

ARCHAEOLOGICAL EVALUATION
OF THE EXTRAMURAL
MONUMENTAL COMPLEX
(‘THE SOUTHERN CANABAE’)
AT CAERLEON, 2011

An Interim Report



By
P. Guest, M. Luke & C. Pudney

CARDIFF STUDIES IN ARCHAEOLOGY



SPECIALIST REPORT NUMBER 33



ARCHAEOLOGICAL EVALUATION OF THE EXTRAMURAL MONUMENTAL COMPLEX (‘THE SOUTHERN CANABAE’) AT CAERLEON, 2011

Interim Report

by
P. Guest, M. Luke & C. Pudney

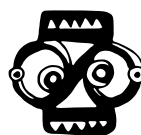
with contributions by
P. Webster, M. Lewis & A. Powell



CARDIFF STUDIES IN ARCHAEOLOGY



SPECIALIST REPORT NUMBER 33



ARCHAEOLOGICAL EVALUATION OF THE EXTRAMURAL MONUMENTAL COMPLEX (‘THE SOUTHERN CANABAE’) AT CAERLEON, 2011

Cardiff Studies in Archaeology Specialist Report 33
© The authors 2012

P. Guest, M.Luke and C.Pudney,
ISBN 978-0-9568398-2-4

Published by the Department of Archaeology & Conservation
School of History Archaeology and Religion
Cardiff University,
Humanities Building,
Colum Drive,
Cardiff,
CF10 3EU

Tel: +44 (0)29 208 74470
Fax: +44 (0)29 208 74929

Email: adminshare@cardiff.ac.uk

All rights reserved. No part of this publication may be reproduced
in any form or by any means without permission of the authors.

Designed by Cardiff Archaeological Illustration and Design
Software: Adobe Creative Suite 4 Design Premium

Contents

Introduction	1
Background	3
Project Aims & Objectives	9
Methodology	11
Results of the excavations	13
Trench 1	15
Trench 2	25
Trench 3	29
Trench 4	33
Trench 5	39
Trench 6	51
Trench 7	57
Trench 8	61
Trench 9	67
Artefact & Environmental Assemblages	73
Pottery - preliminary observations	79
Discussion and interpretation	87
Bibliography	95
Appendix 1 - Trench Matrices	97
Appendix 2 - Community Engagement	107
Appendix 3 - Project Team	113

Introduction

Excavations were undertaken across the area of the newly discovered complex of monumental buildings to the southwest of the legionary fortress of *Isca* at Caerleon between the 4th of August and the 1st of September 2011. This work was intended to evaluate the nature of the archaeological remains in this part of Caerleon and to provide important new information on the history and role of *Isca* in the Roman period, which, as one of only three permanent legionary fortresses in Britain, is a site of significant international importance. Greater knowledge of the extramural complex of monumental buildings will lead to a better appreciation of Caerleon's part in the conquest, pacification and acculturation of Britain, and improve understanding of the River Usk's role in connecting the fortress with the network of auxiliary forts in southern Wales, as well as other parts of Roman Britain and the Empire. The project was directed by Dr Peter Guest of Cardiff University and Mike Luke of Albion Archaeology, and the core project team consisted

of 13 staff and 23 student archaeologists from Cardiff University.

From the outset the Caerleon excavations have linked internationally significant research with undergraduate training and a broad mission to engage with the public. The engagement strategy this year was to continue to raise the public's awareness of, and participation in, archaeological fieldwork and the remains of Roman Britain. The excavation also provided an excellent opportunity to involve 23 undergraduate students and numerous young volunteers in knowledge transfer and community engagement activities that will provide them with significant employability skills.

The fields containing the *Southern Canabae* complex are privately owned and we are grateful to Mr Michael Haines of Broadway Farm for permission to carry out the excavations. The area is also a Scheduled Ancient



Fig. 1. Aerial photograph of the 2011 Caerleon Southern Canabae trenches, the River Usk and the legionary amphitheatre

Introduction

Monument and Scheduled Monument Consent was granted by Cadw. Funding for the excavations was provided by Cardiff University, the Roman Research Trust, the Haverfield Bequest (University of Oxford), Time Team, Newport City Council, and the Caerleon Tourist Forum. Cadw provided funding for the initial post-excavation archiving work and preparation of this interim report and we are grateful to Jonathan Berry and his colleagues at Cadw for their continued support. Finally, we would like to thank the staff at the National Roman Legion Museum (National Museum Wales) for their encouragement and assistance.

This report summarises the results of the evaluation and includes the stratigraphic sequences recorded in each of the nine trenches, an overview of the finds assemblages, and a discussion of the excavation's significance for understanding the legionary fortress at Caerleon. Mark Lewis and Peter Webster undertook the preliminary analysis of the pottery from the excavations,

while Adrienne Powell completed the assessment of the animal bone assemblage. We are pleased to include summaries of their reports in this interim, which begins the process of integrating the stratigraphic narrative and the related finds evidence. A summary of the community engagement activities devised for the 2011 season is also provided here (a full report is available from the authors). Professor Bill Manning kindly commented on a draft and we are very grateful to him for helping to remove the inconsistencies and glitches in the text. We would also like to thank Tim Young for providing images of the geophysical survey results as well as his interpretations. Ian Dennis of Cardiff University prepared this report for publication with his usual skill and patience.



Fig. 2. Almost the complete Caerleon Southern Canabae 2011 excavation team, 31st August.

Background

The site of Roman *Isca*, which lies beneath the town of Caerleon near Newport in South Wales, is one of the best known legionary fortresses from the Empire - a result of the intensive accumulation of knowledge obtained over a century-and-a-half of antiquarian and archaeological exploration at Caerleon which enables the fortress' layout and history to be described in some detail. The significance of the site has been understood for centuries and *Isca's* ruins were conspicuous enough in the medieval landscape of South Wales to merit comment in the work of chroniclers such as Gerald of Wales and Geoffrey of Monmouth in the twelfth century.

The first antiquarian work was undertaken by John Edward Lee in the 1840s, though the framework of understanding of the fortress really only really began to be established during the course of several important excavations carried out by the National Museum of Wales from the 1920s to the 1980s (Boon 1972; Boon 1987; Jones 2001; Knight 2001: 48). These revealed many of the buildings inside and around the fortress, including the amphitheatre, various barrack blocks (of which the most important are those in Prysgr Field), the headquarters building, a possible hospital, the fortress



Fig. 3. Location of Caerleon, South Wales (maps reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright. All rights reserved.)

baths, a tribune's house, various supposed workshops, and a quay on the right bank of the Usk. From the 1980s numerous watching-briefs, evaluations and large-scale excavations have been undertaken by the Glamorgan-Gwent Archaeological Trust and other commercial units at Caerleon, of which the most significant were those on the Roman Gates site (Evans and Metcalf 1992) and the extramural settlement to the east of the fortress on Mill Street (Evans 2000). The insightful accounts published by George Boon summarised the state of knowledge in the 1970s and 1980s (Boon 1972; Boon 1987), while up-to-date summaries and discussions of specific themes relating to Caerleon have appeared more recently (Brewer 2002; Manning 2004; Evans 2010).

Isca lies on a spur of gently rising ground between the meandering River Usk and its floodplain to the east and south, the Afon Lwyd stream to the north, and Lodge Hill to the northwest (Fig. 3). Oriented almost exactly south-east to north-west, the fortress covers 20.3 hectares (some 50 acres) on the right bank of the Usk at the river's lowest bridging point before it enters the Severn Estuary at the

modern city of Newport. *Isca* was founded in c. A.D. 74 or 75 probably by *Legio Secunda Augusta* during, or perhaps in advance of, the final campaigns of the governor of *Britannia* Julius Frontinus against the *Silures* and other native tribes of this western part of Britain. The Usk allowed the legion to be supplied by sea and also provision the auxiliary units based in the upstream forts at Abergavenny and Brecon, while the road that crossed the Usk at Caerleon led to the major Roman settlements at Gloucester and Wroxeter in the east (both of which had been earlier legionary bases), and westwards towards the fort at Cardiff and beyond to Carmarthen.

Initially many of the buildings within the fortress would have been built in timber, though the techniques employed by excavators in Caerleon during much of the twentieth century means that any evidence for timber structures would not have been recognised in their narrow trenches. The amphitheatre was first constructed in about 90 by which time the decision had probably been taken to make *Isca* the Second Augustan Legion's permanent base in Britain, and most buildings appear to have been



Fig. 4. Plan of the legionary fortress of *Isca* at Caerleon as known in 2002

rebuilt in stone between the late first and early second centuries. Soon afterwards the legion was redeployed to northern Britain where it assisted in the construction of first Hadrian's Wall and, subsequently, the Antonine Wall. For the succeeding decades of the second century it is likely that the legion would have left only a small force at Caerleon while the majority of its men were occupied with the various demolitions and renovations of the Walls that took place up to c. 160 before it was finally decided that Hadrian's Wall was to be the northern frontier of the Roman Empire. Epigraphic evidence points to several rebuilding events in Caerleon during the third century - unsurprising given the age of the original buildings and the extended period of semi-abandonment during the second century.

It is thought that the military occupation at *Isca* ended c. 300 when the legion was redeployed, possibly to a new fort at Cardiff before appearing as the garrison of the Saxon Shore fort at Richborough in the early fifth-century *Notitia Dignitatum*. The fortress, however, has produced evidence for occupation during much of the fourth

century, notably from the southern and eastern parts. The identity of these late-Roman inhabitants has been a matter of considerable debate with some suggesting a reduced military garrison, while others have imagined civilians living in abandoned barracks and other military buildings until the end of the Roman period when, like most places in Britain, the archaeological evidence for occupation disappears (Gardner 2007).

In 2003 Cadw grant-aided the Glamorgan-Gwent Archaeological Trust to produce a research framework for Caerleon (Evans 2004). This document set out how much was known about fortress, but also highlighted the areas where knowledge was lacking and suggested measures that could be taken to provide valuable information to fill in those gaps. The research framework emphasised the plan of the *canabae* and the development of the River Usk as research priorities, and also highlighted the potential of modern excavations to produce important information relating to the society and culture of the inhabitants of Caerleon and its environs (particularly finds and environmental evidence). This initiative set in motion a

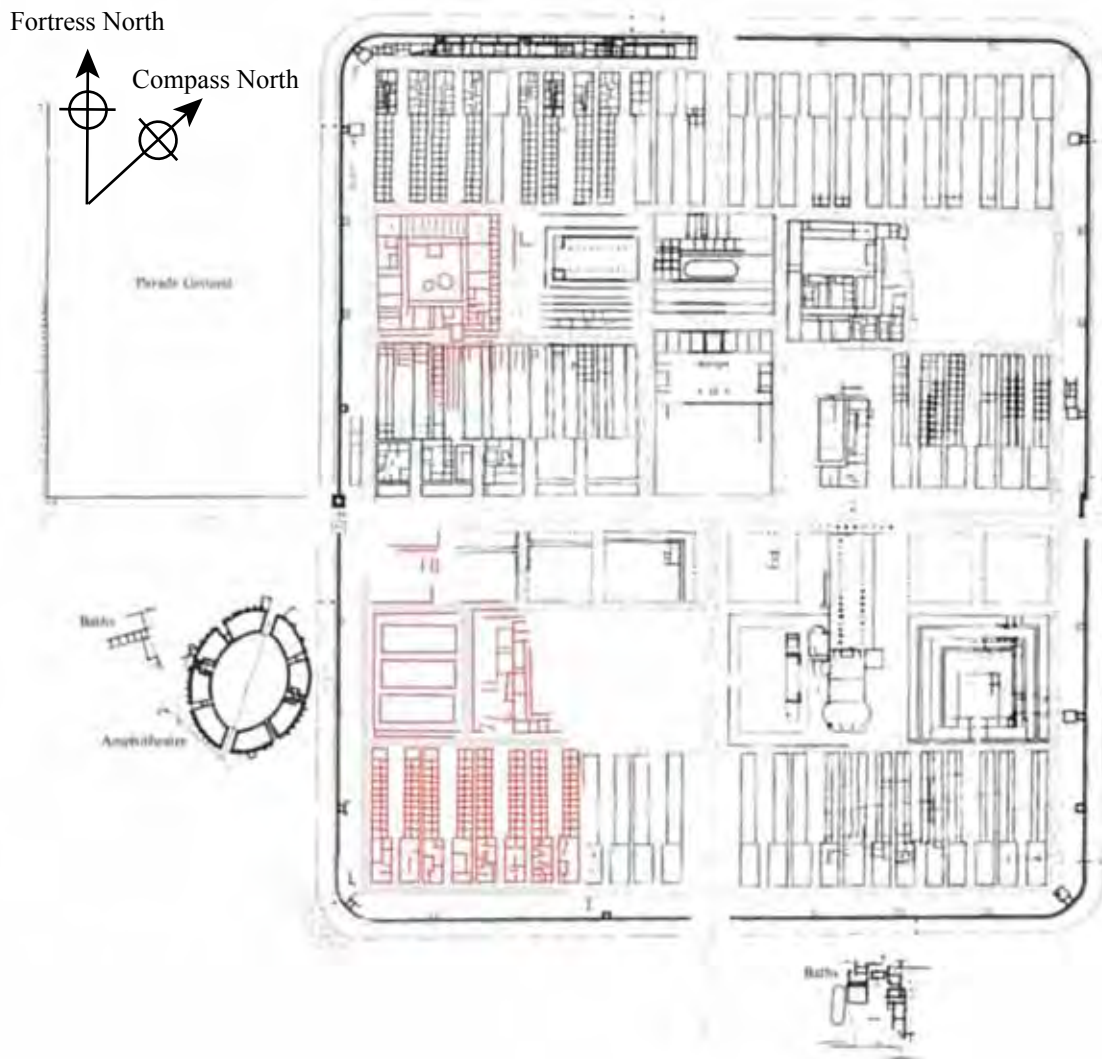


Fig. 5. Updated plan of *Isca* after geophysical surveys from 2006 to 2008 (newly-discovered buildings shown in red)

number of research projects at Caerleon, including the programme of geophysical surveys of all the remaining areas of open ground within the fortress undertaken by GeoArch and Cardiff University between 2006 and 2008 (Fig. 5. See also Guest and Young 2007; Guest and Young 2010), and the major excavations by Cardiff University and UCL of a legionary store-building in Priory Field in 2008 and 2010 (Guest and Gardner 2008; Gardner and Guest 2010).

In 2008 a gradiometer survey was undertaken of open fields around the amphitheatre to the southwest of the fortress. These continued until 2011 and ultimately revealed a previously unknown complex of large public-style buildings extending over an area of about 5 hectares outside the fortress (Figs 6 and 7). Previous work in the 1950s hinted at the presence of large Roman buildings in this part of Caerleon, including a bath-house and a building with a monumental entranceway, yet the scale and nature of the newly-discovered suburb was nevertheless surprising. Elsewhere on this side of the fortress, civilian occupation seems to be confined to fairly rural-looking structures along either side of the main road leading out of *Isca's* west gate (Chapman 2011, 324-26; Young 2012).

The monumental complex that comprises the *Southern Canabae* includes one of the largest buildings known from Roman Britain fronting onto the Usk (the courtyard alone enclosed an area into which Caerleon's amphitheatre would have fitted with room to spare). Other buildings extending northwards from the river included further courtyards and possible basilica-like buildings. The whole complex appears to have been built as a single entity and was orientated approximately west-northwest to east-southeast and, therefore, on a different alignment to the fortress itself. This part of Caerleon has long been under rough pasture and the evidence for relatively recent activity is limited to a few discrete areas of metal dumping, lines of old fences and relict field boundaries. The detailed examination and interpretation of these geophysical surveys is available elsewhere (Chapman 2011, 324-26; Young 2012), but in light of the 2011 excavations the *Southern Canabae* complex is described here as consisting of at least three major buildings or groups of buildings:

Zone 1) The southernmost building closest to the Usk is also the largest. Measuring 140m from east to west and at least 120m from north to south, it consists of a large square courtyard covering an area of approximately 1 hectare, possibly provided with a covered portico or ambulatory, and surrounded by ranges on all four sides. The courtyard itself contains two features that are likely to be buildings or structures of some kind. Both show as positive white anomalies (in contrast to the ranges whose walls produce negative readings), and include a small square structure on the main north-south axis of the open

area, as well as a more extensive series of anomalies on the eastern side of the courtyard aligned on a different orientation to the surrounding building or the fortress.

The magnetic gradiometer recorded the strongest readings from this building along the incomplete southern range closest to the right bank of the Usk. The eastern range of the building appears to be wider than the western side and seems to have been subdivided longitudinally into four or perhaps five parallel, though narrow, rows of rooms. The northern range furthest from the river is apparently as wide as the eastern side, but the internal area here seems to be divided into large rectangular spaces with their narrow sides facing the courtyard and ambulatory (although there are also indications of smaller rooms too).

Zone 2) The large courtyard building lies on the floodplain of the Usk and the land to the north rises up to the low promontory on which the amphitheatre and the fortress are sited. The second area of buildings located on the gradiometer survey lies on the upper part of this slope and the top of the higher ground, apparently connected to the back of the main courtyard building. The higher geophysical readings in this area suggest a complicated picture of walls criss-crossing this part of the complex. There are also several very high anomalies in this field that might be related to recent agricultural activity such as the digging of pits and post-holes, or possibly the excavation of the amphitheatre in the 1920s (particularly the dumping of spoil). At this stage it is difficult to discern the layout of discrete buildings or internal walls, although these certainly followed the same alignment as the rest of the complex.

Zone 3) Immediately north of this indistinct middle-ground lies a northern zone of two courtyards and associated buildings aligned on the same orientation. The first courtyard measures 45-50m square and is apparently enclosed on three sides by a narrow corridor, possibly an ambulatory, while the eastern side is bounded by what seems to be a major aisled building. This building, or perhaps another adjoining building, continues eastwards towards the amphitheatre and the bath-building revealed by the Wheelers in the 1920s (Bath A), though today it is obscured by farm-buildings (Evans 2000, 492-5). On the opposite western side of the courtyard, and apparently built up against the western ambulatory, is a row of six or seven large rectangular rooms whose narrow ends face towards the courtyard and the Usk floodplain.

Although the second courtyard is imaged less clearly on the magnetometer results, it is possible to make out the main features of the structures that occupied this most northerly part of the complex. It seems to consist of an irregular square or rectangular open space bounded on its southern side by the courtyard just described, its western and northern sides by walls, or possibly roads, and on its eastern side by another long north-south building that



Fig. 6. Combined results of the gradiometer surveys to the south of Caerleon 2008-11 (© GeoArch)

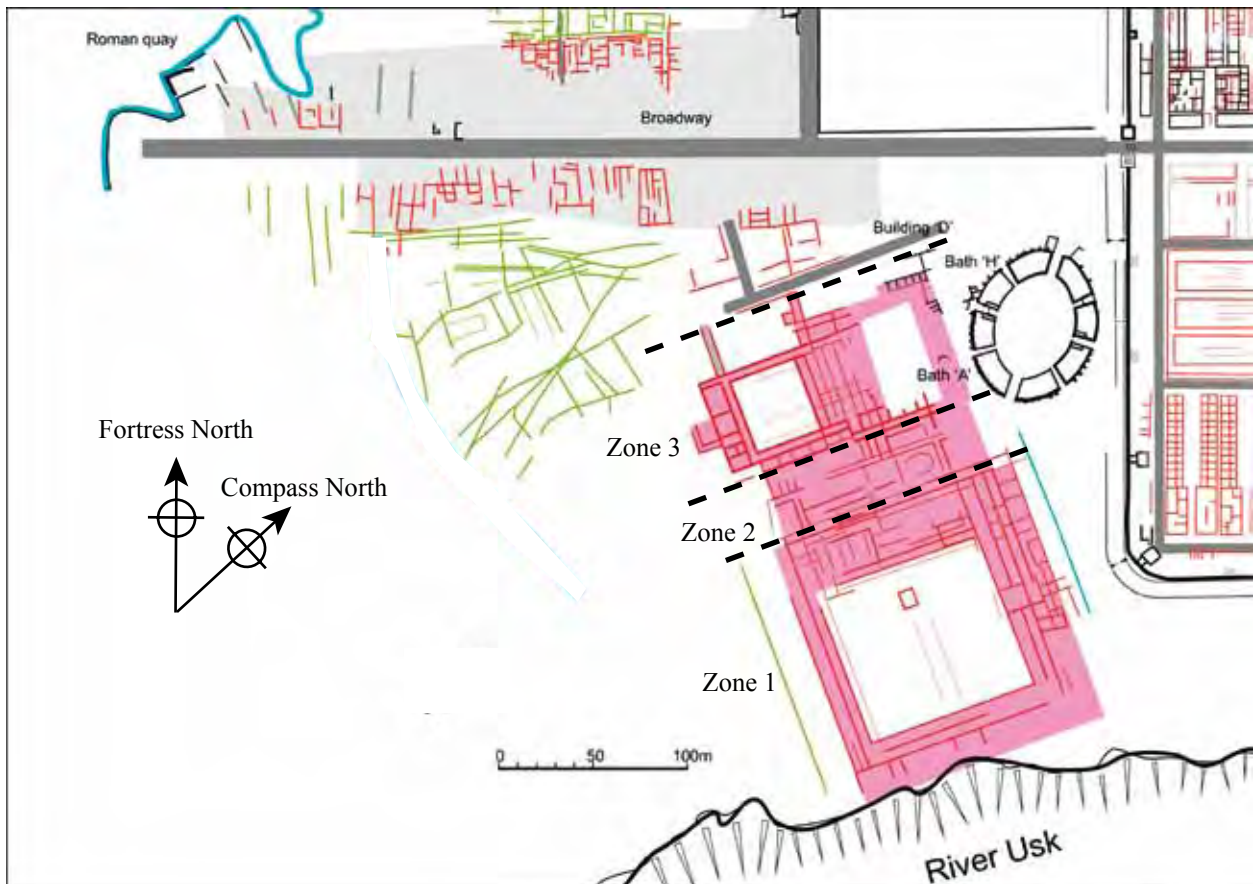


Fig. 7. Interpretation of the geophysical results 2008-11, showing the Southern Canabae complex (© GeoArch)

appears to be subdivided into internal rooms. There are clearly buildings continuing from this point eastwards towards the amphitheatre though they also lie beneath modern farm-buildings. During excavation in advance of the construction of these agricultural buildings, however, Nash-Williams revealed a large courtyard structure with hypocausted rooms and a monumental porticoed entranceway (Building D) that is almost certainly a continuation of this northernmost series of buildings identified during the geophysical surveys (Evans 2000, 492-6).

Large extramural courtyard buildings similar to the Zone 1 example at Caerleon described above have been identified at the legionary fortresses at Carnuntum, Nijmegen, Mirebeau and Vindonissa on the continent (though only at Nijmegen in the Netherlands has one been excavated), yet *Isca* seems to be unusual in not otherwise having developed a significant civilian settlement outside its walls (Goguey and Reddé 1995; Hartmann 1986; Willems and van Enckevort 2009). The immediate questions posed by the results of the geophysical surveys concerned the dating and function of the complex of

monumental buildings. Was it associated with the military occupation of the site, or was the intention for Caerleon to become a centre of civilian administration for western Britain like York in the North? The alignment of the complex suggests either that it is earlier than the fortress, or contemporary but somehow separate (possibly not 'military').

Two small trial trenches excavated in 2010 over the southern range of the very large courtyard building closest to the Usk (Zone 1), revealed a wall constructed from deliberately broken and relaid *tegulae* (roof tiles), which was thought to be part of Roman Caerleon's main quay on the Usk. Material dumped outwards from this wall was interpreted as the remains of landing stages or jetties projecting out into the river to allow larger ships to dock at Caerleon. The 2010 trial trenches suggested that the Roman remains survive very well in this part of Caerleon's outskirts, and there was little evidence for extensive medieval and modern disturbance (Gardner and Guest 2010).



Fig. 8. Test pits 1 and 2 excavated in 2010 close to the right bank of the river Usk

Project Aims & Objectives

Geophysical surveys carried out between 2008 and 2010 identified an extensive complex of public-style monumental buildings between the amphitheatre and the Usk. This part of the fortress *canabae* includes several large courtyard structures, one of which measures approximately 140m by 120m. The precise layout, date and function of these buildings are not known at the present time, but their ground plans suggest it is possible that they could have been either associated with the legionary command or part of a formal civil settlement, and it seems likely that the complex included parts of a port on the River Usk.

The discovery of these buildings is a remarkable addition to the fortress at Caerleon, but many questions remained about their dating and functions. The 2011 evaluation trenches were located to investigate the full extent of the monumental complex that comprises the *Southern Canabae*, specifically aiming to improve our knowledge and understanding of the following research topics:

- Layout of the buildings identified by the gradiometer surveys
- Date of the buildings' abandonment and, potentially, some indication of when they were constructed
- Function of these buildings and, therefore, the purpose of the monumental complex
- Remains of the suggested quayside wall and landing stages, including their construction and histories
- Extent of erosion to the remains caused by the River Usk, and if the river continues to erode this important archaeological resource.

Another objective of the 2011 excavation was to increase the public's awareness of, and participation in, archaeological fieldwork and the rich historic environment of Wales. The 2011 project aimed to contribute to many of the ambitions set out in the *Welsh Historic Environment Strategy* published in 2009 by offering the opportunity to participate in archaeological discovery and increasing awareness of Britain's Roman past. This promoted heritage tourism in South Wales and benefitted the local economy.

Methodology

The 2011 evaluation consisted of nine trenches exposing a total area of 410 m², or less than 1% of the extent of the *Southern Canabae* (Fig. 9). The trenches were located so as to ground truth the geophysical results and to provide as much information as possible on the plans, functions and dating of the buildings comprising the monumental complex:

- Trenches 1, 2, 3 and 4 investigated different parts of the very large courtyard building closest to the Usk (zone 1)
 - Trench 5 was positioned to the rear of the centre of the northern range of the same courtyard building and extended upslope into the indistinct area of buildings in the centre of the complex (zone 2)
 - Trench 6 examined the eastern part of zone 2 lying adjacent to the amphitheatre
 - Trenches 7 and 8 were located at the eastern and western sides of the southern courtyard and adjoining aisled building in zone 3
 - Trench 9 was positioned over the probable aisled building to the east of the most northerly courtyard also in zone 3.
- A dedicated project page for the excavations in Caerleon on the Council for British Archaeology's *Community Archaeology Forum* website where the dig blog was updated daily as the season progressed. People could also follow the latest discoveries on Facebook and Twitter.
 - Volunteers could work on the excavation where they gained experience of excavation, archaeological recording and finds work (cleaning and recording).
 - All visitors to the site were given a tour of the excavation where they found out more about the background to the project, the excavation techniques being used, and the archaeological remains in the trenches. Objects from the excavation were on display in the Finds Tent where visitors could see a range of artefacts uncovered during the season.
 - A 3-day Open Weekend was held during the Summer Bank Holiday when visitors could visit the site throughout the day and take part in various hands-on activities. The engagement element of the project involved Cardiff University's dedicated Community Archaeologist and Community Engagement Team.

Seven of the trenches measured 20m by 2m, Trench 3 measured 10m by 5m, and Trench 1 also 10m by 5m but with a 15m by 2m extension to the north. All were excavated to the first significant archaeological deposits, except for Trench 1 where Scheduled Monument Consent allowed excavation to the full depth of the surviving stratigraphy.

The topsoil and any overburden were removed by machine after which the trenches were entirely hand-excavated (all machined spoil was metal-detected). On site recording was completed according to Cardiff University standards and bulk and small finds were processed and recorded on site. Samples were taken from deposits where it was considered that surviving environmental remains will make a contribution to the understanding of a building's functions or dating. The trenches were backfilled by machine at the end of the excavation.

Building on the success of the Priory Field excavations in 2008 and 2010, the *Southern Canabae* project encouraged the public to explore Roman antiquity by becoming involved with the archaeological fieldwork at Caerleon. The following resources and opportunities were available during the 2011 season:

Channel 4's Time Team filmed the excavation over three days for a programme dedicated to Caerleon that was broadcast in March 2012. Trench 3 was excavated by Phil Harding with Cardiff University students and volunteers, and the programme promoted the archaeology of Roman Caerleon to a mainstream audience across the UK.

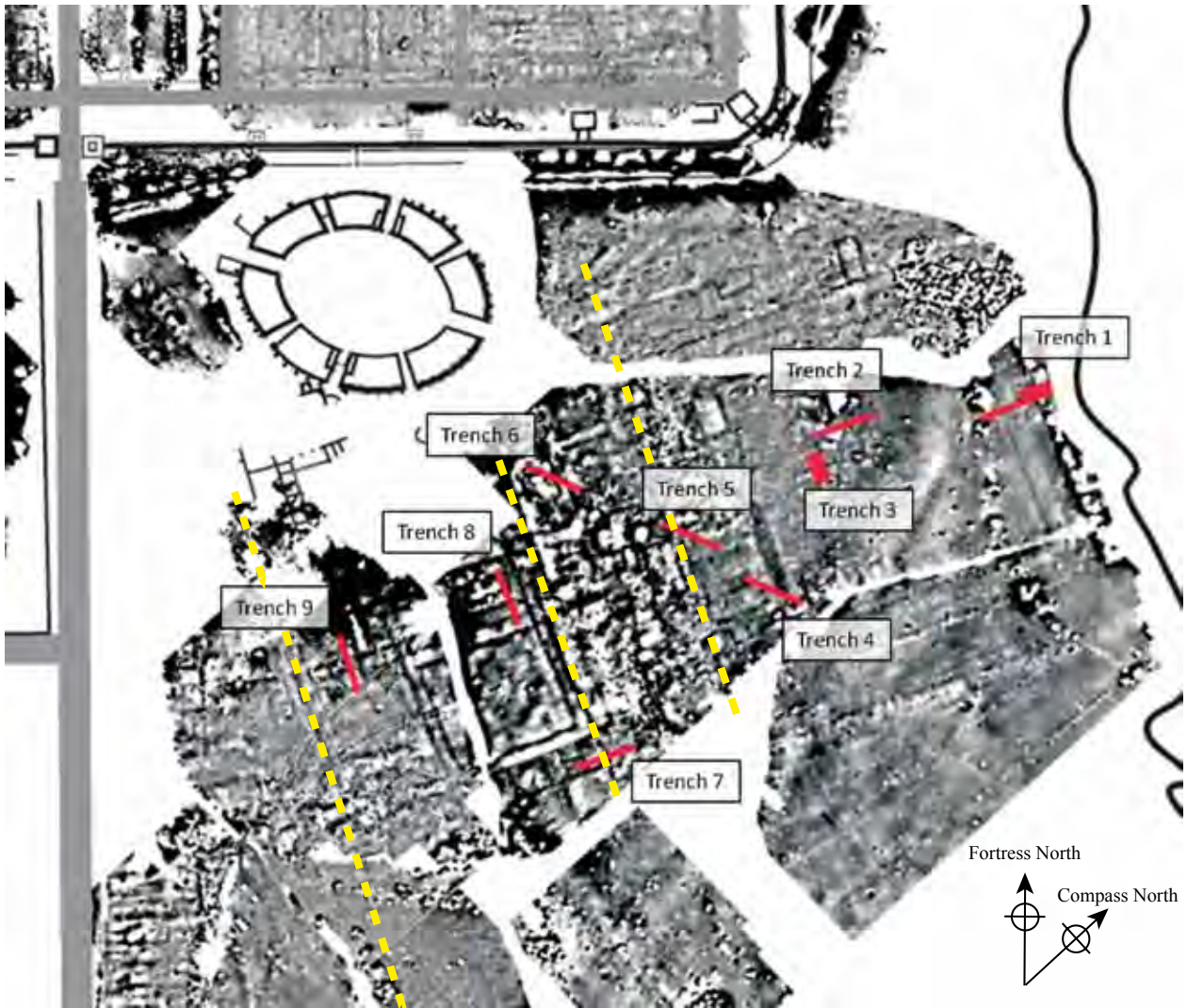


Fig. 9. Caerleon Southern Canabae 2011, trench location plan

Excavation Results

The following sections describe the archaeological remains encountered in the nine evaluation trenches excavated in 2011. The results are compared to the gradiometer survey results and the trench narratives attempt to arrange the stratigraphy into a sequence of phased episodes of construction, use, disuse and dereliction. The trenches are described in some detail with summary plans and photographs, while the accompanying stratigraphic matrices can be found in Appendix 1. Walls and negative features such as pits, foundation trenches and post-holes, are indicated with square brackets [123], while layers and fills are shown within round brackets (123). Common abbreviations include ORS (Old Red Sandstone) and CBM (ceramic building material).

