



## Piercebridge, County Durham

Archaeological Evaluation and Assessment of Results



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**PIERCEBRIDGE,  
COUNTY DURHAM**

**Archaeological Evaluation and Assessment of Results**

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## PIERCEBRIDGE, COUNTY DURHAM

### Archaeological Evaluation and Assessment of Results

#### Summary

In June and July 2009 an archaeological evaluation was undertaken by Channel 4's 'Time Team' at the site of Piercebridge, County Durham (NGR 421004 515725), in several areas in and around the Roman fort (Scheduled Ancient Monument numbers 23638, 23771) which underlies the present village. Through a targeted evaluation comprising six trenches, as well as further exploration in the River Tees, this project was able to contribute to the ongoing aims of the Piercebridge Project.

The evaluation located a previously unknown area of activity to the north-west of the fort, dating to the 2nd century AD, although the precise nature of the activity in this area was not conclusive. The types of domestic refuse recovered would be consistent with civilian settlement, although a large area of cobbling could imply a more official or military structure. The alignment of features in this area differed from that of the fort, and suggests that activity here pre-dated the construction of the fort in the mid 3rd century AD.

The evaluation also located the exact route of the earlier alignment of Dere Street to the south of the River Tees, although no further dating was obtained, and geophysical survey did not reveal any evidence for any significant settlement remains in this area. A section of what appears to be a branch road was uncovered to the north of the river, and geophysical results suggest that this pre-dates some of the *vicus* buildings.

Some further remains were found within the area of Tofts Field, to the east of the fort and the present village, which particularly highlighted the changing course of the river. The presence of a grave suggests that there may be a cemetery in this area; a cist burial was discovered just to the south-west in 1933. Underwater exploration found a number of timbers to the west of the course of the Roman stone bridge, and a radiocarbon date in the 1st century AD was obtained for an additional line of timber piles to the west of this.

Very little evidence for post-Roman activity was recovered, apart from a few possible Saxon and medieval pottery sherds. Medieval ridge and furrow was identified from the geophysical survey to the south of the river.

The results of the Time Team evaluation clearly augment the information from the previous excavations on the Site, albeit in a relatively limited fashion. Given the scale of the results, full publication is not recommended, but instead it is proposed that the results are published in the form of a summary report, with accompanying figures, to be submitted to the *Durham Archaeological Journal*.

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## **PIERCEBRIDGE, COUNTY DURHAM**

### **Archaeological Evaluation and Assessment of Results**

#### **Acknowledgements**

This programme of post-excavation and assessment work was commissioned and funded by Videotext Communications Ltd, and Wessex Archaeology would like to thank the staff at Videotext, and in particular Michael Douglas (Series Editor), Jane Hammond (Production Manager), Adam Warner (Director), Sarah Jobling (Assistant Producer), Louise Ord (Researcher) and Emily Woodburn (Production Coordinator) for their considerable help during the recording and post-excavation work.

The geophysical survey was undertaken by John Gater, Jimmy Adcock and Emma Wood of GSB Prospection. The field survey was undertaken by Henry Chapman, University of Birmingham and landscape survey and map regression was undertaken by Stewart Ainsworth of English Heritage. The excavation strategy was devised by Ben Robinson and Mick Aston, in conjunction with David Mason, the County Archaeologist. The on-site recording was co-ordinated by Naomi Hall, and on-site finds processing was carried out by Helen MacIntyre, both of Wessex Archaeology.

The excavations were undertaken by Time Team's retained archaeologists, Phil Harding (Wessex Archaeology), Matt Williams, Ian Powlesland, Faye Simpson, Raksha Dave, Naomi Sewpaul and Tracey Smith assisted by Penny Middleton, Daniel Still, Jon Welsh, Jamie Scott, George Clarkson and Deborah Anderson. The metal detector survey was carried out by Craig Allaker and David Lewney. Diving was undertaken by Rolfe Mitchinson and Bob Middlemass.

The archive was collated and all post-excavation assessment and analysis undertaken by Wessex Archaeology, except for the initial historical research (by Jim Mower, Videotext Communications). This report was compiled by Naomi Hall with specialist reports prepared by Lorraine Mephram (finds), Nicholas Cooke (coins), Jessica Grimm (animal bone), and Chris J. Stevens (radiocarbon dating). The illustrations were prepared by Kenneth Lymer, except for Figures 9 and 10 (Chris J. Stevens). The post-excavation project was managed on behalf of Wessex Archaeology by Lorraine Mephram.

Finally thanks are extended to the Lord Barnard and the Raby Estate, and to Richard and Caroline Wilson for allowing access to the Site for geophysical survey and archaeological evaluation, and also to the tenant farmer, Chris Hodgson, for his co-operation throughout the project. Wessex Archaeology would also like to thank Phillippa Walton (British Museum), Michael Worthington (Oxford Tree-Ring Laboratory), Pete Wilson (English Heritage) and Rob Young (English Heritage) for their advice and assistance.

# PIERCEBRIDGE, COUNTY DURHAM

## Archaeological Evaluation and Assessment of Results

### 1 INTRODUCTION

#### 1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Videotext Communications Ltd to undertake a programme of archaeological recording and post-excavation work on an archaeological evaluation undertaken by Channel 4's 'Time Team' at the site of Piercebridge, County Durham (hereafter the 'Site') (Figure 1).

1.1.2 This report documents the results of archaeological survey and evaluation undertaken by Time Team, and presents an assessment of the results of these works.

#### 1.2 Site Location, Topography and Geology

1.2.1 The Site consisted of three areas of investigation, centred on NGR 421004 515725. One lay to the north-west of the current village of Piercebridge, just beyond the earthworks of the Roman fort (Area 1). A second area lay to the east of Piercebridge, just north of the River Tees (Area 2). Both of these areas lie within the parish of Piercebridge, which falls under the Darlington Unitary Authority within County Durham. A third area lay to the south of the River Tees within the parish of Cliffe which is in the county of North Yorkshire (Area 3). The Site is a Scheduled Ancient Monument, numbers 23638 (the area of the fort) and 23771 (the *vicus*). The areas of scheduling cover a total area of 0.12km<sup>2</sup> and include the village green, the visible ruins in the eastern part of the village, the field to the east known as Tofts Field and the remaining earthwork fortifications and a bordering area beyond these. Other areas of scheduling cover the remains of the later stone Roman bridge to the south of the river and the current post-medieval bridge.

1.2.2 The Site lies approximately 8km to the west of Darlington and 4km to the east of Gainford. The B2675 runs north – south through the village, mostly along the alignment of the Roman road known as Dere Street. The present village is situated on the northern bank of the River Tees. Areas 1 and 2 occupied relatively level ground while Area 3 was situated on an area of higher ground which slopes steeply to the north and east towards the river.

1.2.3 The land in all three areas is currently under pasture. The underlying geology consists of a marl along the river terrace and clays (British Geological Survey, sheet 32).

#### 1.3 Archaeological Background

##### *Prehistoric*

1.3.1 Two bowl barrows lie approximately 0.48km to the south of the Site, on Watson's Hill overlooking the River Tees. These are likely to be the most visible survivors of a wider group of funerary monuments. Barrows of this



type date from the Late Neolithic through to the Late Bronze Age with most examples belonging to the period 2400-1500BC (NMR 29524, 29523). A further barrow lies just 0.9km to the north-west of the Site (NMR DA69), on the northern side of the river.

1.3.2 Approximately 5km to the south-west lies the Late Iron Age *oppidum* of Stanwick (NMR 26950), the substantial earthworks of which enclose an area of 310ha. Excavations on this site show this to have been a major market centre and focus of political power. The site demonstrates continuity of occupation into the early Roman period and the presence of a wealthy elite interacting with the Roman trade routes by the mid 1st century AD. This site later became the location for an early Christian church in the 8th and 9th centuries AD.

1.3.3 A number of isolated prehistoric flint tools have been found in the vicinity (listed on the County Durham Sites and Monuments Record).

#### **Romano-British**

1.3.4 Between the 18th to the early 20th centuries, a number of fragments of carved and inscribed stone were found in the area, dating from the Roman period. The fragments have come from both sides of the river and in a number of cases the stone had been reused in later buildings. The stone artefacts include several altar fragments and a tombstone (see entries 1021-1027 in Collingwood and Wright 1965).

1.3.5 Nineteenth century sources refer to a number of burials in the area of Piercebridge, including several to the south-west and south of the river. There are indications that at least some of these were probably Roman. There is also a report from 1856 of a 1st or 2nd century AD cremation urn found to the north of Piercebridge near Carlbury; 35 stone-lined Roman inhumation graves were also discovered here at this time, causing it to be marked as a Roman cemetery on 19th century maps. A further four inhumation burials, three within stone-lined cists, were discovered in 1956 just to the south-west of the cemetery (Richardson 1962, 172-4).

1.3.6 In 1956 two Roman lime kilns were discovered just to the north of Piercebridge (Richardson 1962, 169-72).

1.3.7 The Site is located at the point where Dere Street (the major Roman route from *Eboracum* (York) to the Antonine Wall) crosses the River Tees and as such is likely to have been a major focus for trade and occupation as well as military activity. Piercebridge was one of a large number of forts that provided the defensive and offensive network for the Roman army in Britannia. The fort may be *Morbium*, listed in the *Notitia Dignitatum*, an early 5th century AD list of official positions throughout the Roman Empire, including military commanders, their units and locations. However, due to the declining Roman influence and withdrawal from Britain during the late 4th century, the information relating to Britain within this document must necessarily be much earlier (Bidwell 1997, 100-1).

1.3.8 The general line of Dere Street was probably established during the Agricolan campaigns in the late 1st century AD. At least two phases of alignment for the crossing of Dere Street over the River Tees are known.

One, assumed to be the earlier, can be seen as a cropmark over Tofts Field on a north-north-west – south-south-east alignment and projected just to the west of the George Hotel. In 1732 there is a mention of “ a bridge, some of the wood of which was yet remaining... I took this to be rather the continuation of the Military way... this way points directly to the Tofts” (J. Horsley, cited in Richardson 1936, 237-8). The second alignment is associated with the stone piers still visible to the south of the river (see **front cover, bottom left**), and lies approximately 175m further to the east than the earlier road. Much of the southern part of this was excavated in advance of gravel extraction in the 1970s. Due to the profile of the flood plain at this point the span of this bridge may have been twice that of the earlier bridge (Fitzpatrick and Scott 1999, 118-9). No definite dating has been obtained to date the construction of the bridge but during the early 4th century AD the structure appears to have been modified to include a causeway at the southern end. While exact details of its construction are unclear, it seems likely that the stone piers supported a timber superstructure (Fitzpatrick and Scott 1999, 124-7). Although attempts were made in the 1930s to locate the northern bridge abutment, this appears to have been destroyed in the 17th century (Richardson 1936, 246-7).

- 1.3.9 Approximately 15km to the north of Piercebridge is the fort of *Vinovia* (Binchester). This fort is one of a number of military complexes built as part of Governor Agricola’s push into Scotland in the late 1st century AD, and later consolidated to support the defences at Hadrian’s Wall (Wilmott 1995). The situation of the fort at Binchester is similar to that of Piercebridge, being on a hill-top overlooking the point where Dere Street crosses the River Wear. Excavation of this fort by Time Team in April 2007 suggested that the early 1st and 2nd century AD fort may have only been intermittently occupied and that there may have a series of such temporary, timber-built forts (Wessex Archaeology 2008a, 8-9).

#### ***Medieval and post-medieval***

- 1.3.10 Piercebridge is listed as *Persebrigg* in the 11th century *Historia de S. Cuthberto*. The origins of the first element in the place name are slightly unclear but are likely to relate to the dialect word *persh* for osier or willow which is derived from a Middle English term, although there is the possibility that it relates to a personal name such as Piers or Percy (Ekwall 1960, 366; Darlington Borough Council 2005, 4).
- 1.3.11 The current settlement appears to follow a medieval pattern of two rows of houses situated around a village green, although the houses themselves date from the mid 17th to the 20th century (Darlington Borough Council 2005, 4). Nevertheless, excavations on the village green in 1948 and 1949 found traces of medieval walls as well as earlier Roman material (Keeney 1950, 304).
- 1.3.12 A number of shrunken and deserted medieval villages in the vicinity of the Site, e.g. Ulnaby to the north-east (Wessex Archaeology 2008b), and Manfield to the south-east, attest to declining populations in this area during the medieval period.
- 1.3.13 The current bridge, which is a Grade II listed structure, was built in the early 17th century and widened in the 18th century. During the English Civil War

the crossing was successfully defended by Royalist troops (Darlington Borough Council 2005, 4).

#### **1.4 Previous Archaeological Work**

1.4.1 There has been a long sequence of previous archaeological work and research concerning the Site. It is known that small-scale excavation took place in and around the village from the 1930s by Mr. G.H. Richardson, a local antiquary, and Mr. G.S. Keeney of the Department of Archaeology in the University of Durham. However the major series of excavations took place from 1969 to 1981, initially by Professor D.W. Harding on the site of the villa, and thereafter by Mr. Peter Scott on a variety of sites in both the civil settlement (*vicus*) north and south of the river and in the fort. What follows is a summary of this work (Videotext 2009, 4-5).

1.4.2 North of the river the excavations explored the eastern defences of the known Roman fort within which the village is located, and the civil settlement (referred to as the northern *vicus*) that lay to the east within the area known as Tofts Field. South of the river the roadside settlement (referred to as the southern *vicus*) was recorded in advance of gravel extraction, and Holme House villa further to the east was also excavated. The earliest occupation was found to be at the villa site where continuity from the Iron Age into the 2nd century AD could be demonstrated. The settlement north of the river had started to develop by the end of the 1st century AD, but there is no evidence of any military involvement prior to the mid 2nd century AD. It is suggested that settlement may therefore have developed as a result of the river crossing; finds from the river suggest possible religious votive activity at this time.

1.4.3 A major change in the nature of occupation can be seen in the late 2nd century AD when the site became the focus of major military activity, reflected in the material culture. High quality masonry structures were built just to the west of Tofts Field. Nevertheless the extant fort defences were not built till the mid 3rd century AD. This military presence appears to have been short lived, as by the 4th century AD the area occupied had contracted to the fort and area immediately to the east, with the outlying areas north of the river and the settlement to the south abandoned. There is some evidence of occupation having continued into the 6th century with imported late 5th and 6th century finds. The final decline of Piercebridge should probably be put in the 7th or 8th centuries, and was probably associated with the rise of Gainford to the west as a major late Saxon centre.

#### ***Fieldwalking 2003***

1.4.4 A fieldwalking project was conducted over three weeks in April/May 2003 over the entire area of Tofts Field. A small area of geophysical survey was also undertaken by the University of Durham, designed to complement aerial photography. The aims and objectives were to define further the urban form of the settlement, and the nature and possible function of the buildings, to gain an idea of the chronology of the civil settlement, and to assess further the state of preservation of the site. Analysis of the distribution of finds across the site suggested that Roman finds were related to settlement activities whilst the medieval and later period appeared more likely to relate

to agricultural activities. Some Roman material, especially pottery, may be related to dumping activities connected with property boundaries.

