Castleshaw Roman Fort:
Archaeological Evaluation
of land east of the fort defences

Summer 2019

Friends of Castleshaw Roman Forts volunteers undertaking the evaluation

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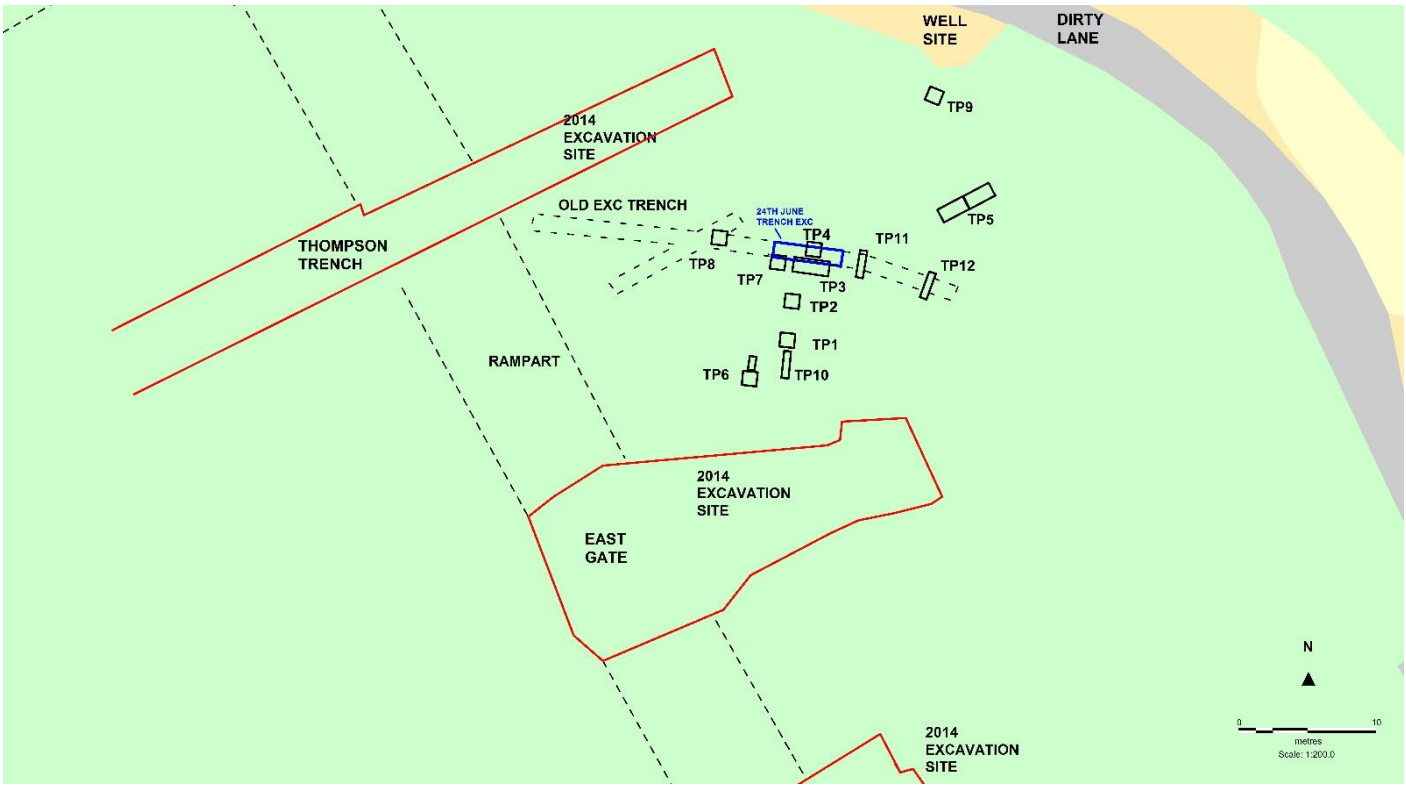
Background

As part of the Castleshaw Roman Forts Hinterland Survey, the Friends of Castleshaw Roman Forts (FoCRF) carried out an archaeological evaluation of an area of land east of the defences at Castleshaw Roman Fort (Heritage Asset No. 1017837), centred on grid reference SD99830953. The land is owned by United Utilities and farmed by David Hirst.

The evaluation continued last year's investigations outside the east rampart, concentrating on providing further information on identified features but also undertaking test pitting elsewhere to define the extent and character of Roman activity.

In 2018 three days of test pitting outside the fort's eastern rampart successfully demonstrated the survival of a range of Roman features and deposits (Redhead 2018). The exercise showed that a previously unrecorded trench, probably dug by Bruton in 1907 or 1908, had encountered significant Roman remains. Within the five metre long section re-opened in June 2018 were a number of features of archaeological interest. The stone features took the form of an apparent wall orientated west to east and a furnace-type feature with stone lined flue. There was a considerable amount of heated, reddened clay together with charcoal and Roman finds. The function and full extent of the wall and possible furnace are not yet defined but the absence of slag residues suggests it was not used for metal production/working.



Plan of 2018 investigations east of the fort defences

Further south, two evaluation test pits (TP6 and TP10) uncovered stone surfaces similar to that recorded on the north side of the east gate exit road in 2014. These surfaces were also picked up as anomalies by the resistivity survey. In both test pits there appeared to be kerb stones on the north side which may demarcate the extent of the stone surface. It was not clear if the stones formed part of a spur road running northwards from the main road exiting the east gate or belonged to a workshop/building floor.

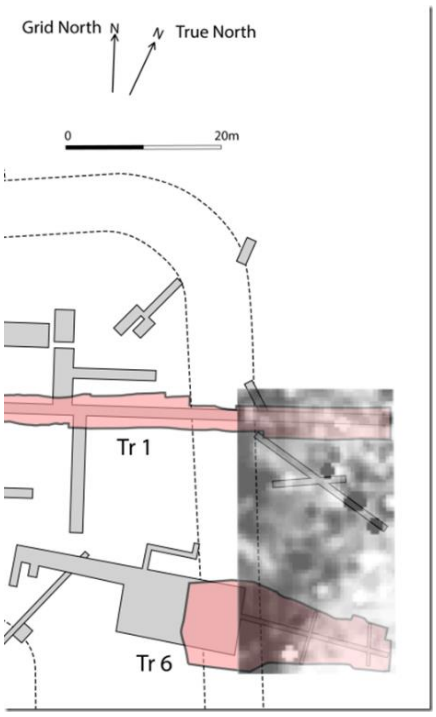
Test Pits 1 and 2 confirmed that the stone surface did not extend all the way to the re-excavated section of Bruton's trench. These test pits each had a discrete concentration of stones but mainly comprised a soil layer and were very different in character to TPs 6 and 10. It is postulated that these stone features formed part of a building with the 'spur road' giving access from the east gate exit road. Indeed, the stone surface may in fact be a yard area in front of the building. Could the furnace and wall seen in the re-excavated Bruton trench be part of this building or belong to a different structure? There is still much to define here,

however a picture is emerging of an area immediately outside the eastern rampart that has substantial archaeological remains relating to a possible building.

The 2018 evaluation explored the eastern stretch of Bruton's old trench and found that the trench was not straight and kinked to the south-east. Further evidence of fire reddened clay was found in the eastern part of the old trench, suggesting an extensive area of activity relating to the furnace, with the possibility there could be more than one in the area. On the west side of the old excavation trench a cut was found for an intersecting trench also probably dug by Bruton. The test pit that revealed this cut had no remains for Roman activity. The 2018 investigations have shown that the old excavation trench uncovered substantial Roman remains and it is strange that these were not reported previously by Bruton. It might be because this area was just too confusing for the antiquarians as it did not conform to standard fort conventions; there was a rampart but no defensive ditches and instead there were structural remains of unknown type and function. On the whole Francis Bruton was good at recording the Roman features his diggers discovered so it is possible that the trench was dug by Buckley or Wrigley at a slightly earlier date when the excavations were more haphazard and not recorded.

It is very rare for a rampart to be built but not to have a ditch outside it. This goes against military conventions. There are plenty of forts with military annexes attached to one side to accommodate additional storage, workshops, accommodation etc, but in these cases almost without fail there is still a defensive ditch or even two ditches outside the rampart separating the main fort from the annexe. At Castleshaw three sides of the fort had two ditches, but not the most vulnerable east side which has the flattest ground in front of it. Interestingly, Castleshaw's contemporary neighbour at Slack eight miles to the east also has a section of ditch missing; this was due to the close proximity of the bath house to the fort's east corner (Bidwell & Hodgson 2009, Figure 28, p 76-7). Is it possible that Castleshaw was built by the same unit and that it also had a bath house close to the eastern defences which was enclosed within an annexe? There is not yet enough archaeological evidence to prove that the remains discovered in 2018 belong to a bath house, but it is certainly an interesting line of enquiry that deserves further investigation.

The area between the well on Dirty Lane, which might have been a spring in Roman times, and the re-excavated section of the Bruton trench has seen little excavation other than the eastern end of Professor Thompson's trench dug in the early 1960s and re-excavated by Salford Archaeology in 2014. This trench was lacking in Roman features except for a drain that ran out from under the eastern rampart. However, Test Pit 5, which was excavated across a square, flat depression, found a silty deposit suggesting that there had been wet ground here, probably in the Roman period.



Plans showing resistivity survey overlaid in relation to 2014 excavated trenches (in pink), with earlier trenching shown in grey; right, the 5 metre length section of Bruton's old trench re-excavated in June 2018.