The preliminary analysis of the finds and environmental evidence is included after the site narratives. The metal and other registered small finds are due to be cleaned and conserved in the near future, but it is possible to discuss the pattern of small finds between the nine trenches. The bulk finds, including brick and tile and the animal bone assemblage, are also described, while the extensive work on the pottery assemblage has important implications for the dating of the *Southern Canabae* and the identification of the activities that took place there.

Trench 1

Trench 1 was located to investigate the geophysical anomalies that run parallel to the River Usk. The area closest to the river produced higher gradiometer readings than other parts of the *Southern Canabae* and it is thought that the buildings exposed in the trench included part of Caerleon's port facilities as well as the southeastern range of the large courtyard building. The trench was positioned at the eastern end of the building's south-north axis, looking towards the building in the courtyard (partly excavated in Trench 3) and in line with the middle of the building's northern range where Trench 5 was located (Fig. 9). The provisional stratigraphic matrix for Trench 1 can be found in Appendix 1.

Two 5m by 2m test pits excavated in this area in 2010 revealed the upper courses of a wall constructed of broken roof tiles that appears to have produced the positive magnetic linear anomaly that extended for at least 80m alongside the modern riverbank. Trench 1 included the northernmost of these test pits (TP1) and extended for a distance of 25m from southeast to northwest (Fig 10 and

11). The main part of the trench was 5m wide, while the 15m long extension was 2m wide.

The latest Roman deposits in Trench 1 lay some 0.3-0.4m below the modern ground surface and were sealed by layers of alluvial silts deposited during more recent flooding events. Other evidence for post-Roman activity was restricted to a ditch and revetted bank at the west end of the trench. The River Usk is likely to be actively eroding the eastern side of the buildings identified in Trench 1, although the modern flood defences may well be reducing the rate of this destruction.

After the 2010 season the *tegula* wall was interpreted as part of a quayside structure on the edge of Usk's riverbank, though the 2011 excavation showed that this was almost certainly not the case and that the river during the Roman period must have flowed some distance to the east of its current course. Instead it is believed that the *tegula* wall separated a row of buildings of some kind on its riverward side from a roadway running parallel

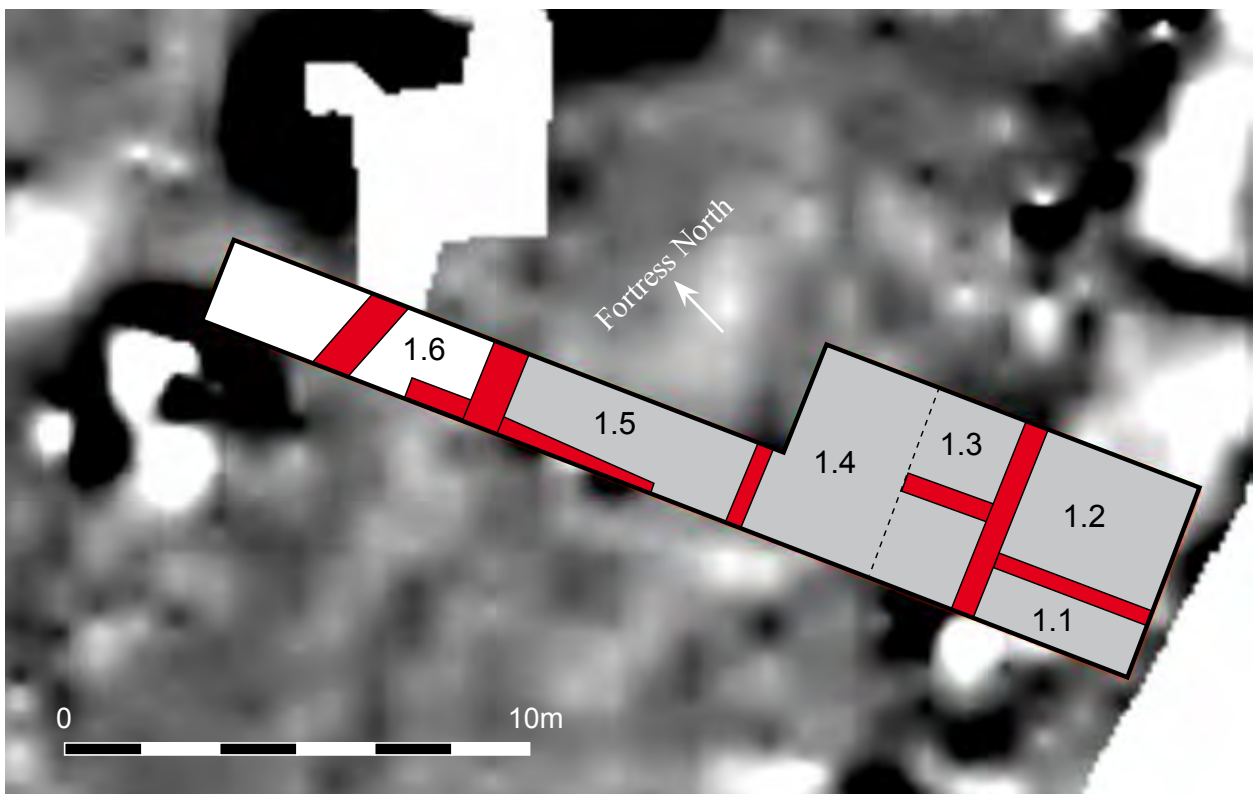


Fig. 10. Trench 1 showing main walls superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion.



Fig. 11. Trench 1 from east to west as excavated

to these buildings. Two northeast-to-southwest aligned walls on the other side of the roadway appear to belong to the main courtyard building, probably marking the position of its narrow front wing and the boundary with the courtyard itself (see Fig. 12). The spaces separated by these various walls in Trench 1 are number 1.1 to 1.6 in the following discussion.

CONSTRUCTION AND USE

The earliest deposits exposed in the trench consisted of alluvial clays (194) and (198) in the northern part of the trench. These sloped gradually down towards the river, though the shallowness of the gradient indicates that the river bank in the Roman period must have been some distance further east of this point.

The *tegula* wall [115] passed through the full 5m width of the trench (Fig. 13). The wall was built over cobbled footings (190), offset on the wall's western side by 0.4m, which seem to have been constructed on top of the underlying surface rather than within a foundation trench (Fig. 14). A line of large stones (175) above the remains of a wooden plank/beam (193) on the eastern side of the wall possibly represent revetting against which the footings had been piled in order to stop these slipping down the natural slope (Fig. 15).

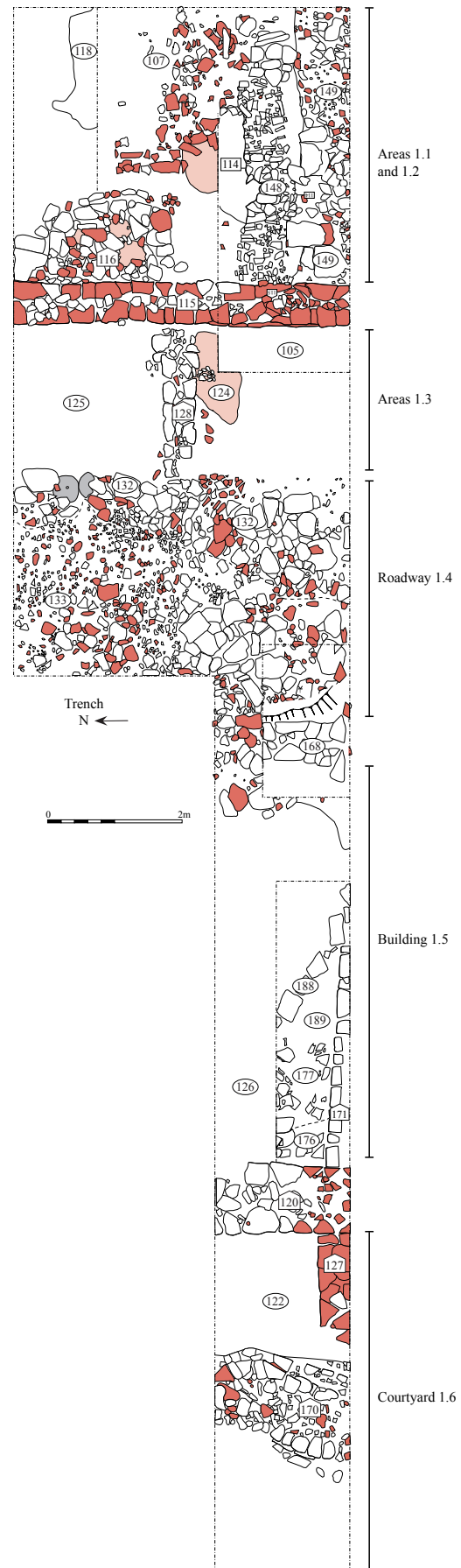


Fig. 12. Final plan of Trench 1 showing walls and main features



Fig. 13. East end of Trench 1 showing tegula wall [115] and associated structures in Areas 1.1, 1.2 and 1.3



Fig. 14. West face of tegula wall [115] and underlying cobbled foundations (190)



Fig 15. East face of tegula wall [115], showing underlying burnt wooden beam (193) and large stones (175) against the wall's face

Eleven courses of *tegulae* survived forming a wall that was 0.6m wide. The tiles had been deliberately broken lengthways and each half set slightly apart to create a central space that was filled with smaller pieces of broken brick and tile. The flanges of the broken *tegulae* formed the wall's faces and the entire structure was bonded with solidly packed clay. The flanges of the uppermost *tegula* course had been carefully chipped away to leave a flat surface, on top of which sat a twelfth course of faced stones at the northern end of the trench and broken bricks at the southern end. It is possible, therefore, that this wall was not built much higher than it survives today and that it acted as a sleeper wall for a timber or colonnaded superstructure.

After the *tegula* wall had been built, the footings and the lowest courses of *tegulae* were sealed by extensive deposits of clay intermixed with other material that raised and levelled the ground to either side of the wall.

East of the *tegulae* wall the lowest clay dump (179) contained a dark deposit (192) including large lumps of slag and charcoal (Fig. 16). Further clay and silty levelling material (173/161/155/160/156/154), lay below a north-south arrangement of stones, brick and tiles (153) that probably formed a temporary division or revetment to control the dumping. This was sealed by further clay deposits (146/145). The sequence of material on the western side of the *tegulae* wall (186/180/184/185/183/157/151) indicates that the wall was already upstanding when the levelling dumps were deposited against its faces. A shallow gully [159] within

(157) could be the remains of a temporary partition or an attempt to drain the area during construction.

Areas 1.1 and 1.2

The footings of an east-west wall were identified in the southeastern corner of the trench (excavated in the 2010 test pit). The wall had been robbed but the 0.6m wide foundations survived, comprising closely packed angular stones [148]. The sequence of clay make-up deposits to the north and south of the foundations were different and the wall must have been upstanding when the ground was raised. The surfaces either side of the wall were also different indicating that it separated different buildings, or separate rooms within a single building (Fig. 17).

Surface (149) within the southern Area 1.1 consisted of an intermittent layer of large ORS slabs with smaller angular stones, as well as pieces of brick and tile in between and patches of pebbled metalling (Fig. 17). This surface continued beyond the southern edge of the trench and was not excavated.

In Area 1.2 north of wall [148], the levelling deposits were overlain by a series of surfaces, the earliest of which consisted of patches of angular ORS slabs and crushed CBM fragments (130) and metalling (129). A shallow semi-circular structure (116) butting against the east face of *tegula* wall [115] was constructed on top of these primary surfaces (Fig. 18). This unusual feature consisted of a crude surface of roughly hewn ORS blocks with intermittent patches of crushed tile, while a row of smaller stones and broken brick on its eastern side seemed



Fig. 16. North section of Trench 1 showing natural clays and levelling deposits on the riverward side of tegula wall [115]



Fig. 17. East-facing view of foundations [148] and surface 149 in Area 1.1 (on left of photograph)

to create a narrow gap or groove on its front face. The purpose of this structure is unclear, but the surface around it within Area 1.2 was relaid and repatched several times with mortar (135) and brick and tile (130/138), possibly incorporating a crude drainage channel (141). Eventually, most of these deposits were overlain by a final more substantial stone and CBM surface (123/136), associated with a mixed charcoal deposit containing iron and copper objects as well as metalworking slags (118) that indicate some of the activities that took place in this building at the end of its life (though it could also have been dumped here after the building was abandoned).

Area 1.3

West of the *tegula* wall in Trench 1 was a narrow strip of ground that appears either to have been part of a lean-to building against the wall, or a pavement of some kind between the buildings described above and the roadway to the west (Fig. 19). This area included the remains of a 2.3m long wall [128] projecting perpendicularly from the west face of the *tegula* wall. Only the upper surviving course was exposed and, therefore, the level from which it was constructed is not known. It was built using roughly-hewn ORS blocks and was clay bonded, and it seems most likely that it was part of an open-ended



Fig.18. Semi-circular feature (116) in Area 1.2 (bottom) and surface 149 in Area 1.1 (top)

building of some kind constructed against the *tegula* wall (against which it butted), whose entrance faced directly onto the road.

The surfaces either side of wall [128] consisted of sandy silts with occasional pieces of brick, tile and stone. These were darker and more mixed (125) north of the wall, and lighter to the south where a patch of crushed tile (124) against the wall's south face suggests that this is most likely to have been the interior of a building with which it was associated. The interior and exterior surfaces were both at a higher level than the road surface to the west and appear to have partly encroached over it.

Road 1.4

The roadway ran between the possible lean-to structure or pavement against the riverside building and the long corridor-like building to the west (Fig. 19). It was between 3.5m and 3.75m wide and was partly excavated in the northern part of the trench. The lowest layer associated with the road was a possible metallated surface (162) above the uppermost levelling deposit, which in turn was overlain by a darker deposit with fewer stones (124) that continued into the area of the later lean-to building. The latest substantial surface of the road probably consisted of flagstones, which only survived in one area. The flagstones were heavily worn and fragmented and had been extensively patched and relaid with clay, stone, brick and tile (133). The eastern edge of the roadway was raised with a roughly laid surface of large flat stones,

brick, tile and two pieces of a rotary quern set in a clay bedding (132) (Fig. 20). The roadway petered out on its western side where it met wall [168].

Building 1.5

The extension of Trench 1 extended across the full width of a narrow corridor-like building identified on the gradiometer survey results. This structure was aligned on the same orientation as the riverside building, the *tegula* wall and the roadway. It is likely that this was the courtyard building's front wing facing the river and the port.

Building 1.5 was defined by north-south walls [168] and [120] on its eastern and western sides respectively, creating a space between them of slightly more than 6m. Wall [168] was 0.55m wide and consisted of crudely faced clay-bonded ORS blocks with a rubble core (Fig. 21). At just under 1m wide, wall [120] was broader than [168] and the short length of this wall exposed in the trench showed that it had been built using two different techniques (Figs. 22 and 23). The northern part consisted of faces of stones of various sizes and a rubble core bonded with earth, while the southern part was constructed with triangular bricks and a core of CBM and rubble that were bonded together with orange clay. That the two parts are clearly bonded together demonstrates that the different constructions were part of the original build, and it is likely that this difference suggests that one part of the wall was the end of an entranceway. The



Fig. 19. Area 1.3, including wall [128], and the patched roadway 1.4 west of tegula wall



Fig. 20. Quern stones reused in patching of roadway 1.4 (132)



Fig. 21. North-south wall [168] separating roadway 1.4 (on left) from building 1.5 (on right)



Fig. 22. North-south wall [120] separating building 1.5 (on left) from courtyard 1.6 (on right). The two east-west walls in the trench edge ([171] to left and [127] on right) possibly mark the southern side of an entranceway into the courtyard.



Fig. 23. West face of wall [120] and the latest cobbled surface in courtyard 1.6. Note the two different methods of construction and wall [127] projecting into the courtyard area

geophysical survey results indicate that the middle the courtyard building's front wing lay just to the north of Trench 1, in which case the stone-built part of wall [120] exposed in the trench was most probably the southern end of the main entranceway from the corridor building into the courtyard itself.

An east-west oriented wall [171] on the very southern edge of Trench 1 butted against the inside faces of walls [168] and [120]. Only its northern face was visible in the trench and it is not known how wide this wall would have been, although enough was exposed to show that it had been crudely faced with earth-bonded ORS blocks of varying sizes (Fig. 22). The western end of this wall butted up to the brick-built part of wall [120] and it is possible, therefore, that it marked the south side of the putative entranceway.

A possible early stone surface in the corridor / entranceway (176/177) was found between walls [120] and [171], although the surviving stones blocks were irregularly shaped and could also be part of a construction deposit. This area was subsequently filled by various layers of rubble (174), silts (172/121) and then more rubble (126/187/188/189). The uppermost of these rubble deposits lay at the same height as the roadway further east and they probably represent the latest floor surfaces in the corridor / entranceway.

The eastern wall [168] appeared to have been sealed by a layer of silt (167), although it seems likely that the

wall had been robbed and that (167) was part of the fill of the robber trench that was not recognised during the excavation.

Courtyard 1.6

The geophysical results suggest the western end of Trench 1 extended into courtyard of the very large building on the southern side of the *Southern Canabae*. A later field boundary truncated or covered a large part of the end of the extension, but it was possible nevertheless to reveal the final surfaces of the open area next to the building's east wing (see Figs. 22 and 23).

A short brick wall [127] projected into the open area from external wall the wing's [120]. This continued beyond the southern edge of the trench and how wide the wall was is therefore unknown, but, like the southern part of [120] (against which it butted) it was built of clay-bonded courses of triangular bricks and a CBM core. The wall extended for some 1.4m into the courtyard and its western end was squared. Wall [127] lies on the same alignment as wall [171] inside the corridor building 1.5 and it is probably a continuation of the southern side of the entranceway through the building's front wing from the riverside roadway. It seems likely that this short wall would have served as a buttress, plinth or base of some kind to monumentalise the southern side of this entrance when viewed from the courtyard. The latest surface of the courtyard butted against wall [127] and consisted of large river cobbles and some stones bedding onto clay (182/191).



Fig. 24. West end of the Trench 1 extension showing the oblique medieval or post-medieval field boundary and Roman structures beyond

DISUSE, DECAY AND ROBBING

In the corridor building 1.5, possible evidence for demolition/collapse deposits consisted of rubble and CBM (119/126) which were in turn overlain by a very compact clay (111). These were similar to layers (107) and (108) in the eastern half of the trench. In general, however, the deposits that seem to be related to the decay and abandonment of the buildings in Trench 1 are much shallower than comparable layers in the other trenches. This might be explained if these buildings had been abandoned and dismantled earlier than elsewhere, or if this part of the *Southern Canabae* closest to the River Usk had been subjected to extensive flooding which led to these buildings' abandonment and also carried away much of the material that remained after their demolition. The effects of the flooding experienced in this part of Caerleon are shown in the thickness of alluvial clay (106) that overlies all of Trench 1 (Fig. 16).

FIELD BOUNDARY

A substantial Medieval or post-Medieval boundary was located at the very western end of the trench extension. It consisted of a ditch [102], which was still visible on the surface, and an adjacent wall [170] and bank (178) to the east (Fig. 24). The wall had been built using reused

ORS blocks and pieces of Roman brick and tile. The bank and ditch were part of an unusual semi-circular field boundary and it is possible that they could have served as a flood defence.

Trench 2

Trench 2 was intended to examine how the central open area of the *Southern Canabae's* main courtyard building was surfaced, as well as to investigate the geophysical anomalies in the courtyard's northwestern corner which it was thought could be of post-Roman origin (Figs 25 and 26).

It was found that the courtyard surface consisted of open ground upon which cobbles and stones had been thrown down as hard standing. These had been cut by a post-hole and a shallow pit. The geophysical anomalies seem to correlate with a substantial rubble structure that appeared to have been deliberately laid. The only evidence for post-Roman activity in Trench 2 was a post-Medieval field boundary. The provisional stratigraphic matrix for Trench 2 can be found in Appendix 1.

CLEARANCE AND LEVELLING

After hand excavation had confirmed no sensitive or significant archaeological remains were present, and with permission from Cadw, a sondage was dug by mini-digger at the eastern end of the trench. The natural geology, consisting of a light grey-blue clay containing river-borne cobbles (231), was located at a depth of 1.00-1.15m (Fig. 27). A hand-excavated sondage at the western end of the trench discovered similar grey-blue clay at a similar depth, demonstrating that the underlying geology in this part of the floodplain is relatively level.

A thin (c. 0.05m thick) charcoal-rich layer (223) overlay the natural geology in the western sondage, though nothing similar was found at the east end of the trench. This was sealed by a series of thick clay deposits that extended across the entire trench, including (214/221/222) at the eastern end and (226-230) in the western sondage. It is possible that the charcoal layer is derived from the clearance of vegetation in advance of construction work in the early Roman period, the first stage of which is represented by the succeeding clay levelling layers. Analysis of the few sherds of pottery from these layers will confirm if these indicate Roman activity or pre-date the arrival of the legion in Caerleon.

STONE STRUCTURE

An area of large angular blocks of stones was revealed in the central part of the trench that appears to have formed part of a structure of some kind (Figs 28 and 29). These stones extended between 3.25m and 3.8m from east to west, and the lowest layers of blocks (207) were probably laid directly on top of the underlying clay levelling deposits. The western edge of the feature was straight and here the stones gave the impression of having been laid with their flat sides facing upwards to form a face of at least two courses. The largest stones were found on this western side, while smaller blocks and large cobbles were more prevalent to the east where the feature's edge was diagonal to the trench. The upper layers of stone (208) were all large and there did not appear to be any internal

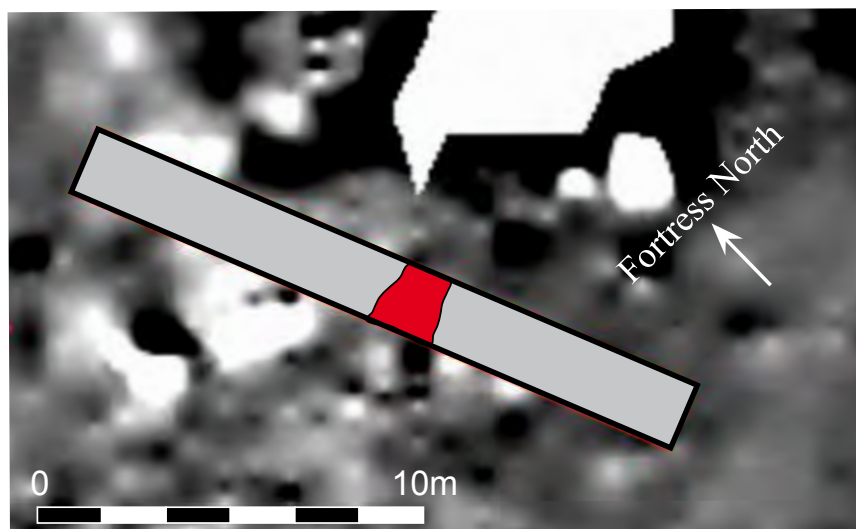


Fig. 25. Trench 2 superimposed over gradiometer results and showing extent of stone feature (207)



Fig. 26. Trench 2 from east as excavated



Fig. 27. Machined-excavated sondage at east end of Trench 2, showing clay and river cobbles (231)



Fig. 28. Stone feature (207) from east (upper stone layer (208) visible in the section)



Fig. 29. Stone feature (207) from north

arrangement to the structure at this level (a dark soft silt (215) was tentatively identified separating the lower stones from those above).

It is possible that this structure might contain the remains of a collapsed north-south earth-bonded wall, though its existence and dating need to be confirmed.

COURTYARD SURFACES AND ASSOCIATED ACTIVITY

Thin layers of silty clay with occasional small stones (210/213/216) overlay the clay levelling deposits and appeared to butt against the stone structure (207). These layers were very firm in places and appear to have been deliberately compacted. Although the presence of iron pans could indicate the effects of natural processes too, the presence of charcoal, fragments of CBM, pottery and slag suggests these layers that are probably the remnants of the earliest Roman-period ground levels in the courtyard (Fig. 30). The discovery of a posthole [219] and a shallow circular pit [225] cut into these layers supports the interpretation of these as open ground. The post had been packed with pieces of ORS and clay (218/217), while the fill of the pit included what appeared to be metalworking debris (224).

The surfaces, pit and posthole were sealed by deposits comprising thin pink clay (209) and then a compact yellow-grey silt with pebble inclusions (205) and (206). It is uncertain if these represent later ground levels or post-Roman alluvial deposits.

POST-MEDIEVAL FIELD BOUNDARIES

The two shallow north-south ditches [203] and [212] that passed through the centre of the trench are the remnants of relict field boundaries. These cut layer (204) that, in turn, sealed the top of the rubble structure (207). The course of ditch [212] was observed as a slight undulation in the field to the south of Trench 2 and fragments of clay pipe were recovered from its fill.



Fig. 30. Trench 2 from west, showing latest cobbled ground level cut by post-hole [219] and pit [225] in foreground

Trench 3

Trench 3 was located within the internal open area of the main courtyard building of the *Southern Canabae* to investigate an apparently square positive anomaly identified during the gradiometer surveys. The structure lies on the courtyard's main north-south axis towards its northern side and the trench was positioned to expose this possible building's northeastern corner as well as a substantial area of the courtyard itself (Figs 31 and 32). Trench 3 was supervised by Time Team and excavated in three days towards the end of the 2011 season.

The geophysical anomaly turned out to be a rectangular structure consisting of low clay-bonded brick walls. These were not rendered or plastered and no evidence for a floor was found inside the structure. The courtyard appears to have been open ground, while several large flat stones set into the yard surface were identified as possible post-pads for other more superficial buildings. The provisional stratigraphic matrix for Trench 3 is located in Appendix 1.

NATURAL AND SUBSOIL

After hand excavation had confirmed no sensitive or significant archaeological remains were present, and with permission from Cadw, a sondage was dug by mini-digger at the northern end of the trench. The natural geology was located at approximately 1.4m below the modern ground surface and consisted of horizontal pinkish clay overlain by river cobbles and gravel (309).

The natural was sealed by some 0.75m of clay subsoils, the uppermost of which might have been brought in to level the area prior to construction of the courtyard building (308/313/323).

CONSTRUCTION AND USE

Structure 3.1

Two walls were located in the southern part of the trench (Fig. 33). The east-west wall (303/304) was 0.8m wide and was bonded to the end of a north-south wall (302) that was 0.6m wide. Wall (303/304) was the outer wall of

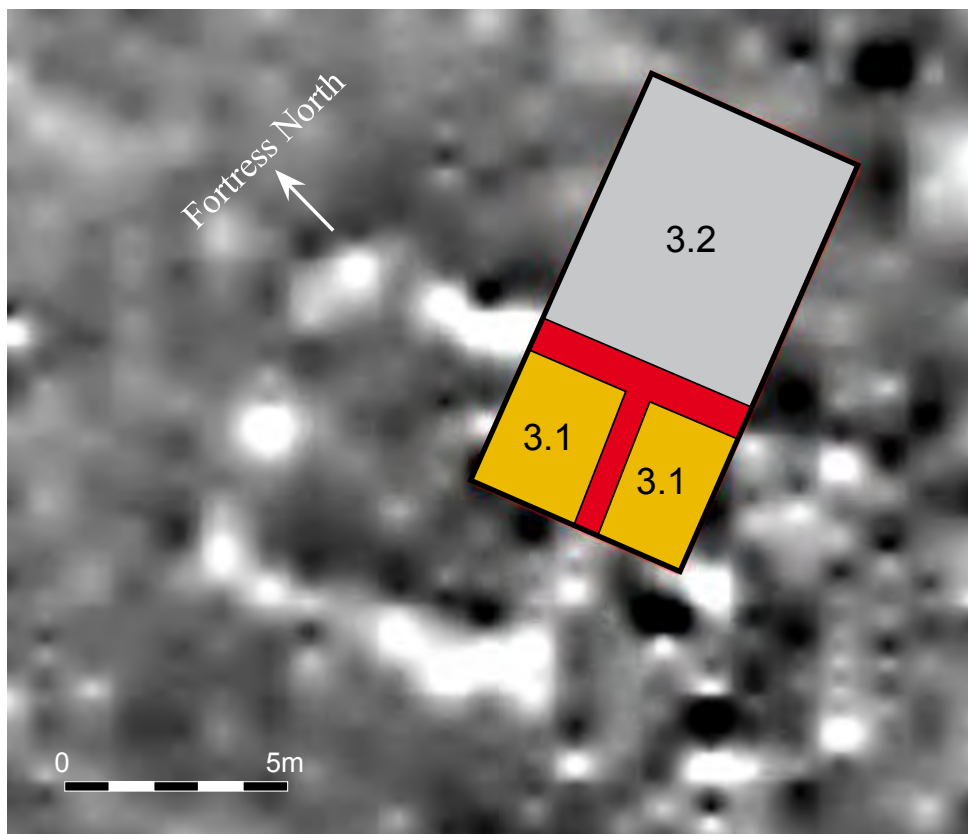


Fig. 31. Trench 3 showing main walls superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion.