#### ***Analysis of finds from the river***

- 1.4.5 Since the mid 1980s, divers Bob Middlemass and Rolfe Mitchinson have recovered hundreds of objects from a relatively small area on the bed of the River Tees, centred on NGR 421300 515650. The cataloguing and analysis of this assemblage is being undertaken by Philippa Walton (British Museum), and what follows is a summary of her initial conclusions (Walton 2009). The objects range in date from the Late Iron Age to the medieval period and were recovered through a combination of underwater metal detecting and 'eyes only' retrieval. Despite a lack of precise recording of the spatial distribution of finds, the collection was catalogued upon its reporting to the Portable Antiquities Scheme. The divers have also reported the existence of various stone and timber structures on the river bed.
- 1.4.6 A total of 586 coins have already been discovered. Dating of these show some interesting deviation from the coin assemblage recovered from the earlier excavations, suggesting a different pattern of coin loss and therefore, by inference, function. The structure of the assemblage as a whole is more in keeping with votive offerings rather than everyday loss and discard. In particular, while the excavations have not recovered any coinage prior to the reign of Vespasian (69-79AD), there are a number of earlier coins from the river. The river assemblage shows two peaks in distribution, the first around 138-161AD and the second around 193-222AD. The high incidence of coins dating from the second half of the 3rd century AD from the excavations is not mirrored in the river assemblage. This decline in the deposition of late coins is also seen at other votive sites.
- 1.4.7 Brooches retrieved from the river display a similar date range to those recovered from the excavation, but there are some differences in the type of brooches seen which may again relate to the use of votive offerings. Of the later brooches, the dominance of the Knee brooch, a known Germanic type, may reflect the influx of troops from the Continent. A number of later gold items are particularly suggestive of a high status site. Finds from the river also included a number of early intaglio rings, not seen from the excavations.
- 1.4.8 Definite military items from the assemblage date to the 2nd and 3rd centuries AD. There are also lead seals stamped LVI (*Legio VI Victrix*), which correspond to the Sixth Legion, and OVA (*Ala Vocontiorum*), a cavalry unit. While the presence of these seals cannot be taken as proof of the presence of these units there are also a number of 3rd century horse harness fittings and equipment present. Two 3rd or 4th century iron 'standard points', similar to those recovered from Vindolanda, were also recovered.
- 1.4.9 A number of figures thought to represent deities were also found, as well as two plaques. A number of rolled lead sheets have also been retrieved but until further examination is possible it not clear whether these are 'curses', such as those from the votive offerings from Bath, or fishing weights.

- 1.4.10 Although dominated by the Roman material dating between the 2nd and 4th centuries AD, the assemblage includes a 1st century AD cosmetic grinder and mirror handle as well as some Anglo-Saxon square-headed brooches and a strap end. These give some indication of activity in the area both prior to and subsequent to the main Roman phases of activity.

#### ***The Piercebridge Project 2006-7***

- 1.4.11 During the 1980s, considerable progress was made in analysing the data from Piercebridge, but with the death of Peter Scott the project ground to a halt. The project was revived following David Mason's appointment as County Archaeologist for Durham in 2004. Using funds from the Aggregates Levy Sustainability Fund it was possible to publish the excavations, produce a guidebook and upgrade the signs that inform people about the Roman monuments at Piercebridge. This project identified several key questions about the settlement and development of Piercebridge:

- When and where did occupation start at Piercebridge?
- What was the nature of the military presence at Piercebridge and when did it start?
- What was the nature of the civilian settlement at Piercebridge and could it be considered to have the characteristics of an urban community?
- What do the late stratified sequences tell us about the transition between the 'Roman' world of the 4th century and the 'sub-Roman' world of the 5<sup>th</sup> century AD and beyond?

## **2 AIMS AND OBJECTIVES**

- 2.1.1 A project design for the work was compiled (Videotext Communications 2009), providing full details of the research aims and methods. A brief summary is provided here.
- 2.1.2 The aim of the project was to characterise the nature and date of the Site and place it within its historical, geographical and archaeological context. It was hoped that the project would also contribute to the key questions posed by the Piercebridge Project (outlined in **1.4.11**).
- 2.1.3 Specific research aims were as follows:
- To determine, as far as possible, the nature and condition of the Roman and post-Roman deposits in the Tofts Field area (Area 2), and in particular to further define the possible function of later period buildings.
  - To determine, as far as possible, the nature and condition of sub-surface archaeological remains within the western area of the site (Area 1), in particular the nature of the fort defences and possible presence of a *vicus* in this area.
  - To determine, as far as possible, the nature and condition of sub-surface archaeological remains in the area belonging to Northern Nurseries (to the north of the present village), in particular to establish the extent of the

Roman burial ground thought to exist here. Note that in the event, for logistic reasons this area was not investigated during the evaluation.

- To determine, as far as possible, the nature and condition of possible Roman structural remains observed in the River Tees immediately to the south of the Tofts Field area and to identify any further finds that may be associated with these remains.

### **3 METHODOLOGY**

#### **3.1 Geophysical Survey**

3.1.1 Prior to the excavation of evaluation trenches, a geophysical survey was carried out across the Site using a combination of resistance and magnetic survey. The survey grid was tied in to the Ordnance Survey grid using a Trimble real time differential GPS system.

#### **3.2 Landscape and Earthwork Survey**

3.2.1 A landscape survey and analysis of the cartographic evidence was undertaken by Stewart Ainsworth, Senior Investigator of the Archaeological Survey and Investigation Team, English Heritage. A summary of the findings is incorporated in the discussion.

#### **3.3 Evaluation Trenches**

3.3.1 Six trenches of varying sizes were excavated, their locations determined in order to investigate and to clarify geophysical anomalies and to address specific research objectives (**Figure 1**).

3.3.2 The trenches were excavated using a combination of machine and hand digging. All machine trenches were excavated under constant archaeological supervision and ceased at the identification of significant archaeological remains, or at natural geology if this was encountered first. When machine excavation had ceased all trenches were cleaned by hand and archaeological deposits investigated.

3.3.3 At various stages during excavation the deposits were scanned by a metal detector and signals marked in order to facilitate investigation. The excavated up-cast was scanned by metal detector.

3.3.4 All archaeological deposits were recorded using Wessex Archaeology's *pro forma* record sheets with a unique numbering system for individual contexts. Trenches were located using a Trimble Real Time Differential GPS survey system. All archaeological features and deposits were planned at a scale of 1:20 with sections drawn at 1:10. All principal strata and features were related to the Ordnance Survey datum.

3.3.5 A full photographic record of the investigations and individual features was maintained, utilising digital images. The photographic record illustrated both the detail and general context of the archaeology revealed and the Site as a whole.

3.3.6 At the completion of the work, all trenches were reinstated using the excavated soil.

- 3.3.7 The work was carried out on the 30th June – 3rd July 2009. The archive and all artefacts were subsequently transported to the offices of Wessex Archaeology in Salisbury where they were processed and assessed for this report.

### **3.4 Copyright**

- 3.4.1 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

## **4 RESULTS**

### **4.1 Introduction**

- 4.1.1 Details of individual excavated contexts and features, the full geophysical report (GSB 2009), the summary of the landscape and earthwork survey and further details of artefactual and environmental assemblages, are retained in the archive. Summaries of the excavated sequences can be found in **Appendix 1**.

### **4.2 Geophysical Results**

- 4.2.1 Geophysical survey was carried out over a total area of 3.5ha, using a combination of gradiometric and GPR (Ground Penetrating Radar) survey (**Figures 1 and 2**). In total, six separate areas were surveyed; Areas 1, 2 and 3, 4 and 6 utilising a fluxgate magnetometer and Areas 2 and 5 using GPR. The magnetic results from the majority of the survey areas show a wealth of archaeological anomalies associated with the Roman fort and settlement at Piercebridge. These responses provide a plan of the defences, buildings and roads. A potential prehistoric element has also been identified south of the river in the form of a ring ditch and enclosure.
- 4.2.2 GPR results add internal structural detail to some of the buildings; unfortunately an attempt to map the bridge footings across the River Tees (Area 5) proved less successful. Depths referred to in the interpretation of GPR data must be considered an approximation. Due to technical reasons it is often not possible to detect the base of features; only the tops of buried deposits are detected with any kind of certainty.

#### ***Magnetic Survey***

##### Area 1

- 4.2.3 These areas were positioned over part of the western section of the Roman Fort, where some earthworks are still extant. The magnetic data clearly show the defences as bands of both positive and negative responses. Several anomalies of archaeological interest lie outside the fort and indicate the presence of buildings, possibly forming part of a western *vicus* complex.

##### Area 2

- 4.2.4 This area was positioned to the east of the fort, in Tofts Field, where cropmark evidence is dense. The results show a number of rectilinear features, such as (A), which are clearly building remains associated with the *vicus*. A number of these buildings appear to front on to the road (B) approaching the fort from the east. The data show a 'jumble' of differing alignments, perhaps suggesting different phasing.
- 4.2.5 The projected line of *Dere Street* crosses through this field and can be seen within the cropmarks; however, disappointingly it is absent from the magnetic dataset. This is perhaps due to the strength of the buildings which may be masking the response from the road.
- 4.2.6 A number of other anomalies have been located within this area, including ditch responses.

#### Area 3

- 4.2.7 Following the exact same alignment as cropmark evidence and mapping, a band of anomalies (C) relates to *Dere Street*.
- 4.2.8 This field overlooks Piercebridge and slopes down from west to east. At the top of the hill, anomalies (D) are possibly of prehistoric interest. The circular response (1) measures approximately 11m in diameter and appears to be surrounded by an enclosure, which in turn appears to be appended to a large ditch which cuts through the area on a north-west – south-east alignment.
- 4.2.9 Running approximately east to west, strong linear trends associated with ridge and furrow are visible, and a headland is present in the east of the survey area.
- 4.2.10 Ferrous response (E) is roughly positioned where a Second World War anti-aircraft light or gun platform was sited (S. Ainsworth, *pers. comm.*).

#### Area 4

- 4.2.11 Within this area it was hoped that the survey would trace the remains of a second Roman road across the River Tees. However, no archaeological anomalies were detected, just natural variation within the soils.

#### Area 6

- 4.2.12 This small area was designed to locate *Dere Street* and any other archaeological remains on the south side of the river. However, due to landscaping and modern interferences any features of interest will have been masked.

### **Ground Penetrating Radar Survey**

#### Area 2

- 4.2.13 A sample block of coarse resolution radar data (1.0m traverse separation) was collected at the Tofts Field site to test whether the GPR could help resolve the complex picture revealed by the magnetic survey. There is a very close correlation between the two datasets and, even at this broad line spacing, the GPR has revealed some extra detail such as internal structure within one of the buildings, the line of ditches beneath the buildings as well as indicating the complex spread of deposits in this area.



- 4.2.14 It is clear that the archaeological resource lies very near to the surface but has a considerable depth extent in places. The site would benefit greatly from further GPR survey with a denser sampling strategy.

#### Area 5

- 4.2.15 An attempt was made to map known bridge foundations by deploying the radar unit in a small boat and traversing the River Tees. The intention was to identify the known structure within the data and to then move upstream to try to locate any *in situ* remains of a purported third bridge, which is thought to lie just east of the medieval crossing point.
- 4.2.16 Unfortunately, the stony nature of the river bed precluded effective sub-bottom imaging of anything but the strongest reflectors, with the boulders reflecting practically all of the radar energy. It was difficult to identify any kind of change coincident with the position of the known bridge timbers which were likely to produce only a subtle response, at best. As a result, any further investigation was abandoned.

### **4.3 Evaluation Trenches**

#### ***Introduction***

- 4.3.1 Trenches 1 and 2 were positioned within the first area to the north-west of the current village of Piercebridge just beyond the outer earthwork defences of the fort. Trenches 3 and 6 were within the second area, just to the north of the River Tees within the area known as Tofts Field, just to the east of the current village of Piercebridge. Trenches 4 and 5 were to the south of river up on the escarpment (**Figure 1**). The size and shape of the trenches varied to account for the potential targets that they were sited on and the archaeology subsequently uncovered. Any substantial structural remains were left *in situ*. Trench 5 in Area 3 was located on the highest area of land at a height of 69.59m aOD. Trench 6, on the northern bank of the river, occupied the lowest position at a height of 56.52m aOD.
- 4.3.2 Generally the trenches saw the removal of 0.18-0.25m of topsoil and 0.25-0.32m of underlying subsoil in order to expose the archaeology. The exception was Trench 6 where the inclusion of alluvial and colluvial material had led to a topsoil of up to 0.36m and a subsoil of up to 1.2m in depth. Where encountered, the natural geology was a sandy clay although variation was seen between the three different areas.
- 4.3.3 During 30th June and 1st July an investigation was undertaken within the River Tees at the point of the presumed earlier river crossing (NGR 421254 515626) with the aim of mapping and possibly dating the timber structure previously observed there (see above, **1.4.5**). A number of samples were collected for dendrochronological dating, but on assessment none proved to be adequate for this analysis. Due to heavy rain on the afternoon of the 1st July it was not possible to do any further work after this point within the river channel.

#### ***Area 1***

- 4.3.4 Area 1 was located just beyond the north-west earthwork fortifications. Since it lay to the north of any likely *vicus* settlement located adjacent to the

western gate, it was hoped that it might be possible to identify settlement or military activity pre-dating the known fortifications.

#### Trench 1 (Figure 3)

- 4.3.5 Trench 1 was positioned on a rectilinear anomaly identified from the geophysical survey (**Figure 2**). The alignment of this possible structure differed from the alignment of the fort; it was believed that this could represent an area of Roman occupation pre-dating the fort. The fort itself is considered to be of relatively late date, with the earthwork defences dating to the 3rd century AD.
- 4.3.6 Initially, a small area was excavated directly underneath the topsoil (101), and an area of rough cobbling (102) was encountered. Artefacts associated with this suggested that it was of post-medieval date and it did not appear to have been responsible for the geophysical response. After hand digging a small area, the rest of (102) was removed by machine and found to overlie an earlier soil. This was variously numbered (103), (106) or (107) depending on its location within the trench. Artefacts recovered from this suggest that it relates to the Roman-British occupation of the Site. There was fairly frequent pottery and occasional animal bone, consistent with the deposition of domestic debris. The pottery was particularly concentrated within (103) and (106) which lay in the south-western part of the trench. Removal of this revealed a small area of flat limestone slabs (104) and a north-west – south-east aligned wall (105). The wall corresponded to the alignment identified from the geophysical survey.
- 4.3.7 Accordingly, the trench was extended to the south-west to reveal the interior of the building and to confirm its width. A sondage was dug along the southern edge of the trench in order to investigate the structures and deposits encountered and to establish their chronology and relationship to each other.
- 4.3.8 Another stone built wall (111) of similar construction and alignment to (105) was found 3.6m to the west, marking the south-west wall of the structure (**Figure 3, Plate 1**). Banked up against the north-east side of (105) was a thin deposit (108) containing frequent charcoal inclusions. This is likely to represent an occupation layer external to the building. A similar deposit (110) was found within the building. The build-up of this deposit against the stone of (104) shows that this must post-date this feature, lending support to the idea that this is an *in situ* structure. The stones comprising structure (104) were scorched or heat affected, so this may be the remains of a hearth. A rough line of stones (122) stretching to the south-west of (104) and apparently overlying (110) is likely to be the tumble or collapse from (104), as the stones were similar in size and shape.
- 4.3.9 A small area of metalised surface (123) was found in the north-western part of the trench, bordered by (122) and (111). It was banked up against (111) but its relationship to (122) was not determined; it is likely that this was a fragment of an internal surface.
- 4.3.10 No visible traces of a construction trench could be seen for either (105) or (111); instead, they appear to have been constructed directly onto a compact clay rich layer (115) (**Figure 3, Plate 2**). Despite the predominance

of early Roman pottery in this trench, a sherd from this deposit is late Roman, although this could be intrusive from layers (109) and (110) which lie physically above it. Layer (115) may be the same as layer (121) which extended beyond (111) to the south-west. The walls themselves were relatively thin and poorly faced, with no real core. They may have therefore acted as the foundation for a timber building, negating the need for a deep foundation trench.