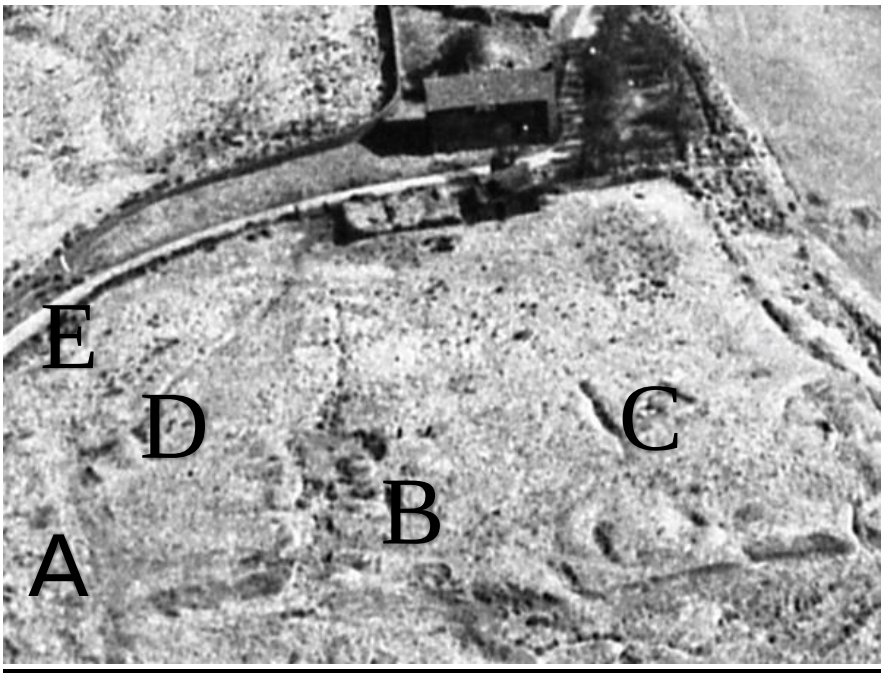
Evaluation Methodology

The archaeological research strategy for Castleshaw Roman Forts is set out in 'An Excavation Strategy for Castleshaw Roman Forts' (Redhead 2013). Relevant to the 2019 evaluation are the following:

Research Objective 8: Understanding how the fort functioned
Research Objective 9: Understanding the road network
Research Objective 10. Understanding the immediate hinterland. Little work has taken place outside the interior of the fort. The question of a possible 1st century *vicus* remains an important issue for further investigation. Currently there is only evidence of a settlement associated with the 2nd century fortlet and, as yet, no sign of a 1st century precursor. This is quite unusual given that most auxiliary forts did have associated civilian communities, drawn by the attraction of a permanent garrison of troops keen to spend their pay. However, investigations of the surrounding area have so far been limited.

Scheduled Monument Consent was obtained for the evaluation and allowed for:

- Undertake archaeological test pitting and trenching in the area to the east of the Roman Fort eastern rampart, between the east gate and the north-east corner bounded on the east by Dirty Lane. The test pits/trenches will focus on key areas of interest identified by last year's evaluation.
- Define the extent and character of the wall exposed on the north side of Bruton's old trench.
- Examine the area beyond the eastern end of the wall where there is a concentration of burnt clay deposits to determine if more furnaces or flues exist here.
- Define the extent and character of the stone spread revealed in Test Pits 6 and 10.
- Determine the relationship between the possible furnace and structural remains in Test Pits 1 and 2 to the south
- Investigate the area between the well and Bruton's old excavation trench to determine the presence/absence and extent of Roman remains



1970s aerial photograph showing: A = old Thomson trench through rampart, B = site of east gate, C = old excavation trench through east rampart, D = area of 2018 evaluation trenching and Bruton's old trench, E = location of well

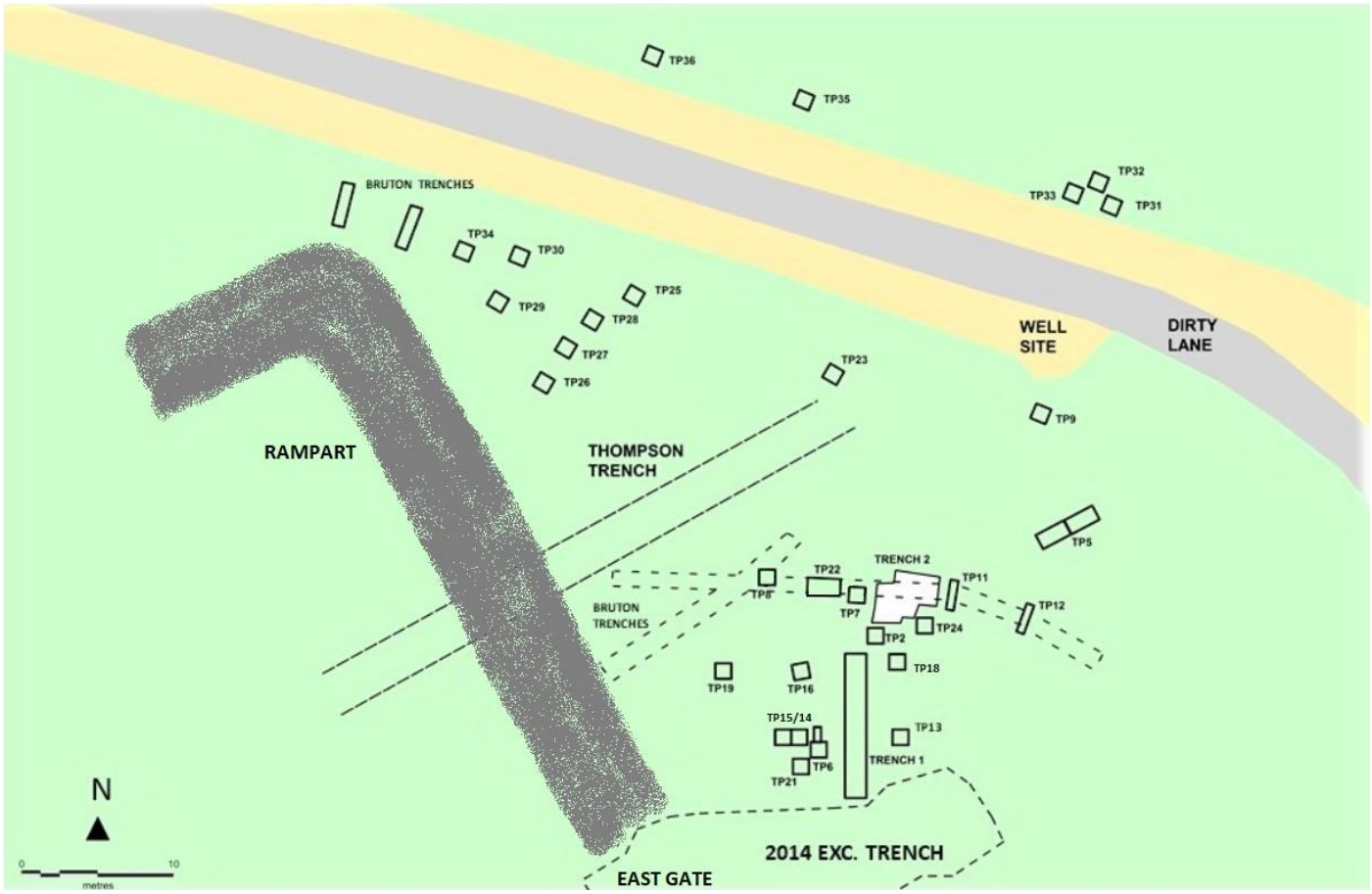
The evaluation took place over days: Saturday 22nd June (to coincide with the Greater Manchester Festival of Archaeology), all 3 days of the Bank Holiday weekend 24th, 25th, and 26th August, with a final day on Saturday 21st September. The weather over the Bank Holiday was exceptionally hot and sunny.

Test pitting consisted of 1 metre square sample excavations, with several of these expanded to form trench explorations. 21 test pits and 2 trenches were excavated. A written description and photographic record was made of each test pit and its position recorded. The depth of natural and overlying stratigraphy was recorded. Finds were cleaned and described. This report sets out the results of the test pitting and a copy has been lodged with the Greater Manchester Historic Environment Record and put onto the Friends of Castleshaw Roman Forts website. An Oasis record form has also been created.

The work was undertaken in accordance with the methodology set out in the 'Excavation Strategy for Castleshaw Roman Forts' (Redhead, 2013). The evaluation exercise will inform future research excavation in this area by establishing the level of survival, character, relative significance and potential of archaeological remains.

The investigations were undertaken by volunteers of the Friends of Castleshaw Roman Forts and were led and reported on by Norman Redhead. 17 Friends volunteers helped out over the 5 days. Their enthusiasm and dedication were amazing and their much valued, continued support is crucial in furthering our understanding of this enigmatic Roman site.

This report can be accessed as a pdf on the Friends of Castleshaw Roman Forts website: www.castleshawarchaeology.co.uk .



Plan of the location of trenches and test pits for the 2019 investigations.

Results

Trench 1

The site of TP10 was opened up to form a 1 metre wide excavation trench four metres long (Trench 1) so that it extended beyond TP10 northwards towards TP1 and the old Bruton trench, with the aim of defining the northern extent of the stone surface. The stone surface extended for 1.7 metres northwards before terminating, with large, flat stones marking the end of the surface. These were arranged so that one substantial stone was laid on an east-west alignment whilst two small stones ran off in a north-west direction, with some smaller stones possibly continuing the edge. The stones framed a small post hole which was 18 cm diameter and 20 cm deep, filled with a dark grey silt. The post had been inserted into the natural subsoil and had no packing materials. On the north side of the post hole was a scatter of small to medium grit stones which gave way to stone-free, mid- to dark yellow silty clay subsoil towards the northern end of the trench. The top of the post hole was at 276.70 m aOD (above Ordnance Datum), the top of the stone layer at 276.78 m aOD, and the lower flagstone surface 276.69 m aOD

Tim, Mike and Steve excavate the northernmost four metres of Trench 1. The stone flagged surface is visible in the bottom of the trench, with the post hole half sectioned in the photograph on the right, situated just beyond the stone surface.

Detail of the end of the stone surface (left) and the post hole before excavation.

It was interesting to note that the stone flagged floor consisted of two layers separated by a thin deposit of clay. This suggested two phases of stone floor. The upper stone layer was cruder and more uneven than the lower, but this could be down to more exposure to disturbance from ploughing etc. The well-preserved lower floor had large angular flags up to 45 cm across. The bottom layer was not excavated so it is not known what lies beneath. It is possible the post hole is associated with the building in which the stone floor sits and that the stone alignment running at an angle north west of the flag floor could be a dwarf stone wall that supported a timber structure. Further excavation would elucidate the extent and construction of the building containing the floor.

Close up photograph of the lower flagstone floor.