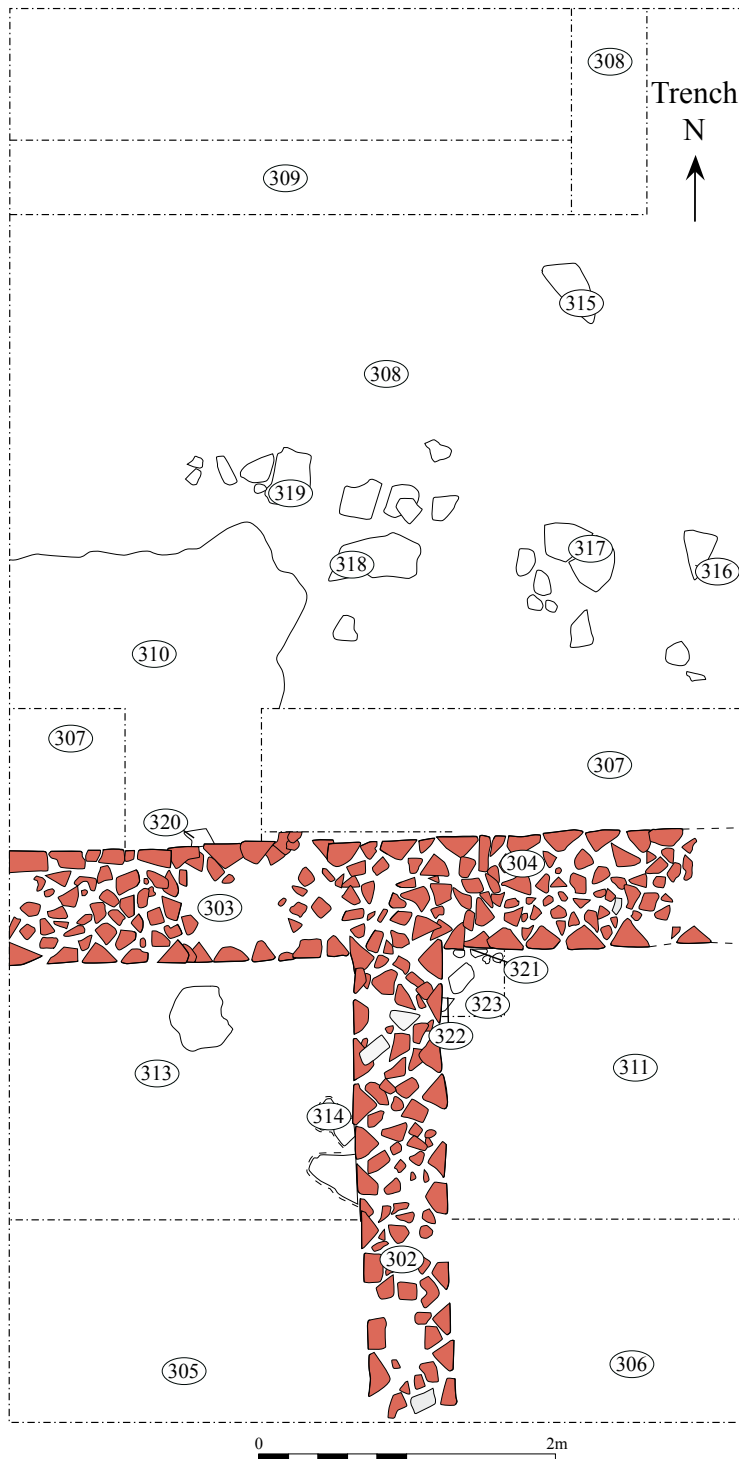


Fig. 32 Final plan of Trench 3 showing walls and main features

the structure (this continued beyond the trench to the east and west), while (302) appears to have been an internal wall dividing the inside of the structure into two parts (this continued beyond the southern edge of the trench).

Both walls were clay-bonded and consisted of faces of triangular bricks on either side of a core of large pieces of broken brick. The walls were bonded together and had therefore clearly been constructed as part of the same build. Up to six courses survived of the outer wall and five of the narrower internal wall. No foundations for

either wall were observed and it is possible either that they had been built directly onto the existing ground surface, or that the cobbles (321/322) observed in a small sondage against walls (304/302) were footings contained in a trench whose edges were not recognised during the excavation.

Trench 3 showed that the anomaly on the magnetometer results was a rectangular brick-built structure some 9m wide and aligned southeast to northwest. It is more difficult to be certain about its length but it must have



Fig. 33. Structure 3.1 from south



Fig. 34. Rubble spread (310) and possible post-pads (315-319) in Area 3.2

extended for at least 13m in total and was divided into two parts, of which the northwestern was possibly the largest. Excavation of the interior of the structure produced no evidence for an internal floor of any kind and the deposits encountered here (311/312) were very similar to those found outside the building in the north of the trench.

The deposits associated with the structure produced very few finds of any kind and the absence of bricks and tiles from the vicinity of the structure suggests either that any superstructure had been extensively robbed, or that the walls supported a timber building. It is also possible, however, that these walls had never supported a building at all in which case the structure could have functioned as the base of a platform of some kind.

Area 3.2 Courtyard surface and possible post-pads

There was no indication that the courtyard had been paved in the area of the trench and it appears that the subsoils served as the contemporary ground levels.

Several individual and groups of large flat stones (315/316/317/318/319) were found embedded in the top of the clay subsoil (Fig. 34). The stones were irregularly

shaped and individually measured *c.* 0.3m by 0.2m (315/316), while some seem to have been placed together to form roughly semi-circular groups *c.* 0.6m by 0.6m in extent. These were found close to the brick structure and they are tentatively interpreted as post-pads (although there was no obvious spatial patterning and similar flat stones (314) were found within the brick structure too).

A larger area of ORS blocks (310) also lay above the clay subsoil on the north side of the brick structure. These possibly butted against the face of the brick wall and appear to have been thrown down rather than laid.

ABANDONMENT

Deposits of silty clay extended across the entire trench filling the areas inside structure 3.1 as well as outside (305/306/307). It is likely that these were laid down here during flooding events after structure 3.1 and probably the entire courtyard building had been abandoned, though how long afterwards is not certain. There was little evidence for Medieval or modern activity in the trench.

Trench 4

Trench 4 was positioned to investigate the southern end of the range of rooms on the northwestern side of the very large courtyard building in the east of the Southern *Canabae* (Fig. 34). The gradiometer results suggest that this northwestern range possibly was divided into large rectangular spaces with their narrow sides facing the courtyard, while a long narrow area adjoining the courtyard could have been a corridor or ambulatory. Trench 4 cut diagonally across the Roman buildings in this area and, according to the geophysical results, it included parts of perhaps two of the large spaces within the range, as well as parts of the possible ambulatory and another room or building at its southern end.

The walls and surfaces exposed within Trench 4 were aligned approximately north-south or east-west and several separate buildings or rooms were revealed. Although the archaeology in this part of the *Southern Canabae* was difficult to understand in a 2m wide

evaluation trench, several possible walls and at least two phases of construction were identified. The main walls had been partly robbed, although one stretch of a wall in the south of the trench was still standing several courses high (Fig. 35). The Roman archaeology in Trench 4 was undisturbed by later activity and survived only a few centimetres below the modern ground level. The provisional stratigraphic matrix for Trench 4 is located in Appendix 1.

EARLIEST SURFACE AND STONE STRUCTURE

The earliest deposit within the trench was a surface (431) located approximately 1.2m below the modern ground level (6.75m over datum). Stones and cobbles had been laid flat within a clay bedding layer that extended over the northern part of the trench (Fig. 36). The southern edge of this surface appeared to begin approximately 1.4m from the adjacent rubble structure (430) and was aligned parallel to it on a northeast-southwest orientation. The

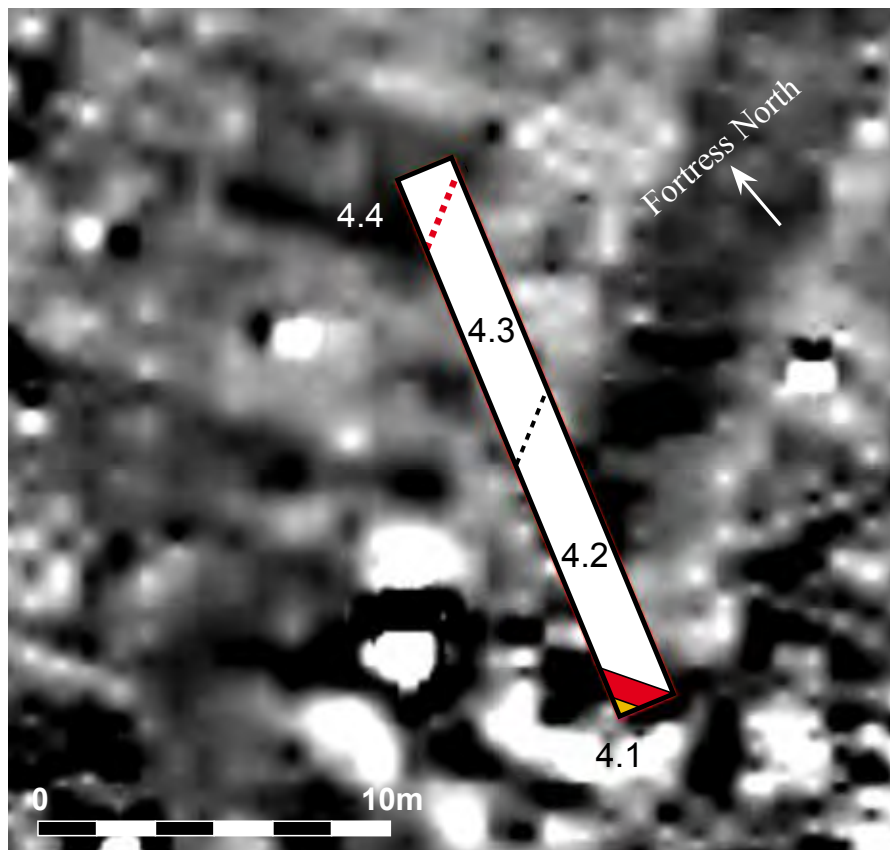


Fig. 34. Trench 4 showing wall and surfaced areas superimposed over the gradiometer results. Numbers refer to 'Areas' as described in the trench discussion

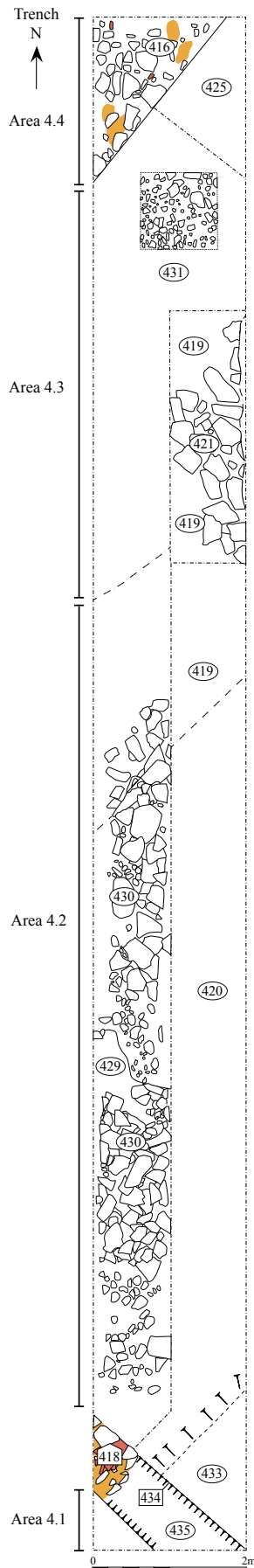


Fig. 35. Final plan of Trench 4 showing wall and main features

surface continued beyond the trench to the east and west, while it also extended beneath a later stone surface at the northern end of the trench.

To the south of the surface was an area of packed rubble and medium-to-large cobbles (430) that extended for a distance of 7m across the southern half of the trench. On its northern edge the angular stones appear to have been deliberately laid flat to form at least five rough courses, while the southern part of the structure was more mixed with cobbles, some of which were very large, and there was no hard edge on this side (Fig. 37). The rubble was between 0.7m and 0.8m thick and the stone blocks and cobbles were densely packed throughout, except in the centre where a narrow stone-free channel might have formed a drain (429). The northern edge of faced blocks suggests that the area exposed in the trench was part of a wide linear platform of some kind on a northeast-to-southwest alignment.

Structure (430) was not excavated and, although its relationship with surface (431) is not certain, it is possible that they were in use at the same time. The packed rubble and cobble platform could be the explanation for the darker linear anomaly on the gradiometer results that it was believed might be the courtyard's ambulatory.

LEVELLING AND SECOND PHASE CONSTRUCTION

A short length of a wall [418], revealed in the southern end of Trench 4, was aligned east-west. This appears to correspond with a negative linear anomaly on the geophysical survey results and it separated a cobbled surfaced area to the north from a different room, or more likely building, to the south. The wall had been partially robbed, though six courses survived close to the western trench edge (Fig. 38).

The wall's construction trench [434] was 0.76m wide and contained footings of packed angular stones in a loose brown-yellow sand (435). The lowest course of faced stone was as wide as the footings, but the upper courses were only 0.66m wide. White mortar bonded the wall's stone faces with its core of rubble and CBM pieces, and a string course of bricks and flat stones sat between the third and fifth courses of squared stones. The lowest stone courses were abutted by the levelling deposits to either side, indicating that it was built from a lower level before the spaces to the north and south were subsequently raised and surfaced.

Area 4.1 - southern room or building

The gradiometer results suggest that the space to the south of wall [418] was situated towards the centre of an east-west row of rooms or adjoining buildings in this part of the courtyard building. Although only a very small area of the interior of this room was included in the southwestern corner of the trench, it was possible to



Fig. 36. Earliest stone and cobbled surface (431) in the northern part of Trench 4. Stone and white mortar layer (416) is visible in the top right-hand corner



Fig. 37. Crudely faced northern edge of rubble structure (430)



Fig. 38. Southern edge of Trench 4 showing stony surface (415) and white mortar surface (433) in the foreground, with wall [418] and footings (435) beyond, and the sequence of deposits in Area 4.1 in the corner

observe the sequence of deposits here in the side of the trench that had robbed the wall (Fig. 38).

The lowest deposit (439), possibly natural or redeposited natural from the digging of the wall trenches, lay beneath a layer of light brown orange silty sand with frequent small stones and occasional CBM inclusions (438), that is likely to have been levelling for a floor. No actual floor surface was visible, however, and overlying (438) was a charcoal rich layer (437) that possibly originates from the use of the room or its abandonment.

Area 4.2 - central cobbled area

To the north of wall [418], the earlier rubble (430) was sealed by a series of layers (412/422/428), deeper in the south than the north, that seem to have served to level the original uneven platform before a new cambered surface was laid. This consisted of small pebbles (420) and small angular stones (415) bedded in silty-clay (Fig. 39). The northern side of this surface followed precisely the same northeast-southwest alignment as the underlying rubble (430), while in the south the surface butted against the third course of wall [418] suggesting that the cambered surface filled the same long narrow space as rubble (430). In the southeastern corner of the trench white mortar (433) seems to have been poured on top of the levelling layers, forming a separate but adjoining surface to (415/420). The sharp northeast-southwest boundary between surfaces (433) and (415/420) indicates the presence of a partition of some kind that is likely to have butted against the north face of wall [418].

Area 4.3 - northern (open?) area.

The early stone and cobble surface (431) was sealed at the northern end of the trench by a thin dark accumulation or occupation layer (427), while immediately to the south of this some 0.6m of compact grey clay (432) had been dumped against the north face of rubble structure (430). These layers were overlain by redeposited natural (424/426), mixed together with quantities of domestic debris that appear to have been dumped deliberately to raise the height of the area in the north of the trench to the same level as the top of the rubble platform (430) to the south. There was no indication of any cobbling equivalent to (415/420) here and it is possible that the dumps of redeposited natural would have served as surfaces in this part of the central area (in which case the ground here was lower than the cobbled surface to the south).

Area 4.4

The northern side of this apparently unsurfaced space was demarcated by an area of packed ORS blocks mixed with large quantities of white mortar aligned northeast-southwest (416). Only a small part of this was exposed in the corner of Trench 4 and, although in plan this stony deposit gave the impression of being the fill of a robber trench, after the area to the south in the trench was excavated it became clear that this feature was only one or two stones deep (Fig. 36). It is likely, therefore, that (416) is part of another rubble surface extending northwards, or perhaps the remains of a collapsed wall. Nevertheless, the clear differentiation between this deposit and the stone-free area to the south indicates that these were



Fig. 39. Trench 4 looking north, showing stone surface (415) and white mortar surface (433) in the foreground, pebbled surface (420) in the middle ground, and possible rubble surface (421) beyond

distinct spaces, separated by a partition of some kind. It is possible that a shallow trench [410] adjacent to (416) marks the location of such a wall, though no trace of footings was found in this putative robber trench.

ACCUMULATION AND POSSIBLE RESURFACING

The northern edge of cobbled surface in Area 4.2 (420) was overlain by a series of mixed silty sand layers (414/419/425), possibly natural accumulations of soil, which also sealed the levelling layers and possible clay surfaces in Area 4.3 to the north (424/426). Two adjacent areas of rubble above (419) on the eastern side of the trench could be the remains of later surfaces, or platforms of some kind, at the same height as the cobbled area (420) to the south (Fig. 39). Layer (421) consisted of large flat blocks of ORS that appeared to form a very uneven surface, while an area of smaller stones in a sandy clay matrix (417) extended southwards from (421) where it almost joined cobbled surface (420).

DECAY, COLLAPSE AND ROBBING

Extensive deposits of rubble and CBM fragments covered the latest Roman levels in Trench 4. These included (403/405/406/407/436), presumably derived from the abandonment and collapse of this part of the courtyard building. There was some variation in the density of

rubble across the trench, but it was not possible to determine if this was the result of deliberate selection to create building platforms or other factors.

Trench [408] to rob wall [418], like with cut [410] in the northern part of Trench 4, was dug from the level of these rubble deposits. This indicates that the robbing activity occurred after the buildings in this area had fallen down, though the fact that part of wall [418] survived suggests that this was not undertaken systematically.

Trench 5

Trench 5 was located at the centre of the rear range of rooms on the northern side of the very large courtyard building alongside the River Usk (zone 1), and continued up the hillside into the middle part of the *Southern Canabae* complex (zone 2). The trench cut diagonally across the Roman buildings and was positioned at the northern end of the courtyard building's main north-south axis, overlooking the building in Trench 3 and also in line with the middle of the building's southern range closest to the Usk where Trench 1 was located. The gradiometer results suggested that this spot could mark the position of a narrow entranceway leading northwards from the large courtyard building into the buildings of zone 2 (Fig. 40).

As the ground in this area rose gently upwards from east to west, a series of shallow terraces had been cut into the

slope allowing the construction of the various corridors and rooms of the Roman buildings along the edge of the higher ground (Figs 41 and 42). The long walls exposed within Trench 5 were aligned approximately east to west and several separate rooms or spaces were revealed, which for the purposes of this discussion are numbered 5.1 to 5.6 (from south to north).

The archaeology in this part of the *Southern Canabae* was very complicated and the northern part of the trench produced possible evidence for several phases of rebuilding and major structural alterations. The main walls had been robbed, but several others in the northern part of the trench were still standing several courses high above the internal floors with which they were associated. Other than one pit that cut through a wall, the Roman

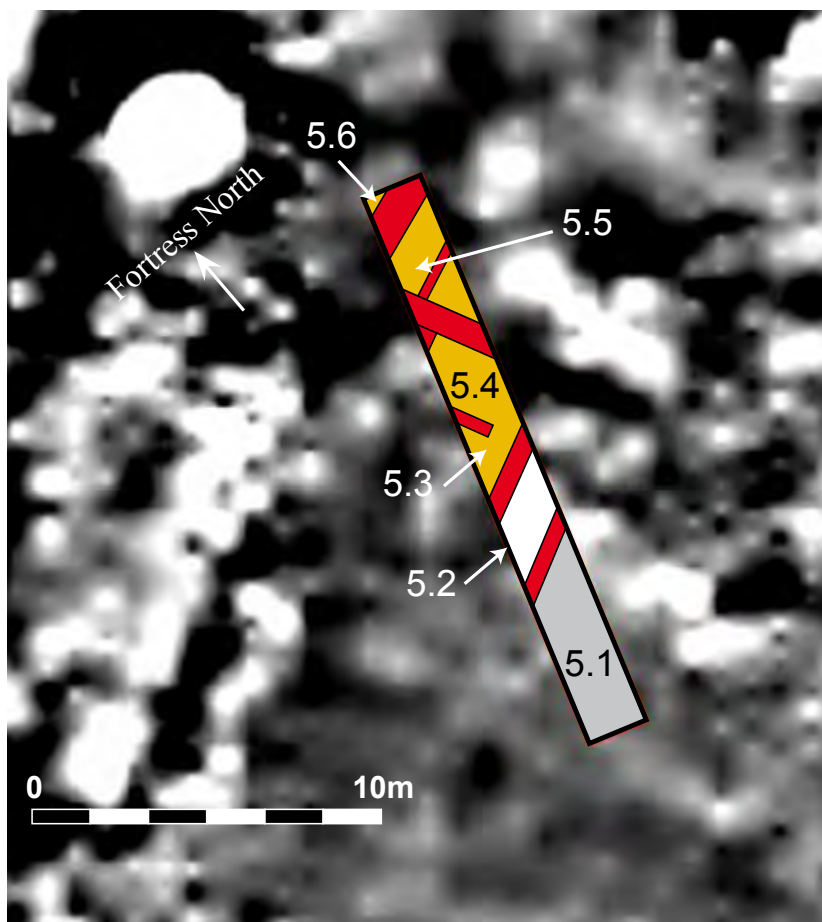


Fig. 40. Trench 5 showing main walls superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion



Fig. 41. Trench 5 from south as excavated

archaeology in Trench 5 was undisturbed by later activity and survived only a few centimetres below the modern ground level. This remarkable level of preservation is partly explained by the unrobbed walls at the top of the slope creating spaces that became filled with hillwash after the abandonment of the Roman buildings. The provisional stratigraphic matrix for Trench 5 can be found in Appendix 1.

CONSTRUCTION AND USE

The main wall that separated the large courtyard building (zone 1) from the buildings in the centre of the *Southern Canabae* complex (zone 2) would have passed through the centre of Trench 5. The wall and its foundations, however, had been completely robbed and all that remained was the east-west robber cut [516] and its fills. The robbing trench was some 0.95m wide and the bottom lay between 0.45m and 0.55m below the level of the earliest Roman floors to either side, suggesting that the original wall foundations had been relatively wide but shallow. It is unusual for wall foundations to have been so extensively robbed and it could be that, unlike all other wall foundations observed in the 2011 trenches, this main wall was provided with masonry rather than cobbled foundations that were worth the effort of removing. The lowest deposits contained within the cut were both very clean, including what appears to be redeposited natural

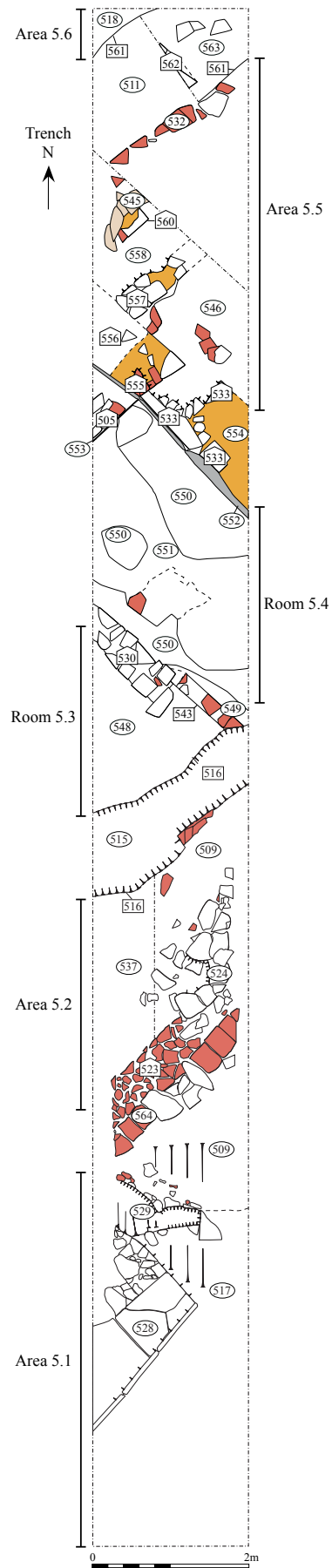


Fig. 42. Final plan of Trench 5

clay (536/567), and it is possible that these could be the base for foundations at the bottom of a construction trench rather than infilling of the robber cut.

Area 5.1 and Passageway 5.2

The part of Trench 5 to the south of the robbed main wall most likely lay at the very back of the zone 1 large courtyard building's northern rear range and consists of two spaces separated by a low brick north-south wall surviving at least five course high [523]. The wall's two faces were built using triangular bricks (the apex of each brick pointed inwards) and the core was composed of smaller pieces of broken brick, all of which were bonded together with clay (Fig. 43). It is certain that this wall did not rise any higher because the sloping capstones of a drain (564) along its southern side rested on the top edge of the wall's uppermost course of bricks. The other side of the drain was formed by a row of irregular blocks of ORS placed on their ends between 0.5m and 0.8m from the wall. The bottom of the drain was unlined and the capping was formed by a row of complete bricks and irregular slabs of ORS laid at an angle (possibly in groups of three), with their bottom edges resting on the top of the lining stones and their upper edges on the wall itself. The fill of the drain was a loose dark silt that contained no finds (566).

It is uncertain if the brick courses continued further down and it is possible that they formed, however, a

base for a timber wall. It seems more likely that [523] supported a colonnade and that the narrow *c.* 1.6m-wide space between this wall and the robbed main rear wall was a corridor or passageway at the back of courtyard building's rear range (Area 5.2). The surviving surface of this passageway consisted of patches of worn and degraded compact white mortar or plaster (544) that could have been the bedding for flagstones of some other type of durable flooring.

On the south side of the brick wall [523] was Area 5.1, which extended beyond the trench edge to the east, south and west. The geophysical results suggest that this lay within the range on the northern side of the main courtyard in zone 1, but it is not clear if it was roofed or an open space. No traces of floors were found here and it appears that this area was bare earth perhaps with cobbles thrown down to form crude surfaces. The earliest of these was a compacted clay layer (541) and a large flat stone set within it (547) might have served as a post-pad for a structure of some kind. The clay, however, was very clean and lies below the capped drain against wall [523], suggesting that if it was a surface then the wall and drain (as well as other features described below) must post-date its use.

A more convincing surface in this area was a layer of compacted silty-clay mixed with small fragments of CBM and cobbles (517) above a thick levelling deposit



Fig. 43. Wall [523] and adjacent drain with sloping capstones in situ. Looking northwards from Areas 5.1 to 5.2



Fig. 44. Drain [529] in Area 5.1, from west



Fig. 45. Flagstone feature (528) in Area 5.1, from east. Drain [529] cuts across the trench from the near edge

(540). This was some 0.3m higher than (541) and gave the appearance of a rough yard surface that had seen considerable use. Set within bedding layer (540) and sealed by the surface (517) was a second stone-lined drain (529), this time not on the same alignment as the buildings. The edges of the drain were formed by two courses of unmortared irregular ORS, blocks and one large flat ORS capstone was found *in situ* at its eastern end (Fig. 44). The drain did not extend across the full width of the trench, but instead terminated some 1.10m in from the eastern trench edge (the western end of the drain ends obliquely with its southern side extending only 0.9m into the trench). Like the previous drain, no stones lined the bottom but, unlike the first drain, the fill (542) produced quantities of pottery, animal bone and small finds.

Also set within bedding layer (540) in Area 5.1 was part of an unusual structure composed of horizontal rows of large rectangular ORS slabs, with a raised bevelled rim on its southern side formed by upright narrower ORS slabs (528). This was aligned parallel to the east-west brick wall [523] between this area and passageway 5.2 and, as it extended beyond the western edge of the trench (and there was no sign of a second rim on its northern side), it seems safe to assume that a third row of flagstones and rim would have taken it close to, if not butting against, the brick wall or its adjoining drain (Fig. 45). The function of this structure is uncertain, though the flagstones from which its base was made had been carefully laid and it is

possible that it was intended to hold water or some other liquid. At first glance the absence of a rim on its northern side is problematic, but there is some indication that this end originally would have butted against a wall in which case a rim on this side might not have been necessary. The geophysical survey suggested that an north-south wall ran through this part of Area 5.1 and, even though the excavations did not identify the remains of a wall, it is possible that it had been completely robbed and was simply missed in the narrow confines of the evaluation trench. Circumstantial evidence for the existence of a 0.4-0.5m wide wall against which feature (528) could have butted is provided by the drain (529), whose western end terminates obliquely about half way into the trench and, therefore, on the other side of a possible robbed out wall to the flagstone trough or tank.

Rooms 5.3 and 5.4

The rooms exposed in the northern part of Trench 5 are different to the northern range of the main courtyard building. The main wall robbed out by trench [516] separated the lower areas to the south from a series of raised rooms to the north (the floors were some 0.4m higher than the passageway 5.2), of which parts of two were excavated. The sequence of walls is extremely complex here and it is possible that there had been several episodes of structural alterations in this part of the complex, though it was not always possible to fully untangle this complexity.



Fig. 46. Room 5.3 from southeast, showing latest floor (548), internal dividing wall [530], and beam slot (543)



Fig. 47. Room 5.4 from east, showing latest floor (551)



Fig. 48. Brick end of wall [555/556] from room 5.3. Butted against by wall [505] on left and [533] in the foreground

The two rooms upslope of the main wall were separated by an internal north-south partition wall [530] and a slot (543). Wall [530] was some 0.5m wide and had been built with roughly faced ORS blocks set in a friable silty-sand mortar. The face of this wall in room 5.3 was unrendered and the southern end of the wall appears to sit directly on top of an earlier surface without any foundations (explaining the uneven nature of the wall's courses). The slot (543) was some 0.2m wide and extended for a distance of 1.1m from the southern end of wall [530] to the robber trench for the main wall (which formed the eastern side of the room). Originally the slot would have been filled by a wooden beam at the base of a doorframe between rooms 5.3 and 5.4. Concrete was poured into the rooms thereby preserving the position of the original beam, which was either removed or had simply rotted away. The floor in room 5.3 consisted of a yellow-brown concrete mixed with small pebbles but no crushed tile (548), which butted against the lowest course of wall [530] (Fig. 46). This floor was not excavated, but the sequence of deposits beneath it was observed in the side of robber trench [516], which showed that it had been laid on top of a bedding layer consisting of stones, broken brick and tile, as well as a thin deposit of burnt material in the area of the beam slot (upon which the beam itself had originally sat). There was no evidence for an earlier floor in this room, suggesting that the dividing wall [530] was an original feature.

Room 5.4, some 2m wide and 4m deep, was adjacent to room 5.3 and was formed by walls [530] to the south, [533] to the north, [505] to the west, and robber trench [516] to the east (Fig. 47). Wall [533] was more substantial than the others, measuring 0.9m wide and built with mortared courses of large neatly faced blocks either side of a rubble core (it's northern face had been partially robbed). Painted plaster was found adhering to the surviving face of this wall in room 5.4, decorated with horizontal and vertical red lines above the floor (552). Wall [505] butted up to the continuation of [533] and was clearly a later addition. Although only a short length of this wall was exposed in the trench, it survived to a height of eight or perhaps nine courses above the floor. Some 0.4m wide at the top, it seems to have been built in two episodes: the lowest six or seven courses use small neatly cut and faced stones, while the uppermost two courses do not appear to have been bonded with mortar and were made with larger more roughly-hewn stones and a brick (it is not certain whether the upper part of this wall is Roman or post-Roman reuse of a truncated wall). The face of this wall in room 5.4 had been rendered with course plaster, as was the north face of the southern wall [530], though in neither case was there any indication that they had been decorated.

A thin piece of wood with the remains of three iron nails through it was discovered at the base of the wall in a pile of collapsed plaster (SF 5072). Some of the loose pieces of plaster bore grooves on their inner faces and it is likely

that these and the piece of wood came from the collapsed lath and plaster ceiling in this room.

The latest floor in room 5.4 consisted of a thin layer of crushed tile set in a degraded mortar matrix (551). Originally this might have looked like opus signinum but it had become worn in several places, particularly near to the walls and close to the doorway into room 5.3, revealing either areas of mixed burnt material (550) or large pieces of brick upon which the floor had been laid (and similar to the sequence observed beneath the concrete floor in room 5.3).

