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SUMMARY

Roman deposits were found to be extant at the base of an approximately 3.00m deep sewer trench in St Cuthbert's Lane, Carlisle.

These deposits appeared to be relatively unaffected by later intrusive activity and as conditions were damp organic survival is likely to be good. The presence of overlying dark earth would presume that the full Roman sequence may be largely undisturbed.

No form or spatial organisation could be ascertained but the presence of Roman cobbled surfaces suggests roads, buildings or yards indicative of sophisticated settlement and function.

The watching brief essentially serves as a non-invasive evaluation for this area providing proof that Roman stratigraphy is present to a thickness between 0.50 and 1.00m.

1. INTRODUCTION

1.1 Project Origins

Cumbria County Council's Historic Environment Service (CCCHES) was consulted by Carlisle City Council regarding renovation of a sewer in St Cuthbert's Lane, Carlisle.

As potential and significant archaeological remains may be encountered, an archaeological watching brief was requested.

Gerry Martin has been commissioned by Enterprise PLC (the client) to prepare a Specification of Works for a Programme of Archaeological Watching Brief Action relating to the ground works for a building foundation. The watching brief action has been requested because potential and significant archaeological remains may be encountered.

The condition exists "to afford reasonable opportunity for an examination to be made to determine the existence of any remains of archaeological interest within the site and for the examination and recording of such remains, in accordance with Policy LE10 of the Carlisle District Local Plan 2001-2016".

The development of the site will involve the machine removal of overburden within the sewer footprint.

This report describes the results of that archaeological watching brief and its archaeological context within the known archaeological record as summarised in the desk-based assessment.

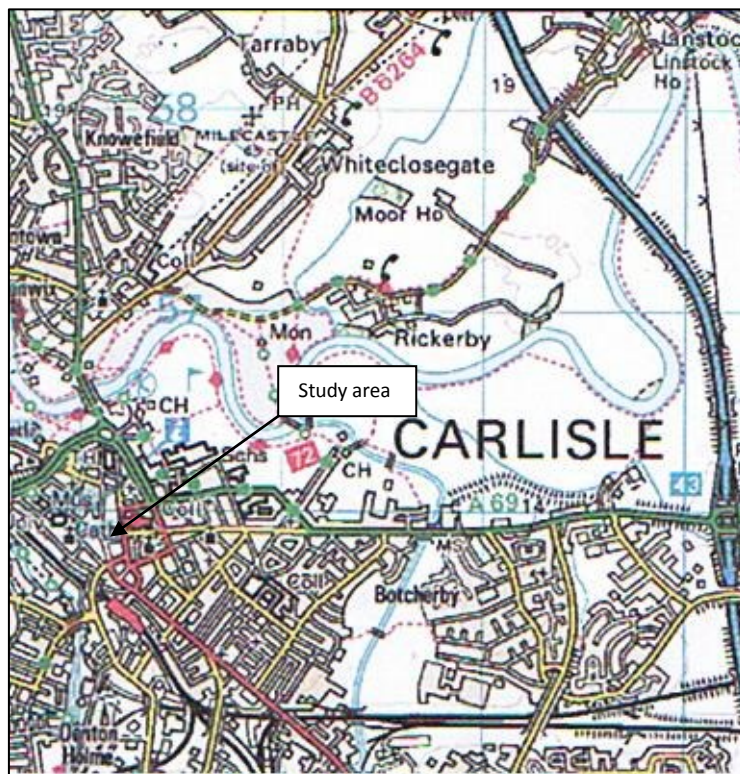


Figure 1. Site location (OS Copyright, Licence no. 100044205)

2. METHODOLOGY

2.1 Project Design

This document outlined the archaeological contractors' professional competence as well as general objectives required of the project, the methodology and the resources needed for the successful expedition of this fieldwork.

The study area lies (NY 40020 55880) to the north-east of St Cuthbert's Church within a narrow lane that reflects the roughly rectilinear spatial lay-out of the Medieval city (figure 2).

The new sewer links two extant manholes approximately 1.90m north of House of Fraser department store.