The northern extent of the stone floor had been defined, but not that to the south. Initially a one metre square test pit (TP17) was excavated five metres south of TP10 from 2018. It soon became clear that no stones were present but there was a deposit showing patches of burnt clay and charcoal. Therefore, it was decided to open up a trench linking TP17 to TP10 as an extension to the part of Trench 1 described above, giving a total length to Trench 1 of 6.5 metres. Up against the northern part of this trench, the stone surface extended for 50 cm. Here the surface was at 276.63 m aOD with the turf level about this being 276.87 m aOD.

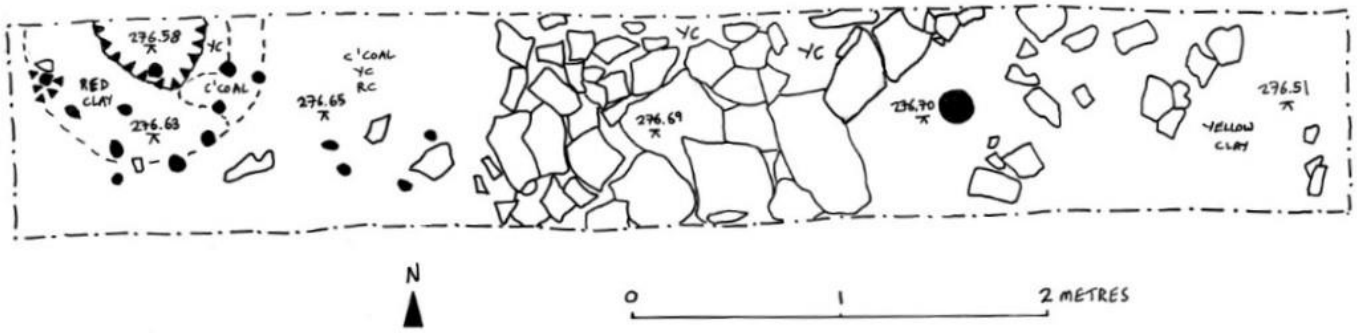
Trench 1 looking north (left) and looking south (right), showing the nature of the stone surface.

This was found to have a cruder and more disturbed upper level of stones, sealing a much better-preserved flagstone floor beneath, similar in make-up to that seen further north. Exploration of the floor's edge indicated at least two courses of stone depth but no evidence of a wall or post holes indicating a structure encasing the stonework; instead, a burnt deposit of mid- grey brown silty clay loam with frequent small to medium patches of charcoal and oxidised red, orange and cream coloured clay came right up to the wall. Within the deposit were a couple of medium, thin sand stones, one of which was on edge. There was not enough time to fully explore the relationship between the burnt deposit and the stone base, although the deposit could be seen to be around 20 cm deep with a charcoal layer at its base. Further investigation is needed here.

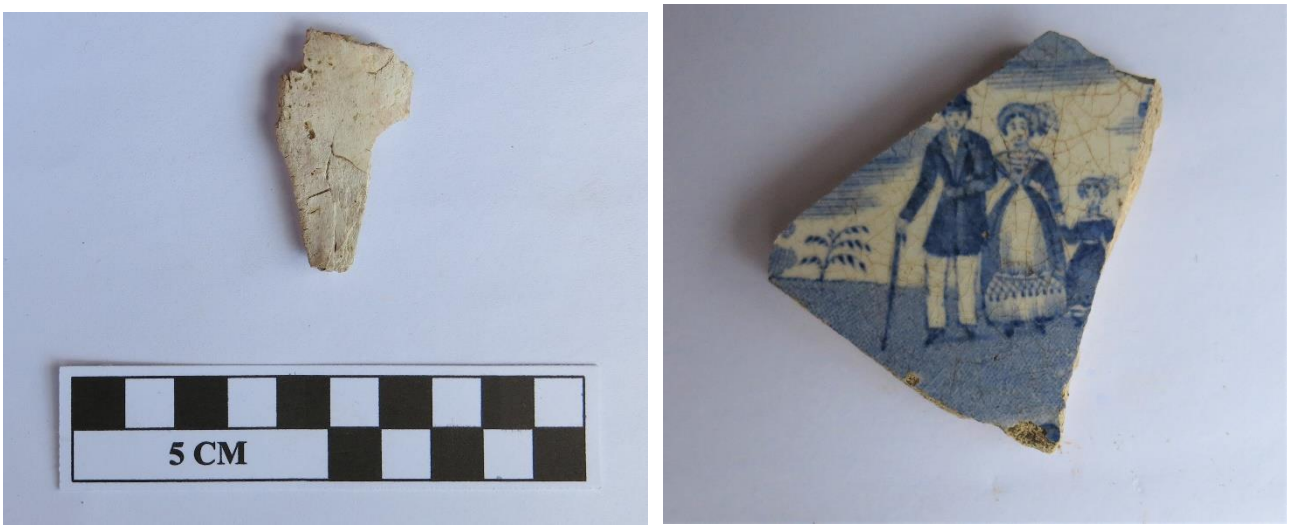
Several stake holes, in the form of circular shapes of grey silt, were evident in the burnt deposit. Removal of a spit of the deposit helped define these better, and also revealed a semi-circular feature defined by heat reddened and cream coloured clay. Several stake holes were cut into this clay and also along its edge. They ranged from 4 to 8 cm wide to a maximum of 10 cm deep. Within the feature was a shallow depression which was filled with a dark brown-grey silty clay loam and frequent flecks and pieces of charcoal. This feature ran into the trench edge so its western edge was not defined. The fill was only 5 cm deep and came off onto cream and heat-reddened clay, with lots of charcoal and a stake hole. There were several pieces of bone within the excavated upper level of the burnt deposit. This survival is unusual at Castleshaw due to the acid soils. Bone can survive when it has been cooked/burnt in antiquity. Amongst the bones was a larger fragment of tibia – possibly from a sheep. Putting all the evidence together, this feature is interpreted as a dome-shaped oven, made of clay supported by a wooden superstructure and probably used for cooking meat.

Detail of edge of stone surface after removal of upper level, with burnt deposit in foreground (left) and in section (right).

The stake holes were concentrated around a semi-circle of intense charcoal and heat reddened clay, associated with a depression which was partly exposed against the trench edge.



Plan of Trench 1.



Highlighted finds from Trench 1: a large piece of burnt and probably (sheep?) tibia bone of Roman date from the possible oven (left) and from the topsoil a body sherd of blue and white glazed pottery dating to the mid-19th century showing a charming family group.

Trench 2 (incorporating old Bruton trench 2018 re-excavation, TP4, and TP3)

The main excavation of last year re-opened a 5 metre long section of Bruton's old trench, and then extended this to the south to expose a flue and 'furnace' (TP3). This area was again the main focus of the 2019 investigations, as the function and understanding of the stone structures revealed last year needed further elucidation. Initially, a 2 metre long section of the northern side of the trench was re-opened to help define the stone wall and a 1 metre square test pit (TP20) cut to the north.

Re-opening last year's excavation with TP20 in the background with photo scale.

This initial excavation confirmed that the wall terminated and gave way to natural mid-yellow clay subsoil before changing to an extensive area of heat-reddened clay with a concentration of stones, some of which appeared to be aligned and belonging to a structure. It was therefore decided to expand the trench eastwards and northwards. The 'furnace' revealed last year was also re-exposed to help us understand its relationship to the newly excavated areas.

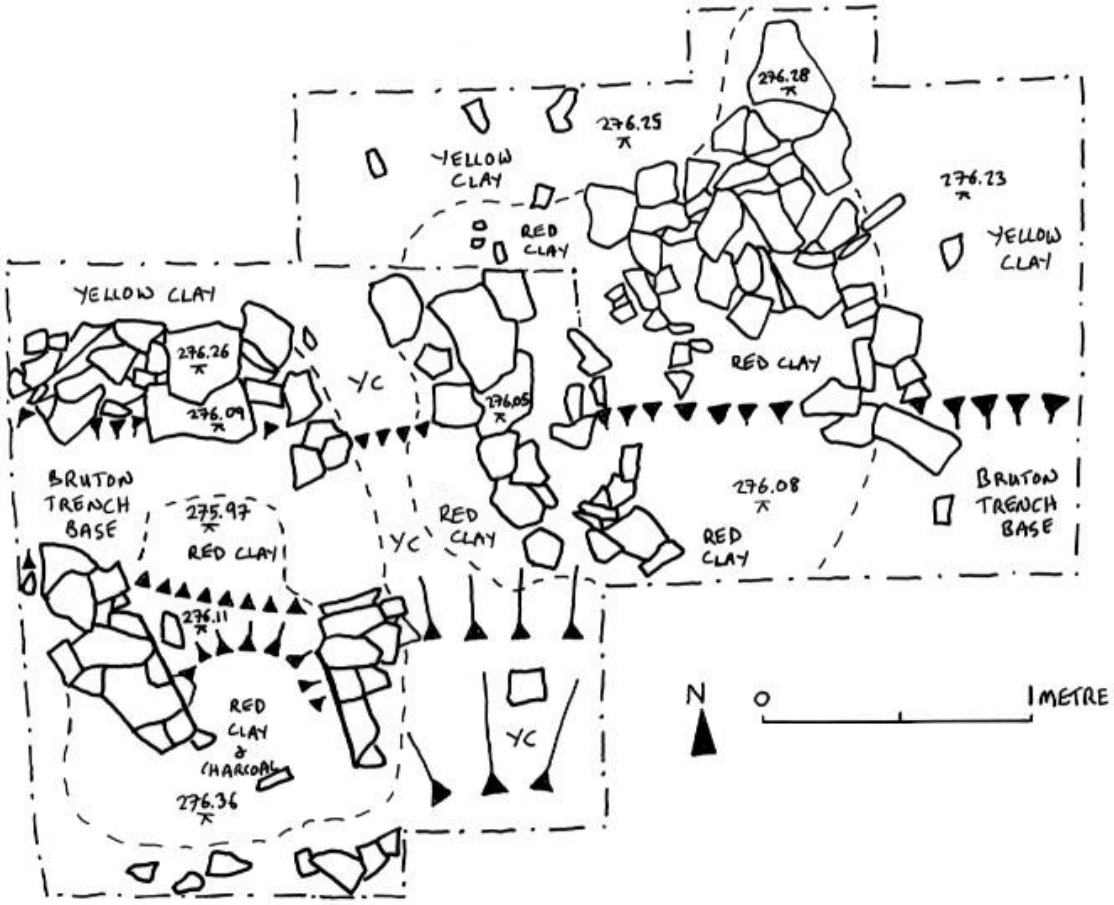
The enlarged Trench 2 with the line of the cut of Bruton's trench of c 1908 marked by the two photo scales. The possible furnace site is far left side, with the possible wall top middle of the photograph to the right of the photo scale. Newly excavated areas are in the near foreground and right side of the photograph.