Area 5.5

The area of Trench 5 to the north and east of room 5.4 was packed with the remains of two parallel east-west walls and, although the excavation continued to a depth of 1.2m, no substantial floors were discovered here. The western wall of the narrow building comprising areas 5.3-5.5 [562] lay at the northern end of the trench. Measuring 1.2m it was wider than the opposite wall of this building [516] to the south and had been robbed to the top of its foundations of mortared cobbles (563). It is possible to confirm, therefore, that this building adjacent to the main courtyard building to the east was just under 7m wide, and that there must have been another space equivalent to 5.5m some 2.5m wide behind room 5.4 (and also probably 5.3).

Room 5.4 was separated from area 5.5 by wall [533] and its continuation [555/6], and the architecture of these adjoining spaces appears to have been entirely different. During the excavation this main dividing wall was thought to have consisted of three separated phases of construction, though it more likely that the length of walling contained in the trench included a blocked doorway 1.05m wide (the northern part of [533]), between jambs built of alternating courses of stone and brick, of which only the northern side [555] was completely exposed (Figs 48 and 49).

The corner of area 5.5 between east-west wall [562] and north-south wall [533/555] contained two further east-west wall-like structures, [560] and [557]. Wall [560] was not fully exposed, but it is likely that it had been built up against the inside of main wall [562] and, therefore, must have been about 0.7m wide. It seems to have consisted of two abutting courses of bricks and stones without a core, and its southern face comprised at least three courses of flat bricks, then a course of neatly cut ORS blocks, followed by two courses of rectangular tufa blocks all bonded with a very solid pinkish-red sandy mortar. The two visible stones of the ORS course were laid as stretchers, while the tufa blocks of the surviving upper courses appear to have been laid as headers (Figs 49 and 50).



Fig. 49. Area 5.5 from east, showing walls (from left to right) [533], [505], [555/556], [557] and [560]. Note the possible filled doorway in [533] (below left-hand ranging rod)

Lying only 0.4m south of this wall was another parallel east-west wall [557], although this was faced only on its southern side. Wall [557] butted against wall [556] and consisted of nine irregular courses of narrow ORS blocks bonded with a loose sandy mortar that sat upon a wide rubble foundation observed beneath its south face (see Figs 49 and 50). The space between the face of wall [560] and the core of [557] was filled with a loose red sand and mortar deposit (558) very similar to the bonding of [560]. The space on the other side of wall [557], in the corner between it and wall [533/555/556], was packed with rubble and broken brick and tile within a loose mortary matrix (546) and (554).

The walls in this small part of area 5.5 and the material filling the spaces between them were overlain by several deposits that must be the collapsed remains of the superstructure of wall [560] (Figs. 50 and 51). The first of these overlay [558] and consisted of a tangled mass of wedge-shaped tufa blocks within a matrix of only slightly less solid pinkish-red sandy mortar (545), and bonded on its northern side to three courses of triangular bricks (532).

These deposits appear to be the remains of part of the lower courses of a barrel vault, of which [558] was the northern supporting wall from which it sprung. How far this roof or ceiling extended is unknown as the opposite supporting wall to [560] lay beyond the trench, but it is clear from its collapsed remains that this had been a substantial structure. Against and on top of (545) lay a row of shaped ORS voussoirs in a yellow mortar (559),

which in turn was overlain by several collapsed courses of degraded tufa blocks set in a similar yellow mortar, some of which had been cut into voussoirs and were mixed with ORS voussoirs (513) (Fig. 52). Two adjoining complete box flue tiles were also incorporated into this collapsed structure. The coursing of the stones within (513) was very clear and the collapsed roof retained part of its original curvature when excavated (Fig. 53). The box flues had been laid end-on-end and were built within the tufa coursing (they showed no signs of sooting). It is thought that rows of box tile were used to form ribs supporting the vaulted ceiling that was constructed mainly of tufa, but with ORS courses perhaps to give extra strength.

Wall [557] possibly formed an additional support or bracing wall for the vaulted ceiling. If this interpretation of these walls in this area is correct, the floor this ceiling covered is probably the clay surface beneath the rubble deposits (546) and (554) that filled the space between walls [557] and [533]. If so, the plain floor suggests that, despite the elaborate roof arrangement, this space was not intended to be as impressive as the neighbouring rooms 5.4 and 5.3 (whose floors were considerably higher too).

Room 5.6

The northwestern corner of Trench 5 exposed a small part of a room in the building beyond wall [562], which had been covered with a tessellated pavement (518). Unfortunately disturbed by the robbing of the wall, the tesserae were all black or white and presumably formed the border of a large mosaic (Fig. 54).



Fig. 50. Area 5.5 from west, showing wall [560] on left and wall [557] bottom right, sealed by collapsed deposits (545) and (513)

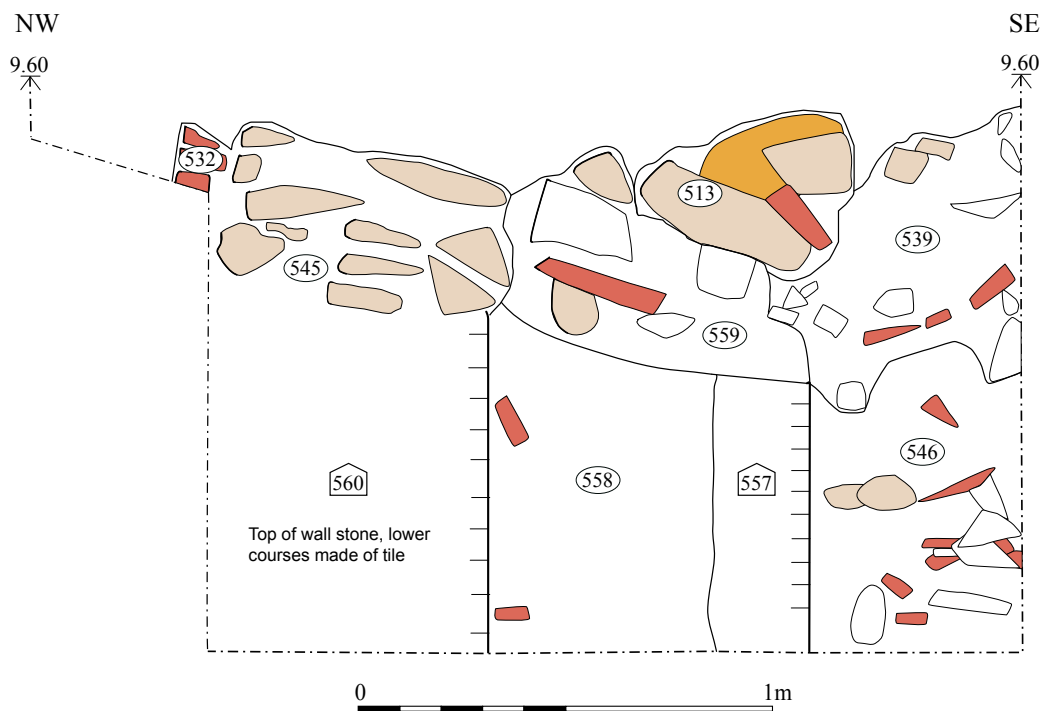


Fig. 51. Section through Area 5.5



Fig. 52. Tufa and Old Red Sandstone voussoirs from Area 5.5

DISUSE, DECAY AND ROBBING

Area 5.1 and Passageway 5.2

The deposits overlying the latest surfaces in area 5.1 consisted of thin mixed silty accumulations (514/517). The last floor in passageway 5.2 was sealed by a thicker deposit of light brown silty material (537) and an area of rubble that could possibly have been intentionally laid (524). Although this is far from certain, the fact that these stones extended over the top of brick wall [523] indicates that this wall was no longer in use. Above (537) and (524), a thick layer of mid white-brown sandy silt with degraded mortar, plaster and concrete lumps (509) extended across the passageway area. Containing quantities of pottery, animal bone and oyster shell, this deposit appeared very midden-like and suggests a combination of building decay and rubbish dumping.

Layer (509) in area 5.2 was overlain by large quantities of densely packed broken roof tiles covering much of area 5.1 as well (507). The southern edge of the fragmented tiles was marked by a line of more intact *tegulae* and broken *imbrices* aligned southeast to northwest across the trench (508). It is not clear if these were tiles that had simply slipped from a nearby roof or had been deliberately placed here during a later period of occupation (see Figs. 55 and 56).

Rooms 5.3 and 5.4

The last concrete and crushed tile floors in rooms 5.3 and 5.4 were sealed by thin layers of silty material that produced animal bone, pottery and several metal small finds (531 / 535). In turn these were overlain by a series of deposits that filled the rooms, particularly room 5.4 where these reached a depth of 0.5m. These layers consisted of dumps of sandy silt mixed with decayed plaster and mortar, pieces of concrete flooring, as well as very large quantities of brick and tile fragments, animal bone, oyster shells, pottery and numerous glass and metal finds (534 / 538). These appear to have originated from the discarding of rubbish in these, presumably abandoned, rooms.

The next layers in the rooms are associated with the decay and collapse (or perhaps demolition) of the building. The

earliest of these is a mixed deposit of mortar, decayed plaster and broken roof tile in room 5.4 (527), which was overlain by more compact layers with more tile and less mortar (526) that also filled room 5.3. The main episode of roof collapse is represented by (522), which also included three intact, or near intact, box flue tiles, perhaps from the collapsed vaulted ceiling in area 5.5 (that this material also overlay wall [530] indicates that the dividing wall between these rooms was not longer standing above ground at this time). Layer (522) was probably part of the same roof collapse event as (507) in area 5.1 and 5.2, but these had been cut by [516], thereby confirming that the main wall of the building was robbed some time after the roof had collapsed. The other walls that formed rooms 5.3 and 5.4 were not robbed, probably because the rooms became filled with building debris and rubbish that covered their lower courses until they were no longer visible above ground. This suggests that the building's main load bearing walls must have continued to support the building's roof for some time after the internal walls had fallen down.

Area 5.5

As described in the previous section, the vaulted ceiling in this part of the building seems to have fallen down into the room below, probably as a single event rather than gradually over time and sealing rubble deposits (539) and (546) dumped on top of the latest floor. The survival of the remains of the tufa and stone ceiling is explained partly by the very solid mortar with which it had been bonded and perhaps the shape of the stones from which it was constructed, many of which had been cut into voussoirs that would have been less useful to those looking to recycle building stone.

Cut [561] marks the robbing of wall [562] between area 5.5 and room 5.6. The lowest fills of this trench were similar to some of the collapse deposits further south, suggesting that the wall could have been robbed relatively early after the abandonment of this part of the Southern *Canabae* complex.



Fig. 53. Northern end of Trench 5, showing remains of collapsed vault - brick and tile coursing (545) in the foreground,, with courses of tufa and ORS voussoirs (513) beyond. Note the two intact box-flue tiles

The remains of the collapsed ceiling in area 5.5 and the tessellated floor in room 5.6 were sealed by a layer of mixed stone and CBM (506), similar to layers (503 / 504) further south in Trench 5 where they became gradually thicker towards the bottom of the slope. The latest activity in Trench 5 was feature [520] cut from the level of context (503/4), which could be a very late trench or pit to rob wall (556), although only part of it was contained within the trench. Above this and extending across the entire trench was topsoil (501/502).



Fig. 54. Half-sectioned robber trench [561] of wall [562]. Note the small piece of tessellated pavement on the right (Area 5.6)



Fig. 55. Stacked (laid?) tegulae and imbrices (508) in Area 5.1



Fig. 56. Deposit of broken roof tiles and box flue tiles (507) in Areas 5.1 and 5.2

Trench 6

Trench 6 was positioned diagonally across the northeastern part of the middle zone 2 of the *Southern Canabae* complex, close to the amphitheatre. The gradiometer results suggest that the southern end of the trench lay within a rectangular structure, possibly an open area, and extended into a narrower rectangular building to the northwest (Fig. 57). The uneven topography of this area today was believed to be a result of the dumping of spoil from the Wheeler's work in the amphitheatre in the 1920s, and aerial photographs of the excavations show narrow-gauge railed trackways leading out from the amphitheatre's south entrance. It was thought, therefore, that large quantities of redeposited spoil from these relatively recent excavations might cover any remains of Roman buildings in this trench.

As it turned out, however, the evidence for twentieth-century spoil dumping in this part of the field was limited to a layer of stone in the northern part of Trench 6. Below this two east-west walls were revealed, as well as a stone-lined drain, a lead water pipe and an area of

flagstone flooring, all of which is believed to date to the Roman period. The walls divide the area exposed in the trench into three areas (6.1-6.3), which appear to have belonged to two adjoining buildings (Figs 58 and 59). The provisional stratigraphic matrix for Trench 6 can be found in Appendix 1.

CONSTRUCTION AND OCCUPATION

Area 6.1

The southern east-west wall in Trench 6 [637] was some 0.95m wide and consisted of a rubble core between two courses of facing stone, and it appears to have been clay rather than mortar bonded. Understanding the construction of wall [637] was complicated by the fact that a lead water-pipe had been built across it and that a later phase of robbing had removed the courses overlying the pipe within the trench (Fig. 60). The water-pipe (634) ran from north to south at right angles to wall [637] and had been built into it so that it would have buried beneath the floor surfaces. The main pipe had a diameter of 0.12m and a bulge showed where two lengths had been joined

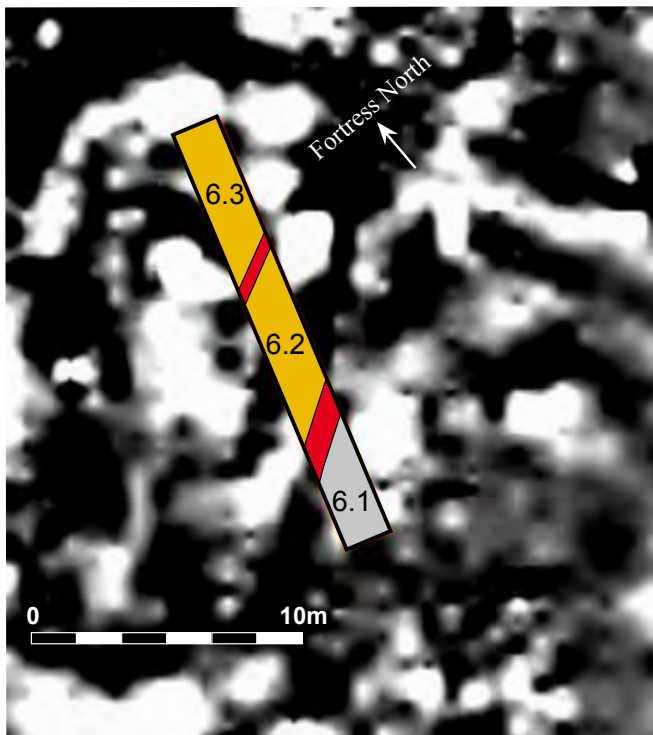


Fig. 57. Trench 6 showing walls and surfaced areas superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion



Fig. 58. Trench 6 as excavated, from south



Fig. 60. Water-pipe (634) crossing wall [637] and sealed by cobble core ((628), from northwest

together in the centre of the wall. The pipe continued beyond the eastern edge of the trench, but its western end ended just within the trench with a round collar or plate pierced by iron nails (Fig. 61). This must be where the lead-pipe had been attached to a wooden tank (or pipe) from which water was drawn down slope. On the southern side of wall [637] the main pipe was tapped by a narrower branch heading in a more southeasterly direction. Presumably both pipes fed fountains or other water-features somewhere within the large courtyard building.

The lead-pipes do not appear to have been laid within a trench, but sat on stone bedding before being covered over by large cobbles [628] and the make-up deposits in area 6.1. The geophysical results suggest that this was the western side of a wide rectangular space that had been made-up and levelled by some 0.2m before a stone floor was laid (604) (Fig. 62). This surface, possibly open to the elements, was exposed in the southern part of the trench and consisted of four rows of large ORS flagstones on the same alignment as wall [637] (though there is some indication that the northern part of the surface had

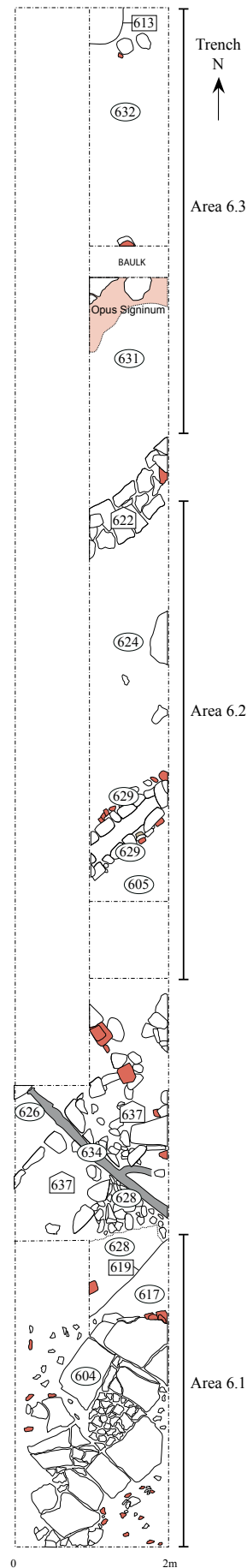


Fig. 59. Final plan of Trench 6

been laid in the opposite direction). The flagstones lie directly below the topsoil and during the excavation it was suggested that they could have been laid during the 1920's amphitheatre excavations, perhaps the bedding for a trackway to remove spoil. While this is possible, the flagstones exactly follow the alignment of the Roman building and it seems more likely that they represent the latest Roman surface, most likely a courtyard, in this part of the *Southern Canabae*.

Rooms 6.2 and 6.3

From wall [637] northwards Trench 6 seems to have extended into the interior of a single building, divided into two rooms by the second north-south wall [622]. Only one course of this wall was revealed but it did not appear to have been particularly well built. Some 0.55m wide, it was earth bonded and even within the narrow confines of the trench it was clear that it had been constructed slightly off straight (Fig. 63). It is assumed that this was an internal wall dividing a building into two rooms. There was no indication that this wall had been robbed, suggesting either that it supported a timber wall or that it was dismantled during or soon after the Roman period.

The latest floor in the southern room 6.2 (i.e. between walls [637] and [622]), consisted of a thin layer of crushed

tile (612/625) on top of a clay bedding layer (624/626), both of which lay around and on top of the lead pipe. A stone drain (629) passing down the centre of room 6.2 presumably lay beneath this floor, though subsequent robbing activity within the trench (possibly to take away the capstones) has removed the relationship between these surfaces and the drain itself (Fig. 64). The drain was oriented on the same alignment as the building and its sides were built from courses of flat stone and large pieces of broken brick. A layer of compacted clay formed its bottom surface (636), while a flat stone capping the drain was observed in the east side of the trench.

A similar sequence of bedding (623) and degraded tile surface (631) was uncovered in room 6.3 north of wall [622], though here compact clay (650) had been introduced to patch the worn floor.

DECAY AND ROBBING

Room 6.3 was filled with 0.08-0.2m thick deposits of burnt material, consisting of numerous dumps of charcoal and possibly metalworking waste (616 and 608), while the last Roman floor in rooms 6.2 was sealed by a variety of deposits including a patch of broken roof tiles (607) and decayed mortar mixed with crushed tile fragments (614). Presumably these indicate a period of abandonment and decay followed by collapse or demolition as evidenced



Fig. 61. Northwestern end of water-pipe (634) showing collar and iron nail heads



Fig. 62. Southern end of Trench 6, showing flagstone surface (604)



Fig. 63. Internal wall [622], from west



Fig. 64. Drain (629) in Area 6.2, from west

by the substantial silty layers containing larger pieces of brick and tile as well as rubble in these rooms (609/610/615). A small possible posthole [613] in the northern end of the trench suggests limited activity in this area after the building had collapsed or been demolished, though it is not possible at this time to offer a precise date for this feature.

A wide V-shaped trench was cut seemingly along the line of drain in the middle of room 6.2 [640], possibly to remove the drain's capstones. The linear cut [619] in the southern part of the trench was for the robbing of the substantial wall [637] between rooms 6.1 and 6.2. It is fortunate that the robbers were not interested in the wall's cobble core which lay on top of and covered the lead-pipe.

The robber cuts and flagstone floor were all sealed by layers of rubble that covered the entire trench. A concentration of rubble in the northern part of Trench 6 might be *spolia* from the amphitheatre excavations in the 1920s, although if this is the correct interpretation of this material it suggests that dumping here was less intensive than previously thought. This lay directly beneath the subsoil and topsoil (602 and 601).

Trench 7

The gradiometer survey results indicate that the western side of the first courtyard in zone 3 of the *Southern Canabae* comprised a series of large rooms or adjoining buildings that were built against the southwestern wall of the courtyard. These structures lay on the edge of the higher ground overlooking the floodplain of the River Usk as it meandered towards the Severn Estuary, and they would have been the first buildings at Caerleon visible from boats and ships as they sailed upstream. Trench 7 was positioned across two rooms on the southern side of this range and it also included the area to the south of this courtyard at the western end of the *Southern Canabae*'s central zone 2 (Figs 65 and 66).

The interior of the rooms had been raised with large quantities of make-up material and were considerably higher than the ground to the east. The excavations discovered that the end room had been furnished with a hypocausted floor and elaborately decorated walls. No traces of floors or surfaces were found in the area beyond the rooms to the south and it is thought that this could have been open during the Roman period (Fig. 67). The archaeological remains of these structures

lie immediately below the modern ground surface and survive very well indeed. There was very little evidence for post-Roman activity in this part of the field. The provisional stratigraphic matrix for Trench 7 can be found in Appendix 1.

CONSTRUCTION AND OCCUPATION

Rooms 7.1 and 7.2

The two walls in Trench 7 had both been robbed, the external wall down to its foundations some 2m below the modern ground surface. This wall's foundations consisted of large river cobbles (716) tightly packed and bonded with mortar in the 1.30m wide wall trench [719], while the internal wall [722] between rooms 7.1 and 7.2 (some 0.8m wide) had been reduced to a layer of sandy mortar between stone courses below the rooms' floors but still above its foundations.

In room 7.2 a thick make-up deposit (723) of pinkish clean clay raised the floor level by some 1.15m above the original ground surface from which the foundation trench had been cut (724). Overlying this and across the entire room was a levelling layer of stones and brick and

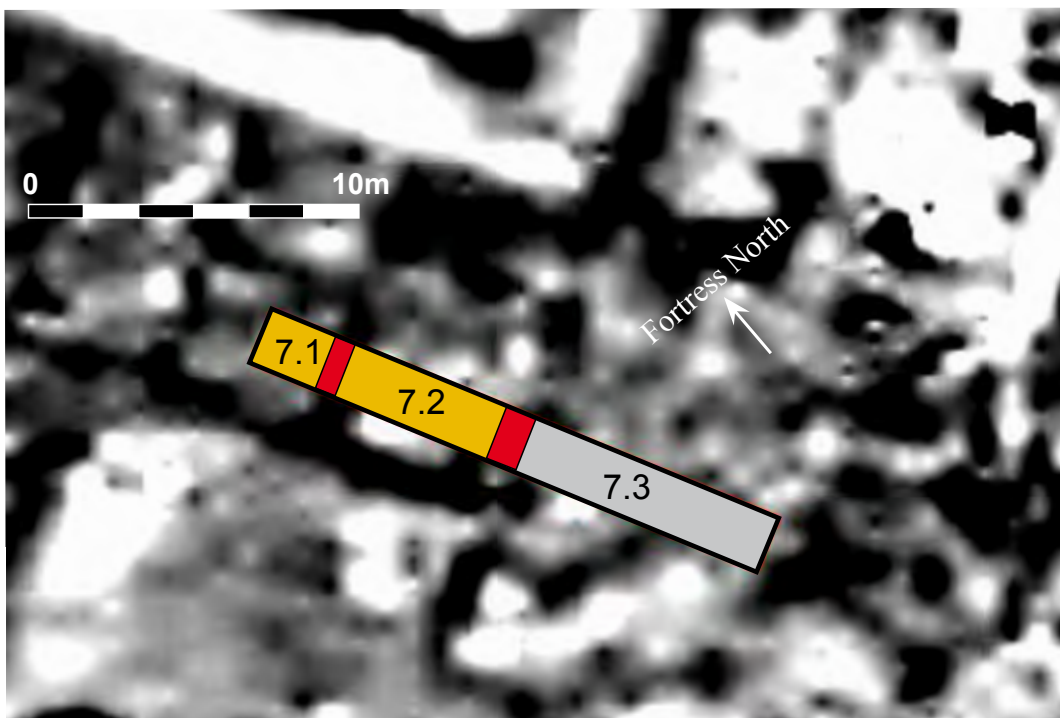


Fig. 65. Trench 7 showing walls and surfaced areas superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion



Fig. 66. Trench 7 fully excavated, from west

tile fragments (738), which also acted as bedding for the concrete surface (714) that was part of the only floor that this room had been provided with. Several *pilae* from a hypocaust were arranged in rows on top of the concrete, which sloped downwards from north to south and was covered by a patchy layer of burnt material, presumably from the firing of the underfloor heating system (Fig. 68). The concrete extended to the eastern wall of the room, but stopped some 0.6m short of the western wall and it is possible that this space would have been filled by columns of box flue tiles running up the inside face of the wall.

At total of 24 *pilae* and mortar bases for seven more were uncovered in the exposed part of room 7.2 (718), while the material that subsequently filled the room contained numerous bricks and stones from other disturbed *pilae*. The *pilae* had been arranged in rows of nine across the room and each surviving *pila* consisted of a square brick on a small mortar spread, some of which had an irregular flat piece of stone mortared on top. None of the second tier of stones had mortar on their upper surfaces and it is not certain how high the *pilae* originally would have been. It seems unlikely that the space beneath the raise floor was only some 0.12m deep, but the absence of mortar on the stone is certainly intriguing. The infilling deposits also contained fragments of large square or rectangular ORS slabs that presumably had been laid

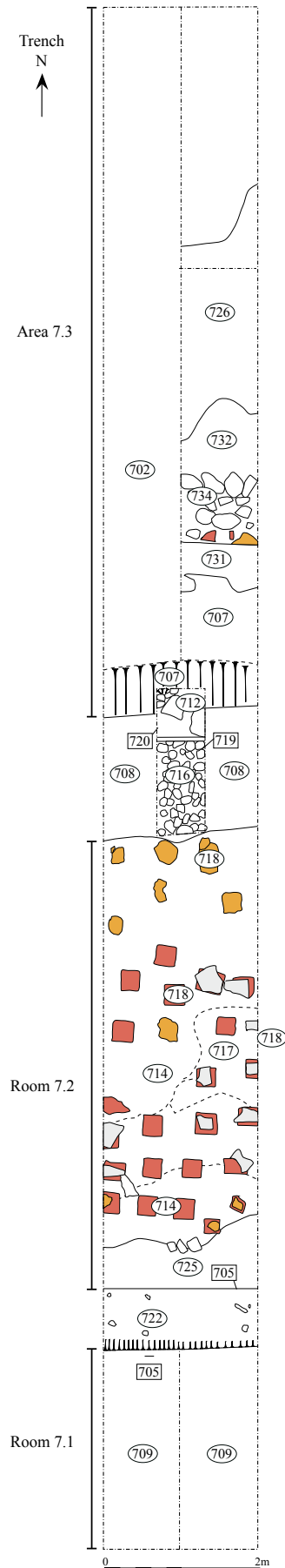


Fig. 67. Final plan of Trench 7



Fig. 68. Hypocaust in room 7.2 showing bases of pilae (718) on concrete bedding (714). Photograph taken from south



Fig. 69. Painted plaster overlying the hypocaust pilae in room 7.2



Fig. 70. Half-section through room 7.1 from east, showing levelling deposit (730), stone and brick bedding layer (729), followed by an *opus signinum* surface (709)

over the *pilae* (the largest piece had bevelled edges and mortar adhering on one side). The loose bricks and slabs were found among large quantities of decayed mortar that must have formed the floor's surface when laid over the slabs, but which had been broken up when the slabs were later removed. These deposits also produced numerous pieces of plaster painted with various colours, including red, yellow and blue, and the heated room's walls seem to have been decorated with diamond patterns and floral motifs (Fig. 69).

The interior of room 7.1 also had been raised above the existing ground surface (layers (737) and (730)), though exactly by how much is unknown as it was not possible to examine the deposits to their full depth in this part of the trench. Again a mixed layer of stones and brick fragments (729) lay above these and below the room's floor surface, which this time consisted of *opus signinum* (709) (Fig. 70).

Area 7.3

Area 7.3 covered half of the trench from the robbed eastern external wall. The latest surface here was approximately 0.9m below the floor in room 7.2 and consisted of compacted cobbles (736), which suggests that this part of the trench lay outside a building, perhaps a road or alley through the *Southern Canabae*. Above the cobbles a series of rubble layers interspersed with deposits containing animal bone, pottery and oyster shells appears to indicate the dumping of rubbish against the eastern wall of the courtyard buildings (712/726/732/739/740),

though whether this occurred while the buildings were in use is not certain.

Later activity in 7.3 is evidenced by a north-south linear stone feature (731) that partly overlay some of these rubbish dumps and might be a poorly constructed dry-stone wall. It was difficult, however, to understand the nature of this arrangement of stones in a narrow evaluation trench and it could be that the feature derives from the decay or demolition of the neighbouring building.

As previously described, the in situ *pilae* in room 7.2 were covered by the disturbed remains of the hypocaust floor (717), including mortar, plaster (some painted), broken bricks and pieces of ORS slabs, which presumably had to be broken up in order to remove the underlying slabs. This was overlain by a layer of broken roof tiles and stone that suggest decay or the demolition of the building (710), after which the eastern external wall was robbed (trench [720]). Stones (703) on top of the floor in room 7.1 (709) indicate a period of decay before the building collapsed or was demolished, though the western internal wall appears to have been robbed at a later date.

In area 7.3 outside the building, the rubbish dumps on top of the last surface and the possible wall were all sealed by a series of silty deposits (primarily 728/726/727), containing pieces of brick, tile and stone, that eventually raised the level of ground here almost to the same height as further west. Thin topsoils covered Trench 7 beneath the turf (701/702).

Trench 8

Trench 8 was oriented northwest to southeast across the large apparently aisled building on the eastern side of the first courtyard in zone 3 (Fig. 71). The trench revealed three internal areas of the building, at least one of which had been furnished with an *opus signinum* floor, while two underwent later alterations. An extensive external area was exposed at the southern end of the trench. The Roman period deposits were found between 0.15m and 0.45m below the modern ground surface and were very well preserved (Figs 72 and 73).

The building had been raised above the surrounding ground level and the discovery of a possible step on its southern side indicates the building was accessed from the large courtyard in this direction. There was little evidence for significant post-Roman activity in Trench 8. The provisional stratigraphic matrix for Trench 8 can be found in Appendix 1.

CONSTRUCTION AND OCCUPATION

Area 8.1 – possible open area with step and drain

The southernmost 7.5m of Trench 8 appears to have been part of a single external space, though at first glance the archaeology within the trench does not appear to coincide with the gradiometer results that suggested this area included two wide corridor-like structures parallel to the

adjacent building. It was assumed before the excavation that these were either internal ‘aisles’ of the building or possibly porticoes around the courtyard to the south, yet no sign of the presumed east-west masonry wall separating the two corridors was identified during the excavation. This is possibly because a wall lies deeper than Trench 8 was excavated, though it is more likely that the geophysical anomaly was caused by a concentration of charcoal and other burnt material that might represent the upper fill an unexcavated linear feature (perhaps the remains of a timber wall).