- 4.3.11 Beneath (108) and stretching beyond the limits of the trench was a compact, clay-rich layer (109), possibly an external surface. This was butted up to the base of wall (105). Cutting through this on a similar alignment to (105) was a small gully or drain (113).
- 4.3.12 To the south-west beyond wall (111) was a compact stony layer (117); its make-up suggests that it may be a path running alongside the building. It was only around 0.6m wide, defined on its south-western edge by wall (120). While walls (105) and (111) were constructed from a hard, pale grey carboniferous limestone, wall (120), despite being on the same alignment as the other two walls, was made from a much softer stone, magnesium limestone. This outcrops locally, just to the south of Piercebridge. The softness of this rock would seem to make it unsuitable for any substantial structure. Wall (120) had a much more defined face and core construction than the other two walls, and the sondage along its south-eastern face suggested a possible stepped or raked profile.
- 4.3.13 To the south-west of wall (120) was a deposit of predominantly magnesium limestone fragments (116). It seems likely that these derived from the collapse or destruction of the upper part of (120). As (116) lies only on the south-western side of (120) and forms a relatively compact layer at the same level as (117) it is possible that this may have been deliberately levelled to form a later surface. Indeed, the almost total absence of magnesium limestone within the deposits in the rest of the trench suggests controlled demolition rather than collapse or destruction.
- 4.3.14 Beneath (116) was a flagstone floor (119) overlain by a thin layer of silting (118). This floor was constructed from hard grey limestone set into clay, although the size and shape of the slabs varied. Its depth shows that the floor level of this structure was below that of the building to the east.

#### Trench 2 (Figure 4)

- 4.3.15 Trench 2 was positioned to the south-east of Trench 1 and targeted on a north – south aligned geophysical anomaly that appeared to respect the orientation of the fort. It was hoped that this would provide information on any settlement and structures contemporary with the fort that lay beyond it to the west.
- 4.3.16 Removal of the topsoil and subsoil uncovered extensive areas of rough cobbling (204) and (205), divided (and cut) by shallow ditch (209). The upper fill of ditch (209) is likely to have resulted from gradual long-term silting. This fill contained a sherd of 2nd century AD samian ware, and overlay a thinner primary fill (214).

- 4.3.17 Another silt deposit (203) lay to the east of (204). As the eastern boundary of this must lie beyond the limits of the trench it was difficult to ascertain whether this and the layers beneath were deposits within another ditch cutting the surface or were banked up against the edge of it (**Figure 4, Plate 4**). While (203), (206) and (207) were dark silty deposits containing significant amounts of occupational debris, (213) beneath was much lighter in colour and contained only a small amount of animal bone. This overlay a compact gravel fill which may be eroded material from (204). The samian ware sherds recovered from these deposits suggest a relatively early date for these deposits.
- 4.3.18 The trench was extended westwards in order to try and establish the edge of cobbling (204)/(205). However, despite extending the length of the trench to nearly 18m no edge was revealed, which brings the exposed length of the cobbling to 15m. The upper portion of the surface had been damaged by ploughing but in small areas an overlying sandy layer (211) was observed. At the far western end of the trench this was overlain by a clay layer (210) that is likely to have formed the original surface. A machine-excavated sondage was placed part way along the trench in order to examine the makeup of (204)/(205) and the deposits beneath (**Figure 4, Plate 5**). The cobbled surface (204)/(205) was found to be bedded on a deep layer (215) composed of large cobbles and smaller stones. This in turn overlay a similar deposit (216). Deposit (216) extended below the limit of excavation and is apparently a natural sediment - its unsorted nature suggests that it is a glacial till. Deposit (215) may comprise this material re-deposited and reworked.

### **Area 2**

- 4.3.19 Area 2 was located in Tofts Field, just to the east of Piercebridge village and within the known location of the northern *vicus* (which was apparently focused outside the eastern entrance of the fort) and within the scheduled area. This lies just along the northern bank of the river between the modern bridge and the stone-based Roman bridge.
- 4.3.20 The soil horizons in this area demonstrated the incorporation of alluvial material from the episodic flooding of the river, having a higher clay and silt content and being much greyer in colour. Where encountered, the natural was a mid orange clay. Observation of the river after heavy rain showed high levels of silt being carried down the river and a quick and marked rise in water level.

### **Trench 3 (Figure 5)**

- 4.3.21 Trench 3 was targeted on a number of linear geophysical anomalies running north-south towards the river (**Figure 2**). This area lies outside the previously excavated area of Tofts Field. It was thought that one of the responses could relate to a possible structure identified in the river (NGR 421254 515626). It was thought the trench might also indicate whether activity extended right to the present river edge, suggesting that its course may have shifted northwards.
- 4.3.22 The trench was originally targeted on the linear anomaly that aligned most clearly with the possible structure in the river. However, after the removal of the overburden this was seen to relate to a ditch rather than a trackway or

road. Accordingly, the trench was extended both to the west and to the east, to investigate what appeared to be a series of possible ditches. After removal of topsoil and subsoil by machine, three possible linear features could be discerned, although the edges were indistinct at this level. Accordingly a discontinuous sondage was excavated along the southern edge of the trench to clarify and to investigate these possible features (**Figure 5, Plate 6**).

- 4.3.23 At the eastern end of the trench a wide north – south aligned feature (310) was seen, the western edge of which was indistinct. Cut into the top of this was a shallow inhumation grave (309). A number of angular stones appear to have been placed around the edges of the cut but there was no sign of any capping stones. Further excavation partly exposed the lower portion of the skeleton (308), revealing it to be a north-north-west – south-south-east aligned, extended, supine burial of an adult. The grave cut extended beyond the southern edge of the trench (**Figure 5, Plate 6**). A fragment of a shale bracelet was found associated with this burial. The grave cut was not fully excavated, and the remains were left *in situ*.
- 4.3.24 The ditch (310) itself was not fully excavated although the gradient of the eastern edge suggests a fairly shallow profile. Artefacts from this feature confirmed its Romano-British date.
- 4.3.25 To the west of (310) was another possible ditch (314) on a similar alignment. This was obscured by the overlying deposit (305) and, despite its removal in a sondage along the southern edge of the trench, the western edge of the ditch was still unclear. The ditch was left unexcavated.
- 4.3.26 To the west of this the eastern edge of another possible ditch (315) could be seen; the western edge lay beyond the limit of the trench (**Figure 5, Plate 7**). This feature was only partly excavated but it appears to have been another ditch on a similar alignment to (310) and (314). At the western end of the trench a dump of stone (304) lay in the top of the possible ditch. This stone rubble was composed of magnesium limestone. A silver coin found within this deposit dates to the 3rd century AD. Another silver coin was found within the secondary ditch fill beneath (307); this is an issue of Domitian, dated AD79.
- 4.3.27 A possible posthole (313) was situated between ditches (310) and (314). Possible packing material could be seen in the upper fill of this feature, which was left unexcavated.
- 4.3.28 The continuation of all the linear features southwards beyond the limit of the trench suggests that the course of the river originally lay further south.

#### Trench 6 (Figure 6)

- 4.3.29 Trench 6 was positioned on a linear anomaly identified by the geophysical survey to the east of Trench 3.
- 4.3.30 The trench showed a surprising depth of topsoil and subsoil, with up to 0.90m of the subsoil (602), bringing the maximum depth of the trench to 1.55m. Today only the slightest depression remains in this area, but comparison with the soil depth in Trench 3 suggests that the ground here

must have originally been much more low-lying. In particular the depth of the subsoil (or B horizon) has been increased by the addition of alluvial sediments from the flooding of the river. If this area previously formed a small valley, hillwash or colluvial sediment may have also been incorporated into the overburden.

4.3.31 After battering the trench sides to allow safe access, a small portion of the surface of a road surface was exposed (**Figure 6, Plate 8**). This was found to be composed of small, densely packed cobbles (604). To the east this had been damaged, revealing this surface to be bedded into sand (603). Beneath this was a layer of larger, more irregular cobbling (607). The full width of the road was not exposed in this trench but a line of stone kerbing (605) is likely to lie near the western edge of the road.

4.3.32 A distinct area of stone rubble (606) lay on top of (604), apparently composed of material taken from the road surface. Although not directly dated, this must relate to the disuse and possible destruction of this stretch of road.

#### ***Underwater exploration***

4.3.33 Previous investigation within the river to the south of this field has identified two distinct areas of preserved timber structures.

4.3.34 The easternmost corresponds with the earlier alignment of Dere Street and is centred on NGR 421254 515626. This is thought to correspond to an earlier bridge crossing, and is also the area where the highest concentration of finds was found by the 2003 fieldwalking project.

4.3.35 During the evaluation, further exploration was undertaken by Bob Middlemass and Rolfe Mitchinson within the easternmost timber concentration in the hope of locating, recording and dating more precisely the structure they had discovered there (**Back cover, bottom**). While ultimately it was not possible to date the timbers, and the heavy silt load made recording difficult, GPS equipment was used to locate the area more accurately. The timbers at this position appear to consist of a number of upright piles with some horizontal beams. Some of these are several metres long and lie in line with the current. In one place six timbers could be seen lying side by side apparently *in situ*.

4.3.36 Some 115m to the west of this is a second concentration of timbers (NGR 421145 515587). Here, there are at least seven vertical timbers in two parallel lines, and a large lump of concrete lies just to the south of these. The function of these timbers is currently unknown, but a sample taken from one was radiocarbon dated to the 1st century AD (**Appendix 2**).

#### ***Area 3***

4.3.37 To the south of the river and the modern road the land rises sharply to the summit of Betty Watson's Hill. This area lies beyond the limit of scheduling. Trenches 4 and 5 were situated on the north face of this hill. The topology of this area meant that it had been suggested as a possible location for an earlier fort, commanding as it does views over the river crossing. Geophysical survey revealed substantial ridge and furrow in this area but no traces of an earlier military structure.

4.3.38 Where encountered the natural in this area was a boulder clay incorporating fragments of sandstone.

Trench 4 (Figure 7)

4.3.39 Trench 4 was positioned on the known earlier alignment of Dere Street, its location confirmed by geophysical survey.

4.3.40 Removal of the overlying topsoil and subsoil did not immediately reveal the road surface, but a line of cobbles (407) and a rough wall of magnesium limestone (404) were seen, both on a north-west south-east alignment. Wall (404) was a dry stone structure which appeared to be only one stone wide, with all the stones showing evidence of heat damage. As it was only faced on the eastern side this was concluded to be a revetment feature rather than a free-standing wall.

4.3.41 To the east of wall (404) was (406), a layer of colluvium which had built up directly over the cobbled surface of the road (408) (**Figure 7, Plate 10**). Large rounded cobbles within this layer are likely to be derived from the damage to (408) by ploughing. To the west of (404) a similar but finer layer of colluvium (405) could be seen, banked up against the wall. This overlay an area of metalling (403), apparently associated with (404) and forming a slightly irregular but compact surface to the west of this wall.

4.3.42 Excavation of a sondage along the southern edge of the trench showed (407) to be the fill of a small gully (409) or drain, which cut into the cobbled surface of the road (408). This feature was only partly excavated and remained undated.

4.3.43 The width of the cobbled road surface was only 3m and its diffuse edges suggest it may have been truncated on either side (**Figure 7, Plate 9**). It was not possible to establish a direct stratigraphic relationship to (404) but it seems reasonable to assume that the latter relates to later activity after the road had at least partly fallen into disuse. Both (404) and (408) appear to overlie the boulder clay deposit (416) which may well have been redeposited. To the east of (408) a small area of a similar deposit (415) could be seen.

4.3.44 Deposit (416) was cut through by ditch cut (414). This north-west – south-east aligned feature was not fully excavated but its shallow sloping sides suggest it is relatively shallow. It was bordered on the eastern edge by a number of large sub-rounded sandstone blocks which also seem to form the limit of (403). The placement of these may therefore be deliberate. The main secondary fill (411) was a slightly mixed sediment with occasional large fragments of stone suggesting fairly high energy, rapid deposition. It contained some early Roman samian sherds. The relationship of fill (411) to deposit (412) was uncertain. Deposit (412) may have filled a recut of ditch (414), cutting through (411), but it was not possible to be certain about this interpretation (no cut number was assigned to the possible recut). Tumbled down the western edge was the gravelly primary fill (413). The whole ditch was sealed by a colluvial layer (405) and cut through the natural (410) on its western side.

### Trench 5 (Figure 8)

- 4.3.45 Geophysical survey to the west of Trench 4 revealed a possible prehistoric enclosure and roundhouse. A trench was therefore positioned to investigate this and its relationship to the later Roman activity.
- 4.3.46 Initial excavation exposed a north-east – south-west aligned stone rubble foundation (505) lying just to the north-west of a cut (504) on a similar alignment (**Figure 8, Plate 11**). Excavation showed ditch (504) to be very shallow, probably highly truncated, and filled with a single deposit (503). The pottery recovered from this feature was Romano-British in date, but not more closely datable. A number of large stones at the base of (503) could relate to the ploughing out and destruction of (505). A number of small hollows to the north of (504) were considered to be animal burrows.
- 4.3.47 A layer of hillwash (509) had built up around (505). Removal of this exposed a possible north – south aligned cut (507), running just to the south of (505), and cutting through the natural. An opposing edge could not be seen within the confines of the trench. This was filled with a compact, clay deposit (506), which remained unexcavated. The wall foundation was found to be set directly on top of (506) with no signs of a construction cut. A stone rubble foundation of this type is likely to have provided the basis for a timber structure.

## **5 FINDS**

### **5.1 Introduction**

- 5.1.1 Finds were recovered from all six of the trenches excavated, with the majority coming from Trenches 1, 2 and 4; very few finds were recovered from Trench 5. The assemblage is very largely of Romano-British date, with some post-medieval material.
- 5.1.2 All finds have been quantified by material type within each context, and totals by material type and by trench are presented in **Table 1**. Following quantification, all finds have been at least visually scanned, in order to ascertain their nature, probable date range, and condition. Spot dates have been recorded for datable material (pottery). This information provides the basis for an assessment of the potential of the finds assemblage to contribute to an understanding of the Site, with particular reference to the relationship of peripheral structures and features to the fort.