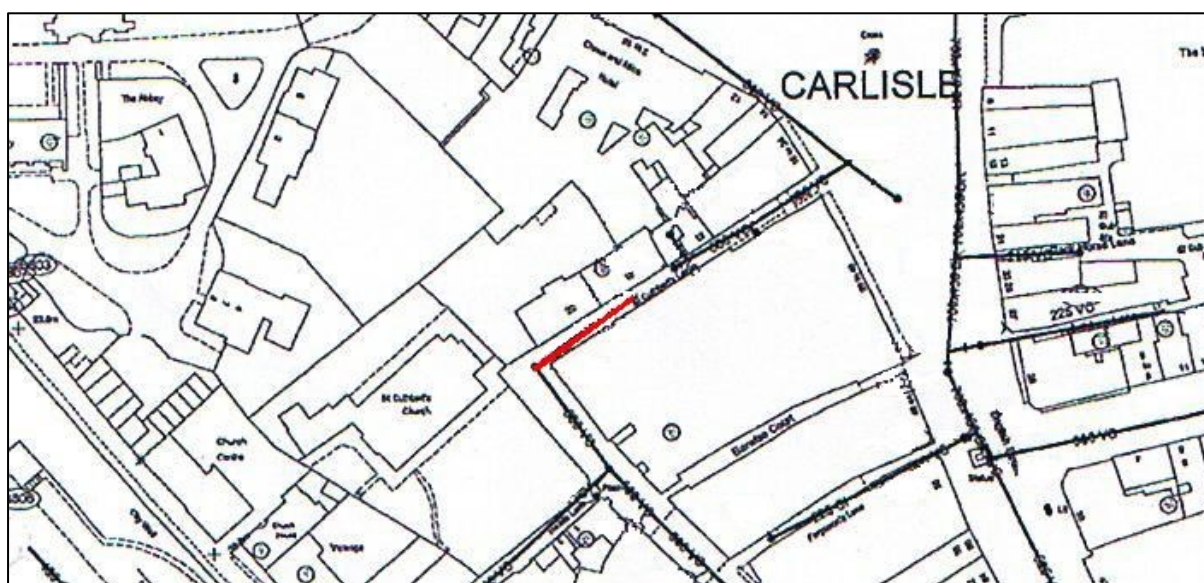


Figure 2. Location of sewer main in red outline

Gerry Martin Associates Ltd were commissioned to undertake the archaeological fieldwork following approval of the project design by the curatorial body.

The following report has been assembled to the relevant standards and protocols of the Institute of Field Archaeologists (Standard and Guidance for Archaeological Field Evaluation, 2008), combined with accepted best practice and in accordance with the brief prepared by the curatorial authority.

Fieldwork took place between April 15th and May 5th 2011 following approval for partial closure of the right of way.

2.2 Archive

The archive has been compiled in accordance with the project design and the guidelines set out by English Heritage (1991) and the Institute of Field Archaeologists (1994).

The archive will be deposited with an appropriate repository, Tullie House Museum and a copy of the report donated to the County Sites and Monuments Record, as requested by the curatorial authority.

3. BACKGROUND

3.1 Location, topography and geology

The Permian (290-248 million years ago) and Triassic (248-205 million years old) periods in North Cumbria are represented by red mudstones and sandstones that outcrop in Carlisle and the Vale of Eden deposited under arid conditions over a large desert plain with numerous basins and mountain ranges. However, although these rocks have a relatively extensive area of outcrop, the solid rock geology rarely emerges from beneath a thick covering of glacial and post glacial deposits.

These sandstones are overlain by the Mercia Mudstone Group, which comprise mudstones, sandstones and thin horizons of gypsum and rock salt. These rocks form the solid geology in north Cumbria along the shore of the Solway Firth to the River Eden estuary.

The drift geology consists of glacial deposits, mainly of till (boulder clay) deposited beneath ice sheets and glaciers. The composition of the till varies depending on where the main ice flow was from, so that till over parts of northern Cumbria contains material derived from Scotland, while the Carlisle Plain received ice and its debris from the north, south and probably east.