Instead, the entire southern part of Trench 8 consisted of a series of compacted mixed orange-brown silty clay layers, primarily (846) and (856), that appear to be the latest ground level in this part of the complex (see Fig. 72). There is no indication that this space was paved or provided with any form of durable surface, while water from a drain that ran beneath the adjacent building seems to have flowed directly out onto this area where it would have simply soaked into the ground. On the basis of the excavated evidence it is suggested that this part of the complex was an external area and was connected to the courtyard rather than the aisled building, though only further excavation will confirm this.

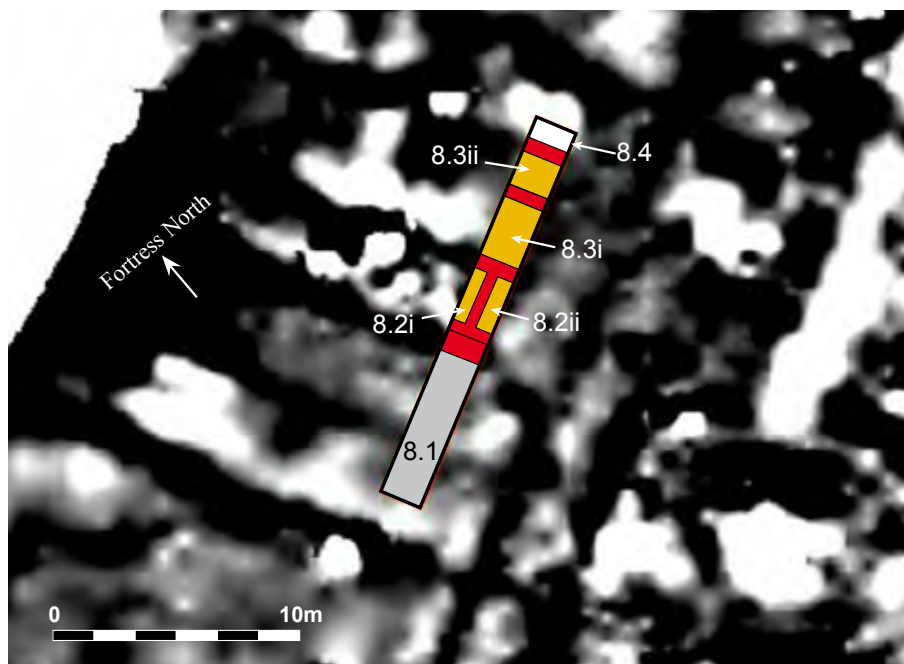


Fig. 71. Trench 8 showing walls and surfaced areas superimposed over gradiometer results. Numbers refer to ‘Areas’ as described in the trench discussion



Fig. 72. Trench 8 from south, fully excavated

The building's southern external wall was 0.50m wide and had been surprisingly badly constructed [815] (Fig. 74). Only two courses of this wall were visible in the trench and there was no sign that the masonry had been bonded with mortar (the mortar of the other walls survived reasonably well so it is unlikely that the bonding in [815] had simply eroded away). Butting up against the southern face of this wall was a 1.1m - 1.2m wide stone platform consisting of a single course of large flat stones and also seemingly unmortared [826/829]. This was probably a step allowing access from the courtyard into the interior of the building and it is possible that this feature ran along the full length of the front wall. A curved stone-lined drain [825] had been built into both the wall [815] and platform [826] which channel to water, presumably from the eastern end of the building, into the adjacent open space via a V-shaped outlet made from fragments of broken *tegula* (possibly part of a single tile). The *tegula* pieces had been carefully selected and deliberately positioned to reduce splashing, while crude sloping faces of stones and tile were found to either side of the drain opening (Fig. 75).

The poor quality of the construction of these features suggests that wall [815] was not intended to be load-

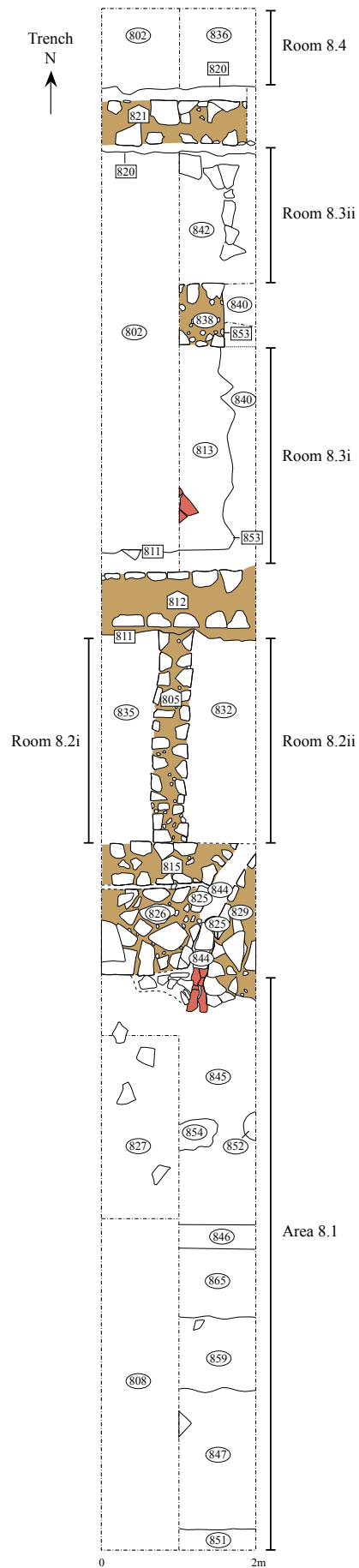


Fig. 73 Final plan of Trench 8



Fig. 74. Southern narrow external wall of building [815] and broad step (826/829) from external Area 8.1 (left). Drain (825) cuts through both the wall and step. Taken from the east



Fig. 75. Outlet of drain (825), consisting of broken tegula. Taken from the south

bearing and it is difficult to imagine that this wall and the step formed the building's main entrance. Later decay or demolition deposits from Areas 8.2 and 8.3 produced a number of segmented bricks, each one quarter of a circle, that indicate the presence of brick-built columns somewhere in this part of the building. While the original location of these columns is not known, the external wall [815] is perhaps the best candidate in Trench 8 for a colonnaded wall. The presence of the rudimentary drain that would have deposited large quantities of water from the step directly into the courtyard suggests that this was most likely a utilitarian area where ornamentation was not a major concern.

Areas 8.2, 8.3 and 8.4 - the aisled building

The part of the building contained in the central and northern parts of Trench 8 included three internal spaces separated by east-west walls, all of which had been robbed to below the levels of the latest floors. The southern space 8.2, bounded to the south by wall [815] and to the north by the wall [812], was 2.75m wide, the central space 8.3 between [812] and the next wall [821] was 5.5m wide, and only 1.2m of the most northerly space 8.4 was exposed in the trench (the geophysical results suggest that this part of the building was probably as wide as 8.3). Walls [812] and [821] were more solidly built than [815] with neatly dressed facing stones of ORS bonded with durable mortars (the cores of both walls contained fragments of CBM). It is noteworthy that the middle wall [812] was wider than the walls to either side (0.7m compared to 0.55-0.60 m), and it is possible that the weight of the roof was supported on this wall or that this part of the building was taller.

Area 8.2 was divided into two by a slightly crooked north-south mortared wall [805] that ran between walls [815] and [812], but was not bonded to them (Fig. 76). The wall was 0.46m wide and consisted of a core of rubble and large pieces of broken roof tile between faces of roughly cut ORS, some of which still had lime mortar adhering to them. The wall was not constructed with foundations, but was simply built on top of an existing surface and it appears that it was a later addition to the building inserted to create separate rooms 8.2i and 8.2ii (the geophysical results suggest that this southern part of the building could have consisted of a row of rooms). The wall was associated with poorly-preserved *opus signinum* floors in the two rooms (832/835), while the presence of patches of lime mortar on both faces of [805] suggests that both rooms were rendered (no evidence of painted plaster was recovered).

To the north the wider Area 8.3 had also been subdivided into two, though here the additional wall [838] ran parallel to the direction of the building (i.e. east-west) creating smaller spaces some 2.9m and 2.2m wide (8.3i and 8.3ii respectively). This wall was 0.83m wide with a rubble and tile core and also had been built directly onto

an existing surface without foundations, again suggesting a later alteration to the layout of the building. Only a short length of this wall was exposed in the trench and it appears to have been originally bonded to, or butted against, a similarly shallow north-south wall that has since been completely removed but whose presence is shown by the robber cut [853] along the eastern trench edge (Fig. 77). This cut was only found in 8.3i indicating that in its later phases this part of the building's central 'aisle' consisted of rooms perhaps accessed from a narrow corridor (8.3ii). The geophysical results have identified other possible internal divisions in this 'aisle' further west. The latest surfaces in both excavated areas of 8.3 consisted of thin deposits of compacted pinkish clay (813 and 842) suggesting that these spaces were provided with rudimentary beaten clay floors. Area 8.3ii was excavated to a level below the latest phase and here a series of flat stones, possibly deliberately laid, might suggest an earlier stone floor (842).

DECAY AND ROBBING

Overlying the uppermost clay surfaces in area 8.1 was a thick layer of clayey silt containing large quantities of broken roof tiles and some rubble (824/827), which presumably derives from the removal of the adjoining building's roof. Within this deposit was a curvilinear arrangement of faced stones (823) abutted by stacks of possibly deliberately placed broken bricks and roof tiles (828) (Fig 78), perhaps indicating activity of some kind in this area during the period of the building's abandonment (it is also possible that this feature relates to the drain mentioned previously). Above this were various rubble deposits related to the collapse or demolition of the building (there was more roof tile in this part of the trench that above the building to the north) and topsoil.

The floors in Areas 8.2 and 8.3 were overlain by a series of deposits containing quantities of degraded plaster, mortar and CBM fragments that must have originated from the building's abandonment and dereliction. It was from this level that cut [853] to rob the later wall dividing 8.3 was noted, which if correct indicates that some of the building's internal walls were being dismantled while the superstructure was still standing.

Thick layers of dark silty soil with large quantities of building rubble and broken roof tiles (the tile was concentrated in the central and southern parts of the trench) lay on top of these deposits, including (839), (804/806) and (808/822). These rubble deposits were cut by flat-bottomed and vertical-sided trenches for the robbing of the major east-west walls ([820], [811] and [814] ran along walls [821], [812] and ([815] respectively). The fact that wall [805] was not robbed suggests that it had been partly dismantled already (or had collapsed) and was not visible when the robbing took place. This, combined with the absence of large quantities of building stone in the upper parts of the trench, indicates



fig. 76. Wall [805] separating rooms 8.2i (top) from 8.2ii (bottom). Taken from the east



Fig. 77. Section of wall [838] from the east. The wall separated rooms 8.3i (left) from 8.3ii (right), and probably butted against a north-south wall that has been robbed (edge of robber trench [353] cuts the clay surface in 8.3i)



Fig. 78. Arrangement of stones and CBM in Area 8.1

perhaps that the major robbing event occurred sometime after the building's demolition. A rubble layer with CBM inclusions (807) post-dated this robbing event in the southern end of the trench, which lay beneath the topsoil (801).

Trench 9

Trench 9 was the most northerly of the trenches excavated in 2011 and was positioned across the full width of the narrow northwest-southeast aligned building that lay between the western courtyard of the *Southern Canabae* (zone 3), and Building D excavated by Nash-Williams in the 1950s. The trench exposed two raised rooms or corridors, provided with *opus signinum* floors and walls decorated with painted plaster, between two probable external areas (Figs 79 and 81). The deposits associated with the building's use and demolition lay no more than 0.3m below the modern ground surface and were remarkably well preserved (Fig. 80). Ruts caused by modern agricultural vehicles passing over this part of the field were shown to be actively cutting into the Roman archaeology in the southern part of the trench. The rooms or corridors of the building were considerably higher than the surrounding ground level and had been clearly raised with substantial quantities of levelling material. The absence of steps or other means of entering the building from the north and south indicates that access

into and through the building itself was gained from its short eastern and western sides. The excavated evidence combined with the gradiometer results suggests that the narrow building could have been the rear wing of the monumental Building D whose entrance opened onto the amphitheatre.

Trench 9 produced very little Medieval or modern material, suggesting that the Roman building was the first and last phase of significant occupation in this part of Caerleon. The provisional stratigraphic matrix for Trench 9 is located in Appendix 1.

CONSTRUCTION AND OCCUPATION

Rooms 9.2 and 9.3 - the 'corridor' building.

The east-west walls of the 12m wide building had been robbed either to their lowest courses or their foundations. Although the southern external wall [931] had been completely robbed to its cobbled footings, these showed that it was considerably wider than the northern external

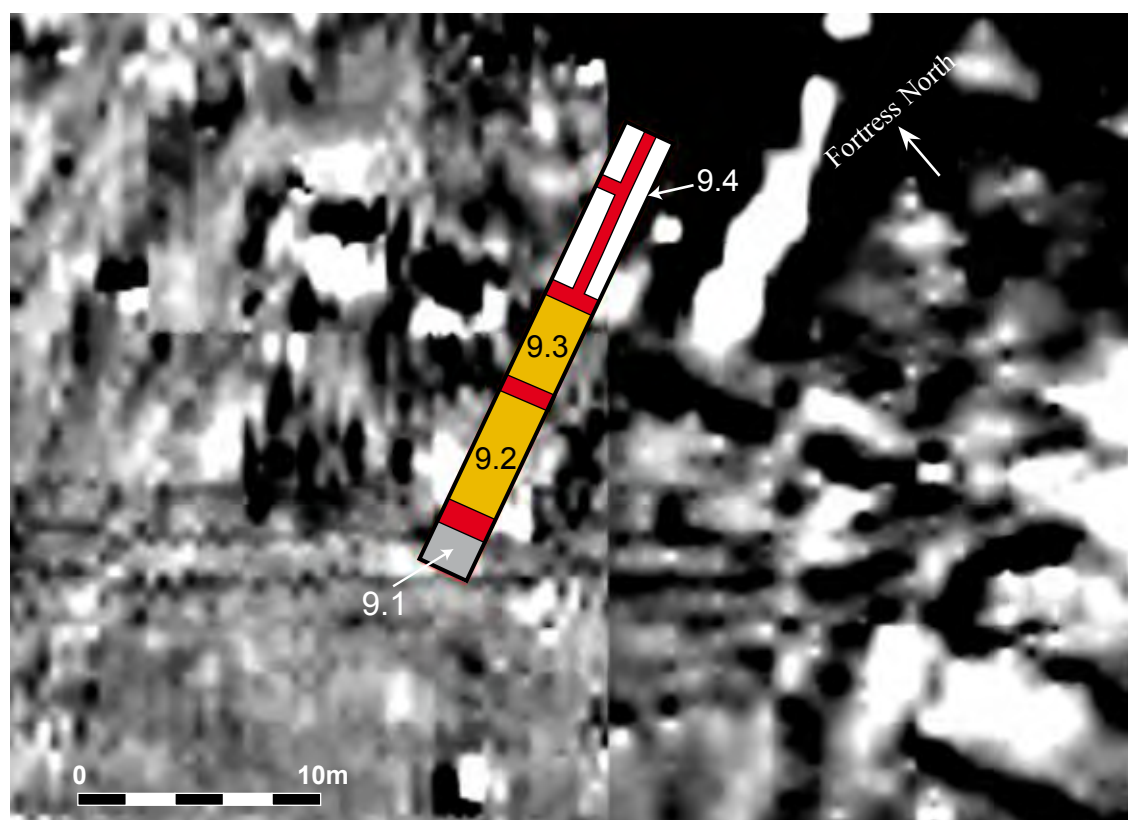


Fig. 79. Trench 9 showing walls and surfaced areas superimposed over gradiometer results. Numbers refer to 'Areas' as described in the trench discussion



Fig. 80. Trench 9 fully excavated, from south

wall [917] (0.98m compared to 0.60 m), and it is possible that this was the main (rear) wall of the Building D complex. A third wall [918], 0.75m wide, divided the building longitudinally into two long internal spaces (at some 5m the southern, or rear, internal area 9.2 was wider than the northern internal area 9.3 which measured 3.7m wide). The lower courses of walls [917] and [918] had not been robbed and consisted of rubble cores between faces of roughly cut blocks of ORS bonded with orange sandy mortars.

Several unexcavated mortar deposits visible in the sides of the later robber trenches possibly relate to the construction phases of these walls. The robber trenches also showed that a series of substantial deposits had been dumped between the walls, particularly (936) in 9.2 and (940) in 9.3, to raise the interior of the building before the first the floors were laid. These deposits were up to 0.4m deep in 9.2, but decreased in depth from south to north within the trench as the builders worked with the natural slope of the ground on which the building was constructed.

The make-up in room 9.2 was overlain by a layer of medium-sized angular blocks of ORS (943), over which the concrete for the first *opus signinum* floor

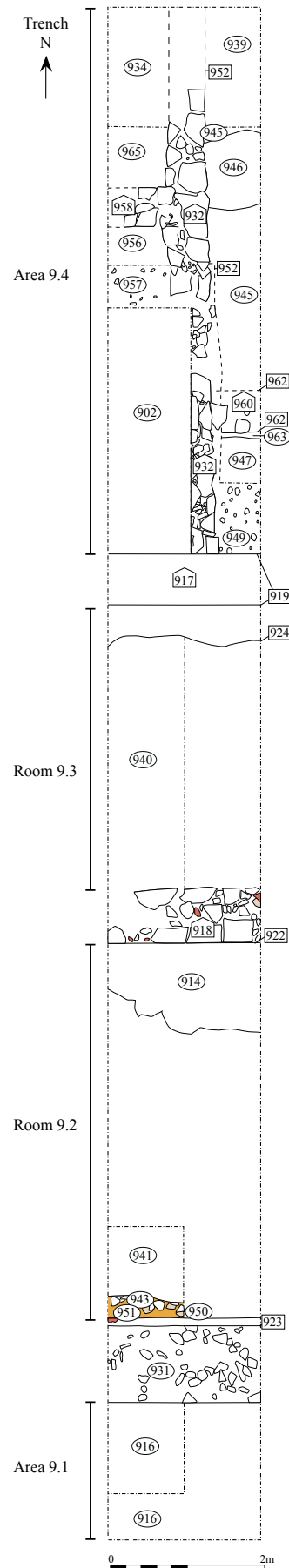


Fig. 81. Final plan of Trench 9



Fig. 82. Room 9.2 from south, showing earliest *opus signinum* floor (941) beneath second *opus signinum* floor (907/914)

(941) was poured and levelled (Fig. 82). This floor had been intensively used and the surface shown signs of considerable wear-and-tear. A possible accumulation layer consisting of fine brown silts (932) lay on top of this floor, which in turn was sealed by a second and final *opus signinum* surface (907/914). The same construction sequence was observed in area 9.3 where a layer of ORS (930/925) levelled the make-up deposits (940/926) and formed the base for an *opus signinum* floor (910). Unlike in 9.2, however, the floor in this internal area was not replaced and the original surface was used throughout the duration of the building's life (Fig. 83).

The evidence provided by the building's walls and the dimensions of its two internal spaces suggests that the narrower northern area 9.3 possibly served as a corridor, while the wider southern area 9.2 might have been subdivided by lateral internal walls (outside the 2m wide evaluation trench) to form a range of rooms with doorways from the corridor. Further excavation would confirm the precise layout of this building, but the geophysical results suggest that such an arrangement of corridor leading to rooms is certainly possible.

In area 9.3 most of the *opus signinum* floor (910) and its underlying rubble bedding (930/925) had been cut away by a large shallow pit [924] whose western side lay just within the trench and which extended for an unknown distance beyond the trench to the east. The purpose of this pit is unclear, but as it was sealed by fallen plaster

from wall [917] it must predate the decay or demolition of the building. Furthermore, the pit had been filled with dumps of sandstone and tufa before being deliberately levelled with deposits of sand and decayed mortar (929), as if the pit had been dug and filled while 9.3 was still in use within the standing building.

Area 9.1 - southern 'yard'

The southern end of the Trench 9 included a small part of what is likely to have been an open area behind the rear wall of the corridor building just described (the geophysical results identified a probable courtyard, some 25-30m wide and potentially up to 40m long, immediately to the southwest of the building).

Although the trench [923] that robbed wall [931] extended to a depth of more than a metre below the floors inside the building, no surfaces of this external area were visible in the southern face of the trench. Instead the sequence of deposits in area 9.1 consisted of a mixed layer of sandy silt (916) with large quantities of pottery, animal bone and occasional glass fragments, below a similar deposit containing numerous small finds as well as rubble and CBM fragments (908). These probably represent episodes of rubbish dumping followed by the accumulation of debris from the building's decay and demolition. Therefore, the ground level of the courtyard must lie beneath these, although how much lower is uncertain. This demonstrates the extent of the terracing in this part of the *Southern Canabae* that was required to



Fig. 83. Room 9.3 from east, showing half-sectioned pit [924], and opus signinum floor (910) on right

create a platform for the corridor building, and the height difference and the absence of steps must mean that the building was not accessed from the southern courtyard.

Area 9.4 - northern area

The area to the northeast of the corridor building in the northern part of Trench 9 was also considerably lower than the corridor building. The trench was excavated to a depth of 1.2m below the modern ground level and as no substantial surfaces had been observed at this point it is uncertain, therefore, if this part of the trench was inside another building or had been an external area.

Three connected walls were discovered in area 9.4 that were part of a structure of some kind (Fig. 84). These were narrower and more poorly constructed than the building's walls, consisting of ORS blocks of various sizes bonded with a yellow sandy mortar, but without a consistent rubble core. A north-south wall [932] extended from the north wall [917] of the corridor building and continued northwards beyond the end of the trench. This wall varied in width from 0.5m to 0.6m and was not quite straight along its observed length. Unusually, it was bonded into the lower courses of [917] but not the wall's two uppermost surviving courses, suggesting either that it had supported a timber superstructure or, perhaps more likely, that it was a sleeper wall for a colonnade or portico. A second wall [958] at right angles to wall [932] extended for an uncertain distance eastwards, and the fact that these walls were bonded together shows that they had been constructed at the same time. A possible third wall

[960] may have run perpendicularly eastwards from wall [932], though only a short length of it was included in the trench and the evidence for this wall is less convincing.

A series of brown and orange sandy layers – including (945/946/947/949/95/965) - butted up to the lower courses on both sides of walls [932] and [958], and these must have been deposited while the structures formed by these walls were standing. These layers gradually became shallower to the north as the pre-existing ground surface sloped upwards, though whether they represent construction activity or surfaces is unclear.

The north-south wall [932] continued beyond the northern end of Trench 9 towards the monumental Building D excavated by Nash-Williams. Lying immediately west of the amphitheatre, this building was oriented on the same alignment as the *Southern Canabae* and its northwestern side included a row of rooms that apparently head directly towards Trench 9. It is possible, therefore, that walls [932] and [958] are a continuation of this range of rooms and that Building D extended as far as the corridor building described previously. If this is indeed the case, the position of wall [958] suggests that the rooms, were they of equal size, would have been approximately 4.3m wide.

DECAY AND ROBBING

Rooms 9.2 and 9.3

Dumps of painted wall plaster (909) in the northern part of room 9.3 lay on top of the *opus signinum* floor



Fig. 84. Area 9.4 from north, showing walls [932] and [958]

(910) as well as the in-filled pit [924] (Fig. 85). Red and white were the predominant colours on the plaster and, although fragmentary, it appears that the decorative scheme comprised red lines forming squares or rectangles on a white background. It is most likely that this had decorated the internal face of wall [917], but it is not certain whether the plaster fell while the building was still standing (presumably no longer in use and partially derelict), or during the robbing of the building. Similarly fragmentary deposits of painted wall plaster (913) were found overlying the floor (914) in room 9.2 close to wall [918], indicating that this space had been decorated too.

Layers of mixed ORS and tufa rubble (some blocks with mortar still adhering to them) in a dark sandy matrix overlay the dumps of collapsed wall plaster in both rooms 9.2 and 9.3 (904 and 906 respectively). These were then cut by robber trenches that removed the lower courses of the building's two external walls [917] and [931] as well as its internal wall [918]. All of the lower courses of the southern external wall [931] had been removed and the robber cut for this wall [923] bottomed on its cobbled foundations at just over 1m below the latest Roman floor surfaces. Walls [917] and [918] had not been completely robbed and the lowest courses survived above their

foundations in trenches [919] and [922] respectively. The fills of these robber trenches contained large quantities of building debris as well as other material including pottery, and the building was overlain by shallow silt deposits including concentrations of medium-sized ORS rubble mixed with quantities of roofing material and decayed mortar.

Area 9.4

In the northern part of the trench dark silt deposits (929/934) overlay the sandy layers around the walls, and they also appear to overlie the uppermost surviving courses of north-south wall [932] (possibly supporting the observation that this had been a low sleeper wall that was no longer in use when these silts were deposited).

Although the evidence is not entirely clear, it appears that a shallow cut [952] along the wall [932] closest to the corridor building indicates that even this low wall had experienced some robbing, though this activity must have occurred before deposits (935/920) and (902) were laid down as these seal the uppermost fill of the robber trench. No evidence for robbing was noted for the short section of wall [958] within the trench. Layers (935/920) produced large quantities of animal bone, pottery, shell

and charcoal, suggesting that the area immediately north of the corridor building was used for the disposal of rubbish after the structures formed by walls [932/958] had gone out of use or been robbed away. Trench [919], associated with the robbing of the corridor building's northern wall [917], was cut from the level of layer (902) indicating that the structures in the northern part of Trench 9, whatever form these took, went out of use and were robbed earlier than the building itself.

The uppermost layers in the northern part of the trench consisted of thick deposits of ORS rubble with some fragments of CBM lying directly below the topsoil. The stones here were generally much larger than those found overlying the corridor building where more roof material was recovered.



Fig. 85. Area 9.3 from west, showing collapsed wall plaster (909) above the opus signinum floor (910). The foundations of wall [917] are visible on the left of the photo

Artefact & Environmental Assemblages

The 2011 excavations produced a typically large and varied range of material culture and environmental evidence. At the time of writing the work of conserving, identifying and describing this material is on-going; Adrienne Powell has completed the and assessment of the animal bone, Drs Peter Webster and Mark Lewis have finished the preliminary identification of the pottery assemblage, while the metal and other small finds are scheduled to undergo conservation in the laboratories at Cardiff University from the Autumn of 2012. The pottery assemblage is presented in the next section, while the following discussion summarises the extent and nature of the various categories of non-ceramic finds, including an initial examination of the patterns of deposition between the nine trenches.

SMALL FINDS / REGISTERED ARTEFACTS

A total of 475 objects classified as small finds were recovered, including a wide range of artefacts of copper alloy, iron, lead, glass, worked bone, ceramic, and jet or shale. All stratified find spots were recorded in three dimensions and the distribution of small finds between the nine trenches is shown on Table 1 and Fig. 86.

Trenches 1 and 5 produced the largest collections of small finds, though probably for different reasons. In Trench 1 the majority of artefacts came from deposits used to raise and level the buildings on the east side of the *tegula* wall (rooms 1.1 and 1.2), while in Trench 5 the rubbish deposits overlying the latest Roman floors in rooms 5.3 and 5.4 produced the greatest quantity of small finds from this building. Although the processes that led to the deposition of large numbers of objects in Trenches 1 and 5 were different, it is likely in both cases that these artefacts were not directly associated with the functions of these buildings. Iron, lead and glass finds were particularly common from Trench 1, whereas glass and copper alloy objects were found more frequently in Trench 5. Elsewhere, a surprisingly large assemblage of glass was recovered from Trench 2 (though not all of it was Roman), Trenches 3 and 4 produced very few finds, while the objects from Trench 9 included relatively large quantities of iron as well as coins.

Although the small finds are yet to be cleaned and conserved, it is apparent that the assemblage includes far fewer military finds that was the case in Priory Field. Instead, the majority of registered artefacts from

	Total	Trench 1	T 2	T3	T 4	T 5	T 6	T 7	T 8	T 9
Coins	20	4	1		2			2	2	9
Copper alloy*	94	24	1	2	7	23	9	7	12	9
Iron	83	32	1	1	4	14	10	4	3	14
Lead	92	40	5	1	7	11	10	4	11	3
Glass **	134	34	14	4	10	30	11	19	7	5
Antefixa	4					1		3		
Ceramic ***	10	5				3			1	1
Bone	10				1	5	1	3		
Jet / shale	2		1			1				
Stone	25	6	1		1	6	1	6	3	1
Intaglio	1			1						
Total	475	145	24	9	32	94	42	48	39	42

Table 1. Distribution of small finds / registered artefacts (by count)

* non-numismatic objects

** beads and vessel glass

*** decorated samian and graffiti

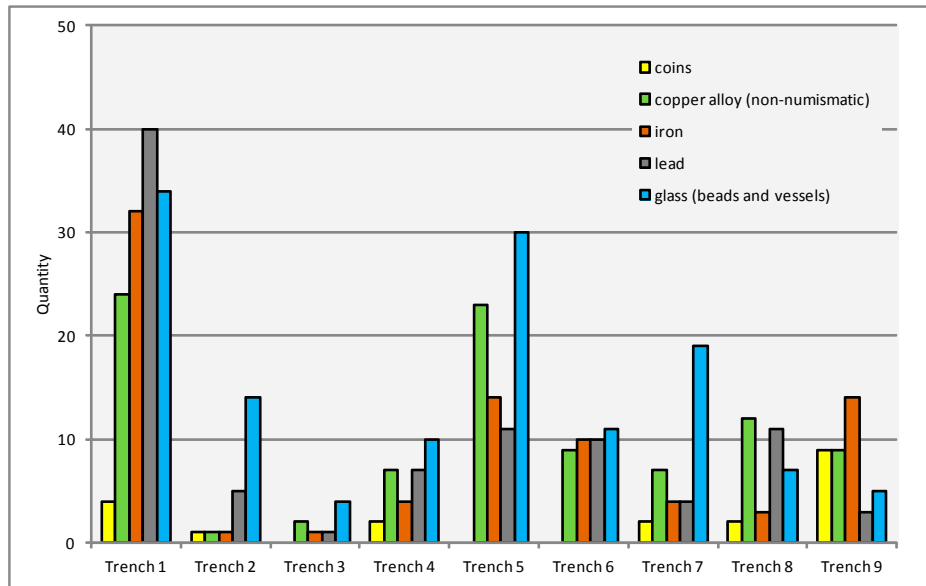


Fig 86 . Distribution of small finds from the Southern Canabae

the *Southern Canabae* seem to be personal, domestic and craft items. This perhaps reflects the activities that took place in the complex, or possibly the domestic and industrial nature of the rubbish dumped into the abandoned buildings in Trench 5 and possibly elsewhere.

buildings produced greater quantities of such material, although even here there were significant differences between the material recovered. Trenches 1, 4 and 5, for instance, produced large assemblages of animal bone and pottery, while Trenches 6, 8 and 9 did not.