Once this area had been carefully trowelled and cleaned it was possible to understand the features. It became apparent that there were two discrete areas of stonework forming two separate stone structures. The westernmost structure was mostly exposed in last year's excavation but could now be re-interpreted. Bruton's old excavation trench had dissected this structure leaving remnants on either side. On the north side of the trench, further excavation showed that this section of wall was curved at the rear, was un-mortared and had a large flat stone at its based measuring 40 cm across. It became apparent that this stone was a remnant of a flagstone floor, encased by a stone wall foundation set into the natural clay. Some fragments of stone walling survived in the base of the Bruton trench, with the walls continuing on the south side of the Bruton trench cut. These walls flanked a burnt clay floor under an infill oxidised red, burnt clay, charcoal and small stones that were exposed and described in last year's excavation as a flue for a furnace. Within the base of the Bruton's trench was an intensely heated area of red clay continuing the line of the flue, again described last year. The flue was 0.5 metres wide and extended for a maximum length of 0.7 metres southwards from Bruton's trench edge to run out into an area of medium sized grit stones along the edge of Trench 2 and a deposit of yellow clay mixed with oxidised red clay and charcoal. This stone structure can now be interpreted as stone built over with a flagstone floor. Most of the floor had been removed by Bruton's trench, leaving just the one flagstone in situ, whereas the back wall of the oven and the flue or stoking area had survived mostly intact. The flue walls can now be seen to be the front flanking walls of the oven and would have formed the base of dome shaped structure used for baking bread. The structure was approximately 1.7 metres long by 1.5 metres wide.

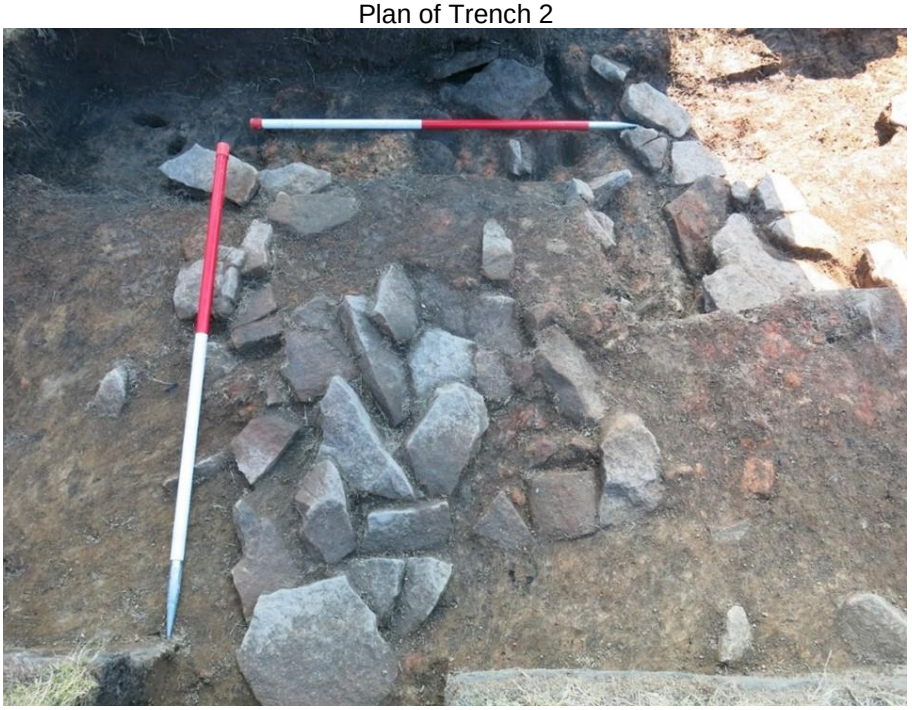
Detail of the oven structure, with rear (north wall) and floor flagstone in foreground, cut by Bruton's trench, and the stoking area/front of the oven flanked by walls beyond.

A second similar feature lay immediately to the east, separated by a strip of natural yellow clay 30 cm wide. TP20 was extended at the rear of the trench to expose and area of burnt red clay and a concentration of stones. The latter were mostly angled and of medium size grit stone with evidence for heat reddening; however, there was a flat stone 25 cm across lying at the rear (north side) of concentration of stones. In the middle of Trench 2, forming a discrete western edge to the second stone structure, was a stone wall alignment running north to south and surviving across the base of Bruton's trench. This very damaged wall appeared to be about 50 cm wide and curved into the edge of the excavation trench so was not quite fully exposed. It was complemented towards the east side of Trench 2 by another stone wall running parallel but which was partly obscured by the concentration of stones to the south. Between these two east and west walls were deposits of burnt red clay, charcoal, stones and yellow clay. This second structure can also be interpreted as an oven, with the concentration of angled stones representing the collapsed roof of the dome structure. The dimensions for this oven are slightly larger than the one to the west, being at least 1.7

metres long and 1.7 metres wide. However, the western oven has been badly damaged by Bruton's trench cut and the eastern oven has not been properly defined by excavation so these dimensions should be treated with caution. Time constraints did not allow excavation of the collapsed stone deposit but this would be worthwhile in the future to confirm the presence of a stone flag floor and the function of this feature.



Plan of Trench 2



Detailed view of the second structure, looking south, showing the collapsed stonework which appears to derive from the domed roof of the oven.

Photo showing the two structures, looking west, with photo scales running down the central axis of each oven structure.

There were few finds from Trench 2 of Roman date – no pottery but a twisted chunk of melted lead could be Roman in origin, along with a fragment of burnt bone and a piece of glass.

Test Pit 13

This one metre square test pit successfully located the eastern edge of the stone floor 2 metres to the east of Trench 1. The top of the flagstone floor was encountered at 276.78 aOD about 20 centimetres beneath the turf layer. As in Trench 1, there were two layers of stone, with the lower being better preserved and with larger flags, occurring at 276.67 m aOD. The upper stone layer comprised small to medium sized flat stones, concentrated as a rough surface on the south-west quadrant of the test pit. When removed a much more substantial surface was revealed consisting of two lines of flat stones up to 25 cm across. The outer, easternmost stone alignment ran south-east to north-west across the middle of the test pit at a different angle to the other stone alignment which was against the western side of the test pit. It is not clear why the alignments are different – do they represent different phases or could plough damage where stones have been pulled out of position be the cause? In the north-east quarter of the test pit was a stone-free deposit of yellow-brown silty clay loam with frequent flecks of charcoal. A lump of burnt red clay and charcoal slightly overlapped the eastern edge of the stone floor, and there were several pieces of burnt daub, suggesting that there has been heating activity in this area perhaps for more ovens. Further excavation here is recommended to better understand the stone alignments and associated activities.

TP13 looking north.

Post medieval pottery and glass from topsoil in TP13 (left) and pieces of burnt daub from the top of the stone surface (right).

Test Pit 14

This was located 2.3 metres to the west of Trench 1 to look for the western edge of the stone surface. As with TP13 and Trench 1, this one metre square test pit exposed two layers of stonework, the upper surface at 276.69 m aOD, the lower at 276.59 m aOD. Under the topsoil and a shallow layer mid- to dark brown plough soil was a clay layer sealing and partly mixed in with a deposit of charcoal, burnt daub and bone fragments lying over the edge of the upper stone layer. This deposit filled in a depression formed by the underlying stones sloping down towards the west. Some of the stones were heat reddened and two were

smeared with charcoal. The upper stone layer, as seen elsewhere, was made up of small to medium gritstones forming a crude surface whilst underneath was a smoother floor of larger, flat stones that appears to be contiguous with that seen in Trench 1 and TP13. The lower stone surface was not exposed across the whole test pit but was not dug through. Clearly there has been a heat related activity; whether this was cooking or workshop related is not possible to discern at this stage.

TP14 looking south. The smaller stones of the upper stone layer can be seen in the top left corner, the lower flags slope down towards the right (west side of the test pit).

Finds from TP 14 with clay pipe and post medieval pottery fragments from the top/plough soil (left) and bones, nails and burn daub from the burnt deposit above the lower stone floor (right).

Test Pit 15

TP14 was extended westwards as a one metre square area (TP15) to follow the stone surface and hopefully find its western edge. The stone surface was found across the test pit but only in its southern half. Under a thin layer of dark yellow silty clay loam was a charcoal deposit measuring 30 by 50 cm but with its southern and eastern sides running beyond the test pit. The charcoal was only 1 cm deep and came off on to a spread of small to medium gritstones, flanked by two larger flagstones (at 276.59 m aOD). To the south of this was a linear cut feature which seems to delineate the northern edge of the stone surface. It was excavated to a depth at 276.25 m aOD. A post hole was also encountered towards the western edge of the test pit, on the south side of the linear cut. The linear cut wasn't fully exposed due to the constraints of the test pit, but with the post hole could be foundation for a timber framed building with a stone flagged floor or yard surface outside of the building. This is an area that would justify further investigation.

TP15 looking south, showing the charcoal deposit (left) and the stone flags, post hole and building slot (right).

Finds from TP 15 include burnt bone fragments, a nail, post-medieval pottery and a clay pipe stem.

Test Pit 16

This was positioned 2 metres north of TP14. Under the topsoil was a dark brown silty clay loam with lots of charcoal flecking which came off to reveal an extensive spread of charcoal across much of the test pit but with one or two patches of dark brown silty clay loam with little charcoal. In the south-east part of the test pit was a concentrated area of heat reddened clay. The turf level was at 276.87 m aOD and the charcoal at 276.51 m aOD. Time constraints did not allow further investigation of these deposits which were derived from burning activities and could represent the location or close proximity of an oven. This is a very interesting piece of archaeology that will repay exploring more widely in the future.

TP16 looking east, showing the charcoal spread and possible hearth area to right, whilst the finds were limited to clay pipe and post medieval fragments from the topsoil.

Test Pit 17

Southern part of Trench 1, described above.