The study area lies close to the bluff overlooking the River Caldew that was formalised as West Walls, the area being relatively flat maintaining a high disposition within the city.

St Cuthbert's Lane remains as a small alley that connects St Cuthbert's Church with the main north-south axis (English Street).

4. HISTORICAL CONTEXT

4.1 Desk-based assessment

St Cuthbert's Lane lies in close proximity to St Cuthbert's Church dedicated to St Cuthbert and later rebuilt in 870, 1070 and 1778. The study area has produced part of an Anglian cross (HER 526).

The closest open area excavation was at Blackfriars Street (McCarthy, 1990) approximately 50m away. The sequence revealed:

- Pre-Roman ard-marks
- Flavian buildings
- Flavian and Trajanic buildings
- A large mid Hadrianic to early Antonine timber building
- A decline in the mid to late second century
- A spatial re-organisation during the late second to fifth centuries
- Anglian timber buildings
- The Medieval Dominican Friary

The study area lies within a salient between two Roman streets and it would appear probable that a similar stratigraphic sequence may be encountered.

The influence of the Roman urban landscape appears to impact during later periods as the alignment of St Cuthbert's Church is not true to Christian tradition (McCarthy 1993, 103).

A monastery and church was founded by St Cuthbert around 685 AD in close proximity as fragments of sculpted eighth century Celtic crosses recovered from St Cuthbert's Lane (Ibid, 34-35).

In 1776 W.Stukeley referred to a great quantity of Roman coins discovered under St Cuthbert's Church (Shotter 1982, 198).



Figure 3. The earliest map of Carlisle circa 1560

The site is mentioned throughout the late Medieval period and has by 1560 developed into an ordered terrace with gardens (figure 3).

- In 1546 it is described as “ Item ji (2?) burgage in tenor of Roberts Lawson set in Seynt Cuthbertes Venell betwixt the land of the dene of Carlell othe weste and Peter Sadler othe este paying yerlie iij s (3 shillings)” (Storey 1960, 72).
- Circa 1656 the sale of a property specified at St Cuthberts' Venell mentioned in the “Dormant Book” (Ferguson 1882, 6).
- St Cuthberts' Lane (figure 4) is represented in the 1684-85 Carlisle Survey (Ferguson 1893, 174).