BULK FINDS

The material classified as bulk finds, and therefore not registered in the same way as small finds, includes pottery, animal bone, iron nails, non-vessel glass, metallurgical and glass slags, tesserae and clay-pipe. The distribution of these finds is shown on Table 2 and Fig 87, where it is apparent that different quantities of material were recovered from the nine trenches. In part this reflects the depth to which the trenches were excavated, but these patterns must also reflect the intensity and type of occupation in different parts of the *Southern Canabae* too. For example, Trenches 2 and 3 in the centre of the main courtyard building produced very little material at all, suggesting that this large open area was not used in a way that resulted in the loss of iron nails, broken ceramic vessels or animal bone. The trenches located within other

It likely that this is an effect of the various processes that formed the stratigraphic deposits within which this material was contained, such as the dumping of rubbish in rooms and spaces in Trenches 4 and 5 when these buildings were no longer in use. It is important to bear in mind, therefore, that the material recovered from the trenches could have originated elsewhere and does not necessarily refer to the original functions of the excavated buildings themselves. In Trench 1, however, much of the ceramic assemblage was recovered from levelling deposits within the buildings closest to the River Usk and this will be important when understanding the chronology of these buildings' construction and use. It is noteworthy that these deposits in Trench 1 produced similarly large quantities of metallurgical slags but relatively little animal bone, indicating perhaps that the material used to

	Total	Trench 1	T2	T3	T4	T5	T6	T7	T8	T9
Animal bone	4674	168	3		751	1810	227	1182	157	376
Ceramics	6882	1582	363	116	1472	2063	309	436	239	302
Iron nails	785	169	17	6	82	170	32	112	73	124
Glass*	1806	259	581	8	235	329	38	143	66	147
Slag **	15472	6978	616	687	1670	3195	1030	57	1099	140
Tesserae**	3105			25	851	1480	8	741		
Clay-pipe	94	1	11		7	8	2	1	17	47

Table 2. Distribution of bulk finds

* window and modern glass, by weight (g)

** by weight (g)

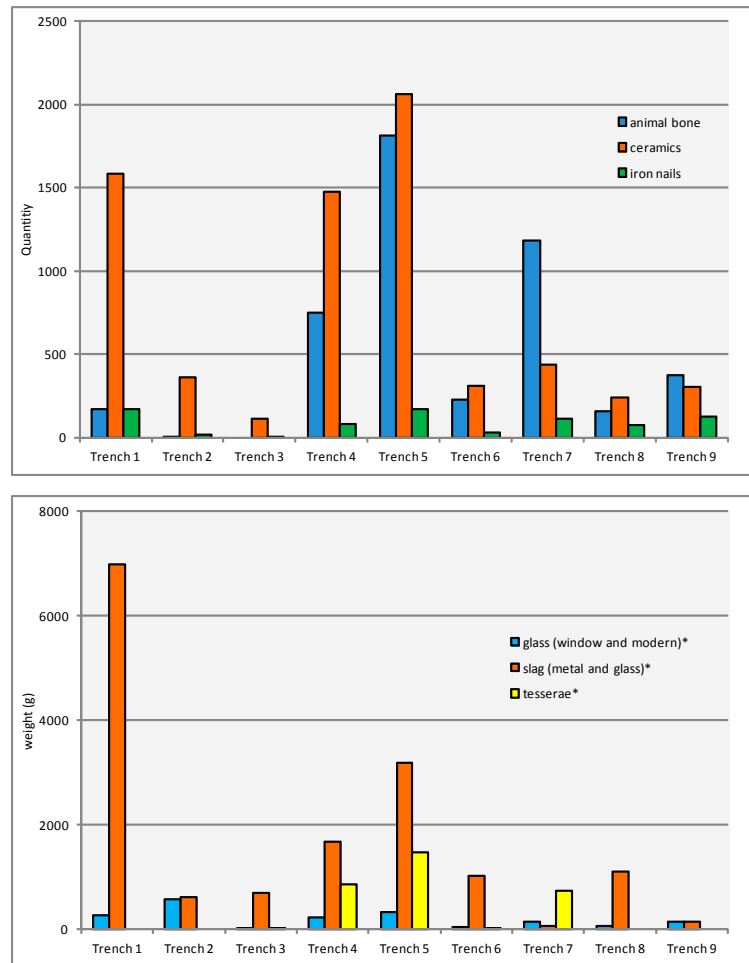


Fig. 87. Distribution of bulk finds from the Southern Canabae

raise the interior of these buildings may well have been brought here from an area where metalworking took place.

The discovery of tesserae from mosaic floors was limited to Trenches 4, 5 and 7. Those from 5 and 6 were small and predominantly black or white, which in the case of Trench 5 must have come from the disturbed tessellated floor partly revealed in the northern end of the trench. The two rooms exposed in Trench 7 were not tessellated (the hypocaust floor in room 7.1 was *opus signinum*), and it is likely that a mosaic existed in one of the adjacent rooms. In contrast, the tesserae from Trench 4 were larger, crudely fashioned, and all white or light grey. Again there was no trace of a mosaic in the trench, but the concentration of tesserae towards the northern end suggests a relatively unsophisticated tessellated floor close by.

CERAMIC BUILDING MATERIAL

Over three tonnes of brick and tile was recovered during the evaluation excavations. The distribution of this material by type between the nine trenches is shown on Table 3 and Fig. 88. Assuming that bricks and tiles will not have moved very far from where they had been used in walls and roofs, these reveal details of the buildings' original architecture as well as indicating the different histories of buildings once they were abandoned.

Tegulae and *imbrices* from roofs were most common

from Trenches 5 and 8, while almost non-existent from Trenches 2 and 3. In the latter cases the absence of roof tiles is presumably because the structures located in the open area of the main courtyard building either did not have tiled roofs or were not roofed at all. It is interesting to note, however, that smaller quantities of roof tiles were recovered from Trenches 1, 4, 6, 7 and 9, all of which exposed parts of Roman buildings that must have been roofed with terracotta tiles like those in Trenches 5 and 8. The differential recovery of *tegulae* and *imbrices* is likely, therefore, to be in part the result of some roofs being salvaged (Trenches 1, 4, 6, 7 and 9), while others appear to have remained in place until they collapsed and became part of the archaeology of the buildings they had once covered (Trenches 5 and 8).

Bricks were recovered from seven of the nine trenches, but are most common from Trench 7 where many of the examples found there must have been used in the *pilae* to support the heated floor. Trench 7 also produced several pieces of box flues that presumably were also used in the hypocaust, though box flue tiles were most common from Trench 5 where they appear to have been used to reinforce the barrel vault at the north end of the trench (the single complete box flue from Trench 5 was 0.39m long, 0.19m wide, 0.13m deep and with sides 0.02m thick).

	Total	Trench 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9
Tegula	1090	99	11	0.5	49.5	399.5	125.5	69	295	41
Imbrex	396	26	3.5		15.5	218	22.5	13	86	11.5
Brick / pila	217		1		40	32	2	96	22	24
Box flue	23.5				0.5	20.5		2.5		
Segmented circular tiles	33.5				0.5	3.5			25.5	4
Unidentified	1285.5	146	11.5	33.5	109.5	501	163.5	137	141	42.5
Total	3045.5	271	27	34	215.5	1174.5	313.5	317.5	569.5	123

Table 3. Distribution of ceramic building material by weight (kg)

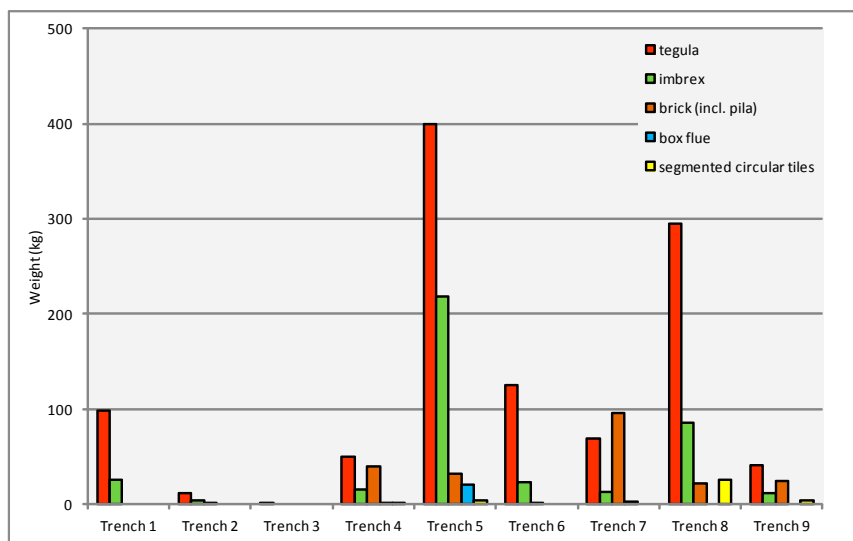


Fig 88. Distribution of ceramic building materials from the Southern Canabae

Several trenches also produced examples of segmented circular tiles, though they were most frequent in Trench 8. Each tile formed one quarter of a circle and they would have been laid in courses to build columns or engaged (half) columns. Trench 8 showed that at least two sizes of brick-built column were used in the *Southern Canabae*: the smallest had a radius of 0.175m and the bricks were 0.05m thick, while the largest had a radius of 0.24m and the bricks were 0.07m thick. Such segmented bricks are not a common feature of Romano-British architecture, military or civilian, and only a few are known from within the legionary fortress at Caerleon.

ANIMAL BONE¹

All bone was scanned and counted and the presence of ageing, sexing, and butchery data was noted, as were measurable specimens. Most of the bone was unwashed at the time of evaluation and hence some surface features such as shallow gnawmarks and fine cutmarks may

have been obscured. Vertebrae and ribs were counted as unidentifiable. Phasing and context information were not available at the time of evaluation hence all bone is treated as single phase.

There is a total of 4674 fragments in the assemblage (Table 4), excluding bone from the topsoil, of which 2159 fragments are identifiable. Most of the material comes from Trench 5 (39%), Trench 7 (25%) and Trench 4 (15%); these trenches also contained greater proportions of identifiable bone than the other trenches. The overall level of identification, at 46%, is quite high and suggests some retrieval bias.

The main taxonomic groups present are shown in Table 5. The major domestic species, cattle, sheep/goat and pig, comprise 49% of the identifiable assemblage. Of these, the most frequent species overall is pig (61%), although the frequency varies between trenches. No systematic recording of anatomical elements was made during evaluation, although foot bones, particularly metapodials, are notably common. Cattle is the next most abundant taxon overall (24%) and is particularly frequent in Trenches 8 and 9, even outnumbering pig in the latter. Sheep/goat makes a relatively minor contribution overall

¹ The following is an abridged version of Adrienne Powell's assessment of the animal bone assemblage (analysis was undertaken in the Osteoarchaeology Laboratory at Cardiff University).

Trench	Identified Bone	Unidentified Bone	Total	% ID
1	25	143	168	15
2		3	3	0
4	360	391	751	48
5	909	901	1810	50
6	79	148	227	35
7	598	584	1182	51
8	50	107	157	32
9	138	238	376	37
Total	2159	2515	4674	46

Table 4. Summary of the animal bone from the Caerleon Southern Canabae evaluations

(15%) and includes two goat specimens. A group of 46 sheep/goat bones from context (534) appear to be mostly from the same, juvenile, individual. Small numbers of equid, cat and dog bones are also present. The dog bones from Trench 5 include a partial skeleton of a dwarf dog comparable with a modern corgi reference skeleton, as well as an isolated tibia from a dwarf animal. Remains from a small, non-dwarf, canid either fox (*Vulpes vulpes*) or small dog are also present.

Wild mammals present include red/fallow deer (*Cervus/Dama*), roe deer (*Capreolus capreolus*), fox, hare (*Lepus* sp.), hedgehog (*Erinaceus europaeus*), water vole (*Arvicola terrestris*) and unidentified small mammal. Bird bones are unusually numerous, as a group outnumbering the pig remains; they are most abundant in Trenches 5 (43% of total identified) and 6 (46%). Bones of domestic fowl are the most prevalent, however, other species present include goose, duck, pigeon (*Columba* sp.), raven (*Corvus corax*) and medium and small passerines. A small amount of fish bone is present, concentrated in Trenches 5 and 6. Other species present include frog (*Rana* sp) and toad (*Bufo* sp), most of which occurred in a large (ca. 250 bones) concentration in context (706).

Butchery evidence is infrequent but may have been obscured by the unwashed state of most of the material. There are a few examples of worked bone in the form of sawn antler segments, a deer metacarpal with the distal end sawn through and a sawn segment of large mammal bone. Measurable elements are frequent as are ageable bones and jaws: the assemblage includes neonatal bones from cattle, pig and dog. Sexable fowl tarsometatarsi are frequent, sexable pig canines are present but less frequent. Some evidence of pathological conditions has survived. There is both charred and calcined bone present, and much bone has a dark colour, although it is unclear whether this is due to charring or staining. Carnivore and rodent gnawing damage was present.

Comparison of this Southern Canabae evaluation animal bone assemblage with previously published groups from Caerleon (Hamilton-Dyer 1993, O'Connor 1986) highlights several interesting features. Firstly, the predominance of pig bones in contrast to the assemblages from the *Scammum Tribunorum* and the Legionary Fortress Baths where cattle predominate (save for the smaller samples from drains in the latter where sheep/goat bones are more numerous). Cattle bones were also the most frequent in the unpublished material from the

Trench	Cattle	Sheep/ goat	Pig	Equid	Dog	Other mammal	Bird	Fish	Other	Total
1	15	3	7							25
2										0
4	49	29	159	2		27	93	1		360
5	52	76	300	1	20	57	394	6	3	909
6	1	2	31	1		5	36	3		79
7	65	30	97	2	5	50	93	1	255	598
8	17	3	17			4	9			50
9	48	10	32	2	3	9	32	1	1	138
Total	247	153	643	8	28	152	657	12	259	2159

Table 5. Animal taxa present in the Caerleon Southern Canabae assemblage

recent excavations in Golledges Field. Perhaps related to the species profile is the low incidence of observed butchery in the evaluated bone: in both published assemblages cattle butchery is indicated primarily by chopmarks, whereas knife cuts are more prevalent in the sheep/goat and pig remains and these are more likely than chopmarks to have been obscured by the unwashed state of the current assemblage. Secondly, the frequency of wild mammal bones (7%) is greater than in the published material. Thirdly, the frequency of bird bone is remarkably high. Fourthly, the presence of dwarf dog bones: bones from small dogs were also noted in the Legionary Baths assemblage and at Caerwent (Noddle 1983), however, beyond describing them as lap-dogs little information about their morphology was provided and it would be interesting to compare these bones to see if different types can be identified.

Pottery¹

INTRODUCTION

All pottery (approximately 93.25kg) from the 2011 excavations has been examined and an archive list produced dividing the material by context and source and, where possible, giving 'spot dates' to individual vessels (quantification has been by estimated vessel numbers and by weight). The comments below are based on this archive list and a brief summary by context has also been produced (the quantified archive and synopsis are available from the authors on request).

Before making specific comments it must also be pointed out that the nature of a preliminary excavation imposes limits on the amount of information which can be deduced from the pottery recovered. The various trenches were not all of equal size making direct comparison between them difficult. Not all were excavated down to

century *floruit*. This is apparent if we show in histogram form all vessels to which more than a generalised date can be given (Fig. 89).

There are, however, differences between the trenches and we have, therefore, included a separate histogram for each trench below. When considering these it is important to remember that the yield per trench will vary according to its size and the depth of stratigraphy investigated. The total number of vessels specifically dated from each trench is as follows: Trench 1: 175; Trench 2: 51; Trench 3: 10; Trench 4: 156; Trench 5: 178; Trench 6: 40; Trench 7: 59; Trench 8: 28; Trench 9: 41. It will be clear, therefore, that Trenches 1, 4 and 5 are likely to provide the best indications of the pattern on the site as a whole and that Trench 3 can do little more than provide a glimpse of what may be there.

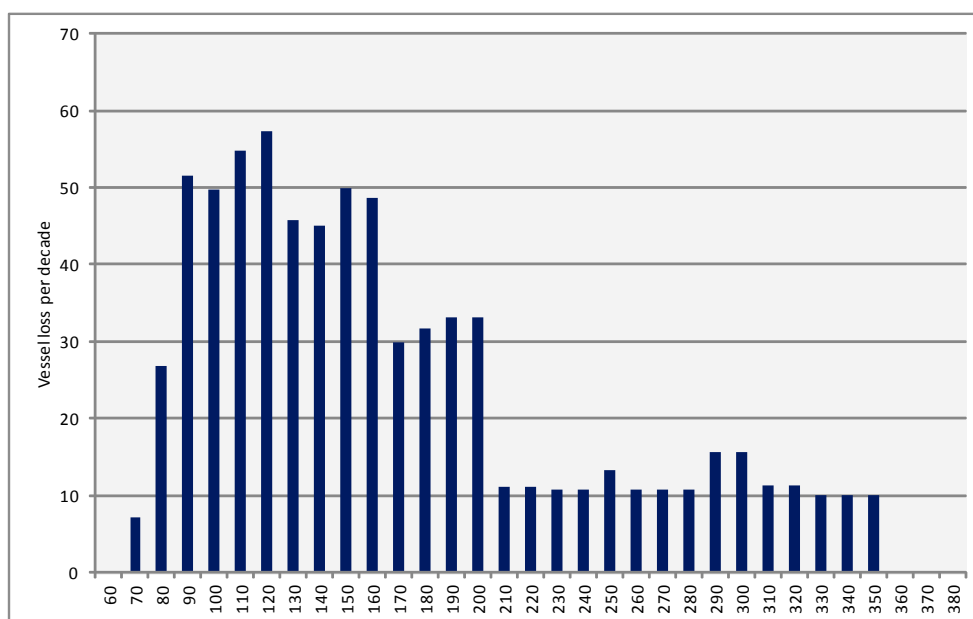


Fig. 89. Roman pottery from the 2011 Southern Canabae excavations

the natural subsoil, a factor which must have bearing on the chronological comments below. Nevertheless, a fairly consistent pattern does seem to emerge.

CHRONOLOGY

In general all trenches show a spread of pottery from the later first century to the early/mid fourth and with a second

Taken as a whole, the pottery includes some pieces from the very beginning of the Roman occupation of the fortress including examples both of the samian form 29 and the 'Hofheim' flagon type, both of which could have appeared with the first construction of the fortress and are unlikely to have been current much after the early 90s AD. However, all trenches show a preponderance

¹ The following is an abridged version of the authors' pottery assessment. These are preliminary comments based on a review of the entire pottery assemblage and the next step will be to consider the material in relation to the stratified grouping of contexts.

of late first and second century vessels and, thereafter, a diminution. Most areas have some vessels which belong to the later third to fourth centuries but the number of fourth century pieces is not such as to suggest occupation beyond the early to mid century and this is backed up by the absence of pieces which certainly belong to the second half of the century.

Looked at on a trench by trench basis we can see some variation across the extramural complex. Trench 1 has a preponderance of types from the period between the very late first century and the very end of the second (Fig. 90a). Thereafter, there appears to be some activity on or near the area up to the early/mid 4th century. Trench 2 figures are based on a much smaller sample, but there is an even greater concentration of late first to mid 2nd vessels and very little from any later period (Fig. 90b).

Trench 3 figures are based on a very small sample indeed but seem to mirror those from the nearby Trench 2 (Fig. 91a). The almost total absence of third century pottery from either trench is notable. Trench 4 figures are based on a more extensive collection but are almost entirely concentrated on the period from the late first to the very end of the second centuries (Fig. 91b).

Trench 5 yielded the largest collection of pottery and the most later (third and fourth century) material (Fig. 92a). There is again a late first to late second century peak but there are also significant amounts of third and early to

mid fourth century pieces (only Trench 7 shows a similar pattern). Trench 6 shows a clear early to mid 2nd century peak and a marked decline in activity after *c.* A.D. 200.

Trench 7 shows a similar pattern to Trench 5 but with a more even distribution of types between the early second and the early/mid fourth centuries (Fig. 93a). Trench 8 figures are again based on a small sample, but show a late first to mid second century peak tailing off across the remainder of the second century and with little thereafter (Fig. 93b). Trench 9 has comparatively more later pieces than most areas. The main floruit is again in the second century and, as with all areas, there is a third century dip. The increase in late third and fourth century pieces is, however, noticeable here (Fig. 93c).

We may note that the trenches are numbered across the site from east to west and it looks as if the main courtyard building and port (i.e. Trenches 1 to 4) saw little activity after the very end of the second century. Many sherds appear to have been moved around in the ground and only a few contexts appear to have produced near complete vessels. However, Trench 5 contexts (534-5) appear to be an exception and contain large fragments of vessels freshly broken when they entered the ground.

The shallow depth of topsoil produced, as one might expect, a number of contexts which look as if they may be disturbed. However, this is mitigated by the small quantity of Medieval and later pottery (far less than in

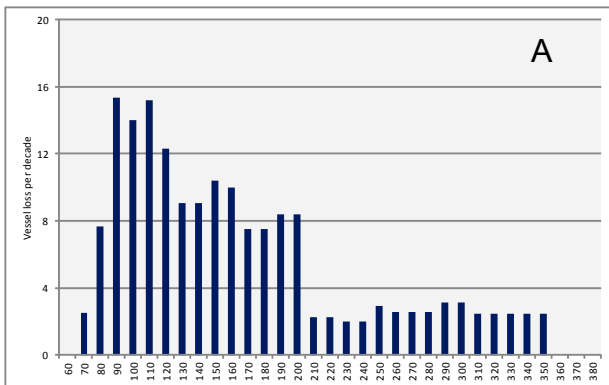


Fig. 90. Roman pottery from Trench 1 and Trench 2

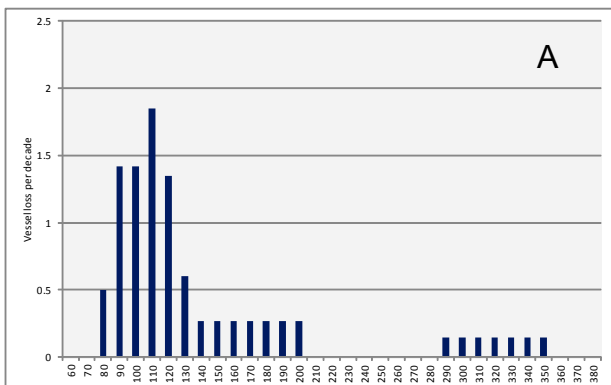
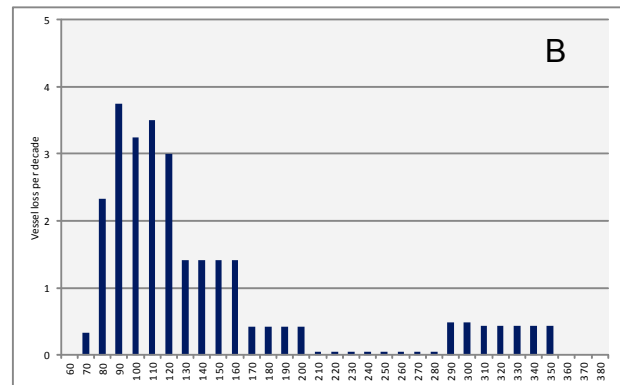
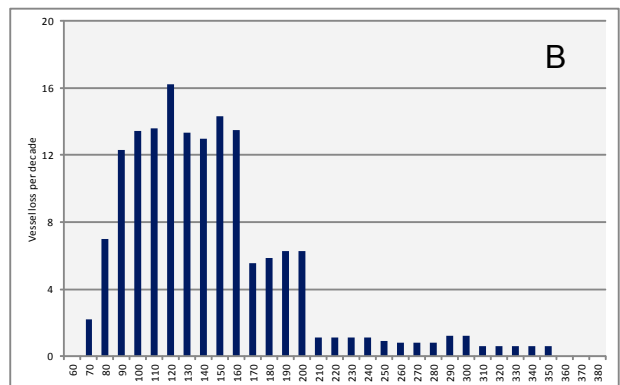


Fig. 91. Roman pottery from Trench 3 and Trench 4



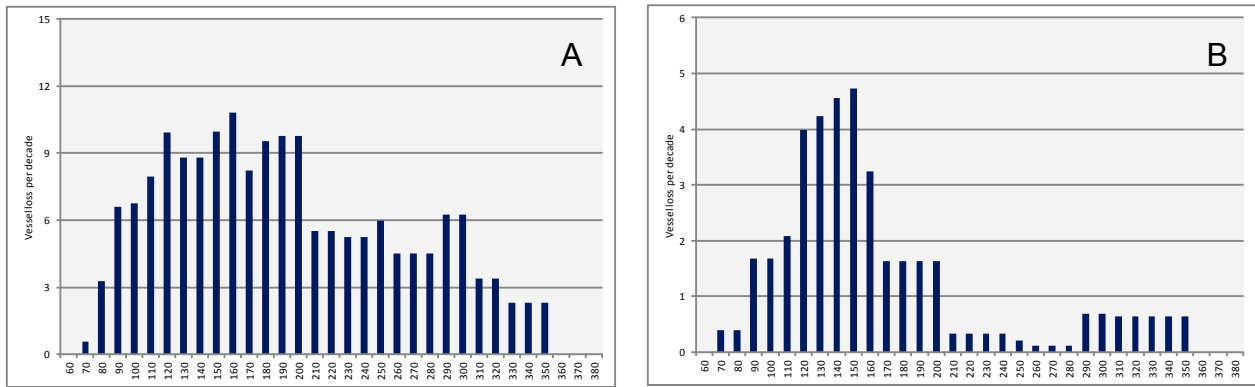


Fig. 92. Roman pottery from Trench 5 and Trench 6

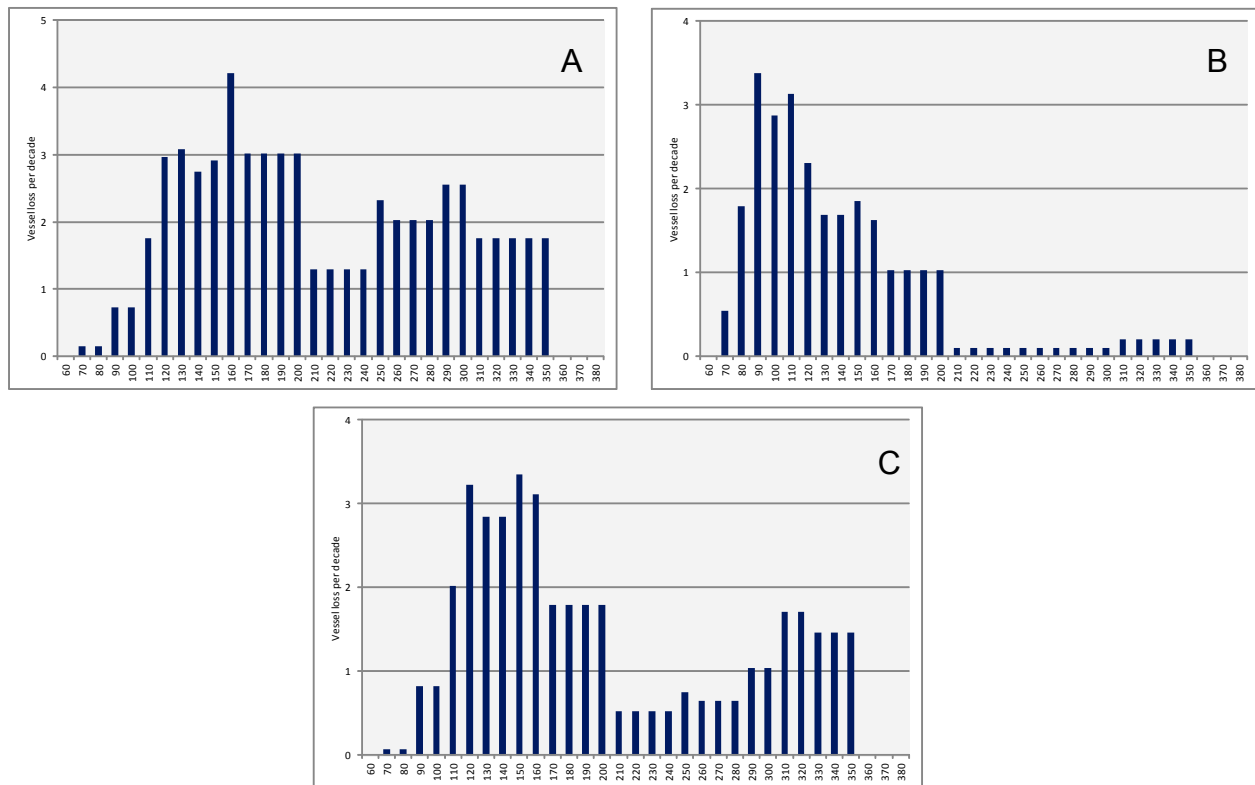


Fig. 93. Roman pottery from Trench 7, Trench 8 and Trench 9

the Priory Field excavations of 2008 and 2010). One may suggest that medieval disturbance was probably slight, perhaps because the area was rough grazing and not used for arable farming. There is no evidence of late medieval and early post-medieval activity but some for the period between the mid 17th and the 19th centuries, although it may be noted that this seems to concentrate in the area of the more northerly Trenches 8 and 9. The spreading of material from middens over this part of the site seems possible.

Prior to the 2011 season it was thought likely that the area being excavated had acquired its uneven appearance due to the spreading of spoil from the nearby amphitheatre excavations. This was clearly not the case but it remains true that photographs of the Wheeler excavations show

the light railway system leading in the general direction of the 2011 site and some spillage of amphitheatre spoil over the site cannot be entirely ruled out. There are a number of layers with suspiciously low numbers of rims, for instance, making the presence of pottery ‘weeded’ from the amphitheatre assemblage at least a possibility. It will be worthwhile to examine the contexts of these layers in due course.

SOURCES

With a few exceptions, the sources of Roman pottery from the 2011 excavations are as one would expect for a Caerleon site. There are some significant differences with the Priory Field material and some interesting presences and absences, so that a brief resumé of the main sources of pottery is worthwhile.

Finewares

As one would expect from a site with a second century *floruit*, samian forms a major component of the finewares. There are some South Gaulish pieces including a couple of form 29s, but only one Les Martres piece (Table 6). The remainder are mainly Central Gaulish but there are a few pieces of East Gaulish ware also.

Samian forms are, of course, more easily identifiable from very small fragments than most other pottery shapes and the figure of 189 vessels may be disproportionately high (approximately 25% of all vessels to which a firm date could be given). Within the samian assemblage

the numbers of decorated vessels seem low and disproportionately weighted in favour of Trench 1, as the breakdown on Table 7 makes clear.

The greater incidence of the early South Gaulish form 29 over the somewhat later South Gaulish form 37 in Trench 1 is unusual on any Caerleon site with occupation through into the second century and may indicate some early building in the vicinity. A representation of samian as a percentage of all pottery again makes clear that Trench 1 is exceptional, while the percentage of samian from the more westerly trenches seems low (Table 8).