Test Pit 18

Opposite TP16, on the other (eastern) side of Trench 1, Test Pit 18 was located to examine the area between the stone platform and the ovens located in Trench 2 just to the north. At nearly 50 cm beneath the topsoil and plough soil, at 276.37 m oAD, a stone deposit with a clear edge was revealed. The stones were jumbled and set in a mid-brown silty clay loam with lumps of burnt daub and charcoal, and there was plenty of evidence of heat reddening of the stones. This feature wasn't explored further but looks as though it could be the edge of an oven/furnace. To the north-west of this feature was a band of almost stone-free dark brown silty clay loam with frequent flecks/pieces of charcoal. From the plough soil immediately above the stones came a rim sherd of Roman mortarium, part of the spout. Based on TP18, this area has considerable interest and potential for Roman features and deposits.

TP18 looking east.

Finds from TP18 top and plough soils including post medieval pottery, a clay pipe stem, lump of daub and a spout from a mortarium.

Test Pit 19

This was located 4 metres west of TP16 towards the fort east rampart and about 5 metres from the rampart. A thin layer of topsoil overlay a relatively deep brown plough soil layer. The turf level was at 276.83 m aOD and under the plough soil a mid-brown yellow silty clay subsoil was encountered at 276.55 m aOD. A sondage was excavated in the north-east corner to about 40 cm depth, exposing firmer natural orange clay in the section and base. No archaeological features were found in TP19 which suggests there was a gap between the rampart and whatever activities the Romans were undertaking in this general area. The only finds were two sherds of glazed post medieval pottery.


TP19 looking east, showing corner sondage through natural.

Test Pit 20

Part of Trench 2 - North east side. Described under Trench 2 above.

Test Pit 20 marked by photographic scale.

Finds from top and plough soil in Test Pit 20. Black glazed earthen and yellow glazed earthen wares, with bone, lead and blueish coloured glass of possible Roman origin.

Test Pit 21

This was located one metre to the south of TP14 and just to the south-west, examining the area between the stone surface and the east gate trench. TP21 revealed a different type of stone surface at a much shallower depth. This was made up of small angular pieces of gritstone, with a couple of larger, flat and smooth stones. The turf level was 277.07 m aOD with the top of the stone layer (the stone pad) being at 276.80. This could be a track or a yard surface with the two larger stones being a post pad for a timber structure. The shallow depth of this stone surface suggests it could be a later phase, perhaps belonging to the early 2nd century AD fortlet. A larger area needs to be opened-up to understand this feature properly and so the excavation was halted at this level.

TP21 looking west, showing the character of the stone layer.

Post medieval finds from TP21.

Test Pit 22

TP22, which was 1 x 2 m, was located 2 metres to the west of Trench 2 to reveal the old excavation trench cut and see if any Roman archaeological was present. The test pit was adjacent to TP7 dug last year, which revealed a stone alignment and burnt red clay. TP22 picked up the cut of the old excavation trench and a random spread of medium-sized grit stones. The rest of the trench showed some dark grey back fill of Bruton's old trench which appeared to be shallowing out or changing direction slightly so that only a part of it could be discerned in the eastern part of the test pit. The only possible Roman material was the deposit of stones and no Roman artifacts were recovered. This represents quite a contrast to TP7 – it is possible that the stones are rubble from a third oven base which was indicated by the wall found in TP7.

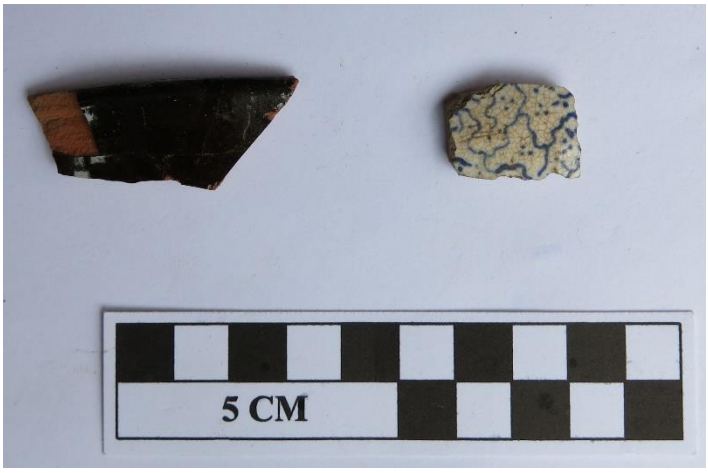
TP22 looking east, showing the cut of the old excavation trench in the far section together with a spread of stones.

TP22 post medieval finds.

Test Pit 23

Part of the 2019 evaluation focused on the triangle of land bounded by the east fort rampart, Dirty Lane on the north and Thompson's trench to the south. TP23 was located just north of the eastern end of the Thompson trench which had been re-opened in the 2014 community excavation (Salford Archaeology 2014 p 22-63), being not far from the bounding Dirty Lane. The topsoil was only 14 cm deep and came off onto natural yellow clay but also showed a dark grey humic fill of an old excavation trench, with a very clean cut for that trench running south to north diagonally across the test pit. There were only a couple of post

medieval pottery finds. The old trench appears to be an offshoot from Thompson's main trench, to look for the ditch or other features. The fill was excavated in part of the old trench and found to be c 25 cm deep onto natural clay.



TP23 looking north-west showing the old excavation trench cut and, right, the two post medieval pottery sherds.

Test Pit 24

This was positioned just to the south east of Trench 2 to look for evidence of features near to the ovens. Turf was at 276.68 m aOD, with three flat, angular stones being found at a depth of 276.15 m aOD. The topsoil and plough soils were relatively deep at around 25 cm deep each. The stones were set in a mid-yellow grey silty clay loam containing lenses of burnt material in the form of charcoal and burnt red clay. In the south-east corner, at 276.10 m aOD, was a thin band of charcoal. No Roman features were revealed but the presence of the stones and the burnt patches suggests that this pit was close to the oven activity.

TP24 looking east, with detail of burnt deposit in section above scale in sondage on right.

Two post medieval pottery sherds and two pieces of burnt orange daub from TP24.

Test Pit 25

Several one metre square test pits were located close to the fence by Dirty Lane (north of Thompson's trench) to examine the potential for Roman deposits and to look for evidence of the defensive ditch as it rounds the corner of the fort defences. TP25 was a 12 metres north-west of TP23. Under the turf, which was at 274.68 m aOD, was a layer of stones at around 45 cm deep. They were sealed under a relatively deep deposit of topsoil and mid-brown plough soil. The stones were randomly orientated and comprised medium sized angular gritstones. They were not deliberately laid and most were embedded in or wholly within what appeared to be natural mid-yellow clay subsoil. There were no Roman pottery finds although there was one piece of calcined bone and a possible oxidised nail head.


TP25 looking north west, showing stone layer.

TP25 post medieval finds, with possible nail head and calcined bone fragment on left whilst the other finds comprised a clay pipe stem fragments and post medieval glazed pottery sherds.

Test Pit 26

This was located 7 metres south-west of TP 25 towards the fort east rampart and formed part of a line of 4 test pits (along with TP25, 27 and 28) to check for the presence of the defensive ditch. The modern turf level was at 275.75 m aOD and nearly half a metre down at 275.27 m aOD was found a striking layer of black humic material and grey clay. This was sealed under 20 cm of topsoil and 28 cm of mid-brown silty clay loam (plough soil). The humic material can be interpreted as being decayed turf. This layer may represent the turf and clay sods used for the Roman rampart construction, as seen elsewhere in the fort and fortlet defences. However, TP26 is quite a long way to the east of the known rampart so could this be part of a berm (the ledge between the rampart and ditch), or material dispersed from the rampart during its dismantling, or could it belong to some other feature such as another rampart to enclose an annexe. Further investigation of this area is recommended.


TP26 looking north east showing turf and clay of rampart construction.

Finds from TP26 included a possible severely corroded nail, glazed post medieval pottery and the base of a clay pipe bowl. The simple form and small bowl size suggest an early date for the clay pipe, possibly late 17th or early 18th century.

Test Pit 27

Positioned 2 metres north-east of TP26 to check for the defensive ditch, this test pit found natural clay at a maximum depth of 40 cm beneath the turf level which was at 275.32 m aOD. The natural comprised light to mid-grey or light to mid-yellow clay with frequent small to medium gritstones. There were no finds and clearly the ditch does not exist at this point.

TP27 looking north east

Test Pit 28

Located 2 metres north east of TP27 and 2 metres south west of TP25, this formed part of the line of 4 test pits straddling the potential line of the defensive ditch. Once again there was no evidence for the ditch. Turf level was 274.92 m aOD and at 274.92 m aOD a layer of sub-natural was encountered, comprising light yellow silty clay with pieces of gritstone.

TP28 looking north east, with the finds comprising post medieval glazed pottery sherds and clay pipe stems.

Test Pit 29

Excavating TP30 (near) and TP29 (far right-hand edge of photo).

TP29 was 3 metres south west of TP30 and very similar in character (see description for TP30). TP29 was not photographed. The turf was at 275.20 m aOD and the base at 274.67 m aOD. There were no finds.

Test Pit 30

This was located 3 metres north east and downslope of TP29. These two test pits were excavated 4 metres to the north west of and parallel to the line of TPs 25 to 28 with the aim of finding the defensive ditch rounding the corner of the rampart. The ditch was not located in either TP29 or TP30. Under 44 cm of topsoil and mid- to dark brown plough soil was found a deposit of shaley mid-brown silty clay loam with patches of light yellow silty clay. This was interpreted as subsoil, confirmed by the deeper excavation of similar material in TP34 just to the west. There were no Roman finds. Turf level was 274.61 m aOD and the subsoil at 274.17 m aOD.

TP30 looking north west and finds from the plough soil comprising a clay pipe stem and post medieval glazed pottery sherds.

Test Pit 31

The last day of archaeological investigation in 2019 focused on the narrow strip of relatively flat ground on the opposite side of Dirty Lane to the fort. The origins of this lane probably lie in the medieval period but its relationship to the Roman fort complex is uncertain. Did it respect or utilise Roman defensive features or did it just cut through previous Roman remains? Its construction involved substantial engineering, being partly terraced into the hillside and flanked by ditches and with a drystone wall on north side. Could Roman remains have extended and survive beyond the north side of the road? There appeared to be an earthwork close up against the wall on the opposite side of the lane to the well, so 3 test pits were excavated to investigate this feature.