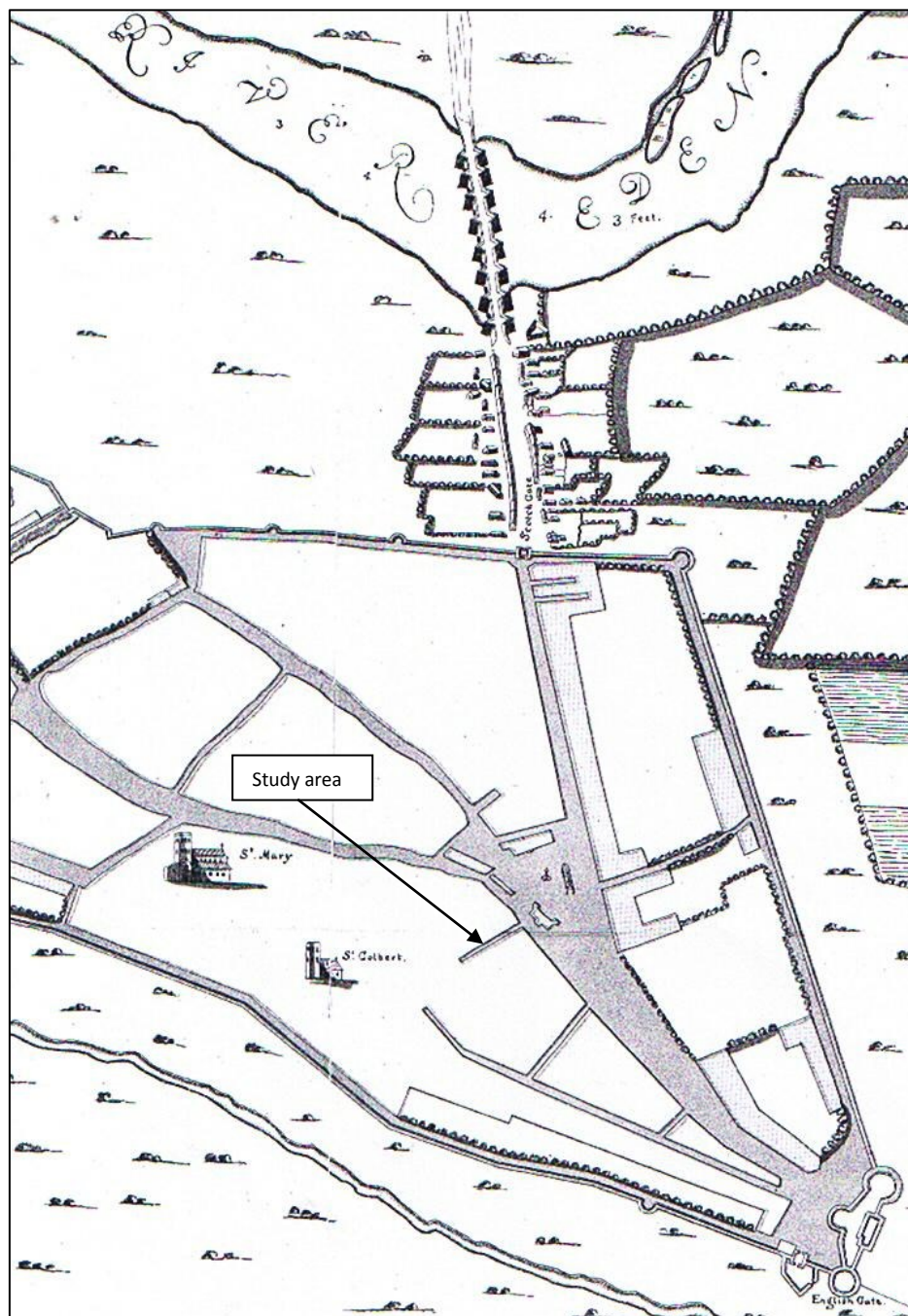


Figure 4. 1684-85 Map of Carlisle showing St Cuthbert's Lane



Figure 5. Watching brief when cable laid in 2010

In 2010, a watching brief was conducted in St Cuthbert's Lane when electric cables were inserted (figure 4). These cables remained in the modern overburden and did not compromise any extant archaeological deposits (Beaty *pers comm.*).

5. RESULTS

5.1 Development proposals

The project involved the replacement of a sewer main conjoining two extant manholes 27m apart.

The specific action undertaken required excavation and removal of the defunct 19th century salt glaze sewer pipe, bedding gravel in, a new plastic pipe inserted that connected to a series of feeder pipes from adjacent buildings and then remediation.

The trench was reduced to a depth of approximately 3.00m and was shored by sheet piling obscuring the trench side.

The narrow width of the trench and the presence of a former sewer pipe meant that the majority of the fill was re-deposited material but containing principally Roman cultural material that had been disturbed from its original provenance albeit no great distance.

Only at the very base of the trench could "fresh" Roman stratigraphy be observed. The depth of the trench, inundation by water, seepage from cracked pipes and the narrow confines were all factors that compromised the archaeological observations.

5.2 Methodology

The objective of the watching brief investigation is to carry out a formal programme of archaeological observations and investigations during any operations on site that may disturb or destroy archaeological or architecturally informative deposits or remains. The specific aims of the work are to:

- Provide a record of those works associated with the removal of the topsoil
- Provide a record of any significant archaeological or architectural features encountered by intrusive activities

In order to achieve these objectives, a record of all archaeological informative deposits encountered during the ground operations were made consisting of detailed context records on individual proforma sheets and field drawings, according to the protocols set out in the GMA manual.

The ground-works were undertaken by a 13 tonne machine under archaeological supervision. This action consisted of observation of the spoil removal and monitoring the displaced soil. Revealed sections were checked for any past cultural activity and if necessary recorded according to the protocols of the GMA manual.