SOURCE	FORM	T1	T2	T3	T4	T5	T6	T7	T8	T9	TOTALS
SG	18	2	4				1				7
	18R				1						1
	18 or 18/31	1	1								2
	18/31	3	2		3	1					9
	27	5	2		3	1					11
	29	5			1				1	1	8
	36	1	1		3	1					6
	37	4	3	1	2				1		11
	67		1								1
	78	1		1							2
	C.11	2									2
	cup		1		1						2
	bowl	1							1		2
LMdV	18/31				1						1
	33				1						1
	bowl			1							1
CG	18/31	2			1	1					4
	18/31 or 31	1				1					2
	27					1					1
	31	6				6	1	6		1	20
	31R	3					1	2			6
	33	3			3	3	1	3	1		14
	36		1				2				3
	37	12			5	2	4	2	1	1	27
	38	1			1	3		1	1		7
	45	1									1
	46	1				1					2
	72	1				3					4
	C11					1					1
	C15	1									1
	C21	1									1
	Cup	1									1
	Bowl	6	1		2	3	1	2		2	17
	Beaker					1					1
	Flagon	1									1
EG	31				1						1
	31R				1						1
	45									1	1
	C11					1					1
	Lud.Sb	2				1					3
	Bowl									1	1
TOTALS		68	17	3	30	31	11	16	6	7	189

Table 6 Samian ware from the 2011 excavations

SOURCE	FORM	T1	T2	T3	T4	T5	T6	T7	T8	T9	TOTALS
SG	29	5			1				1	1	8
SG	37	4	3	1	2				1		11
SG	67		1								1
SG	78	1		1							2
CG	37	12			5	2	4	2	1	1	27
CG	72	1				3					4
TOTALS		23	4	2	8	5	4	2	3	2	53

Table 7 Decorated samian from the 2011 excavations

The impression gained from sorting the pottery is that samian ware, and particularly decorated ware, is under-represented and one might postulate both that the nearby quays were not those over which samian was imported and that higher status residential structures were at some distance from the areas excavated. There is a certain preponderance of later forms also, with more Central Gaulish pieces (114) than South Gaulish (64).

Other finewares tend to reflect the late first to late second century activity on the site as the Table 9 shows. There are a number of pieces of local green glazed pottery which was probably manufactured at or near Caerleon in the later first to early second century and might, on the basis of the known finds of wasters, have been made in the western civil settlement. Although there are no pieces comparable to the green glazed wasters from Nash-Williams' extramural building VII (Boon 1966, Pl.III.5) there are a few pieces of grey ware with vitreous accretions (eg. from 502) which may repay further examination. Substantial fragments of a flanged bowl in this fabric came from Trench 1 context (157), which is closely paralleled by other vessels from the western *Canabae* (Greep in Zienkiewicz 1986b, Fig.38, 3.2-3.3).

source is unknown. Examples in a thin red fabric come from contexts (208), (311), and (426).

Probably also dating from the later first or early second century is the roughcast ware from the Argonne or nearby areas of north Gaul. This fabric is found in Britain between the Flavian and mid-Antonine periods but, in the Caerleon area, there is a notable absence of Gaulish roughcast ware from levels later than the early second century as, by then, the local Caerleon Ware kilns were in production. The only known Caerleon kilns are on the raised ground at Abernant above Bulmore, but others are likely to have existed. Among their products were roughcast beakers which, although technically less competent than the north Gaulish examples, were produced in large numbers and were, no doubt, a good deal cheaper and thus drove the competition from the market place. The range of pottery produced by these local kilns was probably extensive. Certainly the Caerleon Ware kilns supplied our site with red slipped vessels imitating samian and metal shapes and red slipped mortaria.

In Table 10 we have recorded those Caerleon Ware vessels for which a form can be determined. The 97 Caerleon

	T1	T2	T3	T4	T5	T6	T7	T8	T9	TOTALS
all pottery	175	51	10	156	178	40	59	28	41	738
samian	68	17	3	30	31	11	16	6	7	189
samian %	38.9	33.3	30	19.2	17.4	27.5	27.1	21.4	17.1	25.61

Table 8 Samian as a proportion of the pottery from the 2011 excavations

Also probably of local manufacture (and of late first to early second century date) is mica dusted ware. Although not plentiful (and liable to have lost its surface in the prevalent soil conditions) a small number of examples were noted. Of probably similar date are a couple of vessels in thin off-white eggshell ware from Trench 6 (605). This fabric appears in small quantities throughout the fortress and civil settlement and has obvious affinities with the eggshell ware found at Holt. A common (and at present unknown) source for both is possible. The 2011 site also yielded a number of small thin-walled cups and small bowls which are in a variety of fabrics and almost equal to the white egg-shell ware in thickness. Again, the

Ware vessels amount to some 13% of all recovered vessels, a remarkable total given the comparatively short lifespan of the Caerleon Ware kilns (c. A.D. 110-160/70). What is also clear from the table is that Caerleon mortaria are surprisingly scarce on the site. This seems to reflect a general dearth of mortaria (with the possible exception of the later white Oxford vessels) and may reflect a non-domestic character for the buildings sampled.

The second half of the second century saw the appearance of a number of colour coated wares. The 2011 site produced examples of colour coated beakers imported from Lezoux and from the Mosel (Moselkeramik). These were current from the mid second to the mid third century. In addition

FABRIC	T1	T2	T3	T4	T5	T6	T7	T8	T9	TOTALS
Red Eggshell	2	1	1	1						5
White Eggshell						1				1
Terra Nigra	1			2				1		4
Pompeiiian Red				1						1
Mica dusted	2					2		1		5
London type		1								1
Green Glaze	4			2					1	7
N.Gaul Roughcast	3			3	2					8
Lezoux colour coated	1				7				1	9
Mosel colour coated	2				7		3	1		13
Nene Valley colour coated	1				7	1	1		3	13
Oxford colour coated	1				1		1		2	5
?New Forest					1					1
TOTAL	17	2	1	9	25	4	5	3	7	73

Table 9 Non-samian finewares from the 2011 excavations

there were colour coated beakers from the Nene Valley which are probably later second to third century in date. Later British colour coated wares are, however, scarce. There are no examples of the Nene Valley colour coated versions of kitchen ware bowls and dishes popular in the fourth century (although one possible 'Castor Box' may be noted) and very few Oxford colour coated beakers or bowls. A single beaker fragment possibly from the New Forest was present, but, unlike the Oxford ware, this is a ware on the very edge of its range in South Wales and one would not expect larger numbers. A few pieces of fineware of unknown source were also noted. These will require further work and the possibility of vessels brought in as make-weights in cargo delivered at the quays or in the luggage of troops or merchants cannot be excluded.

produced by the Caerleon Ware potters, but need not, of course, be restricted to the narrow *c.* 110-160 date range of the red slipped ware.

A number of contexts in Trench 5 (and one in Trench 1) included substantial fragments of more than one casserole and lid of a type identified with an African style of cuisine by Vivien Swan. She has identified a number of vessels of this type on legionary sites and on the Antonine Wall and postulated the presence of African troops recruited into the legions, especially in the Severan period, as a reason for the sudden appearance of these vessels. While this remains a possibility, it must be pointed out that the spread of a particular style of cooking requiring specialised equipment does not necessarily reflect the

	T1	T2	T3	T4	T5	T6	T7	T8	T9	TOTALS
All except mortaria	10	5	0	34	15	7	5	2	9	87
Mortaria	4	0	0	4	0	0	2	0	0	10

Table 10 Caerleon ware forms from the 2011 excavations

Other Kitchen and Table Wares

A series of local sources are apparent. The local potteries which produced the green glazed and mica dusted finewares probably also produced more mundane ware. There are a few examples of white slipped ware (including mortaria but mainly flagons) which are probably local to Caerleon and late first to early second century in date. The few examples of everted rim jars and flanged and carinated bowls of the Flavian to Trajanic period undoubtedly include examples from local greyware and oxidised ware sources. All Caerleon sites yield both Caerleon Ware and oxidised wares which on occasion are simply Caerleon Ware without the slip but which may be coarser and unslipped versions of Caerleon Ware forms or other forms in these coarser fabrics. All are likely to be

ethnicity of the cook using those utensils (as many modern users of a wok will attest). One may also point to the use of these distinctive casseroles in other areas of the western Mediterranean seaboard. The case for Africans at Caerleon is, therefore, unproven, but the appearance of a specific style of cooking using specially (and locally) made casseroles is clear on a number of Caerleon sites both inside and outside the fortress.

Other local wares include the common South Wales Reduced (or Grey) Ware found throughout the region. It is less common at Caerleon than elsewhere, presumably because of the presence of local potteries producing oxidised wares, but, nevertheless, in the 2011 trenches, as elsewhere in and around the fortress, we find examples

particularly of jars, wide mouthed jars and bowls in this regional fabric.

Among the coarse wares which have been imported onto the site from elsewhere in Britain, the most common is Black-Burnished Ware. This is present in South Wales from the conquest period onwards but becomes the pre-eminent cooking ware from the early to mid-second century to the late fourth century or beyond. Unsurprisingly, therefore, it is present in most contexts on the 2011 site with the possible exception of a few which may be first century in date. We may also note a single example of Severn Valley Ware (a jar which might presumably have arrived as a container) and several white mortaria from the Oxfordshire kilns. In general mortaria are scarce on the 2011 site, although a stamped vessel in South West White Slipped Ware may be noted.

We have already noted a number of pieces of fineware from unidentified sources which may have appeared with other cargoes or in luggage. To these we should add four pieces from contexts (535), (902), (920) and (939) of Black-Burnished Ware category 2 (BB2), a fabric which rarely appears in the west of Britain. It was made in the South-East and exported up the eastern seaboard. Our pieces could, therefore, have come from anywhere within the normal exporting range of the ware but they are perhaps best seen as having come in the luggage of legionaries returning from construction duties on the Antonine Wall where BB2 is common.

Despite the obvious range of the assemblage there are a number of ceramics notable for their scarcity. There are, for instance very few amphorae sherds (just a handful of Dressel 20 oil amphora sherds, a fish sauce amphora and some South Gaulish wine amphora fragments) suggesting that these bulk commodities did not enter the civil settlement through this part of the riverside – a point probably supported by the scarcity of amphorae on the nearby Priory Field site. The scarcity of mortaria has already been noted and may also reflect the usage of the area sampled. The presence of a few items of over-fired tile, perhaps wasters (from 425 and 515) is intriguing.

SOCIAL & ECONOMIC IMPLICATIONS

Comments on the implications of the assemblage must be tempered by the partial nature of the collection – an exploratory sample from a large area, clearly covering several buildings. Even with this in mind, the pottery is noticeably more varied than that from the recent Priory Field excavations and draws on most, though not all, of the sources of pottery available to Roman Caerleon. Both presences and absences may be significant. The dearth of amphorae has been noted and this was clearly not an area over which amphorae were moved. Neither is it likely that the buildings on the site used many amphora-born commodities – or if they did then their service and storage areas were not sampled. The dearth of decorated samian

and perhaps of Oxfordshire colour coated ware may also be significant. This is not a ‘grand house’ collection. The small number of mortaria present must also have a significance and perhaps points to a non-domestic emphasis in the area. We may note a crucible fragment from context (423) and a few waste tiles but this does not seem to be an industrial area either. But the variety, particularly of earlier finewares does not really support a service or storage function. At present it is difficult, on the evidence of the pottery when considered in isolation to arrive at any clear indication of the usage of the area. In part this may be due to the small scale of the excavations when compared with the large area examined. It may, however, be that when the material is linked to the stratified sequence, clearer trends will be apparent. One suspects, however, that it is the nature of such exploratory excavations to raise more questions than they answer and that more extensive work on specific buildings will hold the key to unravelling the function of the site (or sites).

Discussion

The excavations at Caerleon in 2011 revealed some remarkable archaeological remains that will make a significant contribution to our understanding of the legionary fortress of *Isca* and, in turn, the early history of western Roman Britain. The conquest and pacification of the native tribes of the west, particularly the Silures, play a major role in the sequence of events described by Roman historians and it is possible that the complex of buildings known here as the *Southern Canabae* would have been familiar to the Roman soldiers and their commanders who took part in the campaigns against these most obdurate of opponents of Roman imperial ambitions in Britain.

The definitive discussion of the excavations and their significance will be possible only after the finds have been conserved and the respective specialists' reports have been written. This will allow the integration of the excavated stratigraphy and the finds information, but the purpose of this interim report is to present an outline of the archaeological sequences identified in the nine evaluation trenches and to explore, at least in part, whether or not we might be in a position to present provisional answers to the research questions that provided the original motivation for the 2011 excavations.

The project's aims and objectives were grouped into a series of related themes and topics, including:

- Layout of the buildings identified by the gradiometer surveys
- Date of the buildings' abandonment and, potentially, some indication of when they were constructed
- Function of these buildings and, therefore, the purpose of the monumental complex
- Remains of the suggested quayside wall and landing stages, including their construction and histories
- Extent of erosion to the remains caused by the River Usk, and if the river continues to erode this important archaeological resource.

Before exploring these in more detail however, it is worth summarising the nature and extent of the surviving archaeology that lies beneath the fields to the south of the amphitheatre at Caerleon. In all trenches it was found that the remains of the Roman buildings survive very well and the uppermost deposits associated with the occupation and subsequent abandonment of the *Southern Canabae* lie very close to the modern ground surface, in places only just below the turf. The explanation for this extraordinary level of survival is the absence of any significant post-Roman activity in this part of Caerleon – the evidence for

Medieval and modern occupation seems to be limited to field boundaries and the occasional pits and post-holes, most of which are likely to be agricultural in nature. Other major Roman centres in Britain invariably were occupied in one form or another in later centuries and in many instances, particularly the two other permanent legionary fortresses at York and Chester, these sites became important urban centres from the Medieval period onwards. In these places the actions of their post-Roman inhabitants caused considerable damage to the underlying Roman archaeology or led to the Roman remains being covered by complex archaeological remains that need to be carefully excavated before the Roman levels are reached.

In the area of the *Southern Canabae*, however, this did not happen. For whatever reasons the post-Roman successor to *Isca* grew up within the walls of the fortress and never expanded into the extramural complex that otherwise might have obscured or disturbed the Roman archaeology we now know is so well preserved in these fields. We are also fortunate that this land has been under pasture for many years and that any ploughing has been sporadic and relatively shallow. No plough marks were noted in the evaluation trenches, although, because the archaeology lies so close to the surface, the movement of tractors and other vehicles across the fields, particularly in wet weather, is causing some damage to the uppermost remains in the western part of the complex.

Outreach was an important element of the 2011 season and encouraging public participation and community engagement were written into the original project design. A separate summary of the successful engagement work is provided at the end of this report, but interestingly the questions asked by members of the public were often the same as those we set ourselves: What have you found? How old is it? What were the buildings for? The archaeological remains in the nine trenches have provided us with the means to answer these questions and, as is always the case, ask others that could form the basis for future work on the site.

LAYOUT AND ARCHITECTURE OF THE SOUTHERN CANABAE

The evaluations confirmed that the *Southern Canabae* complex consists of at least three major elements, each comprising separate buildings distinguishable by their layout and architecture. The trenches also found that the outlines of the buildings as imaged by the geophysical surveys were generally borne out archeologically, so

that magnetic anomalies coincided with walls and other features such as drains. It is now possible to state with certainty that the major buildings identified during the surveys are all Roman. Whether these were built as a single episode or were added to over time remains to be confirmed, though the architecture of the main elements suggests either that they were built at different times or that they were contemporary but served different functions.

This unusual form of tile wall seems to have divided a series of buildings that extended towards the river (areas 1.1 and 1.2), from a parallel roadway running alongside their landward sides. The presence of a stone course capping the eleven *tegula* courses perhaps indicates that this wall was a stylobate intended to support a colonnaded superstructure of some kind, and the interiors of the buildings were levelled before being provided with rudimentary stone and brick floors. The roadway consisted



Fig. 94 Interpretation of the geophysical results showing the Southern Canabae complex and the 3 'zones' of buildings that comprise it.

Zone 1 – the quayside

The main part of Trench 1 exposed a cross section of the courtyard building's southern range closest to the River Usk. The 2010 test-pits suggested that this area might have included the quayside wall which was part of Caerleon's port, though the 2011 excavations showed that this was not the case and the situation is somewhat more complicated than initially thought. It is now clear that the Usk has moved westwards since the Roman period and that any remains of a port and quay that once existed here have been eroded away by the river. Instead, the gently sloping pre-Roman ground surface shows that the ancient riverbank, although close, must have been further east of the Trench and that the wall constructed from deliberately broken *tegulae* [115] was not the quay.

of a narrow pavement (1.3) which, within Trench 1, was divided by a short wall perhaps to create lean-to buildings or covered entrances, as well as the road itself (1.4) which clearly separated the structures along the riverbank from the southern range of the main courtyard building to the west. The road surface had been intensively used over time and was patched using brick and building stone, as well as complete and broken querns. It is not known if the buildings closest to the river were part of a port, but it is possible that these were warehouses or similar that fronted the quay that has since been eroded away.

Zone 1 – the courtyard building: the courtyard

The very large courtyard building on the southern side of the *Southern Canabae* was explored in Trenches 1, 2, 3, 4 and part of 5. The 1 ha courtyard was shown to have been left as open ground, perhaps intermittently surfaced

with cobbles and pebbles most of which have worn away. The two possible buildings identified on the geophysical surveys proved to be walled structures, although if these were indeed both Roman buildings is debateable. The stone wall and associated collapse in Trench 2 could have been part of a building, though it is not certain that it is Roman in date and it is possible that it was part of a substantial Medieval field boundary. The structure on the courtyard's east-west axis, part of which was exposed in Trench 3 is certainly Roman, although like the *tegula* wall in Trench 1 the method of construction is unusual in a Romano-British context.

The use of fired bricks, in this case triangular, in structure 3.1 is reminiscent of Roman buildings on the continent particularly, though certainly not exclusively, in Italy. *Opus testaceum* (also known as *opus latericium*), was a common building technique from the first century B.C. and this method of construction, in which courses of bricks were used to face a cement core, remained popular throughout the Roman period especially for imperial buildings in the western provinces (the Constantinian *Aula Palatina* in Trier is one of the best known examples of a brick-built building from the fourth century). The use of bricks to construct buildings however, is very unusual in Roman Britain where mortared stone was the universally-favoured building technique in forts and fortresses, towns, cities and villa buildings (see below). The wall of fired bricks in Trench 3 explains why this structure produced positive readings on the gradiometer results (imaged as white rather than black), although it is not certain that these walls were ever part of a building in the centre of the courtyard. The absence of foundations and the use of clay rather than mortar or cement to bond the bricks would have meant that the walls were not strong enough to support a substantial superstructure and roof. The absence of loose bricks and roof tiles suggests that these walls were never built to full height and covered. Instead of a building, the structure in Trench 3 perhaps should be seen a base for a platform of some kind, or an enclosure demarcating this space in the wider courtyard.

The area of the courtyard seems to have been the location for other, more superficial, structures. The identification of possible post-pads and a post-hole might have been part of timber buildings or enclosures, while the shallow pit in Trench 2 filled with metalworking debris hints at the nature of the activities that might have taken place here.

The courtyard building: the southern range

The main courtyard building's southern, probably front, range seems to have consisted of a 6m wide corridor (area 1.5) that gave access from the riverside road (see above) into the courtyard itself. The corridor and courtyard were separated by another low *opus testaceum* wall, again possibly for a colonnade that could have extended around three or four sides of the central open area. A change

from brick to stone courses in the centre of this wall probably marks the position of the main entranceway into the courtyard from the port-side road. The southern side of the entranceway appears to have been marked by a transverse wall separating it from the corridor, and in the courtyard this was perhaps embellished by a brick-built base for a plinth or pilaster.

The courtyard building: the northern range

Trenches 4 and 5 were positioned to investigate what was believed to be the wide northern range of the courtyard building that the geophysical results suggested could have been divided into large rectangular spaces whose narrow sides faced the courtyard. It is difficult however, always to reconcile the geophysical anomalies with the excavated archaeology in this part of the building, primarily because the southern end of Trench 4 contained at least two phases of occupation that are conflated on the gradiometer results. The first of these consisted of a laid, possibly linear, dry-stone platform whose function is unclear (area 4.2). This was overlain by a well-made cambered cobble and stone surface that might have formed a wide corridor or portico on this side of the courtyard. The adjacent space to the north of this cobbled area does not appear to have been surfaced at all, while a layer of stone and mortar at the northern end of Trench 4 suggests another space with a hard-wearing floor surface (areas 4.3 and 4.4). How these areas were separated is not clear as no remains of dividing walls were identified, and it is not certain if these spaces were part of a single building or entirely separate buildings.

The rear of the courtyard building's northern range was also exposed in the southern end of Trench 5. A low brick-built *opus testaceum* wall appears to have separated a narrow corridor (area 5.2), probably colonnaded, from an unsurfaced area to the south. The presence of a drain along the outside of the stylobate wall suggests perhaps that the southernmost area in the trench was an external open space bounded on its northern side by a covered corridor. The flagstone structure in the southern part of Trench 5 appears to be a water trough or tank, perhaps indicating that industrial activities took place in this part of the courtyard building's northern range, or that animals were kept here (area 5.1).

The geophysical survey suggests that a narrow passageway or corridor passed though the centre of the northern range, providing access from the main courtyard to the buildings of zone 2 to the northwest. The northern range on the other side of this corridor is unfortunately obscured by magnetic noise, though it is possible a similar arrangement of open spaces and coarse surfaced areas lay beyond this passageway too.

Zone 2 – central buildings and spaces

The buildings on the higher ground overlooking the main courtyard building and the Usk floodplain were exposed

in Trench 6 and parts of Trenches 5 and 7. Trench 5 showed that the Roman buildings constructed against the rear wall of the courtyard building's northern range had been terraced into the sloping ground. It seems likely that a series of long structures would have risen up the low promontory, perhaps with a monumental entranceway of some kind in the centre leading from the port and courtyard. The northern part of Trench 5 contained two adjoining rooms provided with concrete floors and painted plaster (rooms 5.3 and 5.4), east of which was a space with a vaulted ceiling that is in the correct location for an entranceway. A doorway between the two rooms suggests that this corridor building could not be accessed from the courtyard building to the south and that the only way to reach this part of the building was from the north, possibly via an integral corridor running along its rear wall. The vaulted ceiling over the possible entrance (area 5.5) was constructed from tufa and masonry voussoirs, with the frame of the vault perhaps provided by ribs of box flue tiles. There is no suggestion that the vault was decorated in any way, and the presence of such an unusual and complicated architectural feature suggests perhaps that this part of the building was intended to be two storeys or more high. Only a small area of the vaulted space was exposed in the trench and further excavation is needed to confirm whether the collapsed ceiling is indeed the remains of a barrel vault rather than, for instance, an archway.

The discovery of part of a tessellated pavement at the northern end of Trench 5 demonstrates that at least one room on the crest of the higher ground was provided with a mosaic floor (area 5.6), though only the edge was exposed and it is not known how well the rest survives or if it was decorated.

The northern part of zone 2 was explored in Trench 6, where a well preserved flagstone surface may well indicate a small open courtyard between neighbouring buildings (area 6.1). The geophysical results suggest that a narrow rectangular building with a coarse crushed tile floor lay to the northwest of this possible courtyard, and the discovery of metalworking suggests that industrial activities took place here. The discovery of a lead water-pipe shows that water from a tank of some kind located in this building was fed downslope to fountains or suchlike further east. The southern end of zone 2 was investigated in the eastern end of Trench 7, which showed that, in this area at least, an external cobbled area lay between the buildings of zones 2 and 3 (area 7.3). This might have been a road or alleyway, though the geophysical results suggest that these surfaces could have been part of a more extensive open space.

Zone 3 – the northern courtyard complexes: courtyard 1
Trenches 7, 8 and 9 examined the two courtyards and associated buildings in the north of the *Southern Canabae*. The southernmost of these consisted of a

central square courtyard with narrow corridors on three sides and what appears to be a major aisled building on the fourth, northern, side. In plan the central part of this building is reminiscent of a forum, but the absence of rooms beyond the corridors means that it is unlikely to have been built as a marketplace. The courtyard is similar to buildings known as *quadriportici*, defined as nearly square peristyle courtyards surrounded by colonnaded porticoes. Trenches 7 and 8 examined buildings on the southern and northern sides of courtyard 1 respectively. The two rooms exposed in Trench 7 were at the east end of a row of large rooms that ran alongside the courtyard's southern portico. These had been raised in height by at least 1m over the surrounding ground surfaces. One of the rooms was provided with an *opus signinum* floor (room 7.1), while the adjoining corner room was built with an underfloor heating system and elaborately painted walls (room 7.2). These rooms appear to have been part of a small bath suite and the geophysics suggests that the *prae-furnium*, where air was heated before passing into the hypocaust, was located in a small adjacent room accessed from the portico.

On the other side of the southern zone 3 courtyard, Trench 8 found that the two wide corridors running along the courtyard's north side were not provided with internal floors as anticipated, but instead seem to have consisted of beaten earth surfaces. The remains of a large aisled building were found beyond these open corridors and a step-like structure against the southern external wall shows that this building could be accessed from the direction of the central courtyard. A drain built into the wall terminated with an outlet on the outside face of the step from which water must have poured into the adjacent open corridor.

The aisled building seems to have consisted of a series of parallel rooms and internal corridors covered either with flagstone or *opus signinum* floors (rooms 8.2-8.4). Although some walls were rendered there was no evidence that any of the rooms had been more than white-washed. It is possible that this building was part of a complex that included the bath-house excavated in the 1920s next to the amphitheatre (known as Bath A).

The northern courtyard complexes: courtyard 2

The northernmost courtyard building was examined in Trench 9. Although the geophysical results are less clear here, it is likely that it composed a second *quadriporticus* with an adjoining building on its northeastern side. The full width of this building was exposed in the trench, which showed that it was long and narrow and, like the aisled building in Trench 8, had been raised in height above the surrounding ground surfaces. The interior was divided into two parallel spaces, probably a corridor and a row of room with *opus signinum* floors and painted walls (rooms 9.2 and 9.3). The absence of any evidence for a step to overcome the difference in height between

the courtyard to the south and the interior of the building suggests that this building was accessed from its narrow ends, and possibly was part of the large courtyard structure excavated in the 1950s known as Building D (also known as Building IX), that included a monumental entranceway and hypocausted rooms.

The northern part of Trench 9 may well have exposed part of the central courtyard of Building D, which again was much lower than the internal floors of the corridor building (area 9.4). If this turns out to be the case, perhaps two major bath complexes seem to have been located on the northern side of the *Southern Canabae* closest to the amphitheatre and the road leading into the fortress' west gate.

Building methods

The *Southern Canabae* can be divided into two parts that seem to have been built using different methods of construction. The remains of the courtyard building in zone 1 are more superficial than the other buildings in the suburb and many of the walls located in Trenches 1, 2, 3, 4 and 5 were built without foundations and bonded with earth or clay rather than mortar. Furthermore, the presence of at least three CBM-built walls in the courtyard building is very unusual in Caerleon. *Opus testaceum*, the use of bricks or tiles to face a wall's concrete core, is more common on the continent than Roman Britain where mortared stone was the favoured building technique (Ward-Perkins 1981, 21-121; Adams 1994, 145-51). Many buildings constructed entirely of brick and tile can be found in Rome, Ostia and Pompeii, as well as elsewhere on the Roman continent, although the CBM walls at Caerleon are not strictly *opus testaceum* as their faces are clay bonded and clay or earth was also used to pack the walls' cores. This suggests that these were never intended to be load-bearing walls and that they would have supported arcades or colonnades instead of solid superstructures, although why bricks and tiles were used is unclear. The internal rooms and spaces of the zone 1 courtyard building were provided with hard-wearing floor surfaces made of cobbles, pebbles, beaten earth and scatters of crushed tile. These give a functional impression to these areas that is supported by the general absence of wall plaster from the courtyard building where the walls of rooms must have been entirely unembellished.

The buildings in zones 2 and 3 were generally constructed using mortared masonry walls and they were more solidly built than the zone 1 courtyard building. In the northern zone 3 the buildings appear to have been long narrow corridor-like structures ranged around open peristyle yards, while in the central zone 2 the paved area discovered in the southern end of Trench 6 could have been an open yard between surrounding buildings. The floors in these parts of the *Southern Canabae* were usually *opus signinum*, although room 7.2 was provided with a hypocaust and room 5.6 must have been

tessellated, at least in its latest phase. Most trenches produced evidence for internal decoration in the zones 2 and 3 buildings, ranging from fairly rough white-washed render to elaborate wall paintings in rooms 7.2 and 9.3. The discovery in Trench 8 of segmented tiles of two different sizes indicates that a colonnade, possibly around the outside of the southernmost courtyard in zone 3 was constructed from brick-built columns. Segmented tiles are known from only a few excavations in Caerleon (Zienkiewicz 1993, 126-7) and a handful of other sites in Roman Britain, notably the temple to Claudius at Colchester where brick built columns may have formed the main portico of the temple when it was rebuilt after the Boudiccan destruction, if not before (Hull 1953; Crummy 1980; Drury 1984, 41).

Layout of the Southern Canabae

The suburb of monumental buildings between the amphitheatre and the River Usk appears to have consisted of at least 3 separate elements, all of which were built on a different orientation to the fortress. The very large courtyard building in zone 1 lies next to the port facilities on the Usk, only part of which survives, and comprises an extensive central courtyard surrounded by corridors and ranges of rooms. The building measures at least 140m from east to west and 120m from north to south and is one of the largest structures known from Roman Britain. It is not certain if similar buildings existed in the *canabae* of the other permanent British fortresses at Chester and York (for example Mason 1987, 149-51), though there are several instances of large buildings located outside the walls of legionary fortresses on the continent comparable with the Caerleon example, notably at Carnuntum, Nijmegen, Mirebeau and Vindonissa. It is perhaps interesting that, like at Caerleon, the courtyard buildings at Mirebeau and Vindonissa were located in close proximity to amphitheatres, while at Carnuntum and Nijmegen the courtyard structures are on the opposite sides of the fortresses to their amphitheatres (van Enckevort 2002; Goguy and Reddé 1995; Hartmann 1986; Jobst 1983, 98-100.).

The building complexes in zone 3 of the *Southern Canabae* would appear to consist of at least two peristyle courtyards and associated buildings. In plan these are reminiscent of *quadriportici*, a form of courtyard building that was common in Roman cities of the late republican and early imperial periods. *Quadriportici* from Rome, Pompeii and Hadrian's villa at Tivoli are among the best known examples from Italy (Berry 2007, 143-7; Coarelli 2002, 178-81; McDonald and Pinto 1995, 95-99; Ward-Perkins 1981). In the urban examples the *quadriportici* were located next to theatres (Pompey's theatre in Rome and the Large Theatre in Regio VIII at Pompeii), or amphitheatres (the 141m by 107m *palaestra* in Regio II at Pompeii), while at Tivoli the courtyard known as the Water Court or *Piazza d'Oro* served as an ornamental garden next to a grand *nymphaeum* with six fountains.

Pompey's *quadriporticus* in Rome also performed a decorative function and the courtyard was filled with a formal garden, including statues and fountains. Although the Pompeian *quadriporticus* in Regio VII is best known as a gladiator school and barracks, the gladiators moved here only after the earthquake of A.D. 62 and it is not certain what function the building originally was intended to fulfil. The presence of a long pool in the centre of the Pompeian *palaestra* reinforces the importance of water in these buildings, something that is worth bearing in mind when considering the drain and outlet in the first courtyard of zone 3 excavated in Trench 8.

DATING OF THE *SOUTHERN CANABAE*: CONSTRUCTION, ABANDONMENT AND POST- ROMAN ACTIVITY

The final statement regarding the dating of the *Southern Canabae* must wait for the identification and analysis of the artefacts recovered from the excavated deposits, but it is already possible to put forward some ideas at this stage of the post-excavation work regarding the construction and abandonment of this important new addition to Roman Caerleon.

It is clear from the material produced during the excavation that the *Southern Canabae* was built very early in the Roman period and there is no reason to suggest that the suburb was later than the construction of the fortress in the mid 70s. It is unclear at this stage if the various different buildings were all built at the same time, though the similar proportions of late first and early second-century pottery identified from all nine trenches suggests that they could have been broadly contemporary (in which case the use of different building techniques in zone 1 compared to zones 2 and 3 should be related to these buildings' functions rather than their dating).