Test pits 31, 32 and 33 being excavated on the 21st September beside the wall bordering the north side of Dirty Lane.

TP31 encountered a 40 cm deep deposit of mixed soil of predominantly mid- to dark grey brown silty clay loam. There were handful of post medieval pottery sherds and this deposit is interpreted as spoil from the road construction or clearing out/creation of the roadside ditch. It became apparent that the ‘earthwork’ was therefore of more recent origin and not Roman. However, the deposit was found to seal a decayed turf layer representing the pre-spoil surface level and this in turn sealed what appeared to be the side of ditch feature. There was not enough time or space to investigate this feature fully but TPs 32 and 33 provided more information. Elsewhere, under the former turf layer was natural yellow clay and another possible linear feature against the south side of the test pit, but again restrictions of space meant this was not

investigated further. The turf level was 275.03 m aOD on the east side of the test pit, with the former ground surface at 274.63 m aOD.

TP31 looking east above and north (right). The left picture shows the dark grey former turf layer with natural yellow to the right and then a potential linear cut feature further right against the test pit edge. The right picture shows a sondage through the fill of a ditch-like feature (in the top left corner).

Post medieval glazed pottery from TP31

Test Pit 32

This was located on the northernmost part of the ‘earthwork’ feature and was staggered with TP31 to the south and TP33 to the north so that the corners of the 3 test pits almost touched. TP32 found a deep deposit spoil as seen in TP31 but much deeper here at around 65 cm. The earthwork was made up of a series of dumped spoil with black, humic spoil horizons representing decayed turf lines suggesting a repetition of spoil moving episodes presumably from works to the road. Interestingly, a possible shallow ditch feature was sealed under the spoil material. This had a flat based and angled gently up to the northern edge. The southern edge was not seen within the confines of the one metre square test pit. The fill of the ditch comprised a maximum 20 cm deep mid-brown silty clay loam overlying a thin spread of light to mid-grey silt. The turf level was at 274.67 m aOD and possible ditch base at 273.92 m aOD.

TP32 looking west, showing the layers of spoil accumulation and the shallow ditch-like feature.

Finds from TP 32 comprising post medieval glazed pottery fragments.

Test Pit 33

This was slightly to the west of and set back from TP32, being close to the roadside wall and on the same axis as TP31 to the east. The spoil deposit was not as deep here (maximum of 30 cm) and the possible ditch feature identified in TP31 and TP32 was found in this test pit as well. In this case, the shallow ditch was fully excavated within the confines of the test pit. This allowed the south side of the ditch to be revealed, complementing the north side excavated in TP32.The ditch was only about 25 cm deep and had the same fill as that described in TP32. The edge of the ditch ran down the middle of the test pit on a north west to south east axis. Taking into account TP32, the width of the ditch can be calculated at c 1.5 metres with the flat base being c 0.70 cm. On its south side the ditch feature cut through a deposit containing Roman material. This deposit was part excavated and comprised light brown silty clay loam with frequent small patches of red and light yellow clay and charcoal flecks. Several pieces of (burnt) orange daub and melted lead came from the deposit confirming its Roman origin. Importantly, this is clear evidence for Roman remains surviving on the north side of Dirty Lane. There were no finds within the shallow ditch fills so its date is not yet known, however it cuts the Roman deposit so post-dates that. Further investigation is needed to define the extent and nature of Roman remains in this area.


TP33 looking south (above) and east (right)

Pieces of burnt daub and melted lead from the deposit cut by the ditch feature in TP33.

Test Pit 34

This was located 3 metres north west of TPs 29 and 30 and a similar distance south east from Bruton's old excavation trench across the Roman ditch at the corner of the fort defences. This trench was partly re-excavated in 2017 by the Friends as Trench 5 (Redhead 2017, p 23-6) which confirmed the edge of the ditch. TP34 was placed to find evidence of the continuation of the ditch as it curves around the north east corner of the fort. The test pit comprised 10 cm topsoil, then 15 cm of dark brown plough soil under which was a 25 cm deep deposit of a light to mid-brown silty clay loam with frequent medium to large patches of light yellow silty clay and frequent small sandstones. This came off on to a compact mid-grey clay and shale material which is natural. The turf level was 274.78 on the north west side of the test pit ranging to 275.03 on the east side. There were no finds. There was no indication of the fort ditch in TP34 and it must be concluded that the terminus of the ditch falls between TP34 and Trench 5 excavated in 2017. This is a key area for further investigation.

Test Pit 35

On the last afternoon of the investigations, two more test pits were dug on the north side of Dirty Lane roughly opposite the corner. These were both on the flat ground beside the wall bounding Dirty Lane. The orange bucket to the left in the photograph below (TP36) and the figure in the middle of the picture (at TP35) show the sites of these two test pits. The far group of figures are working on TPs 31-33. A bank of spoil from works to Dirty Lane or for construction of the drystone wall was evident running alongside the wall. This could mask Roman deposits or features. The photograph shows the way the land falls away to quite steeply to the left of the test pits.

TP35 was found to be quite deep and due to time pressures became a 1 metre by 0.5 metre test pit. A 25 cm deep mixed deposit of humic material and brown soil overlay a 35 cm deep deposit of mid- to dark brown silty clay loam. Underneath this was a more compact grey clay and shale layer which could be sub-natural. The lower deposit immediately above the sub-natural horizon was similar to that encountered in

TPs 31-33 so it is possible that the ditch feature continues as far as TP35 running along the break in slope. The excavation of TP35 was quite limited so this is an area that would repay further exploration. There were no finds. Levels were not taken for the test pit.

TP35 looking south and, right, showing it with the wall for Dirty Lane in the background with figures working near the north east corner of the fort.

Test Pit 36

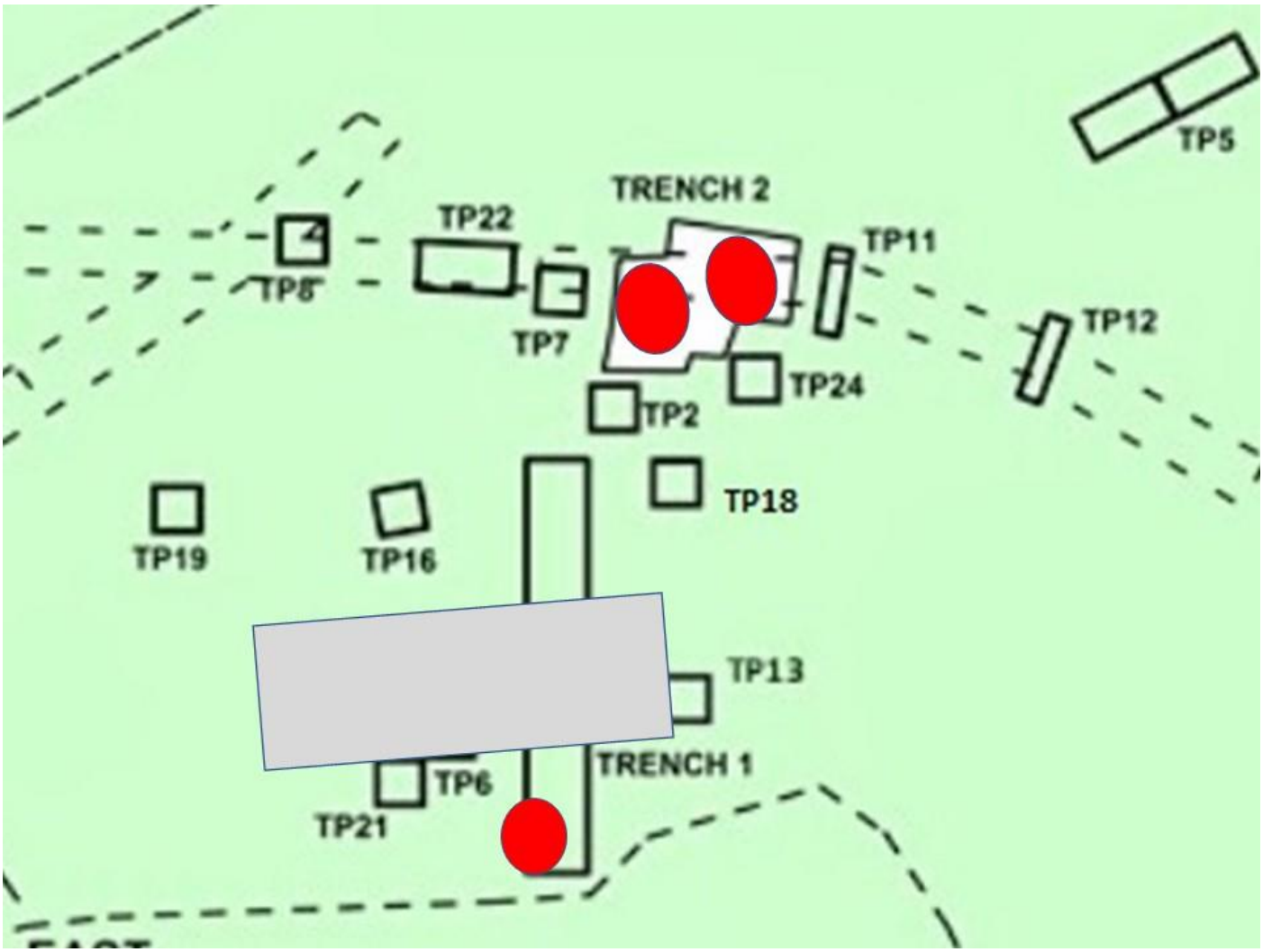
Under 15 cm of topsoil was a 25 cm deep deposit of mid-brown silty clay loam that overlay a stony layer. The small to medium sized, angular gritstones did not form a level or made surface and appear to have been dumped rather than laid. Time constraints meant that the depth and character of the stony layer could not be explored further. There were no finds but, given the depth of the stone deposit, a Roman origin cannot be ruled out and further investigation is warranted. Levels were not taken for the test pit.

