

Archaeological Evaluation

Redefining Roman
Castleshaw Project

Client: Friends of Castleshaw
Roman Forts

Technical Report:

Vicky Nash, John Roberts &
Norman Redhead

Report No: 32/2014



Site Location: The study area (centred at SD 99880 09633) is located within the Scheduled Ancient Monument boundary for Castleshaw Roman Forts (SM 30359, HA 1017837). The site is bounded to the North and East by Dirty Lane, to the South by Dry Croft Lane and to the West by Cote lane.

NGR: Centred at SD 99880 09633

Internal Ref: (CfAA 32/2014)

Proposal: Archaeological Evaluation

Planning Ref: N/A

Prepared for: The Friends of Castleshaw Roman Forts

Document Title: Redefining Roman Castleshaw Project

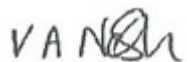
Document Type: Evaluation Report

Version: Version FINAL

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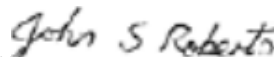
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Summary

The Centre for Applied Archaeology was commissioned by 'The Friends of Castleshaw Roman Forts, to undertake a programme of archaeological excavation at the site of Castleshaw Roman Forts (SM 30359, HA 1017837). The site of Castleshaw Roman forts is located within an area of enclosed pasture just to the west of the present hamlet of Castleshaw in the historic parish of Saddleworth, on the west side of Dirty Lane, Delph, Oldham, Greater Manchester, (centred at SD 99880 09633). The site comprises a turf and timber auxiliary fort dated c AD 79-95, replaced by a turf and timber fortlet dated c AD105-120. These guarded the main trans- Pennine highway linking the legionary fortresses at Chester and York.

The research rationale for the trenches had previously been set out in the 'Castleshaw Excavation Strategy' document. Scheduled Monument Consent (SMC) was granted on 21st January 2014 (Ref: S00075769). The excavation took place over a 4 week period during July 2014 and involved a large number of volunteer archaeologists from the local and wider community, led by a small professional team from the University of Salford. The Excavation Strategy identified 8 trenches of which 5 were excavated in 2014 within the context of the SMC. The investigations focused on exposing and re-excavating old archaeological trenches, with some previously undisturbed areas cleaned and sample excavated.

The recent excavations have demonstrated that the archaeology is far more complex than previous excavators have led us to believe. The July 2014 excavations were essentially a large scale evaluation of the Roman fort site. This work has demonstrated that multi-phased, stratified Roman archaeology survives across much of the site. The excavations have found several phases of Roman activity, suggesting that the fort was rebuilt at some stage and that after its final demolition the land was re-used by the Romans for other purposes before and during the occupation of the fortlet. There is evidence for a possible annexe on the eastern side of the fort with an absence of defensive ditches, a probable service road and building remains. The finds assemblage fits in with the date range for military occupation presented by previous studies ie. late 1st- early 2nd centuries AD. Pottery analysis suggests the presence of a kiln but its location is currently unknown. Palaeo-environmental work concludes that the fort environs had some cereal production (spelt wheat) and herb rich pasture, with oak being the main timber used on the fort construction. The evidence points to the fort being adapted from the standard layout and function of an auxiliary fort. Our understanding of the site has been significantly enhanced and will inform a revised research framework to reflect the new discoveries.

One of the trenches investigated the cottage site at Husteads Farm. This yielded a late medieval sherd of green glaze pottery, extending the historical narrative back by two hundred years and more, and confirming the suspicion that Castleshaw hamlet has medieval origins. The early cottage stone foundations were substantial. There were a number of sherds of 17th century pottery as well, pre-dating the 18th century rebuild by John Scholefield and demonstrating longevity of the settlement.

1. Introduction

1.1 Background

The Roman army built two successive forts on the promontory at the head of the Castleshaw valley, guarding the main cross-Pennine highway between the legionary fortresses of Chester and York. It is thought that Agricola established the first fort in AD 79. This was built in turf and timber and held a standard infantry cohort of around 500 men. It was short-lived and appears to have been abandoned in the AD mid-90s before the site was re-occupied by a much smaller fortlet at around AD 105. This fortlet, also of turf and timber, overlies part of the Agricolan fort site and held no more than 60 men. It may have been a commissary fort, a centre for organising and conducting supplies or it served as the command centre of a standard fort, with most of the troops outstationed to guard roads across the Pennine valleys. The fortlet was abandoned in the AD mid-120s. One of the fascinating aspects of Castleshaw is that it was a short-lived site and was not re-built in stone like most other Pennine forts.

Over the last 100 years and more there have been a succession of archaeological investigations at this evocative site, the largest scale being the complete exposure of the fortlet by the Greater Manchester Archaeological Unit, followed by landscaping and presentation. However, the larger and earlier fort had received much less attention and suffers from poor conditions and limited interpretation. Renewed interest in the site has led to the formation of the Friends of Castleshaw Roman Forts to take forward investigation and future management, and work with partners to engage the local and wider community with this significant heritage site. The Friends have established a website which contains pdfs of most of the published and unpublished works on the Roman Forts. This wealth of material can be accessed at <http://www.castleshawarchaeology.co.uk>.

In July 2014 the Centre for Applied Archaeology was commissioned by ‘The Friends of Castleshaw Roman Forts, to undertake a programme of archaeological evaluation at the site of Castleshaw Roman Forts, Dirty Lane, Delph, Greater Manchester (SM 30359, HA 1017837).

The works formed part of the Heritage Lottery Funded ‘Redefining Roman Castleshaw Project’, which aimed to further assess the remains of the earlier, larger Agricolan fort which was poorly understood and difficult to interpret. The project re-excavated several old excavation trenches within the northern half of the fort, previously excavated by Bruton in 1907-8, Rosser in the 1950’s and Thompson in the late 1950s and 1960s. New techniques and a better understanding of the Roman military in Britain meant that the project would allow a much better interpretation of the archaeological remains and the lost or poorly reported excavation results from previous digs would be to a great extent recovered.



Figure 1.1: Aerial photograph of Castleshaw Roman Forts, looking north.

The project was also designed to include members of the community in every aspect, including the excavations, and as such volunteers were accommodated every working day on site. The volunteers were taught and carried out all tasks associated with an archaeological excavation and the statistics of those involved are given below.

The excavation team was on site from 7th July 2014 to 1st August 2014. In that time a variety of groups and individuals took part in the excavations:

- **127 adult individuals completing 400 working days**
- **270 school children and teachers from 10 local schools**
- **16 individuals including 10 children on the family dig day**
- **36 children and 6 adults from the Young Archaeologists Club**
- **123 Visitors and 13 Tour Groups**
- **9 disadvantaged volunteers with 6 carers**

1.2 Project Personnel

The project was conducted by professional archaeologists from the CfAA. On-site excavations were undertaken by Vicky Nash, John Roberts, Sarah Cattell, Rachael Reader, Sarah-Jayne Murphy and Kirsty Whittall of the CfAA, with the support of volunteers from the Friends of Castleshaw Roman Forts group and members of the local community.

The report was compiled and written by Vicky Nash, John Roberts and Norman Redhead. Kirsty Whittall provided the finds report overview and Richard Ker and Karl Lunn prepared the illustrations. The project was managed by Vicky Nash.

1.3 Monitoring

Norman Redhead, the County Archaeologist for Greater Manchester (Greater Manchester Archaeology Advisory Service, GMAAS) monitored the archaeological works. Scheduled Ancient Monument consent was monitored by Andrew Davison of English Heritage.

2. The Setting

2.1 Location

Castleshaw is located approximately 1.7km north-west of Diggle; 5.0km south of Saddleworth and 13.0km south-west of Oldham within the Southern Pennines (**Figure 2.1**). It forms part of the civil parish of Saddleworth, historically part of the West Riding of Yorkshire and now an administrative district of the Metropolitan Borough of Oldham in Greater Manchester.



2.1 Location Map. Reproduced by permission (Licence No: 100050261).

2.2 Topography & Geology

The site of Castleshaw Roman forts is located within an area of enclosed pasture just to the west of the present hamlet of Castleshaw, on the west side of Dirty Lane, Delph, Greater Manchester, (centred at SD 99880 09633). The site lies on a spur of flat land on the eastern slopes of the valley at a height of 275m OD. It is overlooked by high ground on three sides, the landform rising steadily from west to east. To the north stretches the wild expanse of Standedge reaching a height of 450m OD along the outcrop of Millstone Edge. Castleshaw Moor lies to the north-west of the site (425m OD) and a high ridge extends south-west dividing the Castleshaw and Tame valleys. To the southeast, the eastern end of the Harrop Ridge (350m OD) separates Castleshaw from Diggle. The only area of low ground lies to the south-west, along the course of the Castleshaw Brook (now known as Hull Brook) where the ground drops to just 200m OD around Delph, before rising steeply again towards Knott Hill and Badger Edge.

The underlying bedrock geology of the study area, as mapped by the British Geological Survey, comprises of mudstones, siltstones and sandstones of the Millstone Grit Group. The overlying drift geology is predominantly boulder clay (<http://www.bgs.ac.uk>).

2.3 Designations & Current Land Use

Castleshaw Roman fort and fortlet form a Scheduled Monument (SM 30359, HA 1017837) and are protected under the provisions of the Ancient Monuments and Archaeological Areas Act of 1979. The site was first designated in 1935 and was comprised of the enclosed area containing both the fort and fortlet. In 1998, the scheduled area was extended following the discovery of the potential civilian settlement (*vicus*) within Day Croft Field, to the south of the forts (**Figure 2.2**).

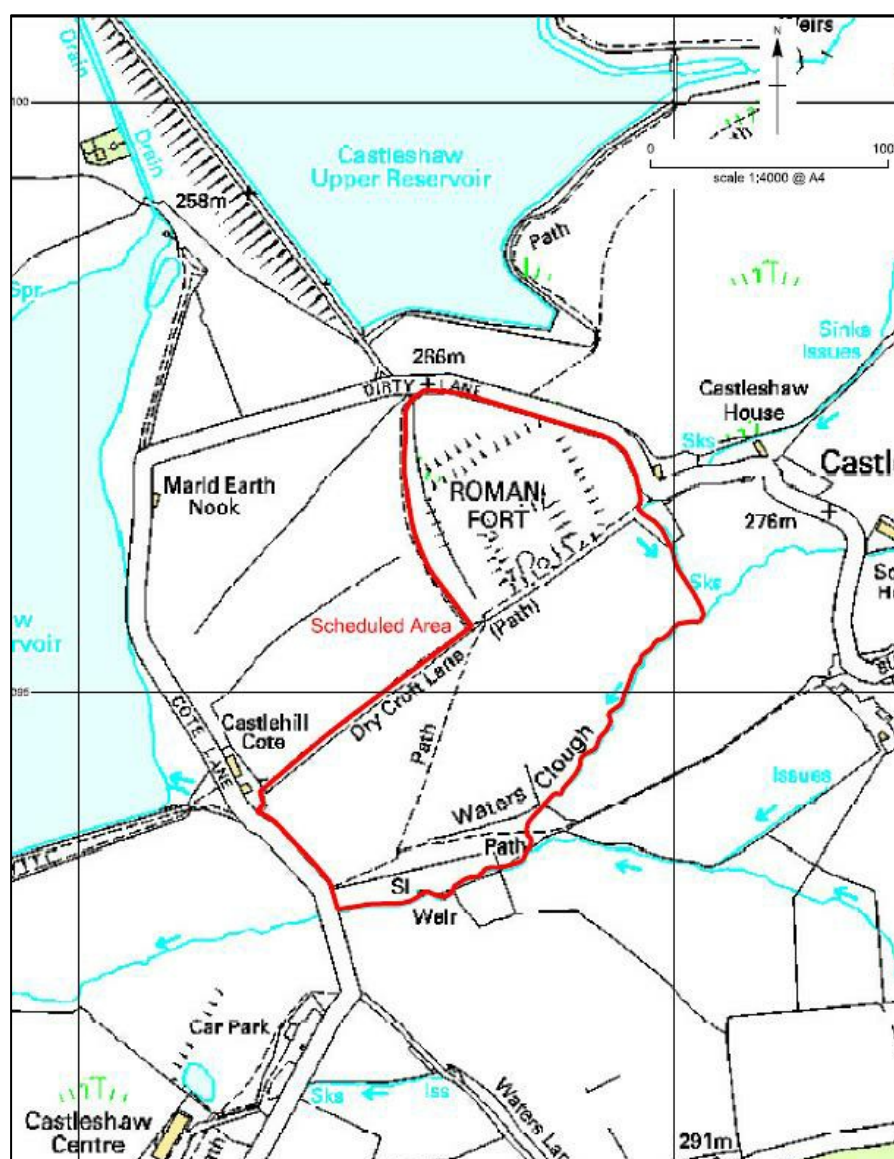


Figure 2.2: Modern OS Map showing the location of the Scheduled Area in Red. Reproduced by permission (Licence No: 100050261).

The site is currently under the ownership of United Utilities who also own and manage the two nearby Castleshaw Reservoirs. The site is currently leased to David Hirst of Wood Farm, who uses the site for pasture.

3. Methodology Statement

3.1 Excavation Strategy

This chapter represents a programme of archaeological trenching designed to progress our understanding of the origins, form and character of the buried remains associated with the larger Agricolan Fort at Castleshaw. The investigations will also inform the future conservation of archaeological remains and their interpretation. All the following trenches are located within the Scheduled Monument area (**Figure 3.1**).



Figure 3.1: Plan showing areas of past excavation with the location of the 2014 fort trenches overlain in pink.

The research rationale for the trenches had previously been set out in the Castleshaw Excavation Strategy document (Redhead 2013). Scheduled Monument Consent (SMC) was granted on 21st January 2014 (Ref: S00075769). The excavation took place over a 4 week period during July 2014 and involved a large number of volunteer archaeologists from the local and wider community, led by a small

professional team from the University of Salford. The Excavation Strategy identified 8 trenches of which 5 were excavated in 2014 within the context of the SMC.

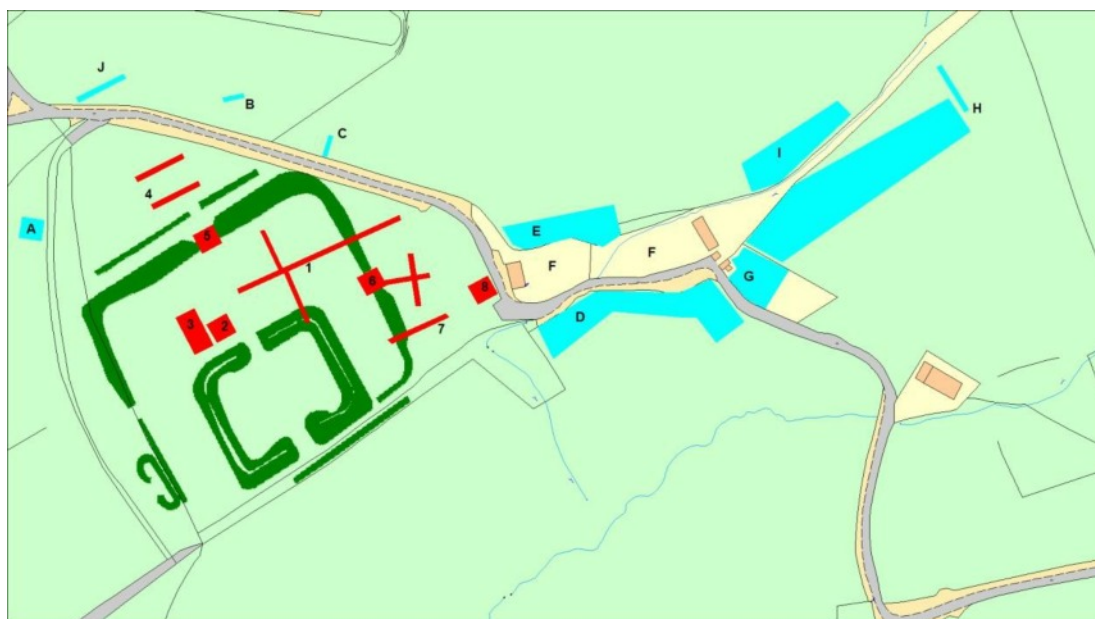


Figure 3.2: Plan showing location of the 8 proposed trenches within the Scheduled area (in red). Targeted areas for the Hinterland Survey are in blue. Reproduced by permission (Licence No: 100050261).

Trench 1

Trench 1 was to comprise of a c.85.00m x c.2.00m trench located within the north-eastern quadrant of the fort. The aim of this trench was to re-excavate Thompson's 1963 excavation trench, in order to re-examine the features he had identified within the interior of the fort, to record a section through the fort's north-eastern rampart and to re-investigate the area defined by Thompson as 'uninterrupted clay' where the fort's outer ditches should be.

Trench 2

Trench 2 was to comprise of a 10.00m x 10.00m trench located within the north-western quadrant of the fort. The aim of the trench was to re-excavate Thompson's Trench 6 from his 1964 excavation, in order to re-examine the Bronze Age beaker pit identified on his plan and look for further evidence which could shed light on the nature of the site's Bronze Age occupation. The trench will also provide the opportunity to review features identified in Thompson's Trenches 11 and 21 which were identified as belonging to the fort's *Principia*.

Trench 6

Trench 6 was to comprise of 20.00m x 10.00m trench located across the fort's East Gate. The aim of the trench was to re-open Bruton's 1907-08 trenches to allow

detailed recording and modern interpretation of the gateway and associated exit road which will allow confirmation or re-interpretation of Bruton's plan in relation to the 'Loop Road' arrangement.

Trench 7

Trench 7 was to comprise of a c.20.00m x 5.00m trench located within the north-eastern quadrant of the fort. The aim of the trench was to re-excavate a still visible but unrecorded (and of uncertain origin) trench running east to west across southern part of the fort's eastern rampart.

Trench 8

Trench 8 was to comprise of a 10.00m x 10.00m trench located outside of the fort on the north-eastern boundary of the scheduled area. The aim of the trench was to further assess and record the wall foundations and flag floor previously identified in a test pitting exercise conducted by the Friends of Castleshaw Roman Forts in March 2014. The further assessment of this area would help our understanding of the character and evolution of Castleshaw settlement and selected excavation will examine the potential for Roman deposits beneath and adjacent to the later structural remains.

3.2 Excavation Methodology

The excavation was restricted by SMC so that it focused on re-excavating old excavation trenches and carrying out only selective excavation of undisturbed Roman features and deposits.

All archaeological features selected (stratigraphical layers, cuts, fills, structures) were evaluated by hand tools and recorded in plan at 1:20 or in section at 1:10 using standard single context recording methods with photographs taken as appropriate.

Removal of modern overburden (topsoil and subsoil) was conducted using a mechanical excavator with a toothless ditching bucket under the supervision of a professional archaeologist acting as a banks man. Removed overburden was stored on a single mounded spoil heap located at an appropriate distance away from the main open area excavation or the fenced edges of the compound.

Machine excavation continued in 100mm spits until either natural geological deposits or significant archaeological deposits were identified. Machine excavation was undertaken cautiously, with preference for surviving information and hand excavation once interfaces were first encountered.

During the machine excavation and until the programme of archaeological works were complete, the open area excavation and spoil heaps were surrounded by

Polyvinyl Barrier fencing, located not less than two metres away from the edges of either.

Following machine excavation all areas were cleaned using appropriate hand tools and archaeological features recorded by photography and scaled plan.

During the machine excavation and planning phase Mr Norman Redhead of the Greater Manchester Archaeological Advisory Service (GMAAS) was consulted at regular intervals and invited to make a monitoring visit.

3.3 *Recording Methodology*

A unique text-number site code was created prior to the commencement of the programme of works.

Separate contexts were recorded individually on pro-forma context sheets. Plans and sections were recorded on drawing sheets at an appropriate scale of 1:10, 1:20, or 1:50, depending on the complexity of the data and features encountered. All drawings were individually identified and cross referenced, contexts enumerated and principal layers and features annotated with OD level information.

The OD height of all principal strata and features was calculated and indicated on the appropriate plans and sections.

Photography of all relevant phases and features was undertaken with digital formats. General working photographs were taken during the excavation, to provide illustrative material covering the wider aspects of the archaeological work undertaken. A copy of the digital photographs have been made available to the curatorial body, with the production of the technical archaeological report along with photographs generated by a range of aerial photographs.

All finds were recorded by context. Significant “small finds” were located within three dimensions to the nearest 10mm and bagged and labelled separately, numbered and a simple description made so that they can be identified within the assemblage.

A one week recording period was allowed for professional archaeological staff at the end of the community project to finalise recording and excavation.



Figure 3.3: Aerial Photograph Showing Trenches 1, 2, 6 & 7 and the Fortlet Rampart (bottom left area) during the 2014 excavation

4. Historical & Archaeological Background

This section of the report has been taken from previous historical research undertaken by Northern Archaeological Associates, (Middleton, P. 2011, *Conservation Management Plan: Castleshaw Roman Forts, Saddleworth, Greater Manchester*, NAA 11/088).

4.2 Historical & Archaeological Background

Castleshaw was first discovered in the mid-18th century after lying abandoned and forgotten for well over a thousand years. In 1751, Thomas Percival of Royton (1740–1804), a renowned physician, author, antiquarian and fellow of the Royal Society presented a paper describing his research into the route of the trans-Pennine Roman road from Manchester in which he stated ‘...at Castleshaw I was well pleased to find a double Roman camp’. The paper was illustrated by a sketch of the site layout, the first known plan of the monument (Percival 1751).

A few years later in 1766, the Reverend John Watson produced a slightly more detailed plan of the fort in his paper presented to the Society of Antiquaries (Watson 1766). During his investigations, Watson apparently quizzed the locals, noting that finds of ‘*coins, beads, pieces of uncommon pots and bricks*’ had been found in the proximity of the site including ‘*an inscription on a stone, which, not being understood, was unfortunately broke and used*’ (Booth 2001, 66 citing Watson). However, Watson noted that his investigations produced nothing except a small glass bead – a melon bead (now lost). Such as it was, this is the first recorded excavation and find associated with the site.

Castleshaw was mentioned again in 1771 by Reverend John Whitaker in his *History of Manchester* where he refers to the site as; ‘*a probably fortress of the Sistonii, but to have extended along the area which rises eminent over the rest of the ground, and which is all equally denominated The Husteads and all defined by the Castleshills*’. He goes on to describe the smaller fortlet: ‘*The later fortress seems to have been contracted into a much narrower compass, and to have been enclosed within the fosse, that still plainly appears encircling a rounded eminence near the centre*’ (Whitaker 1771, 107). Just what this ‘round eminence’ may have been is unknown, but it was probably the buried structural remains of the fortlet, now long since levelled by subsequent excavation.

Despite this early interest in the site, no further investigation was undertaken at Castleshaw for almost a century. In the late 1890s, the local poet and historian Ammon Wrigley ‘rediscovered’ the forts and set about a series of excavations

recorded in his book *Songs of a Moorland Parish* published in 1912 – in places a rather florid but, nevertheless, evocative description of his endeavours.

In the following year, G.F. Buckley, a local mill owner from Delph, leased the site for a year and, *Castleshaw Roman Fort, Saddleworth, Greater Manchester: Conservation Management Plan* acting on instruction from the antiquarian W.H. St. John Hope, began excavating the fortlet area. Buckley dug a series of diagonal trenches, which produced considerable amounts of high quality pottery including samian ware, black ware and white ware (Wrigley 1912). The results were published in a short report in *The Transactions of the Lancashire and Cheshire Antiquarian Society* (Andrew 1898). Wrigley then returned and continued intermittent excavation at the site until 1907, finding further examples of pottery and tile, some with partial tile stamps, and two coins (Booth 2001, 29-30).

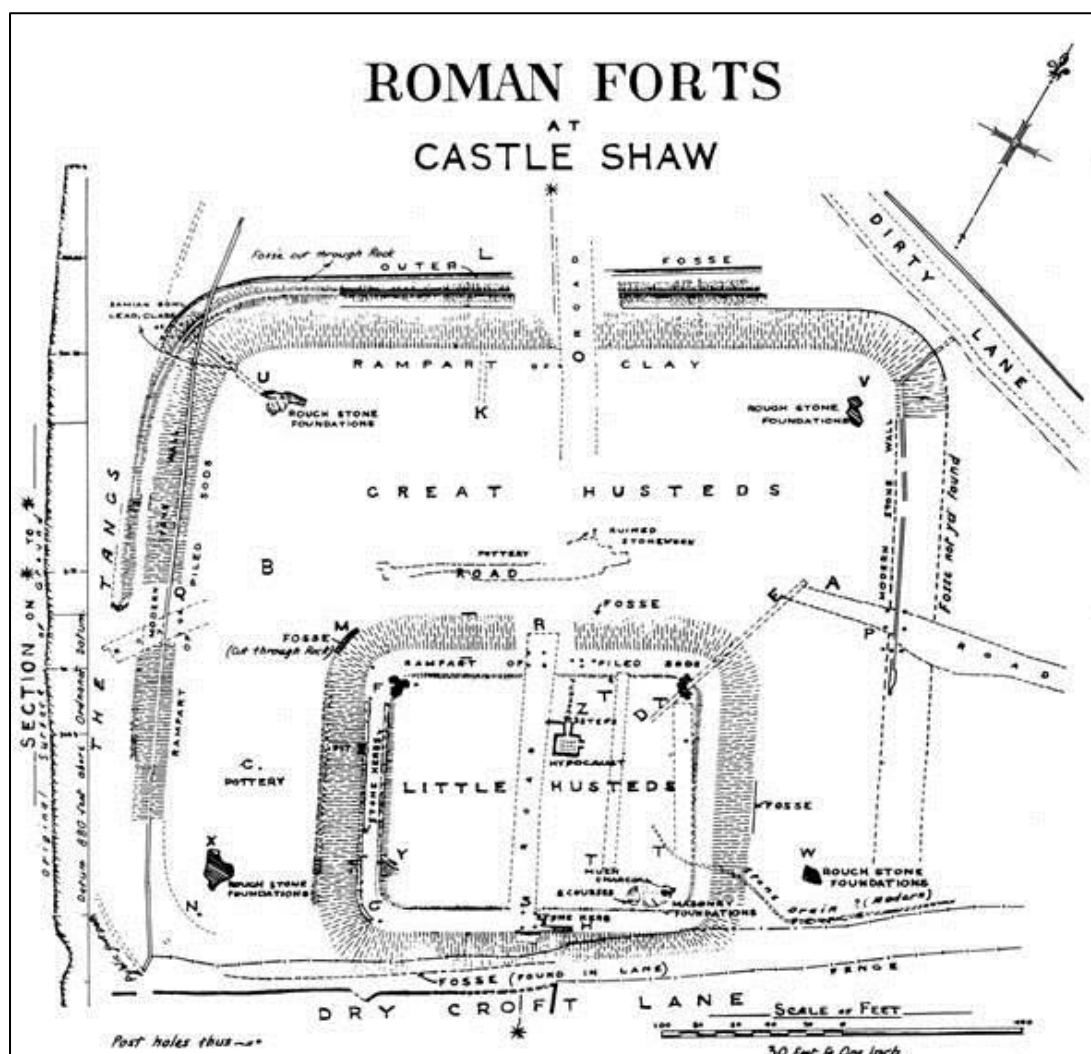


Figure 4.1: Bruton's plan of the Roman forts (1908). Taken from Start, D. 1986, *Survey & Conservation Work at Castleshaw Roman Forts 1984 – 85*.

In 1907 the site was bought by Samuel Andrews of Leeds, a member of the Lancashire and Cheshire Antiquarian Society, and Major William Lees of Heywood of the Yorkshire Archaeological Society. They invited F.A. Bruton, a Classics master at Manchester Grammar School, to direct further excavation targeting the defences of the fort and the layout of the fortlet. The results were published in an interim report in 1908, followed by a second report in 1911 (Bruton 1908; 1911). The work included the first detailed survey of the site, as well as lists of recorded finds and a series of photographs - the first photographic images of the site.

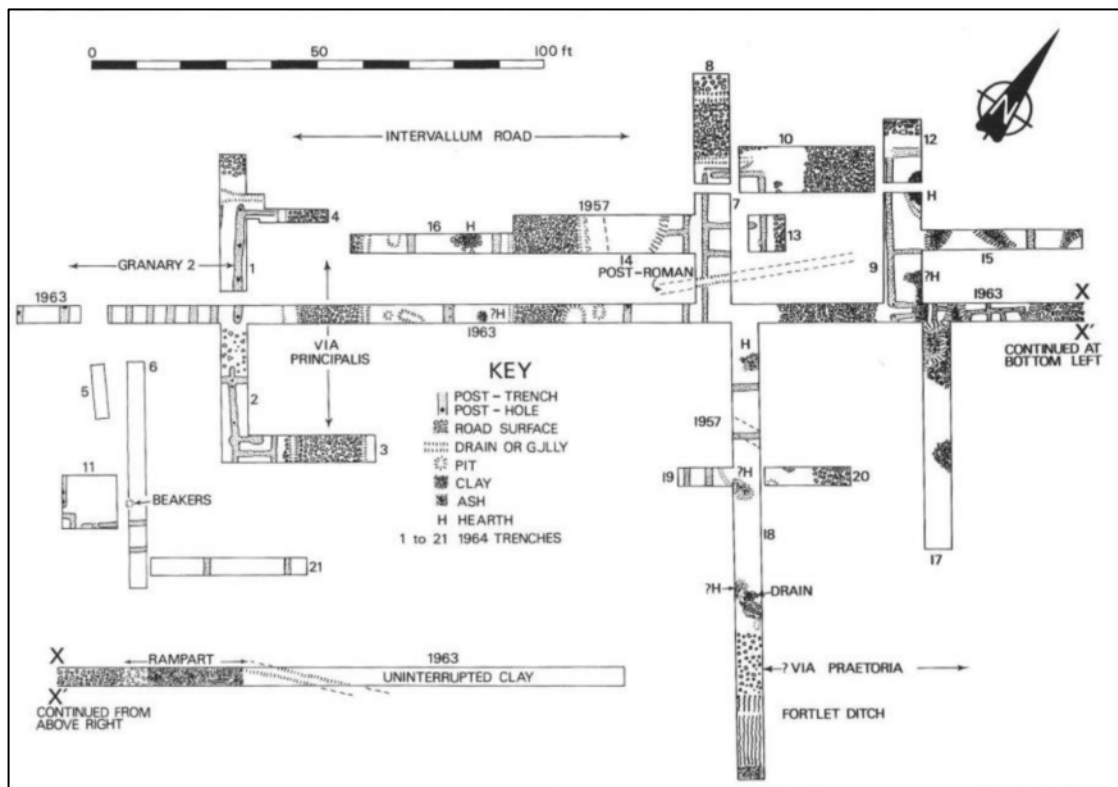


Figure 4.2: Thompsons Excavation Plan. Taken from Thompson, F.H. 1967, The Roman Fort at Castleshaw, Yorkshire. Excavations 1957 – 64.

After the First World War, the famous Roman archaeologist, Ian Richmond, undertook a study of the pottery from Castleshaw, establishing a chronology for the fort and later fortlet which has largely stood the test of time. The results of his work were published in a paper 'The sequence and purpose of the Roman forts at Castleshaw' published in *The Transactions of the Lancashire & Cheshire Antiquarian Society* in 1929. However, no further excavation took place until 1957 when Manchester University, under the leadership of C.E.P. Rosser, began a series of training excavations concentrated within the previously unexcavated fort area. In 1960, F.H. Thompson took over the work, continuing through until 1964. Excavation results were published in a series of three reports; two interim reports (Rosser 1958; Thompson 1965) and a final report (Thompson 1974) in *The Transactions of the Lancashire and Cheshire Antiquarian Society*.

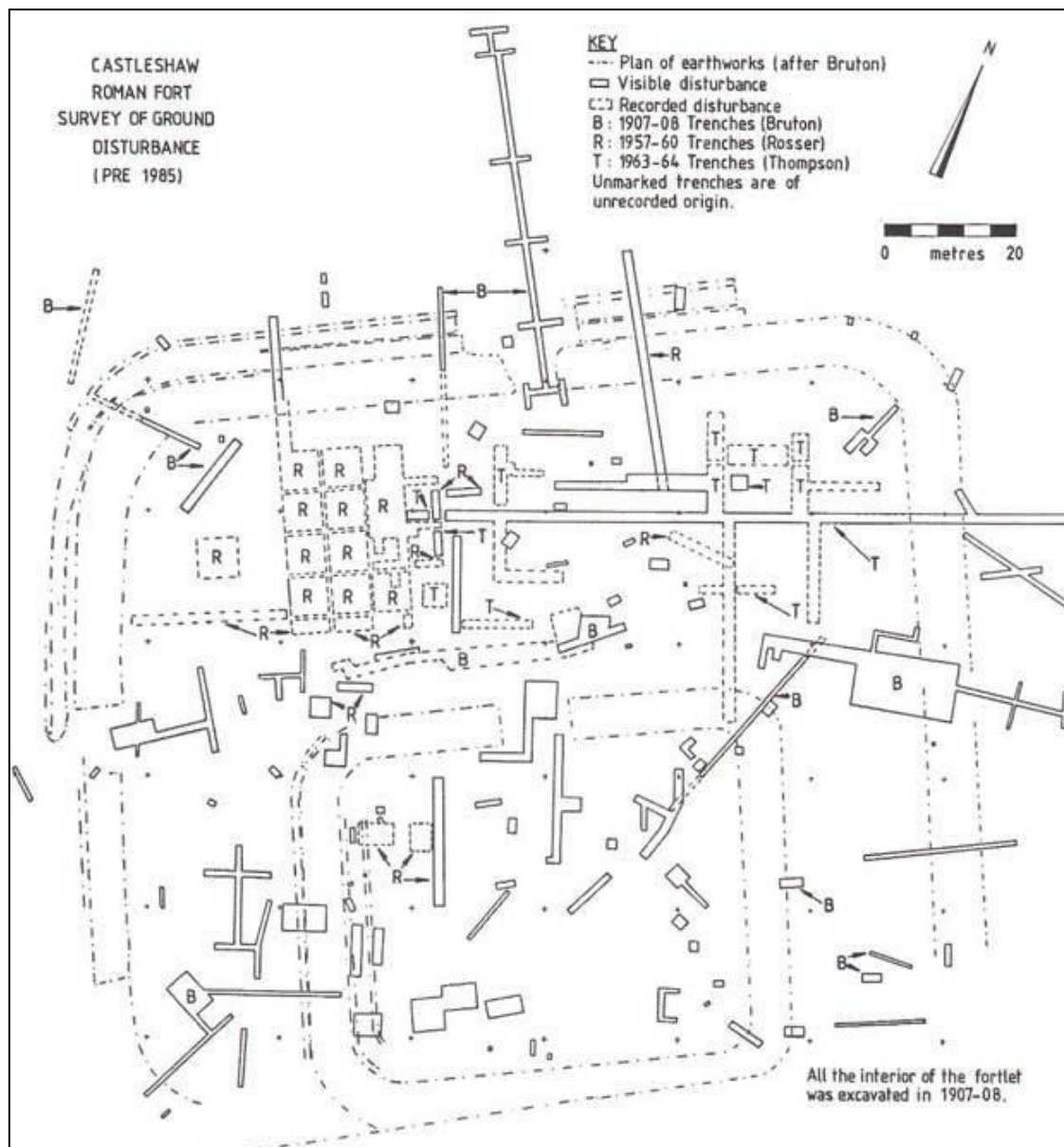


Figure 4.3: GMAU survey of pre-1985 excavations and investigations. Taken from Start, D. 1986, Survey & Conservation Work at Castleshaw Roman Forts 1984 – 85.

Following the Bruton and Manchester University excavations, the site was in quite a poor condition, with mounds of spoil obscuring much of the area of the fortlet and fort. In 1984, the Greater Manchester Archaeological Unit (GMAU) - with support from the Manpower Services Commission, North West Water (now United Utilities), the Oldham Metropolitan Borough Council and English Heritage - began work to restore the fortlet site and make it more accessible to the general public by improving interpretation.

In advance of this work, a phase of topographic and geophysical survey was undertaken, which included plotting all the old trenches across both the fort and fortlet. Given the costs of funding excavation, it was then decided that the most appropriate approach would be to concentrate on just the area of the fortlet as such sites are relatively rare and a displayed fortlet would be of considerable educational value.

As a Scheduled Monument, any new excavation had to be kept to a minimum and the majority of works were confined to re-opening, cleaning and recording the old trenches. However, some new work was permitted in order to secure a good stratigraphic sequence to show how the site developed over time. The results were published in a GMAU monograph *Castleshaw: The Archaeology of a Roman Fortlet* (Walker 1989) which includes a substantial contribution by Norman Redhead, the current Greater Manchester County Archaeologist, who has been directly involved with research on the site since the 1980s, directing the subsequent Daycroft Field excavations.

Despite the limitations of the project, significant results were achieved which considerably advanced an understanding of both the form and function of the 2nd century fortlet. Scheduled Monument Consent permitted GMAU to re-excavate old archaeology trenches within the fortlet and to reveal the top of the Roman horizon, clean and record, and undertake limited sample excavation of Roman features. Using this methodology it was possible to define no less than 4 separate phases of timber building construction within the fortlet interior.

The first two phases belonged to the earlier, larger fort which was in existence from the AD 70s to the mid-90s, whilst the fortlet also had two phases within its equally short life span. This may reflect the harsh climate and the short 'shelf' life of the timber buildings, but it could also represent changes in design and policy. For instance, in the last phase of the fortlet around AD 120 it was apparent that a major re-ordering of the interior took place: the hypocaust flue and furnace were moved so that an extension could be made to the building cutting into the service road, the granary was increased in size by at least a third and space was so restricted that there was no room for an intervallum road against the inner face of the western rampart. Outside the south gate the area was used for settlement activity resulting in the main trans-Pennine highway being diverted to loop round the opposite, north, side of the fortlet.

The subsequent landscaping and consolidation work following the excavation also considerably improved the interpretative and educational value of the site, making it one of only a handful of fortlets on display to the public in this way.

In 1994, the GMAU returned to the site under the direction of Norman Redhead and, with funding from North West Water, undertook a programme of test pitting and trial trenching in Daycroft Field to the south and south-west of the fort, with the intention of determining the presence, nature, extent and potential date of any extra-mural

activity associated with a civilian settlement (*vicus*). Significant evidence for such a settlement was found and published in two reports (Redhead 1996 & 1997).

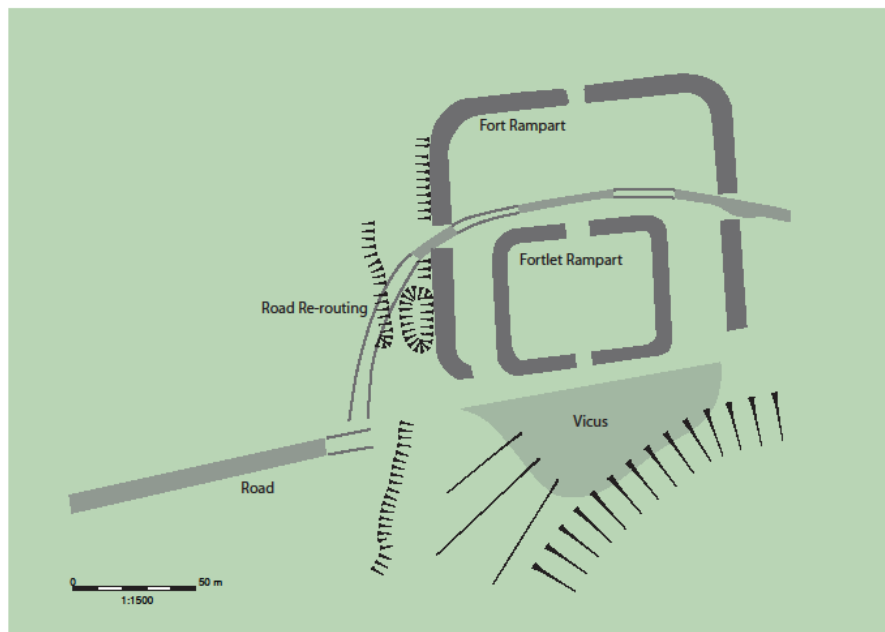


Figure 4.4: Plan of Roman remains at Castleshaw

The recent excavations of 2014, reported in this volume, were the first research investigations to take place in nearly 20 years, and the first in the Agricolaan fort site since the 1960s.

5. Trench 1

5.1 Introduction

Archaeological background

A detailed account of the overall archaeological background to the Roman Forts at Castleshaw is presented in the opening sections of this report. Therefore it is only necessary here to summarize the relevant elements where they relate to Trench 1 (Tr1).

As the intention of Tr1 was to re-excavate parts of a trench excavated by Professor F.H.Thompson in 1963 his report on this and his further excavations in 1964 are of especial interest. In particular his references to the 4 feet wide 360 feet long trench he excavated in 1963 east to west inside the Fort and specifically the 280 feet of this trench which ran east from the *via principalis* to the line of the fort's east ditch (Thompson 1974, 1-13). In his report Professor Thompson states:

"...a series of road surfaces appeared composed of rough gritstone flags and accompanied by side ditches.....Four were encountered in all and between them appeared possible post- trenches and more clearly identified pits"

"Immediately inside the rampart a more complex series of post trenches was encountered, interrupted by pits with a fill of black ash, the product of large scale burning."

Further east his trench cut through the fort's defences.

"The rampart showed clearly, with a width of approximately 20 feet....The remarkable feature of this section was that, in spite of being carried for a distance of 80 feet beyond the outer face of the rampart, there was no sign of one ditch, let alone two."

Professor Thompson's closing remarks on the 1963 season are particularly relevant to Castleshaw but will strike a chord with all archaeologists *"Briefly, this transect across the fort interior had produced useful evidence in some directions but had also made it clear that it would be necessary to open up larger areas if any building plans were to be obtained."*

Aims and objectives

Samuel Andrew writing of the 1907-1908 excavations describes the fort's ditches thus *"The outer fosse is double on the west and north sides."* (Andrew S 1898, 83-101). This presumably relates to the trenches excavated in these locations by Francis Bruton.

The presence of two ditches along the north side of the fort is supported by the description in Professor Thompson's report of a trench excavated across them in 1957 by Mr C. E. P. Rosser. "*The inner and outer ditches were both V-shaped in section. Their width was 6 feet and 11 feet respectively, and their depth 2 ½ and 3 feet.*" This description is backed by a section drawing by Rosser featured as an illustration in Professor Thompson's report.

Professor Thompson's trench is one of three which are known to have been excavated across the expected line of the defensive ditches on the east side of the fort. The provenance of the other two of these is unknown and no records relating to them have come to light. However given the evidence available to him from Andrew and Rosser the mild sense of consternation in his words at not finding any ditches in his trench is understandable.

One of the objectives for Tr1 then was to re-excavate the section of Professor Thompson's trench outside the rampart, across the line where any ditches should be located. The aim was to examine his findings and provide a fuller record of the archaeology. It was also the intention that information gleaned from this part of Tr1 would supplement the excavation of Trench 4 (Tr4) and provide insights into the defences on the east side of the fort.

The excavations carried out by the Greater Manchester Archaeological Unit (GMAU) in the 1980's suggested that the fort may have had more than one phase of construction (Walker 1989). Excavation of the north gateway of the fortlet encompassed the junction of the fort *via principalis* and *via paetoria* upon which the north rampart of the fortlet was built. Excavation revealed that the *via principalis* sealed an earlier Roman feature. Also the excavations of the fortlet barrack block revealed what the excavators believe to be two phases of fort barracks.

Therefore the second objective was to look for more evidence of phasing within the fort in an area that was free of the distraction from later overlying fortlet features.

Methodology

The line of Professor Thompson's four foot wide 1963 trench was clearly visible as an earthwork and a measurement was taken from its west end to a point that was approximately half way across the *via principalis*. This would form the west end of Tr1 which would then follow the line of the 1963 east for 85 m to its terminus beyond the fort's rampart. The intention was to use a mechanical excavator to remove the turf and topsoil to reveal the archaeological features shown on the plan in his report and to re-examine them. In addition the topsoil and subsoil would be removed from a strip either side of his trench with the intention of providing further information on the nature of the features excavated in the Thompson trench.

As machine excavation began it became clear that the intended methodology would have to be modified. It was apparent that the illustration in Professor Thompson's report was intended to serve as a multi-phase plan showing all the features in situ rather than a record of the excavation. This was most obvious in regard to the roads which were shown on the plan but, quite understandably, removed by Professor Thompson and his team as part of the excavation.



Figure 5.1: Plan showing areas of past excavation with the 2014 trenches overlain in pink.

Additionally, and again perfectly understandable from an archaeological perspective, it was clear that in places the trench had been widened. This would have been in order to reveal more of certain archaeological features which were deemed to be of particular importance, the ad hoc nature of these extensions meant that they are not shown on the plan of the 1963 trench. These unplanned off shoots resulted in a few diversions both during the machine and hand digging phases of the 2014 excavation. In the latter case some time was spent examining extensions which turned out to be features which had been excavated in 1963 and then backfilled with the material excavated from it.

Furthermore it was clear that the base of Professor Thompsons trench was some 0.20m lower than the level at which archaeological features were visible in the strips either side of it. This meant that if the 2014 excavations were to reveal the features

shown in the Professors plan then an unknown but undoubtedly considerable amount of backfill would have to be removed.

The Roman fort and fortlet at Castleshaw form a Scheduled Monument, designated in 1935 under the Ancient Monuments and Archaeological Areas Act 1979. The dilemma faced by archaeologists guiding machine stripping is to ensure the right amount of topsoil or overburden is removed so that the archaeological levels are revealed: too much and the archaeology could be severely truncated or destroyed, too little and the excavation team is faced with the task of spending days trying to define the edges of features. Between these two extremes it is largely dependent on the archaeologist, as to whether their approach will be one of ensuring that above all the archaeological features should be clearly visible, a tactic which may necessitate a slight truncation of the features and the material they are cut into, or to cease as soon as the archaeological features appear accepting the fact that time will have to be spent hand cleaning areas and filtering out archaeology from root and animal activity.

Influencing the archaeologist's decision will be other criteria such as the vulnerability of the site, weather and soil conditions, time constraints and the number and experience of available staff. Therefore it should not come as a surprise or taken as a cause for concern that the level at which the archaeologists in 2014 chose to begin the excavation of archaeological features was generally between 0.05 – 0.15ms higher than that determined by Professor Thompson. The ability to detect archaeological features at a slightly higher level was due in no small part to having the previous excavation plan which allowed the current excavators to predict their location.

There was a drawback to this discrepancy in height. It had been anticipated that a uniform level would be achieved across the trench allowing all the pits and hearths and post trenches identified, and presumably excavated by, Professor Thompson to be seen, re-excavated and recorded. The difference in levels meant that the 1963 trench retained what amounted to a considerable quantity of backfill and therefore only specific areas were targeted for complete backfill removal.

The site grid established for the work on the fortlet in the 1980's followed the alignment of principal archaeological features, such as the fort rampart. For recording purposes the gridlines were taken to run north to south and east to west, even though in reality they ran closer to south-west to north-east and south-east to north-west. This is a standard practice in archaeological fieldwork as it makes the task of recording far easier and quicker if the site grid is aligned with major features. It serves only as a tool and from this grid the site and its features can be placed accurately in the landscape within the national grid reference system. As some of the grid pegs from the 1980's excavation were still in place it was decided to re-establish this grid as near as possible. This is of course different to the system used by earlier excavators who by and large maintained the use of compass bearings when describing the alignment of trenches and features. All references to alignment in this

section are based on the grid established in the 1980's except where a compass based alignment appears in quotes from Professor Thompson's report.



Figure 5.2: Aerial view showing Tr 1. Looking North, the *via principalis* marks the start of the trench on the left.

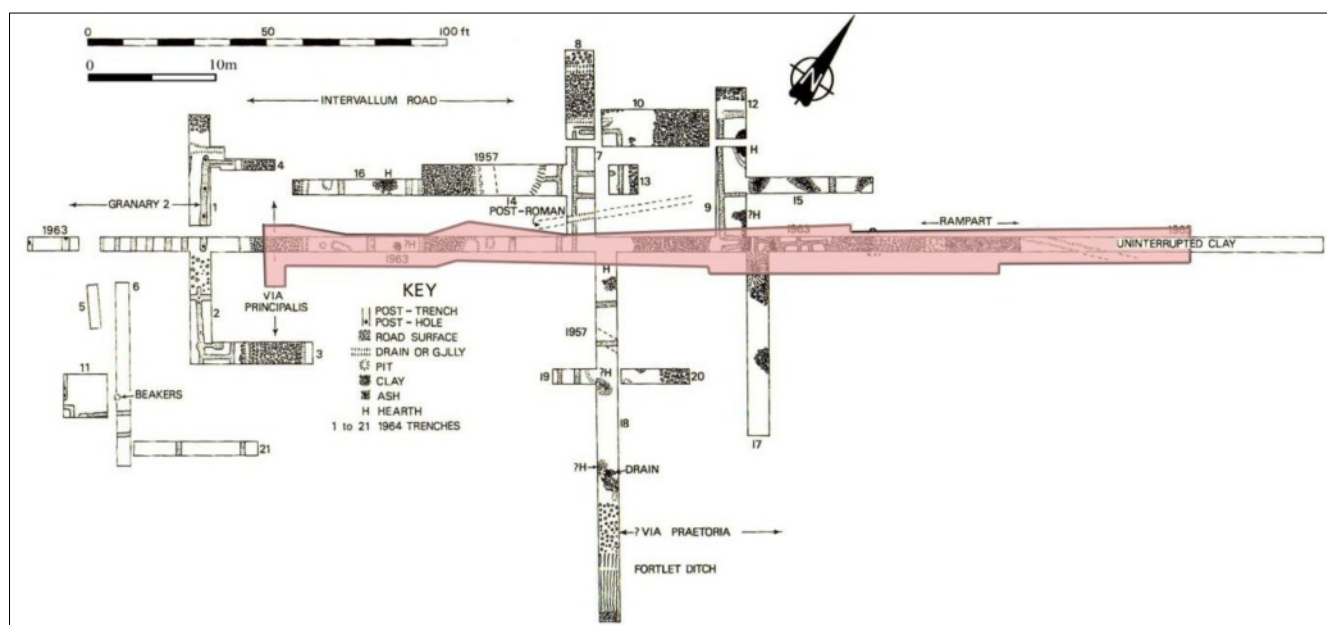
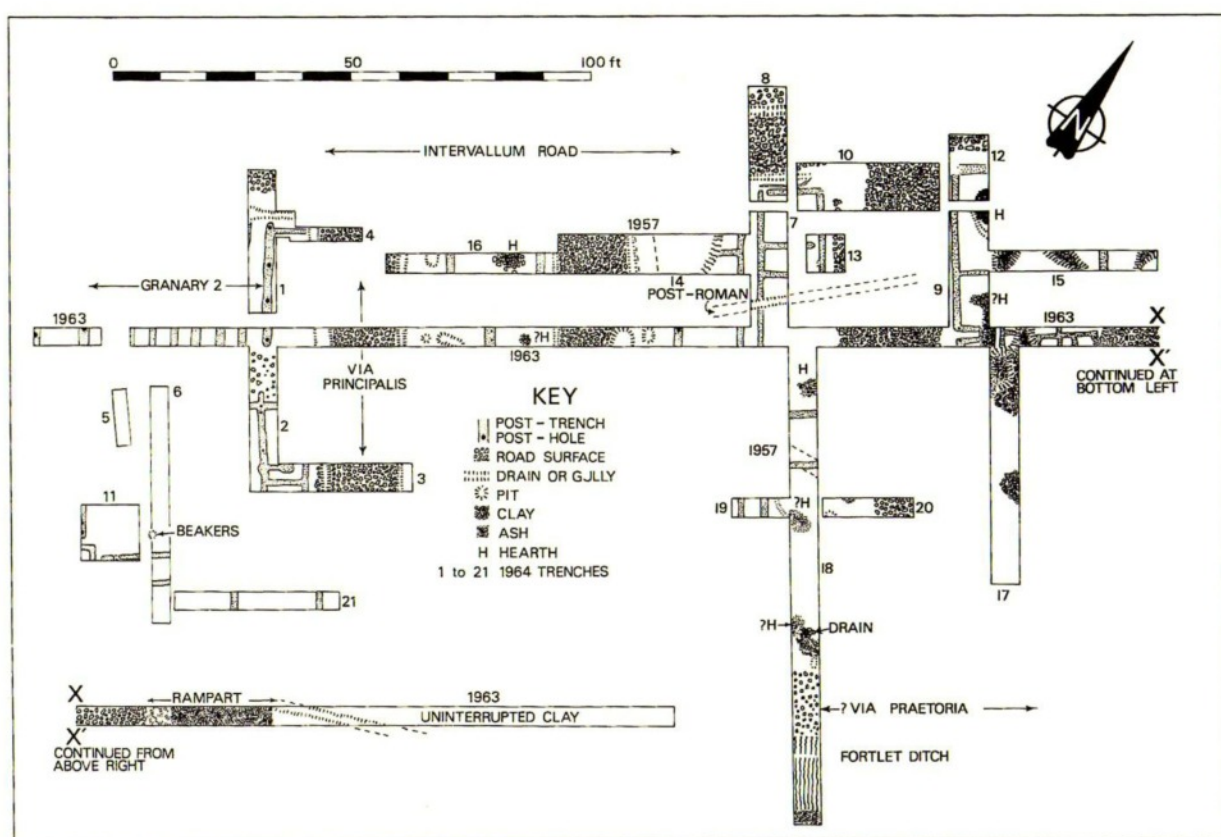


Figure 5.3: Figure showing 2014 Tr1 overlain onto Professor Thompson's 1963 trench and showing his further trenches excavated in 1964.