### **5.2 Pottery**

- 5.2.1 The pottery assemblage is largely of Romano-British date, with small quantities of possible post-Roman, medieval and post-medieval material. The condition in most cases is good; some of the samian and other colour-coated wares have suffered some surface abrasion, but in general edges are relatively crisp. The exceptions are mostly confined to topsoil layers, where a higher level of reworking is not unexpected.
- 5.2.2 The whole assemblage has been quantified (number and weight) by ware type; totals are presented in **Table 2**. Some known ware types have been identified (e.g. Black Burnished ware; Nene Valley colour coated wares), but much of the coarseware assemblage has been classified by fabric colour



(e.g. greywares). Known Romano-British ware types are correlated with the national fabric reference series where appropriate (Tomber and Dore 1998).

### **Romano-British**

- 5.2.3 Amongst the imported wares samian is relatively well represented (17% of the total Romano-British assemblage by number of sherds). Very few sherds of South Gaulish origin were identified; the bulk appears to be of either Central Gaulish or East Gaulish origin. Identifiable forms include forms 18/31 (3 examples), 30 (3), 31 (1), 33 (4), 37 (1) and 45 (3), suggesting a 2nd century AD focus, particularly in the later part of the century, and possibly extending into the early 3rd century. Seven sherds are decorated, but no stamps are present. One sherd is burnt.
- 5.2.4 Amphora sherds consist entirely of Spanish Dressel 20 types; there is one handle (ditch 414). There are examples here of both the early and late fabrics (BAT AM 1 and BAT AM 2 respectively).
- 5.2.5 Other imports are limited to a single sherd of Moselkeramik black-slipped ware (MOS BS) from layer (110).
- 5.2.6 All of the mortaria appear to be Nene Valley products, and this industry also accounts for most of the British colour-coated wares – 36 sherds out of 40, the remaining four coming from the Oxfordshire production centre (OXF RS). The only identifiable vessel forms are Nene Valley beakers, and these include at least one barbotine-decorated 'hunt cup', from layer (203).
- 5.2.7 Amongst the coarsewares, south-east Dorset Black Burnished ware (DOR BB 1) was recognised, but not BB2. The majority of the wares are broadly grouped and probably include the products of several sources or source areas; greywares predominate (and include a few sherds of 4th century AD Crambeck parchment ware), with a small proportion of oxidised wares (which could include further sherds of Oxfordshire products). There are also three sherds of coarse shelly ware (one from a rilled jar), and one grog-tempered sherd. Vessel forms consist largely of everted rim jars (one Crambeck example is handled: Corder 1989, type 3), with a few straight-sided dishes, and lipped and dropped flange bowls. One sherd of Black Burnished ware has been neatly trimmed and perforated to make a spindlewhorl (diameter 39mm, weight 13g).
- 5.2.8 Overall, the range of ware types and vessel forms suggest that activity on the Site probably did not start until the end of the 1st century or beginning of the 2nd century AD; the assemblage then spans the period from the 2nd to the 4th century AD.

### **Post-Roman**

- 5.2.9 Two sherds, one in a coarse sandy fabric (hillwash/colluviums layer 406) and one shelly (rubble layer 116), both unoxidised, have been tentatively identified as Anglian. The fabric of the sandy sherd appears to equate with fabric 1 as previously identified at Piercebridge (Cooper and Vince 2008); there is no obvious parallel for the shelly sherd, although an oxidised fabric with shell inclusions was identified (Cooper and Vince 2008, fabric 8A).

5.2.10 Six sherds are medieval; all are in sandy fabrics, in a range of coarseness; three sherds are glazed.

5.2.11 The remaining 12 sherds are post-medieval, and include 11 coarse redwares (three are late white-slipped wares) and one tinglazed earthenware.

### 5.3 Ceramic Building Material

5.3.1 Six of the ten pieces of CBM recovered are of Romano-British date, and this includes two *imbrex* fragments and one combed fragment, probably from a box flue tile. Three fragments from Trench 1 topsoil are from post-medieval roof tiles, while one small fragment from ditch 315 is undiagnostic, but is probably also Romano-British.

### 5.4 Glass

5.4.1 Of the five pieces of glass recovered, two are from post-medieval bottles (Trench 1 topsoil), two are pieces of Romano-British window glass, with matt/glossy surfaces (subsoil layer 103), and one, in clear, thin-walled glass, is probably Romano-British vessel glass (layer 117). All the glass came from Trench 1.

### 5.5 Metalwork

#### Coins

5.5.1 Six coins were recovered; the majority unstratified or from topsoil and subsoil deposits, found by metal detectorists. All six are Roman in date, and comprise two silver *denarii* and four copper alloy *antoniniani*. In general the coins are in fairly poor condition, with the majority showing signs of post depositional corrosion. Despite this, however, all six could be identified to period.

5.5.2 The earliest of the six is a *denarius* issued by Domitian as Caesar in AD 79. Apart from some obviously modern damage, this is in excellent condition, with little wear, and is unlikely to have been in circulation for long prior to its deposition or loss. It is also one of only two stratified coins from the site, being recovered from ditch (315) (secondary fill 307). The second stratified coin is also a *denarius*, struck by Severus Alexander (AD 222 – 235). It was also found in ditch (315) (upper fill 304). This coin shows signs of heavy copper corrosion, and the reverse is struck off centre, suggesting that it may be a contemporary copy.

5.5.3 The remaining four coins are all copper alloy *antoniniani* of the late 3rd century AD. All are copies or probably copies of contemporary coins, and all were found unstratified or in topsoil or subsoil deposits. These are contemporary copies of 'official' coinage, possibly struck to compensate for gaps in supply of coinage to Britain and to supply sufficient small change for the provinces needs. It is unclear whether these copies were officially sanctioned, if at all, but they are not uncommon as site finds, and seem to have circulated in the same fashion as officially struck coins.

5.5.4 The two silver *denarii* recovered are both useful in providing dates for the contexts in which they occur, with the *denarius* of Domitian indicating that coinage was in use on site during the Flavian period. The four radiate copies

of the late 3rd century AD confirm that the site was in use during this period, whilst the absence of 4th century AD coins from the assemblage is notable, although it is difficult to draw any significant conclusions from so small an assemblage.

### **Copper Alloy**

- 5.5.5 Apart from the coins, other copper alloy objects comprise a strip fragment; a small, unidentified object; and a large, domed stud with a riveted stud. The latter object was a topsoil find in Trench 2 and could be post-medieval.

### **Lead**

- 5.5.6 The lead objects comprise sheet and waste fragments.

### **Iron**

- 5.5.7 Most of the iron consists of nails (28 objects, including four hobnails), and other structural items such as a joiner's dog and a loop-headed pin. Other identifiable items are restricted to a Romano-British latchlifter (layer 115), a post-medieval key (Trench 3 topsoil) and a chisel, probably also post-medieval (Trench 3 topsoil). The remaining objects comprise miscellaneous strip, bar and sheet fragments, or unidentifiable lumps. Apart from the keys, none of the iron objects are chronologically distinctive, and could be of Romano-British or later date.

## **5.6 Shale**

- 5.6.1 Two joining fragments are from a plain shale armllet. This was found in the backfill of grave (309), and may have comprised a deliberately deposited grave good.

## **5.7 Worked Bone**

- 5.7.1 Three bone objects were recovered, of which two are points, possibly for leather-working; both came from hillwash/colluvium layer (406). The third is a pin shaft, with two transverse grooves, and a shallow spiral groove down the shaft which cuts through the surface polish (subsoil in Trench 6).

### **5.7.2 Animal Bone**

- 5.7.3 A total of 234 bones was hand-recovered at the site. All bones derive from mammals and birds. No bones from fish or amphibians were present. Conjoining fragments that were demonstrably from the same bone were counted as one bone in order to minimise distortion, and totals therefore vary from the raw fragment counts given in **Table 1**. No fragments were recorded as 'medium mammal' or 'large mammal'; these were instead consigned to the unidentified category.

- 5.7.4 The extent of mechanical or chemical attrition to the bone surface was recorded, and the numbers of gnawed bone were also noted. Marks from chopping, sawing, knife cuts and fractures made when the bone was fresh were recorded as butchery marks.

- 5.7.5 Most animal bone fragments are in fair or good condition with some superficial root-etching. Seven bones show signs of butchery and, combined with their disarticulated nature, this indicates that the remains contain food

waste. Seven bones show gnawing marks and in one case these were made by a rat.

- 5.7.6 The identified bones in this small assemblage derive from horse (n=9), cattle (57), sheep/goat (15), pig (4) and raven (4). The raven might have been attracted by waste and died on the site. On the other hand, Romans were known for using ravens in rituals. The assemblage contained the remains of adult horse and cattle and adult and juvenile sheep/goat. The presence of elements from different parts of the skeleton makes it likely that the animals were killed on the site.

## **5.8 Human Bone**

- 5.8.1 Apart from the adult individual found in grave (309), ten fragments of disarticulated human bone were found, all redeposited in an upper fill of ditch (314). These include fragments of skull, maxilla with teeth, pelvis and thoracic vertebra. The teeth are well worn. All fragments could represent a single individual, of an adult (c. 30-40 years).

## **5.9 Other Finds**

- 5.9.1 Other finds comprise very small quantities of fired clay (undated, probably structural), clay pipe (all plain stems), stone (one roof tile fragment, one possible rubber), and ironworking slag (undated).

## **5.10 Potential and further recommendations**

- 5.10.1 The evaluation recovered a relatively small finds assemblage, in which only pottery and animal bone is represented in anything more than minimal quantities. Viewed alone, the size of the assemblage is insufficient to warrant further analysis and, although it clearly augments the material already recovered from the Site (Cool and Mason 2008), it adds nothing to the known range of finds.
- 5.10.2 Dating evidence has been provided by the pottery and coins, and further analysis of these categories is unlikely to be repaid by any significant refinement of that dating. Structural evidence (CBM, window glass, ironwork), functional evidence (bone and iron tools), economic evidence (animal bone), and evidence for lifestyle (vessel glass, shale armlet) are all extremely limited. All finds have been recorded at least to a minimum archive level, and no further analysis is proposed.

## **6 PALAEO-ENVIRONMENTAL SUMMARY**

- 6.1.1 During the excavation a number of samples were taken for dendrochronological dating from the possible bridge structure at NGR 421254 515626. Analysis, however, showed that there were insufficient rings for dating.
- 6.1.2 One sample was taken from a possible structure to the east of the possible bridge (at NGR 421145 515587) and submitted for radiocarbon dating; this was dated to the 1st century AD (see **Appendix 2**).
- 6.1.3 No other environmental samples were taken during the evaluation.

## 7 DISCUSSION

### 7.1 Introduction

7.1.1 This evaluation, although limited in its extent, has made some contribution to the understanding of the Roman sequence at Piercebridge. In reference to the existing research agenda the evaluation could not pinpoint any definitively early military remains but did suggest 2nd century AD occupation to the north-west of the fort defences. It also confirmed the presence of a long sequence of occupation in Tofts Field to the east of the fort. The early route of Dere Street was located to the south of the River Tees.

7.1.2 Although the depth of the archaeological deposits varied, they were generally well preserved. Evidence from Trench 3, however, suggests that some of the Tofts Field settlement is likely to have been lost to erosion by the river.

### 7.2 Prehistoric

7.2.1 No prehistoric features were positively identified during this evaluation. Although the form of the features in Trench 5 is considered to be more in keeping with the Late Iron Age tradition, pottery recovered here was exclusively Romano-British in date. Parallels with Stanwick would suggest continuity in the wider area from the Late Iron Age and into the early Roman period. There has been some suggestion that the *oppidum* at Stanwick may be related to early occupation and an early river crossing at Piercebridge. However, while the radiocarbon date from the timber at the easternmost crossing was dated to the 1st century AD, and there are a number of Iron Age and pre-Claudian coins from the river, there is very little evidence from the excavations generally for 1st century AD activity. Moreover, the *oppidum* at Stanwick is known to have declined in importance from AD 70 onwards.

### 7.3 Romano-British

#### ***Military presence: the evidence for early origins***

7.3.1 The presence of an earlier military fortification seems to be a generally agreed premise but so far excavations have failed to pinpoint its location. Excavations in 1934 and 1938 found courses of well dressed stone incorporated into the rampart walls, clearly suggesting reuse of earlier building material (Keeney 1939, 47-8), while excavations at the north-east corner of the defences in the 1934 recovered finds dating from the mid 2nd to 4th centuries AD (Richardson 1936, 258-9). However, earlier excavations would seem to imply that the early fort does not lie beneath the area of the late 3rd century AD fort; a small excavation on the village green in 1948 and 1949 failed to find any traces of earlier structures beneath the late 3rd/early 4th AD deposits (Keeney 1950, 286-7).

7.3.2 While the current evaluation located 2nd century AD activity to the north-west of the fort, the nature of this activity was not conclusive. Animal bone from the evaluation was primarily found in Trenches 1 and 2, and this is consistent with domestic consumption, with some evidence for butchery and local husbandry. The occupation to the north-west, therefore, seems to be more consistent with domestic activity, although the large area of cobbling in Trench 2 could imply a more official or military structure.

- 7.3.3 A section of Dere Street excavated in 1974 identified the earliest phase of the road, dating to the late 1st century AD, but it appeared to have been resurfaced at least three times, c. AD 130, c. AD 180 and c. AD 200 (Fitzpatrick and Scott 1999, 115). The position of Trench 4 confirmed the continuing alignment of Dere Street beyond the southern bank of the River Tees, although no further dating was obtained. Geophysical survey in this area did not suggest that any military or even any substantial settlement related to the road at this point.
- 7.3.4 The inscriptions from the stonework recovered from the area support the idea of a military presence here prior to the construction of the fort, at least from the early 3rd century AD (Fitzpatrick and Scott 1999, 129). There are also a number of 2nd century AD military finds recovered from river.
- 7.3.5 The section of road found within Trench 6 was well constructed, and the geophysical results strongly suggest that it pre-dates some of the *vicus* buildings. Several similar geophysical responses lie roughly parallel to the road in Trench 6, but it seems unlikely that these all relate to road alignments. This road does not obviously line up with either of the known timber crossings, but could potentially turn beyond the surveyed area. A well constructed road could argue for organisation and frequent use, but a military connection cannot be proved.
- 7.3.6 The section of branch road in the area of Tofts Field uncovered during the 1939 excavations was similarly well constructed and overlay an earlier road surface (Keeney 1941, 128-30). The buried soil beneath the earlier road in Tofts Field contained late 3rd century AD material. A building flanking this portion of road showed two phases of construction, the earlier of which also dated to the late 3rd century AD (Keeney 1941, 130-6). The road in Trench 6 may well, therefore, pre-date this phase of activity.

