshoe	140mm long, 25mm wide.
358	Broken piece of horseshoe	80mm long, 18mm wide,
Dress		
168	Possible shoe buckle, 16th to 19th century	45mm x 40mm externally, 36 x 22mm internally. No trace of pin
Tools		
262	Flat axe head	150mm long, 75mm wide at shaft, increasing to 100mm at blade
171	Triangular section file	130mm long, sides max 10mm wide
11	Hammer Head, One end rounded the other a chisel end, broken wooden haft still present	130mm long, 30mmdeep at haft, rounded end has 35mm diameter, chisel end 35mm across
Household		
349	Key with broken shank and bit missing	Loop is 62mm diam, shank is 40mm long, before break
176	Key with broken loop and partial bit	87mm long, bar is 7mm diameter
182	Strap bracket or hinge	Turned over end 10mm long, leg is 70mm long coming to a point
208	Broken agricultural gate latch with expanded end	160mm long, 20mm wide on bar.

Table 4: Lead Shot

ID	Type of Shot (Harding 2012))	Description	Dimensions	Weight (g)
90	Carbine	Mould line and sprue end visible. Pristine condition	0.559 inch diam	18
91	Carbine	Mould line and sprue end visible. Pristine condition	0.564 inch diam	18
210	Carbine or arquebus	Mould lines etc cleaned off	0.629 inch diam	22
220	Carbine	Mould lines and sprue visible. One side flattened from firing	0.563 inch diam	17
164	Pistol Ball	Mould line and sprue end visible	0.42 inch diam	8
201	Pistol Ball	Mould line and sprue end visible. Slight flattening on one side. Fired?	0.525 inch diam	14
226	Pistol Ball	Mould line and sprue end visible	0.423 inch diam	8
260	Pistol Ball	Mould line and sprue end visible	0.514 inch diam	14
281	Pistol Ball	Mould marks cleaned off	0.434 inch diam	5
322	Pistol Ball	Damage to surfaces, may have been fired, mould and sprue marks removed.	0.538 inch diam	10
323	Pistol Ball	Mould lines cleaned off, one side flattened, Fired	0.472 inch diam	8
344	Pistol Ball	Mould line and sprue end visible	0.539 inch diam	16
97	Pistol Ball	Mould line and sprue end visible	0.519 inch diam	16
196	Pistol Ball		0.425 inch diam	3
95	Pistol Ball	Mould line and sprue end visible	0.521 inch diam	18
43	Buck shot	Slight misalignment between two halves of ball	0.359 inch diam	5
201	Buck shot	Mould line and sprue end visible	0.344 inch diam	4
201	Buck shot	Mould line and sprue end visible	0.356 inch diam	4
284	Buck shot	Mould line and sprue end visible	0.341 inch diam	3
7	Buck shot	Mould marks cleaned off	0.364 inch diam	3
81	Buck shot	Mould marks cleaned off	0.358 inch diam	4
85	Buck shot	Mould line and sprue end visible	0.359 inch diam	5
221	Buck shot		0.263 inch diam	less than 1g
264	Buck shot		0.346 inch diam	less than 1g
287	Spent Shot	Cylindrical piece with one end flattened	27mm long x 6mm diam (0.259 inch diam)	8
339	Spent Shot	Possible impacted shot	25mm x 35mm, flattened, with striations on one side	12
295	Spent Shot	Roughly oval and with hole towards middles. Impacted shot?	32mm x 28mm x 1mm	11

Table 5: Lead Objects

ID	Object	Description	Dimensions	Weight (g)
251	Rivet or Stud or cap	Octagonal shape with rough base. Cf 189. Possible Powder box cap cf Pontefract	6mm diameter, 5mm long	2
189	Rivet or Stud or cap	cf 251 Possible Powder box cap cf Pontefract	Domed head 10mm across, shank is 5mm long, round and 6mm diameter	3
123	Rivet or Stud or cap	cf 251 Possible Powder box cap cf Pontefract	Rough head 10mm across, octagonal shank 5mm long and 5mm wide	2
87	Spindle Whorl	Conical spindle whorl with eroded decoration. Medieval	27mm diam, hole is 10mm diam	30
298	Weight	Rough cast weight / plumb bob with integral suspension hole with some signs of wear	45mm x19mm. Hole 8mm diameter	111
188	Strap	Part of 186, Is this lead or pewter	14mm x 11mm x 2mm	
175	Strap	Strip with turned over end and two misshaped holes, possible handle?	60mm long x 20mm wide x 2mm	
186	Strap	Possible strap with pinched sides and blue ish corroded central strip. See also 188, Possible pewter?	43mm long x 14mm wide, maximum 2mm	5
93	Discs	Circular object, two thin sheets of lead.. Broken in half, with shallow square indentations on one side	50mm diam, 2-3mm thick	23
256	Disc	Flat disc	32mm diam x 4mm	31
13	Toy Horse	Hollow cast toy horse with traces of paint	48mm x 40mm	52

Figures

Figure 1: Location map of area of investigations, Cliffe, North Yorkshire

Figure 2: Cliffe, North Yorkshire area of geophysical & metal detector survey © 2019 Microsoft

Figure 3: Large mound, possible artillery platform, in trees to north of survey area and overlooking the bridge at Piercebridge

Figure 4: Eastern, landscaped(?) edge of large mound during metal detecting in the area.