Professor Thompson's 1963 trench was assigned the context number [120] and is referred to either as Professor Thompson's trench; the 1963 trench or [120]. The

material Professor Thompson used to backfill [120] was assigned the context number (102). In this section of the report Professor Thompson's trenches are referenced in full e.g. trench 14 while the 2014 trenches are abbreviated e.g. Tr1.

The Results are divided into three main parts; The Roads, The Buildings and The Defences. The Roads are illustrated using photographs. Whilst all the contexts visible on the photographs have been labelled only those interpreted as being directly related to the roads and their function have been described and discussed. Contexts labelled but not described and discussed under The Roads will be considered in the text relating to The Buildings. Similarly all contexts appearing on the plans and sections illustrating The Buildings have been labelled but only those relating to the buildings are described and discussed all others having been dealt with under The Roads.



Thompson's plan

Figure 5.4: Professor Thompson's plan of his excavations. His 1963 trench runs horizontally east to west.

5.2 Results

5.2.1 The Roads

Via Principalis

Description

As stated above the west end of Tr1 was measured in to coincide with the east side of the *via principalis*. These measurements proved accurate and 1.50m of the road was exposed. On the north side of Professor Thompson's trench the level of survival was good, however on the south side it appears that the Professor had extended his excavations by 1.50m so that to all intents and purposes the road surface was only visible in section. Where the stones of the *via principalis*, context (109), had been removed a layer of yellow clay was exposed which has been interpreted as natural clay, that is, not a result of human activity. A 3.0m length of the 1963 trench was excavated to examine the possible roadside ditch shown on Professor Thompson's plan.



Figure 5.5: Aerial view of the remains of the *via principalis*.

To the north of [120] an area 1.40m by 0.70m of (109) was exposed. The stones of the road surface were partially covered with mid-brown silty clay, context (105). This was thought to represent an occupation layer as it was restricted to the area of the underlying stones but it is perhaps more accurately viewed as the interface between the subsoil and the surface of the *via principalis*. The road itself was made

up of sub-angular fragments of the local coarse millstone grit. The fragments were broadly similar in size between 0.25m and 0.15m in length and no smaller than 0.10m in width. Although there were some smaller pieces visible it is thought that these had broken off other fragments. They were fairly uniform in thickness at around 0.05m. This uniformity may be a result of the plated nature of the sandstone bedrock which allows it to be levered out as flat slabs. Other than generally lying flat there was no sense of any deliberate alignment of the stones forming (109). All the backfill from a 3.0m length of [120] was removed; however neither the section of road revealed in the north face of [120] nor the sections through (109) presented in the south side of Tr1 gave any indication of a layered make up to the *via principalis*. The sections showed that (109) was on average three stones (0.25m) thick.

Both sections did however reveal a light brown clay layer c50mm thick, context (170), which separated (109) from the natural yellow clay. It is probable that this is in fact natural which is just lighter in colour as a result of its stratigraphic position. However, it could also have become discoloured as a result of being exposed to human activity during the construction of the *via principalis* or it may even represent the agger. To the north of [120] the road does appear to slope slightly west to east which may be the result of being laid on an artificially made cambered surface. The situation might have been clearer had not (109) stopped so abruptly. Initially the possibility was considered that the edges of the *via principalis* may have been lined with larger stones acting as a kerb and that at some time, perhaps during the construction of the fortlet, these stones had been ‘robbed out’ and re-used elsewhere. The situation became clearer when it became obvious that (109) was visible in the north section of Tr1 and the question was resolved when further excavation revealed the roadside drainage ditch, context [161]. This is shown on Professor Thompson’s plan with the stones of the *via principalis* running right up to its eastern edge. The fact that the stones of (109) no longer do so strongly suggests that they were removed during the 1963 excavation.

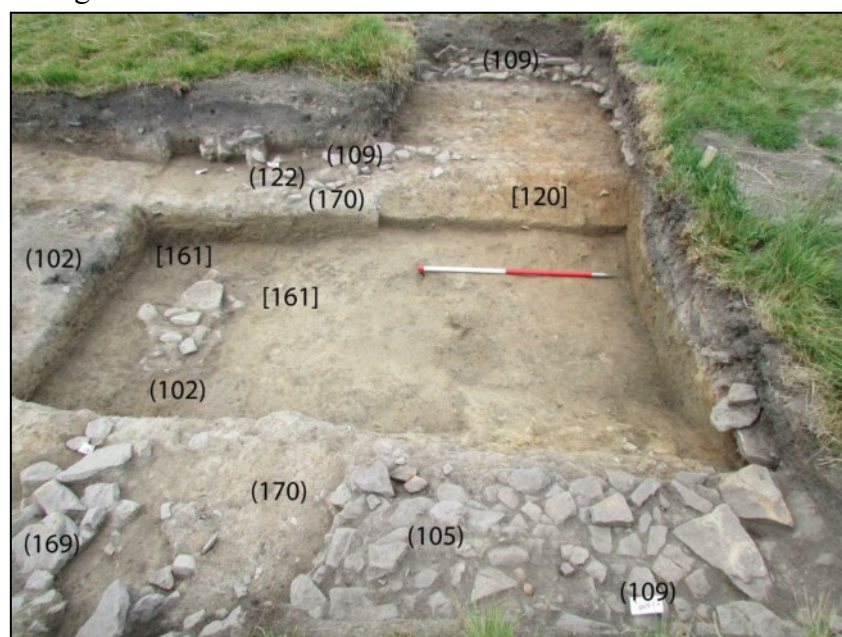


Figure 5.6: The remnants of the *via principalis* at the west end of Tr1 looking south.

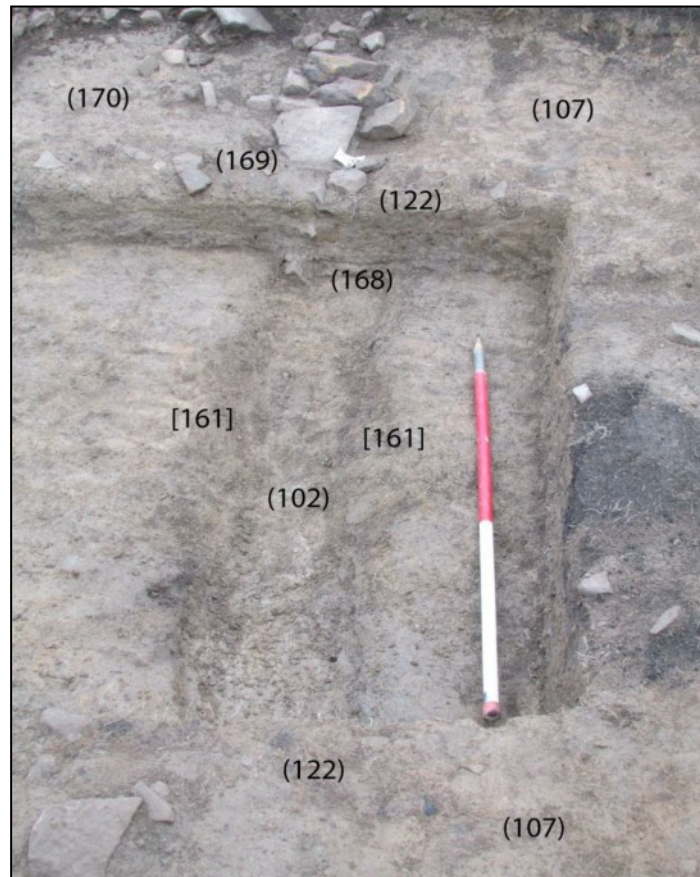


Figure 5.7: View of the excavated drainage gully to the east of the *via principalis*. Looking south.

In the base of Professor Thompson's trench the backfill material within his excavated section of the roadside gully could clearly be discerned. No dimensions for this feature are given in his report therefore it was decided to re excavate the 1963 section and extend it east and west. The roadside ditch was 0.40m wide and 0.28m deep, its sides sloped steeply and evenly to a flat base. The ditch contained two very similar fills, contexts (122) and (168), both of which approximated very closely to the natural clay in the immediate area. This is not at all what one might expect from the fills of the drainage ditch for the main Fort road. Generally the fills of these features are distinctive in colour and texture formed as they are from occupation material silting into the ditches. Close examination of the section suggested that (122) may be the fill of separate cut possibly representing a re-cutting of [161], or perhaps caused by the cleaning of the roadside ditch. The general shape of this feature, and in particular its flat base, are suggestive of this activity. It is also possible that (168) is in fact natural clay which has undergone a slight morphosis as a result of its proximity to the drainage ditch.

The edges of [161] were very difficult to discern. It was only the backfill of Professor Thompson's excavation and a line of large stones, context (169), which continued on the same alignment which allowed [161] to be traced with any certainty. Prior to the excavation of [161] it was thought that the stones of (169) may represent material from the *via principalis* slumping into the roadside ditch.

However, excavation revealed that they simply sat directly on top of fills (122) and (168). In fact there were no stones at all within either of the fills. The only inclusion noted from either of them was a small 'metal' object. This was recovered while trowel cleaning the surface of (122) and actually might only represent mineralisation within a worm hole or root tube.

Discussion

Given that one of the objectives of Tr1 was to look for evidence of the different phases of the Fort it is tempting to interpret fills (122) and (168) not as silting of the *via principalis* ditch but as a deliberate backfilling using the surrounding natural clay in order to afford either an extension eastward of the *via principalis* or the laying of a new, separate, surface in the form of (169).

However a more prosaic explanation is probably likely. The surface of the extant *via principalis* is far from level, it is clear that it has been subject to disturbance. Although it is likely that historically as is the case today pastoral farming dominated the Castleshaw landscape, there is evidence that arable farming has taken place in the vicinity of the fort. Historically the evidence for this comes from the post medieval barns of nearby farms used for storing crops and from the traces of ridge and furrow ploughing which are visible on modern aerial photographs. Archaeologically the evidence comes from a thick layer of brown ploughsoil which was found in the fortlet ditch sections excavated by GMAU. Professor Thompson remarked on the discovery of the roads in 1963 that "*These roads lay so close beneath the surface that some doubt was felt about their Roman date in the early stages.*" Therefore any ploughing in the interior of the Fort would almost certainly have truncated and disturbed the archaeology. In these circumstances it is not difficult to envisage a scenario in which plough activity removes the upper levels of the *via principalis* and upsets and spreads the main bulk 'statumen' and so reduces the camber of the agger. This process might also have truncated the roadside ditch, perhaps even completely removing the upper layers of silted material and in so doing any support for stones from (109) which had tipped into the ditch, leaving only the primary fill which derived from the surrounding natural.

The West Service Road

Description

Machine excavation revealed a stone surface 14.0m to the east of the *via principalis*. This appeared to tally with a stone surface shown on the plan in Professor Thompson's report and interpreted as a fort service road. Once again it was immediately clear that the road had been removed within his trench but survived in reasonable condition to the north and south of it. Running west, from the east side of the road, the fill from a 10m long section of [120] was removed by hand. The base of [120] was between 0.05m and 0.15m below the level designated as natural for the 2014 excavation and 0.34m below the highest surviving stones. After the remnants of overburden had been removed by trowel a situation very similar to that seen on the *via principalis* emerged. Partially covering, and between, the stones forming the upper level of the surface, was a layer of mid brown silty clay, context (110), which, as with layer (105), was confined to the area of the stones. Layer (110) was removed to reveal fully the stones, context (114), which constituted the road surface.



Figure 5.8: Aerial view of the west service road and associated features; (site west is at the top of the picture).

To the north of [120] the layer of stones measured 4.40m east to west and was exposed to a maximum of 1.40m north to south. To the south they measured 3.80m east to west and were exposed to a maximum of 1.0m north to south. The stones themselves were sub-angular fragments of millstone grit. On average the stones of (114) were 0.10m to 0.20m in length and slightly less in width and of a fairly uniform 0.05m thickness. The sections through (114) provided by the re-excavation of [120] showed that there was no obvious pattern to the vertical make up of (114) and that it varied in depth being between one and three stones thick, 0.07m to 0.20m. These variations in depth whether deliberate or the result of differing extents of later disturbance did result in the impression of a camber to the road associated with an agger. Like the *via principalis* there was no apparent alignment of the stones and the surface itself was uneven with a number of the stones pitched from the horizontal. However, unlike the *via principalis*, parts of this surface were made up of noticeably larger fragments of stone. To the north of [120] along the east side of (114) the stone fragments were around 0.30m in length and around 0.20m wide as were those on the west side of (114) to the south of [120].

The quantity of stones on the south side of [120] was much less than to the north. To the south apart from the area of large stones there was really only one other area, some 2.0m to the east, that could be described as representing a surface. Between these two areas the natural clay was exposed, covered only scantily by random stones. The south section of Tr1 did suggest that beyond the trench the stones extended east for a further 0.80m. In this instance there is no evidence to suggest that any stones have been removed by earlier excavation. Their paucity is, in all probability, simply a reflection of the varying levels to which the archaeology survives at Castleshaw and an indication of the impact of historic ploughing or recycling.

The plan of the 1963 excavation shows two features associated with this road. Along its west side is a linear feature which may represent a drainage gully for the road. This gully, along with the road, was also excavated a year later by the Professor when he opened a parallel trench 3.0m to the north (trench 16). The plan of this trench, supported by the text, suggests that a drain was also found running along the east side of the road; however the plan of the 1963 shows instead two pits, the larger of which appears to obtrude into the east side of (114). The 2014 excavation did not produce any indication of a drainage gully on the west side of the road in either the base or section of [120] or, in plan, in the new areas exposed north and south of [120]. The excavations did however reveal the pits which are shown on the east side of the road as well as a linear feature (143) which appears to be the continuation of the eastern drainage gully found during the 1964 excavation. In the base of [120] the shape of the larger of the two pits excavated in 1963 could clearly be seen containing the material used by Professor Thompson to backfill it. This backfill material was essentially (102) however it was assigned a separate context number, context (171), in case time and resources permitted its excavation.

The outline of the second pit, which lay half in and half out of the stretch of [120] which had been excavated, could also be discerned in the base of the trench. On investigation it became apparent that this feature had not been fully excavated and the decision was taken to excavate the exposed half of this feature. The result was a semi- oval shape 1.50m north to south and 0.60m east to west which extended down a further 0.15m from the base of [120]. This was designated as context [134]. If we make an assumption that Professor Thompson excavated this feature from the level of the road then the true depth would be 0.35m. The sides of the feature were near vertical and it had a flat base. Below (102), the backfill of [120], it was thought that 3 separate, in-situ, fills (129), (130) and (131) could be discerned. A single sherd of Roman grey ware was recovered from (129).

To the north of [134] a linear feature was seen running north to south parallel with (114). This feature, context (143), ran for 1.70m from the north section of Tr1 to the edge of [120]. It contained a mid-brown silty clay and was 0.30m wide. Based on the north section of Tr1 and [120] the depth of this feature is estimated to be 0.23m with vertical sides and a flat base. There was no indication of (143) in the base of [120] however a short stretch of a linear feature did appear to the south of [120] which is likely to represent a continuation of (143).

From the north section of [120] it was clear that the base of (143) and the base of [120] were virtually at the same level, therefore it is likely that the excavation of [120] removed (143). Any traces of (143) which may have remained might well have been removed by pit [134] although there was no suggestion of the gully feature in the sides of the pit. The nature of (143) illustrates the dilemma in accurately identifying and defining features at Castleshaw. The presence of a feature was recognised as soon as the area was trowel cleaned immediately after machining. However it was only after several more 'hard scrapes' on the north side of Tr1 that the feature was defined enough to allow for it to be accurately planned. At this level it was clear from the section of Tr1 that this cleaning process had truncated (143) by 0.12m. It was only after this cleaning process had identified (143) to the north of [120] that a possible interpretation of subtle differences in the soils to the south of it were tentatively interpreted as a southerly continuation of (143). The intensive trowelling was not carried out to the south of [120] and may be responsible for the lack of certainty as to whether or not (143) was present here. Another factor hindering its identification was the fact that the width of archaeology exposed to the south of [120] at this point was only 0.40m.



Figure 5.9: Section of pit [143] looking east.

Discussion

At the centre of any discussion about this area of the excavation is the nature and function of the pits on the east side of layer (114). Their size and position appear to make little sense if the area they are in is interpreted as being the location of fort barrack blocks. This, combined with the fact that one of the pits cut or at least projected across the line of (114) suggested that they could represent relatively modern disturbance. However we are fortunate in having Professor Thompson's findings which provide more information and allow for us to further a more archaeologically inspiring interpretation. As mentioned above, in 1964 Professor Thompson excavated a trench parallel to [120] 3.0m to the north. This revealed a road surface which is almost certainly a continuation of (114). To the east of this was a large pit which clearly extended beyond the 3.50m width of his trench 14 and from his section drawing was more than 4.20m long. Although in this instance the pit seems to respect the road it does clearly cut through linear features belonging to the fort. Looking at the size and alignment of this pit it is possible that if not part of the same feature [134] and (171) may represent elements of a complex of pits dug adjacent to road. No modern artefacts were present in the fills excavated from [134] and one sherd of Roman pottery was recovered; it is therefore interesting to read what Professor Thompson says about the excavation of the pit found in 1964.

“The fill was a dark grey clayey loam which contained a fair quantity of pottery; after use, vegetation had developed on its surface and eventually turned to peat, evidence for the very waterlogged conditions at this point. The pottery itself, which

included rustic ware, can be identified as Flavian-Trajanic rather than early Flavian (fig.22, 3-20) and the pit must be attributed to the fortlet rather than the fort.”

It would appear then that we may have a number of pits located in the middle of the fort, 20m away from the fortlet, which stratigraphically post-date features clearly belonging to the fort and one of which at least has produced pottery which dates it closer to the period of Fortlet occupation around 120 AD rather than the Fort, (around 80 AD). These pits may represent evidence of extra-mural activity during the period of Fortlet occupation. The current belief is that the road uncovered by Bruton in 1907/08 immediately north of the Fortlet defences represents a loop running from the main Roman road in Daycroft Field. Its route ran through the abandoned west gate of the Fort, across the interior of the fort in front of the north gate of the Fortlet. It then proceeded out through the abandoned east gate of the Fort before curving to re-join the main road as it begins its ascent to Standedge. This represents a substantial investment of resources in order to provide users of the main road with access to the Fortlet and its facilities. It is not difficult to imagine a scenario in which a convoy of troops or supplies from Manchester would arrive at the Fortlet to rest and re-supply before pushing on to Slack. The buildings inside the Fortlet, the granary, mansio and fabrica would have formed the basis for this process but it does not seem unreasonable to suppose that the resources offered by these buildings could have been augmented, and different services provided, by facilities outside the Fortlet deliberately positioned adjacent to the loop road. Locating these alongside and perhaps even building them into the remains of the Fort service road may well have been required for operational purposes or increased efficiency.

The East Service Road

Description

This service road lay 13.0m to the east of the first, its location corresponding accurately with the road shown on plan in the 1964 excavation report. The 1963 excavation had removed the road but either side of [120] the level of survival of this road surface was the best of any uncovered in Tr1. Like the previous two roads it was demarcated by a partial covering layer (103) which was probably an amalgam of remnant subsoil and Fort occupation layers. It did differ slightly from the corresponding layers associated with the other two roads in that it had a much more yellow hue and was of a sandier texture. The removal of (103) revealed the full extent of the stone surface (104). To the north of [120] it measured 7.20m east to west and was exposed to a width of 1.20m north to south. To the south of [120] it measured 4.60m east to west; however, if you were to include stone spread (135) as part of (104) this measurement rises to 6.40m and was exposed to a width of 1.0m north to south. Much of (104) was either one or two stones deep, around 50mm – 0.15m. However towards its east side there were two distinct areas of (104) which were noticeably thicker. These areas lay directly opposite each other side of [120]. Mostly they were three stones thick c 0.20m but in some instances this extended to a

fourth stone. The stones forming these two areas also contained a markedly higher percentage of stones that were at the smaller end of the range which made up (104) and they were more densely packed together. The northern area measured 1.30m north to south while the southern one was 1.0m wide. These two areas shared another characteristic in that they both showed clear signs of a camber which was particularly evident on the north side of Tr1. This seems to have formed by the shaped deposition of a light yellow brown silty clay layer (108). This deposit was difficult to distinguish from the underlying natural which is perhaps not surprising as it almost certainly derives from this material. It also shared certain similarities with (103). At its thickest it is only 0.10m and was observed to run east to west for 1.20m.

Immediately to the east of the cambered sections of (104), and again presenting a mirror image to the north and south of [120], were two areas which contained stones significantly larger than elsewhere in (104). These areas were similar in size measuring c1.20m east to west. Although there are some slight gaps between these and the cambered section they mostly appear to be random. The exceptions might be (106) which is a roughly circular grouping of on-edge stones to the south of [120] and a circular shaped gap in the stones to the north, both of which might represent post holes. The removal of two of the larger stones is that as a group they lie above the smaller stones more representative of (104) and in some instances sit within layer (103). This opens up the possibility that they may represent a later surface not directly related to the road or perhaps that they are ex situ disturbed by ploughing.

To the west of the cambered sections the size of the stones is more mixed and the depth of (104) generally less than in other areas, for the most part being just one stone thick. Professor Thompson does not make any mention of roadside ditches in his report and none are shown on his plan, either in the 1963 trench or the 1964 trench some 7m to the north. No features that could definitely be designated as road drainage gullies were found during the 2014 excavations however a linear feature [147] was found running north to south in the base of [120]. This feature was 0.35m wide and 0.30m deep. Its fill (160) was light orange brown silty clay. This was clear against the natural at the bottom of [120] running the complete 1.20m width of the Thompson trench. Either side, at a higher level, the linear nature of this feature was hard to follow. On the north side it was also covered by (104). Even so a circular gap in (104) against the section, which aligns with [147], is a possible indication of its continuation north or perhaps a post hole set within it. This seems to be the case to the south of [120] where the linear shape is replaced by 2 circular areas of mid brown silty clay. As with (122) and (143), (160) the fill of linear feature [147] was more like re-deposited natural than the silted fill of a drainage ditch.

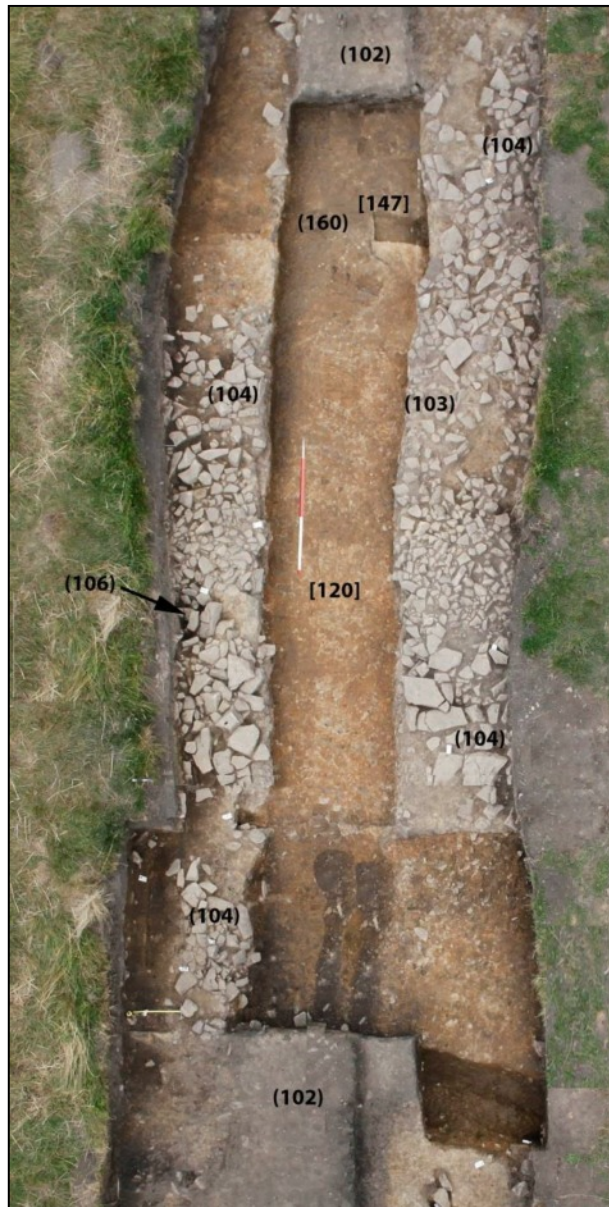


Figure 5.10: Aerial view of the East Service Road looking west.



Figure 5.11: South facing section of East Service Road.

Discussion

The greater survival of (104) compared to the other surfaces (109) and (114) allows for a more informed discussion on the nature of the roads within the Fort. It is a misconception that Roman military construction adhered blindly to predetermined methods and sizes and this can be seen by looking at even the small sample of roads that have been excavated in the Fort and Fortlet at Castleshaw. Professor Thompson's report gives the width of the East Service road as 20 feet or 6.09m compared to the 2014 measurements for (104) of 7.20m and 4.60m or 6.40m. The same report gives the width for the *via principalis* as 14 feet, (4.20m) or 18 feet including the drainage ditches. This means that a simple service road is wider than the main Fort thoroughfare. The *via principalis* of the Fortlet varies in width between 7.70m and 3.90m. It appears to have no drainage ditches but does have a kerb. The service road in the Fortlet varies in width between 2.50m and 1.20m. This evidence would suggest that not only are there differences between the Fort and Fortlet roads there are differences between the roads belonging to each structure. Not only that, but there are differences in each individual road depending on which bit of it you look at. Size is no indicator of importance and drainage is not a critical issue. In fact any interpretation of the East Service Road based on Professor Thompson's plan would have to conclude that it is noticeably wider in his 1963 trench than in his 1964 trenches to the north and south and that between this trench and the one to the north its east edge must change direction.

In the case of (104) it may be that just the cambered section represents the road if the large stones to the east of it are interpreted as having formed the flags of the road surface which have been disturbed by ploughing then it may have been slightly wider, perhaps 1.50m. More of a path than a road, more akin to the service road of the Fortlet than the *via principalis*. What then of the stones to the west. Two interpretations seem possible. The first is that they too represent road stones, a mixture of sizes, which have been disturbed by ploughing. The second is that they represent a surface which forms a link between the building to the west and the road. With the possibility of post hole settings and its alignment with a post trench in Professor Thompson's trench to the north, it seems likely that [147] is structural in nature. It is possible that the elements of (104) which cover the 2.0m between [147] and the start of the camber represent either a specific surface linking a building entrance to the road or are part of a linear surface, perhaps a covered walkway, running outside the building.

The *Intervallum* Road

Description

The *intervallum* was a gap between the rampart (*vallum*) of a Roman Fort and the buildings inside. This gap traditionally served the military purpose of allowing troops quick access to the rampart and put the buildings out of range of incendiaries that might be hurled over the rampart. Convention has it that this space would also contain a road, the *via sagularis*, which ran the entire perimeter of the Fort following the line of the rampart. In military terms this would have allowed for a speedy distribution of troops to critical parts of the defences. This road is now more commonly referred to as the *intervallum* road. It is common in Roman Forts to find evidence of processes like smithing and baking located between the *intervallum* road and the rampart. These remains often take the form of simple ovens set into the rampart and impinging on the road; however they can sometimes be associated with purpose-built structures.

So far the presence and location of the Fort roads located and excavated in 1963 had been confirmed by the results of Tr1. However this was not the case for the *intervallum* road. In his report (ref) Professor Thompson states that in the 1963 trench four road surfaces were encountered. He does not give descriptions of the surfaces in this trench, but provides one, along with measurements, if they appear again to the north or south in the 1964 trenches. This is the case for the *via principalis* and the west and east service roads but not for the *intervallum*. The only reference to the *intervallum* road in the 1963 trench is as an aside in his description on the results from 1964.

“In 1963 a complex series of post-trenches was noted immediately south-west of the intervallum road, ...”

On his plan a stone surface approximately 21', 6.50m in width is shown in the same drawn style as the other stone in his 1963 trench. Measurements taken from the plan suggest a gap of 10.30m between the East Service road and the stones he interpreted as the *intervallum* road. Measuring from the East Service road there was no indication of any stone layer resembling the other probable road surfaces found in Tr1. Although it was anticipated that the stones shown on the 1964 report plan would have been removed by that excavation it was supposed that elements of it would be visible to the north and south of [120] especially as at this point Tr1 was at its widest, just over 3.0m. In terms of stones all that was revealed was a desultory scatter sitting on what appeared to be a layer of re-deposited natural (137). This layer was apparent on both sides of [120] however the stones were only present in any noteworthy number on the south side. Layer (137) produced fragments of Roman pottery as well as pieces of what appeared to be daub or burnt clay. To the north (137) appeared to be cut by a series of pits filled with (119) a deposit containing ash, charcoal fragments lumps of burnt clay and fragments of heat marked gritstone. Around 20% of the stones to the south of [120] also showed evidence of burning. There was no obvious pattern to the distribution of these burnt stones and they were not

distinguished by any uniformity of size or shape. Although (119) was not excavated in this area it did appear as if there were three interconnected pits. Whether or not these represent part of a contemporaneous system or a series of progressive recuts is unclear. Slightly further to the north a 2.0m length of [120] was excavated as part of the 2014 investigation of the Fort defences. The purpose of this was to identify the west end of the rampart but the exposed north and south sections of [120] also provided further information about the pits. The north section showed 2 layers of yellowish clay, (173) and (174) which were inclined west to east and are interpreted as representing in situ rampart material. Although similar in texture the lower of the two, (174), was much lighter and contained a number of patches of light grey clay as well as the occasional stone fragment. Its character was very similar to that of the rampart material seen in Tr7. Against (174) was a very distinctive dark grey deposit, (148) which contained frequent flecks and small fragments of charcoal as well as what appeared to be very small fragments of burnt bone.

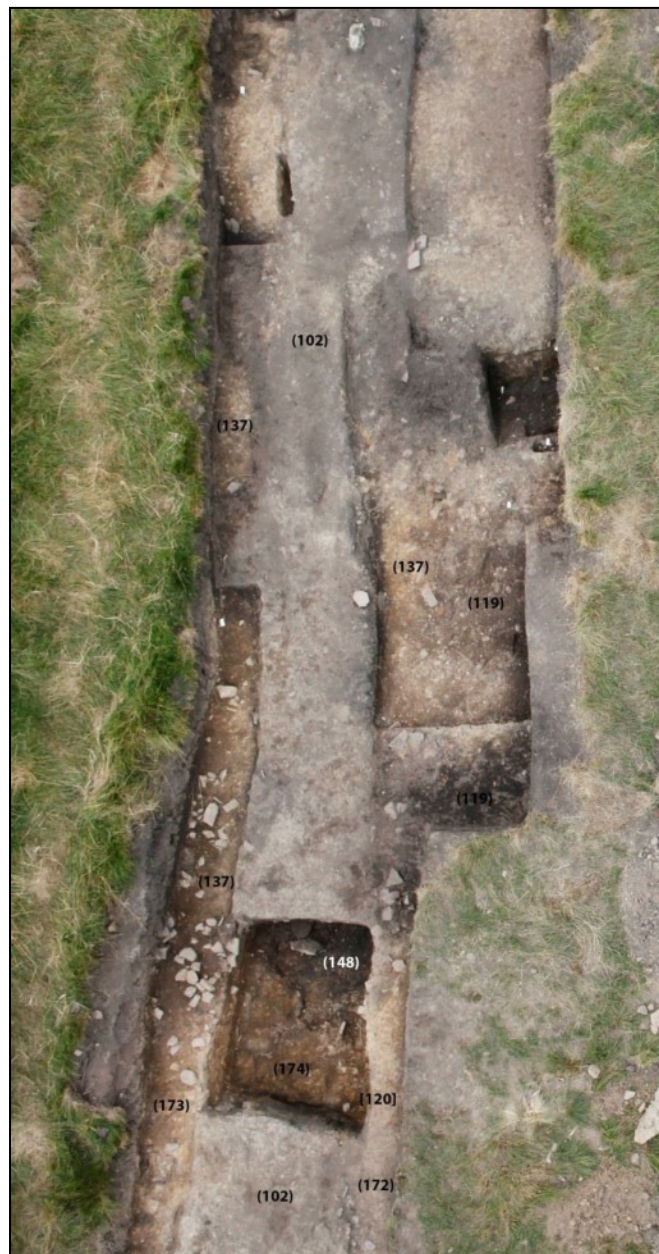


Figure 5.12: The East Plot.

Although it was only partially excavated, (148) appeared to fill a feature that was cut into (174). Charcoal (148) and clays (173) and (174) were overlain by (175) a 0.10m thick band of mid-brown silty clay the east end of which was itself overlain by layer (172). This was similar in texture to (175) but had a more orange hue to it. The main differentiating characteristic was a series of dark grey vertical bands which ran into (172) from the surface. Above (172) was a segment of clay layer (137) and above that right in the west corner of the section was a portion of (119) which appears to be filling a feature, possibly a pit, cut into (137). The south face of this excavated tranche of [120] showed a similar pattern although possible rampart layer (173) was not seen in this section.

Discussion

Attempting to phase the Roman Fort at Castleshaw from a single section is futile; however certain possibilities are suggested by the stratigraphy revealed in these sections. If, as seems reasonable, (173) and (174) represent the western edge of the Fort rampart the charcoal layer (148) may be the fill of a pit associated with some small-scale industrial or manufacturing process such as general blacksmithing or perhaps the rake out from a baking oven. The analysis of the fired clay sampled from (119) would seem to support the latter interpretation (see Finds Appendix: *Fired Clay and CMB* by Dr Phil Mills). A position immediately inside the ramparts is the traditional location for such activities away from timber buildings and easily accessed via the *intervallum* road. It is tempting to look upon layers (119) and (137) as also being associated with these processes. The difficulty with this interpretation is that (119) and (148) are separated stratigraphically by layers (175) and (172). It is not uncommon to find a layer sealing off a pit that has become full or unusable and its replacement cut into the sealing layer. Layer (175) can be explained in this manner but the most likely interpretation for layer (172) is that it represents either natural slippage/erosion or human truncation slighting/ploughing of the Fort rampart. As the sections show that the pits filled with (119) and the associated clay layer (137) are above (172) it might be that, as with the pits adjacent to the West Service Road (114), we are looking at activity within the Fort boundaries occurring after it was abandoned as a military establishment.

What then of the *intervallum* road? If the representation of roads used in Professor Thompson's plan is consistent in that it portrays stone surfaces of a size, density and uniformity as those found elsewhere in Tr1, and as shown on his report photograph of the *via principalis* then we must believe that such a surface existed, surviving solely within the confines of his 1963 trench running 6.50m east to west but only 1.20m wide. It is possible that the representation of stones in the Professor's report is a more generous view of the actual nature of the surfaces encountered during his excavations. If this is so then the scattering of stones seen in Tr1 to the south of his trench and the even less substantial, seemingly random, pieces of stone to the south may actually represent what was interpreted as the *intervallum*. Although perhaps slightly misleading this is not unreasonable especially if the idea of intensive post-

Fort pitting in the area is accepted, as this would have severely truncated the *intervallum* road.

As mentioned at the start of the description Professor Thompson gives dimensions for the roads in the 1963 trench based on their reappearance in the trenches he excavated a year later. The fact that he does not do so for the *intervallum* is hardly surprising given that his report plan shows no sign of this road in Trench 15 which he excavated in 1964 4.50m to the north. Instead the area is shown as containing a post trench and two ash filled pits. Perhaps the Professor himself was uncertain as to the interpretation of the stones he had uncovered. His plan has the *via principalis* labelled as such and the *via praetoria* too, even the stone surfaces found in trenches 1, 8 and 12 are linked with the annotation *intervallum* road; however, no such identifier graces the stones found in 1963.

Are we to assume that a later phase of activity has removed all but the most scant traces of the Fort *intervallum* road? This is possible but if so it implies a scale and organization of activity much greater than the occasional traveller pausing at the remains of the Fort to carry out running repairs before continuing their journey to Manchester or Slack. Two other possibilities exist. Firstly that on abandonment the Fort was severely slighted by the departing garrison with the aim, as Professor Thompson says, "...of leaving the site a tabula rasa." In this scenario the late pits were intended to take the debris produced in the process and in the course of their excavation one of the service roads was damaged and much of the east arm of the *intervallum* road destroyed. This is perhaps the most conventional interpretation. An alternative possibility is that there never was an *intervallum* road on this side of the Fort.



Figure 5.12. Burnt deposits at the back of the rampart

5.2.2 The Buildings.

The archaeological features found in Tr1 are best discussed based on their location in regard to the roads and the rampart. This divides them into three groups; The West Plot, features found between the *via principalis* and the West Service Road; The Central Plot; This lies between the West and East Service Roads and the East Plot; The area between the East Service Road and the inside face of the rampart.

The West Plot

Description.

Professor Thompson points out the ephemeral nature of some of the features at Castleshaw and earlier in this chapter it was mentioned that defining features is sometimes more difficult at a higher level, closer to the subsoil/natural interface. The exceptions to this were areas of reddened material, often surrounded by stones, which indicated the location of possible hearths. These showed up clearly, indeed in 2014 the level at which these features appeared served as a guideline while machining as to how far below the interface level should be excavated to ensure that the archaeology was exposed.

The West Plot measured 9.0m east to west stretching from the eastern drainage gully of the *via principalis* [161] to the stone surface of the West Service Road (110).

To the east of [161] layer (107), a mid-yellowish brown silty clay, extended east for 7.50m either side of [120]. This represented the level to which Tr1 was machine excavated and into which the archaeological deposits described below were set. A single mellow bead was retrieved from within (107). The fill of Professor Thompson's trench was removed over a 10m stretch which exposed part of (107) in section showing it to be 0.12m deep.

To the east of (107) running for 1.70m up to the West Service Road was layer (141). From the section provided by the excavated 1963 trench it was determined that (141) was 0.16m deep light brown sandy silt that ran either side of [120]. No features were visible within (141). In section the junction between layers (107) and (141) was quite clear and appeared almost vertical. The horizon between (141) and the natural clay was also quite distinct.

In the West Plot three potential hearths were revealed. Context (151) lay 2.40m from the *via principalis*. It was a semi-circular patch of reddened clay which projected out 0.25m from the north section of Tr1. It measured 0.55m east to west and appeared to cut into layer (107). There appeared to be two fragments of burnt stone sitting on top of the reddened clay. The boundary between (151) and (107) was diffuse and circa 0.30m to the west of (151) there was a patch of (107) which contained a scattering of charcoal flecks concentrated in such a way as to clearly describe a semi-circle running into the north section of Tr1.

Context (152) lay within layer (141) 6.0m to the east of (151). It manifested itself in much the same way as (151) a patch of reddened clay which projected from the north section for 0.15m and ran east to west for 0.25m. There was one medium sized fragment of stone lying flat some 0.15m to the west of (152) but it is unclear if the two are associated in any way. Immediately west of the stone was an area of (141) notable because of the presence of a light scatter of charcoal flecks. Contexts (151) and (152) were the only archaeological features observed in Tr1 to the north of Professor Thompson's trench.

The third feature to be tentatively interpreted as the remains of a hearth was context (150). This context lay 2.0m to the south of (152). It had been cut by [120] so that half of it lay to the south of [120] within layer (107) in the area newly exposed by Tr1 and half of it in the base of [120]. The part that lay to the south of [120] comprised of three large fragments of stone covering an area 0.60m east to west and 0.50m north to south. They were lying flat although one had seemingly been disturbed by the excavation of [120]. This was in contrast to the reddened clay of (151) and (152). In fact it was only because the 0.12m deep fill of Professor Thompson's trench was excavated in this area, exposing in section the characteristic reddened clay, that the interpretation of the feature as a hearth was made. As well as burnt clay the material visible in the section below the stones also contained moderate patches of charcoal flecks. In the base of [120] these patches were also visible, although significantly reduced in concentration, in a spread measuring 0.50m east to west by 0.40m north to south. Context (150) was the only archaeological feature observed in the base of [120] within the West Plot.

Against the south section of Tr1, within layer (107), a series of amorphous deposits, roughly aligned east to west, were recorded as contexts (115), (117) (118) and (153). All these possible features appeared to run into the south section of Tr1. They were discernible from the surrounding layers by the fact that they lacked the yellow hue of (107) and contained occasional flecks of charcoal. It is difficult to offer any interpretation for them. They could represent a line of postholes or the location of post settings within a construction trench running east to west which was not discerned during the excavations.

Running north from (115) for 0.70m was a 0.25m wide linear shaped band of mid-brown silty clay, (175). This material was cut by [120] and was not visible either in the base of [120] or within (107) to the north of [120].

Discussion

Of the features observed during the current excavations it is the linear (175) which corresponds best to features shown on Professor Thompson's plan. The combined evidence would suggest a linear construction trench running south to north. Unfortunately (175) could not be seen to the north of [120]. Two possibilities suggest themselves. It could be (175) turns to run east or west, a turn which neither the 1963 nor the 2014 excavators recognised. The notion that (175) turns seems to be supported by the fact that there is no linear feature on a corresponding alignment in trench 16, excavated by Professor Thompson in 1964, 3.50m to the north. Trench 16 does have two parallel post trenches in it running north to south some 5.0m apart. Neither of these were seen in either the 1963 or 2014 excavations. The pattern of post trenches makes it difficult to draw conclusions on the nature of the Fort building which stood here. As Professor Thompson says-

"In trench 16 two possible post-trenches and a hearth suggested a building c. 20 feet wide, presumably running parallel to the via principalis, though the supporting evidence from the 1963 trench was not entirely convincing."

The second possibility is that there is a deliberate gap in (175) possibly for an entrance to a building.

In either case it does seem a remarkable coincidence that (175)'s northward progress should cease at the precise point where [120] and Tr1 meet. Of all the building features recorded during the 2014 excavation, (175) correlates most closely to one shown on Professor Thompson's plan. Yet even here there is disassociation between the archaeology to the south and north of [102] and between the archaeology in Professor Thompson's 1963 and 1964 excavations. It clearly highlights the difficulties of trying to extrapolate and interpret archaeological features at Castleshaw over even the smallest of distances by means of relatively narrow trenches.

The plan of the 1963 trench does show a possible hearth very close to the location of (150) although it is depicted as entirely within [120]. Although labelled as hearths, it is not always possible, especially without excavating them to discern the true purpose

of these areas of burning. The fact that (151) and (152) appear to have associated patches of charcoal flecking nearby suggests that they, along with (150), have more than one element to them and that it was this second, 'charcoal', element to (150) which was excavated in 1963 with the reddened clay element to the south unexposed. This might explain why Professor Thompson added a question mark to his tentative of the feature as a hearth.

It is tempting to see relevance in the presence of two layers occupying the West Plot, layer (107) to the west and layer (141) to the east. Given the difference in width an attractive interpretation is that (107) represents the remnants of a floor surface inside a building with (141) providing a walk space between the building, its exits, and the West Service Road. Linear feature (175) might then be seen as the east wall of this building. Professor Thompson places a building in this area. He bases it on the results from his 1964 excavation of trench 16. This has the walk space gap on the west side facing onto the *via principalis*.

The Central Plot

Description

The Central Plot measured 13m west to east from the stone surface of the West Service Road, (110) to those of the East Service Road, (104).

Immediately east of (110) was pit [134] and north – south linear feature (143). These features have been described and discussed in the section dealing with the West Service Road. The only addition to this is to say that they cut into layer (154). This layer was light brown sandy silt with few inclusions except for the occasional small fragment of sandstone. It stretched east for 5.80m from road surface (110) to layer (155). It was visible on both sides of Professor Thompson's trench and, where this had been excavated, (154) was seen to be 0.05m deep. The boundary between (154) and the natural clay below was diffuse.

Immediately east of linear (143) and also apparently cut into (154) was a roughly rectangular band of mid brown silty clay which emerged from the north section of Tr1. This layer, or fill, (123) measured 2.0m east to west by 0.60m north to south and contained a moderate amount of charcoal flecking. The presence of this charcoal may well be due to the fact that within (123) were two distinct patches which appear to have been reddened presumably as a result of heating. Although these two patches were given discreet context numbers, (176) and (177), they appeared to be composed of the same silty clay as (123). The concentration of charcoal flecks was greater in these two areas than it was elsewhere within (123). Context (177) was circular in shape some 0.25m in diameter, (176) was slightly to the north east and protruded from the north section of Tr1 by 0.20m. East to west it measured 0.80m and appeared to be rectangular in shape. As well as its apparent size and shape it differed from (177) in that there was a small grouping of stones within it, right against the section.

Slightly to the east and on the south side of Professor Thompsons trench was a third area of reddening, context (121). This measured 0.40m east to west by 0.20m north to south. This latter dimension is clearly truncated as (121) is cut by [120]. Unfortunately this was a stretch of the 1963 that had not been excavated and so no vertical measurements could be taken. Context (121) was a reddened patch of silty clay similar to the others found in Tr1 except that there was a distinct lack of charcoal flecks and it produced finds in the shape of one fragment of lead and one of glass.

To the south of (121), and either side of it, where two roughly circular patches of mid-brown silty clay, (111) and (118). The first measured 0.38m east to west by 0.25m north to south; the second had a diameter of 0.25m. Context (118) was the more easterly of the two.

The transition from layer (154) to layer (155) was diffuse. That is to say it was clear at what point (154) stopped but (155) seemed to develop over about 1.0m, gradually becoming more clay in texture and orange in colour, so that it was never possible to define precisely where (155) started. It is possible that this 'transition' was due to

the effects of two trenches dug by Professor Thompson in 1964. These trenches were slightly staggered, the more westerly, trench 8 ran north from the 1963 trench while the second, trench 18 ran south (Fig 5.3). Another possibility is that a feature not clearly identified during excavation separated (154) from (155). Layer (155) was orange-brown silty clay which differed very little from the natural. This context was present either side of [120] and on the north side stretched for 3.0m towards the East service road while on the south side it ran for 4.60m. It is possible that (155) continues further to the east as layer (108).

To the east of (155) was layer (156) which completed the last 2.0m up to the East Service Road. This layer was a dark brown sandy silt which contained frequent small to large fragments of sandstone. In a section of excavated [120] it was seen to be 0.05m deep and had a very distinct boundary with the underlying natural clay.

Discussion

As with the West Plot there is a varying degree of correlation between the evidence for buildings from Tr1 and from the 1963 excavation. No evidence was found for the most westerly post-trench shown on Professor Thompson's plan, a post-trench that is itself cut away by a large pit in trench 14 excavated by the Professor a year later 3.0m to the north. There is no indication that any hearth was discovered in 1963 at the point where (121) is located.

As mentioned in the description despite persistent cleaning and trowelling the point at which layer (155) begins was very difficult to ascertain. At times, immediately after trowelling or after a shower it might be believed that there was a clear edge between the material immediately east of (154) and (155) and that this material represented the fill of a cut or perhaps two that separated the two layers. A study of Professor Thompson's plan would seem to support this theory as he shows two parallel, north to south, linear features which correspond with the hiatus between (154) and (155). The absence of the easternmost of the two features on the north side of [120] can be explained by the presence of 1964 trench 8 which runs north from [120]. Professor Thompson interprets this area as containing two buildings sitting back to back with the two parallel features representing the two back walls. He suggests that these are barrack buildings;

“Their interpretation as barrack- buildings rests on the presence of clay and stone hearths in trench 18, irregularly spaced partition walls (trenches 17 and 18), and a drain consisting of an amphora neck surrounded by stone slabs in the south-east end of trench 18.”

Based on his trench plans both buildings do, as he says, appear to be c14 feet or 4.2m wide however Fig 3 in his report clearly shows the east building as narrower and there being a gap between it and the East Service Road. The plan of the trenches also shows that these buildings are not centrally placed between the two service roads however the evidence from this plan shows that the gap is between the west building and the West Service Road. If they were barrack blocks one might expect that a little

more care would have been taken in locating them centrally with equal space between their frontage and the respective service roads. Professor Thompson himself comments on uneven spacing of partition walls while a mis-match between partition walls in separate barracks is to be expected traditionally there should appear a recognisable pattern within each individual barrack building. While only a very small area of the west building has been trenched quite a bit has been done over the east one and even taking into account sub divisions within individual *conuibernia* and bespoke quarters for a centurion there is little evidence of a pattern. There is a type of building found in Roman forts that does tend to have a central corridor. This is the *fabricae* or workshops however these are generally placed adjacent to the *intervallum* road as the activities within them posed a fire risk.

Once again the difficulties of extrapolating features at Castleshaw are evident in the Central Plot. A north to south linear feature uncovered by the Professor in his 1964 trench 10, 9.0m to the north, was seen again by him in trench 13, just 3.0m north, is not present in the 1963 trench.

The East Plot

Description

This plot covers the 10.30m that Professor Thompson's plan shows between the East Service Road and the *intervallum* road, except of course in 2014 there was no *intervallum* road and therefore the plot as detailed here extends from the service road 15.0m east to the point where the clay marking the inside of the forts east rampart is first discernable.

The background archaeological layers in this plot are contexts (127) and (137). These layers were divided by, and cut by, linear cut [145]. Layer (137), which stretched for 5.0m from the back of the rampart in the east to [145] in the west and the pits that are cut into it, have already been described and discussed in relation to the *intervallum* road (see above). To the west of [145] layer (127) extended for 7.0m, on both sides of Professor Thompson's trench. Its west side was bounded by and cut by linear cut [179]. Context (127) was a light blue-grey silty clay containing frequent small fragments of sandstone with very occasional medium sized fragments also present. Layer (127) sloped upwards as it moved east from [179], rising 0.71m in 2.0m. It then plateaued for 2.0m before dropping gradually 0.30m over 3.0m to cut [145] a level which is then fairly uniform across (137) until the beginning of the rampart. Excavation showed that (127) formed the top 0.20m of the west edge of cut [145] and the east edge of cut [197]. There appeared to be two 'amorphous' features cut into the main body of (127) to the south of [120]. It is possible that they represent continuations of the north to south linear features recorded by Professor Thompson in 1963, however, the mixed nature of their fills indicates that they are more likely the result of further exploratory investigations from that excavation.

The excavated stretch of [120] extended for 2.40m to the east of the eastern service road. The north section of [120] revealed trench 9, one of Professor Thompson's

1964 trenches, running north from [120]. The backfill of this trench was removed. Unfortunately the fill of an in situ archaeological feature, cut [157] fill (132), was not immediately recognised which resulted in a slight overcutting of trench 9's east side and in some truncation to [157] (132). Of a linear feature shown running north, along the west side of trench 9, there was no sign.

Cut [157] ran north to south for 2.20m. A 1.20m length was excavated to the north of [120]. The excavation showed this feature to be at least 0.70m wide and 0.50m deep. It had steep regular sides and a flat base. It contained two fills. The uppermost was context (178), a dark grey silty clay containing occasional flecks of charcoal which filled [157] to a depth of 0.25m. The primary fill was (132) a dark brown 'gritty' silty clay containing occasional flecks of charcoal and small fragments of sandstone. This context also produced sherds of degraded pottery and small fragments of iron.

Excavation revealed that [157] was the later of two linear features. Context [179] and its fill (142) seem to represent an earlier feature on the same alignment as [157]. Only the western half of this earlier feature survived as its eastern half had been cut away by [157]. Cut [179] was visible for 1.20m running north to south alongside [157]. It survived to a width of 0.25m and was seen to be 0.25m deep. Its surviving edge was regular and near vertical and it too had a flat base. Its fill (142) was a mid- brown silty clay containing occasional small to medium fragments of sandstone. This context produced a sherd of degraded pottery and what seemed to be a sherd of samian ware.