Discussion

The 2019 season of investigation has contributed significantly to our understanding of activity outside the eastern defences of the Agricolan phase fort, building on the work in this area begun in 2018. Of great interest is the fact that there is no defensive ditch alongside the eastern rampart. This is highly unusual for a Roman fort and comparative examples are very rare, but it is interesting to note that the next fort going

eastwards along the trans-Pennine highway to York is Slack Roman fort which also misses a ditch along part of its defences to make room for a bath house. Could Castleshaw have had a similar arrangement or was this extra-mural area used for some other purpose? In 2018 the evaluation focused initially on an old excavation trench thought to have been excavated by Bruton at the beginning of the 20th century but not recorded. This was intriguing as the Friends' re-excavation of section of the old trench revealed stone remains and burnt areas associated with Roman finds. The tentative interpretation was that what appeared to be wall together with a flue and possible furnace could have been part of a bath house. Elsewhere several test pits showed that there were blank areas but also other Roman features of note, such as a well-laid stone surface that looked like a floor rather than the anticipated road that had been indicated by resistivity survey.

These features were further examined in 2019 through two trenches and several new test pits. Further investigation of the Bruton trench and area immediately adjacent to it (Trench 2) demonstrated that there were two flue areas, associated with discrete spreads of stonework. Rather than being part of a bath house, the excavators now consider these to be the remains of two stone oven bases which probably formed part of a bank of ovens. The ovens had been cut through at a slight angle by Bruton's narrow trench so it would have been very difficult for him to make sense of the structural remains. The two ovens are shown in red in Trench 2 on the excavation trench plan below, along with the dashed line of Bruton's trench. A wall was found in TP7 to the west of the two excavated ovens; this may represent the remains of a third oven.



Ian showing location of key Roman features in relation to excavated trenches and test pits. Red = ovens, grey = stone surface

Excavation of Trench 1 and several test pits to the south of the ovens explored the extent and character of the stone surface. Trench 1 defined the south to north width of the surface and demonstrated that it was of

two phases, with the lower one being much better preserved as a flagstone floor and the upper one being cruder but also more damaged by later ploughing activity, as shown in the photograph below.

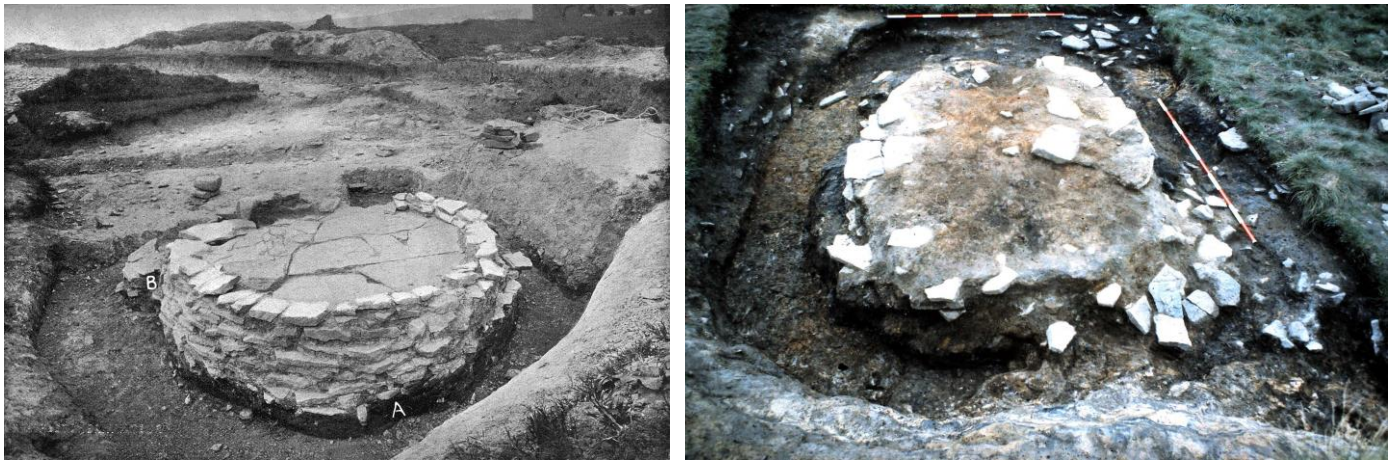
The width of the stone surface was 2.5 metres in Trench 1, with a post hole being located just to the north. It is not known if the post hole was contemporary with the stone surface. A line of stones angled north-west from the main stone surface may be a dwarf stone wall foundation for a timber structure. The eastern edge of the stone surface was found in TP13 but not the western side, so the length is at least 7 metres. Another post hole and possible foundation trench revealed in TP15 suggest that the stone surface might be associated with a timber building and may have been a workshop floor. The southern part of Trench 1 revealed part of what is interpreted as a clay domed oven and just to the north of stone floor in TP16 was another area of charcoal and heat reddening suggestive of a further nearby oven or hearth. Other test pits in this area had evidence of heating activities so the structure to which the stone floor belongs is at the heart of an area given over to ovens and perhaps other heating related activities. It should be noted however that there were no slag residues in the excavated test pits and trench so the function is probably one of cooking rather than manufacturing, an interpretation supported by a small quantity of calcined bone. The plan above shows in grey the rectangular area of the stone floor, whilst the clay oven is show in red at southern end of Trench 1.

The two layers of stone floor provided the main phasing evidence. However, the most southerly positioned test pit, TP 21, had a hard-packed stone surface of quite different character occurring at a relatively shallow level. It was not excavated and it quite possible that the two stone surfaces are sealed underneath it. The cobbled surface looked like it was for a road; however, the presence of a possible padstone for a building post suggest that a floor or yard function is also possible. This higher-level feature, which is located close to the road exiting the east gate, could be of fortlet phase, ie. early 2nd century AD. If this was the case then the stone floors seen in Trench 1, TP13, TP15, and TP14 are probably late 1st century AD fort phase.

In terms of comparative analysis for the stone ovens, there are several examples from within the fort and fortlet at Castleshaw. The best-preserved example is the single oven set into the fortlet rampart beside the single barrack block. This was fully revealed by Bruton when its walls survived to 61 cm high and it had a diameter of 2.75 m. His photograph can be seen below, showing the intact flagstone floor. This contrasts with the condition of the oven when re-exposed by the Greater Manchester Archaeological Unit excavation 80 years later when it looks more like the remnants of the two ovens revealed in Trench 2. The fortlet example appears to be a little larger than those in Trench 2, which were approximately 1.75 m long and 1.5 m wide.

In 1987 GMAU excavated a trench through the western fortlet defences. This revealed a former fort phase stone oven sealed under the fortlet rampart (Start, Redhead & Roberts 1988, p 50). This oven is perhaps a closer comparison with the two from Trench 2. It was shown to be of similar dimensions and when the rampart was removed the dome structure could be seen together with the collapsed area of the flue. It was common for forts to have a bank of bread ovens set in the lee of the inside of the rampart. At Castleshaw fort this was probably in the eastern rampart near the south east corner. The evidence for this was found in the 2014 community excavation when an old excavation trench of unknown origin, that cut through the

eastern rampart, was re-excavated. At the back of the rampart the excavators found the edge of a curving walled structure, a gap and then more stone remains associated with burnt clay deposits. Although truncated by the old trench and only partially revealed, the excavators interpreted these remains as belonging to an oven (Nash, Roberts & Redhead 2014, p 114-5). A fully exposed bank of 4 ovens can also be seen to the south west of the barracks at Caerleon in south Wales.



Castleshaw fortlet oven, as revealed by Bruton in 1907 (left) and by GMAU in the mid-1980s (right)


Fort phase stone oven excavated by GMAU in 1987 beneath the fortlet west rampart.


Trench 7 from the 2014 Castleshaw fort excavation (left) showing the partially excavated oven in foreground and (right) the bank of ovens at Caerleon (source: uksouthwest.net).

Several test pits were excavated in the triangle of land between the north east corner of the fort rampart near Dirty Lane and Thompson's trench which cuts through the middle part of the eastern defences north of the east gate. Of the seven test pits only one (TP26) produced Roman archaeology. This was closest to the

rampart and produced decayed turf and clay suggestive of rampart like material. However, it was too far east to be part of the rampart but could relate to the construction of a berm, similar to that depicted on Thompson's drawing of a section through the northern defences (Thompson 1974, Fig. 5). Alternatively, it could be part of another rampart spurring off from the eastern defences to enclose a military annexe. At the start of the 20th century, the defensive ditch was investigated by Bruton as it rounds the north east rampart corner and its presence was confirmed by the Friends' evaluation in 2017. But as yet there is no firm indication that the ditch continued alongside the eastern rampart. TP34 found no evidence for it despite being only 3 metres from the Bruton trench showing ditch remains. Finding the terminus of the ditch in this area is of great importance to understanding the fort's unusual defensive arrangements on its east side and should be a priority for further investigation.

On the north side of Dirty Lane is a thin spit of relatively flat ground before it drops steeply away to the clough below. This area was investigated for the first time in the 2019 season with the test pits suggesting an early ditch running parallel to the wall along the break in slope. Although there were no artifacts to help with dating, the ditch was sealed under varying depths of spoil deriving from construction/maintenance works to the adjacent lane. Interestingly, the ditch cuts through a deposit of Roman date which yielded pieces of burnt daub building material along with several pieces of melted lead. The construction of the lane, with its road, side ditches, bank and drystone wall, will have cut a swathe through the Roman archaeology; but we currently have little understanding of the level and nature of Roman activity in this area. The fact that we now have evidence for Roman features/deposits extending to the north side of the lane is greatly encouraging and worthy of further study.