Alan James kindly metal-detected the spoil for metal objects.

The work was undertaken between April 15th and May 5th 2011.

5.3 Results

The watching brief was divided into nine sections equivalent to the area that was shored each time a length of sewer pipe was inserted.

Section 1 (15th-19th April 2011)

Section 1 measured 2.80m in length, 0.70m in width and was reduced to a depth of 2.60m and began at an existing manhole into which the new sewer main would discharge. The initial 1.20m of ground was formed from modern build-up and gravel.

The base of the trench revealed a cobbled sandy pebbly surface approximately 0.30m in thickness. This horizon was consolidated but not particularly hard overlying clean pink clay forming natural drift geology. The surface comprised rounded pebbles circa 0.10m in size within a greenish yellow coarse sand matrix (figure 6).

Overlying this surface was stiff mixed grey clay containing dark grey organic silt that then became obliterated by the earlier sewer main that was now subject to renewal.

At 2.50m west of the eastern manhole, dark organic silt overlay cobbles from which two pieces of Samian (Form 37, one of the sherds being decorated, probably mid to later 2nd century AD on account of the worn relief) and a single sherd of Black Burnished Ware (BB1) were recovered. The pottery was in good condition and unabraded suggesting relatively rapid deposition.

Approximately 2.80m west of the eastern manhole was a possible crude degraded wall comprising broken red sandstone fragments but no mortar. Possibly, these deposits may represent robbing of a wall foundation or builders' waste but do not appear to belong a pit.

Ground conditions were moist suggesting organic preservation would be good but no wood or timber structural elements were encountered.



Figure 6. Section 1 cobbled surface



Figure 7. Section 2 Roman stratigraphy

Section 2 (20th April 2011)

Section 2 measured 2.70m in length, 0.70m in width and was reduced to a depth of 2.70m and conjoined section 1 to the east. The initial 0.70m of ground was formed from modern build-up and gravel into which sheet piles were driven and the internal area removed by machine.

The sheet piles were left approximately 0.60-0.75m above the base of the trench leaving an exposed section revealing the following stratigraphic sequence above pink Boulder Clay drift geology.

The earliest deposit was a concordant tightly packed, compacted green pebbly sand matrix 0.25m in thickness that continued from section 1 that appeared to be a) a road or lane, b) a yard or c) a coarse internal surface such as a stable. This material did not possess extraneous artefacts, probably representing a single act of deposition (figure 7).

Overlying this horizon was a mixed deposit of organic silt 0.30m in thickness but containing thin orange clay micro-laminations approximately 5mm in thickness. This banding may represent occupation deposits but more likely to be crude or casual acts of dumping or *ad hoc* resurfacing.

There is no evidence for charcoal or fire damage and no sign for a clay and cobble foundation for a large wall.

A band of pebbles within the above horizon probably does represent at least one phase of re-use.

Large amphora sherds were recovered from this area but could not be assigned to specific deposits.

The sequence was capped by an undated spread of pebbly sand and decayed red sandstone 0.20m in thickness

Between the sheet piles driven to a depth of approximately 1.90m were 0.10m gaps. At the base of the pile was mixed grey silty clay with mortar flecks and pebbles 0.35m in thickness overlain by a band of pink sand and clay with crushed sandstone 0.25m in thickness, covered by dark earth with occasional animal bone 0.60m in thickness.

The construction cut for the former sewer was unseen but almost certainly battered in profile, the upper deposits described above possibly belonging to this action.

Section 3 (21st April 2011)

Section 3 measured 3.00m in length, 0.70m in width and was reduced to a depth of 2.80m and conjoined section 2 to the east. The initial 0.70m of ground was formed from modern build-up and gravel into which sheet piles were driven and the internal area removed by machine. The trench was subject to flooding compromising the archaeological observation (figure 8).