The west edge of (178) protruded slightly into the excavated portion of [120] where it could be seen to run south for 1.20m before turning to run west for 1.60m as fill (123), and then turning south again to run for 0.80m as (125) into the south section of Tr1. Context (125) was a mid-grey silty material which appeared to be the fill of a linear feature. It ran parallel to and alongside road surface (104). This context separated the stones forming the road from another discreet group of stones, context (135). These were small to medium angular stones aligned roughly east to west measuring 1.60m by 0.60m. These stones and the other archaeological features adjacent to them were overlain by layer (116), a yellow-brown clay very similar to (103) the material which covered road stones (104).

Initially observed to the west of (135) layer (124) was a dark-grey silty clay notable for its high charcoal content. As more of (116) was removed it became clear that (124) extended east along the south edge of stones (135). At the time the excavations closed (124) measured 1.20m in length and 0.60m in width. Metal objects and a sherd of Roman pottery were retrieved from (124). At its eastern extent it ran up to context (136) a sub-circular patch of stiff reddish brown clay containing frequent charcoal flecks and occasional patches of daub/burnt clay. In form and colour (136) looked very similar to features found elsewhere which have been interpreted as hearths. Stratigraphically it appeared that (124) dipped beneath (136) in a manner which seemed to form a 'bowl' shape. Immediately to the east of (136) were the remains of trench 17 excavated in 1964 running south from Professor Thompson's 1963 trench.

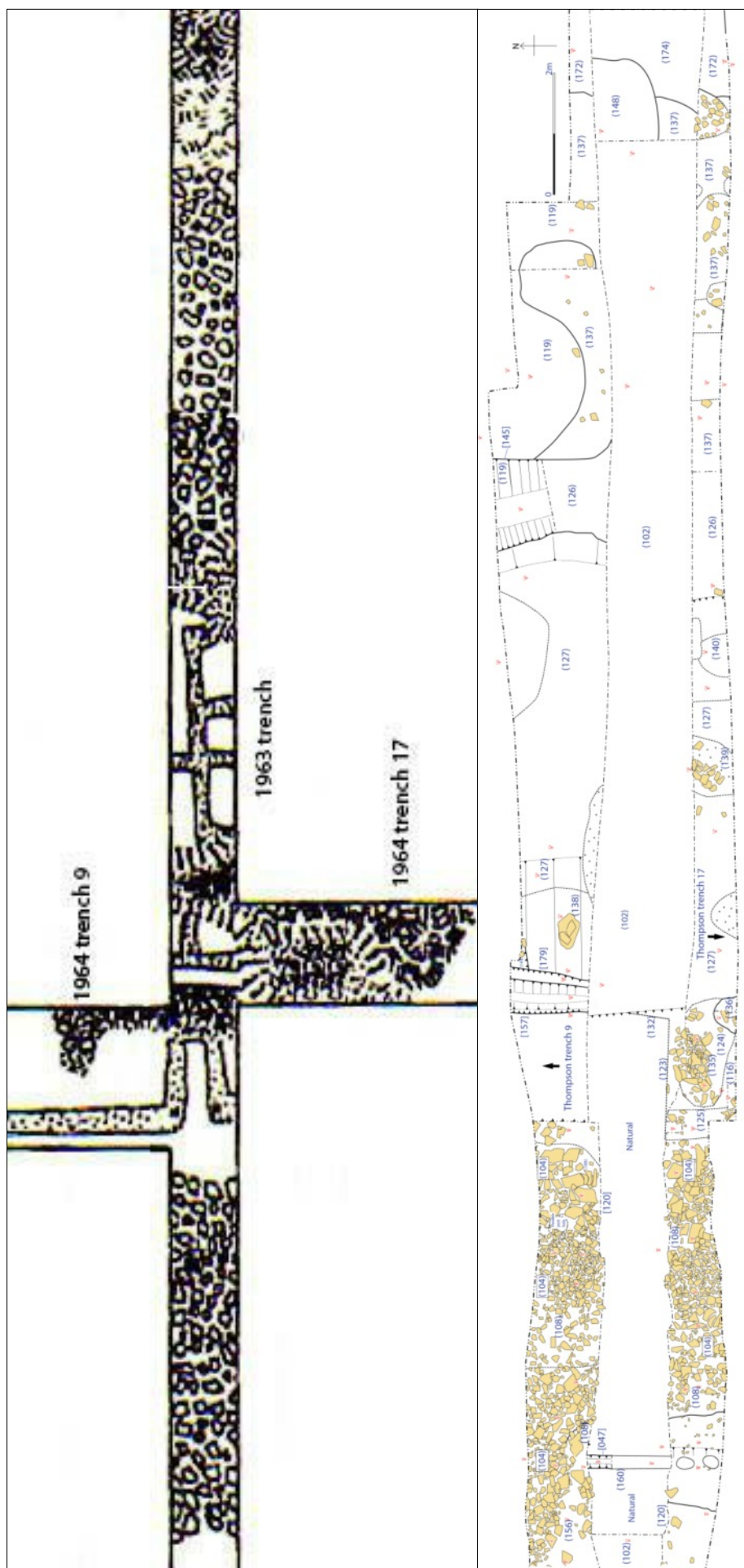


Figure 5.16: A comparison between the results from the 1960's excavations and the Eastern Plot as revealed in 2014.

Discussion

The ‘dog leg’ formed by linear features [157], (178), (123) and (125) is one of the strongest correlations we have between the 1963 and 2014 excavations. Of the 1963 excavation Professor Thompson simply comments that the area immediately inside the rampart contained a complex series of post-trenches. In 1964 trench 9 (and a short extension; trench 12) were excavated on a north to south alignment just to the west of cuts [157] and [179]. Running north to south along the west side of these trenches was a linear feature which after c 12m turned east to run out of the trench. It is tempting to ‘pair up’ these two features with cuts [157] and [179] to produce a rectangular building and agree with the Professor’s tentative interpretation of these features as a barrack block. His caution is understandable as the 2014 excavation found no evidence of a linear feature which might represent the south end of this building. Another of the 1964 trenches, number 15, was linked to trench 12 and ran east to west from it for c 10m. This trench would have been expected to pick up the opposite wall to the one found in trench 12 as a continuation of cuts [157] and [179]. However, no such feature was found. As the report says “... trench 15 produced evidence for ash-pits once more, which may have destroyed the line of the side wall corresponding to that in 9 and 12;” A similarly frustrating situation exists with regard to trench 17 which failed to show any evidence of linear features running south from the 1964 trench. As Professor Thompson says “On the other hand, 17 was completely uninformative except for clay and stone surfaces and a deep ash pit at the north-west end.”

These ambiguities typify the difficulty of trenching at Castleshaw. On the one hand you have in features [157](178) and [179](142) clear and quite substantial linear archaeological features with associated finds and yet trenches right next to them fail to produce any evidence of their existence.

5.2.3 The Defences

Archaeological Background

The east end of Tr1 followed the course of Professor Thompson’s tr1963 trench over the line of the Fort’s east rampart and across the supposed location of the associated ditch system. The defences of the Fort have been examined several times in the past.

In 1907 and 1908 F. A. Bruton led excavations on both the fort and fortlet. In his report on the 1907 excavations (Bruton, 1908) he describes the fort rampart to the west of the forts north gateway thus

“To our surprise, the bank at this point turned out to be made of clean, compact, light-coloured clay, running to a width of over 30 feet, and resting upon dark sandy soil. So far no stone kerb has been seen. This bank of clay, which was practically free from stones, measured 2 ft. 4 inches in depth at the centre.”

His surprise was due to the fact that his previous sections through the fortlet rampart had revealed layers of turves and stone kerbs as part of their construction.

This is the only description of the rampart that is tied to a specific location on his excavation plan by the author.

Although F. A. Bruton alludes to the presence of ditches surrounding the fort his only description of them in either his 1908 or 1911 is

“The outer rampart was defended by a double fosse of similar shape, the line of which was found, by joining up a number of points, to be remarkably true. These outer fosses were also, in places, cut through the solid rock. The first was about 11 feet wide, following on a berm of from 2 to 3 feet.”

The similar shape is a reference to his section through a fortlet ditch which had the classic profile of a *punic* ditch.

In 1957 C.E.P. Rosser excavated a trench across the line of the north defences in 1957. The following description is taken from his interim report of the following year as reproduced in Professor Thompson’s report -

“A section was cut through the defences at a point 150 feet from the north angle, where the north-west rampart is still clearly visible. The rampart, about 17 feet in width, had been built in turf which was heavily leached, and the lamination of the structure had been reduced in definition. Horizontal oak posts were found forming a corduroy on which the rampart was set for stability [figs, 8, 9]. The inner and outer ditches were both V-shaped in section. Their width was 6 feet and 11 feet respectively, and their depth 2½ and 3 feet. A berm of 7 feet separated the inner ditch from the rampart. Turves, surviving to a height of 18 inches had been piled on the space between the ditches [fig 7]. This setting of turf was 9 feet in width and had a clay backing of 2½ wide. The lower half of each ditch was filled with turf material, above which had accumulated a greyish black, capped by a layer of decayed vegetation.”

There was no drawing of this section in the associated interim report but it was found amongst his papers, re-drawn, and appears in Professor Thompson’s report.

Sadly C.E.P. Rosser’s death in 1961 means that the only record of a second trench through the defences excavated a year later is a photograph of what may or may not be a ditch associated with the defences. This also appears in Professor Thompson’s report.

Of his own 1963 excavation through the defences of the fort Professor Thompson writes

“The rampart showed clearly, with a width of approximately 20 feet, but there was no indication of the timber strapping noted elsewhere. The turf construction was quite distinctive and the prolonged leaching of the rampart had deposited a massive iron-pan almost like a thick sheet of iron, on the natural clay beneath the rampart. The remarkable feature of this section was that, in spite of being carried for a distance of 80 feet beyond the outer face of the rampart, there was no sign of even

one ditch, let alone two. The only feature was a gully running almost due east-west and preceeding the erection of the rampart' as it ran underneath it;"

During the excavations by GMAU on the fortlet between 1984 and 1989 a section of the fortlet ditch was excavated in Drycroft Lane beyond the south gate of the fortlet. Drycroft Lane is an old watercourse which has eroded away most of the archaeology. Despite this the GMAU excavations record the inner fortlet ditch cutting a fort ditch. The fort ditch is some 0.75m deep and appears to have a drainage gully or ankle breaker at its base. (Walker J ed 1989).

While there are variances in the description of the forts rampart its presence was universally confirmed by all the excavators. Therefore little work was carried out on it in Tr1 other than to approximately establish its dimensions. This was felt particularly appropriate as Tr7 was targeted to specifically look at the fort rampart. It was therefore Professor Thompsons report on the absence of ditches that became the focus of interest for the section of Tr1 over the defences.

Description

The backfill from the 1963 trench was completely removed from its eastern end to a point some 2.0m to the east of the rampart. This excavation revealed the 'uninterrupted clay', context (195), that Professor Thompson notes on his plan. There was no indication of any defensive ditches cut into this layer. To ensure that this was not some form of 'capping' masking archaeology a slot half the trench width was excavated through it at the east end of the trench. It proved to be 0.30m deep and consisted of a light brownish- yellow clay. It sat directly above the natural sandstone bedrock and is interpreted as representing drift geology.

The base of the emptied trench did reveal the gully which was noted by Professor Thompson in his report. This feature was assigned cut number [146] by the 2014 excavation. This gully cut through the natural clay and sandstone. It ran for 4.0m south east to north-west at an angle across the trench. It was slightly shallower on its north side, around 0.30m as opposed to 0.45m on its south side. This was due mainly to a difference in level between the natural sandstone which was inclined north to south. This variance meant that its width would depend on whether or not you measured it horizontally from its north edge directly across which would give a measurement around 0.70m or at an angle from the top of its southern edge to the top of the northern edge which measured around 1.10m. In profile there was a difference between the south side which was a relatively smooth slope at around 45 degrees from the vertical and the north side which was a lot less regular and which sloped at a steeper angle. This may have been partially due to the difference in geology with the south side comprising primarily of a blue-grey clay with small to medium sandstone fragment inclusions comprising around 40%. Whereas the north side was a mid-brown clay with around 70% sandstone fragments. This variance reflects the overall tip of the sandstone downwards to the north east.



Figure 5.17: Gully cut [146] running north-west.

As expected Professor Thompson had excavated this feature therefore the assignment of fill contexts to it was based on the undisturbed material in the south section of the trench. From this section it was felt that three fills could definitely be placed within [146]. The primary fill was (159) a mid-grey silty clay in which were preserved fragments of wood. This fill was on average 0.15m deep and in section had a width of 1.50m. It should be born in mind that as [146] entered the section of the trench at an oblique angle the width measurements are elongated. Above (159) was fill (169). This was a mid-yellow-grey silty clay loam some 0.10m deep and 1.30m wide. Both (159) and (169) had a very ‘plastic’ consistency probably due to waterlogged conditions.

Pollen assessment of a sample taken from (169) suggests –

“... a landscape dominated by Corylus scrub is indicated, with low numbers of forest trees including Quercus and Betula. Alnus is significant in the local landscape, with this waterlogging-tolerant tree probably growing predominantly along stream banks in the wet valley bottom or other areas of damp ground. Salix would also have favoured these wetland habitats. Moderate Calluna vulgaris pollen levels indicate areas of heathland near the site.” (see Finds Appendix Palynology by Durham University).

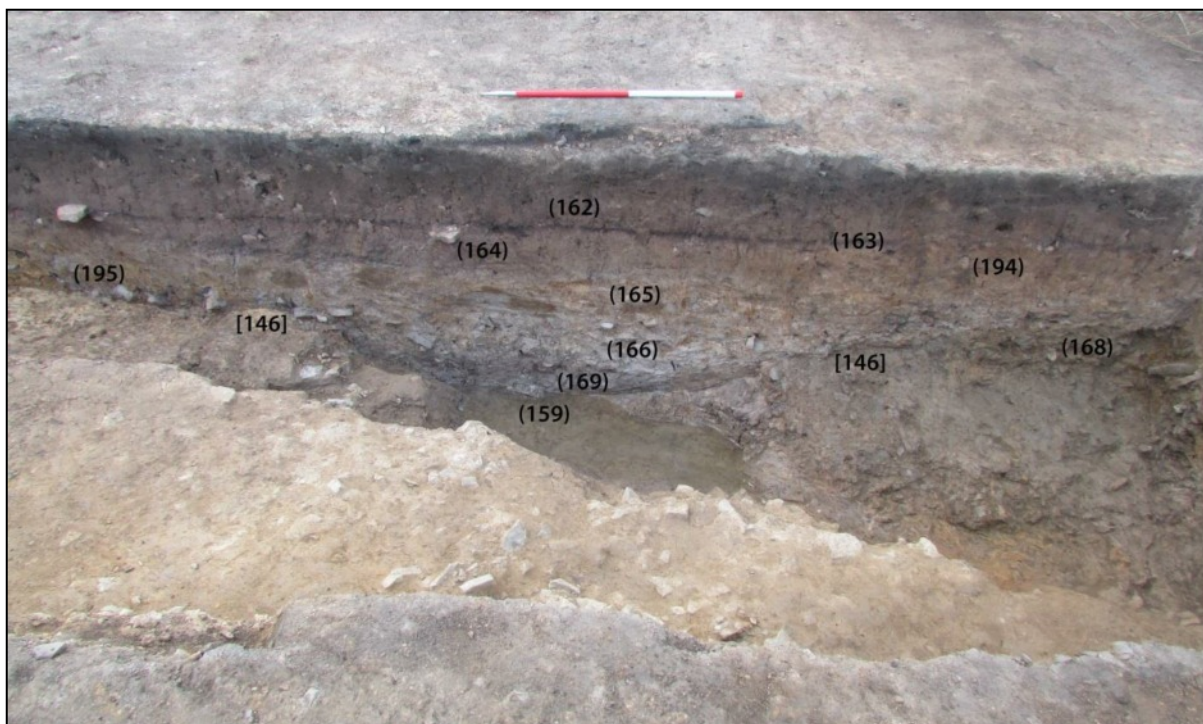


Figure 5.18: North facing section showing cut [146].

Above the fills were two deposits which, although even by the elongated standards of the south section, seemed to extend beyond the cut edges of [146] visible in the base of the trench, did appear to be centred on it.

The earliest of these was context (166). This was a distinctive very light, almost white, silty clay which measured c 0.25m in depth and showed in section as being 1.90m in width. It included moderate numbers of small to medium sub angular stones and the occasional small patch of orange-brown silty clay. Curiously its consistency was more akin to (159) and (169) than context (167) which was directly below it. At its west end (166) lay on top of context (168) which is interpreted as representing natural. At the same point it sat physically below context (194) a yellow-brown silty clay which possibly represents fort rampart material.

Above (166) was (165) which was a light grey silty clay measuring 0.35m deep by 2.70m deep. This layer or fill was distinctive for having a number of sub-rectangular patches of mid brown silty clay which quite possibly represent individual turves. This might suggest that (165) represents evidence of either the erosion or deliberate slighting of the fort rampart into an already partially in-filled [146]. At its west end (165) lay above layer (195) which is interpreted as natural, the 'uninterrupted clay' to which Professor Thompson refers. Also at its west end (165) appeared to be below a very thin and ephemeral dark grey silty loam layer, (196), which may represent the remnants of a turf layer.

Above this and also above (194) was layer (164). This was a light to mid grey silty clay loam containing frequent small to medium of 'degraded' orange sandstone and occasional small fragments of sub-angular sandstone.

Running east for 5.20m from its west end (164) was sealed by layer (163). This was a thin dark grey silty loam almost certainly represents a decayed turf line. This layer was clearly discernible up to the point at which layers (165) and (194) meet after which it was intermittent and less clear.

Above (163) was layer (162). This was a mid-grey-brown silty clay loam around 0.35m deep and was the first 'non-natural' context to extend the whole length of the excavated section of Professor Thompson's trench. This layer has been interpreted as representing a post-medieval plough-soil. This layer sat below the modern day turf and topsoil.

The oblique angle at which [146] ran across the trench meant that the south section was dominated by it. The north section of the trench could not have been more different. While marginally further east than [146] the general shape of that feature was mirrored in the north section by a mass of sub-angular sandstone fragments. Careful cleaning revealed that that these stone were within three different soils.

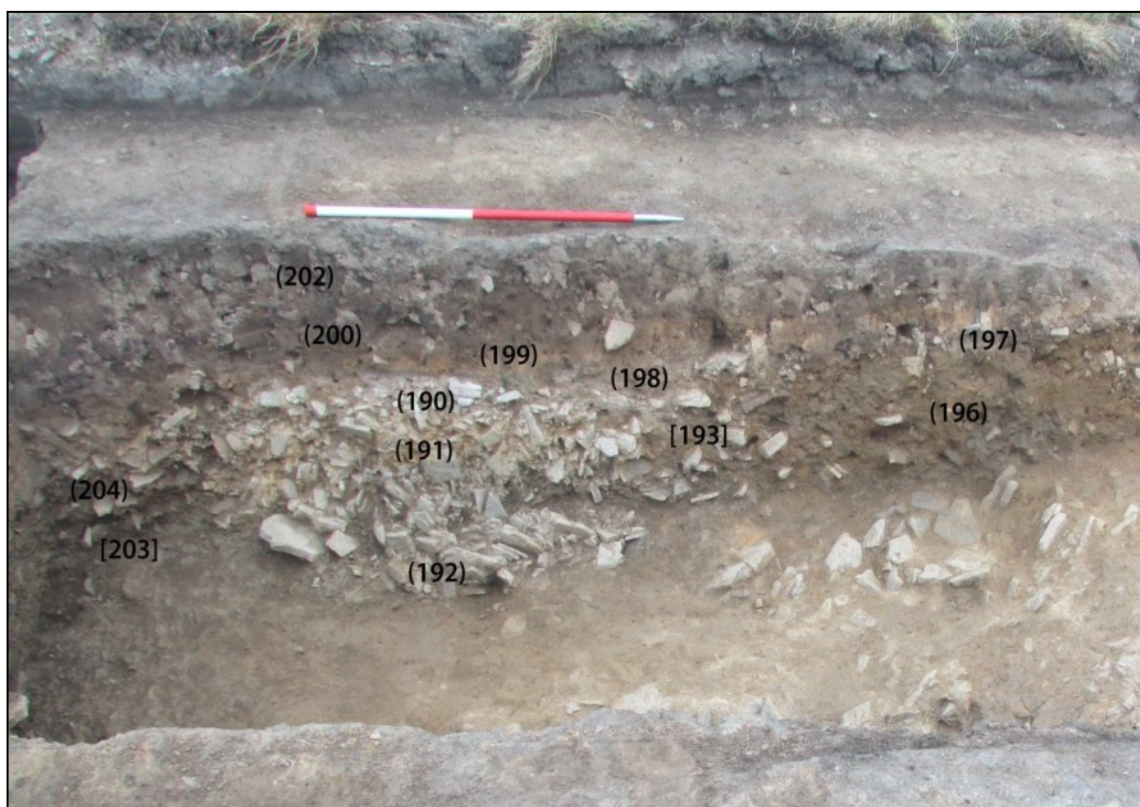


Figure 5.19: South facing section showing cuts [193] and [203].

The uppermost was (190) a light grey-white silty clay loam c 0.20m thick and 1.70m wide containing c 30% small to medium fragments of sub-angular sandstone. Below this was (191), a light yellow-brown silty clay loam containing approximately 50% small to medium fragments of sub-angular sandstone. This context averaged 0.25m in depth and was 0.70m wide. The lowest of the three was (192) a very compact mid grey silty loam with around 70% sandstone fragments. This measured 0.35m in depth

and was 1.30m wide. All three contexts were assigned as fills of cut [193]. Context (192) was also visible in the base of the trench cutting into the natural and running south from the section for a distance of 0.65m. Excavation showed this area of (192), which ended in a curved terminus, to be 0.80m wide and 0.15m deep. The dimensions for [193], as calculated by combining (190), (191) and (192), were a width of 1.70m and a depth of 0.80m. In shape (190), (191) and (192) combined, looked very similar to what one might expect the ditch of a Roman fort to look like.

To the west the two uppermost layers of stones, (190) and (191) appeared to be cut by [203]. Only 0.60m of this possible feature was visible in section as its western half ran beyond the limit of the excavated stretch of the 1963 trench. From what was seen it was 0.40m deep and appeared to have a steeply sloping, regular, east edge and a flat base. It was filled by (204) a mid-brown sandy silt loam comprising up to 50% small to medium sub- angular sandstone fragments.

To the east [193] appeared to cut layer (196) a light to mid yellow-brown silty clay containing frequent small to medium fragments of sandstone. The stratigraphic relationship is complicated by the fact that the uppermost part of (196) 'lips' over (190) the topmost fill of [193]. Layer (196) could be seen in section running east from [193] for 3.20m. It had a maximum depth of 0.40m and sat above natural. Layer (196) appeared to form a slight ridge or mound, certainly the topsoil and possible plough-soil covering above the central part of (196) was a lot thinner than elsewhere to the extent that it was completely removed from over this point of (196) during machine excavation. It also seemed to mark division in the section. A series of layers ran from its west side while only a single one ran from its east.

Covering the west side of (196) and also 'lapping' over (190) was layer (197). This was a light to mid grey silty clay containing frequent small fragments of stone. It showed in section for a distance of 1.70m and a depth of 0.10m.

Above (197) was layer (198) a light brown-yellow silty clay. This extended east for 2.60m over a much larger proportion of (190) than either (196) or (197). It had a maximum depth of 0.10m.

Above (198) was layer (199). The most easterly point of this layer was positioned roughly half way across [193] while its west end could not be determined as it ran beyond the excavated portion of the 1963 trench. Its western most point lay directly above (204) the fill of [203]. Layer (199) was a light brown silty clay loam containing occasional small stones. Its revealed length was 1.80m and it had a maximum depth of 0.25m. The depth of (199) increased markedly as it ran west.

Above layer (199) was layer (200). This was a light to mid grey silty loam dark which has been interpreted as representing a decayed turf line.

Running down the east side of layer (196) was layer (201). This was a compact mid grey silty clay comprising up to 70% small to large sub angular sandstone fragments. Layer (201) ran for 4.0m from (196) to the east end of Tr1 and had a maximum depth of 0.07m.

Visible at the top of the south facing section and running for almost the entire 9.50m of the excavated 1963 trench was layer (202). The gap in this layer corresponded with the high point of layer (196) as noted above. This was a dark to mid grey-brown silty clay loam containing moderate numbers of small sub-angular sandstone fragments. The depth of this layer decreased from west to east from 0.35m to 0.15m. This layer has been interpreted as representing a plough-soil.

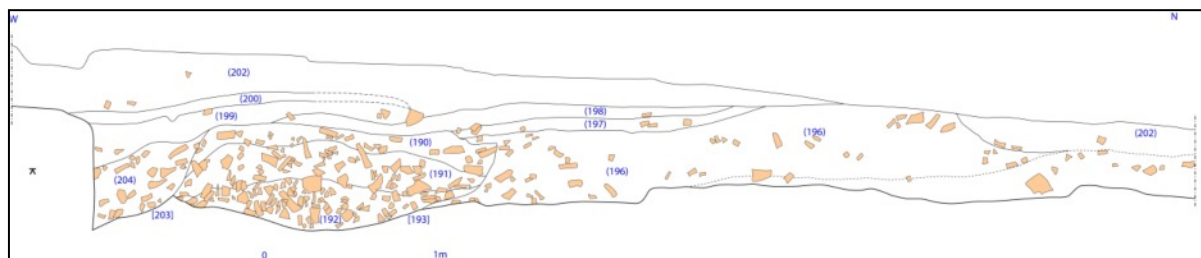


Figure 5.20: south facing section Trench 1.

Discussion

It is very difficult to attempt an interpretation of each and every layer revealed by the excavation of this section of Professor Thompson's trench. Therefore this section will concern itself mainly with the key issue of whether or not the evidence revealed in 2014 corroborates the professor's interpretation that there are no ditches present at this point of the forts defences. In considering this question it is important to note that Professor Thompson would not have seen exactly the same sections as those exposed in 2014. This is because consent had been granted to extend the limits of his trench slightly and to straighten the sides. This is particularly relevant with regard the south facing section. Cut [193] extended out, south, from the 2014 section by 0.30m, virtually the same amount by which the 1963 trench had been widened northwards during the 2014 excavation. This makes it very likely that the south facing section presented to Professor Thompson would have been completely different to the one seen in 2014. Indeed even if Professor Thompson had chosen not to interpret the mass of stones represented by (190), (191) and (192) as ditch fills it is likely that he would have at least made reference to them. Therefore in terms of the south facing section the question is does the section as revealed in 2014 present any evidence to suggest the presence of fort ditches?

There are two possible candidates for a ditch visible in this section. The first is cut [193] which if it does represent a fort ditch almost certainly represents the terminus of the southerly progression of it. The dimensions of [193], 1.70m by 0.80m, tally fairly closely to the 1.82m by 0.76m given by C. E. P. Rosser for the inner ditch he excavated in 1957. There are, however, significant differences; In profile the ditch excavated in 1957 is described as being 'V' shaped and in the section drawing reproduced in Professor Thompson's report exhibits a classic 'punic' shape. The profile of [193] is however more 'U' shaped. Perhaps the most significant difference is in the nature of the material filling the two features. In the description taken from Professor Thompson's report C. E. P. Rosser states

“The lower half of each ditch was filled with turf material, above which had accumulated a greyish black, capped by a layer of decayed vegetation.”

This seems to be completely at odds with the three layers filling [193] which consist almost completely of small to large fragments of stone extending down to the very base of the cut into the natural. The fills of the 1957 ditch tell a story of either the deliberate slighting or collapse of the rampart resulting in the turf deposit, followed by a prolonged period of erosion and silting until the hollow of the ditch was filled to a point at which a turf layer could establish itself. The sequence of infilling of [193] on the other hand suggests a single furious event whereby a mass of stones was pitched into the ditch.

If the stones within [193] are filling a fort ditch where did they come from? A Township map of 1822 shows what is probably a field boundary wall built on the eastern rampart. This is probably post medieval in date. It appears on the First edition 6” Ordnance Survey map of 1851. It is also marked on F. A. Bruton’s 1908 plan of the site noted as being a ‘modern stone wall’. It seems unlikely that the stones filling [193] derive from the demolition of a post medieval dry stone wall. Another possibility is that they represent the results of attempts to bring the surrounding land under the plough. Such a project would certainly have had to deal with a considerable amount of stone and the terminus of a section of Roman ditch would have been a good place to dispose of it. Given that centuries had elapsed between the abandonment of the fort and any agricultural improvements it is unlikely that material such as C.E.P. Rosser describes would not have accumulated in the ditch and presented evidence for itself in the 2014 section. This is even truer of any attempt to relate the stones to the demolition of a post medieval wall.

The second possibility is that they represent fort structures made of stone that have been deliberately dismantled and the remains thrown into the ditch all as part of a deliberate process relating to the abandonment of the fort. This could explain the absence of more ‘traditional’ ditch infills such as C.E.P Rosser describes. There is evidence from Castleshaw itself and many other Roman Forts that ovens and kilns were built into the ramparts perhaps the stones came from such structures.

The second candidate for a ditch revealed in this section is cut [203]. This feature cut the fills of [193] therefore if either of the above theories as to how [193] came to be infilled are true [203] cannot represent the cut of a fort ditch. In any case the stratigraphic relationship between the two contenders for a roman ditch means that they did operate together as part of a two ditch defensive system and therefore at best the south facing section revealed in 2014 offers ambiguous evidence for only one ditch. It is unknown whether or not [203] was visible within Professor Thompson’s 1963 trench but the terminus of [193] close to the south section of the 2014 trench means that this feature, a possible ditch, would not have been.

In the north facing section the gully that Professor Thompson describes in his report was clearly visible as cut [146] and there is no reason to suppose that the section viewed by the Professor was much different from that seen in 2014. The angle at

which this gully was seen to run in 2014 matched the description from 1963 and therefore, within the trench at least, it should not be interpreted as a defensive ditch. The fact that Professor Thompson describes it as running beneath the rampart if we accept a construction date of c 79 AD for the fort then this provides us with a *terminus ante quem* for the gully. We know that there was prehistoric activity on the site but while a pre-Roman date cannot be ruled out it is far more likely that the gully is contemporary with the construction of the fort. Professor Thompson himself says as part of his interpretation of the situation

“The ground on this side of the fort falls away gently and then rises again towards Stanedge, so one can only suppose the natural drainage tended to make the hollow outside the rampart something of a marsh, where a ditch would have been difficult either to cut or retain.”

If he is correct then perhaps the gully was intended to drain water from inside the fort into this already marshy area thus making the ground even more sodden and difficult to traverse for any would be attacker.

6. Trench 2

6.1 Archaeological Descriptions

Trench 2 was roughly square in shape and measured c.10.90m x c.9.90m. The trench was located within the northern extent of the scheduled area, approximately 10.00m to the south-west of Trench 1, (**Figures 3.1, 6.1 & 6.17**). The aim of the trench was to re-excavate Thompson's Trench 6 from his 1964 excavation in order to re-examine the Bronze Age beaker pit identified on his plan and to establish the potential for further evidence which could shed light on the nature of the sites Bronze Age occupation. The trench would also provide the opportunity to re-excavate Thompson's Trenches 11 and 21 which contained features Thompson interpreted as belonging to the Roman Forts '*Principia*' (Thompson, 1974: 8).



Figure 6.1: Aerial view of Trench

The trench was covered by a dense spread of scrub vegetation and dark blackish brown loamy topsoil, c.0.05m. Directly below the topsoil was a mid-greyish brown silty sub-soil deposit (**201**), c.0.10m - 0.40m in depth which contained infrequent inclusions of small sub-angular stones < 0.05m. Also found within deposit (201) were several fragments of Romano-British pottery (see Appendix, Leary: 2015), two abraded fragments of Samian Ware (see Appendix, Wild: 2015) and several iron

nails (see Appendix, Howard-Davis: 2015). Deposit (201) appeared to seal all archaeological deposits within Trench 2.

Directly below deposit (201), concentrated in the south-eastern corner of Trench 2, a deposit of light orange-brown degraded sandstone **(208)** c.0.90m in length, 0.40m in width and 0.04m in depth was identified, which in turn sealed a layer of mid-greyish black silty sand **(209)** which measured c.0.90m in length, 0.70m in width and 0.02m in depth.

Directly beneath deposits (208) and (209), along the southern edge of Trench 2, a linear spread of irregularly laid, sub-angular Pennine grit stones **(206)**, measuring c.10.00m in length and 1.00m in width was revealed (**Figures 6.2 & 6.17**). The spread was aligned roughly east/west and was constructed from stones varying in size from 0.05m – 0.25m, which sat on a layer of dark yellowish-brown silty clay **(210)**. Within deposit (210) the partial remains of a Roman turquoise melon bead and two iron nails were uncovered (see Appendix, Howard-Davis: 2014) along with several sherds of Romano-British pottery (see Appendix, Leary: 2015). The full extent of deposits (206) and (210) could not be determined as they continued beyond the southern, eastern and western extents of the trench.



Figure 6.2: View of stone spread (206), running along the southern edge of Trench 2, looking west.

To the north of stone spread (206), below deposit (201), a light orange brown silty sand **(244)** was identified, which contained frequent inclusions of small sub-angular stones <0.05m in size. The full extent of (244) could not be ascertained as it appeared to be present across the entirety of Trench 2, running below deposits (206) and (210) and continuing beyond the southern, western, northern and eastern extents of the trench. All archaeological features within Trench 2 appeared to either overly or truncate deposit (244), suggesting this may have been a sub-natural deposit.

South-West Quarter of Trench 2

Within the western half of Trench 2, overlying (244) a spread of burnt orange brown silty sand **(261)**, with inclusions of small sub-angular stones <0.06m was identified **(Figure 6.17)**. The full extent of (261) could not be determined as it appeared to continue beyond the western extent of the trench and was truncated to the north by cut [265].

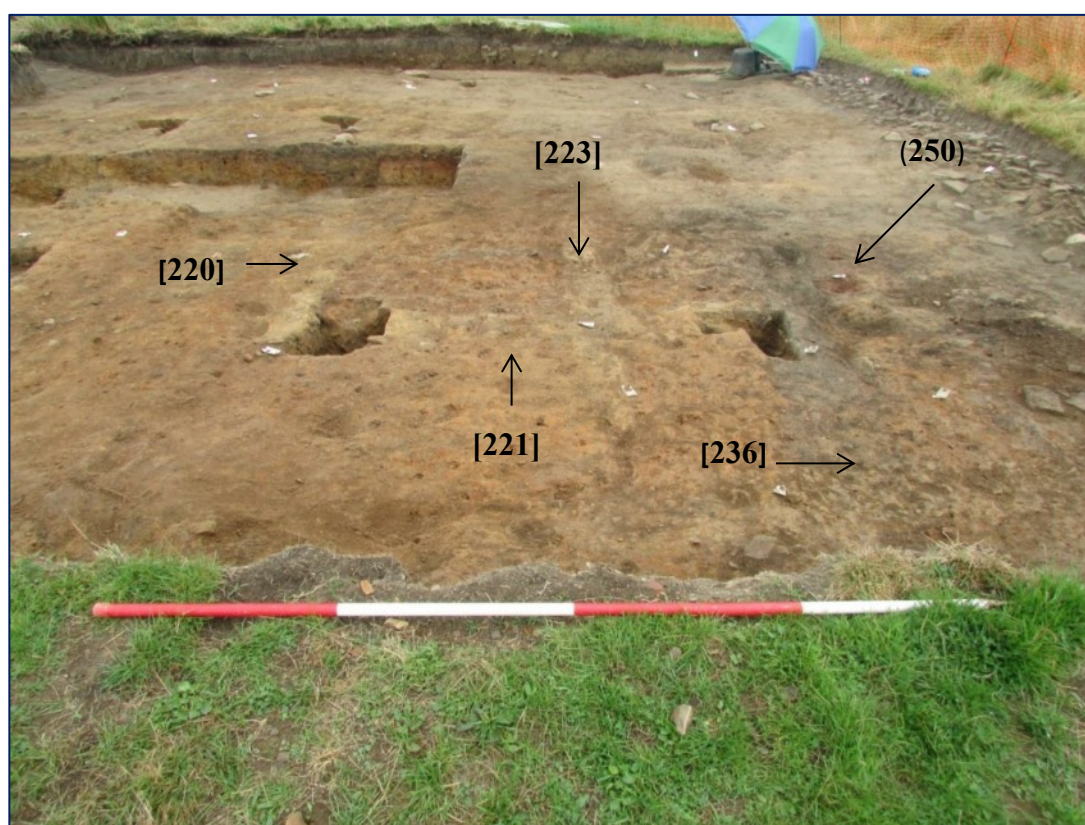


Figure 6.3: General shot of cuts [220], [221], [223] and [236] and feature (250), located within the south-west quarter of Trench 2, looking east.

Within the southern extent of Trench 2, approximately 0.45m to the north of (206) a spread of mixed dark reddish black, burnt cindery material **(225)**, c.0.05m in depth was identified overlying (261). Further excavation revealed that deposit (225) appeared to cap a sub-circular area of intensely burnt dark red clay **(250)**, which

measured c.0.90m x 0.70m (**Figures 6.4 & 6.17**). Deposit (250) was not subject to further excavation so it was not possible to ascertain the depth of this feature however a 10g sample was taken for metallurgy analysis (see Appendix, Hutchinson: 2015).

To the immediate north-west of (250) a linear cut **[221]**, aligned north/south was identified (**Figures 6.3 & 6.17**). The cut measured c.2.30m in length and 0.30m in width. Further excavation revealed that **[221]** measured c.0.33m in depth and had steep sides and a flat base. Within **[221]**, two fills were identified. The upper fill consisted of a compacted layer of mid-yellowish brown clayey silt (**232**), c.0.07m in depth which contained some inclusions of charcoal fragments and sub-angular stones < 0.03m. The lower fill of **[221]** was comprised of mid-orange brown, sandy silt (**233**), c.0.25m in depth which contained moderate inclusions of sub-angular stones < 0.15m.

Truncating both the southern end of **[221]** and the northern half of (250) a second linear cut **[236]** was identified (**Figures 6.3, 6.4 & 6.17**). The cut was aligned east/west and had an excavated length of 2.52m and measured 0.36m in width. Further excavation revealed that **[236]** was 'V' shaped in profile, measured c.0.10m in depth and contained a single fill (**224**), comprised of a dark greyish-brown clayey silt material with infrequent inclusions of charcoal and small sub-angular stones <0.04m.



Figure 6.4: Detailed shot of the junction between cuts **[221] and **[236]**, looking east.**

Approximately 0.45m to the north of [236] a third linear deposit **(223)** of mid- yellowish brown clayey silt, similar to deposit (232) was identified (**Figures 6.3 & 6.17**). Deposit (223) was aligned roughly east/west and appeared to cross feature [221]. The deposit had an excavated length of c.3.10m and measured 0.27m in width. At its eastern end, deposit (223) appeared to truncate an earlier linear deposit of dark greyish brown clay **(226)**, which was aligned north/south, measuring c.0.70m in length and 0.25m in width. Deposits (223) and (226) were not subject to further excavation and as such it was not possible to determine the form and function of these two features.

Abutting the northern end of cut [221], running in an easterly direction, a fourth linear deposit **(220)** of mid-yellowish brown clayey silt, similar to deposits (223) and (232) was identified (**Figures 6.3 & 6.17**). Deposit [220] had an excavated length of c.1.60m and measured 0.30m in width. To the immediate south of deposit (220) a sub-circular deposit of mid-greyish brown clayey silt **(215)** was identified. Deposit (215) was aligned east/west and measured c.1.25m x 0.5m. The full extent of [220] and (215) could not be determined as both features had been truncated at their eastern extents by Thompson's 1964 excavations (Trench 6), (**Figure 6.17**).

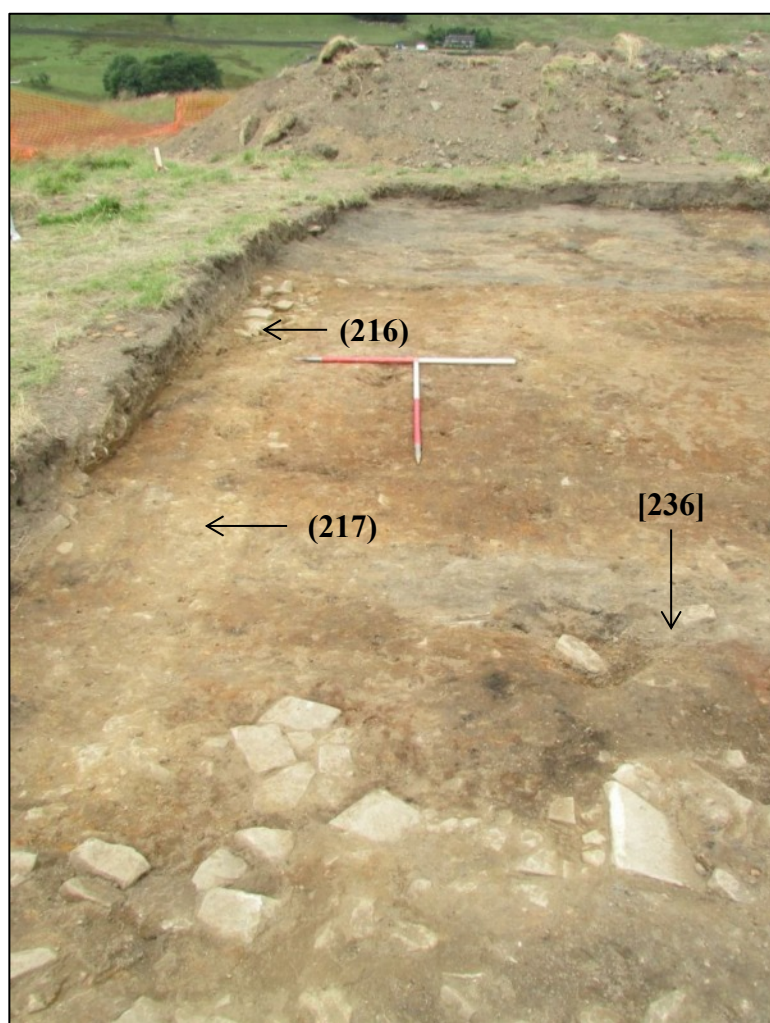


Figure 6.5: Detailed shot of linear (217) and stone deposit (216), looking north.

Along the western edge of Trench 2, appearing to truncate features [236] and (223) a linear deposit of light yellowish-brown clayey silt (**217**), with frequent inclusions of sub-angular stones <0.05m was identified (**Figure 6.5 & 6.17**). Deposit (217) was aligned roughly north/south and measured c.3.38m in length and 0.24m in width. The northern end of (217) was concealed by a layer of irregularly laid, sub-angular Pennine grit stones (**216**), similar to deposit (206), which measured c.1.60m x 0.60m. The full extent of (216) could not be determined as it continued beyond the southern extent of Trench 2 beneath deposit (206).

North-West Quarter of Trench 2

To the immediate north of deposit (215), the remains of a large square cut [**265**], was identified (**Figure 6.17**). The cut occupied the entire north-west corner of Trench 2, truncating deposits (201), (244) and (261). Cut [265] measured c.3.60m x 3.40m and c.0.30m in depth, however it appeared to continue beyond the northern and western baulks of Trench 2 and as such its full extent could not be established. Documentary records confirm that the cut was an archaeological trench (Trench 11), excavated by Thompson in 1964 (**Figure 4.2**). Further excavation revealed that [265] contained a single backfill deposit of dark greyish brown clayey silt (**202**), which contained a single sherd of abraded Romano-British pottery (see Appendix, Leary: 2015).

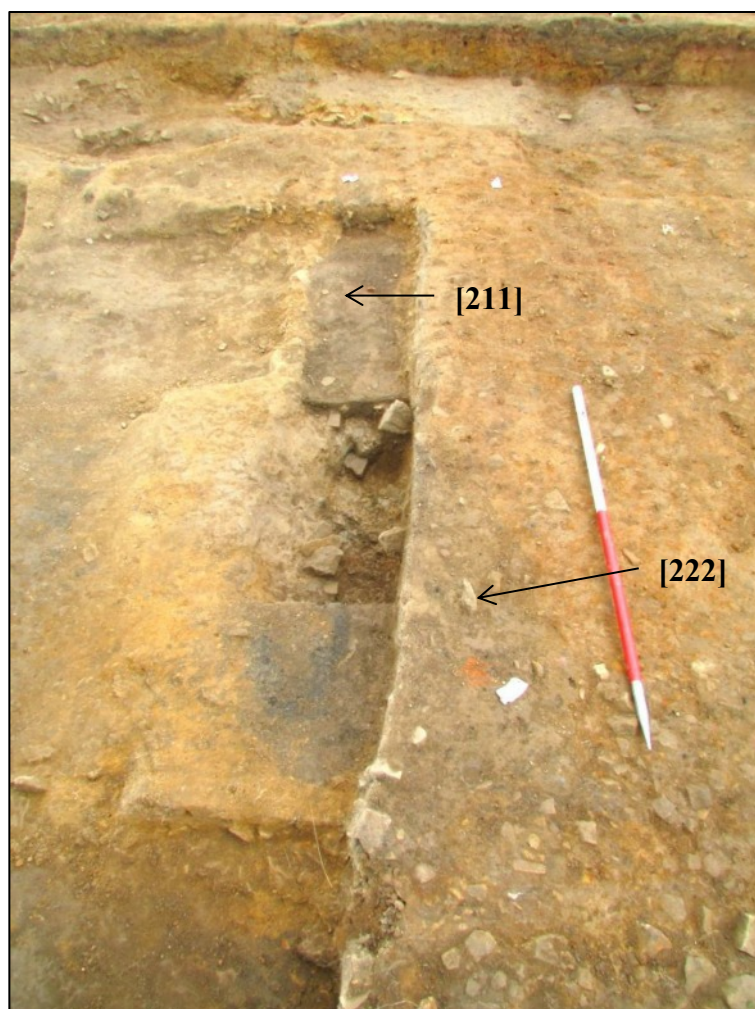


Figure 6.6: Detailed shot of Thompson Trench 11 [265], showing linear cut [211] truncated by sub-circular cut [222], looking east.

Within and the northern extent of Thompsons Trench 11 a linear cut [211] was identified (**Figures 6.6 & 6.17**). The cut was aligned east/west and measured c.3.30m in length, 0.30m in width and was excavated to a depth of c.0.40m. The full extent of [211] could not be ascertained as its upper section had been truncated by Thompson's Trench 11 and Trench 6. Further excavation revealed that the cut was steep sided with a flat base which partially truncated the bedrock (**258**), which lay below (244).

Within [211], two fills were identified. The upper fill (**246**) was comprised of a light greyish-brown sandy silt, surviving to c.0.20m in depth, which contained frequent inclusions of sub-angular stones <0.06m and lenses of burnt clay. The lower fill (**262**) was comprised of dark greyish-brown silty clay, c.0.16m in depth which contained infrequent inclusions of small sub-angular stones <0.03m and a small quantity of corroded iron nails (see Appendix, Howard-Davies: 2015). At its western end [211] was truncated by a sub-circular pit feature [222], which in turn had been partially truncated by Thompsons Trench 11 (**Figures 6.6 & 6.7**). Feature [222] measured c.1.00m in length, 0.90m in width and had an excavated depth of c.0.30m. The cut had gradually sloping sides with a flat, narrow base and contained one fill (**247**), comprised of a mid-brown silty clay, with frequent inclusions of small sub- angular stones <0.05m, charcoal and lenses of burnt clay, similar to deposit (246).

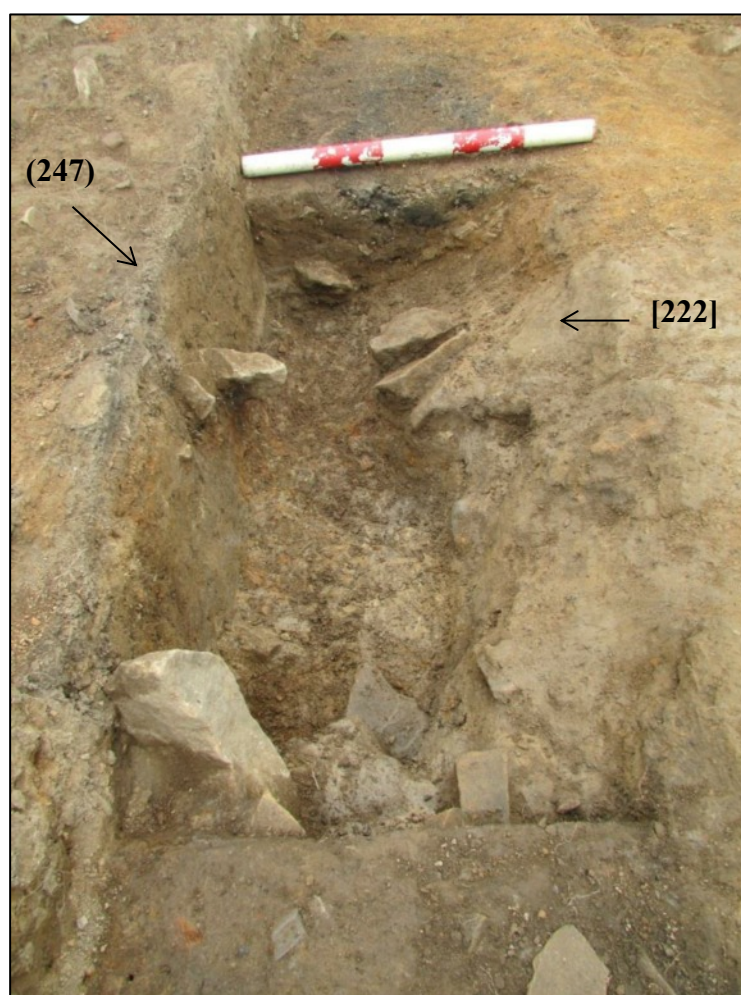


Figure 6.7: Detail of slot excavated within cut [211]. Right hand side shows edge of cut, whilst the left hand has been truncated by a later sub-circular cut [222] and its associated fill (247). Looking west.

Approximately 0.70m to the east of Thompsons Trench 11 [265], a large linear cut [264] truncating deposits (201) and (244) was identified (**Figures 6.8 & 6.17**). The cut was aligned north/south and measured c.7.00m x 1.20m. The full extent of the feature could not be determined as it continued beyond the northern extent of Trench 2, however documentary records confirm that the cut was a former archaeological trench (Trench 6), also excavated by Thompson in 1964 (**Figures 4.2 & 6.8**). Further excavation revealed that the former trench [264] contained a single backfill deposit of dark greyish brown clayey silt (203), identical to deposit (202), which overlay deposit (244).

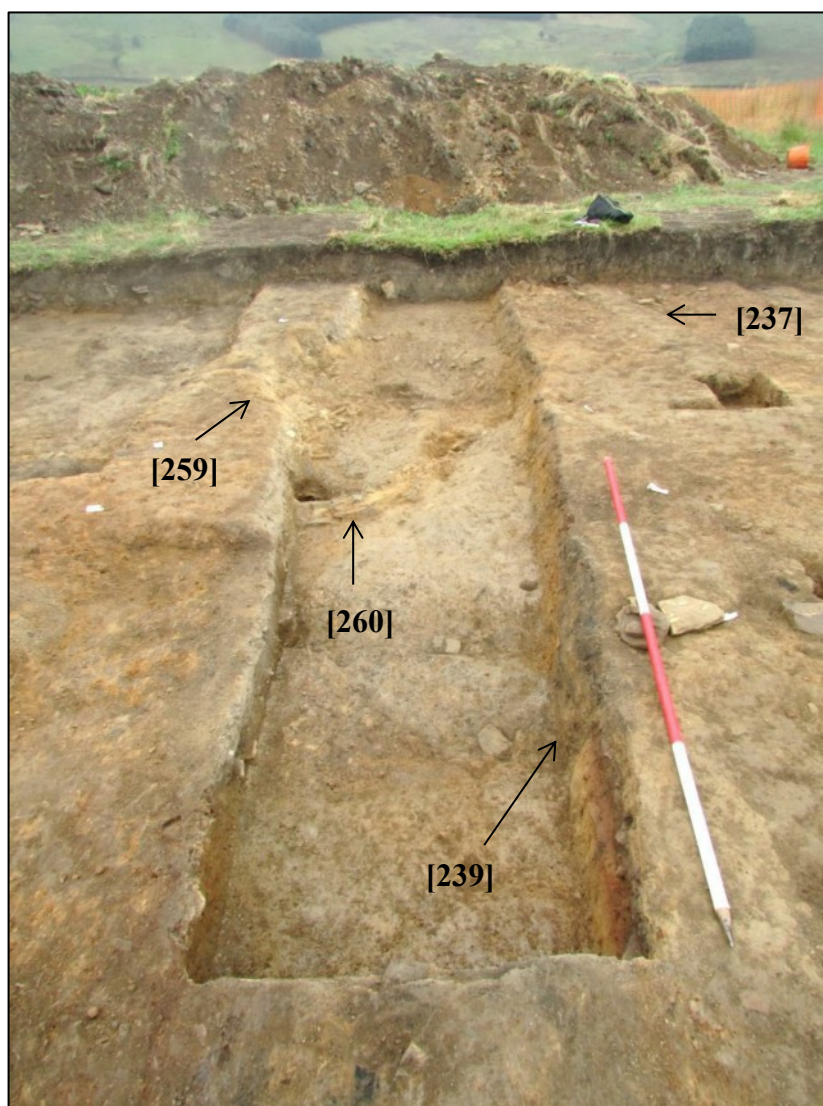


Figure 6.8:
Detail shot of
Thompson
Trench 6 [265],
looking north.