#### **Early settlement**

- 7.3.7 What diagnostic pottery there was from Trenches 1 and 2 to the north-west of the Site was predominantly early in date, but probably no earlier than the 2nd century AD. The alignment of the features in these trenches, on a different alignment to the fort defences, also suggests that activity here was unrelated to, and probably pre-dates, the fort's construction. There is increasing evidence during the 2<sup>nd</sup> century AD for occupation in and around Piercebridge, and many coins from the river assemblage date to this period.
- 7.3.8 Earlier excavations have uncovered evidence for a bath-house in the south-east corner of fort, but as it dates to the end of the 2nd century AD, it apparently also pre-dates the construction of the fort. The buildings excavated on the eastern edge of the fort interior between 1976 and 1981 also pre-date the fort; these seem to be of reasonably high status and show traces of being richly decorated (Cool and Mason 2008). The presence of such highly Romanised buildings indicate that Piercebridge lay within the sphere of Roman culture and organisation, and this kind of activity, so far away from the Romanised south, could imply a nearby military presence.
- 7.3.9 The incidence of a number of linear features in Trench 3, which may not be contemporaneous, suggests some length of occupation and activity. Their position also confirmed the changing river course. The presence of a grave

in Trench 3, along with the cist burial discovered in 1933 just to the south-west, suggests that there may be a cemetery in this area. Some of this is likely to have been lost to the river by erosion, and may account for some of the finds retrieved from the river.

- 7.3.10 Despite the known longevity and extent of Roman occupation on the Site, relatively little ceramic building material was recovered from the Site. That which was found came from Trenches 1, 3 and 6. As with many of the northern forts and associated settlements, this could be explained by the use of local, readily available stone.

#### ***Medieval and later***

- 7.3.11 There is, in general, very little evidence for sub-Roman activity apart from a few possible Saxon and medieval pottery sherds. The evidence from Trench 4 does suggest some later reuse of the road but this could not be firmly dated. In general this does suggest a definite shift of population. Given the location of the Site this could be due to the river crossings falling into disrepair.
- 7.3.12 Medieval ridge and furrow was identified from the geophysical survey within Area 3. The geophysical survey and earthworks also show no traces of later settlement outside boundary of the current settlement. This also supports idea of population shrinkage.

## **8 RECOMMENDATIONS**

- 8.1.1 The results of the Time Team evaluation clearly augment the information from the previous excavations on the Site, albeit in a relatively limited fashion; not all the suggested research objectives were fully achieved.
- 8.1.2 Given the scale of the results, full publication is not recommended, but instead it is proposed that the results are published in the form of a summary report, with accompanying figures, to be submitted to the *Durham Archaeological Journal*.
- 8.1.3 The summary report, which would be based on the information presented in the current report, would be in the region of 3000 words of narrative text, with one or two accompanying plans. Artefactual and environmental information would be integrated into the narrative text as appropriate. A comparable summary publication for the recent Time Team investigations at Binchester Roman fort has already been submitted to the *Durham Archaeological Journal* (Birbeck forthcoming).

## **9 ARCHIVE**

- 9.1.1 The project archive was prepared in accordance with the guidelines outlined in Appendix 3 of *Management of Archaeological Projects* (English Heritage 1991) and in accordance with the *Guidelines for the preparation of excavation archives for long term storage* (UKIC 1990). The excavated material and archive, including plans, photographs and written records, are currently held at the Wessex Archaeology offices under the project code 71506. It is intended that the archive will be deposited with the Bowes Museum, Barnard Castle, County Durham.





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### Online resources

[http://ads.ahds.ac.uk/catalogue/archive/piercebridge\\_eh\\_2008/](http://ads.ahds.ac.uk/catalogue/archive/piercebridge_eh_2008/) : chapter summaries, specialist reports and catalogues accompanying Cool and Mason 2008 (see above)

[http://www.roman-britain.org/epigraphy/rib\\_index.htm](http://www.roman-britain.org/epigraphy/rib_index.htm): summary of entries in Collingwood and Wright 1965 (see above)

<http://www.darlington.gov.uk/PublicMinutes/Cabinet/August%2030%202005/Item%2013%20Appendix.pdf> : Darlington County Council, 2005, Piercebridge Conservation Area: Character appraisal

**Table 1: Finds totals by material type and by trench (number / weight in grammes)**

<b>Material</b>	<b>Tr 1</b>	<b>Tr 2</b>	<b>Tr 3</b>	<b>Tr 4</b>	<b>Tr 5</b>	<b>Tr 6</b>	<b>Total</b>
Pottery	146/1403	61/738	22/190	82/1178	4/14	11/311	326/3834
<i>Romano-British</i>	137/1305	61/738	19/163	78/1133	3/12	8/290	306/3641
<i>Post-Roman</i>	9/98	-	3/27	4/45	1/2	3/21	20/193
Ceramic Building Material	4/109	-	3/71	-	-	3/309	10/489
Fired Clay	2/15	1/14	-	-	-	-	3/29
Clay Pipe	6/7	-	-	1/1	-	-	7/8
Stone	1/16	-	-	1/516	-	-	2/532
Glass	4/35	-	-	-	-	-	4/35
Slag	10/189	-	-	-	-	-	10/189
Metalwork (no. objects)	22	7	9	12	-	6	56
<i>Coins</i>	2	2	2	-	-	1	7
<i>Copper alloy</i>	-	1	1	-	-	1	3
<i>Lead</i>	1	-	1	-	-	-	2
<i>Iron</i>	19	4	5	12	-	4	44
Shale	-	-	1/1	-	-	-	1/1
Worked Bone	-	-	-	2/14	-	1/1	3/15
Animal Bone	141/835	97/544	8/86	90/874	-	17/159	353/2498
Human Bone	-	-	10/56	-	-	-	10/56

**Table 2: Pottery totals by ware type**

<b>Date Range</b>	<b>Ware type</b>	<b>Number</b>	<b>Weight (g)</b>
ROMANO-BRITISH	Samian	53	449
	Dressel 20 amphora	9	729
	Misc. amphorae	1	40
	Other import	1	1
	Nene Valley mortaria	4	209
	Misc. mortaria	4	92
	Nene Valley colour coated ware	36	260
	Oxon colour coat	4	17
	Black Burnished ware	31	271
	Crambeck parchment ware	9	121
	Misc. greywares	138	1336
	Gritty grey ware	3	26
	Grog-tempered ware	1	6
	Oxidised ware	9	66
	Shelly ware	3	18
	<i>sub-total Romano-British</i>	<b>306</b>	<b>3641</b>
POST-ROMAN	Shelly ware	1	15
	Sandy ware	1	6
	Medieval coarseware	3	20
	Medieval sandy ware	3	17
	Redware	11	133
	Tinglaze	1	2
	<i>sub-total post-Roman</i>	<b>20</b>	<b>193</b>
	<b>OVERALL TOTAL</b>	<b>326</b>	<b>3834</b>

**APPENDIX 1: TRENCH SUMMARIES**

bgl = below ground level

<b>TRENCH 1</b>		Type:	Machine excavated
<b>Dimensions:</b> 10.10x1.90m		<b>Max. depth:</b> 0.90m	
		<b>Ground level:</b> 57.66-58.04m aOD	
<b>Context</b>	<b>Description</b>	<b>Depth</b>	
101	<i>Topsoil</i> Modern topsoil. Dark grey-brown silt loam. 1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass; overlies (102).	0.00-0.20m bgl	
102	<i>Surface</i> Possible rough post-medieval cobbling. Dark grey-brown silt loam. 40% sub-rounded cobbles, 2-25cm. Uneven, irregular. Overlies (103), (106) and (107).	0.16m deep	
103	<i>Subsoil</i> Buried soil. Same as (106) and (107). This number given to the area in the western part of the trench to the west of wall (111). Mid brown sandy silt loam. 10% stone, sub-rounded – sub-angular, <1-8cm. Fairly loose and friable; some bioturbation; rare charcoal flecks; fairly homogeneous. Overlies (114), (116) and (117).	0.13m deep	
104	<i>Structure</i> Area of flat limestone slabs. Length 22-38, width 12-32cm, depth 3-8cm. Dark red-brown silt loam between stones. No evidence of bonding. Scorching on stone to south suggest possible hearth. Overlies (115).	0.10m deep	
105	<i>Wall</i> NW-SE aligned stone wall, only lower course remaining. Sub-angular stone blocks. 0.66m wide. Dry stone/soil matrix bonding; irregular jointing. Overlies (115). Associated with (111).	0.34m high	
106	<i>Subsoil</i> Buried soil. Same as (103) and (107). This number given to the area in the central part of the trench between walls (105) and (111). Mid brown sandy silt loam. 10% stone, sub-rounded – sub-angular, <1-8cm. Fairly loose and friable; some bioturbation; rare charcoal flecks; fairly homogeneous. Overlies (110), (122) and (123).	0.15m deep	
107	<i>Subsoil</i> Buried soil. Same as (103) and (106). This number given to the area in the eastern part of the trench to the east of wall (105). Mid brown sandy silt loam. 10% stone, sub-rounded – sub-angular, <1-8cm. Fairly loose and friable; some bioturbation; rare charcoal flecks; fairly homogeneous. Overlies (108) and (112).	0.20m deep	
108	<i>Layer</i> Layer banked up against east of (105). Possible surface/occupation debris. Mid grey-brown sandy silt loam. 30% stone, sub-rounded – sub-angular, <1-7cm. Frequent charcoal; moderately compact; fairly homogeneous. Overlies (109).	0.10m deep	
109	<i>Layer</i> Possible external surface. Dark brown silty clay. 5% stone, sub-angular, <1-5cm. Occasional charcoal flecks; moderately compact and homogeneous. Cut by (113). Overlies/banked against (105).	0.17m+ deep	
110	<i>Layer</i> Layer banked up against west of (105). Possible surface/occupation debris. Dark grey-brown silty clay. 30% stone, sub-rounded – sub-angular, <1-5cm. Frequent charcoal; moderately compact; fairly homogeneous. Overlies (104).	0.10m deep	
111	<i>Wall</i> NW-SE aligned stone wall, only lower course remaining. Sub-angular stone blocks. 0.70m wide. Dry stone/soil matrix bonding; irregular jointing. Overlies (115) and (121). Associated with (105).	0.30m high	
112	<i>Deposit</i> Secondary fill of drain (113). Dark yellow-brown silty clay. 30% stone, sub-angular – sub-rounded, <1-8cm. Fairly homogeneous, fairly compact.	0.30m deep	
<b>113</b>	<b><i>Cut</i></b> <b>NW-SE aligned gully, probable drain. Filled with (112). Concave, moderate sides, concave base. 0.40m wide. Cuts (109).</b>	<b>0.30m deep</b>	
114	<i>Deposit</i> Possible fill of drain formed by (120)/or alternatively the core of this wall. Dark brown silty clay. 80% limestone and magnesium limestone,	0.10m deep	

		sub-rounded, 5-10cm. Moderately compact; mixed. Overlies (120).	
115	Layer	Possible construction surface for wall (105) and (111). Dark brown silty clay. 8% stone, sub-rounded – angular, <1-10cm. Moderately compact; fairly homogeneous. Not fully excavated. Contained domestic debris. Similar to (121).	0.40m+ deep
116	Layer	Rubble debris derived from (120); may have been levelled to form a later surface. Dark brown silty clay. 80% stone (primarily magnesium limestone), sub-rounded – sub-angular, <1-25cm. Moderately compact; slightly mixed. Overlies (118).	0.20m deep
117	Layer	Stony deposit, possible path or fill of gully between (111) and (120). Dark brown-grey silty clay. 60% stone, sub-angular – angular, <1-5cm. Laminated layers. Overlies (121).	0.10m deep
118	Layer	Occupation debris/silting overlying floor (119). Dark brown-black silt loam. 5% stone, sub-rounded, <1-2cm. Moderately compact; fairly homogeneous.	0.08m deep
119	Surface	Angular stone slabs laid as floor surface to west of (120). Laid in dark brown clay. Unexcavated.	-
120	Wall	NW-SE aligned stone wall of rough magnesium limestone blocks. (114) forms either a deposit within it or is core. Overlies (121). (116) is likely to have derived from this structure.	0.30m high
121	Layer	Possible construction surface for wall (111) and (120). Dark brown silty clay. 5% stone, sub-rounded – angular, <1-5cm. Moderately compact; fairly homogeneous. Not fully excavated. Similar to (115).	0.16m+ deep
122	Layer	Large angular stone blocks, possible collapse/tumble from (104). Not excavated. Possibly overlies (110).	-
123	Surface	Small area of metalling. Mid orange-grey sandy silt loam. 80% stone, sub-rounded, 2-6cm. Compact. Bordered by (122) and (111). Banked against (111). Unexcavated.	-

<b>TRENCH 2</b>		<b>Type:</b>	Machine excavated
<b>Dimensions:</b> 17.70x1.90m		<b>Max. depth:</b> 1.31m	<b>Ground level:</b> 58.17-58.29m aOD
<b>Context</b>	<b>Description</b>	<b>Depth</b>	
201	Topsoil	Modern topsoil. Dark grey-brown silt loam. <1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass. Overlies (202).	0.00-0.24m bgl
202	Subsoil	Modern subsoil. Mid grey-brown sandy silt loam. 1% stone, sub-rounded – rounded, <1-2cm. Fairly compact; some bioturbation; homogeneous. Overlies (203), (210) and (208).	0.20-0.52m bgl
203	Layer	Layer banked up against cobbled surface (204), possible ditch fill. Dark grey-brown sandy silt loam. 5% stone, sub-rounded – rounded, <1-8cm. Occasional charcoal flecks; compact; some bioturbation; fairly homogeneous. Overlies (206)/(207).	0.08m deep
204	Surface	Metalling for surface. Identical to (205). Mid grey sandy silt loam. 40% cobbles, sub-rounded – rounded, 8-18cm, 30% stone, sub-rounded – rounded, <1-3cm. Compact. Slightly convex surface. Fairly homogeneous; some bioturbation and plough furrows. Overlies (215).	0.25m deep
205	Surface	Metalling for surface. Identical (204). Mid grey sandy silt loam. 10% cobbles, sub-rounded – rounded, 8-22cm, 40% stone, sub-rounded – rounded, <1-6cm. Compact; fairly homogeneous; some bioturbation and plough furrows.	0.25m deep
206	Layer	Layer banked up against cobbled surface (204), possible ditch fill. Identical to upper part of (207). Dark grey sandy clay. 5% stone, sub-rounded – rounded, <1-5cm. Frequent charcoal flecks. Overlies (213).	~0.10m deep
207	Layer	Layer banked up against cobbled surface (204), possible ditch fill. Dark grey-brown sandy silt loam. 5% stone, sub-rounded – rounded,	0.24m deep