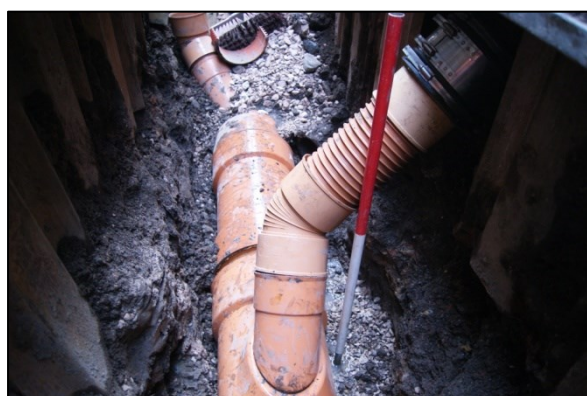


Figure 8. Section 3



Figure 9. Section 4

This section of trench was heavily infiltrated by a series of three feeder drains discharging into the main sewer. The trench appeared to exist within the backfill for the former cut of the sewer, therefore only towards the base were extant archaeological deposits visible.

The earliest part of the archaeological sequence appeared to be a 0.20m thickness band of clay containing Samian pottery.

On the north side of the trench barely visible, was some green pebbly material, possibly a surface or road that was 0.35m in thickness.

Only Roman pottery was recovered suggesting that these deposits were a continuum of the Roman stratigraphy observed from Sections 1 and 2.

Section 4 (26th April 2011)

Section 4 measured 3.60m in length, 0.70m in width and was reduced to a depth of 2.80m and conjoined section 3 to the east. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine. Water flowed constantly at the base of the trench compromising the observations.

Whilst natural clay was not observed, the earliest deposit was pink sandy silt that remained unexcavated sealed by a 0.07m thickness of clean grey silt. A thin deposit (0.05m thickness) of charcoal-laden silt with red sandstone flecks lay beneath a band of crushed red sandstone containing coarse yellow sand with white plaster flecks measuring approximately 0.25m in thickness (figure 9). This deposit (0.70m in depth) was sealed by clean dark earth with yellow sandstone to the west and pink sandstone to the east.

At the base of the trench was black humic clay that may represent discharge from the former main rather than a cultural deposit.

No cobbling was encountered whilst the sheet piles easily slid into place suggesting no substantive obstructions.

Section 5 (27th April 2011)

Section 5 measured 2.90m in length, 0.70m in width and was reduced to a depth of 3.00m and conjoined section 4 to the east. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine. A modern cable duct and former drain to the south penetrated a further 0.70m into the ground. Water flowed constantly at the base of the trench compromising the observations.



Figure 10. Section 5



Figure 11. Section 6, manhole

At the eastern end, remnant Roman stratigraphy 0.80m in length appeared to exist. This comprised of a lens of compacted pebbles and yellow sand overlain by pink or maroon sandy clay 0.20m in thickness, beneath a clean yellow sand 0.07m in thickness covered by a thin stony surface 0.05m in thickness (figure 10).

This short length of stratigraphy was cut 12.60m from the eastern manhole by a large intrusion filled by clean silt that may be a large pit or foundation trench.

A wall 14.50m from the eastern manhole consisted of red sandstone shingles tightly packed with clay mortar and a rubble core over 0.50m in width. This wall penetrated pink clay (natural drift

geology) and a charcoal horizon of unknown antiquity. The backfill was over 0.75m in depth and probably represents a Medieval wall foundation.

Section 6 (28th April 2011)

Section 6 measured 3.00m in length, 0.70m in width and was reduced to a depth of 2.90m and conjoined section 5 to the east. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine. A modern cable duct and former drain to the south penetrated a further 0.70m into the ground.

The trench was truncated on both sides by a former sewer trench and a BT cable duct leaving a small slither of archaeological stratigraphy 0.15m in width.

On the south side of the trench 16.70m from the eastern manhole, there existed a stone manhole comprising a sandstone base 0.95m in width surmounted by mortared sandstone blocks forming a chamber 0.45m in width (figure 11).



Figure 12. Section 7



Figure 13. Section 9

Section 7 (3rd May 2011)

Section 7 measured 3.00m in length, 0.70m in width and was reduced to a depth of 2.60m and conjoined section 6 to the east. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine.