Along the western edge of Thompson's former trench 6 [264], approximately 1.10m from the northern extent of Trench 2 was the partial remains of a sub-circular cut [259] which measured c.0.70m x 0.30m (**Figures 6.9 & 6.17**). Only the lower section of cut [259] survived, as the upper section had been truncated by Thompson's 1964 excavation which concluded that the cut was a Bronze Age beaker pit, owing to several fragments of beaker pottery being recovered from within the feature. Further excavation revealed that [259] had sloping sides and a flat base. The cut truncated

deposit (244) and a band of stratified bedrock (**258**) which sat below (244) and which formed the base of the feature.

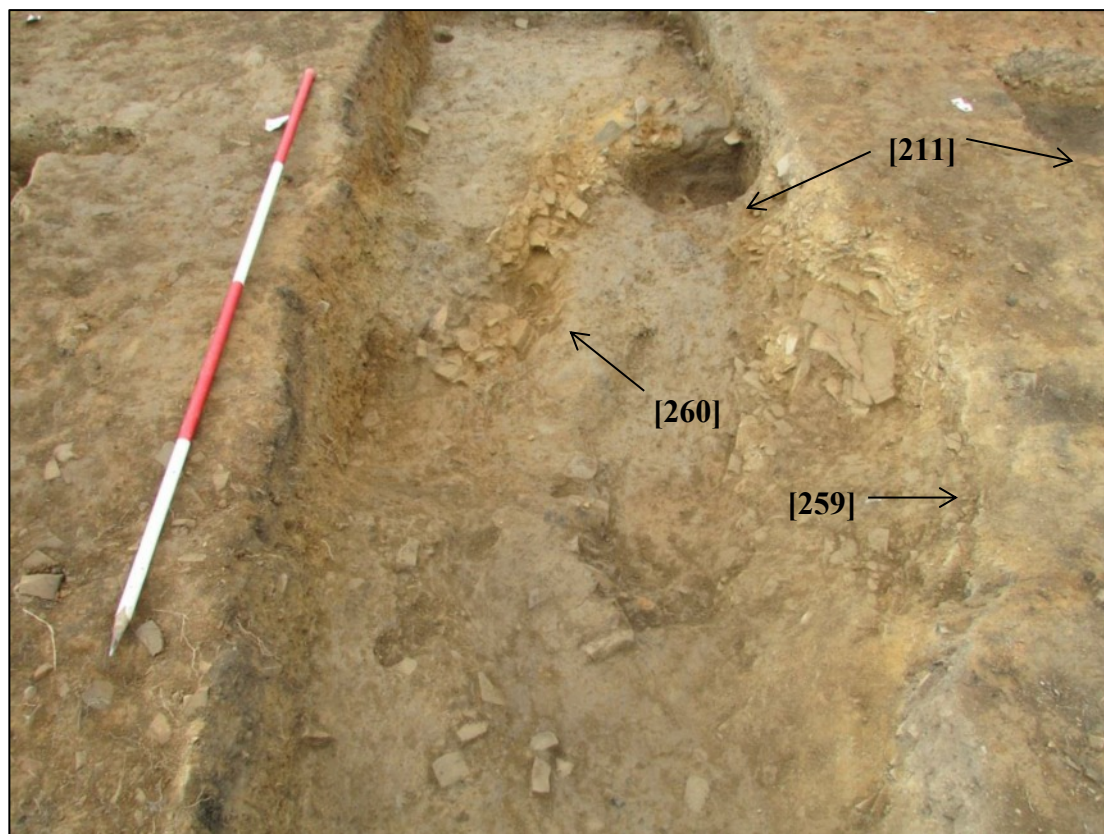


Figure 6.9: Detail shot of Thompson's Trench 11, showing the remains of the sub-circular Beaker Pit [259] and curvilinear feature [260], looking southwards.

To the immediate south-east of [259] at the base of Thompsons Trench 6, a curvilinear feature, possibly a cut [260] was identified (**Figures 6.9 & 6.17**). The feature was aligned roughly north-east/south-west and measured c.1.60m in length. The full extent of [260] could not be ascertained as it continued beyond the western baulk of Thompson's Trench. Further excavation revealed that feature [260] truncated both deposits (244) and (258) and was 'V' shaped in profile having sloping sides and a narrow base, measuring c.0.20m in depth. Within feature [260] a deposit of light orange/brown sandy clay (**245**) with frequent inclusions of sub-angular stones <0.10m was identified.

Within the south-eastern corner of Thompson's Trench 6, truncating deposit (244) a series of three archaeological deposits were visible in the west facing and north facing sections of the trench (**Figures 6.10 & 6.18**). As the deposits were only visible in section it was not possible to ascertain the full extent of these features, although the two upper fills were identified as infilling cut [239]. The uppermost deposit (**257**) measured c.0.08m in depth and was comprised of a light yellowish brown clay with infrequent inclusions of small sub-angular stones <0.04m. Beneath (257) was a

deposit of mid-greyish brown sandy silty sand **(242)**, which contained inclusions of charcoal and sub-angular stones <0.03m in size. Directly beneath (242) was a deposit of burnt dark reddish brown clay **(243)** with infrequent inclusions of small sub- angular stones <0.04m, which measured c.0.12m in depth.

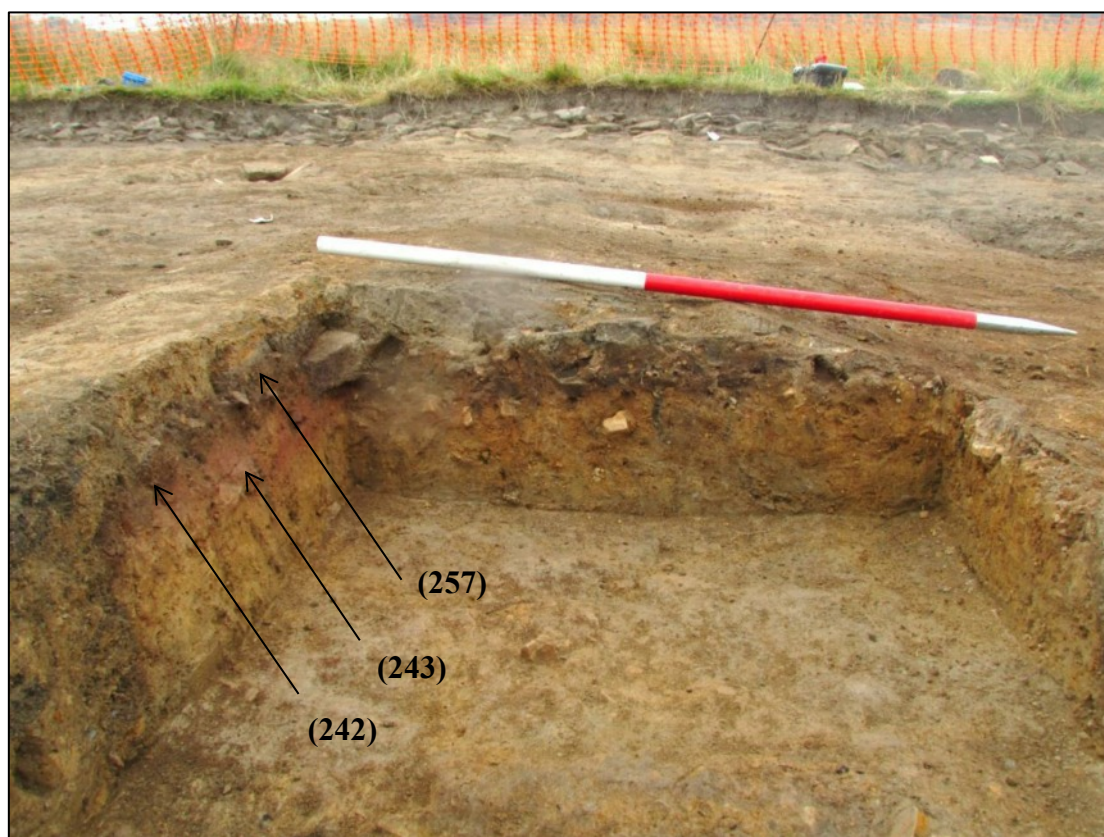


Figure 6.10: Detail of the south-east corner of Thompson Trench 6, showing deposits (257), (242) and (243).

North-East Quarter of Trench 2

To the immediate east of Thompson's Trench 6 a series of three linear cuts, which truncated deposit (244) were identified (**Figure 6.17**). The first cut [238] was aligned east/west and lay approximately 2.80m south of Trench 2's northern extent. The cut had an excavated length of c.1.56m and measured 0.30m in width. The western extent of [238] had been truncated by Thompson's Trench 6, however the cut was visible in the west facing section of this trench, which revealed that [238] was steep sided with a flat base, measuring c.0.27m in depth (**Figure 6.11 & 6.18**). Within [238] one fill **(212)** was identified, which was comprised of a mid-grey brown sandy silt with frequent inclusions of sub-angular stones <0.08m. Within deposit (212) a single sherd of Romano-British pottery was uncovered (see Appendix, Leary: 2015).

Truncating the centre of [238], approximately 0.60m east of Thompsons Trench 6, a second linear cut [237] was identified (**Figure 6.8**). Cut [237], was aligned north/south and measured c.4.35m in length and 0.30m in width. The full length of

[237] could not be ascertained as it continued beyond the northern extent of Trench 2. Further excavation of [237] revealed that the cut had sloping sides and a narrow base, measuring c.0.20m in depth. The cut contained a single fill **(213)** comprised of a mid-greyish brown sandy silt which contained frequent inclusions of charcoal.

Approximately 1.30m south of cut [238] a third linear cut **[239]** was identified. Cut [239] was aligned east/west and appeared to truncate the southern extent of cut [237]. The cut had an excavated length of c.4.80m in length and measured 0.45m in width. The western extent of [239] had been truncated by Thompson's Trench 6, however the cut was visible in the west facing section of this trench, which revealed that [239] was steep sided with a flat base, measuring c.0.34m in depth (**Figures 6.11 & 6.18**). Within [239] two fills were detected, which were previously discussed above. The base fill was comprised of a deposit of mid-greyish brown sandy silty sand **(242)**, which was sealed by deposit of a light yellowish brown clay (257), with infrequent inclusions of small sub-angular stones <0.04m

Truncating the upper section of cut [239] was a shallow 'U' shaped cut [270], c.0.60m in width with a depth of c.0.15m. Cut [270] contained a single fill comprised of mid-greyish brown clayey silt **(215)**.

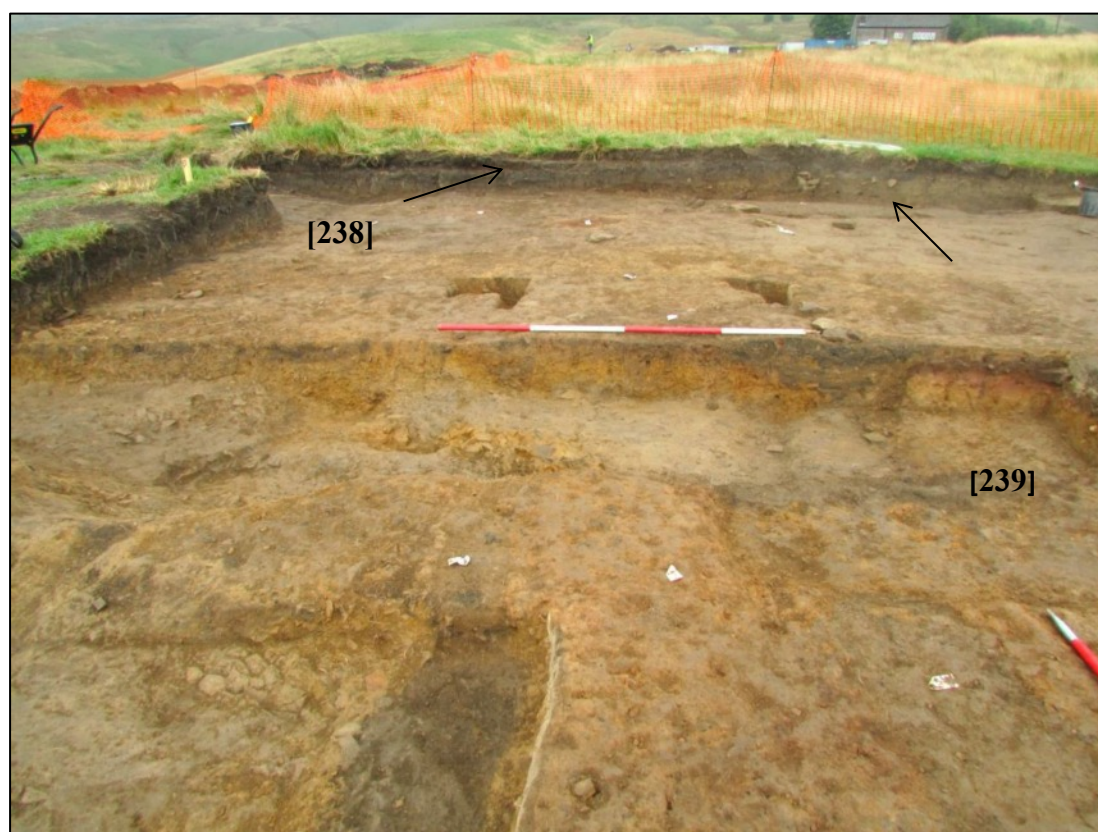


Figure 6.11: General shot of the west facing section of Thompson Trench 6, showing cuts [238] and [239], looking east.

To the east of cuts [237], [238] and [239], beneath (201), within the south-eastern corner of Trench 2, an amorphous spread of dark blackish brown burnt material **(218)**, c.3.40m x 2.50m x 0.05m was identified, **(Figure 6.17)**.

Beneath deposit (218) a series of three sub-circular deposits were identified, which overlay (244), **(Figures 6.12 & 6.17)**. The most northerly deposit **(241)** measured c.0.30m x 0.22m and was comprised of mid-reddish brown burnt clay. Approximately 0.90m to the south-east of (241) the second deposit **(230)** measured c.0.60m x 0.55m and was also comprised of a mid-reddish brown burnt clay material. The third deposit lay approximately 1.20m south-west of (230) and measured c.0.60m x 0.50m. As with (241) and (230) the deposit was comprised of a mid-reddish brown burnt clay material. None of the aforementioned deposits were subject to further excavation so it was not possible to ascertain the depth of these deposits. A 10g sample of deposit (229) was taken for metallurgy analysis (see Appendix, Hutchinson: 2015).

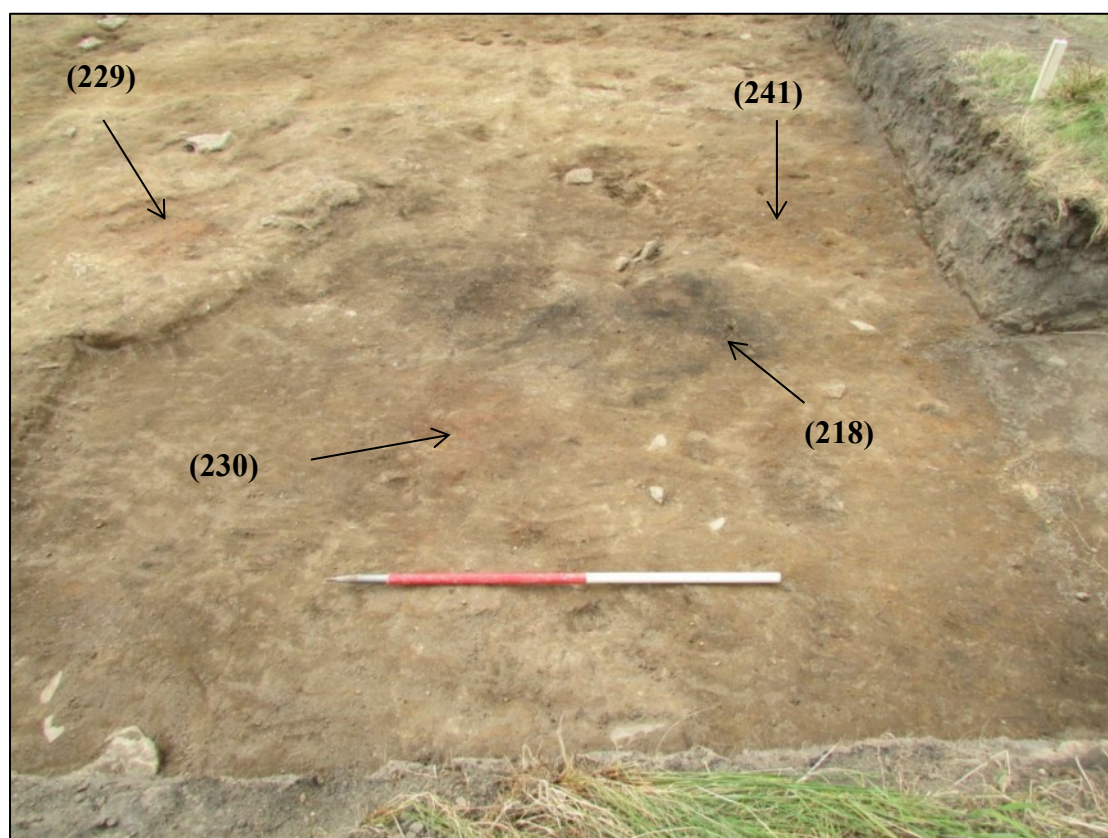


Figure 6.12: General shot of the north-east corner of Trench 2 showing deposits (218), (229), (230) and (241), looking west.

South-East Quarter of Trench 2

To the south-east of deposits (229), (230) and (241), were the partial remains of a roughly rectangular cut [266] were identified, which truncated deposit (201) and

projected westwards from the eastern edge of the trench. The section which formed the eastern edge of Trench 2 revealed that cut [266] measured approximately 1.80 m in width and c0.40m in depth. The full extent of the feature could not be determined as it continued beyond the eastern extent of Trench 2, however documentary records confirm that the cut was a former archaeological trench (Trench 21), excavated by Thompson in 1964 (**Figure 4.2**). Further excavation revealed that cut [266] contained a single backfill deposit (**231**), comprised of a dark greyish brown silty loam with inclusions of varying sized sub-angular gritstones.

Below cut [266] an amorphous deposit of dark greyish brown silty material (**234**) was identified, which contained frequent inclusions of small sub-angular stones <0.05m, fragments of charcoal and lenses of grey/brown clay. Also identified within the deposit were eleven fragments of Roman glass, six iron nails (see Appendix, Howard-Davies: 2015) and several sherds of Romano-British pottery (see Appendix, Leary: 2015).

Beneath deposit (234) the remains of a rectangular shaped surface (**235**) was identified. Deposit (235) comprised of solid mid-greyish brown clay and stone mix which measured c.2.80m x 0.80m with a depth of c.0.08m (**Figures 6.13 & 6.17**). The full extent of (235) could not be ascertained as it continued beyond the eastern extent of Trench 2.

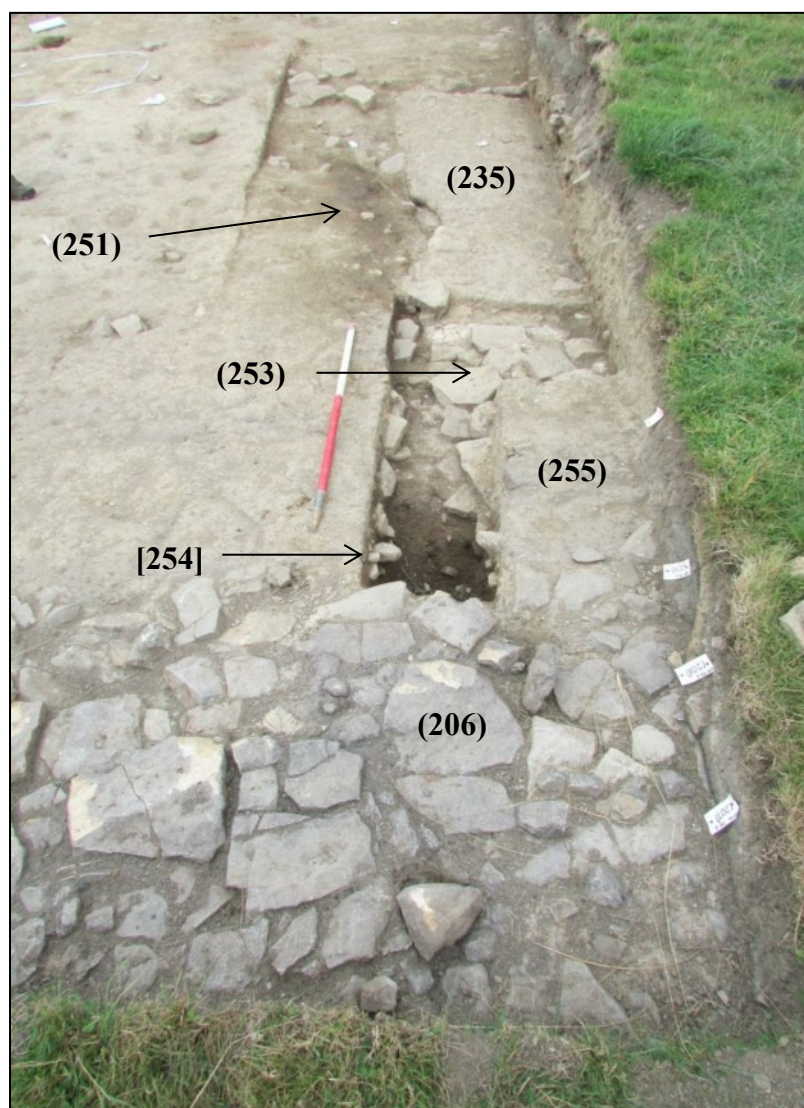


Figure 6.13: South-east corner of Trench 2, showing deposits (235), (253), (255), (206) and cut [254], looking north.

Further excavation to the immediate south of (235) revealed a compacted deposit of light greyish brown clay **(207)** with inclusions of charcoal and small sub-angular stones <0.03m, which had been truncated to the north by cut [266] and to the south by cut [275]. Below (207) was a mid-greyish brown silty clay **(251)** deposit, very similar to (234), which contained frequent inclusions of varying size sub-angular stones <0.20m, charcoal and fragments of burnt clay **(Figure 6.13)**.

Beneath (251) a deposit of soft greyish white clay **(240)** was revealed, which measured c.0.04m in depth, however its full extent could not be ascertained as it continued below surface (235) and beyond the eastern extent of Trench 2 **(Figure 6.14)**. Within (240) a dark blue, glass melon bead of Roman date was uncovered (see Appendix, Howard-Davies: 2015) along with several sherds of Romano-British pottery (see Appendix, Leary: 2014). Directly below deposit (240), a spread of well laid sub-angular, Pennine grit stones **(253)**, <0.30m were identified. Deposit (253) appeared to be two courses in depth and appeared to continue below (235) and (240) as well as beyond the eastern extent of Trench 2 **(Figure 6.14)**.

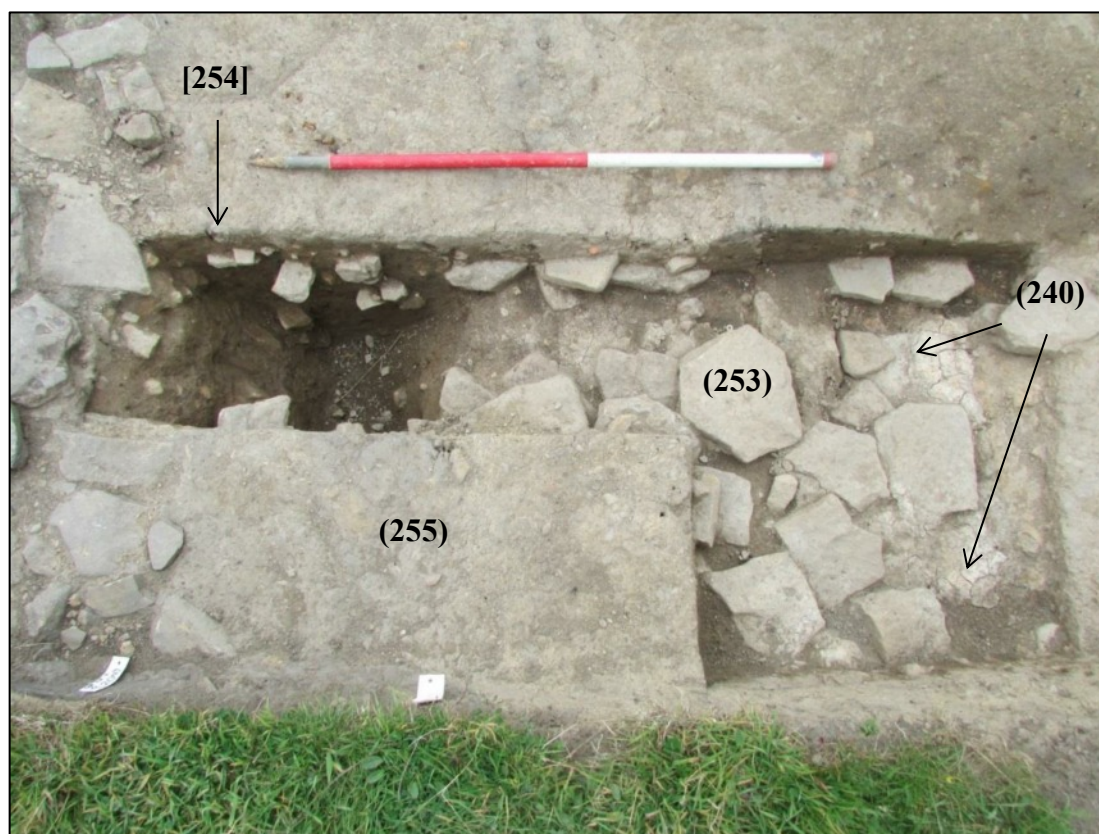


Figure 6.14: Detail of surface (253), deposits (240 & (255) and cut [254], looking west.

Located between deposits (253) and (206) the remains of a linear cut **[254]** was identified **(Figures 6.13 & 6.14)**. The cut truncated deposit (244) and was aligned

east/west (**Figure 6.17**). The cut had an excavated length of c.0.50m and measured 0.60m in width. The full extent of [254] could not be ascertained as it continued beyond the eastern extent of Trench 2 and to the west it was concealed by deposit (255). Further excavation revealed that cut [254] measured c.0.42m in depth and was 'V' shaped in profile with sloping sides and a narrow base (**Figure 6.15**). Within cut [254] three fills were identified (**Figure 6.19**). The upper fill (255) appeared to cap cut [254] and was comprised of 0.07m deep layer of compacted light grey clay with frequent inclusions of sub-angular stones <0.05m, very similar to deposit (235). Beneath (255), the middle fill of the cut was comprised of a 0.16m deep layer of compacted mid-greyish brown silty clay (251), previously identified as capping deposit (235). Beneath (251) the lower fill of cut [254] was comprised of a deposit of mixed orange/grey silty clay (263) with infrequent inclusions of sub-angular stones <0.03m, measuring 0.19m deep.



Figure 6.15: Detail of cuts [254] and [275], looking east.

Directly above cut [254], truncating deposit (207), (255), (208) and (209) were the remains of a 'U' shaped cut [275], c.0.35m in width and c.0.20m in depth. The cut contained one fill comprised of a dark blackish brown silty loam (276), which had infrequent inclusions of small sub-angular stones <0.05m.

Approximately 1.30m to the west of [254] and c.0.80m to the north of deposit (206), a sub-circular depression **(228)** was identified within deposit (244). Feature (228) measured c.0.60m in diameter and 0.07m in depth (**Figure 6.17**). Within (228) two fragments of Pennine grit stone <0.20m were identified, along with a fragment of ceramic building material of Roman period date (see Appendix, Mills: 2015). Circa 1.00m to the east of (228) a second sub-circular depression **(227)** was identified, which measured c0.60m diameter and 0.11m in depth. Within (227) a sub-circular arrangement of grit stone and sandstone fragments were identified (**Figures 6.16 & 6.17**).

To the immediate north of features (227) and (228), two sub-circular deposits similar to those identified in the north-eastern quadrant of Trench 2 were identified overlying (244), (**Figure 6.17**). The most easterly deposit **(205)** was comprised of mid-reddish brown burnt clay (205) and measured c.1.00m in diameter. The second deposit (204) was also comprised of a mid-reddish brown burnt clay deposit and measured c.1.20m in diameter. Neither (204) nor (205) were subject to further excavation so it was not possible to ascertain the depth of these deposits.



Figure 6.16: Detail shot of feature (227), looking east.

6.2 Archaeological Discussion

Excavations within Trench 2 produced significant results, recording a number of key features dating to the Roman occupation of Castleshaw. A small number of these features had been previously identified by Professor Thompson during his excavations of 1963/64; however the 2014 excavations revealed many new features and several phases of activity dating to both the fort and fortlet occupation. The archaeological evidence from Trench 2 can be summarised as follows:

Modern Disturbance (18th, 19th and 20th Centuries)

Excavations in Trench 2 revealed that the trench was covered by a sub-soil layer (201), which contained several fragments of Romano-British pottery, two abraded fragments of Samian Ware and several iron nails (see Appendix: Leary, Wild & Howard-Davis: 2015). Documentary research has shown that the north-west quadrant of the fort had been heavily disturbed through several phases of excavations conducted by Bruton, Rosser and Thompson during the early and mid-20th century, (**Figure 4.3**). It is therefore likely that sub-soil deposit identified within Trench 2 was largely comprised of slighting material from the fort and spoil material from the previous excavations. This would explain the presence of Roman pottery sherds within the sub-soil.

Truncating deposit (201), within the northern and eastern extents of Trench 2, the partial remains of three archaeological trenches were identified [264], [265] and [266]. Documentary research confirmed that these were the remains of Thompson's 1964 excavations. These trenches are outlined below:

Thompson Trench 6

Protruding from the northern extent of Trench 2 were the remains of the southern half of Thompsons Trench 6 [264], (**Figures 4.2, 6.8 & 6.17**). Within Trench 6, Thompson records uncovering a '*prehistoric pit...cut into the closely packed flaggy gritstone to a depth of 15 inches (0.38m) and was 21 inches (0.53m) in diameter. Its fill was a clean orange-brown soil with occasional charcoal fragments and closely packed Beaker sherds....together with worked flints. In total 122 Beaker sherds were recovered from the pit and of these all but 47 could be assigned to five distinct vessels. The five vessels represented in the Castleshaw pit....represent a limited but important sample from a late Southern British Beaker domestic site probably dating to the Bronze Age, c.1550 + 50 BC*', (Thomson, 1974: 14 & 15). The remains of this pit [259] were uncovered during the 2014 excavations but no further flints or Beaker sherds were found.

To the south of the pit [259], Thompson also identified two post-trenches or beam slots, aligned roughly north-east/south-west (**Figures 4.2 & 6.17**). Thompson suggested that these slots along with those found in his other trenches (Trench 11 & 21), formed part of the forts *Principia* and represented one of the normal ranges

which may have surrounded a courtyard (Thompson, 1974: 8). These slots [238] & [239] were identified during the 2014 excavations and are discussed in more detail later in this section (see Group 2).

Thompson Trench 11

To the west of Thompson Trench 6, within the north-west corner of Trench 2 the partial remains of Thompson's Trench 11 [265] were uncovered (**Figure 6.17**). Within Trench 11, Thompson records finding the remains of three post trenches or beam slots (Thompson, 1974: 8). The first was linear in plan and located along the western extent of the trench and contained two post holes. The second was 'L' shaped in plan and was located in the south-western corner of the trench. The third was linear in plan and located along the southern edge of the trench. All three beam slots appeared to continue beyond the confines of Thompson's trench. The 2014 excavations identified the most southerly of these beam slots [222], unfortunately the other two lay beyond the western extent of the 2014 excavation (Trench 2). Thompson suggests that these beam slots along with those found in his other trenches (Trench 6 & 21), formed part of the forts *Principia*, (Thompson, 1974: 8).

Thompson Trench 21

Along the eastern extent of Trench 2, the partial remains of Thompson's Trench 21 were identified (**Figure 6.17**). Thompson records finding the remains of two post trenches or beam slots, aligned north-west/south-east within this trench (**Figure 4.2**). No evidence of the most westerly slot was visible within the 2014 trench suggesting that this feature may have been completely removed during Thompson's excavation, a problem we also encountered within Trench 1 (see Chapter 5). The most easterly slot depicted by Thompson lay beyond the eastern extent of the 2014 excavations and as such could not be further investigated. Thompson suggests that both of these beam slots along with those found in his other trenches (Trench 6 & 11), formed part of the forts *Principia*, (Thompson, 1974: 8).

Prehistoric Activity (Bronze Age, c. 1500 BC)

The earliest archaeological deposits identified within Trench 2 were the remains of a shallow, curvilinear cut [260], which appeared 'V' shaped in profile (**Figures 6.9 & 6.17**). The cut was uncovered at the base of Thompson's Trench 6 to the immediate south-east of the aforementioned pre-historic pit [259]; however Thompson makes no reference to this feature within his report or excavation drawings (**Figure 4.2**).

Like the prehistoric pit [259], this cut [260] truncated the natural bedrock geology (258) and contained a single fill comprised of orange-brown sandy clay (245), (**Figure 6.9 & 6.17**). The full extent of the cut [260] could not be ascertained as it continued beyond the western extent of Thompson's trench, beneath the layers of Roman archaeology associated with the fort [211] and [238]. Although further excavation would be needed to ascertain the true nature and extent of this feature,

Its proximity and similarity in fill to Thompson's pit [259] does suggest that it may have been associated with the pit and possibly Bronze Age in date?

Roman Occupation – (Late 1st Century to Early 2nd Century AD).

Previous historical and archaeological investigations have established that the first military presence at Castleshaw was established by Agricola in AD 79 in the form of a turf and timber Fort, which housed an auxiliary cohort of infantry who guarded the main trans-Pennine highway which linked the legionary Fortresses of Chester and York. This Fort was abandoned in the mid-AD 90's but was then re-occupied about ten years later by a smaller Fortlet, which in turn was abandoned in the mid-AD 20's (Redhead, 2012: 2).

Excavations within Trench 2 revealed a complex series of construction slots, hearths, pits, post pads, floor surfaces, a road and a ditch. The phasing and interpretation of these features was problematic for a number of reasons. Firstly the extremely hot weather experienced during the excavation had caused much of the trench to be sun- bleached making the full extent of many features and deposits undetectable.

Furthermore excavations conducted by Thompson during the 1960's had either truncated or completely removed some features within Trench 2, which made it difficult to ascertain relationships and accurately phase the features.

However, using stratigraphic information uncovered during the 2014 excavation along with non-stratigraphic information such as alignment and relationships visible in plan, it was possible to suggest that there were several phases of occupation within Trench 2, which appeared to span both the fort and fortlet. The results of these interpretations are listed below.

The Fort (Late 1st Century AD), (Figure 6.19).

The earliest evidence of Roman activity to come from within Trench 2, was an amorphous spread of dark orange/brown burnt silty sand (261), found within the western half of the trench (**Figure 6.17**). Compositionally this deposit was the same as the sub-natural (244) it overlay and was most likely evidence of a phase of burning or heating which had caused the upper extent of the natural to become heat damaged. Deposit (261) appeared to be truncated by the construction slots, hearths and pits associated with Groups 1 and 3, along with Thompson's Trench 11, but it was not evident within Thompson's Trench 6. Stratigraphic evidence confirmed that this deposit predated the constructional activity associated with the fort, however its relationship with the pre-historic activity uncovered within Thompsons Trench 6 is uncertain as Thompson makes no reference to the deposit within his excavation records.

The interpretation of deposit (261) is problematic largely owing to the lack of any associated features and its continuation beyond the western and northern confines of the trench. However what can be said with some certainty is that (261) is present on

site as a result of burning or heating activity which occurred prior to the construction of the timber buildings associated with the fort (Groups 1 to 3). The most likely explanation for this heat damage would be as a result of site clearance in readiness for the forts construction or an earlier phase of activity relating to the fort, possibly industrial in nature. The only way to ascertain the true cause of this deposit would be through further excavation to the west of Trench 2.

Within the north-east, north-west and south-west quadrants of Trench 2 a complex pattern of linear construction slots and hearths, were uncovered in addition to two floor surfaces. Within the confines of Trench 2, it was not possible to ascertain the nature of the relationship between all of the individual features, the number of structures they represented or their phasing. However stratigraphic information uncovered during the excavation did confirm that all of these features were either sealed or truncated by deposits associated with the fortlet and as such must be associated with the fort phase of occupation. For ease of discussion these features have been divided into four groups according to their location within Trench 2.

Group 1

Within the south-west quadrant of Trench 2, truncating deposit (261) were a group of four linear features, measuring c.30cm in width, which had been infilled with a mid-yellowish brown clay deposit, which contained inclusions of small sub-angular stones and charcoal fragments. Two of the features were aligned east/west (220) and (223) and two were aligned north/south (217) and [221].

Of these four features only one was subject to further excavation [221] during the 2014 excavation, which revealed a flat bottomed, steep sided construction slot, c.0.33m in depth. The slot had been infilled with a mid-orange brown sandy silt deposit (233) which was sealed by a thin <0.07m layer of the aforementioned yellowish brown clay deposit (232).

Further research suggests that the most westerly of these features (217) had been previously identified by Thompson, within the south-west corner of his Trench 11. Thompson interpreted the feature as a construction slot possibly belonging to one of the normal ranges of the fort *Principia*, (Thompson, 1974: 8). Thompson's excavation plan shows that at its northern extent, the slot turned 90 degrees, and continued westwards beyond the extents of both the 1964 and 2014 trenches, which would suggest that the remains uncovered within Trench 2 formed part of a larger structure (**Figures 4.2 & 6.19**). At its southern extent, feature (217) appeared to be truncated by the 'Loop Road' (206), associated with the later fortlet. This stratigraphic relationship would imply that the features contained within Group 1 predated the fortlet and were most likely associated with the fort.

Associated with the aforementioned linear features, located within the southern extent of deposit (261) was a sub-circular area of burnt red clay (250), which was sealed by a patch of dark, cindery material (225). A 10g sample of (250) was taken for mineral magnetic and geochemical analysis which found evidence of magnetic

enhancement confirming the presence of episodic heating, which suggested that these feature was a hearth and that deposit (225) was a rake out deposit associated with the hearth. However the results did not offer any insights into the action which caused the discolouration and as such it was not possible to say whether these hearths were domestic or industrial in nature.

Group 2

To the east of the features associated with Group 1, were a second group of linear features. This group had been truncated by Thompson's Trench 6 and 11 and as such it has not been possible to ascertain their relationship with the features contained within Group 1.

Within Group 2, a total of four linear features were identified, one of which was aligned north/west [237] and the remaining three were aligned east/west [211], [238] and [239]. Excavation revealed that all four features were flat bottomed, steep sided construction slots, c.0.30m in width and between 0.27m and 0.40m in depth. All four slots truncated the sub-natural (244) and appeared to be filled by a compacted deposit of mid-greyish brown sandy silt (212), (213), (242) and (246) with the exception of cut [211] which appeared to have an additional deposit comprised of a dark greyish brown silty clay (262); and [239] which appeared to have an additional deposit of light yellowish brown clay (257), which was also identified sealing hearth (204). Only slot [238] yielded any dating evidence which comprised a single sherd of Romano-British pottery with a date range of late 1st to early 2nd century.

Further research suggests that some of the features identified within Group 2 formed the continuation of features recorded by Thompson during his 1963 excavation. Thompson interpreted these features as a construction slots possibly belonging to one of the normal ranges associated with the fort *Principia*, (Thompson, 1974: 8).

Features [211] and [238] appeared to form part of the construction slot depicted at the southern extent of Thompson's Trench 11, which continued eastwards through Trench 6, (**Figure 4.2**). Thompson appears to have removed all traces of this feature from within Trench 6, however it was visible in the both the east and west sections of his trench, which were re-excavated as part of the 2014 excavations (**Figures 6.17 & 6.18**). To the south of this feature [239] appeared to form part of the second linear feature depicted by Thompson as running across the centre of Trench 6. Again Thompson appeared to have removed all traces of this feature from within Trench 6; however it was visible along the west facing section of his trench.

Comparison of Thompson's excavation plan and the plan produced from the 2014 excavation revealed a possible alignment between feature [239] and feature (220) from Group 1, suggesting they may form part of the same construction slot (**Figures 4.2 & 6.19**). This raises the possibility that the features recorded in Groups 1 and 2 formed part of the same structure. However owing to the lack of any physical evidence to link these features, it is not possible at this time to prove this theory.

To the immediate south of construction slot [239] were two sub-circular areas of burning (204) and (205). It is unknown whether these hearths were associated with Group 1 or 2, however the most westerly of these deposits (204) appeared to be partially capped by the same yellowish brown clay deposit (257) seen within the Group 1 features suggesting a possibly link. The re-excavation of Thompsons Trench 6 revealed the remains of a third area of burning visible within the south-eastern section of the trench (243), however further analysis suggested that this formed part of (204). No samples were taken from these deposits but their similarities to deposits (250) in Group 1 and (229) in Group 4, would suggest they were hearths.

Group 3

Within the western extent of Trench 2 the remains of two linear features (215) and [236], aligned east/west and a small sub-circular pit were identified. The relationship between these features is unknown however they all appeared to truncate features associated with Groups 1 and 2.

The most northerly of these features was a small sub-circular pit [222], which truncated the western extent of a construction slot [211] discussed within Group 2. Thompsons Trench 11, had truncated the northern half of the pit, however the north facing section of his trench revealed that the pit had gradually sloping sides with a flat base and contained one fill (247). No dating evidence was uncovered from within the pit and there was no evidence to suggest what its function had been.

To the south of the pit, a linear band of mid-greyish brown clayey silt (215), similar to the fill of pit [222] was identified. The full extent of (215) could not be determined as it had been truncated by Thompson's Trench 6, and owing to the extremely dry weather conditions its eastern extent was hardly visible (**Figure 6.17**). However the west facing section of Thompson's Trench 6, did show the continuation of deposit (215) and suggested that it formed the only fill of a 'U' shaped cut [270], c.0.15m in depth which truncated the northern section of an earlier construction slot [239] associated with Group 2, (**Figure 6.18**). No dating evidence was found to date either [270] or (215), however the shallow nature of this feature would suggest that this was some form of a drain or gulley rather than a construction slot.

To the south of (215) a second linear feature [236], was identified which truncated a construction slot [221] and hearth (250) associated with Group 1, (**Figure 6.17**). The feature was very similar to [270] and (215) in that it was 'U' shaped in profile, was shallow c0.10m in depth and contained a single fill comprised (224). No dating evidence was found within the feature, however at its western extent, it was truncated by a possible construction slot (217) associated with Group 1. The shallow nature of this feature would again suggest that this was some form of a drain or gulley similar to (215).

Group 4

Along the eastern extent of Trench 2 a series of hearths, floor surfaces and a ditch were identified. The stratigraphic relationship between these features is difficult to

understand owing to disturbance caused by previous excavations and farming activity. However their appearance in plan would suggest that they were connected and as such they have been attributed to a specific group.

The north-east corner of Trench 2 was sealed by a thick deposit of sub-soil, c.0.40m in depth, which was more than double the depth of the sub-soil within the south-east corner of the trench. Documentary records indicate that both Rosser and Thompson had carried out excavations close to and within this area during the mid-20th century and it is likely that their trenches and associated back fill deposits had disturbed much of this area, (**Figure 4.3**).

Directly below the sub-soil (201) in this area, an amorphous spread of dark blackish brown cinder material (218), was encountered which sealed three sub-circular areas of burnt red clay (229), (230) and (241), (**Figures 6.17 & 6.19**). A 10g sample of (229) was taken for mineral magnetic and geochemical analysis which found evidence of magnetic enhancement confirming the presence of episodic heating, which suggested that these features were hearths and that deposit (218) was a rake out deposit similar to deposits (250) and (225) in Group 1. However the results did not offer any insights into the action which caused the discolouration and as such it was not possible to say whether these hearths were domestic or industrial in nature.

To the south of the hearths, the partial remains of a rectangular cut [266], which contained one fill (231) was identified. Documentary records have confirmed that this cut was the remains of Thompsons Trench 21, which continued eastwards beyond the confines of Trench 2, (**Figure 4.2**). Thompson's excavation plan records two linear features within Trench 21 and the most westerly of these features appeared to lie within the eastern extent of Trench 2; however no signs of this were identified during the 2014 excavation, (**Figure 4.2**). Thompson interpreted these features as construction slots, possibly belonging to one of the normal ranges which formed part of the fort *Principia*, (Thompson, 1974: 8).

The base of Thompson's trench appeared to truncate a deposit of mid -greyish brown clayey silt (**234**) which contained eleven fragments of Roman glass. Analysis of this glass confirmed that these fragments formed part of a blown pale yellow/green, long necked conical flagon which was a common vessel type, used during the late 1st Century AD, passing out of use during the last quarter of the 2nd Century AD. Further excavation revealed that deposit (234) sealed the remains of a floor surface (235) comprised of solid clay and stone mix. Only a very small area of this floor surface was exposed within Trench 2 and as such it was not possible to ascertain whether this was an internal or external surface.

To the immediate south of Thompsons Trench 21 [266], the soil stratigraphy appeared to change. At this point the sub-soil deposit (201) decreases to approximately 0.10m depth and this appears to seal a layer of compacted, light grey brown clayey silt (207) which in turn sealed a further layer of mid-greyish brown clayey silt (251).

Deposit (251) appeared almost identical to deposit (234) and it is likely that these deposits are one in the same. Both (234) and (251) appear to seal all of the archaeological features discussed within Group 4, and appear to be stratigraphically lower than the deposits associated with the fortlet (206). This would suggest that (234) and (251) were laid down prior to the construction of the fortlet and may be slighting material from when the fort was abandoned during the late 1st Century AD. Deposit (207) is however far more problematic to interpret. Its stratigraphic relationship to deposits (234) and (251) would imply that it belonged to the fortlet phase of occupation rather than to fort. However modern disturbance in the form of cut [275] and deposits (208) and (209) had truncated (207) to the extent that it was not possible to determine its stratigraphic relationship with the features associated with the fortlet (206), (227) and (228). Therefore the origins of this deposit (207) are for now unknown.

Beneath deposit (251), to the immediate south of the aforementioned floor surface (235), a layer of soft greyish white clay (240) was revealed, which overlay the partial remains of a well laid stone surface (253). Both (240) and (253) appeared to continue beneath (235) suggesting they belonged to an earlier phase of occupation. Located between the southern edge of (253) and the northern edge of the fortlet 'Loop Road' (206) a linear cut [254] was encountered. As with all of the deposits within Group 4, this cut had been sealed by deposit (251). The full extent of features (253) and [254] could not be established during the 2014 excavation as they continued beyond the eastern extent of Trench 2, however stratigraphic evidence suggests that these features were related. It could therefore be suggested that features (253) and [254] formed the remains of an external floor surface, possibly a road and gully associated with the occupation of the fort, and deposits (235) and (240) may be the remains of a later repair or reuse of this surface?

The Fortlet – (Early 2nd Century AD, (Figure 6.19).

In his first interim report of 1908, Bruton records encountering a curious ridge of varying width, which ran across the entirety of the earlier fort, sweeping around the northern rampart of the later fortlet, (Bruton, 1908: 21). Upon further investigation Bruton notes that this feature was a 'strong paved road', (Figure 4.1). Subsequent archaeological investigations conducted by the Greater Manchester Archaeological Unit (GMAU) in 1997 established that when the earlier Agricolan fort was in operation the main highway between Chester and York ran along the southern edge of the fort, through Daycroft Field, (Redhead, 1997: 46). However during the later fortlet phase when Daycroft Field became the focus for extra mural settlement, the main highway was diverted through the construction of a 'Loop Road' which ran around the northern rampart of the later fortlet, angling through the earlier forts East and West Gates, (Redhead, 1997: 46). It is believed that this 'Loop Road' and Bruton's 'strong' paved road' are one in the same.

At the southern extent of Trench 2, to the immediate south of the Group 4 deposits, excavations revealed the northern edge of a road surface (206), comprised of a spread of irregularly laid, sub-angular Pennine grit stones of varying size, which sat on a layer of dark yellowish-brown silty clay (210), (**Figures 6.2 & 6.17**). The archaeological disturbance plan produced by GMAU in 1984/5 indicates that part of Bruton's 1908 trenching lay close to or possibly overlapped the southern edge of Trench 2, (**Figure 4.3**). This would suggest that the road remains (206) encountered within Trench 2 were most likely the remains of the fortlet 'Loop Road' and as such these remains could be firmly dated to the early 2nd Century AD. Furthermore the suggestion that Bruton's excavations may have previously disturbed the southern extent of Trench 2 would explain why the stratigraphic deposits (208) and (209), overlying the road surface (206) were different from those overlying the features to the immediate north of the road (Group 4). Deposits (208) and (209) were most likely back fill material from Bruton's excavations.

To the immediate north of the 'Loop Road' (206), just south of hearths (204) and (205), two shallow, sub-circular cuts (227) and (228), were encountered (**Figure 6.17 & 6.19**). Within the base of both cuts were pieces of flat grit stone, and in (228) the probable border of a rectangular stamp from a tegula fragment was found. Analysis of the fragment gave a manufacture date of after AD 90, however owing to its size it is likely that this piece was re-used for post packing, post pad material or as hard-core (Appendix: Mills, 2015). The results of the post excavation analysis suggest that features (227) and (228) were the remains of two post pads. The late 1st Century AD manufacture date given to the ceramic building material found within feature (228) indicates that these features were most likely part of the fortlet phase of occupation.

Conclusion

Whilst the results of the 2014 excavations have been able to expand upon and confirm the findings of previous excavations conducted by Thompson, they have also presented us with new questions which can only be answered through further excavation? Any future excavations would need to focus on the areas to the north, east and west of Trench 2, with the aim of establishing the full extent of the structural remains and to understand the relationships between the remains uncovered within Groups 1, 2, 3 and 4 and those uncovered by Thompson during his 1963 excavations. Further excavations would no doubt also help to phase the structural remains contained within Trench 2 and help to establish the function of these structures, which is something the 2014 excavations were unable to achieve.