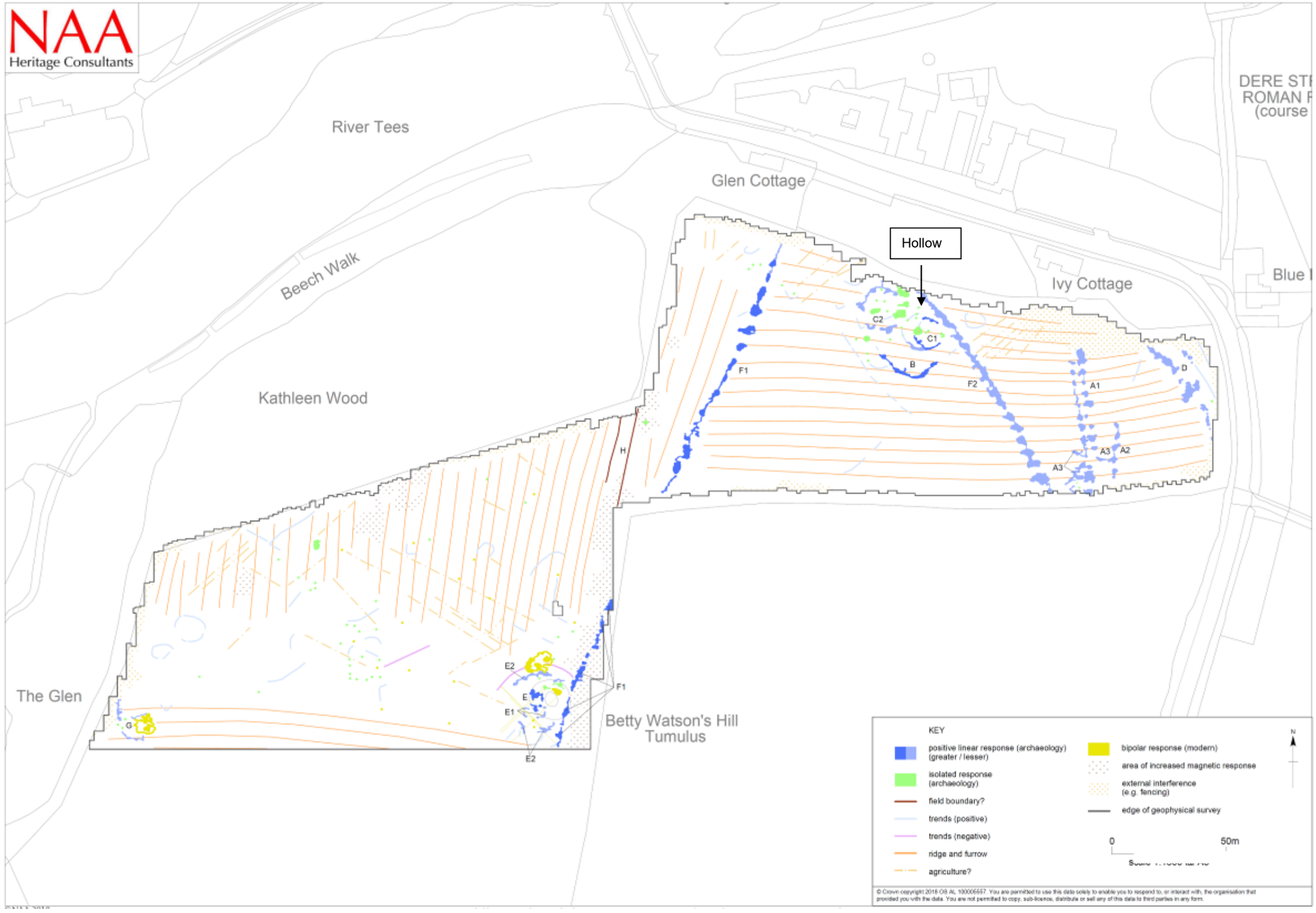

Figure 5: Interpretation of gradiometer survey results, ©NAA 2018

Figure 6: Metal detectorists, recorders and GPS plotting

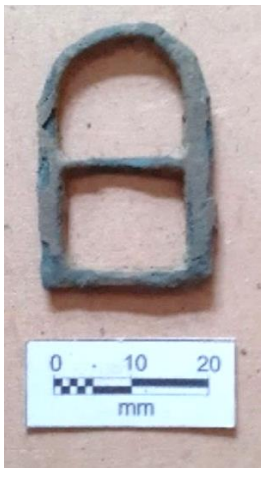

Figure 7: Copper Alloy Objects. Fitting (No 88), Shoe Buckle (No 130), Belt Buckle (No 296)