		<1-5cm. Frequent charcoal flecks. Overlies (213).	
208	<i>Deposit</i>	Secondary fill of ditch (209). Mid grey-brown silt loam. 5% stone, sub-rounded – sub-angular, <1-5cm. Rare charcoal flecks. Fairly homogeneous, fairly compact. Overlies (214).	0.32m deep
<b>209</b>	<b><i>Cut</i></b>	<b>North-east – south-west aligned ditch. Steep east edge, shallow west edge, flat base. Filled with (208) and (214). 2.00m wide. Cuts (211).</b>	<b>0.42m deep</b>
210	<i>Layer</i>	Possible clay capping on surface. Pale yellow-grey silty clay. <1% sub-rounded, <1-2cm. Compact; fairly homogeneous. Only patches remaining. Overlies (211).	0.08m deep
211	<i>Layer</i>	Sand layer overlying surface (204). Mid yellow sand. No observed inclusions. Compact; fairly homogeneous.	0.09m deep
212	<i>Layer</i>	Layer banked up against cobbled surface (204), possible ditch fill. Mid yellow-brown sandy silt loam. 40% stone, sub-rounded – rounded, <1-5cm. Overlies (204).	0.10m deep
213	<i>Layer</i>	Layer banked up against cobbled surface (204), possible ditch fill. Mid yellow-brown silty clay. 1% stone, sub-rounded – rounded, <1-5cm. Rare charcoal flecks; compact. Overlies (212).	0.14m deep
214	<i>Deposit</i>	Primary fill of ditch (209). Dark brown silt loam. 2% stone, sub-rounded – sub-angular, <1-4cm. Fairly homogeneous, fairly compact. Overlies (209).	0.06m deep
215	<i>Layer</i>	Stony layer underlying (204). Mid grey-green sandy silt loam. 12% cobbles, rounded, 10-20cm, 22cm+, 40% stone, rounded, <1-2cm. Moderately compact. Overlies (216).	0.40m deep
216	<i>Layer</i>	Stony layer, possible natural till. Mid brown-yellow sand. 25% cobbles, rounded, 10-20cm, 22cm+, 50% stone, rounded, <1-2cm. Moderately compact.	0.37m+

<b>TRENCH 3</b>		<b>Type:</b>	Machine excavated
<b>Dimensions:</b> 12.02x1.20m		<b>Max. depth:</b> 0.70m	<b>Ground level:</b> 56.84-56.99m aOD
<b>Context</b>	<b>Description</b>	<b>Depth</b>	
301	<i>Topsoil</i>	Modern topsoil. Dark grey-brown sandy silt loam. 1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass. Overlies (302).	0.00-0.22m bgl
302	<i>Subsoil</i>	Modern subsoil. Dark brown sandy silt loam. 2% stone, sub-rounded – rounded, <1-4cm. Fairly compact; some bioturbation; homogeneous. Overlies (303), (304), (305) and (312).	0.18-0.47m bgl
303	<i>Deposit</i>	Deliberate backfill of grave cut (309), derived from upper fill (306) of ditch (310). Dark grey-brown sandy silt loam. <1% stone, sub-rounded, <1-2cm. Fairly compact, fairly homogeneous. Only partly excavated. Overlies skeleton (308).	0.14m+ deep
304	<i>Layer</i>	Upper secondary fill of ditch (315). Mid brown sandy silt loam. 30% magnesium limestone, sub-rounded – sub-angular, 4-18cm. Moderately compact; fairly homogeneous. Overlies (307).	0.23m+ deep
305	<i>Layer</i>	Upper secondary fill/alluvial layer of ditch (314). Dark brown sandy silt loam. <1% stone, sub-rounded, <1-3cm. Similar to subsoil. Moderately compact; fairly homogeneous. Relationship to (307) unclear. Overlies (316).	0.10m deep
306	<i>Deposit</i>	Secondary fill of ditch (310). Mid brown sandy silt loam. <1% stone, sub-rounded, <1-3cm. Moderately compact; fairly homogeneous. Not fully excavated. Overlies (310). Cut by (309).	0.12m+ deep
307	<i>Layer</i>	Secondary fill of ditch (315). Dark brown sandy silt loam. 2% stone, sub-rounded, <1-4cm. Moderately compact; fairly homogeneous. Not fully excavated. Overlies (315).	0.23m+ deep
308	<i>Skeleton</i>	Adult inhumation, north – south aligned. Supine, extended; not fully exposed. Full length extends beyond trench. Left <i>in situ</i> .	0.14m+ deep

309	<i>Cut</i>	<b>Cut of grave, north – south aligned. Cut into top of ditch (310). Filled with (303) and inhumation (308). Not fully excavated. Stones possibly used to mark edge of cut, no sign of capping stones.</b>	<b>0.14m+ deep</b>
310	<i>Cut</i>	<b>Cut of NW-SE aligned ditch. Not fully excavated but potentially very shallow. Filled with (306). 4.4m wide. Cuts (311).</b>	<b>0.12m+ deep</b>
311	<i>Natural</i>	Natural geology. Dark yellow-brown sandy clay. Compact. Slightly mixed.	0.38m+ bgl
312	<i>Deposit</i>	Fill of possible posthole (313). Dark grey-brown sandy silt loam. 60% stone, sub-angular – sub-rounded, 8-12cm. Possible post-packing. Not excavated.	-
313	<i>Cut</i>	<b>Possible posthole. Filled with (312). Not excavated. Sub-circular, 0.2m diameter.</b>	-
314	<i>Cut</i>	<b>Cut of north-west – south-east aligned ditch. Not excavated. Filled with (305) and (316). 1.5m wide. Cuts (311).</b>	-
315	<i>Cut</i>	<b>Cut of NW-SE aligned ditch. Not fully excavated. Filled with (304) and (307). 2.16m+ wide. Western edge not seen. Cuts (310).</b>	<b>0.23m+ deep</b>
316	<i>Deposit</i>	Secondary fill of ditch (314). Dark grey-brown sandy silt loam. 8% stone, sub-rounded, <1-3cm, 8-18cm. Moderately compact; fairly homogeneous. Not excavated. Overlies (314).	-

TRENCH 4		Type:	Machine excavated
Dimensions: 10.04x1.20m		Max. depth: 0.95m	
		Ground level: 65.00-65.74m aOD	
Context	Description	Depth	
401	<i>Topsoil</i>	Modern topsoil. Dark brown silty clay. <1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass. Overlies (402).	
402	<i>Subsoil</i>	Modern subsoil. Mid brown sandy silt loam. 1% stone, sub-rounded – rounded, <1-3cm. Fairly compact; some bioturbation; homogeneous. Overlies (407).	
403	<i>Surface</i>	Compact metallised surface to the west of wall (404), banked up against/associated with (404). Mid yellow-grey sandy silt loam. 40% stone, sub-angular, <1-4cm. Very slightly mixed; some bioturbation.	
404	<i>Structure</i>	NW-SE aligned stone built wall. Only one course remaining. Faced on eastern side only. Scorched/heat affected. Irregular jointing, no obvious bonding agent. 0.24m wide. Overlies (416).	
405	<i>Layer</i>	Hillwash/colluvium – eroded topsoil. Mid brown sandy silt loam. 1% stone, sub-angular – sub-rounded, <1-2cm. Rare charcoal flecks; moderately compact; fairly homogeneous; some bioturbation. Overlies (403) and (412).	
406	<i>Layer</i>	Hillwash/colluvium – eroded topsoil. Similar to (405) but includes large cobbles – plough damage to (408). Mid brown sandy silt loam. 10% stone, sub-angular – sub-rounded, <1-3cm, 8-15cm. Occasional charcoal flecks; moderately compact; fairly homogeneous. Some bioturbation. Overlies (404), (408) and (415).	
407	<i>Deposit</i>	Secondary fill of gully (409). Topsoil derived material with cobbles derived from the road surface. Mid grey-brown sandy silt loam. 60% stone, sub-rounded, 8-20cm. Fairly loose and friable; some bioturbation; homogeneous. Not fully excavated.	
408	<i>Surface</i>	Cobbled surface of the Roman road Dere Street. Mid grey-brown sandy silt loam. 80% stone, sub-rounded – rounded, 2-16cm. Compact. Some plough damage.	
409	<i>Cut</i>	<b>Cut of gully/drain, may relate to later use of the road. Filled with (407). Concave, moderate sides, probable concave base. 0.30m wide. Not fully excavated. Cuts (406).</b>	
410	<i>Natural</i>	Natural geology. Mid yellow-brown sandy clay. 5% limestone and	



		sandstone, sub-angular, 4-15cm. Compact; slightly mixed.	
411	<i>Deposit</i>	Secondary fill of ditch (414). Mid orange-brown sandy clay. 5% stone, sub-angular – sub-rounded, 2-10cm. Moderately compact, very slightly mixed; some bioturbation. Not fully excavated. Overlies (414).	0.25m+ deep
412	<i>Deposit</i>	Secondary fill of ditch (414), possible re-cut fill. Mid brown sandy clay. 2% stone, sub-angular – sub-rounded, 2-6cm. Moderately compact, fairly homogeneous; some bioturbation. Overlies (411) and (413).	0.31m deep
413	<i>Deposit</i>	Primary fill of ditch (414). Mid orange-brown sandy clay (quite gritty). 30% stone, sub-rounded, <1-6cm. Moderately compact, fairly homogeneous; some bioturbation. Derives from the west. Overlies (414).	0.15m deep
414	<i>Cut</i>	<b>North-west – south-east aligned linear. Filled with (411), (412) and (413). Not fully excavated. Straight, moderate sides. 2.70m wide.</b>	<b>0.31m+ deep</b>
415	<i>Layer</i>	Either natural geology or re-deposited natural material – only small section seen. Mid orange sandy clay. 8% stone, sub-angular, 2-8cm. Compact, fairly homogeneous. Unexcavated. Probably overlain by (408) but relationship not proved. Similar to (416).	-
416	<i>Layer</i>	Re-deposited natural material – only small section seen. Mid orange sandy clay. 5% stone, sub-angular, <1-5cm. Compact, fairly homogeneous. Unexcavated. Probably overlain by (408) but relationship not proved. Similar to (416).	-

<b>TRENCH 5</b>		<b>Type:</b>	Machine excavated
<b>Dimensions:</b> 6.00x1.22m		<b>Max. depth:</b> 0.57m	<b>Ground level:</b> 69.18-69.59m aOD
<b>Context</b>	<b>Description</b>	<b>Depth</b>	
501	<i>Topsoil</i>	Modern topsoil. Dark grey-brown sandy silt loam clay. <1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass. Overlies (502).	0.00-0.25m bgl
502	<i>Subsoil</i>	Modern subsoil. Mid brown sandy silt loam. 1% stone, sub-rounded – rounded, <1-3cm. Fairly compact; some bioturbation; homogeneous. Overlies (503) and (509).	0.18-0.43m bgl
503	<i>Deposit</i>	Secondary fill of ditch (504). Mid grey-green silty clay. 30% stone, sub-rounded, 6-22cm. Moderately compact; slightly friable. Overlies (504).	0.21m deep
504	<i>Cut</i>	<b>Shallow NE-SW aligned ditch. Filled with (503). Concave, shallow sides, concave base. 1.30m wide. Cuts (507)</b>	<b>0.21m deep</b>
505	<i>Wall</i>	Stone rubble foundation, NE-SW aligned. Mid orange-brown silty clay. 90% stone, sub-rounded – sub-angular, 10-15cm. Compact. Overlies (506).	0.16m deep
506	<i>Deposit</i>	Possible fill of (508). Mid orange-brown silty clay. <1% stone, sub-rounded – sub-angular, <1-3cm. Compact. Unexcavated.	-
507	<i>Natural</i>	Natural geology. Mid orange-yellow clay. <1% stone, sub-rounded, <1-2cm. Compact.	0.40m+ bgl
508	<i>Cut</i>	<b>Possible cut, only south edge seen. Filled with (506). Overlain by (505). Unexcavated.</b>	-
509	<i>Layer</i>	Hillwash/colluvium banked up against (505). Mid orange-brown silty clay. 2% stone, sub-angular – sub-rounded, <1-4cm. Moderately compact. Fairly homogeneous.	0.08m deep

<b>TRENCH 6</b>		<b>Type:</b>	Machine excavated
<b>Dimensions:</b> 4.50x3.30m		<b>Max. depth:</b> 1.55m	<b>Ground level:</b> 56.52-56.69m aOD
<b>Context</b>	<b>Description</b>	<b>Depth</b>	
601	<i>Topsoil</i> Modern topsoil. Dark grey-brown silt loam clay. <1% stone, sub-rounded, <1-2cm. Fairly loose and friable; homogeneous; heavily bioturbated. Directly under grass. Overlies (602).	0.00-0.36m bgl	
602	<i>Subsoil</i> Modern subsoil deepened by inclusion of alluvium. Mid grey-brown silt loam. 1% stone, sub-rounded, <1-3cm. Fairly compact; some bioturbation; homogeneous. Overlies (605) and (606).	0.25-1.55m bgl	
603	<i>Layer</i> Bedding for upper surface of road (604). Mid orange-yellow sand. <1% stone, sub-rounded, <1-2cm. Compact; slightly mixed. Largely unexcavated. Overlies (607).	-	
604	<i>Surface</i> Upper surface of NW-SE aligned road. Mid brown silt loam. 90% cobbles, sub-rounded – rounded, 2-8cm. Left <i>in situ</i> . Overlies (603).	-	
605	<i>Structure</i> Kerb on western edge of road. Unshaped stone cobbles. North – south aligned. Left <i>in situ</i> . Overlies (604).	-	
606	<i>Surface</i> Area of stone cobbling. Mid brown silt loam. 85% stone, sub-angular – sub-rounded, 2-16cm. Unexcavated. Overlies (604).	0.14m deep	
607	<i>Surface</i> Larger cobbles underlying (603), part of road makeup. Mid brown silt loam. 75% stone, sub-rounded, 2-18cm. Compact. Unexcavated.	-	

## APPENDIX 2: RADIOCARBON REPORT ON TIMBER POST

by Dr Chris J. Stevens, with timber identification by Dr Catherine Barnett

A single transverse section of a timber post, taken by Rolfe Mitchenson from a previously unknown structure discovered by Mitchenson and Bob Middlemass in 1998 (see **Figure 9**), was submitted for radiocarbon dating.

The sampled post was approximately 280mm in diameter; the section was 50mm thick and identified as oak (*Quercus* sp.). The sample was submitted for radiocarbon dating at <sup>14</sup>CHRONO Centre, Queens University, Belfast. A suitable sub-sample was taken by the laboratory from the outer rings of the timber for radiocarbon dating.

### Result

The returned radiocarbon determination (UB-13141, 1961±26 BP; **Table 3; Figure 10**) was calibrated within OxCal 4.1.1 (Bronk Ramsey 2001; 2009). The calibrated date for the timber was 40-85 cal. AD (at 94.3% probability), and strongly suggests that timber is likely to date to the 1st century AD.

Given the nature of the sampled pile it would seem likely that a suitable sized timber would have been chosen for the post and that relatively little of the outermost and therefore most recent rings would have been removed. As such it is unlikely that the date obtained will be considerably earlier than date at which the tree was felled. A conservative estimate might even put this as low as 10 years, while it would seem unlikely that more than 50 years had been removed from the outer rings. It would therefore seem that the timber represents a structure related to a road bridge that was at least contemporary with the earliest settlement on the site around 70 AD and may well even slightly pre-date this.