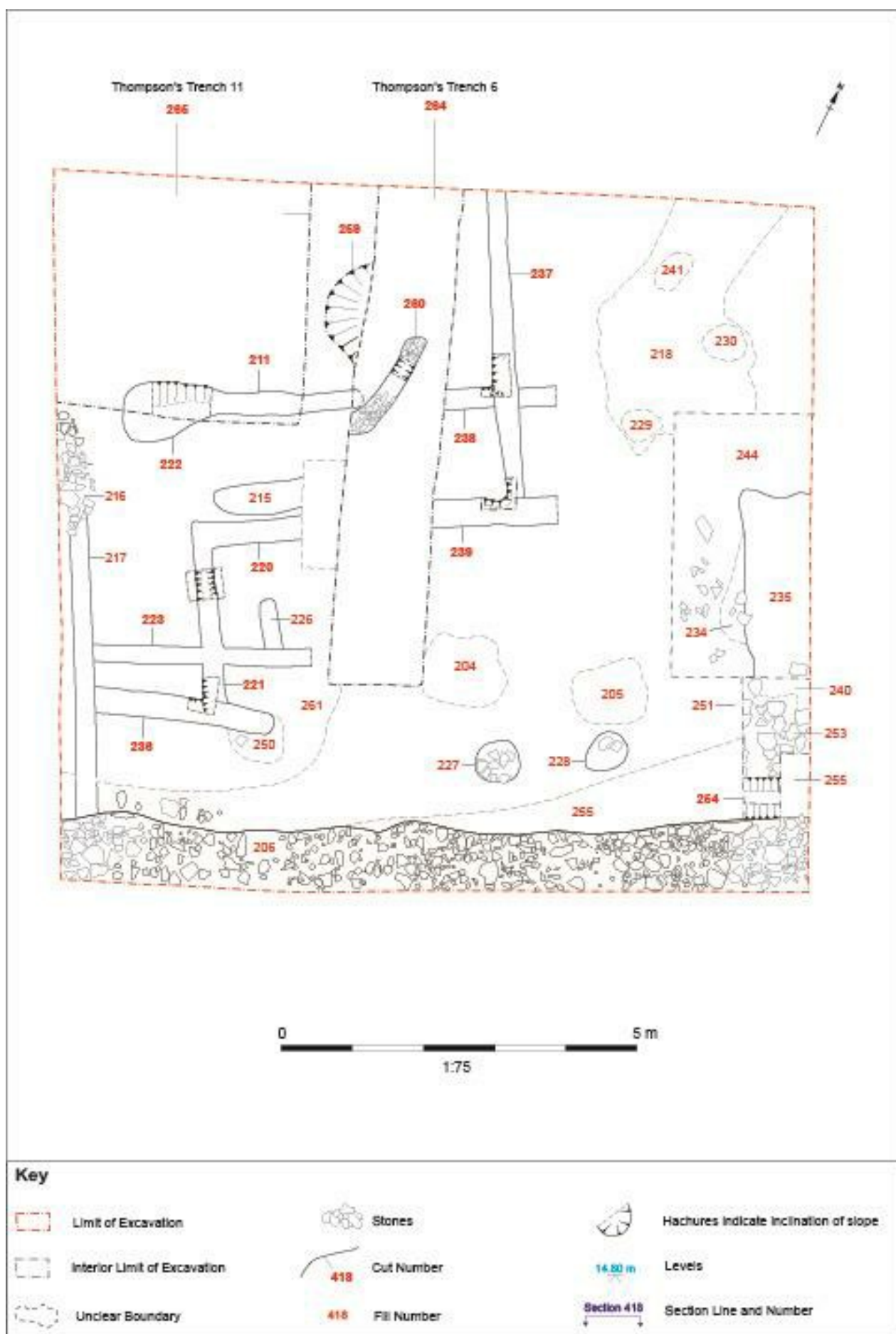


Figure 6.17a: Archaeological Plan of Trench 2, showing all context numbers.

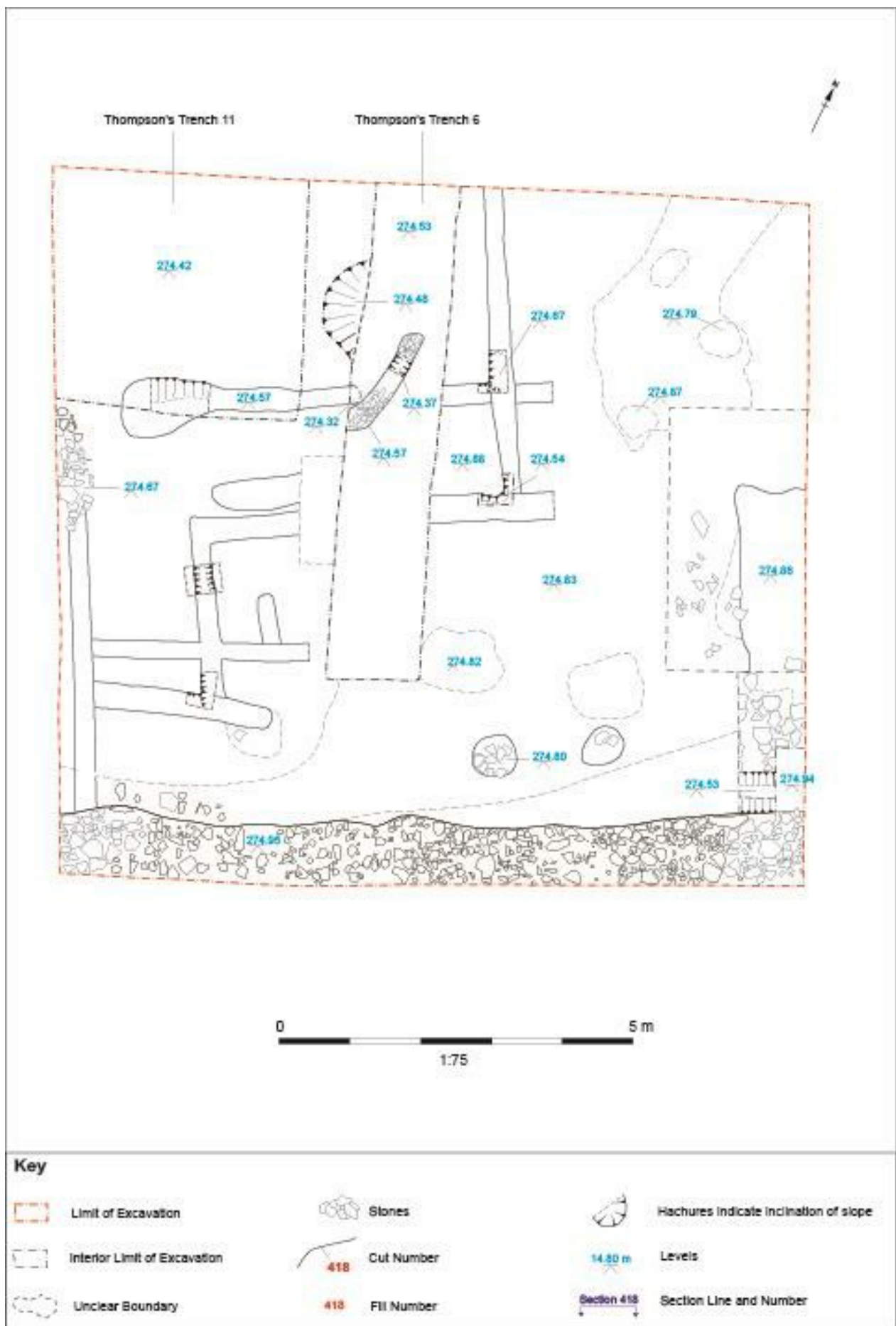


Figure 6.17b: Archaeological Plan of Trench 2, showing feature levels.

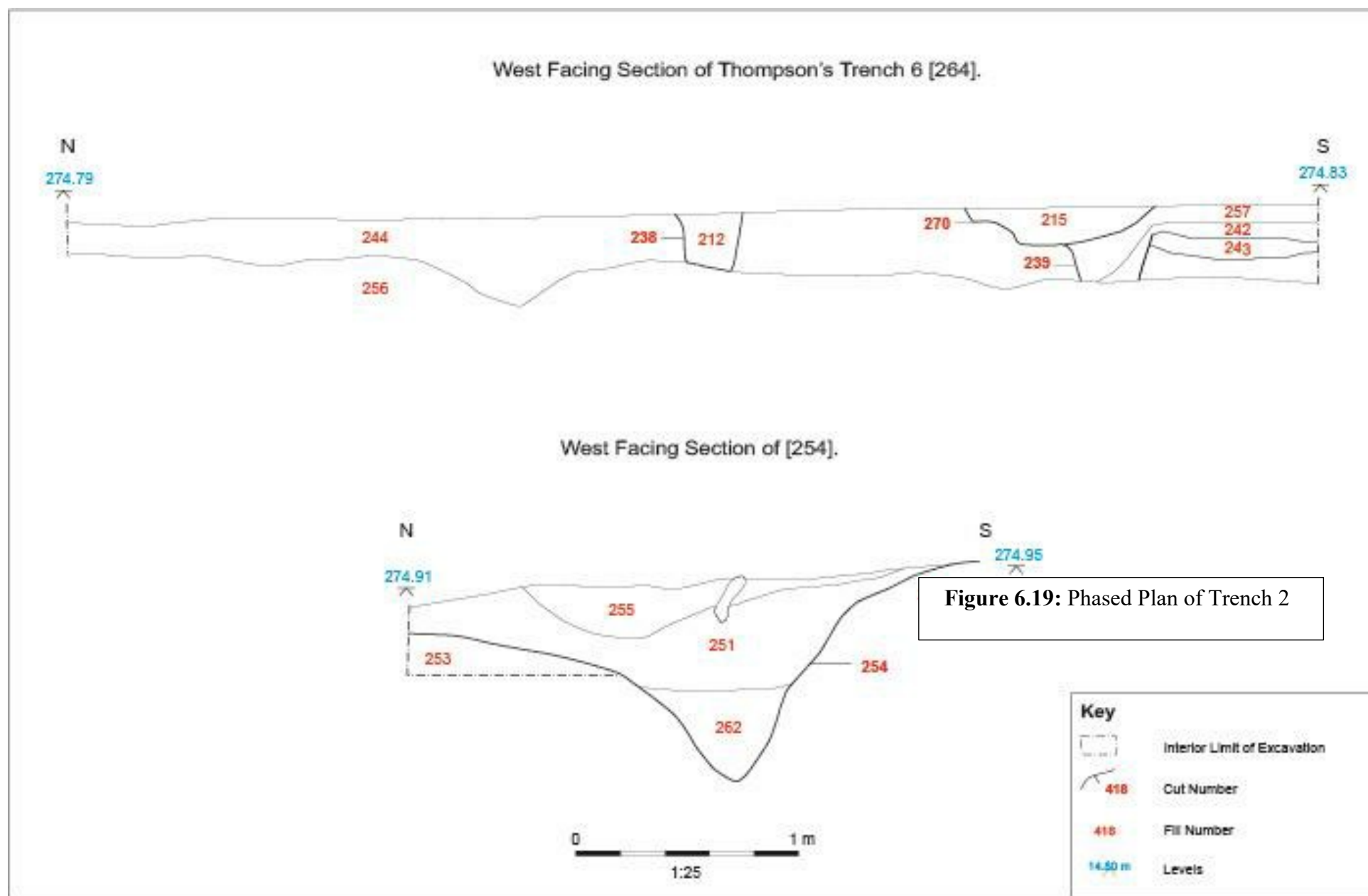


Figure 6.19: Phased Plan of Trench 2

Figure 6.18: West Facing Sections of Thompson Trench 6 and cut [254].



Key

	Limit of Excavation		Stones		Fortlet Activity (Early 2nd Century AD)
	Interior Limit of Excavation		Prehistoric Activity		Fort Activity (Late 1st Century AD)
	Unclear Boundary				

7. Trench 6

7.1 Archaeological Descriptions

Trench 6 was roughly rectangular in shape and was located within the northern extent of the scheduled area, approximately 20.00m to the south of Trench 1 eastern extent (**Figures 3.1, 7.1 & 7.9**). The trench measured 25.40m in length and 6.10m in width at its eastern extent which rose to 12.60m at its western extent. The aim of Trench 6 was to examine in more detail the nature of the Agricola forts East Gate and associated exit road which were previously uncovered during the first season of excavation by Bruton, Andrew and Lees in 1907.



Figure 7.1: Aerial view of Trench 6.

The trench was covered by a dense spread of scrub vegetation and dark blackish brown loamy topsoil, c.0.05m. Directly below the topsoil was a dark greyish brown silty sub-soil deposit (**601**), c.0.30m in depth which contained frequent inclusions of 18th and 19th century ceramics, glass and metal work (see Appendix, Howard-Davies: 2015). Deposit (601) appeared to seal all archaeological deposits within Trench 6.

Truncating (601) at the western extent of the trench was a large rectangular cut **[608a]**, which measured c.7.50m x 7.20m (**Figures 7.1 & 7.9**). Projecting from the eastern extent of this cut was a second linear cut **[608b]**, c.18.30m x 0.60m, aligned east/west which continued beyond the eastern edge of Trench 6. Crossing **[608b]** within the eastern half of Trench 6, two further linear cuts **[608c]** and **[608d]** were revealed, each measured c.3.50m x 0.60m. Infilling cuts **[608a – d]** was a dark blackish brown loamy deposit **(602)**, <0.20m in depth with frequent inclusions of small sub-angular stones <0.05m and rotten turves.

Within the western extent of Trench 6, beneath (602) and **[608a]** a spread of, irregularly laid, well worn, sub-angular Pennine grit stones **(605)**, <0.20m x 0.12m was revealed (**Figures 7.2 & 7.9**). The spread had been stained a dark blackish/grey from the decomposing turves (602) which overlaid them and measured c.8.00m in length and c.7.70m in width. The south-western corner of (605) had been truncated and this area revealed another stone spread (604) which appeared to continue beneath (605). Spread (604) was comprised of slightly larger, sub-angular Pennine grit stones <0.30m x 0.15m which were more compactly laid than (605) and showed no signs of staining (**Figure 7.2**).



Figure 7.2: Detail shot of stone spreads (604) and (605).

Truncating deposits (604) and (605) were three pairs of sub-circular cuts (**Figure 7.9**). Positioned along the northern edge of (605) were cuts **[613]** and **[631]**, both of which were only partially excavated. The most westerly cut **[613]** measured 1.08m in length, 0.64m in width, and was excavated to a depth of 0.50m. The cut had steep sloping sides and contained two fills. The upper fill comprised of the aforementioned (602) which measured c.0.15m in depth. Below (602) a mid-greyish brown silty loam (**614**) was identified which measured c.0.30m in depth and contained a large stone block measuring 0.50m x 0.20m. Approximately 1.70m to the east of **[613]** was cut **[631]** which measured 2.30m in length, 0.90m in width, and was excavated to a depth of 0.40m. The cut had steep sloping sides and as in **[613]** it contained two fills; the upper (602) measuring c.0.10m in depth below which was a mid-greyish brown silty loam (**636**) deposit, c.0.30m in depth, which contained several large sub-angular stones of varying size <0.50m.

Approximately 2.00m to the south of **[613]** and **[631]** was a central set of sub-circular cuts (**Figure 7.9**). The most westerly cut **[611]** was only partially excavated and measured c.1.30m in diameter, with an excavated depth of 0.30m. The cut had steep sloping sides and contained two fills. The upper fill (602) measured c.0.10m in depth and sealed a deposit of mid-greyish brown silty loam (**612**), which contained frequent inclusions of sub-angular stones of varying size <0.50m.

Circa 1.70m to the east of **[611]** was cut **[610]**, which was fully excavated and measured 1.24m in length, 1.14m in width and 1.22m in depth, (**Figures 7.3, 7.9 & 7.10**). The upper c.0.20m of the cut truncated (604) and (605) and had gradual sloping edges which then fell steeply to form an almost vertical sided cut, c.0.60m in diameter, which had a flat base. The eastern edge of **[610]** had been partially truncated by **[608b]**. Below (604) and (605) the cut truncated a deposit of compacted mid-orange/brown sandy clay (**633**), c.0.55m in depth. Below (633) the cut truncated bedrock to a depth of 0.45m.

Within **[610]** six fills were identified. The upper fill (602) measured 0.10m in depth and sealed a deposit of mid-greyish brown silty loam (**615**), 0.25m in depth, which contained frequent inclusions of sub-angular stones of varying size. Below (615) two large slabs of Pennine Grit Stone (**620**) were identified. The upper slab lay horizontally across the western half of the cut and measured 0.70m x 0.64m x 0.05m, whilst the lower slab lay vertically, truncating deposits (**616**) & (**617**) below, and measured 0.70m x 0.37m x 0.05m. Beneath (620) a deposit of dark, reddish brown silty clay (616), c.0.25m in depth was identified, which appeared to contain no inclusions. Directly beneath (616) a layer of sticky, mid-greyish brown, silty clay (617) was identified. Fill (617) had a maximum depth of 0.40m and contained a single, large fragment of terracotta brick or tile of possible Roman origin (see Appendix, Mills: 2014). Below (617) at the base of the cut a dark grey sticky clay deposit (**621**) was identified. Deposit (621) had a maximum depth of 0.20m and contained two pieces of degraded timber, possibly of Roman origin (see Appendix, Archaeological Services Durham University: 2015).



Figure 7.3: Detail shot of cut [610], looking eastwards.

Approximately 2.00m to the south of [610] and [611], along the southern edge of (604) and (605) was a third set of sub-circular cuts (**Figure 7.9**). The most westerly cut [619] measured c1.80m in length, 1.30m in width and had an excavated depth of 0.35m. The cut had steep sloping sides and contained two fills. The upper fill (602) measured c.0.10m in depth and sealed a deposit of mid-greyish brown silty loam (**638**), 0.25m in depth, which contained frequent inclusions of sub-angular stones of varying size. Circa 1.00m to the east of [619] was a circular cut [618], which was fully excavated and measured c.0.70m in diameter and 1.15m in depth, (**Figures 7.4 & 7.9**). The cut had steep sloping sides with a flat base. As with [610] the upper 0.20m of [618] truncated (604) and (605) and had gradual sloping edges which then fell steeply to form an almost vertical sided cut, c.0.60m in diameter, which had a flat base. Below (604) and (605) the cut truncated a deposit of compacted mid- orange/brown sandy clay (**633**), 0.55m in depth. Below (633) the cut truncated bedrock to a depth of 0.45m.

The eastern half of cut [618] had been truncated by a later sub-circular cut [627] which caused the eastern half of [618] to have a stepped profile (**Figure 7.10**). Cut [627] measured 1.76m in length, 1.40m in width and 0.70m in depth. Cut [627] appeared to finish at the start of the bedrock deposit and as such the lower section of [618] survived in -tact. Within [618] and [627] five fills were identified. The upper

fill (602) of both cuts measured c.0.10m in depth, below which was a mid-greyish brown silty loam (637) c.0.25m in depth, which contained several large sub-angular stones of varying size. Beneath (637) a thin deposit of iron-pan was identified which sealed a natural deposit of mid-reddish brown clay (624), c.0.25m in depth, which appeared to contain no inclusions. Below [627] and (624) within the lower half of [618] a layer of sticky, mid-greyish brown, silty clay (625), c.0.35m in depth was identified. Below (625) at the base of the cut a dark grey sticky clay deposit (626) was identified, which had a maximum depth of c.0.20m and contained several large pieces of degraded timber.

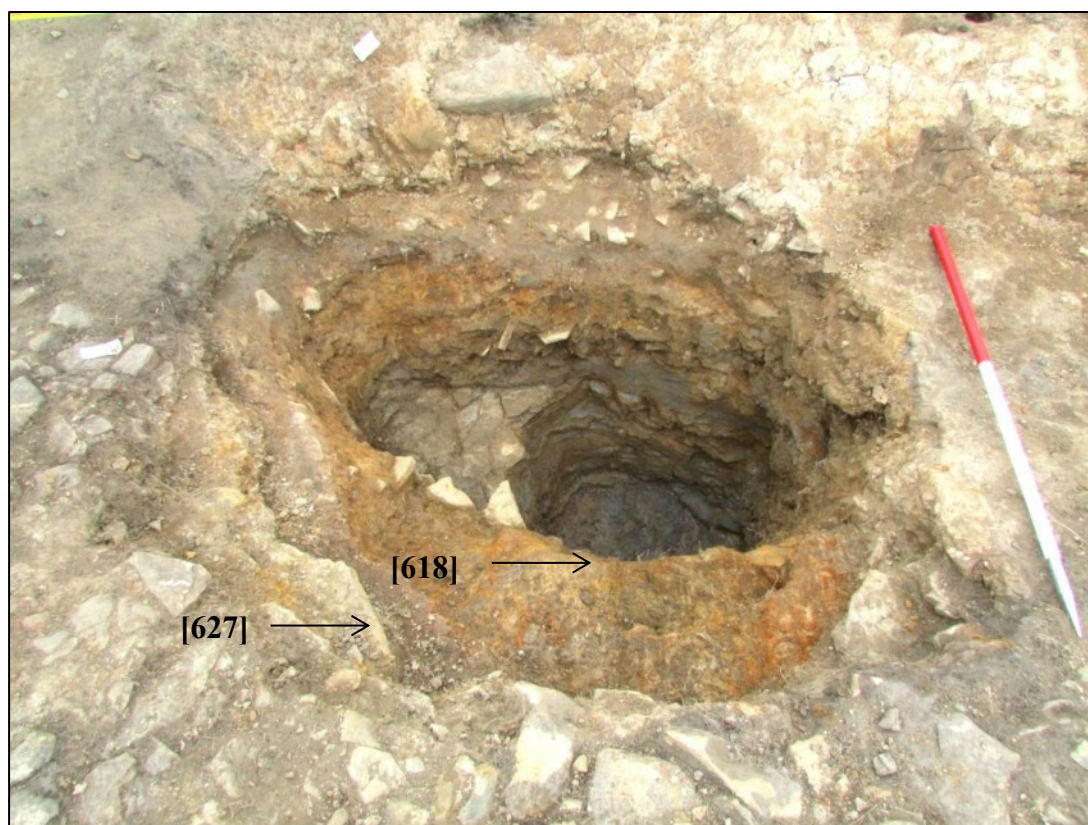


Figure 7.4: Shot of sub-circular cut [618], looking southwards.

Abutting the northern and southern extents of (604) and (605) were the termini of two linear mounds (629) and (630), which were aligned north/south (**Figure 7.5 & 7.9**). The mounds were comprised of light yellowish brown compacted clay which was overlain by deposit (601). The mounds measured c.9.30m in width and survived to a height of 0.75m. The full length of the mounds could not be ascertained as they continued beyond the northern and southern extents of Trench 6. Truncating the summit of the northern mound (629) were the partial remains of dry stone wall (632), which was constructed from sub-angular blocks of Pennine grit stone. The wall measured c.1.80m in length and 0.40m in width.



Figure 7.5: Shot of rampart termini (629) and (630), looking eastwards.

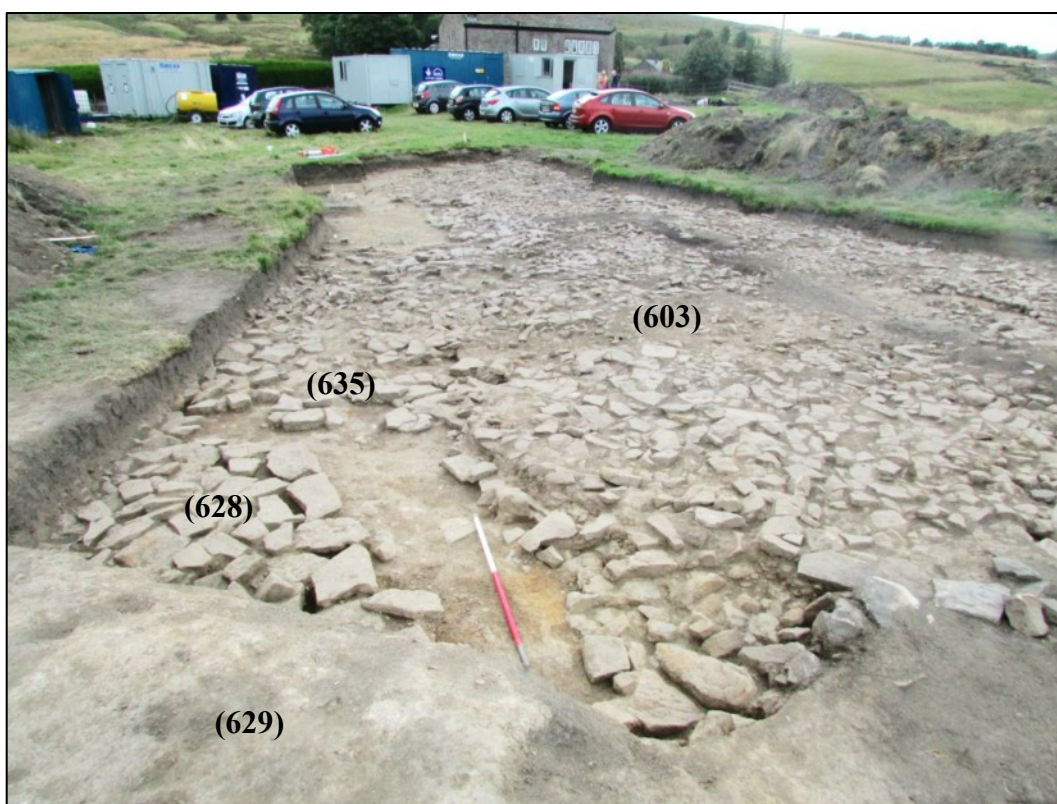


Figure 7.6: Shot of stone spreads (603) and (635) and stone surface (628), looking south-eastwards.

Abutting the eastern edge of (605), directly below deposits (601) and (602), a third, linear spread of irregularly laid, sub-angular Pennine grit stones **(603)**, <0.45m x 0.10m was revealed, **(Figures 7.6 & 7.9)**. The spread was aligned roughly east/west and was excavated to three courses in depth c.0.25m. The spread had an excavated length of c.17.40m and an excavated width of c.4.75m. The full extent of (603) could not be determined as it continued beyond the eastern and southern baulks of the trench.

Along the centre of (603) a fourth stone spread was identified **(607)**, which was comprised of smaller, more compactly laid, sub-angular Pennine grit stones <0.20m x 0.10m. This spread measured c.1.75m in width and as with (603) its full length could not be determined as it continued beyond the eastern baulk of the trench.



Figure 7.7: Shot of stone surface (628), with stone spread (603) in the background, looking southwards.

Abutting the northern edge of (603), below the sub-soil (601), a dark blackish brown silt deposit **(606)**, of varying depths <0.20m was encountered. Beneath (606) a fifth linear spread of irregularly laid, sub-angular Pennine grit stones **(635)**, <0.45m x 0.10m was revealed. The spread was aligned roughly north/south and had an excavated length of c.2.35m and a width of 4.70m. The full extent of (635) could not be determined as it continued beyond the northern baulk of the trench, **(Figures 7.6 & 7.9)**.

To the west of (635), below (606), deposit (633), previously described within [610] and [618] was encountered. The full extent of (633) could not be ascertained as it continued northwards beyond the confines of the trench, westwards beyond the northern mound (629), southwards beneath stone spread (603) and eastwards beneath stone spread (635). Constructed on (633) was a roughly rectangular stone surface **(628)** measuring 2.50m x 1.58m, **(Figure 7.7)**. The surface comprised of a level spread of sub-angular stones <0.30m x 0.15m in size which were surrounded by a single course of slightly larger edging stones <0.40m x 0.20m. The full extent of (628) could not be established as it continued below the northern mound (629) and beyond the northern extent of the trench.

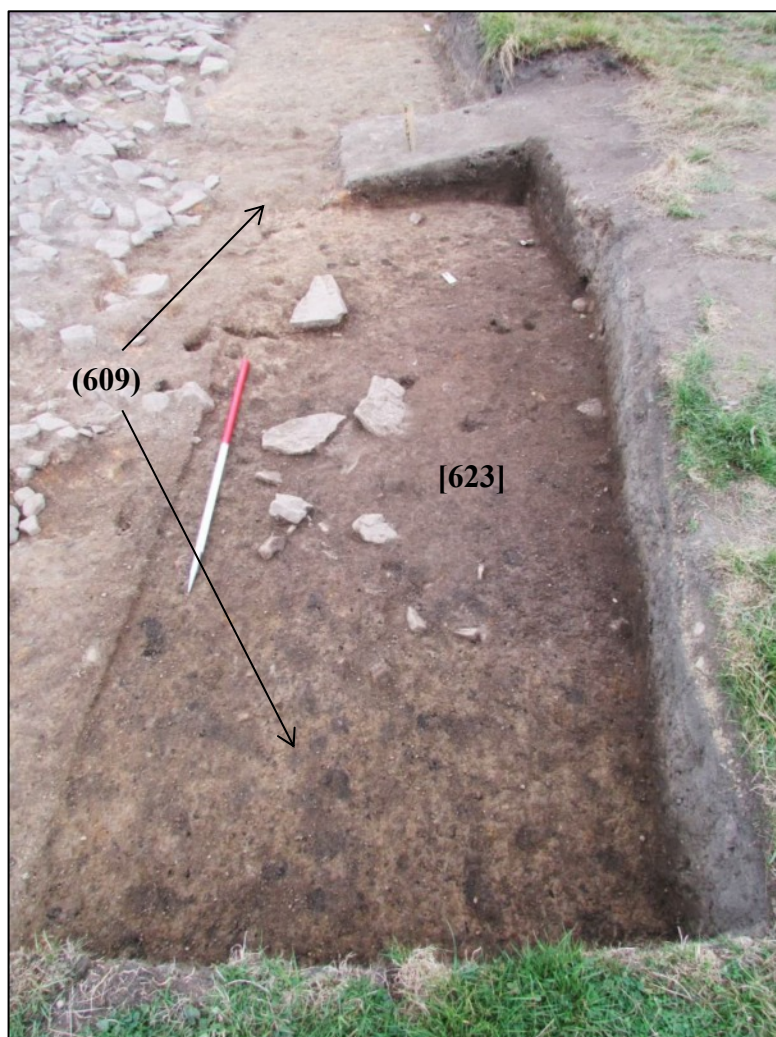


Figure 7.8: Shot of cut [623], looking westwards

To the east of (635) a layer of mid-yellowish brown clayey silt **(609)** was identified which contained frequent inclusions of burnt clay. The full extent of this deposit is unknown as it continued beyond the northern and eastern baulks of the trench as well running below the aforementioned stone spreads (603), (607) and (635). Projecting from the northern edge of Trench 6, truncating (609) were the remains of a semi-circular cut **[623]**, which measured c.1.20m x 2.30m x 0.15m, **(Figures 7.8 & 7.9)**. The full extent of [623] could not be established as it appeared to continue beyond the northern baulk of the trench. Within [623] a single fill comprised of dark greyish

brown silt (622) was identified which contained frequent inclusions of charcoal and a dark blue glass, melon bead of Roman origin (see Appendix, Howard-Davies :2015).

7.2 Archaeological Discussion

The excavations within Trench 6 produced significant results, recording a number of key features dating to the Roman occupation of Castleshaw. A number of these features had been previously identified by the Bruton excavations of 1907/08; however the 2014 excavations revealed that many of these features had not been fully investigated. The archaeological evidence from Trench 6 can be summarised as follows:

Modern Disturbance (18th, 19th and 20th Centuries)

All archaeological deposits within Trench 6 were sealed by a sub-soil layer (601), which contained frequent inclusions of ceramic, glass, corroded metal and animal bone. Analysis of these finds suggest that deposit (601) was a plough soil containing an accumulation of 18th and 19th century midden material, most likely originating from the settlement at Lower Castleshaw, which lay to the immediate east of the Roman fort (see Appendix, Howard-Davies: 2015).

Truncating both the plough soil (601) and the northern section of the fort rampart (629) were the remains of a drystone wall (632). Cartographic sources from the mid-19th century show that the wall formed the north-eastern boundary of a large sub-rectangular enclosure named Castle Hill. The wall is depicted on Bruton's excavation plan of 1911, however by the OS survey of 1949 the wall had been demolished, **(Figure 4.1)**.

Also truncating deposit (601) at the western end of Trench 6 were the remains of a large rectangular cut [608a] along with three adjoining linear cuts [608b – d] which continued beyond the eastern extent of the trench **(Figure 7.9)**. All four cuts appeared to contain a dark organic deposit (602) containing some 19th and 20th century, ceramic, glass and corroded metal. Historical research has confirmed that these cuts formed the partial remains the archaeological trenching excavated by Bruton, Andrew & Lees during their first season at Castleshaw in 1907, **(Figure 4.3)**. It can therefore be assumed that deposit (602) represents the back filling material from these excavations.

Roman Occupation (Late 1st to Early 2nd Centuries AD).

As discussed in Chapter 6, previous historical and archaeological investigations have proven that in AD 79, Agricola established a turf and timber fort at Castleshaw to guard the main trans-Pennine highway which linked the legionary Fortresses of Chester and York. This fort was abandoned in the mid-90's AD but was then re-occupied about ten years later by a smaller fortlet, which in turn was abandoned

in the mid-120's AD (Redhead, 2012: 2). Within Trench 6, evidence for both the fort and fortlet, phases of occupation were found and these are summarised below.

Rampart

At the western extent of Trench 6 the termini of two linear mounds (629 & 630) were uncovered. The mounds were constructed from a light yellowish brown compacted clay and measured c.0.75m in height and c.9.30m in width (**Figures 7.5 & 7.9**). Previous excavations undertaken by Bruton in 1907 established that these features formed part of the forts north-eastern rampart, (Bruton, 1908: 19).

The preservation of the forts rampart at Castleshaw is generally poor, surviving only as a low mound no more than 1.00m in height. The poor survival of the rampart is largely owed to the departing Romans, who would have slighted it when the fort was abandoned, however what did survive has also been subject to truncation through ploughing and disturbance by previous excavations (Readhead, 1989: 25).

During the early and mid- 20th century the fort's rampart was the subject of several investigations. In 1907 Bruton excavated a linear trench (named K-L) across the north-western rampart, just west of the forts West Gate (**Figure 4.1**). To his surprise the rampart at this point was constructed from clean, compact, light-coloured clay, resting upon dark sandy soil (Bruton, 1908: 19). His surprise was due to the fact that his excavations through the later fortlet had revealed a rampart constructed from layers of turves with stone kerbs (Bruton, 1908: 18). Following this discovery Bruton noted that he '*afterwards tested the outer rampart on the other sides and found once more sod layers, but of a different character from those of the fortlet*' (Bruton, 1908: 19).

In 1957 Rosser excavated two trenches across the fort's north-western rampart, one to the west of the West Gate and one to the east. He found at these points the rampart was constructed of turves which had been set on a corduroy of horizontal oak posts for stability (Thompson, 1974: 5). Similarly in 1963 Thompson excavated a trench across the forts north-eastern rampart, to the immediate north of Trench 6 which confirmed that the rampart at this point was also constructed from turves, which had been heavily leached leaving a massive deposit of iron-pan on the natural sandy clay beneath. However Thompson found no evidence of timber corduroy beneath the rampart in this area (Thompson, 1974: 5).

In contrast to the findings of Rosser and Thompson, the section of rampart uncovered within Trench 6 was not constructed from turves but instead appeared to be made entirely from sandy clay, very similar to the description given by Bruton of the rampart at the forts West Gate (Bruton, 1908:19). As noted by Bruton this construction appeared surprising given that his subsequent excavations, along with those conducted by Rosser, Thompson had found the majority of the rampart to be constructed from turves, (see Thompson, 1974: 5 & Nash, 2014: 57). Although it is not unusual for ramparts to be constructed from clay as seen at Melandra Fort in Glossop, the presence of the clay rampart at Castleshaw appears to be restricted to

the area surrounding the East and West Gates. It is therefore likely that the clay rampart was connected in some way to the construction of the Gates, possibly as a capping or bonding material to strengthen the rampart at the forts entrances?

Rampart Structure

Abutting the outer face of the ramparts northern terminus an anomalous stone feature was identified (**Figures 7.7 & 7.9**). Feature (628) was a roughly rectangular stone surface, comprised of a level spread of sub-angular stones surrounded by a single course of slightly larger edging or kerb stones. The feature appeared to continue westwards beneath the rampart and northwards beyond the northern extent of the trench. Owing to the constraints of the Scheduled Monument Consent it was not possible to extend Trench 6 during the 2014 excavations and as it was not possible to ascertain the full extent of (628) or its relationship to the earlier forts north-eastern rampart and East Gate.

Previous archaeological excavations at Castleshaw have identified similar features within the remains of the later fortlet, which may offer some clues as to the purpose of this feature. During the excavation of 1908 Bruton discovered that the southern rampart of the later fortlet had a stone rubble foundation bounded by a double kerb, (Bruton 1908: 17). Similarly in the mid 1950's Rosser found that the western rampart of the fortlet had been constructed on a well laid stone surface, however no kerbing was identified (Redhead, 1989: 27). More recent excavations by the Greater Manchester Archaeological Unit established that the northern and eastern ramparts of the later fortlet had also been constructed on stone rubble foundations and within the northern rampart kerbstones were identified which did not appear to mark the edges of the rampart and as such may have been part of the setting out procedure prior to the construction of the fortlet, (Redhead, 1989: 27).

Despite the above evidence it does appear unlikely that feature (628) formed part of a stone foundation beneath the earlier forts north-eastern rampart. This is largely because no evidence of a similar stone surface was found beneath the rampart in Trench 7 or during Bruton, Rosser and Thompson's previous excavations. Given its location it is more likely that this surface related to the earlier forts East Gate, possibly the foundation of a gate tower or structure associated with the gate, which may explain why the rampart at this point was constructed from clay rather than turves. However without further excavation it would not be prudent to try and offer any kind of solid interpretation of this feature.

The East Gate

Between the termini of the earlier forts north-eastern rampart, truncating surface (604 & 605), a series of six post holes [610, 611, 612, 618, 619 & 631], were uncovered, which were arranged in two rows of three (**Figures 7.1, 7.9 & 7.10**). This area had been subject to previous excavation by Bruton who had recorded the presence of a seventh post hole, lying just beyond the western extent of Trench 6. Bruton concluded that this area had once formed the forts East Gate, which was comprised of a

double portal gate flanked by three sets of posts either side with a central set of posts acting as a division between the two gates, (Bruton, 1908: 21).

Further excavation in 2014 revealed a 0.10m deep deposit of a dark loamy material (602) within the top of each of the six post holes. This deposit was identified as the back filling material from Bruton's 1907 excavation, which would suggest that none of the post-holes had been fully excavated. Beneath and truncated by (602) a deposit of mid-greyish brown silt (612, 614, 615, 636, 637 & 638) was identified in each of the post holes. This deposit contained frequent inclusions of sub-angular stones and Bruton notes that fragments of wood and iron staples were uncovered within this deposit during his excavations (Bruton, 1908: 21). Although no dating evidence was found during the 2014 excavation it would be reasonable to suggest that this deposit represents the purposeful infilling of the post holes most likely as a result of the slighting of the rampart when the fort was abandoned in the mid-90's AD.

Of the six post holes uncovered during the 2014 excavations, two were selected for full excavation [610] and [618]. Further excavation revealed both post holes to be steep sided with flat bases measuring between 0.70m – 1.00m in diameter and c.1.20m in depth. Beneath the aforementioned infill deposit, the lower section of both post holes contained a series of three fills. The upper fill comprised of a dark reddish brown silty clay (616 & 624), below which was a deposit of sticky, mid brown, silty clay (617 & 625), which sealed a bottom fill comprised of a dark grey sticky clay deposit (621 & 626). Post excavation analysis revealed fragments of terracotta brick or tile of possible Roman origin within fill (617) and the bottom fill of both post-holes (621 & 626) contained fragments of degraded timber, possibly fragments of the Roman gate posts (see Appendix, Archaeological Services Durham University: 2015). Given the evidence it is likely that the bottom three fills described above were the result of natural erosion during the period the earlier fort was in operation, rather than being the result of backfilling.

Roadways

Within Trench 6 a series of three road surfaces were revealed:

The first road identified was aligned east/west and was located between a break in the forts north-eastern rampart (629 & 630). The road was extremely well constructed, comprising of a worn, metalled surface (605) made of small sub-angular gritstones which overlay a second rougher surface of larger sub-angular gritstones (604). Truncating the road were the remains of six large post-holes which formed the double portal entrance of the forts East Gate, (Bruton, 1908: 20& 21). Further investigation also revealed that the road continued westwards beyond the confines of Trench 6, but it did not appear to extend eastwards beyond the rampart, suggesting that it was limited to the interior of the earlier fort. The results of the 2014 excavation suggest that road (604 & 605) was constructed in the late 1st Century AD as part of the earlier forts internal road system and given its location it is plausible that this road represents the remains of the forts '*Via Praetoria*', which ran from the East Gate to the '*Principia*' or Headquarter building's, located at the centre of the fort.

Abutting the eastern extent of (604 & 605) a second road surface was identified, which appeared to continue in a south-easterly direction beyond the southern and eastern extents of the trench (**Figure 7.9**). This roadway was comprised of two distinct materials: a spread of large, irregularly laid, sub-angular grit stones (603) and a linear band of smaller, more compactly laid, sub-angular gritstones (607). In contrast to (604 & 605), this roadway was very uneven in places, containing several hollows filled with plough soil. During his 1907 excavation, Bruton encountered the same roadway and noted that it appeared as a curvy-linear ridge of varying width, which ran across the entirety of the earlier fort, sweeping around the northern rampart of the later fortlet, (Bruton, 1908: 21). Subsequent archaeological investigations conducted by the Greater Manchester Archaeological Unit in 1997 established that when the earlier Agricola fort was in operation the main highway between Chester and York ran along the southern edge of the fort, through Daycroft Field, (Redhead, 1997: 46). However during the later fortlet phase when Daycroft Field became the focus for extra mural settlement, the main highway was diverted through the construction of a 'Loop Road' which ran around the northern rampart of the later fortlet, angling through the forts East and West Gates, (Redhead, 1997: 46). Taking into account the results of previous archaeological investigation it would appear that deposits (603 & 607) form the remains of the aforementioned 'Loop Road' giving a construction date of early 2nd Century AD.

The third and final road surface identified (635) was aligned north/south and was located along the outer edge of the forts north-eastern rampart, to the immediate east of feature (628), (**Figure 7.9**). The road appeared to run northwards from the edge of the aforementioned 'Loop Road' (603 & 607) and continued beyond the northern baulk of the trench. The road was comprised of a deposit of irregularly laid, sub- angular Pennine grit stones, similar to deposits (603 & 607). To the immediate east of the roadway a layer of mid-yellowish brown clayey silt (609) was identified, which contained frequent inclusions of burnt clay, daub and some charcoal which suggest there may have been a structure(s) close by. As only a small section of this roadway was uncovered within Trench 6 it was not possible to ascertain either its origin or extent and further investigation would be required in order to fully understand this feature.

It must be noted that recent investigations by the Centre for Applied Archaeology along with those of Bruton (1907/1908) and Thompson (1957 – 64) have found no evidence to support the presence of a defensive ditch running along the outside of the forts north-eastern rampart, which appears odd given that it is the flattest and most vulnerable side of the forts defences (Redhead, 2012: 6). One suggestion to explain the lack of a defensive ditch is that there may have been a military annex present on the eastern side of the fort, (Redhead, 2008: 6). The occurrence of this third road surface (635) in place of a ditch and the presence of burnt clay, daub and charcoal indicating the presence of a structure(s) (609) could support this theory.

Conclusion

Whilst the results of the 2014 excavations have been able to expand upon and confirm the findings of previous excavations conducted by Bruton and Thompson, they have also presented us with new questions which can only be answered through further excavation? Any future excavations would need to focus on the area outside the East Gate particularly, the anomalous stone feature (628) on the north side of the gateway. If (628) proved to be structural it would be interesting to see if a similar structure was present on the south side of the East Gate. Furthermore the presence of a road surface (635) and structural deposits such as burnt clay and daub (609) along the outer edge of the rampart would require further investigation in order to ascertain if there was a military annex outside of the earlier fort, which could explain the lack of defensive ditch in this area.

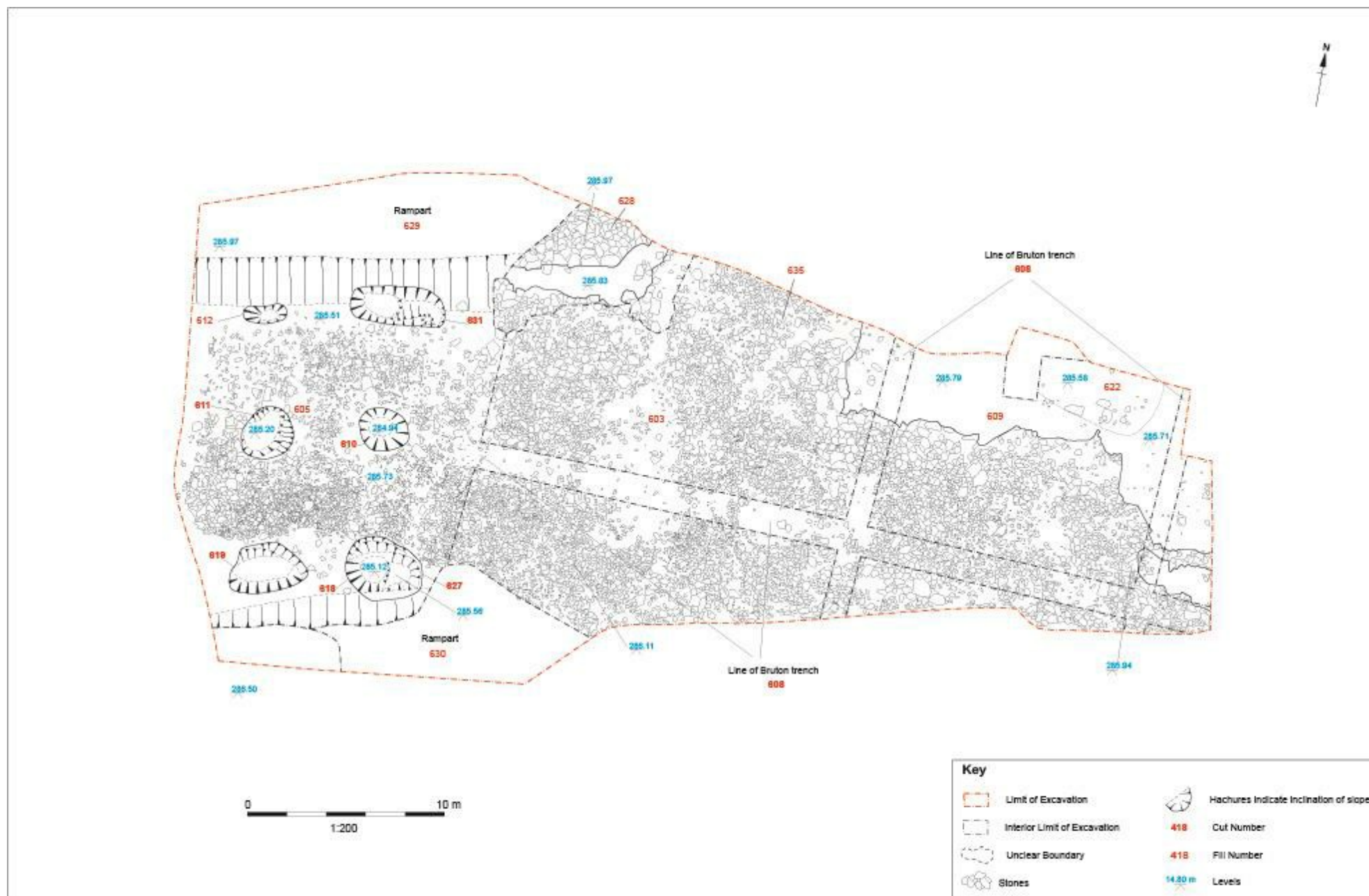


Figure 7.9: Archaeological Plan of Trench 6

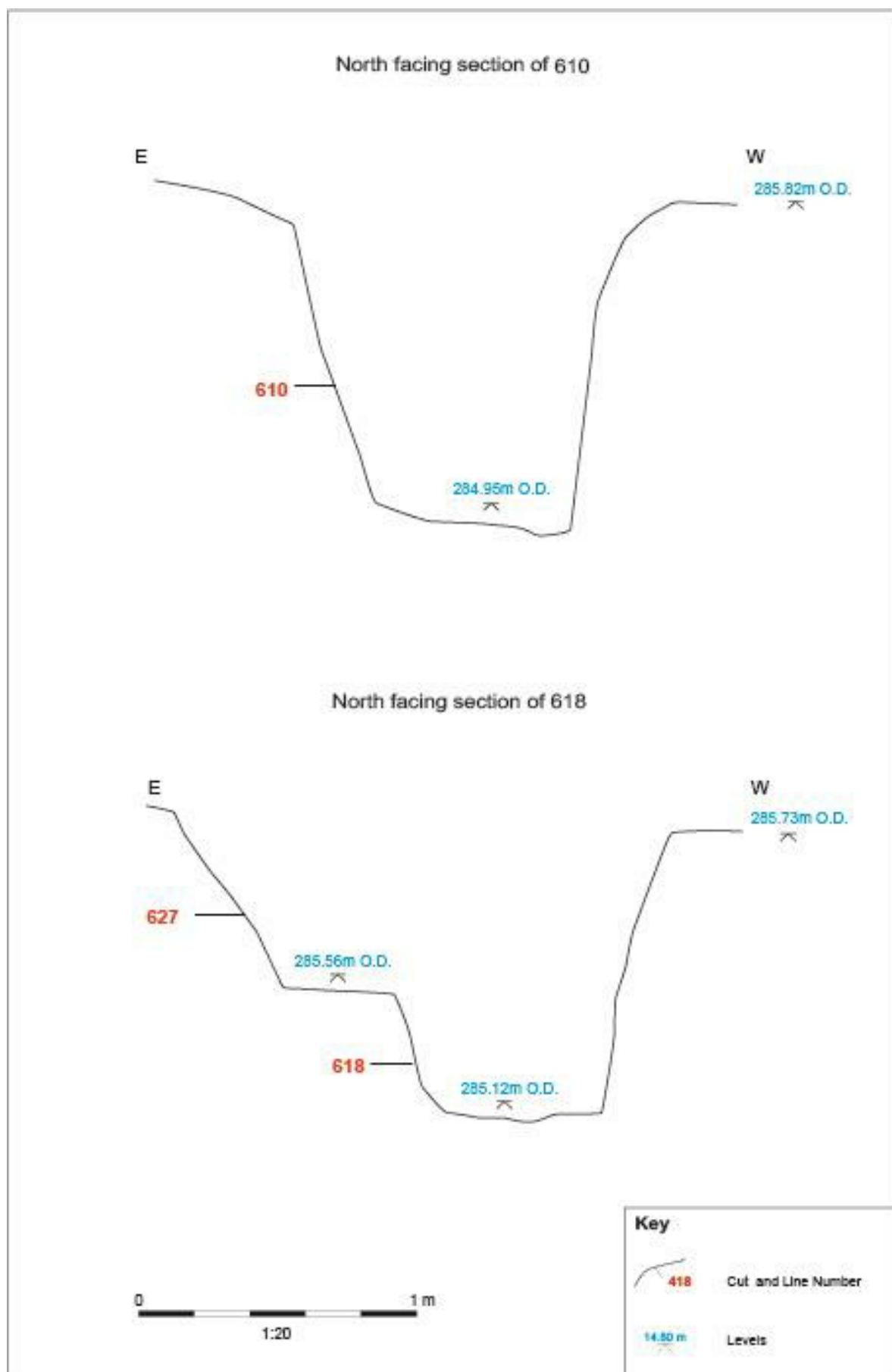


Figure 7.10: Profiles of Post Holes [610] and [618].

8. Trench 7

8.1 Archaeological Descriptions

Trench 7 was linear in plan, aligned east/west and measured 17.60m in length and 5.00m in width. The trench was located approximately 20.00m to the south of Trench 6, within the northern extent of the scheduled area, **(Figure 3.1, 7.9 & 8.1)**. The aim of the trench was to re-examine the remains of an old archaeological trench which was visible as a depression running across the remains of the forts north-eastern rampart.



Figure 8.1: View of Trench 7, looking West.

The trench was covered by a dense spread of scrub vegetation and dark blackish brown loamy topsoil **(701)**, approximately 0.05m in depth. Directly below the topsoil was a dark-greyish brown silty sub-soil deposit **(702)**, which appeared to seal all archaeological deposits and varied in depth across the trench from c.0.30m to 0.50m, **(Figure 8.6)**. Within this deposit frequent inclusions of 18th and 19th century ceramics, glass and metal work were encountered (see Appendix, Howard-Davies: 2015).

Within the southern half of Trench 7, truncating deposit (702) a linear cut [711], believed to be the remains of a former archaeological trench was identified (**Figures 8.1 & 8.5**). The cut measured c.1.20m in width and had an excavated length of 17.40m. The full extent of [711] could not be determined as it continued westwards beyond the confines of Trench 7. Cut [711] contained a single back fill deposit comprised of a dark greyish brown silt deposit (**710**), varying in depth between 0.30m and 0.60m.