Figure 8: Lead Objects. Slug (No 327), Weight (No 298), Discs (No 93)

Figure 9: Possible Carbine Shot

Figure 10: Possible Pistol Shot

Figure 11: Possible Buckshot

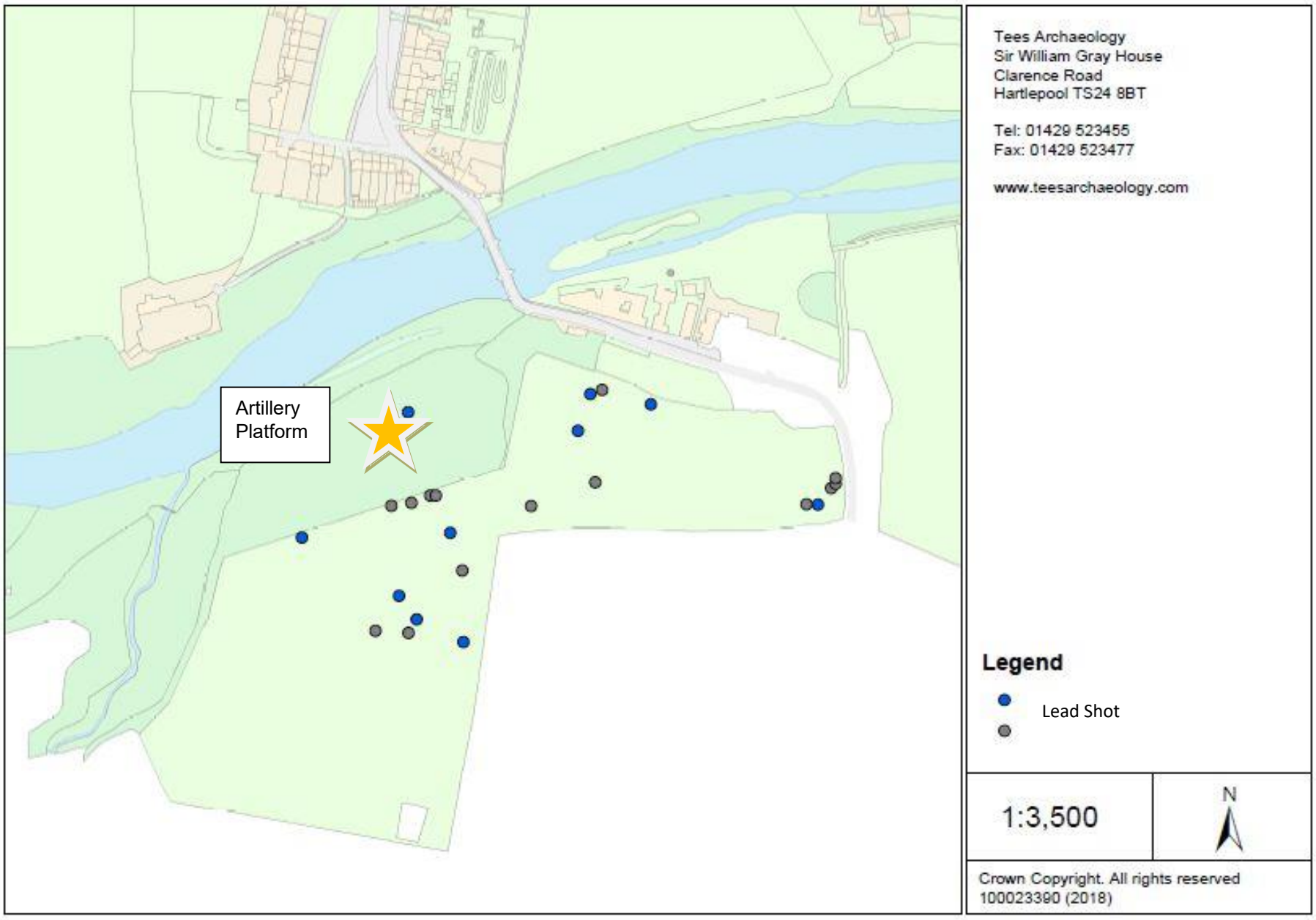

Figure 12: Distribution of Lead shot

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