For a depth of 1.00m below the overburden was a stone and brick wall of probable 18th or 19th century date the rest of the trench being heavily disturbed by relatively modern intrusive action (Figure 12).

At the base of the trench a heavily mixed "Roman" level was probably extant but it was not possible to isolate the elements apart from a generic description of pink clay mixed with charcoal.

Section 8 (4th May 2011)

Section 8 measured 3.00m in length, 0.70m in width and was reduced to a depth of 3.00m and conjoined section 7 to the east. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine.

The trench displayed dark grey silt to each side, gas and electricity trenches and a salt glazed pipe trench leading to the manhole in Section 7.

At the base of the trench was greenish brown clayey silt containing tiny fragments of twigs and decayed wood, overlying organic dark grey silt with charcoal (figure 14). This may represent seepage from the various pipe trenches.



Figure 14. Section 8

Section 9 (5th May 2011)

Section 9 measured 3.00m in length, 0.70m in width and was reduced to a depth of 2.80m and conjoined section 8 to the east and a manhole to the west. The initial 0.50m of ground was formed from modern pink clay and gravel into which sheet piles were driven and the internal area removed by machine.

The ground was heavily disturbed with water pipes and an electric cable traversing the trench.

The base of the trench comprised of clay (probably natural) and some cobbles mixed into the clay. It was not possible to enter the trench due to considerable toxic seepage from the sewer pipe (figure 13).

Half a Samian cup or bowl from the 1st or 2nd century was recovered from the generic fill.

5.4 Discussion

The watching brief undertaken in St Cuthbert's Lane provided secure evidence that Roman remains survived at a depth of approximately 2.00-3.00m below current ground level.

Understanding spatial organisation and identifying individual elements within the sewer trench was extremely difficult and no conspicuous Roman walls or buildings were identified.

Cobbled surfaces were indicative of human occupation but whether these deposits represented buildings, yards or a road, this enquiry remained inconclusive.

Samian ware and its generally good condition probably indicated occupation during the mid to late 2nd century AD and may suggest social prestige. However, the formation process and its related context remains unclear, therefore eschewing further detailed interpretation.

The relatively low level of finds recovery is not significant especially if the study area was used for housing. Moreover, the lack of pit activity suggests that this was not a marginal area, did not develop into a marginal area during the Medieval era and that preservation for early Roman deposits is likely to be very good if not exceptional due to the moist environment that could preserve organic material.

Dark earth appears to be evident, relatively undisturbed, suggesting that a full Roman sequence may exist and largely untouched.

Anglian settlement has been suggested nearby but if these trace deposits existed then they could not be identified during this exercise.

There appeared to be a paucity of Medieval material recovered. Possibly, the study area lay within the precinct of St Cuthbert's Church and remained under-developed until after the Reformation. Later truncation during the 18th and 19th centuries may also account for the absence of Medieval cultural material.

No human burials or charnel remains were uncovered suggesting that the study area had not been used as a graveyard during the Medieval period nor after 1778 when the church was rebuilt.

In 1847, six public houses are listed as being within St Cuthbert's Lane, namely City Arms, Duke of Wellington, Fish and Dolphin, Golden Lion, Hare and Hounds and Shakespeare Tavern. Most probably the brickwork and intrusive activity related to this period of activity.

6. ARCHIVE

The archive has been compiled in accordance with the project design and the guidelines set out by English Heritage (1991) and the Institute of Field Archaeologists (1994, 2001 and 2007).

The archive will be deposited with Tullie House Museum, Carlisle and a copy of the report donated to the County Sites and Monuments Record, as requested by the curatorial authority.

7. ACKNOWLEDGMENTS

I am grateful to Chris May, the client on behalf of Enterprise PLC for his collaboration on this project.

The recovery of the archaeological data would not have been possible without the co-operation of Stuart Wilson and his team of ground-workers who undertook the excavation for Waitings Ltd the contractor.

I would also like to thank the staff of Carlisle Library with my research into the local history of the area and the staff of Cumbria Record Office, Carlisle with the map regression and other documentary research.

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