The south facing section of cut [711] revealed the remains of a convex mound most likely the remains of the forts north-eastern rampart (see Chapter 7). The mound measured, c.9.00m in width and c.0.70m in height, and was sealed by deposit (702), (**Figure 8.6**). The mound was comprised of light yellow/grey clay deposit (**704**) which ranged in depth between 0.10m – 0.25m. Underlying (704) several layers of turves (**705**) were detected, which had a maximum depth of 0.50m. In section the turves appeared as horizons of black silt (turf) which were intercalated between thicker layers of grey sandy clay (see Appendix, Archaeological Services, University of Durham). Beneath the turves (705) a deposit of iron pan (**707**), c.0.04m in depth was encountered, which overlay a natural light orange/brown sandy clay deposit (**708**), which contained frequent inclusions of small sub-angular stones <0.06m, (**Figures 8.2 & 8.6**).



Figure 8.2: View of the convex mound (704 & 705), visible in the south facing section of cut [711], looking North.

Truncating the western edge of the mound (705), beneath deposit (702) lying on top of the natural clay (708), a spread of varying sized, sub-angular grit stones (703), packed with a deposit of dark reddish brown clay (712) were encountered (**Figures 8.3, 8.5 & 8.6**). The spread had an excavated width of c.1.20m but did appear to continue westwards, northwards and southwards beyond the extent of Trench 7. The stones were visible as a tightly packed spread, within the northern and southern sections of the former trench [711], however at the base of [711] the spread appeared fragmented, possibly as a result of damage caused during the previous excavation or the slighting of the rampart when the fort was abandoned. Further excavation revealed that a number of the stones had turned red, possibly as a result of being heated.



Figure 8.3: Shot of stone spread (703), visible at the western extent of cut [711], looking East.

Within the eastern half of [711] a slot c.0.40m in depth was excavated at the eastern extent of the aforementioned mound (704 & 705), to determine whether there was an outer ditch associated with the rampart (**Figure 8.4 & 8.6**). The slot revealed only the natural geology, comprising of the sandy clay deposit (708) previously discussed, which measured 0.30m in depth below which was the natural bedrock comprised of light grey plated or flaggy gritstone (709).

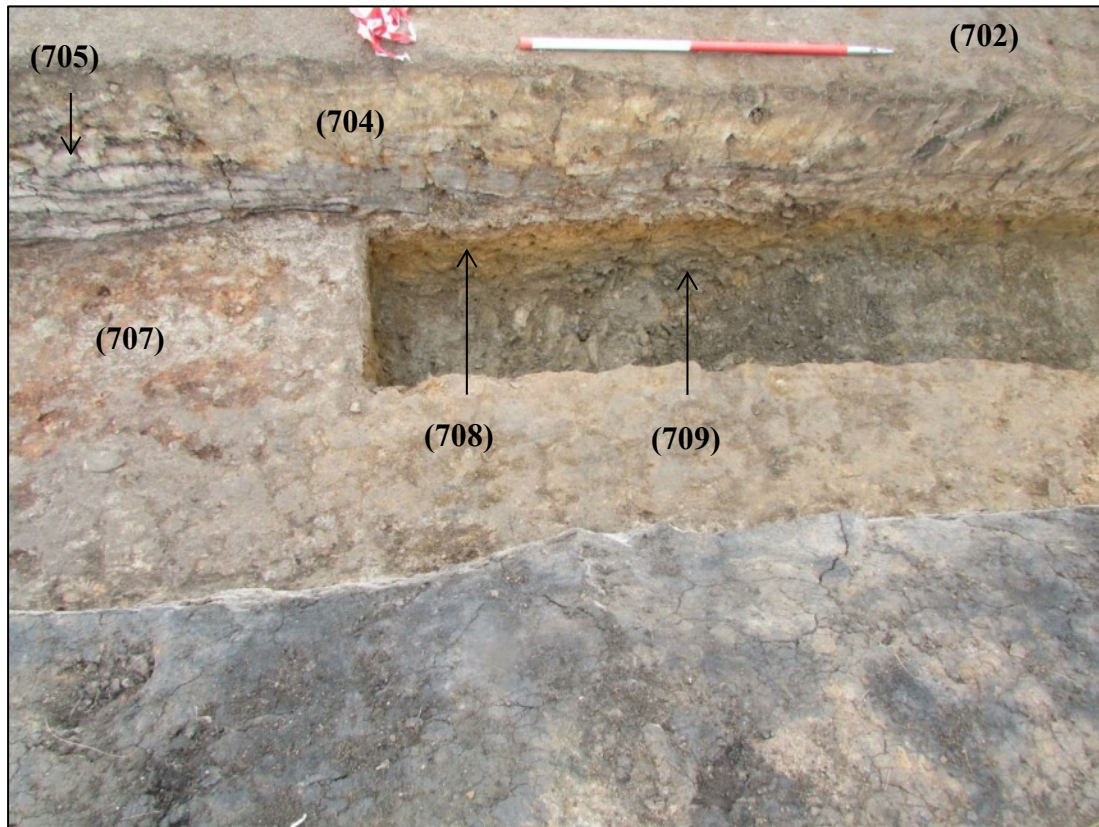


Figure 8.4: South facing section of cut [711], showing convex mound (704 & 705), iron pan deposit (707) and natural clay (708) and bedrock (709) layers within additional slot.

8.2 Archaeological Discussion

The excavation of Trench 7 produced significant results, recording a number of key features dating to the Roman occupation of Castleshaw. The archaeological evidence from Trench 7 can be summarised as follows:

Modern Disturbance (18th, 19th and 20th Centuries)

All archaeological deposits within Trench 7 were sealed by a sub-soil layer (702), which contained frequent inclusions of ceramic, glass, corroded metal and animal bone, similar to deposit (601) found within Trench 6, (Chapter 7). Analysis of these finds suggest that (601 & 702) was a plough soil, which contained an accumulation of 18th and 19th Century midden material, most likely originating from the settlement at Lower Castleshaw, which lay to the immediate east of the Roman fort (see Appendix, Howard-Davies: 2015).

Truncating the southern half of Trench 7 were the remains of a linear cut [711] cut, which contained a single fill (710), (**Figures 8.1 & 8.5**). In 1984 the Greater Manchester Archaeological Unit set out to record the location of all archaeological trenching at Castleshaw, which predated their 1984 excavations (**Figure 4.3**). The survey identified cut [711] as a former archaeological trench but no documentary

evidence has been found to confirm who excavated the trench. However in his 1908 interim report, Bruton makes reference to excavating several test trenches across the earlier forts rampart and it seems reasonable to suggest that this trench [711] was one of Bruton's test trenches (Bruton, 1908: 19).

Roman Occupation (Late 1st Century AD).

As discussed in Chapters 6 and 7, previous historical and archaeological investigations have established that the first military presence at Castleshaw was established by Agricola in AD79 in the form of a turf and timber fort, which housed an auxiliary cohort of infantry who guarded the main trans-Pennine highway which linked the legionary Fortresses of Chester and York, (Redhead, 2012: 2). Evidence of activity associated with this early fort was found within Trench 7 and this summarised below.

Rampart

As discussed in Chapter 7, the preservation of the earlier forts rampart at Castleshaw is generally poor, largely owing to it being slighted by the departing Romans, when the fort was abandoned in the mid-90 AD, in addition to truncation through ploughing during the 18th & 19th centuries and subsequent disturbance by late 19th and 20th century excavations (Redhead, 1989: 25).

During the early and mid-20th century the fort's rampart was the subject of several investigations. In 1907, Bruton excavated several test trenches across the forts rampart revealing *'sod layers, of a different character from those of the inner fort (fortlet). The lines were less clearly shewn, and – whereas the thinner lines in the inner fort were perfectly black, contrasting strongly with the pale streaks of sandy clay, in the outer rampart (fort) the dark lines were distinctly brown and seemed to consist of a different material* (Bruton, 1908: 19).

In 1957 Rosser established that the north-western rampart of the fort was constructed of turves which had been set on a corduroy of horizontal oak posts for stability (Thompson, 1974: 5). Similarly in 1963 Thompson excavated a trench to the immediate north of Trenches 6 & 7 which confirmed that the northern extent of the forts north-eastern rampart was also constructed from turves, which had been subject to prolonged leaching, which had deposited a thick layer of iron-pan on the natural clay beneath the rampart. Thompson found no evidence of timber corduroy below the rampart in this area (Thompson, 1974: 5).

At the time of the 2014 excavation the remains of the earlier forts north-eastern rampart were only visible in the location of Trench 7, as a low mound which was concealed by long grass. However during the re-excavation of the earlier Bruton trench [711], the remains of the forts rampart were visible in the south facing section of the trench (**Figures 3.1 & 8.1**).

The rampart remains uncovered in [711] were identical to those described by Bruton and Thompson, being comprising of layers of turves (605) and sandy clay (604), which had been heavily leached leaving a deposit of iron-pan (607) on the natural sandy clay (608) beneath. The differing nature of the ramparts belonging to the fort and later fortlet as discussed by Bruton is most likely the result of the leaching described by Thompson and as such it can be concluded that the north-eastern rampart of the earlier fort was constructed from turf with the exception of its East Gate, where the rampart appears to be comprised of clay (Chapter 7.2).

It must be noted that as confirmed in Trenches 1 and 6, there was no evidence to suggest that a defensive ditch system was present outside of the rampart in this area.

Oven Structure

At the western extent of Trench 7, truncating the inner face of the fort's north-eastern rampart a spread of varying sized, sub-angular stones (703), packed in a clay deposit (712) were encountered. A number of stones appeared to be heat damaged and had turned red in colour. The true extent of the stones could not be ascertained as it continued beyond the western, northern and southern extents of the trench.

Previous excavations by Bruton in 1908 and the Greater Manchester Archaeological Unit (G.M.A.U) in 1984/5 on the later fortlet at Castleshaw, uncovered the remains of a domed stone built oven, which was set into the back of the rampart near the south-east corner of the fortlet (Redhead, 1989: 43). Bruton describes the oven as being *'9 feet (2.75m) in diameter, about 2 feet (0.61m) in height with a slight projection on the western side...The structure was closed in with large flags 3 to 4 feet (0.9m to 1.2m) long and 4 to 5 inches (0.1m to 0.12m) thick, very neatly fitted and forming a stout floor. A shallow parapet surrounded this'* (Redhead, 1989: 43). Later excavations by (G.M.A.U), showed that the flags were missing and the parapet had collapsed, leaving nothing but a burnt clay and rubble core, very similar to the remains found within Trench 7.

Furthermore during the G.M.A.U excavation of 1984 a series of rake out ash and charcoal deposits were also encountered between the remains of the oven and the fort's Intervallum Road, (Redhead, 1989: 43). Whilst Trench 7 did not extend westwards enough to establish whether there were any rake out or charcoal deposits associated with the stone rubble remains (703), excavations within Trench 1, to the north of Trench 7 did reveal similar deposits. Within Trench 1, along the inner face of the fort's north-eastern rampart fragments of heat marked gritstone were uncovered along with a series of pits filled with deposits of ash, charcoal fragments and lumps of burnt clay (119). There was no obvious pattern to the distribution of these burnt stones and they were not distinguished by any uniformity of size or shape. However analysis of the material found within these pits suggests that the material most likely originated from an oven super structure and fragments of burnt clay may suggest the presence of a Roman tile used as a hearth plate (see Appendix, Mills: 2014).

In Castleshaw: The Archaeology of a Roman Fortlet, Redhead states that ovens set into or close to the ramparts are evident at many Roman forts, suspecting that most garrisons would have had some form of oven. Furthermore excavations by Richmond & McIntyre in 1939 at the site of Fendoch Fort in Scotland, suggested that each century would have had its own baking oven close to its Barrack block (Redhead, 1989: 44). If the aforementioned remains uncovered within Trenches 7 do form an oven structure it would suggest that the Barrack blocks within the north-east and south-east quadrants of the fort had access to their own oven(s) as suggested by Richmond and McIntyre.

Conclusion

Whilst the results of the 2014 excavations have been able to expand upon the findings of previous excavations conducted by Bruton and Thompson, they have also presented us with new questions which can only be answered through a further programme of excavation? The results of the 2014 excavation have not provided enough conclusive evidence to confirm that the stone and clay deposits (703 & 712) encountered in Trench 7 do belong to an oven structure. Further excavation to the north, south and west of Trench 7 would establish the full extent of the remains and confirm or deny the presence of any oven related material such as ash and charcoal. Furthermore it would be prudent to conduct further excavation to the east of Trench 7 along the outer face of the rampart to establish if the possible annexe activity found within Trench 6, continued southward, which could explain the lack of defensive ditch in this area.

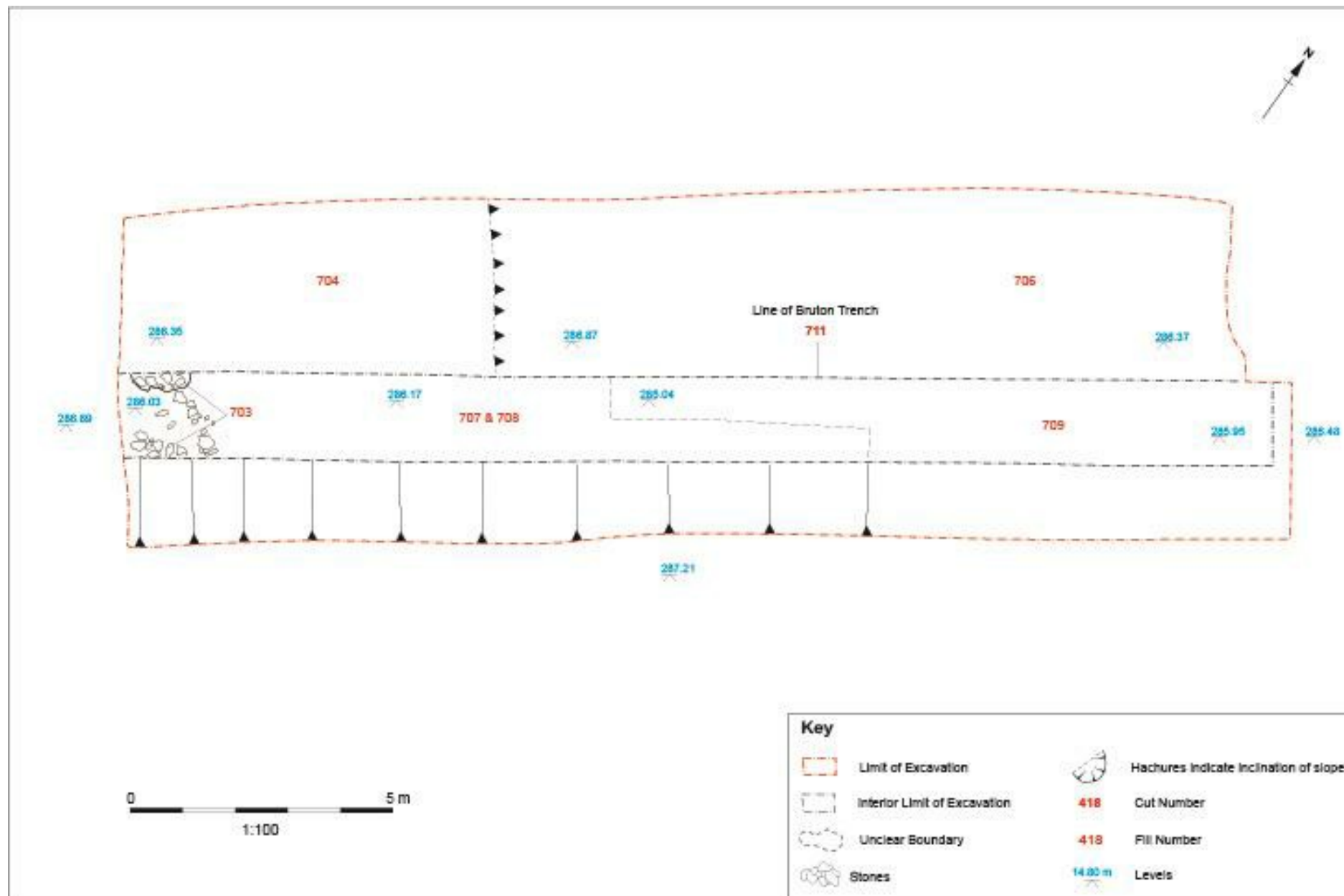


Figure 8.5: Archaeological Plan of Trench 7.

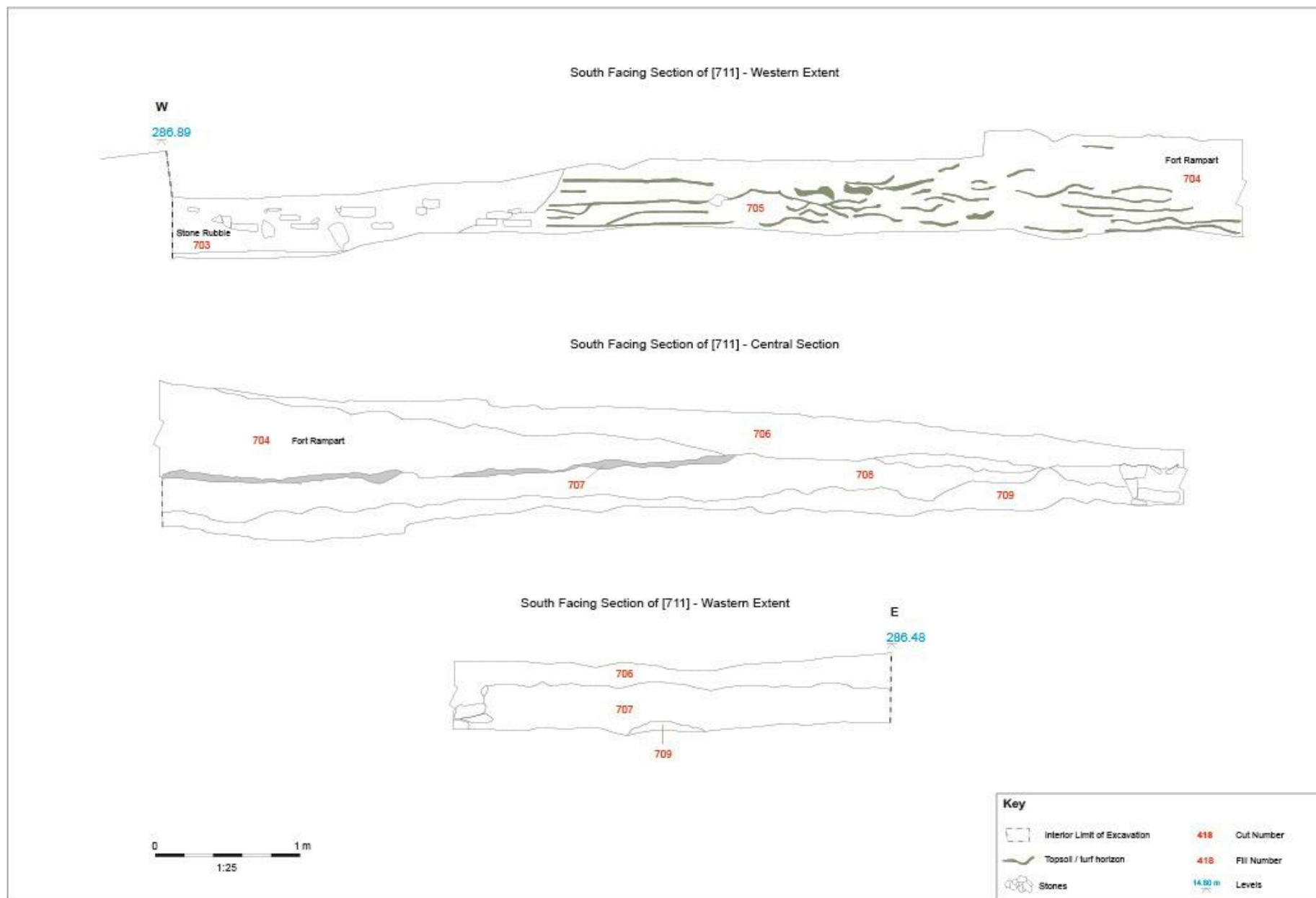


Figure 8.6: Drawing of South Facing Section of former Bruton Trench [711].

9. Trench 8

9.1 Archaeological Descriptions

Trench 8 was roughly rectangular in shape and measured 10.70m in length and 7.70m in width (**Figures 3.1 & 9.10**). The trench was located on the north-eastern border of the scheduled area, lying approximately 25.00m to the north-east of Trench 7, (**Figure 9.1**). The aim of Trench 8 was to further excavate and record the remains of a former dwelling located on the west side of Dirty Lane, which had been subject to previous test pitting (March 2014) as part of the Castleshaw Roman Forts Hinterland Survey.



Figure 9.1: Shot of Trench 8, looking north.

The trench was covered by a dense spread of scrub vegetation and dark blackish brown loamy topsoil, c.0.05m in depth. Directly below the topsoil was a dark blackish brown silty sub-soil deposit (**801**), c.0.30m in depth which contained frequent inclusions of 18th and 19th century ceramics and glass. Deposit (**801**) appeared to seal all archaeological deposits within Trench 8.

Beneath the subsoil (801), within the western and southern extents of the trench, a compacted layer of light orange brown silty clay **(811)** was identified. Deposit (811) appeared to continue beyond the confines of the trench and contained frequent inclusions of small sub-angular stones <0.05m. Along the eastern extent of deposit (811), abutting the outer face of wall **(802)** a spread of varying sized sub-angular stones **(812)** was identified. The spread measured c.1.20m in width and appeared to continue beyond the northern and southern extents of the trench, **(Figure 9.2)**.

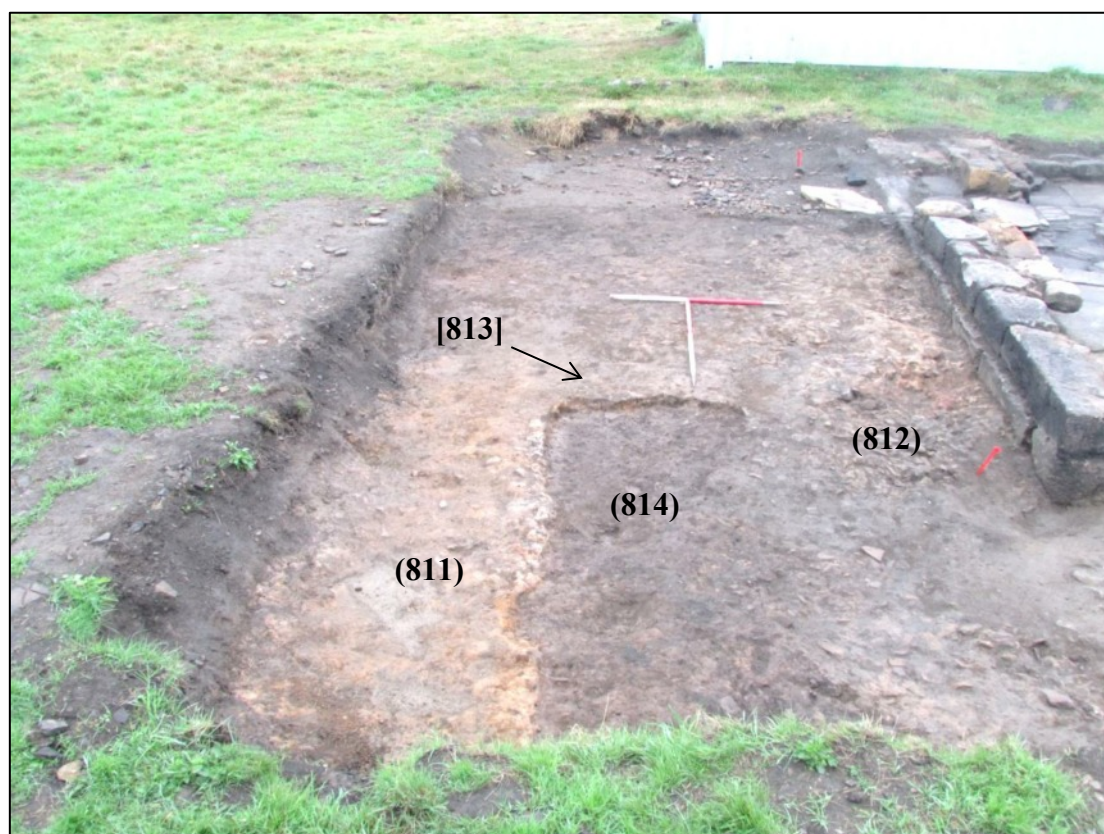


Figure 9.2: Western end of Trench 8. Cut [813] at centre with deposit (811) to the left and deposit (812) to the right, looking north-west.

Truncating deposit (811), to the immediate west of (812), a linear cut **[813]** was identified which appeared to continue beyond the southern extent of the trench, **(Figure 9.2 & 9.10)**. The cut measured c.3.30m in length and c.1.00m in width and contained a deposit of dark greyish brown silty **(814)** which contained infrequent inclusions of small sub-angular stones <0.08m. Owing to time constraints it was not possible to fully excavate this feature and as such its full depth could not be ascertained.

Within the eastern half of Trench 8 a series of four adjoining walls were identified, which formed a rectangular enclosure measuring c.4.60m x 4.00m, **(Figures 9.3 & 9.10)**. All four walls were constructed from regularly laid stone blocks (c.0.50m x

0.30m x 0.25m) and had a stone rubble core. The most westerly of these walls (802) was aligned roughly north/south, measured c.6.00m in length, 0.60m in width and survived to a maximum height of 0.50m. The only exception was along the northern end of the wall, where a c.0.90m wide recess was identified. The full extent of (802) could not be established as it continued beyond the northern extent of the trench. Abutting either end of the eastern or inner face of (802) were two further stone walls aligned roughly east/west; (809) to the north and (803) to the south. Wall (809) survived to a height of 0.25m, measured 0.60m in width and had an excavated length of 4.90m which continued beyond the eastern extent of the trench. To the south wall (803) survived to a maximum height of 0.70m, measured 0.60m in width and had an excavated length of 5.95m which continued beyond the eastern extent of the trench. Abutting the eastern end of both walls (809) and (803) was a fourth wall (810), which formed the eastern boundary of the enclosure. Wall (810) was aligned roughly north/south and survived to a maximum height of 0.25m, measured 0.60m in width and had an excavated length of c.6.00m which continued beyond the northern extent of the trench.



Figure 9.3: Aerial shot of walls (802), (803), (809) and (810) and the stone flagged (805) and concrete (806) and (807) floors contained within, looking south-east.

Abutting the southern or outer face of wall (803) a fifth stone wall **(804)** was identified (**Figures 9.4 & 9.10**). Wall (804) was aligned roughly north/south and was of the same construction as walls (802), (803), (809) and (810). Wall (804) survived to a height of c.0.65m, measured 0.60m in width and had an excavated length of 2.20m. The full extent of the wall could not be established as it continued beyond the southern extent of the trench.



Figure 9.4: Wall (804), looking north-west.

Within the enclosure formed by walls (802), (803), (809) and (810), a rubble deposit comprised of a dark greyish silt with inclusions of mortar and sub-angular grit and sandstones <0.20m, c.0.15m in depth was identified **(818)**. Within deposit (818) a large quantity of ceramic sherds were uncovered which ranged in date from the mid- 17th through to early 20th centuries (**Figure 9.6**). A single sherd of late medieval, c.15th century green glazed pottery was also found within this deposit (**Figure 9.7**).

Within the central and eastern areas of the enclosure two large, rectangular concrete slabs **(806)** and **(807)** were identified (**Figures 9.3 & 9.10**). The central slab (806) appeared to overly surface (805) and abut wall (803). The slab measured c.4.00m x 2.16m x 0.10m and contained two small, square holes (0.10m x 0.10m) along its eastern edge. The eastern slab (807) lay approximately 0.10m to the east of slab

(806) and measured c.4.00m x 1.24m x 0.10m. The slab appeared to sit within a timber and concrete frame **(816)**, c.0.08m in width which surrounded the entirety of the slab and abutted walls (803) and (810) as well as slab (806). On the surface of (807) the partial remains of a mortar and York Stone flagged surface **(808)** were identified. Only four large flags survived the largest of which measured c.0.90m x 0.65m.

Within the north-east corner of Trench 8, between slabs (806) and (807) and wall (809) a possible sixth wall **(817)** was identified. The wall was constructed from stone blocks, (c.0.50m x 0.30m x 0.25m) and appeared to sit on top of surface (805). The wall (817) measured c.3.00m x 0.72m , however it's full extent could not be ascertained as it had been badly truncated and appeared to continue eastwards beyond the extent of the trench (**Figures 9.5 & 9.10**).



Figure 9.5:
Wall (817) on
left and wall
(809) on the
right, looking
west.



Figure 9.6: Selection of post medieval pottery sherds found within deposit (818)

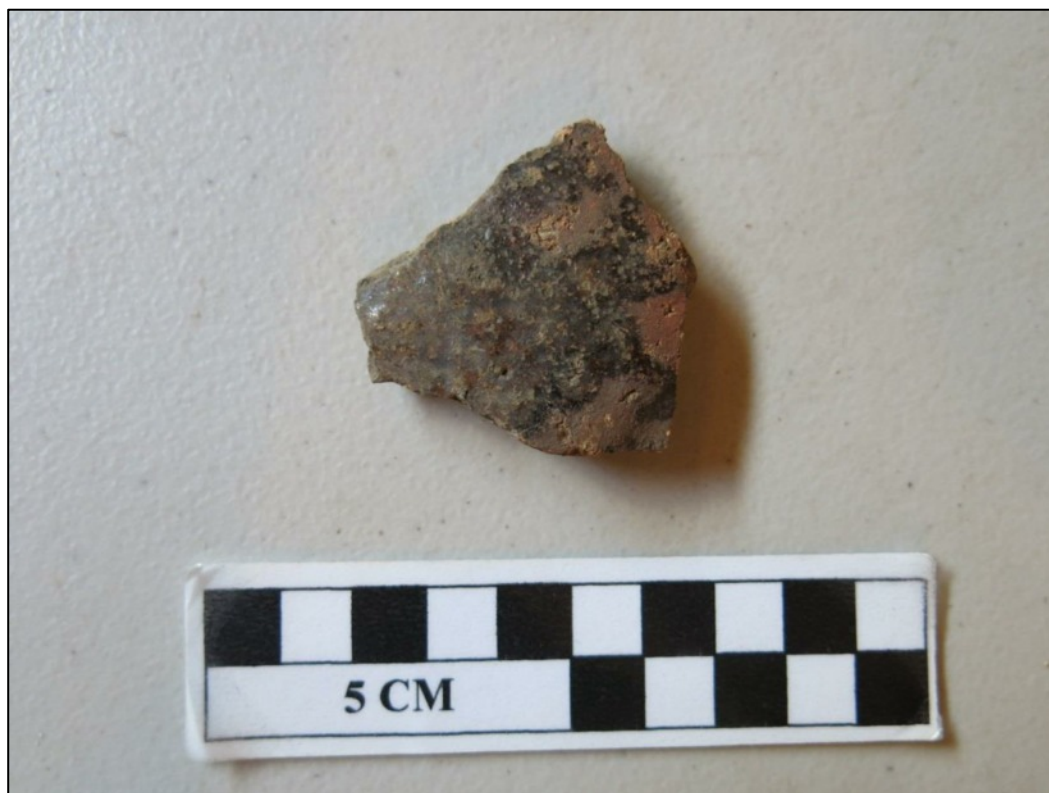


Figure 9.7: Sherd of late medieval, green glazed pottery found within deposit (818)

9.2 Archaeological Discussion

Cartographic and documentary sources confirm that the structural remains uncovered within Trench 8 belonged to the south-western extent of a dwelling house / cottage which once formed part of a small farm, known locally as ‘Husteads’ (Redhead, 2014:2), (Figure 9.8).

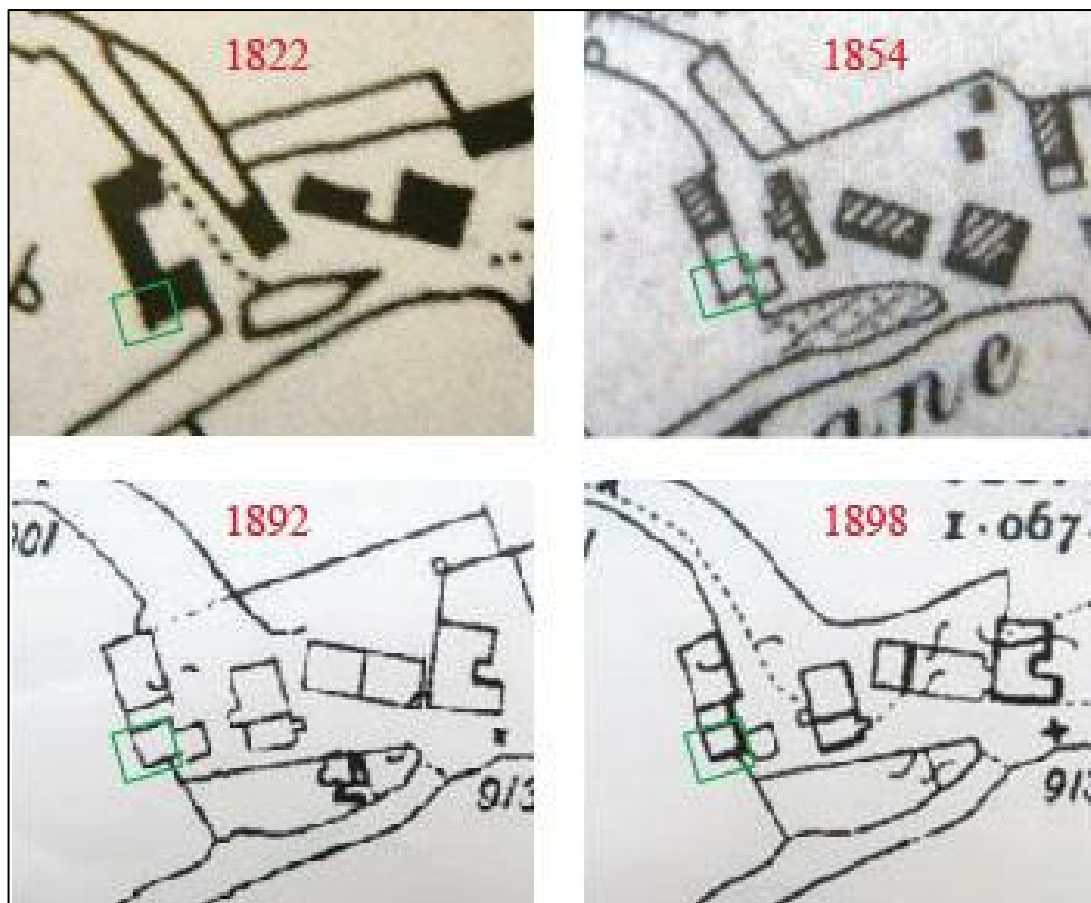


Figure 9.8: Historic Map Regression showing the 1822 Saddleworth Township Map and the OS surveys of 1854, 1892 and 1898. The location of Trench 8 is marked in Green.

The earliest cartographic source for the farm is the Saddleworth Township Map of 1822, which shows a ‘U’ shaped structure and enclosed field labelled (4b) on the west side of Dirty Lane (Figure 9.8). Between the OS survey of 1854 and 1898 the site appeared to have been subject to some remodelling and rebuilding (Figure 9.8). Between the OS surveys of 1898 and 1964 the structure appears un-changed however a short time later aerial photographs show the building to be in ruinous state (Figure 9.9). The earliest documentary evidence for the farm was a deed of 1767 where it is referred to as ‘a cottage, messuage or dwelling house in Castleshaw, now or late in the occupation of John Schoefield, (WYAS BG83 118 in Redhead, 2014: 4). John

Schoefield, died in 1757 in his 77th year, and in his will he is described as of Husteads in Castleshaw, yeoman (Lancs Archives 1759 in Redhead, 2014: 4). Documentary sources suggest that the farmhouse was built by John Schoefield and contained a date stone inscribed ISS 1737.



Figure 9.9: Historic Aerial Photograph, circa 1970's showing the ruinous remains (top left) of the dwelling house/cottage which once formed part of the farmstead known locally as 'Husteads'. (Photo taken from Redhead, 2014, 12)

Excavations within the eastern half of Trench 8 revealed a series of four adjoining stone walls; (802), (803), (809) and (810) which appear to match the footprint of a small square structure first depicted on the OS map of 1822. In addition a fifth stone wall (804) appears to form the remains of the boundary wall which is first depicted on the OS map of 1854 (**Figures 9.8 & 9.10**).

Within the structure formed by walls (802), (803), (809) and (810) the partial remains of a stone flag floor surface (805) were encountered, which had been sealed by later deposits comprising of two large concrete rafts (806) and (807) and sixth stone wall (817) which abutted the inner face of wall (809). It is likely that the flagged surface (805) represents the structures original floor surface, whilst the concrete rafts (806) and (807) and later wall (817) represent later adaptations to the structure, most likely a result of a change in use from a domestic space to an animal enclosure.

Excavations within the western extent of Trench 8 revealed a compacted silty clay deposit (811) which appeared continued beyond the confines of the trench. Deposit (811) appeared to be a sub-natural deposit, possibly formed as a result of levelling for the construction of 'Husteads' (**Figure 9.8**). Deposit (811) was not encountered in any other trench and does not conform to the areas known natural deposit of sandstone and boulder clay.

Situated on top of deposit (811), abutting the outer face of wall (802), a linear deposit of sub-angular stones (812) was identified. Although not depicted on any mapping it is most likely that deposit (812) represents the remains of an exterior pathway which ran along the western extent of the cottage.

Truncating deposit (811) within the south-western corner of the trench a linear cut [813] was identified which appeared to continue beyond the southern extent of the trench, (**Figure 9.2**). At the time of excavation it was not possible to fully excavate the cut and as a result it is not possible to explain the origin or function of this feature.

Documentary sources give a mid-18th century construction date for the dwelling house however the finds assemblage from Trench 8 suggests that there had been domestic activity on the site from the late medieval period onwards. Therefore it may be that an earlier cottage had been in existence on site and John Schoefield had merely extended or rebuilt an earlier property.

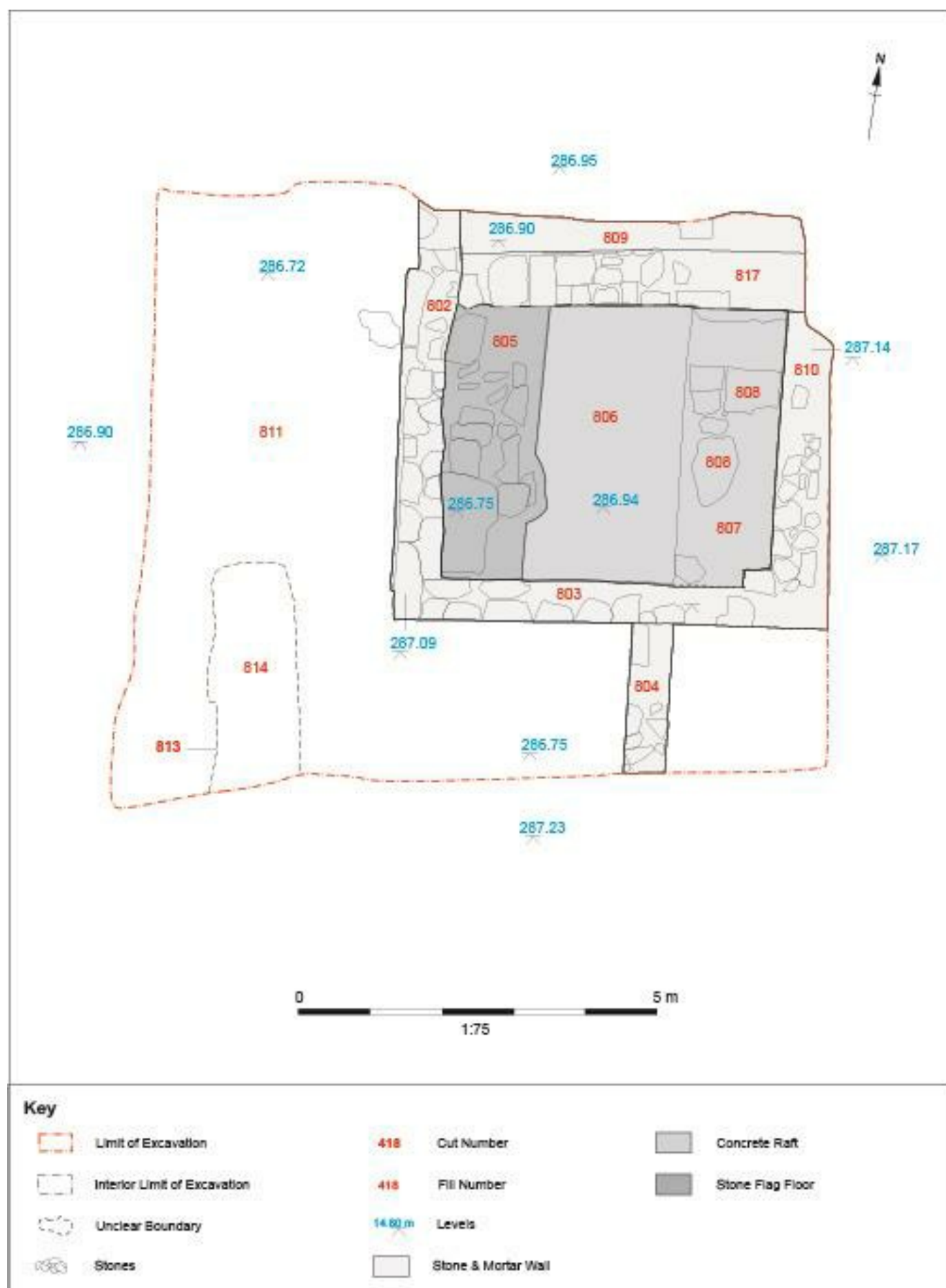


Figure 9.10: Archaeological Plan of Trench 8

10. Archaeological Conclusions

The 2014 one month long community excavation at Castleshaw has revealed a considerable amount of new information on the archaeology of the Roman fort. The investigations focused on exposing and re-excavating old archaeological trenches, with some previously undisturbed areas cleaned and sample excavated. This can be considered to have been a large scale exploratory evaluation as most of the Roman archaeology was surface cleaned and left in *situ*. The main conclusions from the exercise are set out below.

It has been demonstrated that the interior of the fort exhibits variable archaeological survival, due not only to previous excavations but also to ploughing damage and the recycling of stones. Trench 1 revealed severe truncation of deposits in places, such as the *via principalis* road where the camber had been removed and only the base layer of the road and primary fill of the roadside ditch survived. Elsewhere in the trench natural was close to the surface and only vestigial remains of Roman features survived, but in other places, such as close to the rampart, stratigraphic survival was much better. In Trench 2 the preservation of Roman deposits and features was excellent, with complex stratigraphy being revealed. This variable survival across the fort interior is clearly a major factor for interpretation of the remains. Only by opening up large areas for excavation will it be possible to maximise understanding.

In Trench 1, in the north-east quadrant of the fort interior, an area close to the Roman east rampart was found to contain pits full of charcoal, ashes, as well as many pieces of daub, some of it burnt. These had come from demolished structures, possibly ovens, the debris being deposited in pits located at an out-of-the-way corner of the fort. These pits may represent post-fort demolition material. They were sited where the *intervallum* should be and no evidence of this was found in the trench despite Thompson's plan of 1963 indicating its presence.

Elsewhere in Trench 1 several hearths, spreads of stone, post settings and slots suggested the position of buildings alongside the service roads. However, the slots proved difficult to interpret and match up with those shown on Thompson's plans and again show the need for open area excavation to properly understand the form of buildings, phasing, and function. The buildings may relate to barracks but their form and phasing is uncertain within the constraints of the trench and differential survival. Of note were spreads of stones alongside the two service roads; these may have provided access in to building entrances. Roadside drains were part-excavated and these had some interesting finds, such as a large 'melon' bead made of glass paste and a piece of Samian ware (the finest Roman table ware). The roads seem to have been remodelled and adapted over time to changing uses in this area.

The 2014 excavation was able to confirm, in Trenches 1, 6 and 7, Thompson's observation that defensive ditches appear to be absent on the east side of the fort, although a possible stone-filled ditch terminus was noted in the north section of

Trench 1. The ditch may have terminated in a marshy area where a drain identified by Thompson in 1964 was further exposed and its full profile and section recorded. The waterlogged conditions provided good preservation of palaeo-environmental material. Pollen analysis suggests the immediate area comprised a heath landscape, with oak and birch in low numbers, and willow and alder from wetter environments. Some cereal cultivation may have occurred as spelt wheat was found, this being the main cereal crop for Roman Britain. There was also evidence for herb rich pasture and this builds on similar results obtained from a ditch pollen profile in the vicus area outside the fort south gate in 1996 (Brayshay 1999). Oak was the main structural timber and it is thought this was brought on to the site from elsewhere, perhaps elsewhere in the valley where there were better drained soils.

The east gate had last been investigated by Bruton in 1907. This was re-opened and a substantial section of the road exiting the gateway was cleaned and recorded. This showed at least two phases of Roman road. The first one occurred in the gateway area, was finely metalled, and probably belonged to the first timber and turf fort of AD 79, being part of the *via praetoria* road surface. Substantial post pits were found which once held the posts supporting the timber gate structure. This was a dual portal affair comprising six post settings, all of which were exposed within the confines of Trench 6. Two of the post pits were fully excavated and it was found that Bruton's excavations had not fully emptied them. Remains of the original oak posts survived in the base of the post holes. As the road exited the gateway its character changed and it became more uneven and less well made. It is believed that this is a later road, laid down in the early 2nd century at the time of the fortlet. This road, first discovered by Bruton in 1907-8, looped round the north side of the fortlet via the former west and east fort gateways. It is thought this diversion from the main highway was to facilitate space for vicus buildings outside the south gate. The loop road was also identified along the southern edge of Trench 2.

Trench 6 yielded a third possible road. Only the start of this road was exposed, where it joined with the north side of the main road exiting the gate. It appears to run in a northerly direction parallel with but outside the east rampart. A rectangular stone free area, adjacent to the junction of the exit road and this newly discovered road, contained lots of burnt daub and may represent the site of a timber building. Given that no defensive ditches have been found on this, eastern, side of the Roman fort, and given this area's flat nature, it is possible that the road and building belonged to a military annexe. It is inconceivable that there should not be a defensive ditch system for this side of the fort, where the approach is the easiest, and especially as the presence of ditches has been demonstrated through excavation on the north and south sides. However, if there was an annexe here, then defensive ditches might be found further east, perhaps in the area of Dirty Lane.

To have a rampart with no accompanying ditches on one side of a fort is very rare. A local example is suggested at Slack, at Outlane near Huddersfield, which is the next fort eastwards along the main cross-Pennine highway to York. The fort is surrounded by ditches except for the southern half of the eastern defences which give access to

the bath house and a possible annexe. Based on the 2014 evaluation results, the area between Dirty Lane and the eastern rampart at Castleshaw should now form a key area for future research.

Trench 2 produced significant archaeological results. A surprisingly complex series of construction slots, hearths, pits, post pads, floor surfaces, drainage ditch and a road were identified and recorded. Interpretation and phasing were challenging within the constraints of the excavation, which focused on re-excavating old trenches and was made more difficult by the hardening and blanching of the clay soils in hot, sunny conditions. Furthermore, a hard trampled clay deposit masked most Roman features, so that they were difficult to identify on the surface. However, some important conclusions can be drawn.

Several phases were represented, the latest belonging to the post fort (fortlet) phase in the form of two post pads next to the edge of the loop road. The earliest exposed Roman deposit was an area of burnt orange silty-sand, possibly associated with an industrial working area. There was stratigraphy, for instance there were several intercutting building slots, and the fort loop road overlay a fort phase slot. It is clear that more intensive excavation would be required to form a proper understanding. A workshop function for the building in this area in the late 1st century AD fort phase is still plausible, and supported by the presence of a number of hearths and evidence for floors and rebuilding of timber framed walls. Two hearths were sampled for chemical analysis to see if there was lead and iron enrichment, which could represent metal working. This was found not to be the case in this instance. Along with the evidence from Trench 1, this is the first time that fortlet phase (early 2nd century AD) features have been identified beyond the fortlet's northern defences. This chimes well with the extra-mural activity found outside the southern defences.

Thompson's 1963 excavations found a pit full of Bronze Age domestic pottery dating to around 1500 BC. Trench 2 was sited over the pit location but its re-excavated yielded no further pottery. However, nearby was a stone-filled curving gully which might be the remnants of a prehistoric structure. This gully was exposed in the base of Thompson's old trench and its limits were not defined as it ran out of the trench under Roman deposits. The presence of even earlier prehistoric finds, in the form of Mesolithic flint tools, provides a picture of continuous use over many millennia of this spur of land within the Castleshaw valley.

Re-excavation of an old trench exposed in Trench 7 allowed an examination of a section through the east rampart. This showed the individual turves that had been dug out by the Roman soldiers and carefully piled up to create the core of the rampart. At the back of the rampart was found a stone structure which may have been a bread oven for an adjacent barrack block. This would not be an unusual feature, for instance at Elginhaugh in Scotland, a late 1st century AD auxiliary fort, a row of four stone oven bases were found set into the back of the rampart in a corner of the fort.

Research Framework

In reviewing previous archaeological investigations and current understanding, the Conservation Management Plan identified several gaps in our archaeological knowledge for Castleshaw (Middleton 2011). These were set out as 25 research questions covering the prehistoric, Roman, medieval and post-medieval periods. The following research questions are relevant to the results of the 2014 excavation.

The nature and form of settlement: *the nature and form of prehistoric activity at Castleshaw is unknown although the focus of finds, especially when compared with surrounding areas, would indicate that the site was in use potentially from the Mesolithic period onwards. However, such conclusions have to be seen against the extent of excavation at the fortlet when compared to other sites in the area, and the possible bias this creates in archaeological record.* Research Objective 3.

Over 40 worked flint tools and weapons were found during GMAU's 1980s excavations of the fortlet. Trench 2 from the 2014 excavation, even though it was focused on the Beaker pottery pit previously excavated by Thompson, yielded very little in the way of further flint finds. However, this must be substantially due to the fact that the dig concentrated on cleaning the top of the Roman deposits and emptying old excavation trenches; there was only limited excavation of previously undisturbed features. So it is likely that more prehistoric finds are sealed in this area. The potential prehistoric, stone-filled, gully identified near to the Beaker pit and in the base of an old Thompson excavation trench does suggest that further investigation in this area would yield important results in relation to this research question.

The internal layout of the fort: *there are still a number of key buildings which have not been located namely stables, storerooms, latrines and workshops, as well as the apparent absence of any ditches on the eastern side of the site and the absence, so far, of an identified parade ground. This is unsurprising given that only 35% of the fort has been excavated. Unfortunately the scattering of the earlier excavations may have destroyed or obscured the possibility of a comprehensive understanding of some areas; although the 1984-88 excavations have proved that much information can still be gathered from re-excavating the old trenches.* Research Objective 7.

The recent investigations have not really advanced our understanding of the interior layout of the fort. In fact interpretation has become more challenging as Trench 1 has shown how difficult it is to piece together the excavated slots to make barrack blocks. This is undoubtedly not helped by the variable level of truncation and digging within narrow trenches, and it is clearly not possible just to join up the dots; the recent work indicates that there were probably two phases of building within the fort, in place overlain or cut through by post-fort and fortlet phase activity in the early 2nd century AD. The only solution is to strip large areas. Additional research questions have been raised with the discovery of a possible annexe on the east side of the fort and this area should be a priority for future investigation as it could shed important light on the function of the fort. Evidence from Trench 1 suggests a

complex story of changing use and function, for instance the intervallum road has been removed the service roads appear to have been adapted. This together with the irregular nature of the building slots and post settings, indicates a changing or different function in this part of the fort to the previously accepted barrack block interpretation. Future research investigations should include open area excavation in this area to understand the layout, phasing and function of fort and post-fort buildings/activities.

Understanding the road network: *it is a priority to understand more about the course of the road Margary 712 where it runs adjacent to the fort. Currently, the course of the road is unknown, given the absence of any evidence of the feature during the Daycroft Field excavations to the south of the fort and fortlet. Targeted excavation to the east and north of the fort might help identify the course of the road. Similarly, the road alignment from the north gate is also not properly understood. A combination of high resolution LiDAR survey and field survey might allow the course of this to be established at least to the point where it disappears beneath the reservoirs. Further investigation is also needed to define the course of the roads leading out of the east and west gates as well, and confirm whether they do join back with the main road.*
Research Objective 9.