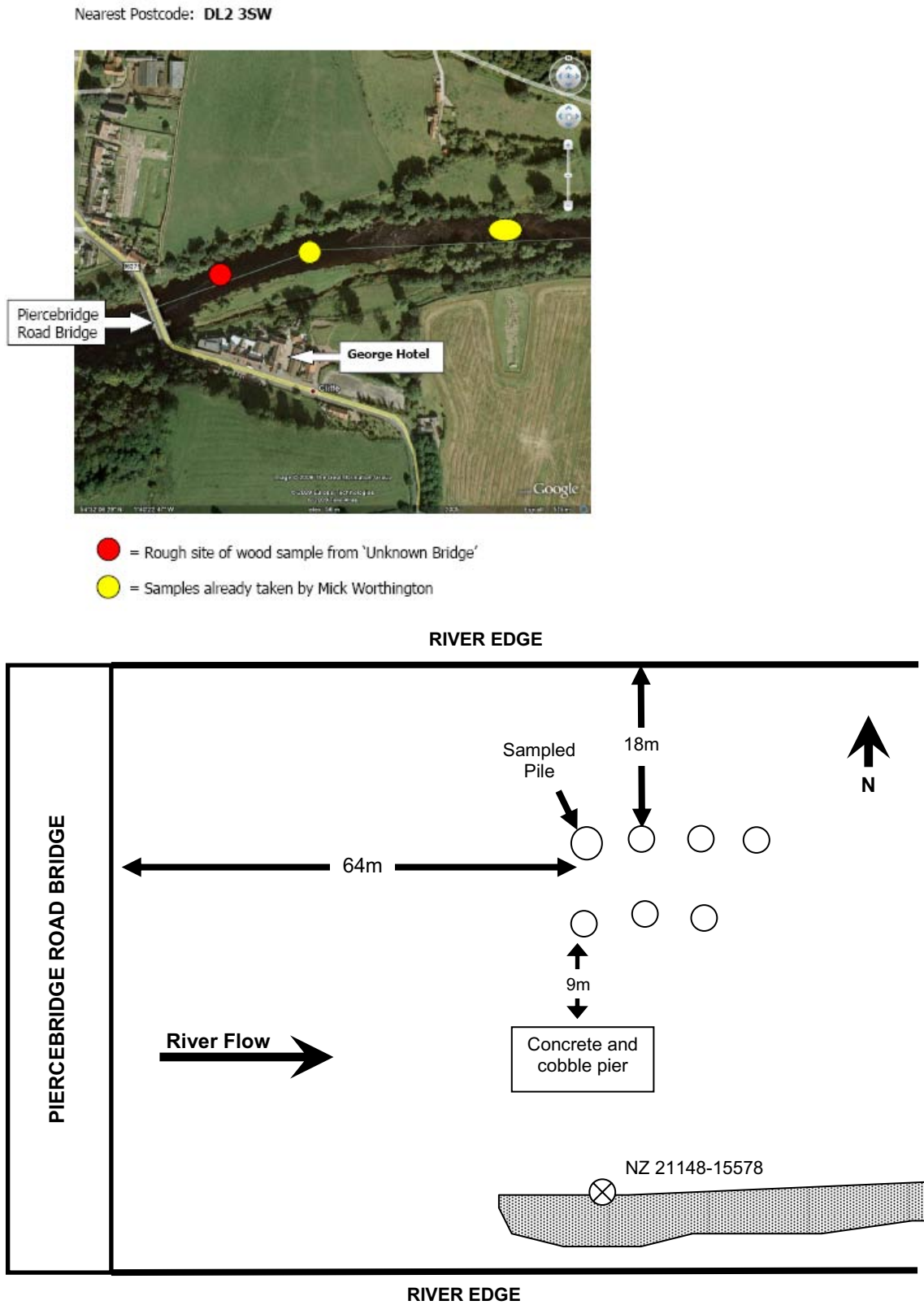
### Potential and Recommendation

While the result is extremely promising, due to the uncertainties involved in the radiocarbon method such a date can only provide a broad, but useful guide, as to the probable date of the structure. The dating of multiple posts would allow for a more accurate picture of the probable date of the structure to be established. Where such suitable samples exist, dendrochronological dating would be preferable to radiocarbon.

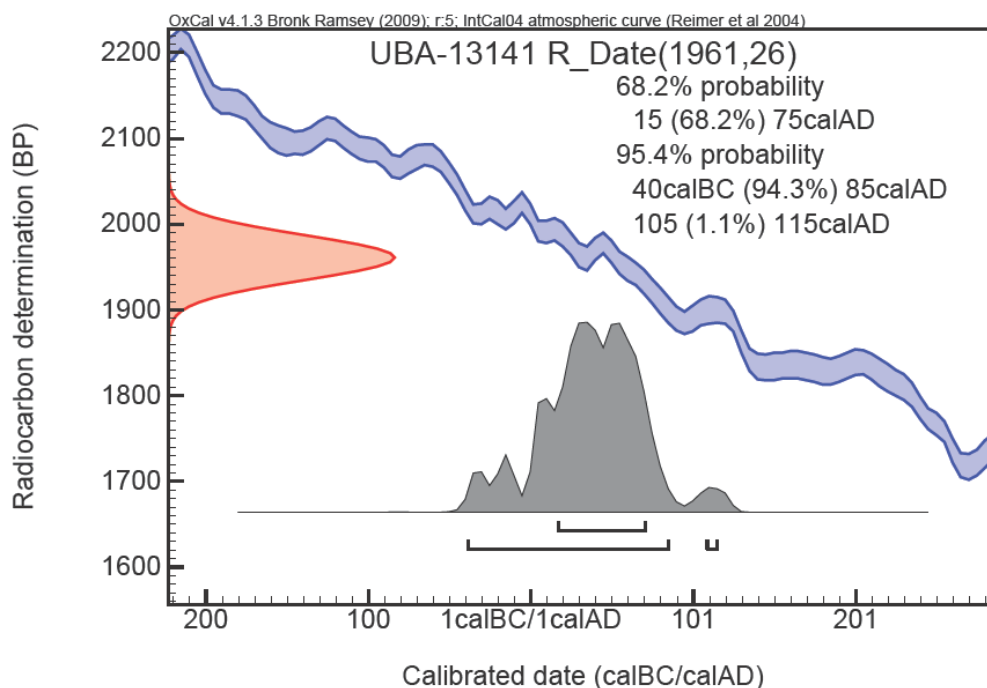
**Table 3: Radiocarbon measurements from the post**

Material	Id.	Lab ref.	δ <sup>13</sup> C	Date BP	calibration AD		
					1 sigma 68.2%	2 sigma (94.4%) 94.3% 1.1%	
Outer rings of timber post	( <i>Quercus</i> sp.)	UB-13141	-22.1‰	1961±26	15-75 cal. AD	40-85 cal. AD	105-115 cal. AD

**Figure 9: Schematic plan showing location of dated timber**

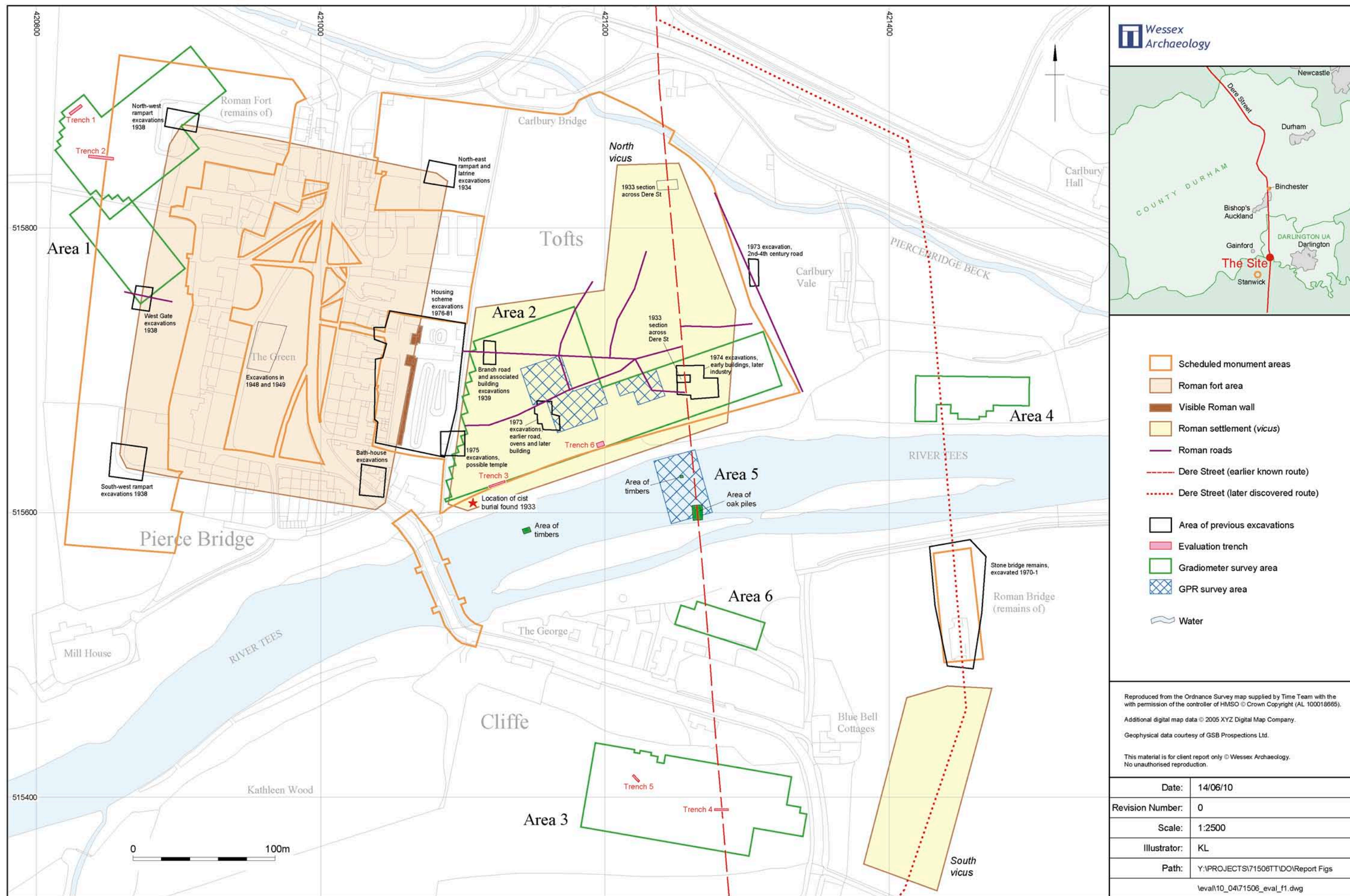


**Figure 10: Probability distribution for date UBA-13141 from the oak post**



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- Bronk Ramsey, C, 2001, Development of the radiocarbon calibration program OxCal, *Radiocarbon* 43, 355-63
- Bronk Ramsay, C, 2009 (in press), Bayesian Analysis of Radiocarbon Dates, *Radiocarbon*