Conclusion

Further definition of features exposed in the 2018 evaluation has been possible through the excavation of 2 targeted trenches and 21 x 1 metre square test pits in the 2019 investigations of land east of the Roman fort and north of the east gate. This work has yielded important results which inform our understanding of activities in this area. The key findings are as follows:

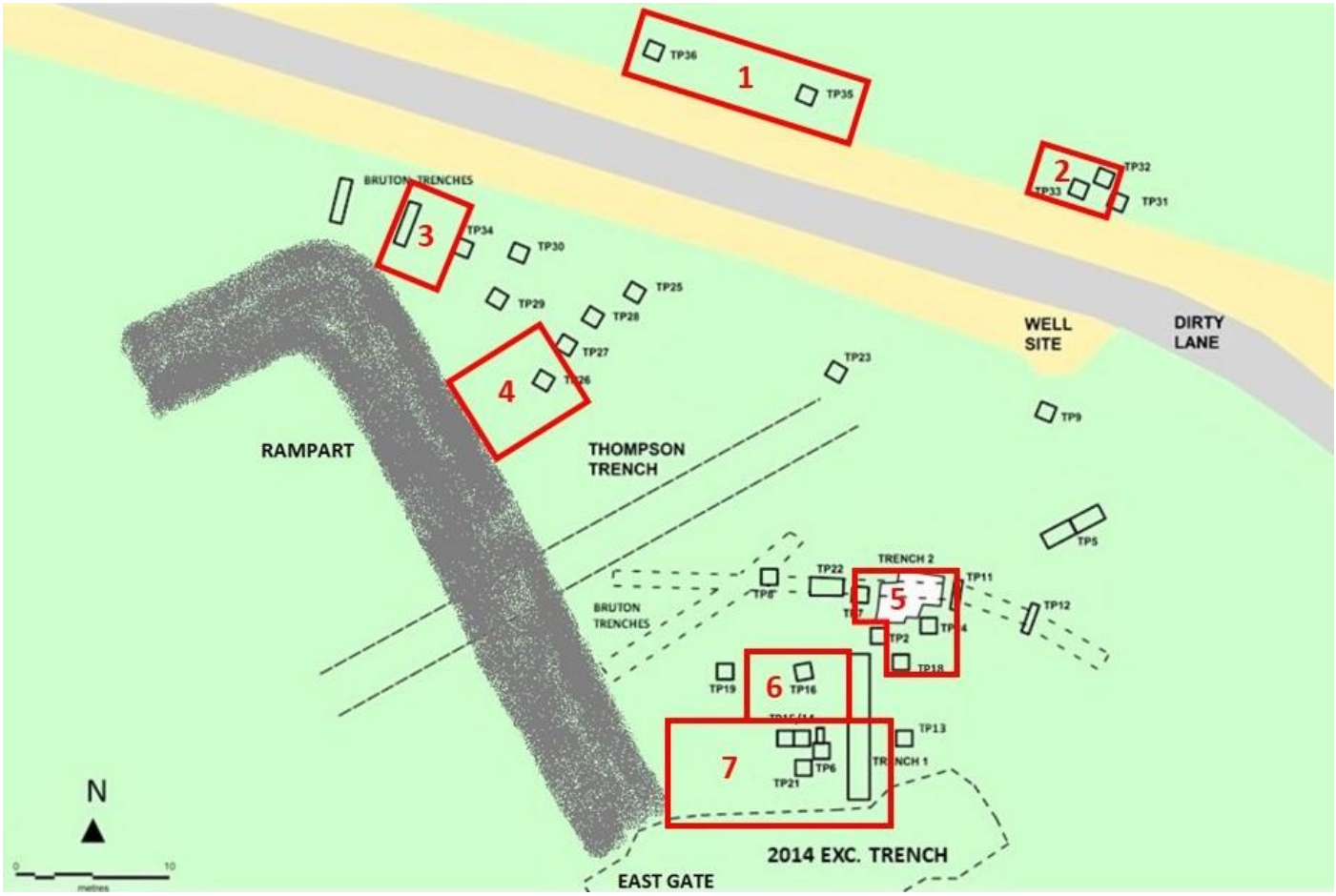
- No ditch exists along the eastern defences but test pitting has narrowed down the area where a terminus can be anticipated, near to the north east corner of the fort defences.
- A 'rampart style' deposit of decayed turf and clay found several metres east of the rampart may relate to a berm or a different rampart.
- A bath house function for the 'wall' and 'furnace' exposed in Bruton's trench and partly investigated by the Friends in 2018 can be ruled out. Instead, these remains can now be interpreted as two domed stone-built bread ovens, with the possibility of a third to the west.
- A narrow rectangular stone flagged surface, of two phases, has been defined on its north, east and south sides, but not on the west. It is c 2.5 metres wide by at least 7 metres long and might be associated with a timber building evidenced by two post holes, a possible dwarf stone wall and a foundation trench. To the south of the stone surface a clay base for a domed oven was found, whilst to the north there is also evidence of burning and a potential oven/hearth nearby.
- On the north side of Dirty Lane, on a narrow flat spit of land, there are indications of a shallow ditch and a Roman deposit cut by the ditch

A picture is starting to emerge of how this area east of the fort rampart was used. The concentration of ovens suggests a special function as the garrison would have had recourse to its own ovens within the fort. It is possible that this area was dedicated to supplying cooked food for travellers or military personnel using the main trans-Pennine highway that the fort sits alongside and guards. The gradient up to Standedge immediately above the fort is very severe and it is possible the fort was used as a staging post for those making the climb.

The site of the bath house has not yet been identified, but it could be located in the area opposite the southern section of the eastern defences. This area has not yet been evaluated but it is proposed that it can be the subject of next season's investigations.

Recommendations

The 2019 investigations have highlighted several key areas for further work on the east side of the fort. These areas are depicted on the plan below.



Plan of areas of recommended further investigation.

1 – Examine flat area on the north side of Dirty Lane to determine the presence of a possible Roman ditch and other features.

2 – Examine flat area on the north side of Dirty Lane to better define the extent and character of a possible Roman ditch and deposit.

3 – Define the terminus of the defensive ditch as it rounds the north east corner of the rampart.

4 – Define the extent and character of the turf and sod deposit seen in Test Pit 26.

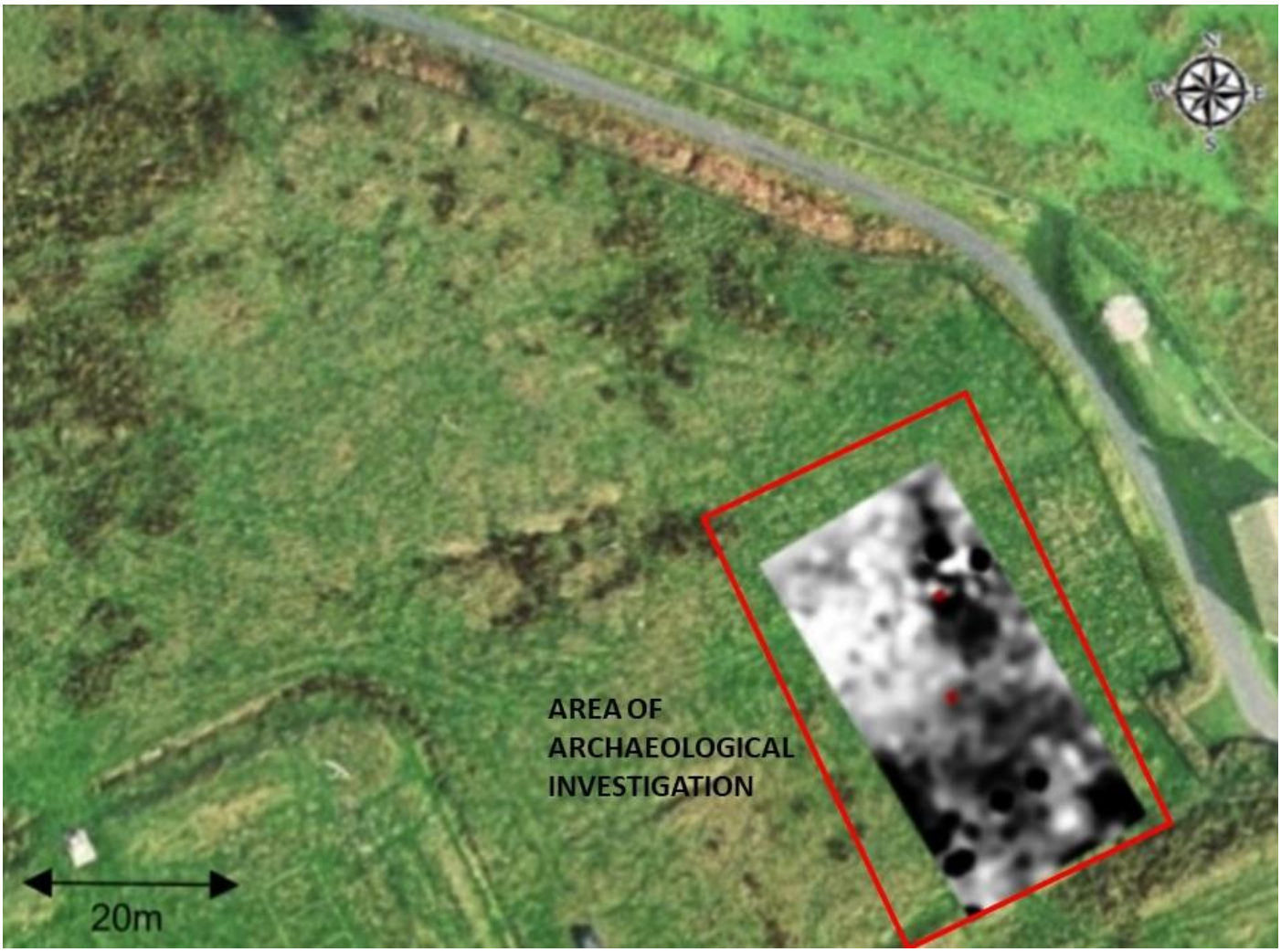
5 – Excavate the rubble and deposits to fully uncover the easternmost of the two stone ovens to facilitate a full and accurate record. Further investigate the areas of Test Pit 7 and 18 to determine the presence or absence of a further ovens.

6 – Investigate the area around Test Pit 16 to define and understand the burnt deposits partly exposed in the test pit. Expose the full extent of the possible dwarf stone wall seen in Trench 1 north of the main stone surface to determine its function and form.

7 – Define the extent and character of the shallow stone surface partly exposed in Test Pit 21. Confirm the edge of the 2014 excavation trench and connect this to the clay oven and stone surfaces revealed in Trench 1. Define the western edge of the stone surface recorded in Test Pit 14. Re-investigate the stone surface exposed in 2014 adjacent to the rampart beside the east gate and relate this to other features now known in this area.

The area east of the fort defences and south of the east gate

This area has not yet been evaluated through trenching or test pitting. A resistivity survey undertaken by the Friends in 2019 (Barrett) has shown that there are several anomalies which will repay investigation. Currently the course of the road exiting the east gate is not well defined so that it is not known how it joins with the main highway. This must be a priority for investigating this area. Given the extent of Roman activity to the north of the east gate, it can be anticipated that a number of Roman features will exist in this area, and this is certainly suggested by the geophysical survey data which is shown below overlaid on to an aerial photograph. The area within the red bordered rectangle should be the focus of future investigations.



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