It has been possible to expose a large tract of the road within and leading away from the east gate. The fortlet phase loop road was confirmed in Trench 2 and Trench 6. It was of a much cruder make-up than the fine metalling seen in the east gateway which was probably associated with the *via praetoria* of the fort. The course of the road from the east gate appears to be angling back towards the main highway which is clearly visible as an earthwork climbing up the head of the valley, yet test pitting and geophysics in the hinterland area of the fort have singularly failed to find the road. In fairness, there has been a considerable post-medieval disturbance in the critical area from building construction for the Lower Castleshaw hamlet and Husteads Farm and it may not be possible now to link up the two roads.

Understanding the wider landscape: *there is potential for a better understanding of how Castleshaw functioned with the wider landscape. This partially ties in with those issues raised in terms of understanding the distribution of Iron Age settlement in the area and how the forts interacted, if at all, with existing native settlements. This again raises the issue of whether there was a civilian settlement (vicus) related to the Flavian period fort and whether food was being produced locally in order to augment the garrison supplies. Palaeo-environmental samples associated with the fortlet show managed pastureland surrounding the site in the 2nd century AD but little evidence so far of arable production. However, it is uncertain if a similar situation prevailed in the earlier period. A more comprehensive sampling strategy – covering material from both inside and outside the site – could reveal a great deal about the activities and infrastructure supporting fort life. A study of a broader finds assemblage may also provide information on the nature of materials being brought into the site ie. those materials that could not be provided locally. However, once more, preservation in terms of both the archaeological and palaeo-environmental*

evidence could have a considerable impact on the potential to advance an understanding in these areas. This is one of the overall regional research aims identified in the North West Archaeological Research Framework. Research Objective 11.

Whilst the recent excavations have been confined to the fort area, there has nonetheless been some informative observations made through palaeo-environmental analysis, in particular from the silts within the fort phase drain in Trench. This work has reinforced previous pollen analysis from the mid-1990s and confirms that herb rich pasture surrounded the site in the late 1st century AD but also some arable production. The immediate environment of the fort was heath but oak appears to have grown on better drained ground nearby and brought on to site for construction purposes. There is evidence for either an annexe or extra-mural activity on the east side of the site but this is as yet poorly understood and requires further research investigation. Palaeo-environmental sampling and chemical analysis undertaken for the 2014 excavation has demonstrated good potential for a research project of further sampling across the fort site and its hinterland.

The transition from fort to fortlet: *questions remain about the relationship of the old fort to the new fortlet. Presumably the fort was slighted when it was first abandoned, although the extent of the destruction, and whether it was dismantled or destroyed, remains unclear. The GMAU excavations found little evidence for re-use of earlier foundations or material. Is there any evidence of use during the intervening period or was the site completely abandoned? Potentially the area of the fort outside of the fortlet might have been re-used either for extra-mural settlement or as an annex for protecting extra stores or accommodating troops and convoys in transit, Looking at the nature of transition across all periods is one of the overall regional research aims identified in the North West Archaeological Research Framework. Research Objective 14.*

Trenches 1 and 2 showed evidence of post fort phase features in the area beyond the northern defences of the fortlet. The constraints of time and the limited excavation areas mean that much more work is required to understand the nature of the activity represented by these features. But the important thing is that there does appear to be extra-mural activity to the north of the fortlet, perhaps related to the loop road which swings round the fortlet's north side. Again, only large area excavation could hope to understand the nature of this activity. Trench 1 also identified potential post fort demolition material, perhaps connected to dismantling and abandonment of the site in the mid-AD90s.

The growth of the medieval hamlet: *across the region, settlement study has largely focused on nucleated villages and moated sites rather than the origins of more dispersed sites like Castle Shaw. The exact nature of any medieval settlement adjacent to the site remains unknown. Documentary evidence, and the echoes of settlement layout preserved on later maps, would seem to indicate Castleshaw grew up around the road junction and there is no evidence to suggest a more nucleated*

settlement at this time. However, as yet there is no archaeological dating evidence for the foundation of the settlement. In particular, whether there was an Early Medieval or Medieval precursor of the settlement or whether the hamlet only comes into existence in the 17th century. Research Objective 23.

The excavation of the cottage site at Husteads Farm has yielded a late medieval sherd of green glaze pottery. This extends back the historical narrative by two hundred years and more, confirming the suspicion that Castleshaw hamlet has medieval origins. The early cottage stone foundations were substantial. There were a number of sherds of 17th century pottery as well, pre-dating the 18th century rebuild by John Scholefield and demonstrating longevity of the settlement.

Do elements of the medieval hamlet survive? Further investigation of the hamlet might help identify the extent and layout of the original settlement, and if any earlier fabric still survives associated with the extant or demolished buildings. Research Objective 24.

Trench 8 was limited in scope, as it focused on the former cottage site of Husteads Farm, but it has defined and recorded a substantial walled stone cottage, possibly of medieval origin. As part of the Castleshaw Roman Forts Hinterland Survey, over the last two years the Friends of Castleshaw Roman Forts have been evaluating archaeological potential in and around Lower Castleshaw hamlet. This has been done through a series of test pitting exercises. Fragmentary remains of former buildings and yards have been found. The earliest pottery has been 17th century.

The recent excavations have demonstrated that the archaeology is far more complex than previous excavators have led us to believe. The July 2014 excavations were essentially a large scale evaluation of the Roman fort site. This work has demonstrated that multi-phased, stratified Roman archaeology survives across much of the site. The excavations have found several phases of Roman activity, suggesting that the fort was rebuilt at some stage and that after its final demolition the land was re-used by the Romans for other purposes before and during the occupation of the fortlet. There is evidence for a possible annexe on the eastern side of the fort. The finds assemblage fits in with the date range for military occupation presented by previous studies ie. late 1st- early 2nd centuries AD. Pottery analysis suggests the presence of a kiln. Palaeo-environmental work concludes that the fort environs had some cereal production (spelt wheat) and herb rich pasture, with oak being the main timber used on the fort construction. The evidence points to the fort being adapted from the standard layout and function of an auxiliary fort. Our understanding of the site has been significantly enhanced and will inform a revised research framework to reflect the new discoveries.

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12. Archive

Artifacts have been sorted and catalogued at Saddleworth Museum by members of the Friends of Castleshaw Roman Forts, with guidance from Kirsty Whittall of the Centre for Applied Archaeology. The paper record will be deposited with the Museum as well. Saddleworth Museum is currently undergoing significant refurbishment and will re-open later in 2016. It is anticipated that some of the excavation finds will go into the new displays and the Friends of Castleshaw Roman Forts are working with the museum on this.

Copies of this excavation report will be lodged with Saddleworth Museum and a pdf will go on to the Friends of Castleshaw Roman Fort's website. There is already a blog on the excavation on this website:

<http://www.castleshawarchaeology.co.uk/index.html>

A copy of this report will be deposited with the Greater Manchester Historic Environment Record held by the Greater Manchester Archaeological Advisory Service.

A summary of the excavation results has been published in *Britannia* 2015.

13. Acknowledgments

The Centre for Applied Archaeology would like to thank The Friends of Castleshaw Roman Forts for commissioning the archaeological works and for all their support during the on-site works. The Friends' committee comprises:

Colin Berry, Sue Exon, Jane Neild, Phil Barrett, Sonia Allen, Paul and Jacqui Renshaw, Peter Holford, Sue Smith, and Jim Grady. Former committee member Rob Isherwood is to be especially thanked for leading the schools programme so successfully.

We are grateful to the Heritage Lottery Fund for grant aiding the community excavation and in particular Rebecca Mason, for pre-application advice, and Nick Herepath, Case Officer. Saddleworth and District Parish Council are also thanked for providing a grant.

United Utilities and the tenant farmer, David Hirst, are thanked for permitting access, and the United Utilities Ranger, Morgana Restall, kindly strimmed the grass, set up and close down the site facilities and trenches.

Andrew Davison, English Heritage Inspector for Ancient Monuments monitored the excavations and gave valuable support through the Scheduled Monument Consent process.

Dave Faulconbridge, Castleshaw Centre Manager, provided facilities for workshops, school classes and helped co-ordinate the Duke of Edinburgh Gold Award volunteers.

Peter Fox, Curator at Saddleworth Museum, and his volunteers helped with hosting training workshops, finds processing and storage.

The project would not have been possible without the support and input of the Castleshaw Working Party who raised funds for the replacement of the information boards in 2010, the subsequent Conservation Management Plan in 2012, and who helped with funding and organisation of the Redefining Roman Castleshaw project: Cllr Mike Buckley (Chair),

Norman Redhead (Secretary – County Archaeologist)

Cllr Barbara Beasley (Saddleworth Parish Council)

Christine Wilson Oldham MBC Officer support

Morgana Restall (United Utilities)

Andrew Davison (English Heritage, now Historic England)

Jim Carr (Saddleworth Historical Society)

Alan Schofield (Saddleworth Historical Society)

David Faulconbridge (Castleshaw Centre)
Peter Fox (Saddleworth Museum)
Sonia Allen (Friends of Castleshaw Roman Forts)
Paul Renshaw (Friends of Castleshaw Roman Forts)
Sue Exon (Friends of Castleshaw Roman Forts)

and previously:

Ken Booth (Saddleworth Archaeological Trust) David
Chadderton (Saddleworth Archaeological Trust)

Appendix: Finds Report



**Post Excavation Appendices for the archaeological materials
recovered from excavations at Castleshaw Roman Fort, 2014.**

Site: Castleshaw Roman Fort

Editor: K. Whittall

Report No:
PXR-02/15



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<i>4. Fired Clay and CMB</i>	<i>Dr P. Mills</i>
<i>5. Glass Artefacts</i>	<i>Christine Howard-Davies</i>
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<i>7. Palynology</i>	<i>University of Durham</i>
<i>8. Chemical Analysis</i>	<i>Simon Hutchinson</i>
<i>9 Conclusion</i>	<i>Kirsty Whittall</i>

Introduction

Site Name: Castleshaw Roman Fort

Site Code: CRF14

Scheduled Monument Number: 1017837

National Grid Reference: SD 99880 09633 (centred)

Castleshaw Roman Fort is a scheduled monument located near Delph in the Pennine region of the North West of England. It's prospective date range covers part of the period of Romano-British occupation, with an early phase during the Flavian-Trajanic (90AD) which was the fort itself and the later phase during the Hadrianic (120AD) which was a smaller fortlet. There is evidence of earlier Prehistoric activity on the site, in the form of a beaker burial located to the north east of the site. As the site is a scheduled monument opportunities for the recovery of samples is rare.

The excavation which took place in July of 2014, sought to investigate several factors:

- Locations of previous excavations.
- The location and survival of the gateways.
- Levels of conservation/degradation of the fort.

Castleshaw Roman fort is popular with the immediate and wider society and is a location of dog walkers, hikers and subject to other forms of erosion. The Fort is situated on a prominence of land, which descends rapidly to the south and as such sedimentary illuviation is a concern, however deposits of rendzina soils and peats are present on site, resulting in some localised standing water during heavier downpours.

The samples which were taken from the site had clear and specific aims and objectives, the samples were collected during the last days of excavation, and caution is advised due to the archaeological works being carried out, recent contamination is considered a factor.

The following report outlines the aims and objectives of the sampling programme as a whole and individually per sample; the report outlines the methodology of collection and the

justification of the removal of soils from a scheduled monument. The report also outlines the artefacts recovered from the site, by use of incorporation of specialist's reports. The discussion and mitigation within this report will inform further investigations into research surrounding Castleshaw Roman Fort.

Artefacts

During the 2014 excavations a number of items were recovered from a combination of sealed contexts and unstratified contexts. All artefacts that were recorded were subject to on site cleaning in tepid water, air drying and storage in air tight zip lock bags, in accordance to the industry standard guidelines for onsite immediate conservation of recovered items.

The items were transported via archive box to Saddleworth Museum, where each item was recorded and given accession numbers in accordance to their context. Accessions marks are preceded by site code, containing the year of excavation.

Once all items had been recorded and numbered, the items were separated into ware types to be dispatched to various specialists.

Each of the specialists has delivered reports on their specific type wares which can be found below

1. Lithics

Andrew Myers

The 2014 excavations recovered a small worked lithic assemblage of six pieces, all recovered from topsoil. This includes a whetstone, probably post-medieval in date, which was recovered from trench 1. The rest of the assemblage is made from varieties of deliberately worked flint. The flint ranges from translucent to opaque brown. Of the five pieces of worked flint two retain some worn nodular cortex, which appears to be thin with a sharp transition boundary. The source or sources of the material is unknown, but would probably be deposits of flint bearing boulder clay rather than riverine gravels. Such sources exist both to the east and west of the Pennines. Throughout the early postglacial period prehistoric populations in the central and southern Pennines accessed boulder clay flint for the production of tools.

There are no chronologically diagnostic retouched tool forms in the assemblage. The assemblage includes two examples, both from trench 2 (201), of bladed flakes struck from prepared cores to remove hinge fracture scars on the core face. One of these exhibits abrupt retouch at the distal end and on part of the right-hand margin. This appears to be the only clear example of a deliberately retouched flint artefact in the assemblage.

The small number of artefacts and the lack of chronologically diagnostic forms constrain any conclusions about the age of the assemblage. It should be noted however that two of the artefacts appear to have been struck off blade cores. Blade cores and the production of more bladed assemblages is generally more characteristic of Mesolithic and Early Neolithic assemblages than those of subsequent periods (Pitts and Jacobi 1979). It is worth noting that a small later Mesolithic assemblage made largely of black Derbyshire chert was recovered during excavation of Melandra Roman fort at Glossop, Derbyshire (Manby 1963).

Finds

Trench 1 (101)

Complete tertiary flake of translucent brown flint 17.3 x 20.2 (abrupt scars on platform)

Trench 1 (101) [labelled whetstone]

Whetstone, complete, rectangular in section 103.5 x 16.7 x 22.7 of unknown, dense stone with thin quartzite seams. Localised areas of 'polish' on one face. Probably post-medieval.

Trench 2 (201) [labelled worked flint ? Scraper]

Complete secondary flake of translucent brown flint 35.9 x 28.7 struck off a blade core – thin nodular cortex with very sharp transition. It appears to have been struck off a blade core, and one scar on the dorsal face terminates with large hinge fracture. An incipient cone of force suggests it was struck with a hard hammer. It was probably produced to remove the hinge fracture from the core face. There are abrupt retouch scars at the distal end and on part of the right-hand margin.

Trench 2 (201)

- 1) Complete tertiary flake of opaque light brown flint 24.1 x 16.8 struck off blade core, slight plunge to distal end. Looks as if it was struck to remove a hinge fracture on dorsal face.
- 2) Broken tertiary flake in opaque mottled brown flint. Irregular abrupt retouch (edge damage?) on two margins.

Trench 6 (601)

Secondary flake proximal of brown translucent flint. Thin nodular cortex with very sharp transition. Incipient cone of force indicates use of hard hammer.

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2. Samian Ware

Felicity Wild

Soil conditions in the Pennines are not kind to samian ware, and that from Castleshaw has suffered more than most. The 2014 excavations produced 17 sherds from a maximum of eight vessels. All were South Gaulish, from La Graufesenque, and Flavian or Trajanic in date. In all cases, the surface slip on one or both sides was entirely missing. Apart from the ovolo on one form 37, all decoration had gone and it was impossible to be certain whether a sherd had once been decorated or not. As previous excavations at Castleshaw have produced an unexpectedly high proportion of decorated ware (Webster 1989, 69), the number of pieces noted here as possibly from form 37 may not be an exaggeration.

Trench 1

Topsoil (101):

Form 18. Two sherds, of rim and base, possibly joining. The outside of the rim sherd is particularly badly degraded. The base shows a potter's stamp starting O[...]. Flavian or Trajanic.

Form 37. Four joining sherds in very poor state of preservation, with another three probably from the same bowl. The terminal of the tongue is damaged, but the ovolo, widely spaced, is probably one used by Sabinus iv. No other details of the decoration survive. c.AD 90-110.

Two sherds of uncertain form, with the surface slip entirely gone. Possibly from the same form 37 as above?

Fill of Thompson trench (102):

Bowl sherd, with surface almost entirely abraded on both sides. Possibly from form 37, though no decoration survives.

Brown sandy silt over Via Principalis (105):

Form 18 rim sherd, badly degraded.

Possible Roman feature between Via Principalis and the Western service road (115):

Tiny scrap of uncertain form, badly degraded on both sides. Might possibly be from the cup form 27 or a scrap of decorated ware?

Fill of possible gully of the Intervallum Road (142):

Sherd of bowl or large dish. All the external surface has gone, but may once have been decorated.

Trench 2

(201):

Two joining scraps of uncertain form. The break appears to be recent. Outer surface totally abraded.

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3 Romano-British Pottery

R.S. Leary with contributions from D.F. Williams on the amphorae

The pottery was examined in context groups and catalogued according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004). The fabrics were recorded and sources suggested. Reference was made to the National Fabric Collection (Tomber and Dore 1998). Forms, surface treatment and sherd conditions were described. Quantification was by sherd count, weight and rim percentage values.

There were 82 sherds of Romano-British coarse pottery (794g). The pottery sherds are fully catalogued in the catalogue.

Wares

The fabric of the pottery was first examined by eye and sorted into ware groups on the basis of colour, hardness, feel, fracture, inclusions and manufacturing technique. If the sherds could not be adequately grouped by eye then they were examined under an x30 binocular microscope and compared with sherds from known sources. National fabric collection codes are given wherever possible (Tomber and Dore 1998), emboldened in the fabric description.

Amphora

DR20 Dressel 20 oil amphora, **BAT AM**.

A rim sherd and partial rim sherd were shown to David Williams who identified the rim sherd as of Flavian date but the partial rim was not complete enough to identify

Mortarium fabrics

NOG WH4

Northern France: Oise/Somme area. There is sufficient evidence in the mass of sherds, the presence of several stamps of *C Iulius Priscus* and some wasters to show that this fabric was being produced at Noyon in Oise, but other potteries producing a similar fabric also existed elsewhere in the Oise/Somme area of northern France (Hartley 1998, 201; see also Tomber and Dore 1998, 75-76, NOG WH4). Two rim sherds were identified as belonging to this type and both were Gillam form 238, the typical form in this fabric dating to cAD65-100

White and white-slipped wares

NOG WH2 yellowish cream ware. Single small undiagnostic bodysherd. Smooth, hard and fine with powdery feel. Fine quartz inclusions. In texture and fabric, this is similar to the **NOG WH4** fabric and is perhaps another North Gaulish import – a flagon or beaker, of Flavian date.

FLB1 orange with traces of white slip. Soft, sandy or powdery. Moderate to sparse fine quartz with sparse medium quartz and red/brown inclusions. The sherds in this ware were from ring-necked flagons of Flavian – Trajanic type.

Grey wares

GRB1 grey ware with black/dark grey slip. Moderate medium/fine quartz with sparse rounded black inclusions. This group was uncommon but this may be the result of surface deterioration in the soil resulting in the loss of the original surfaces. The sherds identified were from a neckless everted-rim rusticated jar with subdued curvilinear rustication, a jar of indeterminate type and a ring-necked flagon of Flavian-Trajanic type. This last vessel was misfired. The core had fired to a rather dirty white shade and was overfired.

GRB2 fabric as GRB1 but no darker grey slip. Most of the vessels in this group were rusticated, neckless everted rim jars with curvilinear subdued rustication and double grooves at the junction of shoulder and neck. One jar had pronounced nodular rustication. A very battered rim appears to come from a wide-mouthed jar of indeterminate form and one grooved bodysherd may be from a narrow-necked jar.

Oxidised ware

OAB1 orange. Moderate, fine quartz with sparse medium quartz. Most of the bodysherds are undiagnostic. One incomplete rim sherd may be an everted-rim from a jar. Other sherds come from a simple based vessel with rouletting. These may well be from the rouletted jar type known from other fort sites in Cheshire and Lancashire and further North at Carlisle in the Flavian period (Swan et al 2009, 609 and pl 199, also at Wigan, Zant and Miller 2008 fig. A3.1). This type has been recovered previously at Castleshaw (Redhead 1989 fig, III.4 no. 11).

Fabrics GRB1, GRB2, OAB1 and FLB1 are likely to be all the same fabric – probably a locally made ware. Differences in hardness, softness and feel are largely the result of burial conditions and firing position within the kiln. It is possible that these fabrics could be further subdivided but sherd conditions made such an exercise futile.

Chronology

As anticipated the assemblage dates to the Flavian-Trajanic period. Where greater precision is possible- in the case of the amphora and mortarium types- the vessels present are of Flavian date. The absence of the necked, everted-rim jars found at Middlewich but rarer at Manchester suggests a start date in the later Flavian period and these accords with the evidence of the samian ware from earlier excavations previously studied (Redhead 1989, and 70) which suggest a start date very late in the AD70s. No BB1 ware was identified and no vessels need date later than the late Flavian-Trajanic period.

Discussion

The pottery in the assemblage comes from four main sources (fig.1). The amphorae are all Dressel 20 oil amphorae coming from the Roman province of Baetica in southern Spain (Peacock & Williams 1986, Class 25). Here olive oil was produced on a massive scale and collected as tax in kind to re-distribute through the empire. The amphora kilns are found in the valley of the River Guadalquivir and its tributaries between Seville and Cordoba and some 150 kilns are known in this region. The region was famous in antiquity for its fertility (Columella De Re Rustica 5, 85; Pliny Naturalis Historia 17.93) and particularly the cultivation of the olive. This type of amphora has been recovered from previous excavations at Castleshaw and also small discs known as amphora stoppers. The presence of these

demonstrates that the amphorae were arriving with their goods intact at Castleshaw and were opened at the site. Such commodious vessels are frequently found re-used in various ways but in such cases the fragile lids are not present.

The second source of pottery was the samian potteries in South Gaul (see Wild this report) and the third was the potteries in north Gaul, probably in the Oise/Somme area of northern France (see above). The mortaria made at these potteries are commonly found on Flavian military sites in Britain and their presence here accords with the date range of the fort. The small white ware bodysherd may also have been made in this area, the fabric is similar to North Gaulish white wares, but the form is unknown. In all likelihood, the vessel it came from arrived along with the mortaria.

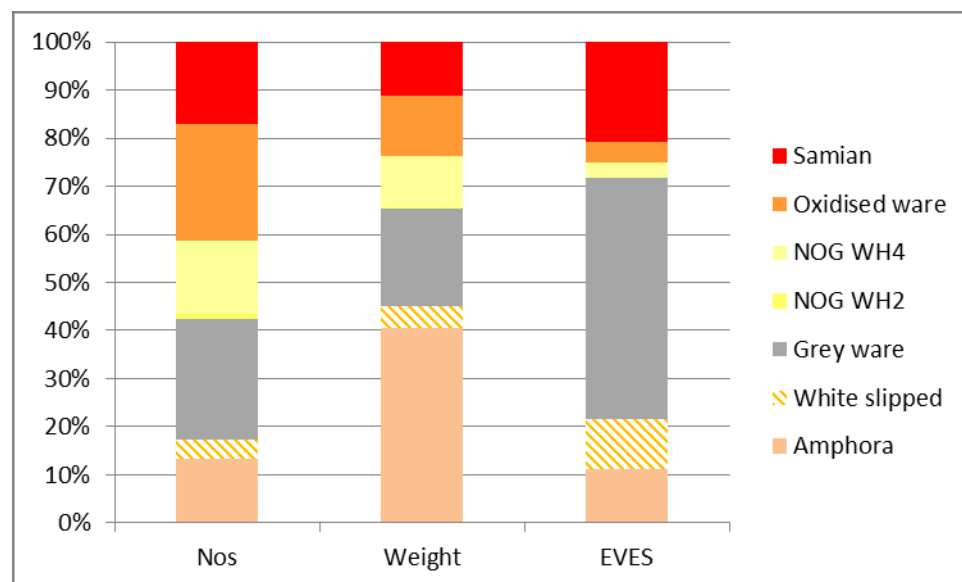


Figure 1 Relative quantities of ware groups by sherd count, weight and estimated vessel equivalents

The rest of the pottery is all in a similar fabric although differing in firing and treatment, namely fabrics OAb1, FLB1, GRB1 and GRB2. It is very common for Flavian forts to have kilns attached to them if pottery of an appropriate quality was not otherwise available in the locality. The pre-Roman population of this region did not produce pottery suitable for a Roman military unit so the quartermaster would have to look elsewhere for a ready supply. It is clear from other sites that small local potteries were set up to meet this demand. Flavian- Trajanic kilns are known to have operated at Manchester, Northwich, Middlewich and

Melandra, earlier at Trent Vale in the Neronian period. There is also evidence for Trajanic production based at Wigan (Zant and Miller 2008). At Castleshaw, mortarium wasters have previously been identified by Clarke who considered them “seconds” but described them as vitrified (1989, 76 no. 5). It is generally unlikely that such vessels would be used, particularly since this is a mortarium which would be subject to a great deal of pressure and abrasion. A second would be unlikely to be suitable for such heavy duty treatment.

The evidence points to a similar situation as that found at Melandra where a number of overfired and distorted vessels suggested local production (Webster 1971, 63, fig. 15, no. 147 and possibly fig. 14, no. 123) and recently Hartley has suggested production of mortaria at Melandra in the early second century (unpublished report). No severely wasted sherds were found in the present assemblage but a Flavian-Trajanic ring-necked flagon rim was found in a reduced condition. At x30 it is clear that this vessel has been overfired and perhaps also misfired. The core is semi-vitrified and the vessel has fired to a greyish white inside with grey surfaces. The surfaces form a distinct layer separate from the core as if slipped.

The evidence points to this being originally a white-slipped flagon where misfiring in the kiln has resulted in the slip being reduced. Strictly speaking such a vessel could be used but their rarity on domestic sites suggests they were perhaps unacceptable.

The vessels present form the standard vessels required by military units at this time – the rusticated jar, the rouletted beaker, the ring-necked flagon supplemented by the imported samian tableware and Gallic mortaria. It was noticeable that all the rusticated jars had a distinct double groove at the base of the rim, perhaps indicating they were all made in the same workshop. Absent is the reeded rim bowl but this form was present in previously excavated groups. Also in a previously excavated group a distinct Pannonian bowl type was illustrated (Redhead 1989 fig.III.4 no. 18). This vessel type has been identified in a Trajanic-Hadrianic kiln waste group F2567 at Dragonby as of Pannonian type (Swan 1996, F2567 fig. 20.34 no. 1460). At Lincoln Darling and Precious give this type a date in the early to mid/late 2nd century (2014, 1190-5). A very similar bowl was present at Middlewich in a fine oxidised ware (Leary 2008, fig. 60 no. 151, p.84 no. 152) in an early second century context. Swan compares this type to a bowl form found in the Rhineland and Pannonia in late first century contexts.

of the site. Clarke noted that the assemblage excavated in 1984 had a surprising high number of flagon perhaps associated with amphorae and amphorae stoppers. Our present group is certainly has a relatively large amount of amphorae and flagons although the quantities of samian ware are not huge (fig.2). Webster noted that the decorated samian vessels was rather higher than normal (1989, 69).

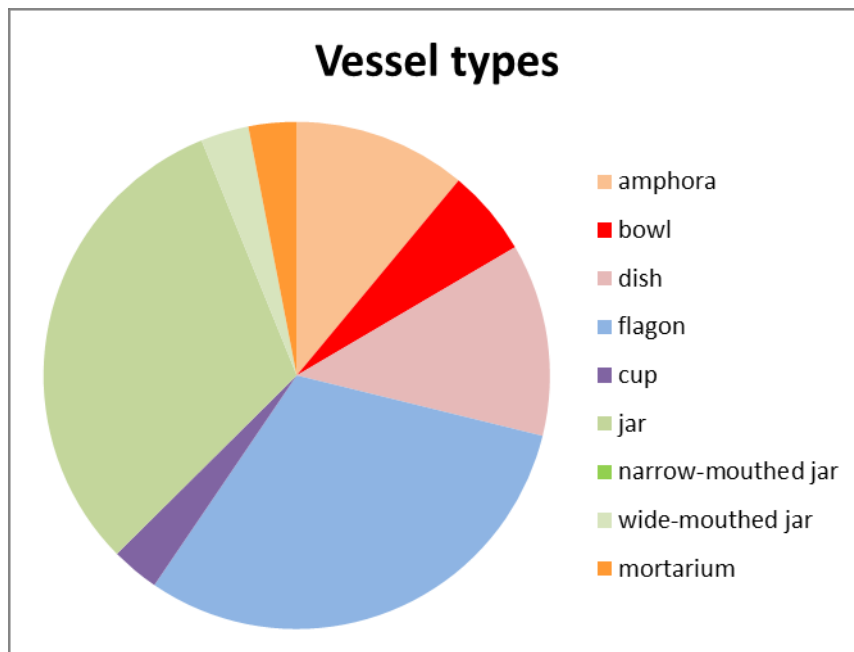


Figure 2 Relative quantities of vessel types

Compared with other sites in the region and in the north, the present assemblage is somewhat poor in bowls and dishes but not dissimilar to the north west industrial sites (fig. 3).

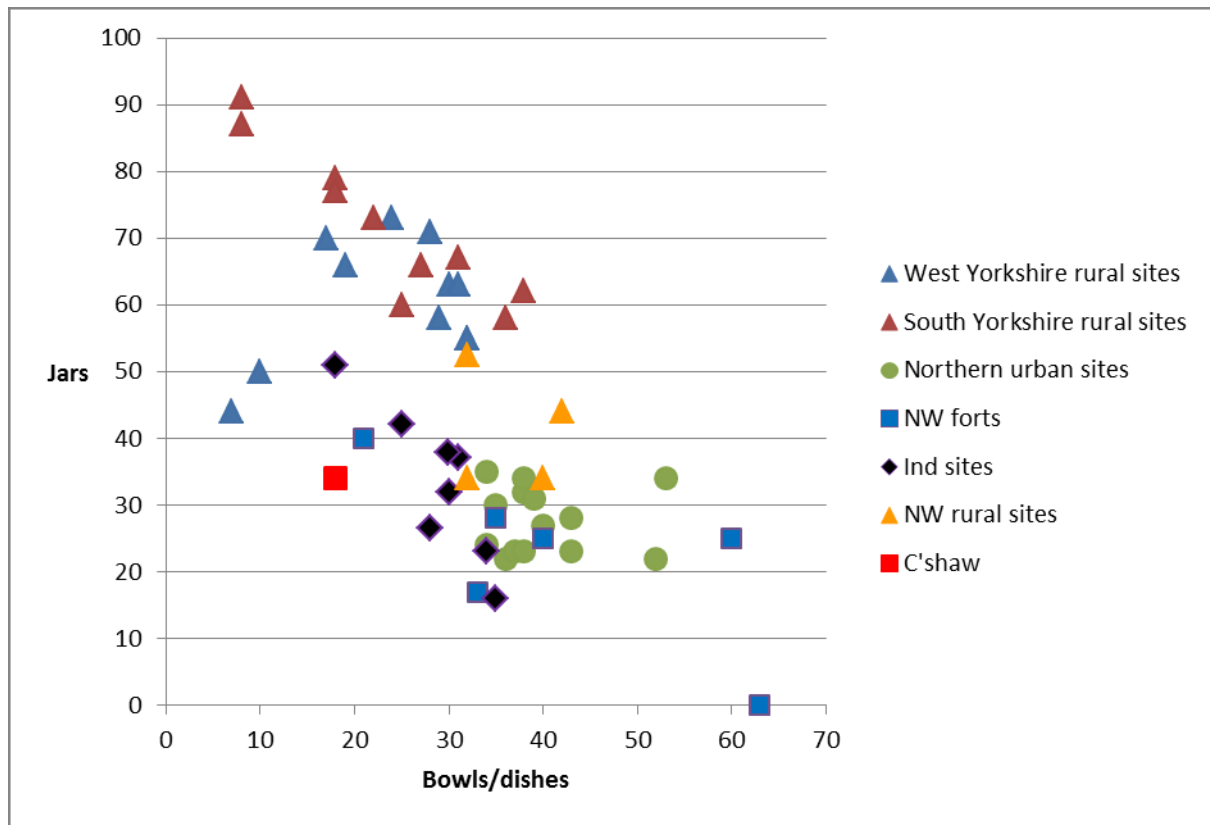


Figure 3 Comparison of bowls/dish to jar ratio at Castleshaw with patterns in the region

Although the assemblage is very small, together with previously excavated groups, it raises interesting questions. Was the pottery being made locally? It is hoped that future work might re-examine the waster material and perhaps include fabric analysis. It would be useful to quantify all the pottery from the site and compare assemblages from different areas in terms of vessel types present. The relatively high numbers of amphora and flagon sherds may indicate functional areas within the fort. It would be rewarding to compare the assemblage from all the excavations with other sites in the region and investigate the proportions of jars to flagons as well as bowls/dishes to jars, given the high level of vessels related to drinking at the site. Also of interest would be an investigation of the nature of assemblages from other fortlets.

[illegible]

[illegible]

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4. Fired Clay and CBM

Dr P Mills MIfA November 2014

Introduction

There were 160 fragments offered for study. Of these there were 92 fragments, weighing 2436g from stratified contexts (i.e. not including topsoil, but including the backfill from the earlier excavation trenches). This comprised 72 fragments, 1281g of fired clay; four fragments, 16g, of mortar, fifteen fragments, 1002g, of Roman brick or tile and one fragment, 137g, of a burnt possible cobble stone. There is also a concrete lump and a fragment of a post medieval brick from topsoil (601).

Dating

There is very little dating evidence from the building material assemblage. The fired clay and mortar are updatable. The small fragments of Roman CBM could be from any part of the Roman period. The probable edge of a stamp would indicate a date of manufacture after c. AD 90 (Kurzman 2006)

Taphonomy

The breakdown of material by deposit type is shown in Table 1. By weight and number of fragments the majority of the material is found from ‘construction slots, with a further significant amount of material from the ‘Thompson trench’. Overall, despite the small sample size, the majority of the material is from ‘vertical’ stratigraphy – i.e. layers. This conforms to the emerging pattern that higher status sites tend to have more material from layers than ‘horizontal’ stratigraphy such as ditches.

The largest fragments are from the Oven(?) deposit – and may suggest the presence of a Roman tile used as a hearth plate. There are large fragments from the post base deposit – which is expected as material is deliberately selected for such deposit types. Similarly the relatively large fragment sizes in the post hole are indicative of selected pieces used for packing.

Table 2 shows the breakdown by fragment proportions by the different material classes. This shows a clear difference in discard regimes between fired clay and CBM, with fired clay

being mainly found in the construction slots , the ‘Thompson’ trench and gully deposits, whereas the CBM is mainly from post hole deposits , the ‘Thompson’ trench and the possible oven.

Table 1 Proportion of material and average fragment size by deposit type, for stratified material

Context type	No%	Wt%	MSW
Surface	4.3%	1.6%	10.0
Occupation/ layer	2.2%	0.6%	7.5
Construction slot	42.4%	50.0%	31.3
Ditch	2.2%	0.2%	2.0
Feature - general	1.1%	0.0%	1.0
Gully	16.3%	3.5%	5.7 Post
base	1.1%	5.6%	137.0
Posthole	6.5%	19.8%	80.3
Oven?	2.2%	14.9%	181.0
Thompson' Trench	21.7%	3.7%	4.5
N/ Avg	92	2436	26.5

Table 2, proportion, by number of fragments, of CBM, fired clay and mortar by deposit type.

Deposit Type	Fired Clay	Mortar	Roman CBM
Construction slot	50.0%	50.0%	
Ditch	1.4%		3.0%
Feature - general			3.0%
Surface	5.6%		
Gully	20.8%		
Oven?			6.1%

Occupation'		50.0%	
Post base			3.0%
Posthole			18.2%
Thompson Trench	22.2%		12.1%
<i>N</i>	72	4	33

The fired clay

There are 71 fragments of fired clay. Two fabrics were defined. A number of wattle impressions were noted, in the usual range of c. 18-22mm in diameter. There was possible planking impressions on examples from (119) as well as a leaf impression from the same context. This material is most likely to have originated as oven superstructure.

D11



Figure 1 D11 at x10

This is a pale buff clay with a powdery feel and irregular break and with some coarse subangular quartz at up to 1mm sparse red ironstone inclusions.

There were 28 fragments, weighing 340g.

D12



Figure 2 D12 at x10

This is a red fabric with an irregular fracture and sandy feel. It has inclusions of common subrounded quartz at 0.2mm

There are 43 fragments, weighing 941g. Five wattle impressions were noted on examples from (119) and one from (102). There were also examples with a plank impression and leaf impression from (119).

Mortar or Plaster

Fine grain Mortar or plaster was noted from (137) and (609).

Ceramic Building materials

Roman

The eleven fragments of roof tile were in a variety of oxidized fabrics and are presumable refuse from reused CBM rather than evidence of a nearby building utilizing CBM. All the material was in the same fabric, closely related to the fired clay, supporting a local origin for this material.

Fabric T11.41



Figure 1 T11.42 at x10

This is a pale red fabric with a powdery feel and irregular fracture. It has inclusions of sparse clear rounded quartz at up to c. 0.4mm and moderate elongate organic voids at c. 0.4mm.

Much of the material could not be identified, beyond being Roman ceramic building material. However there was a tegula flange of form Mills 2013 FRS2/1 from (201) and a probable bricks from 702 and 601. There was the probable border of a rectangular stamp from TR 2 (228) (SF 203), probably on a tegula fragment.

Other materials

Concrete was noted from (201) and (601)

Discussion

This is a small assemblage of building materials from a Roman fort. The material is mainly from layers, which is consistent with a relatively high status site, such as a fort. The material is mainly residual, although the size of the fragments suggests that the material as reused for post packing, post pad and as 'hardcore' in general is antiquity. The fired clay may derive from an oven superstructure or be related to industrial activities.

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5. Glass Artefacts

Christine Howard-Davies GLASS

FROM CASTLESHAW ROMAN FORT

In all, 43 fragments of glass (five of them beads) were submitted for examination from the CRF14 excavation. It is all in good to excellent condition, with only slight abrasion on a few of the more recent fragments, and slight dulling on the surface of recent window glass. The fragments are all small, and with the exception of 11 fragments from the same Roman vessel, recovered from Thompson trench 231 (fill 234) and possible floor surface 235, and three from one vessel in layer 609, all of the fragments seem to derive from different vessels.

Trench	Context	RB vessel	RB bead	PM or later vessel	Modern window	Totals
1	102			4	3	7
	108			1		1
	116			1		1
	121	1				1
	138		1			1
Subtotal 1			1 6 3			11
2	202				1	1
	210		1	1	1	3
	227		1			1
	234	7				7
	235	4				4
	240		1			1
Subtotal		11	3	1	2	17
6	601			6		6
	602			5		5
	609				3	3
	622		1			1
Subtotal		0	1	11	3	15
<i>Totals</i>		<i>12</i>	<i>5</i>	<i>18</i>	<i>8</i>	43

Only two vessels of Roman date were present in the assemblage. Eleven small fragments, some of them joining, from a blown pale yellow/green long-necked conical flagon (Price and Cottam 1998, 152-4) came from contexts **234** and **235**. The glass was in excellent condition, showing the body to have vertical ribs and the base to be concave. Price and Cottam (*op cit*) date these relatively common vessels to the late first and second centuries, passing out of use in the last quarter of the second century. Similar examples are known from a range of sites, including the fort at Ribchester (Price and Cottam 2000), the military supply site at Walton le Dale (Howard-Davis *fc*) and further north in the extramural settlement at Lancaster (Howard-Davis *fc b*).

A single fragment from the neck and shoulder of a mould-blown bottle came from the fill (**121**) of possible post-hole **118**. There was not enough surviving to determine the body form, but the most common type is Isings 50 (1957), with a square cross-section. They were widely used as storage vessels in the first two centuries AD, and continued in use into the third century. Commonly made in natural bluish-green metal, these are found widely, and often make up the largest component of any Roman glass assemblage. Very small fragments of pale bluish vessel glass from clay layer **108**, and colourless glass from **210**, the clay deposit into which road **206** was set, could possibly, from their context, be Roman in date but are probably very recent, that from **210** most likely to be from a modern milk bottle.

The remainder of the vessel glass is likely to date to the eighteenth-century or later. In most cases there are no joining fragments, and each could well derive from a separate vessel. The overall size of the fragments, however, suggests that this material seems most likely to have reached the site piecemeal, through the *ad hoc* disposal of rubbish at the site.

The earliest of these late vessels are represented by fragments of dark olive green wine or beer bottles from Topsoils **101** (2 frags) and **601** (4 frags), and the fill, **602** (1 frag), of

the Bruton trench seen in Trench 6. Comprising *c* 38.8% of the assemblage by fragment count, all are very small and give no indication of the body form, except to suggest that all derive from relatively tall cylindrical bottles, typical of the later eighteenth and nineteenth centuries (see, for instance Noel Hume 1969, 68). One of those from **601** is partially melted, a strong indication that the material could have arrived as a result of the clearance of ash middens. Three fragments from the neck and lip of a small blown vessel in bubbly pale bluish glass come from layer **609**. The vessel is difficult to date with any precision, but seems most likely to be a pharmaceutical vial of late eighteenth- or early nineteenth-century date.

Nothing in the remaining group of vessel glass need be earlier than late nineteenth century, and is probably more recent. Bottle bases from fill **102** of the Thompson trench in trench 1, topsoil **601**, and fill **602**, the former colourless, the latter two in a dark natural blue/green metal, are probably from machine-blown vessels, which are most likely to post-date the widespread adoption of the technology circa 1910 (Miles and Sullivan 1984). Two further colourless bottle fragments came from **602**, one of them from a mould-blown rectangular bottle. A second colourless fragment, retaining a sharp- angled corner, is from **202**, again thought to be the backfill of an earlier excavation. A small pale bluish, modern fragment from **116**, associated again with the Thompson trench in Trench 1, was somewhat fragile, being extensively cracked or crizzled. The problem is caused by an imbalance in the chemical composition of the glass (Brill 1975) and has no implications for its date. Three single melted fragments from similar vessels came from **102**, **601**, and **602**, again hinting at the spreading of ash middens.

All eight of the small, mid-pane, and thus undiagnostic, fragments of pale blue and colourless window glass (between 1.5mm and 2.5mm in thickness) are late in date, probably none of them earlier than the late nineteenth century.

All five of the beads recovered can be regarded as of Roman date. Four of them are melon beads (three of turquoise frit, one of dark blue glass) which, although frit beads were in use over a very long period (Guido 1978, 100), can be regarded as particularly popular during the first two centuries AD, when they appear to have a strong military link, possibly most specifically a link to cavalry, suggesting their use to decorate horse

harness (Price and Cottam 2000, 291; Kemkes *et al* 2002, pl 108). Indeed, Guido (*ibid*) regarded blue glass melon beads as restricted to this period, and they could well be characteristically Flavian (Price and Cottam 2000, 291). The small annular bead from post pad 227 is most likely to be Roman, although a later date cannot be dismissed. They are a long-lived type (Guido 1978, 66, group 6iiia), first appearing as an import in the Iron Age, being relatively common on Roman and later sites. Similar beads were recovered from late Roman (late fourth to early fifth century) contexts at Carlisle (Howard-Davis 2009), and appear further south in Early Anglo-Saxon contexts (see, for instance Brugmann 2004, pl 80), continuing in use perhaps as late as the eighth century AD (Guido 1978, 66).

Very poorly made opaque dark blue glass melon bead. Grooves very irregular and clearly made by pinching the molten glass.

Ht: 9mm; Diameter: 16mm; Diameter perforation: 8mm

CRF14, trench 2, layer 240, late first to second century

Large turquoise frit melon bead, surfaces unleached and glassy.

Ht: 20mm; Diameter: 24mm; Diameter perforation: 11mm

CRF14, trench 1, fill 138 of gulley to the east of the *Via Principalis*, Sf 102, *floruit* late first to second century

Fragment, c 25% of an irregular frit melon bead. The surface is now leached of colour, was but originally turquoise.

L: 12mm; W: 13mm

CRF14, trench 2, clay layer 210, *floruit* late first to second century

Fragment, c 25% of a well-made frit melon bead. The glassy surfaces are greenish turquoise.

L: 19mm; W: 16.5mm

CRF14, trench 6, silty fill (622) of 623, Sf 601, *floruit* late first to second century

Small well-made annular bead. Opaque dark blue very similar in colour to the glass melon bead from layer 240.

Ht: 2mm; Diameter: 6.5mm; Diameter perforation: 1.5mm

CRF14, trench 2, post-pad 227, Sf 204, Roman

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6. Metal Artefacts

Christine Howard-Davies

IRONWORK AND OTHER METAL OBJECTS FROM CASTLESHAW FORT

In all, 103 fragments of ironwork were submitted for examination from the CRF14 excavation, 58 are from Trench 1, 28 from Trench 2, and 17 from Trench 6 (Tables 1-3). All are in poor condition, with thick layers of iron corrosion products. All were subjected to x-ray in order to aid identification. The fragments are mainly small, and the majority are fragmentary nails, probably both hand-forged and machine made.

Context	Nail	Hobnail	Other
	Other		
101	8	2	1
102	5		
103	26		1
108	1		
115	1		
119	2		
122	1		
124	1		
126	1		
129	1		
132	5		
141	2		

Table 1: Distribution of ironwork in Trench 1

	Nail	Hobnail	Other
201	9		4
210	2		
214			2

221	1		
225	1		
231	3		
235	5	1	

Table 2: Distribution of ironwork in Trench 2

Context	Nail	Hobnail	Other
601	12		3
612			2

Table 3: Distribution of ironwork in Trench 6

In general, small fragments of ironwork are effectively impossible to identify or date with any precision, as many simple iron artefacts change very little through time. In Trench 1, it is likely that, with the exception of two hobnails from topsoil **101**, and a large, clearly modern perforated plate from the same context, the remainder of the ironwork comprises small fragments of relatively small hand-forged nails, many equivalent in size to the most numerous Roman type (Manning's type 1b (1985)), although any dating relies largely on other finds from the context, or on the stratigraphic succession.

One or two of the nails have the sinuous bend and/or bent head characteristic of extraction from wood, but none of them retains evidence for clenching, which might suggest that they were likely to have been deposited whilst still in timbers. Thus, whilst undoubtedly there were timber structures on the site, none of the nails need necessarily have derived from them.

The two hobnails seen amongst the material from topsoil **101** are probably Roman in date, with nailed shoes worn throughout the Roman period, by soldiers and civilians alike. Again, it must be borne in mind that hobnails continue in use to the present day, and they might be much more recent. Material from Trench 2 is very similarly divided, with a single hobnail from context **235**.

Three of the four non-nail objects remain unidentified, despite x-ray. The fourth is a modern penknife, with a range of folding blades clearly visible in the x-ray (Plate 1).

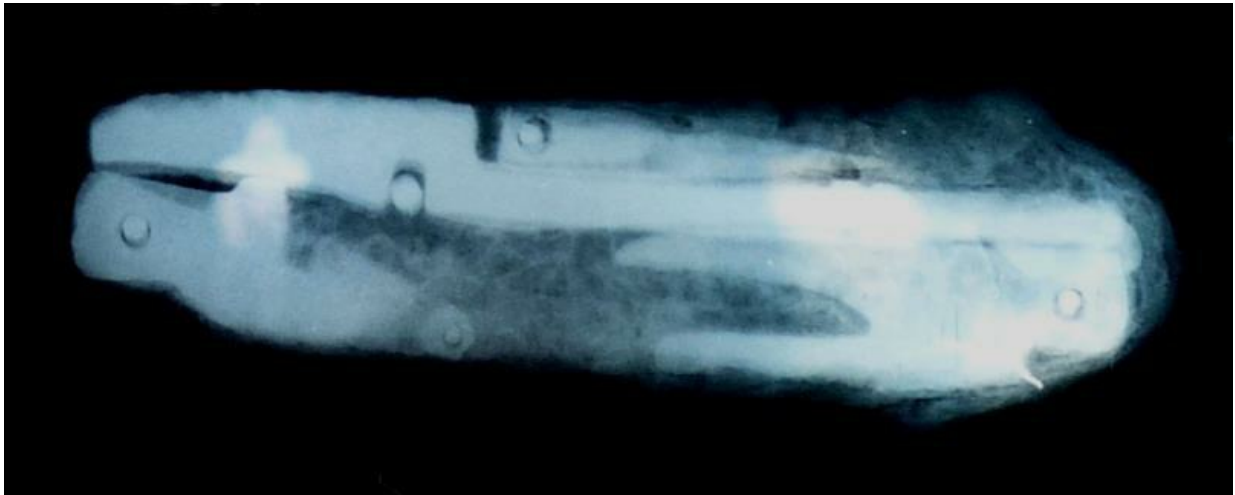


Plate 1: X-ray image of penknife from topsoil 201, Trench 2

The material from Trench 6 is again similar, with nothing that can be identified with confidence as Roman. There is a short length of chain from **601** (Plate 2), but the oval links suggest it to be relatively recent, as Roman chain links are typically, though not exclusively, made in a figure of eight of chain from topsoil **601** in Trench 6.

A round object from context **III**, Trench 1, was thought on excavation to be a copper alloy disc brooch. Further cleaning suggested that it was probably iron, rather than copper alloy, and x-ray showed it most likely to be a featureless disc, perhaps even a large nail head, and not a brooch.



Plate 2: X-ray image of a fragment of chain from topsoil 601, Trench 6

There were, in addition, four small fragments of lead, none of which can be dated with any precision. A small cast, oval fragment came from context **121**, Trench 1; as it seems deliberately made, then one obvious identification would be as a small weight. A similarly small cast object came from context **235**, Trench 2. Almost heart-shaped, it has a perforation seen close to the upper edge on one side, but lower down, towards the centre on the other side. The diameter changes from 2mm to 4mm. Although

presumably intended for suspension, its purpose remains unknown. Two small fragments of melted and then solidified lead come from topsoil **201** in the same trench, and reflect a small amount of lead melted accidentally in a fire, or spillage from the use of molten lead.

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7. Palynology

Charlotte O'Brien, University of Durham and Kirsty Whittall, University of Salford (introduction)

A programme of sampling was carried out at Castleshaw to recover samples which may potentially lead to palynological information for sealed contexts within the site. As the site is classified as a scheduled monument, every care was taken to ensure that the minimal amount of material was removed, and detailed sample information and justifications have been compiled to support the information gained from this study.

The below information offers justification for each individual sample recovered for the study of the palynological information, and is sub-headed by trench. Once the samples were removed, every care was taken to ensure limited cross contamination with modern arboreal pollens, and with other sediments. Each sample was taken with a clean trowel and hand shovel, and immediately deposited within a sterilised sample bag or bucket. The column samples were recovered by trowel and sterilised PVC pipe, and then immediately wrapped in sterilised air tight plastic wrapping to ensure stability and minimise contamination.

Trench 1

Trench 1 was subjected to the removal of several samples on some of the more prominent archaeological features, these samples are discussed below individually and the justification of the removal of each sample is offered after each description. In total three features within trench 1 were identified for sampling, with each feature being assessed, evaluated and considered for the most suitable sampling methodology.

These features included an area of burning/ash/burnt clay immediately west of the rampart (119), a charcoal rich pit revealed in bottom of trench on the west side of rampart (148) and a large drainage ditch (156) The conditions of removal for all of the samples collected from Trench 1 were dry with a slight breeze, which should be considered for recent arboreal pollens, which may have been present at the time of sample recovery.

Trench 1 – Sample taken from (119)

Context (119) was an area of burning/ash/burnt clay immediately west of the Rampart in Trench one, the context was relatively stable and the sample was moist and friable, the area is considered to be within the area of a previous excavation and the sample may be effected by contaminants present during the previous works. The samples recovered from this context were given the numbers 103 and 104.

The sample recovered from (119) large pit feature in Trench 1 consisted of a single 10 litre bucket and a 5 litre sample bag. The fill included numerous and various inclusions of stones and artefacts and flecks of charcoal like substance. The removal of this material was undertaken by hand trowel and hand shovel in dry sunny conditions and was immediately placed into the sterile bucket and bag, and immediately sealed.

The justification of the removal of this material is as follows: Removal of 15 litres of material from (119) large pit feature in trench 1, for the investigation of the following research aims:

- Identification of pit feature (119) through floatation
- Identification of artefacts recovered by floatation
- Palynological investigation of sediments removed
- Identification of the potential function of pit (119)
- Potential date range through artefactual assemblage of the pit.

Through the process of floatation some of the smaller artefacts pertaining to pit feature (119) may be recovered and identified. Along with the palynological investigation of all material removed, it may be possible to identify the function of pit (119). Any further works should be informed by the results of these samples.