Site and trench location

Figure 1



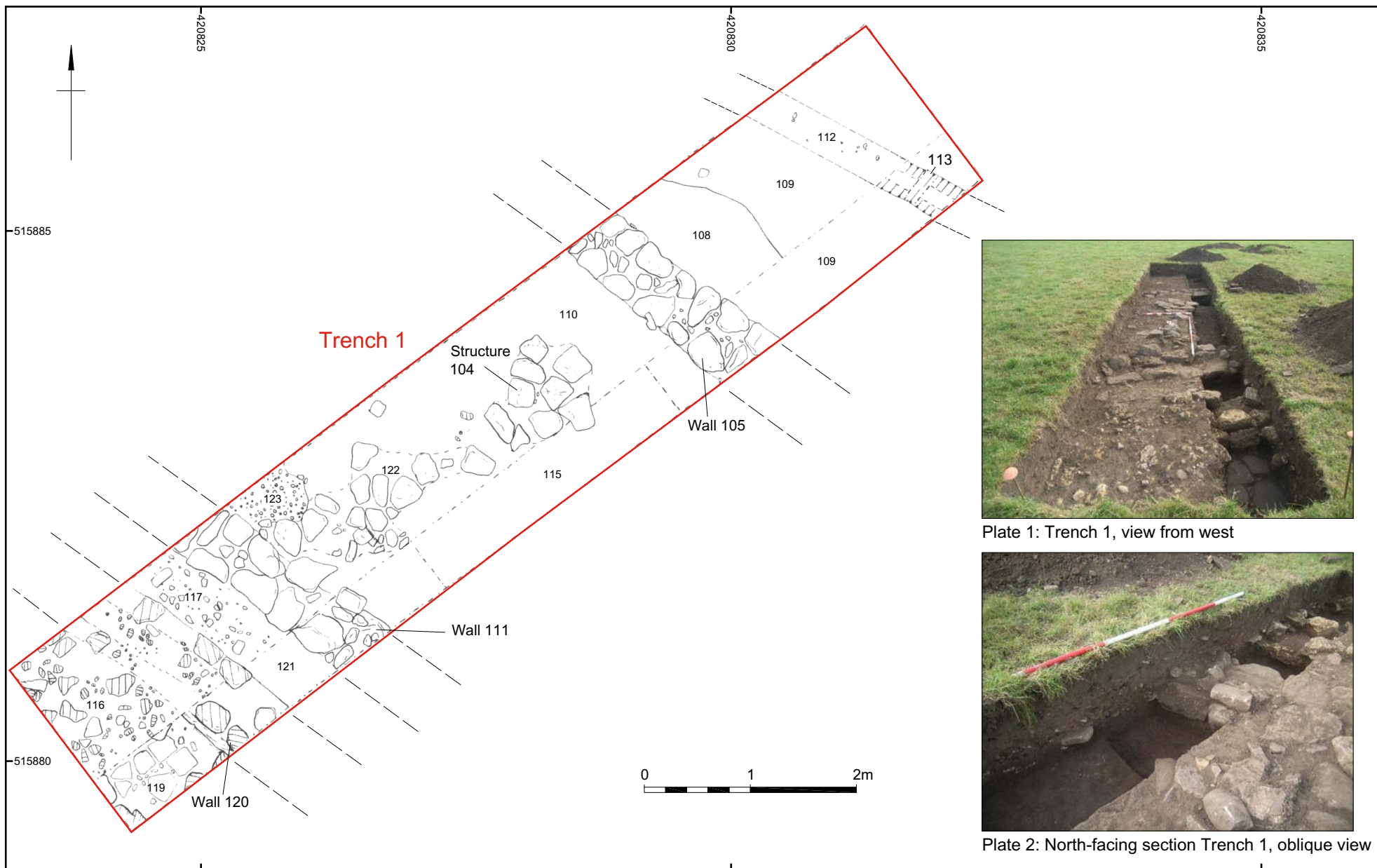


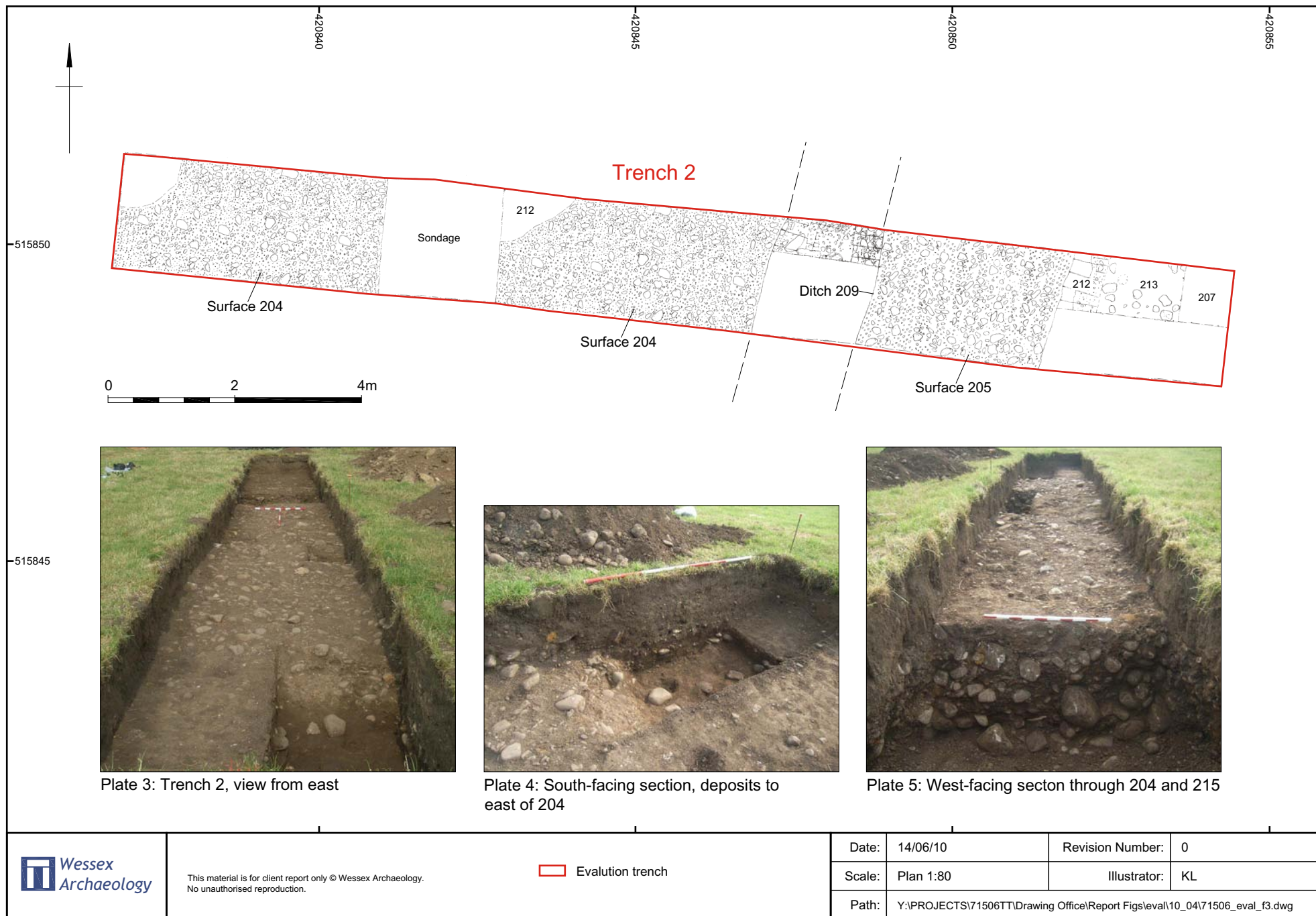
Plate 1: Trench 1, view from west



Plate 2: North-facing section Trench 1, oblique view

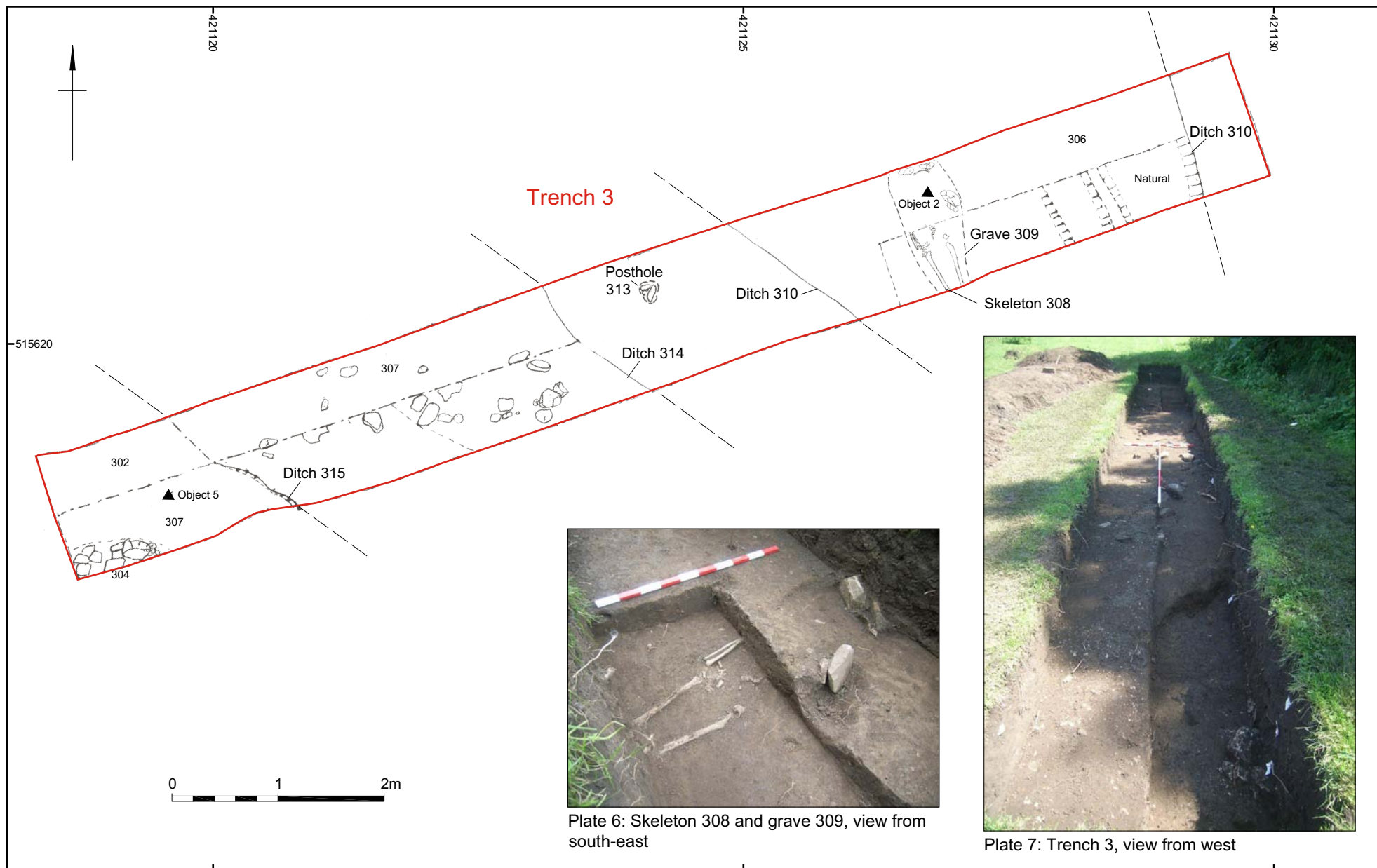
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		Scale:	Plan 1:50	Illustrator:	KL
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Trench 2: plan and photographs

Figure 4



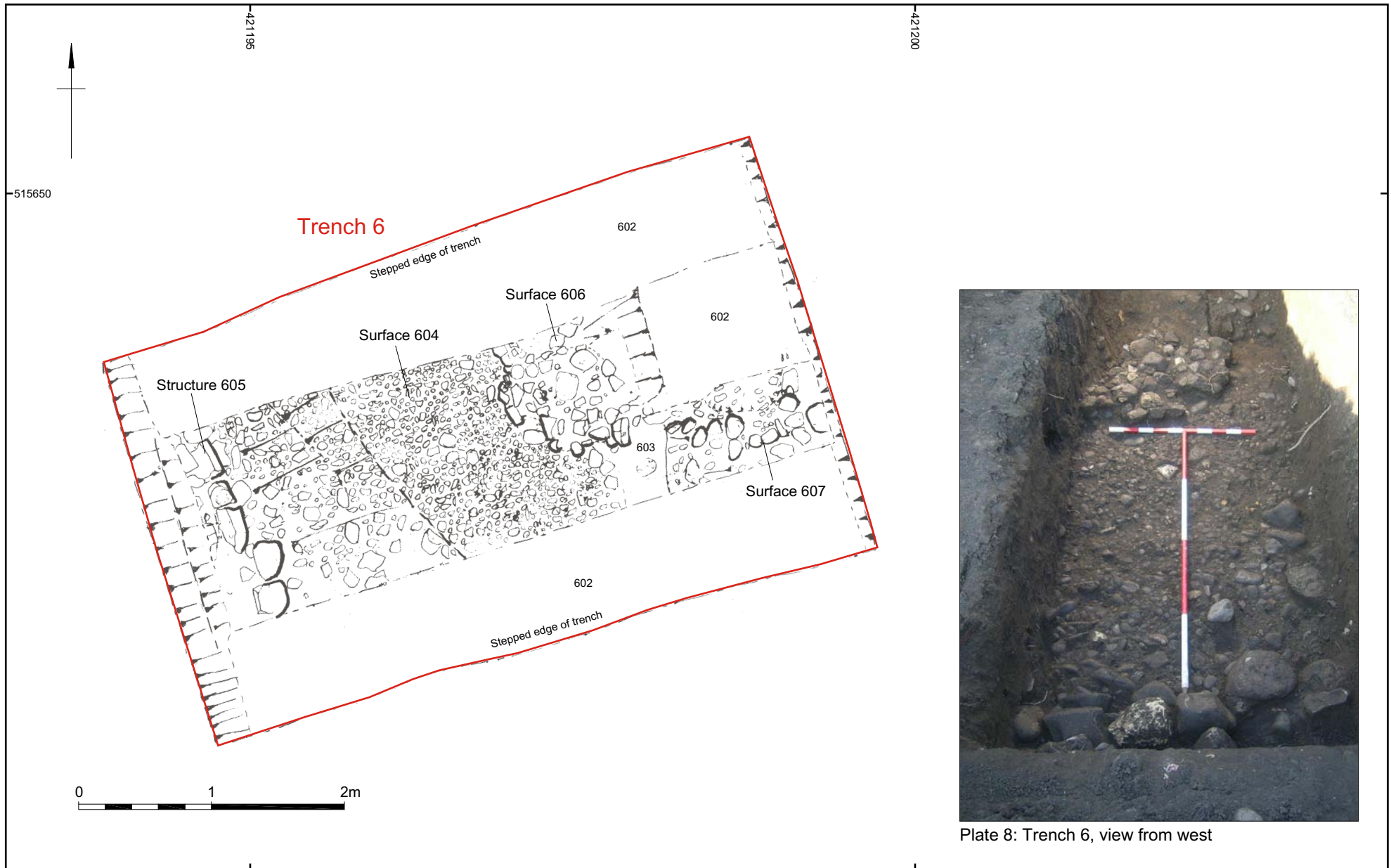


Plate 8: Trench 6, view from west

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Plate 9: Trench 4, view from west

Plate 10: Detail of road surface 408



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Evaluation trench

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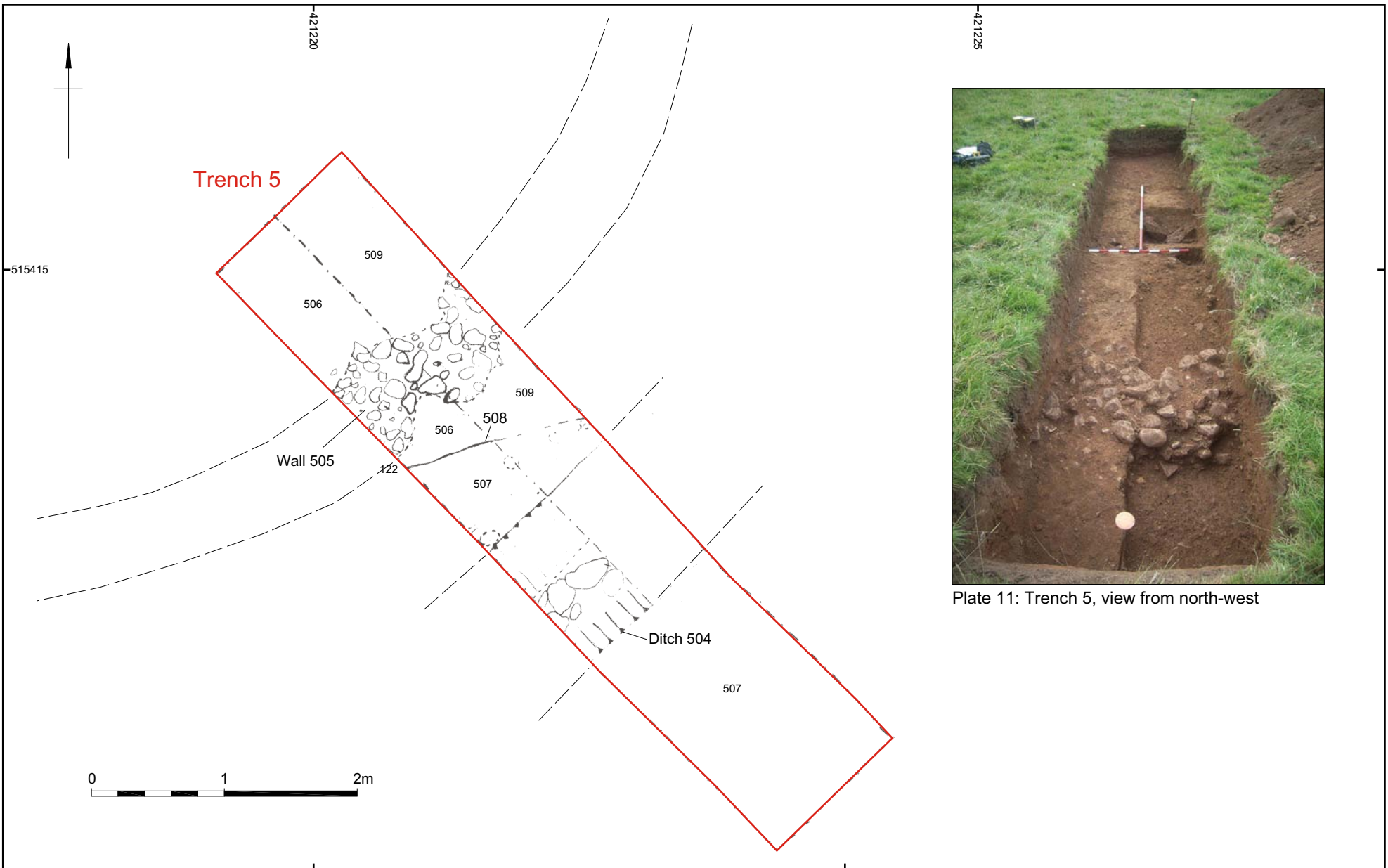



Plate 11: Trench 5, view from north-west

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		Scale:	Plan 1:40	Illustrator:	KL
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