Trench 1 – Sample recovered from (148)

Context (148) was a charcoal rich fill of the pit revealed in the bottom of the trench on the west side of the rampart. Similarly to (119) caution is advised as the area is within the area of previous excavations, the samples recovered from this area were given the sample number 105.

The sample was recovered for palynological investigation as the ash like substance may hold charred materials which would benefit our understanding of the site. The sample was recovered by hand trowel and hand shovel and immediately placed into a sealed plastic container of 10 litres.

The justifications for the removal of this sample are as follows: The removal of 10 litres of ash like sediment recovered from (148) in order to identify and investigate the following research aims:

- Identification of potential charred archaeological and environmental remains
- Identification of the potential function of (148)
- Identification of ash like substance in fill of (148)
- Identification of potential environmental contributions at time of construction.

Through palynological investigation it may be possible to identify the function of (148) and also ascertain any levels of conservation of charred archaeological and environmental remains.

Trench 1 – Samples recovered from (159)

Feature (159) from trench 1, was a large deep gully feature which presented multiple complex stratigraphic layers, and included some preserved wooden materials at the base of the gully. This feature was identified as an area of archaeological interest, due to the depth of the stratigraphy, and depositional conditions within the ditch. The samples recovered from here were in a column sample and given the number 106, where (159) refers to the sediment at the base of the sample, and wooden material was also recovered and given the sample number 107.

The stratigraphy of the ditch feature contained multiple horizons of clay and soil derived deposits in a clear stratigraphic sequence. To this extent, feature (159) was identified, evaluated and recommended for column sampling. The column sample was 1m in height and used a cleaned half PVC pipe for containment; the sample was recovered by hand trowel in dry conditions. The pipe was placed against the section face and gently pushed into the section to create the column sample.

The justification of the removal of this material was to investigate and evaluate the following research aims:

- Stratigraphic investigation through palynology of environmental evidence during construction of the ditch
- Identification of any pollens which have been sealed within the ditch
- Identification of the construction process of the ditch.
- Stratigraphic investigation of the ditch feature.

Through the palynological investigation of the ditch feature, it may be possible to ascertain environmental conditions during the construction of the ditch, and/or during the active phases of Castleshaw. The column sample provides the most accurate form of sampling for stratigraphic sequence, and any further archaeological works would benefit from the evidence gathered from this sample.

Trench 6

Contexts (626) and (621) were sampled from Trench 6, they are described as follows; (621) was a mid-greyish clay deposit below (617) in [610] bottom fill, and (626) is described as the bottom fill of [618] below (625) grey clay with fragments of timber.

Two gateway post holes were identified for the recovery of samples within trench 6, post holes (626) and (621) samples were recovered by hand trowel and hand shovel in dry, clear conditions. The Post holes had been previously excavated during earlier archaeological investigations at Castleshaw, however, these investigations failed to excavate the post holes to their full depth.

Upon excavation, wooden material was discovered at the bases of these post holes, and a program of sampling was recommended in order to collect and identify the wooden materials. Two 10 litre sample buckets were used to contain the samples recovered.

The justification of the removal of these timbers from the Postholes was to identify and assess the material in line with the following research aims:

- Identification of the wooden material/timbres recovered from the post holes
- Identification of any potential industrial residues on the timbres recovered To
- evaluate and identify and phases of construction of the gateway area.
-

Through a palynological investigation, the wooden materials/timbres recovered from the post holes, will help to identify and inform construction methods of Castleshaw, and will benefit further investigations into the site through evidence of construction.

Trench 7 Sample

The samples recovered from Trench 7 pertain to the turf lined rampart; the sample consisted of a 0.30m column sample, which was cleaned and removed by hand trowel. The context within this sample is (705) and is described as black silt contained within (704) these represent layers of the turf used to construct the rampart. The column sample used a 0.30m plastic half drainage pipe, to sample the rampart in order to maintain the stratigraphic integrity of the archaeological material. Once the sample had been removed, it was immediately sealed with sterile wrap to limit any potential airborne arboreal pollen present at the time of sample removal.

The justification for the removal of this sample from the site is as follows: Trench 7 turf lined rampart, sample taken for palynology to identify and investigate the following research aims:

- Residual pollen sealed by the turf Pollen
- present at the time of construction
- Anomaly pollens present, possibly from previous excavations
- Identification of season of construction through palynology
- Environmental conditions at the time of construction.

Through the study of the sample by palynological investigation, it may be possible to identify the above elements and also reflect phases of construction at the site of Castleshaw. Any further investigative works should be informed by any palynological evidence.

The results of the palynology assessment are as follows, the analysis and reports were carried out and written by the Archaeological Services at the University of Durham.

on behalf of
Friends of Castleshaw Roman Forts

Castleshaw Roman Fort
Saddleworth
Greater Manchester

palaeoenvironmental assessment

report 3707
March 2015

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1. Summary

The project

- 1.1 This report presents the results of palaeoenvironmental assessment of bulk samples and column samples taken during archaeological works at Castleshaw Roman Fort, Greater Manchester.
- 1.2 The works were commissioned by Norman Redhead on behalf of Friends of Castleshaw Roman Forts, and conducted by Archaeological Services Durham University.

Results

- 1.3 The plant macrofossil evidence indicates the use of cultivated crops and wild gathered foods during the Roman occupation of the site. Spelt wheat was identified, which was the main cereal crop used throughout Britain at that time. Small scale arable cultivation in the vicinity of the fort is reflected in the pollen data, with areas of herb-rich pasture maintained for grazing. Wood and charcoal identifications suggest that oak was one of the main structural timbers used at the site, which pollen evidence indicates may have been brought from areas of free-draining soils in the Castleshaw Valley. The pits comprise the remains of burnt structural timbers and hearth waste. The latter reflects the exploitation of the local woodland resource for fuelwood, with a diverse range of woods collected.

Recommendations

- 1.4 No further analysis is recommended for the plant macrofossils due to their low numbers and poor preservation. Further analysis of the large quantity of charcoal recovered from deposit (148) and sample 103 could be considered for future synthesis, as Huntley (2010) highlights a lack of charcoal investigations in northern England.
- 1.5 The waterlogged oak timber fragments from posthole fill (621) would require conservation if they are to be retained. The work marks could be examined by a wood technology specialist.
- 1.6 The assessment has shown that pollen is well preserved in certain levels within column samples (159) and (705). Further counting, supported by radiocarbon dating, would provide a more detailed picture of landscape changes and land use patterns during the occupation of the site and following its abandonment.
- 1.7 If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced. The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

2. Project background

Location and background

- 2.1 Archaeological works were conducted by Friends of Castleshaw Roman Forts at Castleshaw Roman Fort, Greater Manchester. The fort is a scheduled monument, built around AD 79, and overlain, after a period of abandonment, by a small fortlet erected around AD105 before being slighted in the mid-AD 120s. This report presents the results of plant macrofossil, charcoal and pollen assessment of samples taken from pits, a drainage ditch and a turf-lined rampart.

Objective

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

Dates

- 2.3 Samples were received by Archaeological Services on 10th December 2014. Assessment and report preparation was conducted between December 2014 and March 2015.

Personnel

- 2.4 Assessment and report preparation was conducted by Dr Charlotte O'Brien and Lorne Elliott. Bulk sample processing was by Dr Magdolna Szilágyi. Pollen preparation was by Dr Helen Drinkall.

Archive

- 2.5 The site code is **CRF14**, for **Castleshaw Roman Fort 2014**. The flots, finds, pollen preparations and column samples are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection. The charred plant remains will be retained at Archaeological Services Durham University.

3. Palaeoenvironmental assessment

Introduction

- 3.1 Five bulk environmental samples, from pit fills (119) and (148) and posthole fills (626) and (621) were assessed for their plant macrofossil, charcoal and pollen content. Pollen assessment was also undertaken on column samples from ditch (159) and turf-lined rampart (705).
- 3.2 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Philpott 2006; Philpott & Brennand 2007; Hall & Huntley 2007; Huntley 2010), which have highlighted the need to investigate deposits likely to comprise information of past vegetation, land use and the exploitation of natural resources for North West England. In particular, turf layers in features such as ditches and ramparts have been identified as an understudied resource.

Plant macrofossil assessment

Methods

- 3.3 The bulk samples were manually floated and sieved through a 500µm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones,

pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).

Results

- 3.4 Pit fill (148) contained abundant charcoal, small fragments of calcined bone (animal), a single sherd of pot and a few fragments of daub/fired clay. Similarly, samples from deposit (119) comprised large quantities of charcoal and small fragments of fired clay/daub.
- 3.5 Waterlogged wood was recovered from posthole fills (621) and (626), which also contained small amounts of charcoal. The wood from (621) comprised of two pieces of oak stemwood with weak ring curvature and tyloses. The larger fragment measured 0.14m along the longest axis, and had work marks including a lateral notch. The smaller fragment was 0.07m along the longest axis. Both fragments may have originally come from the same piece of timber. Two smaller fragments of wood were present in context (626). One was a fragment of oak stemwood with weak ring curvature and tyloses (0.02m longest axis), and the second was a small piece of alder wood with weak ring curvature (0.01m longest axis).
- 3.6 Charred plant macrofossil remains were sparse with a few hazel nutshell fragments present in samples 103 and 601 and a single spelt wheat glume base was recorded in sample 103. Cereal grains were absent. The results are presented in Appendix 1.

Discussion

- 3.7 Evidence from the plant macrofossil assemblages, although limited, indicates the use of spelt wheat at the site. The remains of this cereal crop regularly occur at sites of Roman origin in Britain (Greig 1991). Charred fragments of hazel nutshell from two contexts suggest wild-gathered foods were also utilised at the site. The low numbers of charred botanical remains prevent any further interpretations of diet or crop husbandry practices at the site. The clay matrix of the posthole fills (621) and (626) allowed the preservation of fragments of uncarbonised oak stemwood. These may represent remnants of the original posts or other structural wood used on the site.

Charcoal assessment

Methods

- 3.8 Charcoal identifications were made on selected fragments >4mm. The transverse, radial, and tangential sections were examined at up to x600 magnifications using a Leica DM/LM microscope. Analysis was undertaken following Marguerie & Hunot (2007) and included the examination of tree ring curvature, the number of tree rings and alteration by fusion or radial cracks. The presence of insect degradation, pith, bark, tyloses and reaction wood was also noted. Identifications were assisted by the descriptions of Schweingruber (1990), Hather (2000) and modern reference material held in the Environmental Laboratory at Archaeological services Durham University. The different species were weighed and bagged separately, and material available for radiocarbon dating was cleaned of adhering material and wrapped in foil.

Results

General comments

- 3.9 The quantity of charcoal recovered from the samples ranged from <1g for posthole fills (621) and (626), to almost 300g for sample 103 (context 119), and more than 0.5kg from context (148). Positive identifications were obtained for at least eight tree/shrub species, including oak, birch, hazel, alder, holly and rowan. Due to comparable anatomical structure (particularly in juvenile wood), fragments of willow or poplar were grouped as Salicaceae (willow family). Similarly, hawthorn and apple were recorded as the subfamily Maloideae. Evidence for the use of ash and elm appears to be absent, despite pollen data indicating that they were present as minor components of the regional woodland (Brayshay 1999 and this report).
- 3.10 Complete roundwood containing pith and bark was rare, and charred buds and twigs were either absent or uncommon. The condition of the charcoal varied from soft and friable to good, with the majority of the fragments comprising a sub-angular to sub-rounded appearance. Vitrification (low brilliance), radial cracks and significant distortion were observed in many of the oak fragments identified from all of the samples. Generally, these fragments were comparatively larger (as much as 45mm) and more angular in nature. Material suitable for radiocarbon dating is present for all of the samples. Results of the charcoal assessment are presented in Appendix 1.

Pit fills (119) and (148)

- 3.11 Initial results from the subsamples of charcoal selected for assessment, provide an indication for a high degree of species diversity for fill (148) and sample 103. Deposit (148) comprised the greatest number of tree/shrub taxa (oak, birch, hazel, alder, holly and willow/poplar). A fragment of semi-ring porous charcoal with anatomical properties that include solitary vessels densely clustered within the earlywood, very strong spiral thickenings and narrow biseriate rays was identified as rowan. Vessel arrangement and strong ring curvature indicated much of the non-oak material from these deposits was small calibre stemwood/branchwood. By contrast, strongly distorted fragments of oak comprising weak ring curvature, large earlywood vessels and abundant tyloses suggest much of the oak material represented heartwood stemwood (timber). Evidence of insect degradation (woodworm) was noted in fragments of hazel and birch recovered from sample 103. Charred heather twigs were also noted in this sample but were absent from other fills. The moderate-sized flot from sample 104 predominantly comprised oak timber charcoal with a few small fragments of birch and hazel also noted.

Posthole fills (621) and (626)

- 3.12 These fills comprised small quantities of fragmented charcoal. Fragments of oak heartwood stemwood were identified in both contexts. Fragments of alder occurred in (621), whilst the remains of willow/poplar, Maloideae (apple/hawthorn) and birch were recorded in (626). The small fragment size prevented further identification or interpretation.

Discussion

- 3.13 The small fragment size and species diversity of much of the charcoal assessed is characteristic of fuel debris from a domestic hearth. The comminuted nature of this material is probably the result of exposure to repeated burnings. The presence of burnt food waste (animal bone, nutshell and cereal chaff) provides additional evidence for the disposal or dispersal of domestic hearth waste. The diversity of the

tree/shrub remains reflects the random selection of material over time and provides an indication of landscape clearance and exploitation of the woodland resources.

- 3.14 Charcoal comprising insect degradation (woodworm) was recorded in sample 103. This may represent the collection of 'deadwood' from the woodland floor, the disposal of rotten wood or it could be the result of long term storage of firewood. This poor condition was noted for two different taxa (birch and hazel).
- 3.15 Strongly distorted fragments of oak timber comprising low vitrification and radial cracks occurred in all of the assessed samples. These characteristics are generally associated with smaller pieces of wood such as branchwood or twigs (Marguerie & Hunot 2007). However, the anatomical properties of the oak charcoal recovered from the deposits imply the presence of structural material and although oak is an efficient source of fuel, the large fragment size of these remains is not characteristic of hearth waste. Tissue deformation, fissures and vitrification of stemwood can be caused by rapid combustion at high temperatures (Schweingruber 1990), suggesting these widespread remains may reflect the demolition of the site.

Pollen assessment

Methods

- 3.16 Pollen assessment was undertaken on 12 samples. This included the five bulk samples from pit fills (119) and (148) and posthole fills (626) and (621). In addition, three samples were assessed from the column sample of ditch fill (159), and four samples were assessed from column sample (705), taken from the rampart.
- 3.17 Pollen was extracted from 1ml of sediment from each level, using standard techniques of sodium hydroxide digestion and acetolysis, followed by heavy liquid separation (Moore *et al.* 1991). A *Lycopodium* spore tablet was added in order to facilitate calculation of total pollen concentrations. Each tablet has an average of 18583 spores per tablet. The pollen was mounted in silicone fluid and scanned at up to x500 magnification using a Leica DM2500 microscope. At least 100 land pollen grains were counted at each level, where possible. Where pollen concentrations were low, counting was stopped after four traverses of the 24 x 24 mm coverslip. The results are presented as raw counts in Appendix 2. Plant taxonomic nomenclature follows Stace (1997) and the scheme of pollen morphological types proposed by Bennett *et al.* (1994) has been adopted. The presence of micro-charcoal was noted but was not recorded quantitatively.

Results

Trench 1 – Context (119), sample 103

- 3.18 This sample comprises very few pollen grains, and those present are in a poor condition. *Alnus glutinosa* (alder), *Betula* (birches), *Corylus avellana* (hazel), Poaceae (grasses), *Taraxacum*-type (dandelion-type) and fern spores are recorded. Microscopic charcoal is abundant.

Trench 1 – Context (119), sample 104

- 3.19 As above, pollen concentration is low and preservation is poor. The grains and spores recorded are *Alnus glutinosa*, *Corylus avellana*, *Salix* (willows), *Polypodium vulgare* (polypody) and ferns. Microscopic charcoal is abundant.

Trench 1 – Context (148), sample 105

- 3.20 Pollen concentration is low and preservation is poor. The grains and spores recorded are *Alnus glutinosa*, *Quercus* (oaks), *Calluna vulgaris* (heather), *Corylus avellana*, *Plantago lanceolata* (Ribwort plantain), Poaceae, *Polypodium vulgare* and ferns. A single cereal-type grain is present. Microscopic charcoal is abundant.

Trench 1 – Context (159), 0.88m below top of column sample

- 3.21 Very dark grey clay (10YR 3/1) was sampled at 0.88m depth. Pollen is abundant in the sample and is well preserved. The assemblage is dominated by tree and shrub pollen, with *Alnus glutinosa*, *Betula* and *Corylus avellana* most frequently recorded. Lower numbers of *Quercus*, *Calluna vulgaris*, *Ilex aquifolium* and *Salix* are present. The few herbaceous plants are Apiaceae (Carrot family), Ranunculaceae (buttercup family) and *Rumex* (docks). Spores include *Polypodium vulgare*, *Pteridium aquilinum* (bracken), *Sphagnum* moss and ferns. Microscopic charcoal is present.

Trench 1 – Context (159), 0.50m below top of column sample

- 3.22 Sandy clayey silt was sampled at 0.50m depth. This was greyish brown in colour mottled with orange (10YR 5/2) with fine roots noted. Pollen is abundant in the sample and moderately well preserved. *Corylus avellana* pollen dominates the assemblage with *Alnus glutinosa* frequently recorded. *Betula* and *Calluna vulgaris* are present in lower numbers. Pollen from herbaceous plants makes up 12% of the total land pollen with a greater diversity of herbs noted than at 0.88m depth. The species recorded are Apiaceae, Brassicaceae (cabbage family), cereal-type, *Plantago lanceolata*, Poaceae, Ranunculaceae and Rubiaceae (bedstraw family). Spores include *Polypodium vulgare*, *Sphagnum* moss and ferns. Microscopic charcoal is present.

Trench 1 – Context (159), 0.20m below top of column sample

- 3.23 Sandy silt was sampled at 0.20m depth. This was dark brown in colour (10YR 4/2), mottled with orange with fine roots noted. Pollen is abundant in the sample and moderately well preserved. The proportions of tree and shrub pollen are lower than the underlying levels, although *Corylus* and *Alnus* are still common. There are increases in the frequencies of *Calluna vulgaris* and herbs (particularly Poaceae). Other herbs noted are Apiaceae, Caryophyllaceae (pink family), *Plantago lanceolata* and Ranunculaceae. Spores include *Polypodium vulgare*, *Sphagnum* moss and ferns. Microscopic charcoal is present.

Trench 6 – Context (626), sample 601

- 3.24 Pollen is abundant and well preserved in this sample. Trees and shrubs dominate the pollen assemblage with high frequencies of *Alnus glutinosa* and *Corylus avellana* recorded. Lower numbers of *Betula*, *Quercus*, *Calluna vulgaris* and *Salix* pollen are noted. Herbs include Poaceae, Caryophyllaceae, Ranunculaceae, Rubiaceae, *Succisa pratensis* (devil's-bit scabious) and a few cereal-type grains. Spores of *Polypodium vulgare*, *Pteridium aquilinum*, *Sphagnum* moss and ferns are recorded. Microscopic charcoal is present.

Trench 6 – Context (621), sample 602

- 3.25 Pollen is abundant and well preserved. The assemblage is very similar to that from sample 601 with the additional presence of a few grains of *Fraxinus excelsior* (ash), *Convolvulus*-type (bindweed-type) and *Plantago lanceolata*. Microscopic charcoal is present.

Trench 7 – Context (705), 0.34m, 0.16m and 0.04m below top of column sample

- 3.26 Context (705) comprises a column sample of the turf-lined rampart. Black silt horizons representing turf layers are intercalated between thicker layers of sandy clay. Three of the black silt horizons were assessed for pollen, at 0.34m, 0.16m and 0.04m depth. The pollen assemblages for all three are very similar and are discussed together. Pollen is abundant and well preserved in the layers, with micro-charcoal also abundant throughout. The assemblages are dominated by very high frequencies of *Calluna vulgaris* and *Corylus avellana*. Low frequencies of *Alnus glutinosa* are noted, with a few *Quercus* grains recorded at 0.04m depth. Herbs form a minor component of the pollen assemblages at 0.34m and 0.04m, with a slightly higher proportion (15%) recorded at 0.16m. Caryophyllaceae, *Convolvulus*-type, *Plantago lanceolata*, Poaceae, Ranunculaceae are noted. Spores of *Polypodium vulgare*, *Pteridium aquilinum*, *Sphagnum* moss and ferns are present.

Trench 7 – Context (705), 0.06m below top of column sample

- 3.27 Dark grey sandy clay (10YR 4/1) was sampled at 0.06m depth below a black silt horizon. Pollen concentration was very low and preservation was poor. The pollen grains recorded were *Calluna vulgaris*, *Corylus avellana*, *Convolvulus*-type, Poaceae and *Succisa pratensis*. Spores of *Polypodium vulgare* and other ferns were frequent, with lower numbers of *Pteridium aquilinum* and *Sphagnum* spores recorded.

Discussion

- 3.28 The well-drained nature of pit fills (119) and (148) have not provided the anaerobic conditions necessary for the preservation of pollen, and the small assemblages of damaged grains from these fills are of limited interpretative value.
- 3.29 Pollen is well preserved in the clay and silt layers sampled from ditch fill (159). At the base of the sequence a landscape dominated by *Corylus* scrub is indicated, with low numbers of forest trees including *Quercus* and *Betula*. *Alnus* is significant in the local landscape, with this waterlogging-tolerant tree probably growing predominantly along stream banks in the wet valley bottom or other areas of damp ground. *Salix* would also have favoured these wetland habitats. Moderate *Calluna vulgaris* pollen levels indicate areas of heathland near the site.
- 3.30 A similar landscape of hazel-dominated scrub is indicated further up the ditch sequence at 0.50m, although the presence of cereal-type pollen and herbs associated with agriculture such as *Plantago lanceolata* and Ranunculaceae indicate there were also open areas supporting arable farming and herb-rich pasture for grazing. Previous pollen analysis of ditch fills from the vicus also provided evidence for pastoral farming with limited cereal cultivation (Brayshay 1999).
- 3.31 Increased woodland disturbance and clearance activity are recorded towards the top of the sequence with rises in the frequency of herb pollen, particularly Poaceae. Studies indicate that fire has consistently been used to open woodland and change vegetation composition, with peaks of microscopic charcoal often correlating with phases of intensive human activity in all cultural periods (Innes 2002). The presence of microscopic charcoal throughout the ditch sequence may relate to the use of fire for woodland clearance and/or may derive from human activities associated with the use of the fort and surrounding settlement or episodes marking the demolition/abandonment of the site.

- 3.32 Pollen from the vicus ditches suggested woodland regeneration and a spread of heath and bracken following the abandonment of the site (Brayshay 1999). While an increase in heath is noted towards the top of ditch section (159), generally more open conditions are reflected rather than woodland regeneration. Radiocarbon analysis would help to establish the chronology of the vegetation history recorded in the ditch and how it relates to human activities associated with the fort.
- 3.33 Posthole fills (626) and (621) record a landscape with significant *Corylus* scrub and abundant *Alnus* in wetland areas. Low *Betula*, *Quercus* and *Fraxinus* pollen levels may indicate that either birch, oak and ash woodland grew at some distance from the site or a few of these trees occurred more locally. The spread of forest trees may have been inhibited by levels of exposure, wetness and soil acidification. Cereal-type pollen and herbs associated with agriculture once again reflect a mixed economy of arable and pastoral farming. Areas of heathland are indicated and microscopic charcoal reflects episodes of burning at or near the site.
- 3.34 The black silt layers from the rampart sequence are dominated by *Calluna* pollen, which probably reflects the heathland environment from which the turves were collected. *Corylus* scrub is again indicated, as is the proximity of *Alnus* trees. Herbs associated with pastoral farming reflect this land use in the vicinity of the heathland. Abundant microscopic charcoal is recorded reflecting natural or anthropogenic fires. The similarity of the pollen assemblages in the three silt layers, may indicate that the turves were collected from the same location and that the construction of the rampart was undertaken in a single phase, or if constructed in several phases, there was continuity within the landscape during this period.
- 3.35 Pollen was poorly preserved and sparse in the clay layer from the rampart sequence (at 0.06m depth) and is of little interpretative value. The high values of *Polypodium* and ferns probably reflect differential preservation of these spores, which are more durable than many other microfossils.

Palaeoenvironmental summary

- 3.36 The plant macrofossil evidence indicates the use of cultivated crops and wild gathered foods during the Roman occupation of the site. Spelt wheat was identified, which was the main cereal crop used throughout Britain at that time. Small scale arable cultivation in the vicinity of the fort is reflected in the pollen data, with areas of herb-rich pasture maintained for grazing. Wood and charcoal identifications suggest that oak was one of the main structural timbers used at the site, which pollen evidence indicates may have been brought from areas of free-draining soils in the Castleshaw Valley. The pits comprise the remains of burnt structural timbers and hearth waste. The latter reflects the exploitation of the local woodland resource for fuelwood, with a diverse range of woods collected.

4. Recommendations

- 4.1 No further analysis is recommended for the plant macrofossils due to their low numbers and poor preservation. Further analysis of the large quantity of charcoal recovered from deposit (148) and sample 103 could be considered for future synthesis, as Huntley (2010) highlights a lack of charcoal investigations in northern England.

- 4.2 The waterlogged oak timber fragments from posthole fill (621) would require conservation if they are to be retained. The work marks could be examined by a wood technology specialist.
- 4.3 The assessment has shown that pollen is well preserved in certain levels within column samples (159) and (705). Further counting, supported by radiocarbon dating, would provide a more detailed picture of landscape changes and land use patterns during the occupation of the site and following its abandonment.
- 4.4 If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced. The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

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Appendix 1: Data from palaeoenvironmental assessment

Context	119	119	148	626	621
Sample	103	104	105	601	602
Feature	pit	pit	pit	posthole	posthole
Material available for radiocarbon dating	✓	✓	✓	✓	(✓)
Volume processed (l)	7	3	6	3	4
Volume of flot (ml)	800	200	2000	30	30
Residue contents					
Bone (calcined) indet. frags	-	-	+++	-	-
Charcoal	+++	(+)	++	-	+
Daub / fired clay	++	++	++	-	-
Pot (number of fragments)	-	-	1	-	-
Flot matrix					
Bone (calcined) indet. frags	-	-	++	-	-
Charcoal	+++	+++	++++	++	++
Heather twigs (charred)	++	-	-	-	-
Insect / beetle	-	-	-	+	+
Roots (modern)	+	-	+	++	++
Wood	-	-	-	+	-
Charred remains (total count)					
(c) <i>Triticum spelta</i> (Spelt Wheat) glume base	-	-	1	-	-
(t) <i>Corylus avellana</i> (Hazel) nutshell frag.	-	-	2	1	-
Identified wood (✓ presence)					
<i>Alnus glutinosa</i> (Alder)	-	-	-	✓	-
<i>Quercus</i> sp (Oaks)	-	-	-	✓	✓
Identified charcoal (✓ presence)					
<i>Alnus glutinosa</i> (Alder)	?	-	✓	-	✓
<i>Betula</i> sp (Birches)	✓	✓	✓	✓	-
<i>Corylus avellana</i> (Hazel)	✓	✓	✓	-	-
<i>Ilex aquifolium</i> (Holly)	-	-	✓	-	-
Maloideae (Hawthorn, apple)	-	-	-	✓	-
<i>Quercus</i> sp (Oaks)	✓	✓	✓	✓	✓
Salicaceae (Willow, poplar)	✓	-	✓	✓	-
<i>Sorbus aucuparia</i> (Rowan)	-	-	✓	-	-

[c-cultivated; t-tree/shrub. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant. ?-cf.

(✓) may be unsuitable for dating due to size or species]

Appendix 2: Data from pollen assessment

Trench	1	1	1	1	1	1	6	6	7	7	7	7
Sample	103	104	105	-	-	-	601	602	-	-	-	-
Context	119	119	148	159	159	159	626	621	705	705	705	705
Depth below top of column sample (m)	-	-	-	0.20	0.50	0.88	-	-	0.04	0.06	0.16	0.34
(t) <i>Alnus glutinosa</i> (Alder)	4	1	8	25	35	22	50	49	5	-	11	9
(t) <i>Betula</i> sp. (Birches)	1	-	-	1	3	13	3	-	-	-	-	-
(t) <i>Fraxinus excelsior</i> (Ash)	-	-	-	-	-	-	-	1	-	-	-	-
(t) <i>Quercus</i> sp. (Oaks)	-	-	1	1	-	7	3	2	2	-	-	-
(s) <i>Calluna vulgaris</i> (Heather)	-	-	4	12	9	6	7	13	81	4	48	57
(s) <i>Corylus avellana</i> (Hazel)	4	1	20	35	71	44	57	60	12	4	46	45
(s) <i>Ilex aquifolium</i> (Holly)	-	-	-	1	-	1	-	-	-	-	-	-
(s) <i>Salix</i> sp. (Willows)	-	1	-	-	-	2	2	1	-	-	-	-
(h) Apiaceae undiff. (Carrot family)	-	-	-	1	1	1	-	-	-	-	-	-
(h) Asteraceae undiff. (Daisy family)	-	-	-	-	-	-	-	-	-	-	-	-
(h) Brassicaceae undiff. (Cabbage family)	-	-	-	-	1	-	-	-	-	-	-	-
(h) Caryophyllaceae undiff. (Pink family)	-	-	-	1	-	-	1	2	-	-	1	-
(h) Cereal-type	-	-	1	-	2	-	2	2	-	-	-	-
(h) <i>Convolvulus</i> -type (Bindweed-type)	-	-	-	-	-	-	-	1	-	13	8	-
(h) <i>Plantago lanceolata</i> (Ribwort Plantain)	-	-	3	4	4	-	-	1	4	-	4	1
(h) Poaceae undiff. (Grass family)	1	-	6	30	6	-	12	28	-	1	4	-
(h) Ranunculaceae undiff. (Buttercup family)	-	-	-	1	1	1	2	1	1	-	2	-
(h) Rubiaceae undiff. (Bedstraw family)	-	-	-	-	1	-	1	-	-	-	-	-
(h) <i>Rumex</i> sp. (Docks)	-	-	-	-	-	3	-	-	-	-	-	-
(h) <i>Succisa pratensis</i> (Devil's-bit Scabious)	-	-	-	-	-	-	1	-	-	1	-	1
(h) <i>Taraxacum</i> -type (Dandelion-type)	1	-	-	-	-	-	-	-	-	-	-	-
(s) <i>Polypodium vulgare</i> (Polypody)	1	1	8	9	30	3	7	8	4	43	14	6
(s) <i>Pteridium aquilinum</i> (Bracken)	-	-	-	-	-	2	1	-	-	2	3	3
(s) Pteridophyta (monolete) undiff. (Ferns)	3	2	4	10	16	4	12	17	1	35	11	2
(s) <i>Sphagnum</i> sp. (Sphagnum moss)	-	-	-	1	1	1	2	1	1	5	5	4
Total land pollen counted	11	3	43	112	134	100	141	161	105	23	124	113
<i>Lycopodium</i> spores (exotic)	28	35	31	3	5	5	3	14	1	10	1	1
Microscopic charcoal	Abundant	Abundant	Abundant	Present	Present	Present	Present	Present	Abundant	Present	Abundant	Abundant
Pollen concentration	Low	Low	Low	High	High	High	High	High	High	Low	High	High
Pollen preservation	Poor	Poor	Poor	Moderate	Moderate	Good	Good	Good	Good	Poor	Good	Good
Unidentified pollen grains	-	-	-	-	1	-	-	-	-	-	-	-

[t-trees; s-shrubs; h-herbs; s-spores]

8.. Chemical Analysis

Dr Simon Hutchinson, University of Salford and

Kirsty Whittall, University of Salford (Introduction, discussion)

The following is a report on the results of the analytical analysis of sediments collected from Castleshaw Roman Fort during the excavations held in July 2014. The samples which were collected from trench two had specific aims and objectives, in relation to the chemical evaluation of sedimentary evidence of potential workshop related activities.

Sample Collection

The samples recovered from Trench 2, pertaining to the areas identified as potential workshop activity. Two sample where recovered from features (229) and (236); these sub circular features displayed characteristic discolouration associated with heating and burning.

The samples were taken in dry conditions by leaf point trowel and immediately placed in to zip-lock bags. The sample size was 50grams of material per feature. Both samples were taken for investigation through analytical methods of X-Ray Fluorescence (XRD), and Scanning Electron Microscope (SEM) to ascertain potential levels of elemental enrichments within the sample sediments, which may give indication of industrial activity.

The justification of the removal of the samples from Trench 2 is as follows:

Samples recovered from areas of potential industrial activity to evaluate and investigate the following research aims:

- Identification of potential elemental enrichments
- Identification of possible industrial residues
- Identification of potential activities within Trench Two
- Any industrial elemental enrichments present at Castleshaw
- Elemental evidence of workshop production

Through the analytical investigation of these samples, it may be possible to identify the function of archaeological remains in Trench 2. This evidence would be beneficial to our understanding of activities at Castleshaw and would help to identify industrial production

evidence within the area. Further works would benefit from being informed by the results of this analytical investigation.

The analysis was carried out at the University of Salford by Simon Hutchinson, whose report can be found below

Castleshaw Fort (Saddleworth) 'red deposit' investigation

Introduction

This brief report aims to set out the mineral magnetic and XRF-based geochemical characteristics of two 'red deposit' samples taken from recent excavations at Castleshaw Fort. The results are set out and discussed in relation to a brief survey of both background soil trace element levels and other geochemical surveys of archaeological sites. Dirix et al. (2103) usefully place the use of magnetic and multi-element soil analysis in archaeological site survey into context.

Methodology

Field sampling

Two samples were taken from zones of reddened colour; samples 250 and 229 (the latter being somewhat darker in colour).

Laboratory work

Sample preparation

The two samples were subdivided to reserve approximately half the sample for possible further analysis. The portion for analysis was dried at <40C (this temperature is employed to preserve the mineral magnetic properties of the material), thoroughly mixed and disaggregated using a mortar and pestle. In each case three replicates were analysed.

Mineral magnetic analysis

Six samples (3 from 250 and 3 from 229) were packed into 10 ml plastic (Azlon) sample holders. Mineral magnetic measurements were made using a Bartington Instruments Ltd MS2 B sensor to determine sediment mass specific magnetic susceptibility (X_{lf}) and frequency dependent susceptibility ($X_{fd}\%$)(Dearing 1994). A Molspin Ltd pulse magnetiser and fluxgate

magnetometer were employed to determine Anhysteretic Remanent Magnetisation (ARM) and Saturation Isothermal Remanent Magnetisation (SIRM) (Walden et al. 1999).

Geochemical analysis

Following mineral magnetic analysis the samples were transferred to sample holders where the sample sits on a thin film (6 microns). A range of geochemical properties were determined using a Niton GOLLD fpXRF mounted in a shield. This instrument is calibrated for soil samples and a suitable Certified Reference Material (CRM) is employed at the start of the measurement sequence to verify the results (see Shuttleworth et al. 2014).

Note:

Both XRF-based analyses and mineral magnetic measurements are relatively rapid and non destructive of the samples.

Physical properties

The total organic content of the samples will be determined in due course via a loss-on- ignition method (LOI). This may be useful as elevated element concentrations may reflect a higher organic content (including charcoal).

Note: Unlike the two techniques above, although relatively simple, these analyses are sample destructive.

Results and discussion

Mineral magnetic analyses

The mineral magnetic analyses of the samples indicated magnetic elevated concentrations. This is most marked in sample 229 which was a darker red in colour and has a higher iron (Fe) content. These concentration values of magnetic susceptibility (χ_{lf}), ARM and SIRM exceed what would be expected in local top soils and the local bedrock (sandstone) (e.g. Shuttleworth et al. 2015) (Table 1).

Soil surfaces in the area will tend to hold a mineral magnetic signal reflecting atmospheric deposition of diffuse pollutants since the industrialisation of the region. However, a key characteristic of the samples is the high frequency dependent susceptibility ($\chi_{fd\%}$) of the samples. (The other inter parametric ratios of the samples are also rather different to those of

the moorland soils of the area.) The $\chi_{fd}\%$ values of sample 250 are at the high end of the normal range for top soils and 229's exceed this. This implies that the area from which the deposits have been removed has been heated as this is a known means of magnetic enhancement which also tends to produce a finer mineral magnetic mineralogy (as indicated by the higher $\chi_{fd}\%$ values). The >14% levels of sample 229 may also indicate contamination of this material where magnetic concentrations are exceptionally high (backed up by the SIRM concentrations) (Walden et al. 1999).

Table 1 Mineral magnetic characteristics.

Sample	Code	Xlf	$\chi_{fd}(\%)$	ARM	SIRM
1A	250	41.24	12.31	32.2	1406.8
1 B	250	35.64	11.75	40.5	1474.2
1 C	250	33.51	11.71	36.8	1299.8
MEAN		36.79	11.92	36.47	1393.6

2A	229	70.42	22.53	410.0	24039.8
2 B	229	73.67	19.79	418.8	22773.1
2 C	229	71.20	24.22	418.6	22921.2
MEAN		71.76	22.18	415.80	23244.7

Geochemical analysis

Tables 2a and 2b gives the concentrations of selected elements determined by XRF using a relatively short count time. (Some consideration must be given to the errors for some of these data.) In considering the levels of key elements it is useful to consider those reported in the surface soils of the area (e.g. NSI topsoil data and the National Geochemical Atlas (BGS) providing a wider context) and at other archaeological sites

Table 2a. Geochemical properties determined by fpXRF (mg/kg).

SAMPLE	Pb	Error	Zn	Error	Cu	Error	Fe	Error	Mn	Error
1a	24.54	3.59	79.23	7.24	54.91	9.61	4527.1	247.29	2101.14	67.78
1b	24.58	3.63	75.77	7.20	45.46	9.53	42833	243.72	1694.79	63.12
1c	26.05	3.59	80.14	7.13	48.98	9.31	43007	238.46	1572.74	59.96
	25.06		78.38		49.79		43704		1789.56	
2 A	20.23	3.57	112.24	8.34	48.63	9.85	51904	272.23	531.94	45.86
2 B	21.15	3.57	109.19	8.18	50.97	9.81	48968	262.62	552.11	45.72
2 C	23.64	3.67	112.75	8.29	52.88	9.84	50892	267.23	494.61	44.75
	21.67		111.39		50.83		50588		526.22	

Table 2b. Geochemical properties determined by fpXRF (mg/kg).

SAMPLE	Ni	Error	Cr	Error	V	Error	Sb	Error	Sn	Error
1a	107.33	19.21	64.97	10.82	94.55	16.46	85.76	15.71	43.04	9.94
1b	88.37	19.20	76.12	10.17	82.81	15.55	92.02	16.23	49.42	10.27
1c	89.95	18.73	84.25	10.92	92.15	16.62	95.57	15.79	56.99	10.05

	95.21		75.11		89.84		91.12		49.82	
2 A	77.23	19.93	147.45	11.44	104.07	16.27	73.17	16.03	34.96	10.02
2 B	81.50	19.67	126.52	11.29	128.08	16.47	69.41	16.16	41.82	10.25
2 C	82.28	19.71	137.46	11.47	115.98	16.37	61.72	15.74	35.43	9.94
	80.34		137.14		116.04		68.10		37.40	

In both samples both lead (Pb) and arsenic (As) concentrations are low at around 25 and 7 mg/kg respectively. These levels are well below those found in the local top soils and comparable to the levels expected in the local (sandstone) bedrock. Therefore there is no clear evidence (based on only two samples of course) for Pb working at the site. Furthermore, the analysis of these two elements via XRF is known to provide reliable results.

There are only slightly elevated (relative to background / top soils) levels of copper (Cu) and zinc (Zn) in the samples (50 and 70-111 mg/kg respectively). However, other elements (e.g. iron (Fe) and manganese (Mn) are relatively. In addition, nickel (Ni), chromium (Cr), vanadium (V), and antimony (Sb) and tin (Sn) are higher than background soils (though not as markedly for the latter two elements). This relative enhancement implies some form of contamination of these samples over and above the signal left on the adjacent soil surface as a function of atmospheric deposition since the Industrial Revolution.

Fe levels are around 5 times higher than one might expect for the local geology and the uplands of England. This is consistent with the strong mineral magnetic response of the samples. Mn is not particularly high compared to crustal averages (i.e. the normal range of Mn found in rocks), but is high compared to the levels expected for the local geology (sandstone) and area. There is a considerable difference in the Mn values measured in each sample (whereas Fe values vary less). Some post depositional remobilisation effect may therefore be worth considering

Cook et al. (2014) discuss the use of geochemical signals in characterising space use at the Roman archaeological site of *Calleva Atrebatum* (Silchester, Hampshire). In their survey high (200 mg/kg) to extremely high (c.1300 mg/kg) concentrations of Cu as ‘hotspots’ are considered to reflect metal-working. At Castleshaw Fort the Cu concentrations range from 45-54 mg/kg. Elevated Zn levels associated with metal-working were also found in the ‘hotspots’ in the Silchester survey (e.g., 430 mg/kg), whereas the ranges of Zn concentrations lies from 76 to 113 mg/kg. Cook et al. (2014) also found elevated Pb levels of 1046 mg/kg which were 35 times background compared to the highest Pb in our analysis of 26 mg/kg, which is around the crustal average value for the type of local rock. It should be noted that this survey talks about both elevated levels and hotspots. When the sample set is only two a direct comparison between surveys may be problematic (i.e. are the two samples hotspots?). Moreover, the survey at Silchester deals with a more extensive (and intact) site. However, the publication is both recent and remains relevant. An earlier survey of the site (Cook et al. 2005) reports ranges of; Cu (18-116 mg/kg); Pb (25-215 mg/kg); Zn (28-272 mg/kg). Given the relatively low levels of Cu, Pb and Zn compared to Cook et al. (2005; 2014) (although Sn is relatively high for the location), metal-working of copper alloy including brass is not strongly indicated.

Entwistle et al. (2000) cite previous work where Cu and Zn enrichment are found to reflect human activity through the accumulation of wastes. Wilson et al. (2009) highlight the role of heaths and the process of combustion as the main process of element concentration at historic rural settlement sites. Wilson et al. (2008) also associate elevated levels of Fe with burning. Therefore, given the influence of heating suggested by the mineral magnetic properties of the samples and the abundance of charcoal at the (wider) site, might this explain the relative enhancement of elements without a metal-work source?

Pb, Zn and Cu appear to be the key indicators of metal-working at archaeological sites cited in the literature. Comparison with the other relatively elevated elements found at Castleshaw and other archaeological surveys has not been possible (and the paucity of geoarchaeological study of a wider range of elements is noted in the literature). Therefore, the levels of the other elements may merit further investigation

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@March 2015

Discussion

The area is a carboniferous acidic peaty rendzina soil, associated with upland areas and moors, and as such aluviation is expected to effect the underlying geochemistry of the land, to this extent an enrichment of irons and manganese were expected, although notably due to the peat lenses within the underlying geology, exceptionally high levels of iron and manganese would be informative and indicative of industrial enrichments.

Both samples show visual characteristics of episodic heating through a red discoloration and it was expected that both samples would reflect an altered, possibly higher than average magnetic response. Although this information does provide confirmation of episodic heating, it does not offer any new insights into the action which caused the discolouration.

Both samples will offered a varied response to the analytical testing, with individual enrichment peaks, although this is crucial for any interpretation of the potential historical activity in Trench Two, it could also be seen to provide a proxy interpretation of periodic activities associated with this and other Roman forts. Regardless of the results, mitigation should consider further research in the chemical characterisation of upland Roman forts, in order to contextualise any activities both socially and historically.

9. Conclusion

The post excavation works contained within this appendices have been carried out by selected specialists, whom have offered their own conclusions and interpretations on the material assemblage retrieved from Castleshaw Roman fort.

Each of these specialists reports reflect the complexity of post excavation analysis of the materials and how contextualisation of this assemblage is crucial to the formation of our own understanding of the local and regional activities which took place within the fort.

Beginning with Andy Myers' descriptions and interpretations of the sporadic lithic items recovered from the area, show that Castleshaw fort was situated in an area of previous activity. Although no further prehistoric evidence was recovered from the excavations, it would be remiss to suggest that this area is devoid of significantly earlier activity. Further to this, the lithic items recovered, together with material from previous excavations, strongly suggest that Mesolithic or early Neolithic people utilised this as a camping area prior to the rise of sedentary lifestyles. The lithic component to this report is minimal but it would be worth pulling together all the excavation lithic finds to provide a better context and understanding.

Felicity Wilds assessment of the Samian ware types outlines key information on the date range which is reflected within that type set, providing the information that the majority of the samian wares uncovered are of Flavian-Trajanic period, this ties in with the historical background and information gain from previous excavations.

Ruth Leary's report on the Romano-British pottery, focussed on the coarse wares and grey ware typess which produced the majority of this material assemblage. Leary identifies four potential areas of production for the coarse and grey wares uncovered at Castlehsaw.

The amphorae that was recovered fitted the type sets from kiln sites in Southern Spain, noted for their production and trade of olive oils, and along with the recovery of amphora stoppers, Leary suggests that this reflects the import of olive oils to Castleshaw, similarly, Leary references Wild's samian report when discussing the potential for the import of this high status material from kilns in Northern Gaul, particularly those of Oise and Somme. Further to

these, Leary expresses the potential for a minority of material to be of a local production, particularly the Flavian-Trajanic ring neck flagon rim, which under magnification was identified as vitrified and over fired, and something Leary relates to local kilns within the Northwest, particularly the kiln at Melandra.

The assemblage assessed by Leary is predominantly amphorae and military table wares with the inclusion of potential localised wares, suggesting that local/regional and international trade/supply was taking place at Castleshaw

Dr Phil Mills produced the report on the fired clay and building materials, which highlight elements of the construction of Castleshaw, which in turn offered further interpretation and support to the palynological results given by the University of Durham. The fired clay and building materials recovered from Castleshaw were difficult to identify beyond that of Roman fired clay and building materials, although Mills does identify two fragments of *tegula* from trench two, along with brick fragments from trenches six and seven. Mills indicates that this form of building material would reflect Castleshaw's high status, and that an appreciable amount of the building material had been re-used as packing and padding and hard-core in general antiquity.

Mills offers that the fired clay may derive from an oven superstructure, potentially reflecting the patches of episodic burning recorded within the palynological report.

Christine Howard-Davies supplied the analysis for both the glass and metals; Howard-Davies identifies 43 fragments of glass and 5 melon beads within the assemblage. The melon beads recovered from Castleshaw are the best indication from the glass assemblage, of diagnostic material for the Roman occupation of the fort, as Howard-Davies outlines, these melon beads have strong military associations particularly with that of the cavalry.

The metals assemblage was assessed as having 103 fragments of metals, although highly degraded Howard-Davies surmises that the assemblage is predominantly that of hand forged nails, adding that the lack of "clinching" would be indicative of these items being deposited within the wooden structures of Castleshaw. Howard-Davies suggests that although much of the glass and the metals are difficult to identify and are degraded, items such as the melon

beads and nails fit with the Romano-British occupations during the 1st and 2nd centuries when contextualised with similar Roman forts, such as that at Ribchester.

The Durham University Archaeological Services (DUAS) conducted the assessment of the palynological evidence recovered from Castleshaw. The report of the pollen samples reflected a diverse spread of arboreal pollens throughout the site particularly that of upland shrubs and trees associated with the general flora of the 1st and 2nd centuries.

The pollen residues recovered from the area of Castleshaw offered evidence of arable farming lands and limited crop cultivation, with strong evidence of spelt wheat, the main cereal crop within Britain at that time.

DUAS also identified the main structural timbers of Castleshaw being oak, which would have been transported upland from the Castleshaw Valley, as this type of flora requires freely draining soils, which are not present in the immediate surrounding area of the fort.

Furthermore, DUAS identified microscopic charcoal throughout all stratas of the column samples recovered from the ditch feature in Trench one, suggesting that these may relate to “...the use of fire for woodland clearance and/or may derive from human activities associated with the use of the fort and surrounding settlement or episodes marking the demolition/abandonment of the fort.”

The incorporation of chemical analysis within this report, courtesy of Simon Hutchinson, proves that although not easily interpreted the chemical enrichments and compositions within the soil matrix is something which could prove crucial to our understanding of industry on the site.

The chemical analysis offers insights into functionality of certain areas within the site. Hutchinson outlines the elemental enrichments found at Castleshaw, and explains that these enrichments are not characteristic of metal working in comparison to other Roman forts. However, Hutchinson points out that some of the elemental enrichments peak above that of residual industrial revolution contaminations, resulting in a soil contamination at Castleshaw.

The chemical analysis of these sediments lacks the enrichment of iron or lead which would reflect industry; however, there is a large differentiation between the levels of manganese between both samples, as Hutchinson explains these types of enrichments reflect processes of

combustion as main element concentrations within historic rural sites, showing the potential for elemental enrichments without metal working evidence.

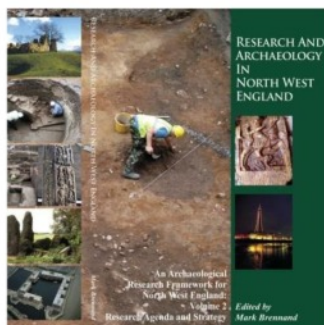
The post excavation analysis as a whole reflects the wide and varied role that Castleshaw held within this period of time. The ceramics analyses conducted by Wild and Leary reflect the high status of the inhabitants of Castleshaw, whereas Mills interpretations of the fired clay ceramics and building materials show the high status value of the structure of the fort. Similarly, the presence of the metals and glass at Castleshaw, as Howard-Davies outlined, gave indication of a military presence potentially a cavalry presence, solidifying the status and importance of Castleshaw during the 1st and 2nd centuries. The pollen and chemical analysis, both show evidence of large episodic burning of the fort, potentially around the time of abandonment, evidence of this can also be seen in the melted lead fragments (Howard- Davies) and the fired clay (Mills).

Understandably mitigation is offered within light of these specialists reports: further study of the Romano-British pottery, as suggested by Leary, may offer further insights into the social aspects of the fort, particularly a study of over firing and vitrification to assess any evidence or characteristic of the locally produced wares.

Further analysis of the soil and chemical enrichments by way of a programme of sampling could aid our understanding of the geochemical traces of Roman industry and add to the collective understanding of chemical prospection within archaeology.

DUAS also mitigates further work on the oak timbers recovered from Castleshaw, as these have evidence of working. Further to this, future work could consider a combination of each set of recommendations as a larger project, contextualising the characteristics of Roman forts in the North West, by way of a series of specific sampling methodologies, including palynology and chemical enrichments.

CONSULTANCY



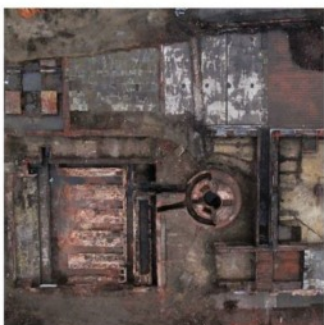
DESK BASED ASSESMENTS



WATCHING BRIEF & EVALUATION



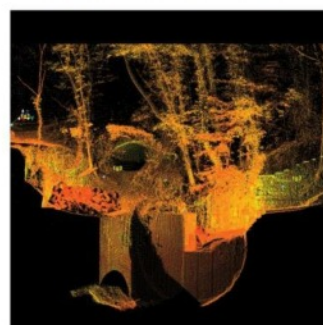
EXCAVATION



BUILDING SURVEY



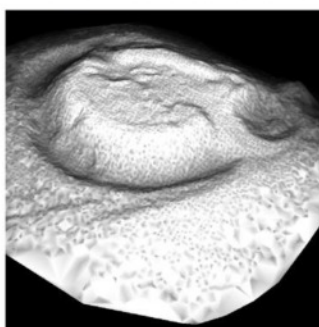
3D LASER SCANNING



COMMUNITY INVOLVEMENT



LANDSCAPE SURVEYS



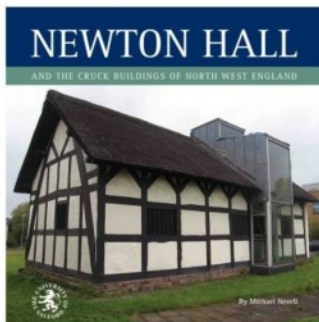
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