Clarifying the nature of the relationship between the amphitheatre and the *Southern Canabae* is essential if we are to understand the early development of the fortress' civil settlement. The construction of the amphitheatre *c.* 90 (or possibly its reconstruction *c.* 140) appears to have led to the partial demolition of at least one bath-house on its western side. It is possible that this building and the adjacent monumental building D were part of the *Southern Canabae* buildings discovered by the geophysical surveys and evaluated in 2011. If this turns out to be the case, it demonstrates that the *Southern Canabae* was certainly in existence before the reconstruction of the amphitheatre, and it could pre-date the amphitheatre's construction in 90. It would seem likely that *Isca* would have been provided with a port as soon as it was established in 74/75, from which the legion could be supplied from the sea and also send provisions to the auxiliary forts upstream from Caerleon.

From the pottery evidence it appears that much of the *Southern Canabae* was no longer in use from possibly

as early as the late second century. While most trenches produced some third and fourth century pottery, this was less prevalent than in most excavated sites at Caerleon and suggests that several of the buildings in the suburb had been abandoned by the beginning of the third century at the latest. It is clear, however, that the buildings must have remained standing for some time and several rooms and spaces were later used to discard rubbish. Trenches 5, 7 and 9 produced significant quantities of pottery from the third to mid-fourth centuries and this material from various rubbish deposits dumped into rooms and against walls outside buildings is evidence of continued occupation nearby in the period after the *Southern Canabae* was no longer in use. The preliminary inspection of the small coin assemblage from the 2011 excavations did not identify any fourth century coins and only a handful of late-third century issues. If this picture is borne out in the final analysis of all the finds, the *Southern Canabae* would appear to have been abandoned perhaps 75-100 years before the legion was withdrawn from Caerleon in *c.* 300, after which some parts were used for the deliberate disposal of rubbish by occupants living and working in the vicinity.

Some of the buildings of the *Southern Canabae* were deliberately demolished and most appear to have been robbed of their building stone before those inside the fortress. Only the buildings in Trenches 5 and 8 seem to have collapsed leaving much of their roofs *in situ*, whereas Trenches 1, 6, 7 and 8 produced far smaller quantities of tile indicating that the roofs of these buildings had been removed prior to the robbing of their walls. The robber trenches in all of the 2011 trenches did not contain the later Medieval and modern material that dates much of the robbing within the fortress and it would appear, therefore, that the *Southern Canabae* was reduced before the fortress, almost certainly in large part between the late Roman period and the reappearance of pottery in the twelfth century.

Post-Roman occupation in this part of Caerleon is limited. Possible structures of reused Roman roof tiles were identified in Trenches 5 and 8 (though these could be Roman), while the upper courses of wall [505] in Trench 5 could be evidence of a standing wall reused at some point after the Roman period. Otherwise, the few signs of post-Roman activity in the area of the *Southern Canabae* consist of medieval field boundaries in Trenches 1 and 2, all of which were in use until relatively recently.

FUNCTION, STATUS AND PURPOSE OF THE *SOUTHERN CANABAE*

The 2011 excavations have confirmed that the buildings of the *Southern Canabae* date to the early Roman period in Britain, while the layout of the monumental suburb suggests its construction was part of a wider plan to develop the fortress at Caerleon in the years during the conquest and pacification of the Silures. The

scale of the buildings with their *opus signinum* floors and simply decorated walls are reminiscent of Roman 'public' military and urban architecture, and there seems little reason to doubt that this part of *Isca's* extramural settlement was a state-sponsored foundation - the *canabae legionis*. The excavations discovered tantalising evidence for the activities that took place in the *Southern Canabae* and, although it should be remembered that the nine evaluation trenches between them revealed less than 1% of the total area of the monumental building complex, it is possible to consider what took place inside these buildings.

Large rectangular or square courtyard buildings outside legionary fortresses in the Roman Empire have been interpreted as *fora*, *macella*, *mansiones*, and a waggon yard (van Enckevort 2002; Goguy and Reddé 1995, 26-9; Jobst 1983, 98-100; von Petrikovits 1981, 170), and from its ground plan alone any of these functions are possible for the building complex in zone 1 of the *Southern Canabae*. Only one of the known examples, however, has been excavated and at Nijmegen 50,000 posts were found covering the central 1 ha courtyard, which have been interpreted as supports for a raised wooden floor or fences that would have been needed to corral large numbers of animals, especially cattle (van Enckevort 2002, 388-9; Willems and van Enckevort 2009, 61-4). The Caerleon building was not well built and it is unlikely that many of its low walls bonded with earth and clay would have been able to support a substantial superstructure or a second storey. It is not certain if the brick-built walls of the structure towards the rear of the open courtyard supported a covered building or were the base of a platform or enclosure, but its positioning on the courtyard's main axis was deliberate. The courtyard itself was left open and there is no evidence that it had been paved, as might be expected if the building served as a marketplace or civic area. It is however, one of the few open spaces within the *canabae* large enough to accommodate the thousands of men in the Second Augustan Legion and it is also possible that the courtyard and surrounding buildings were a gathering place for people, as well as animals and equipment, arriving from the river port before heading off to other parts of the *canabae* or the fortress.

The area of the *Southern Canabae* on the higher ground overlooking zone 1 produced very complex geophysical results and it is difficult to untangle the buildings' remains in this part of the suburb. The excavations indicate however, that a long narrow building divided into a series of corridors and small rooms sat on the slope above zone 1, perhaps with a monumental entranceway allowing access through it. Other buildings nearby included a room with a tessellated floor and a possible metalworking area from which water was fed through a lead pipe to water features of some kind in the courtyard.

The northern part of the *Southern Canabae* (zone 3) consisted of extensive unpaved open areas with corridors and long narrow buildings around their sides. The two largest courtyards had large buildings on their eastern sides that seem to have been divided into small rooms accessed from long corridors. These were provided with robust *opus signinum* or flagstone floors and some of these rooms' walls were painted. A small decorated bath-suite on the south-western side of one of these courtyards had been raised by a considerable height above the surrounding land and it is tempting to think that this was done in order to improve the view towards the River Usk. It is also possible that the structures in zone 3 continued to the northeast and were connected to the buildings excavated close to the amphitheatre (Baths A and H, and Building D or IX). The extent of these buildings to the northwest however, is uncertain and it is also possible that the bath-houses (if these were indeed separate) and monumental building D were not part of the zone 3 complexes, though this will only be resolved by further investigation. For the time being it seems likely that the buildings in the northernmost part of the *Southern Canabae* were not domestic spaces, but could have been used as offices, shops or stalls, or that somewhere in this area lay a *mansio*, perhaps with a central garden, to serve the needs of the many official visitors to *Isca* (Black 1995, 20-1; Evans 2000, 496).

At Caerleon we are now in the fortunate position of being able to draw on the evidence of the excavated finds as well as building plans when thinking about the functions performed in the *Southern Canabae*. Final analysis will take place in due course, but initial observations of the various categories of artefacts have identified some interesting patterns that have an important contribution to make to this discussion. In fact, different parts of the site have produced very different finds assemblages. Pottery and other finds are scarce from the area of the courtyard of the zone 1 building, the port area in Trench 1 produced many metal objects as well as metalworking debris, while pottery and animal bones were common from Trenches 5 and 7 yet less frequent in Trenches 8 and 9. Some of this material will be derived from deposits overlying the last Roman floors and, therefore, belong to a late period of activity when parts of the *Southern Canabae* were used to dispose of rubbish, though other artefacts will have been incorporated in deposits associated with the buildings' construction and use.

Peter Webster and Mark Lewis have noted the absence of amphorae and mortaria from across the *Southern Canabae* where decorated tableware is also unexpectedly uncommon. Roman legionaries are well known for consuming large quantities of beef and pork, but Adrienne Powell's animal bone report highlights the unusually numerous remains of pigs and birds from particular trenches (see King 1999 and King 2005). For the time being it is clear that the pottery and animal

bone assemblages from the *Southern Canabae* are both distinctively different from the material produced elsewhere within the fortress or outside. The age at which the animals were slaughtered will be one of many themes to be pursued when selected material is examined for the final report, as will the types and sources of the pottery recovered during the excavations.

Whatever the functions performed in the various buildings it is evident that, together with the amphitheatre, the *Southern Canabae* formed the centre of the official settlement around the legionary fortress – the best candidate for a *canabae legionis* in Britain. *Isca*, however, did not develop into a major city and, unlike other fortresses, the domestic part of the ‘town’ seems to have remained relatively small and unsophisticated. This apparently stunted development suggests that the civil administration of south-east Wales in the Roman period was located elsewhere, possibly in the civitas capital of *Venta Silurum* at Caerwent some 9 miles away. The *Southern Canabae* seems to have fallen into disuse and abandonment during the early third century, clearly demonstrating that the legion at Caerleon was not responsible for administering the canton of the Silures by this time, or that the structures of Roman imperial authority in this part of *Britannia* needed military protection. These and other questions will be the focus of the remaining post-excavation work and we look forward to presenting the final analysis of this remarkable site in the full excavation report.

Bibliography

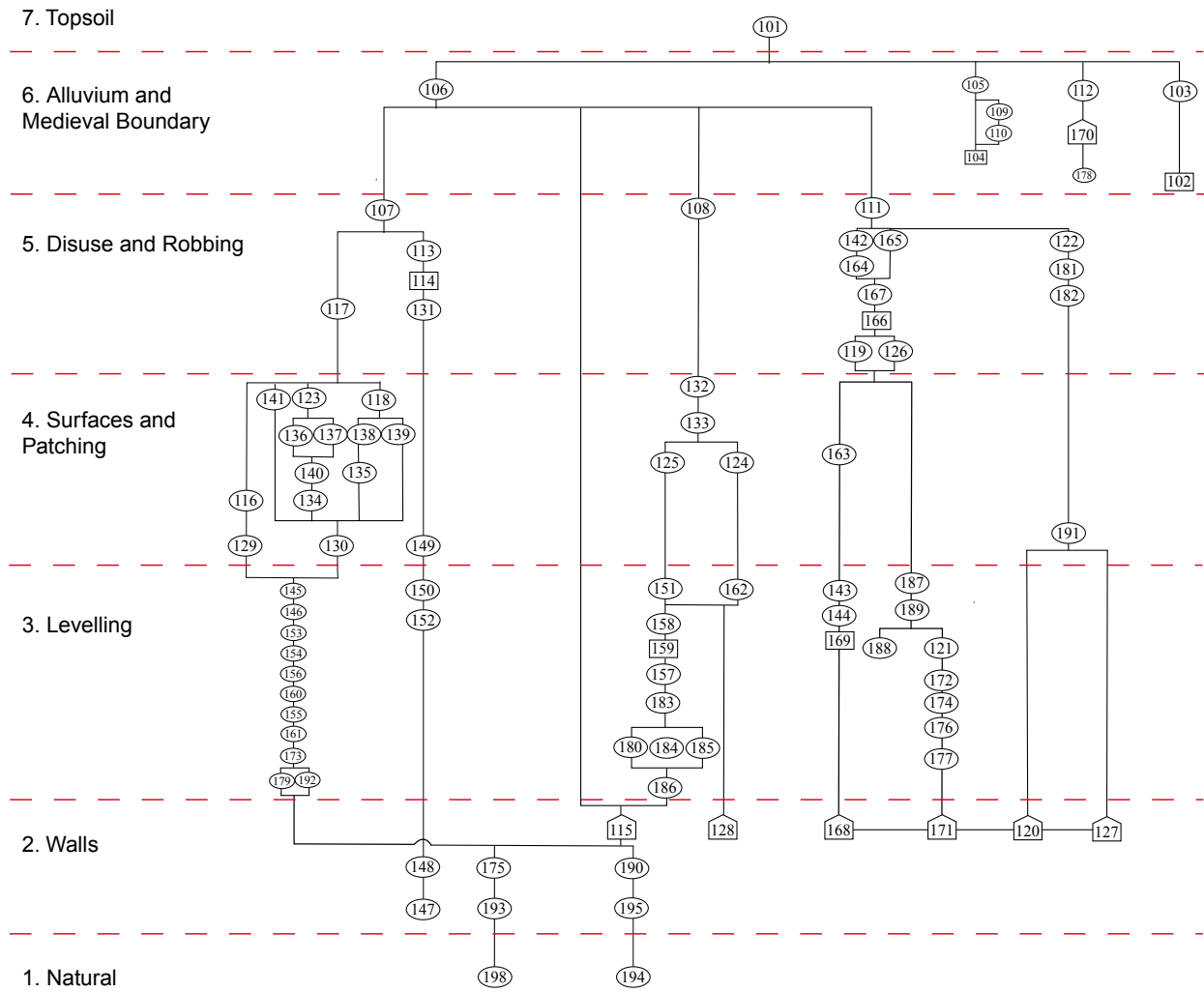
- Adams, J.-P. 1994. *Roman Building: Materials and Techniques*. London: Routledge.
- Berry, J. 2007. *The Complete Pompeii*. London: Thames & Hudson.
- Black, E.W. 1995. *Cursus Publicus. The infrastructure of government in Roman Britain*. Oxford: BAR Brit. Ser. 241.
- Boon, G.C. 1972. *Isca. The Roman Legionary Fortress at Caerleon, Mon.* Cardiff: National Museum of Wales.
- Boon, G.C. 1987. *The Legionary Fortress of Caerleon-Isca*. Cardiff: National Museum of Wales.
- Brewer, R.J. (ed.) 2002. *Birthday of the eagle: the Second Augustan Legion and the Roman military machine*. Cardiff: National Museums & Galleries of Wales.
- Burnham, B. and Davies, J. (eds) 2010. *Roman Frontiers in Wales and the Marches*. RCAHMW, Aberystwyth.
- Chapman, E, 2011. 'Roman Britain in 2010: I. Sites Explored', *Britannia* 42, 320-28.
- Coarelli, F. (ed.), 2002. *Pompeii*. New York: Riverside Book Company.
- Crummy, P. 1980. 'The temples of Roman Colchester', in: W. Rodwell (ed.), *Temples, churches and religion: recent research in Roman Britain*. Oxford: BAR Brit. Ser. 77, 243-83.
- Drury, P.J. 1984. 'The Temple of Claudius at Colchester Reconsidered', *Britannia* 15, 7-50.
- van Enckevort, H. 2002. 'The eastern canabae legionis of the Legio X Gemina on the Kops Plateau in Nijmegen', in: P. Freeman, J. Bennett, Z.T. Fiema and B. Hoffmann (eds), *Limes XVIII. Proceedings of the XVIIIth International Congress of Roman Frontier Studies held in Amman, Jordan (September 2000)*. Oxford, BAR Int. Ser. 1084, 387-93.
- Evans, E. 2000. *The Caerleon Canabae: excavations in the civil settlement 1984-90*. London: Britannia Monograph 16.
- Evans, E. 2004. *The Roman fortress at Caerleon and its environs: a framework for research*. Glamorgan-Gwent Archaeological Trust Report 79.
- Evans, E. 2010. 'Caerleon', in: B.C, Burnham and J.L. Davies (eds) *Roman frontiers in Wales and the Marches*. Aberystwyth: RCAHMW, 161-172.
- Evans, D R & Metcalf, V M 1992. *The 'Roman Gates' site in the fortress of the Second Augustan Legion at Caerleon, Gwent: The excavations of the Roman buildings and evidence for Early Medieval activity*, Oxford: Oxbow Monogr. 15
- Gardner, A. 2007. *An Archaeology of Identity: soldiers and society in late Roman Britain*. Walnut Creek: Left Coast Press
- Gardner, A. and Guest, P., 2007. *Caerleon: Excavations at Golledge's Field and Priory Field, 2007: Interim report*. Unpublished report, Cardiff University / University College London.
- Gardner, A. and Guest, P., 2010. *Caerleon: Excavations in Priory Field and the Southern Canabae, 2010: Interim report*. Unpublished report, Cardiff University / University College London.
- Goguey, R. and Reddé, M. 1995 *Le Camp Légionnaire de Mirebeau*. Mainz: Römisch-Germanischen Zentralmuseum.
- Guest, P. and Gardner, A., 2008. *Caerleon: Excavations in Priory Field, 2008: Interim report*. Unpublished report, Cardiff University / University College London.
- Guest, P and Young, T. 2007. 'Mapping Isca: geophysical investigation of Priory Field, Caerleon', *Archaeologia Cambrensis* 155 (2006), 117-33.
- Guest, P and Young, T. 2010. 'Mapping Isca: geophysical investigation of School Field and Priory Field, Caerleon', *Archaeologia Cambrensis* 158 (2009), 97-111.

Bibliography

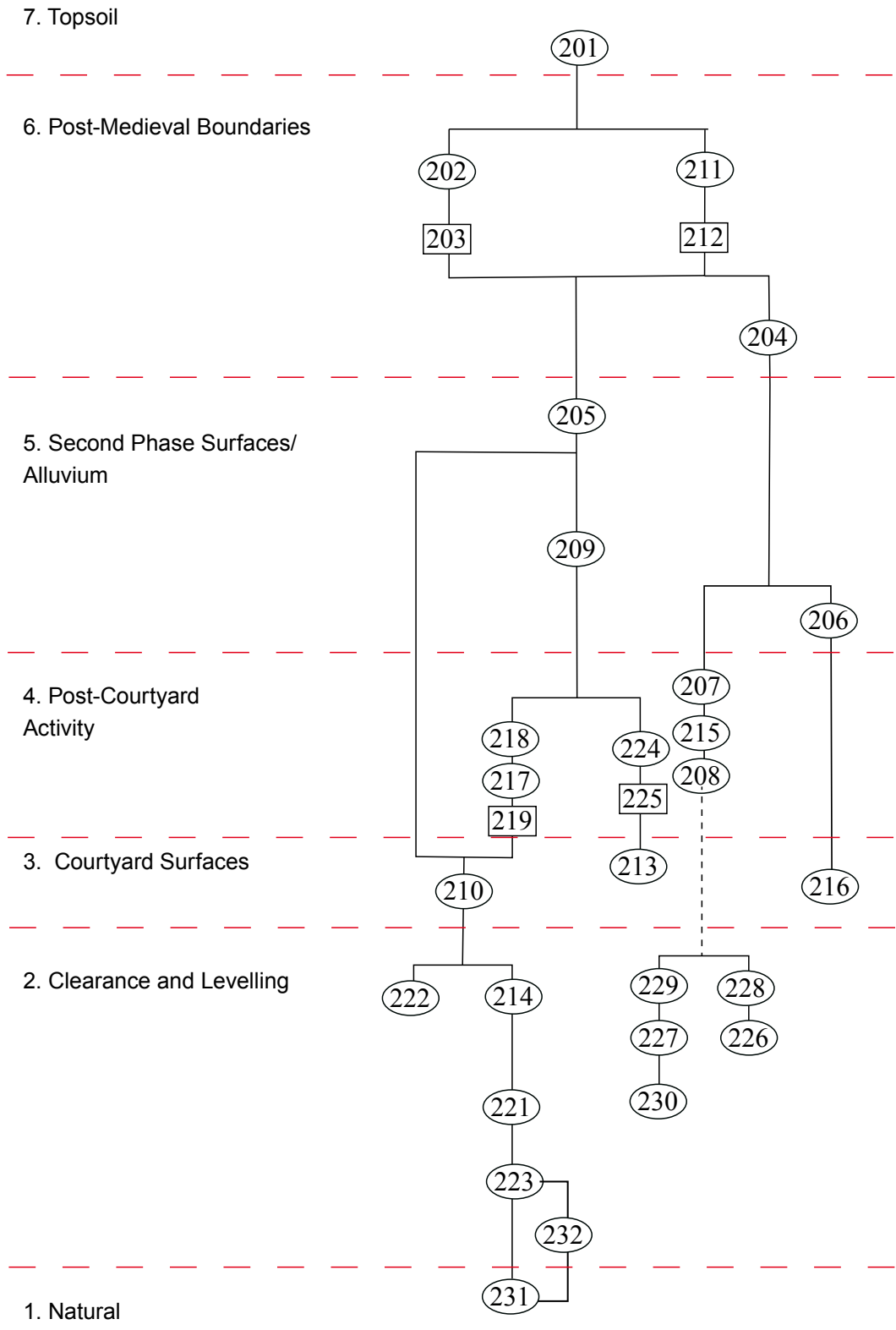
- Hamilton-Dyer, S. 1993. 'The animal bone', in: J.D. Zienkiewicz, 'Excavations in the Scamnum Tribunarum at Caerleon: The Legionary Museum Site 1983-5', *Britannia* 24, 132-136.
- Hartmann, M. 1986. *Vindonissa: Oppidum-Legionslager-Castrum*. Windisch.
- Hull, M.R. 1958. *Roman Colchester*. Oxford.
- Jobst, W. 1983. *Provinzhauptstadt Carnuntum*. Vienna: Österreichischer Bundersverlag.
- Jones, G.V. 2001. 'John Edward Lee and Antiquarianism in Nineteenth-Century Caerleon', *The Monmouthshire Antiquary* XVII, 3-8.
- King, A. 1995. 'Diet in the Roman world: a regional inter-site comparison of the mammal bones', *Journal of Roman Archaeology* 12, 168-202
- King, A. 2005. 'Animal Remains from Temples in Roman Britain', *Britannia* 36, 329-69.
- Knight, J. 2001. 'City of Arthur, City of the Legions: Antiquaries and Writers at Caerleon', *The Monmouthshire Antiquary* XVII, 46-54.
- Manning, W.H. 2004. 'The Roman conquest and the army', in: M. Aldhouse-Green and R. Howell (eds), *The Gwent County History 1: Gwent in prehistory and early history*. Cardiff: University of Wales Press, 178-204.
- Mason, D. 1987. 'Chester: the Canabae Legionis', *Britannia* 18, 143-68.
- McDonald, W. and Pinto, J.A. 1996. *Hadrian's Villa and Its Legacy*. New Haven: Yale University Press.
- Noddle, B.A. 1983. 'The animal bones', in: P.J. Casey, 'Caerwent (Venta Silurum): the excavation of the northwest corner tower and an analysis of the structural sequence of the defences', *Archaeologia Cambrensis* 132, 63-67.
- O'Connor, T.P. 1986. 'The animal bones', in: J.D. Zienkiewicz, *The Legionary Fortress Baths at Caerleon. Volume II: The Finds*. Cardiff: National Museum of Wales, 225-248.
- von Petrikovits, H. 1981. 'Die Canabae Legionis', in: *150 Jahre Deutsches Archäologisches Institut 1829-1979*. Mainz, 163-75.
- Reddé, M., Brulet, R., Fellmann, R., Haalebos, J.K., and von Schurbein, S. 2006. *L'architecture de la Gaule romaine. Les fortifications militaires*. Paris: Maison des Sciences de l'Homme.
- Young, T. 2012. *Geophysical surveys in Caerleon, Newport, 2007-2011*. Unpublished GeoArch Report 2012/05.
- Ward-Perkins, J.B. 1981. *Roman Imperial Architecture*. 2nd edition. New Haven: Yale University Press.
- Willems, W. and van Enkevort, H. 2009. *Ulpia Noviomagus - Roman Nijmegen: The Batavian capital at the imperial frontier*. Rhode Island: JRA Supplement Series 73.
- Zienkiewicz, J. D. 1986a. *The Legionary Fortress Baths at Caerleon. Volume I: The Buildings*. Cardiff: National Museum of Wales.
- Zienkiewicz, J. D. 1986b. *The Legionary Fortress Baths at Caerleon. Volume II: The Finds*. Cardiff: National Museum of Wales.
- Zienkiewicz, J. D. 1993. 'Excavations in the Scamnum Tribunarum at Caerleon: the Legionary Museum Site 1983-5', *Britannia* 24, 27-140.

Appendix 1 - Trench Matrices

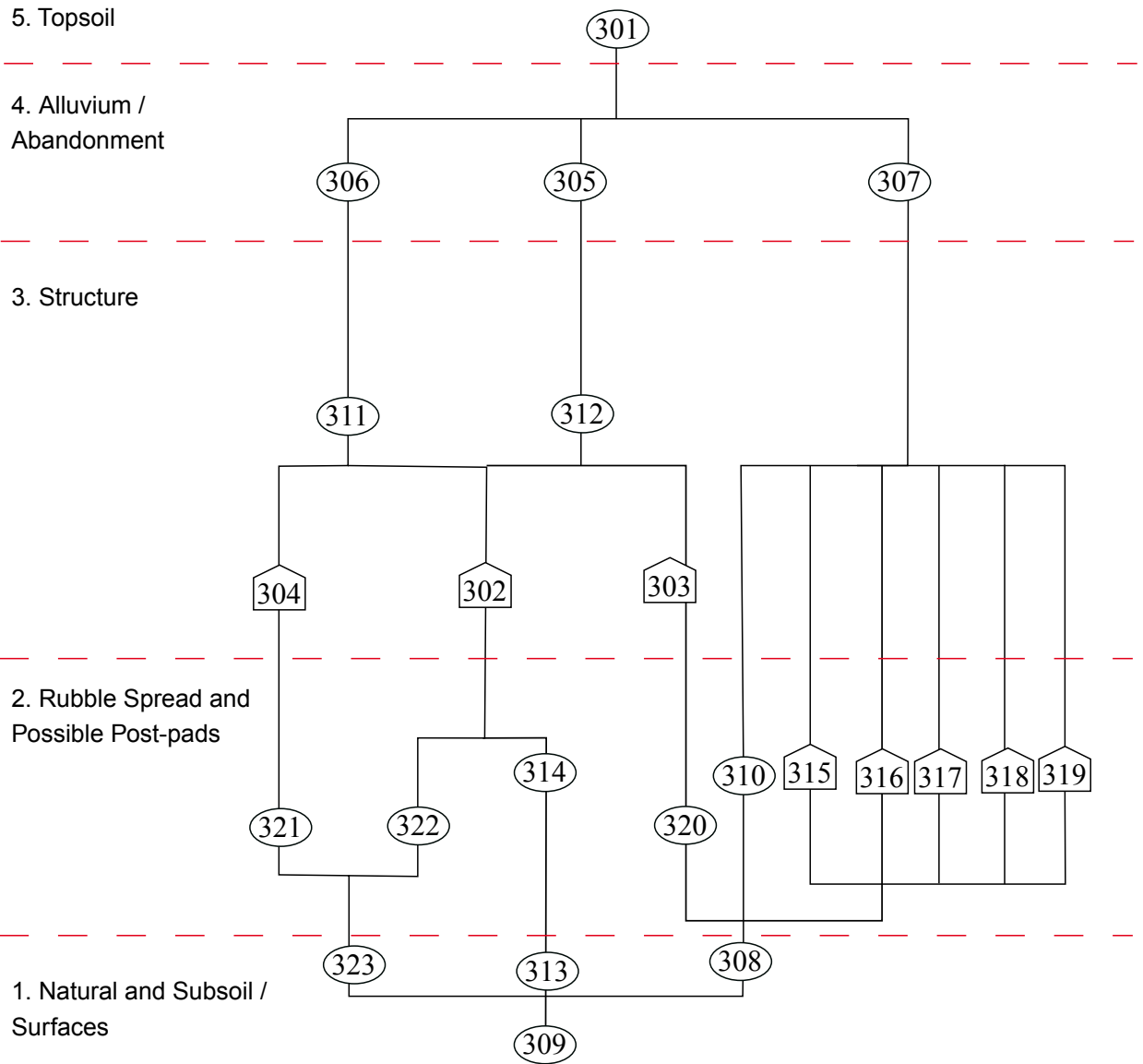
Trench 1 Stratigraphic Matrix



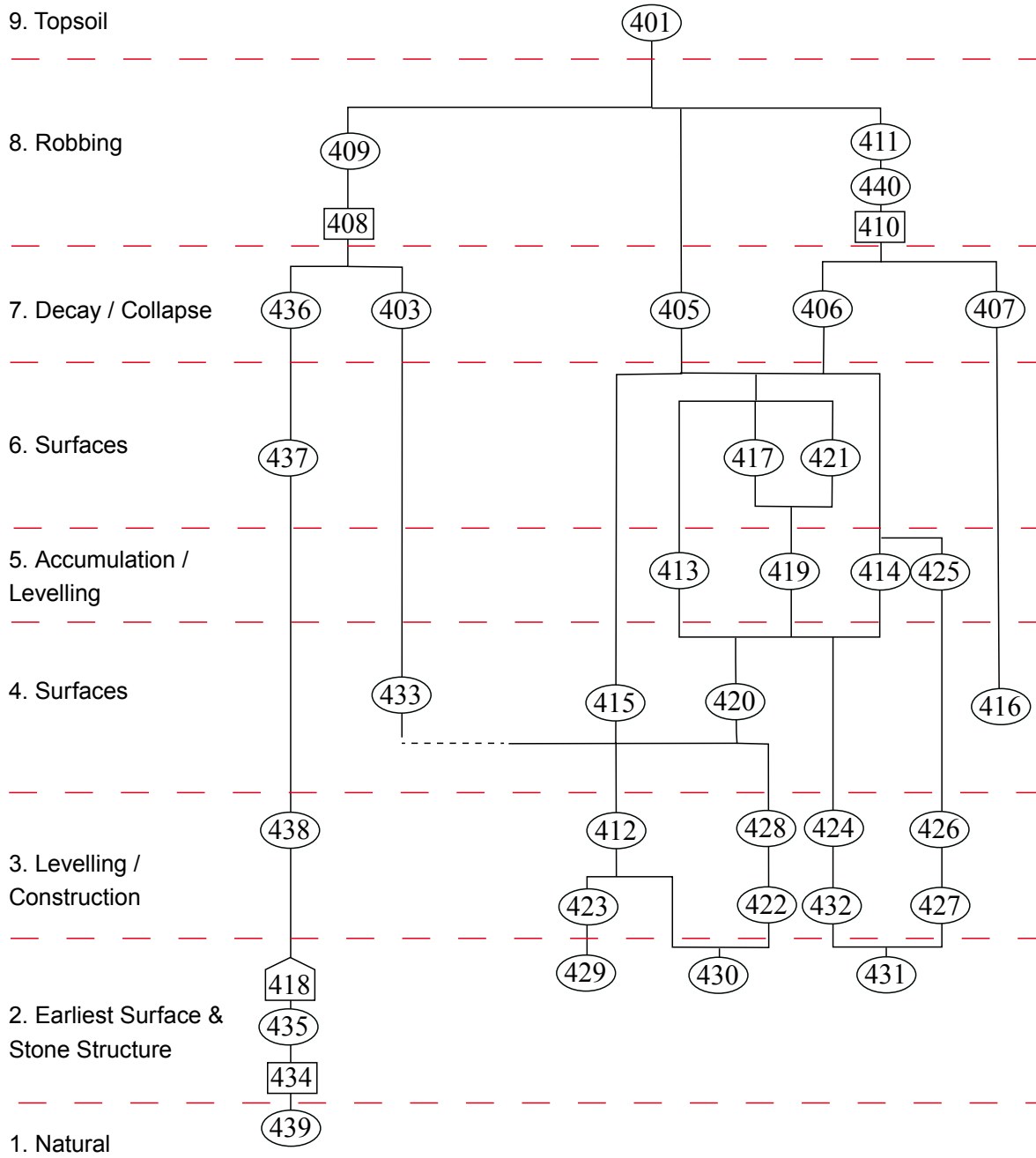
Trench 2 Stratigraphic Matrix



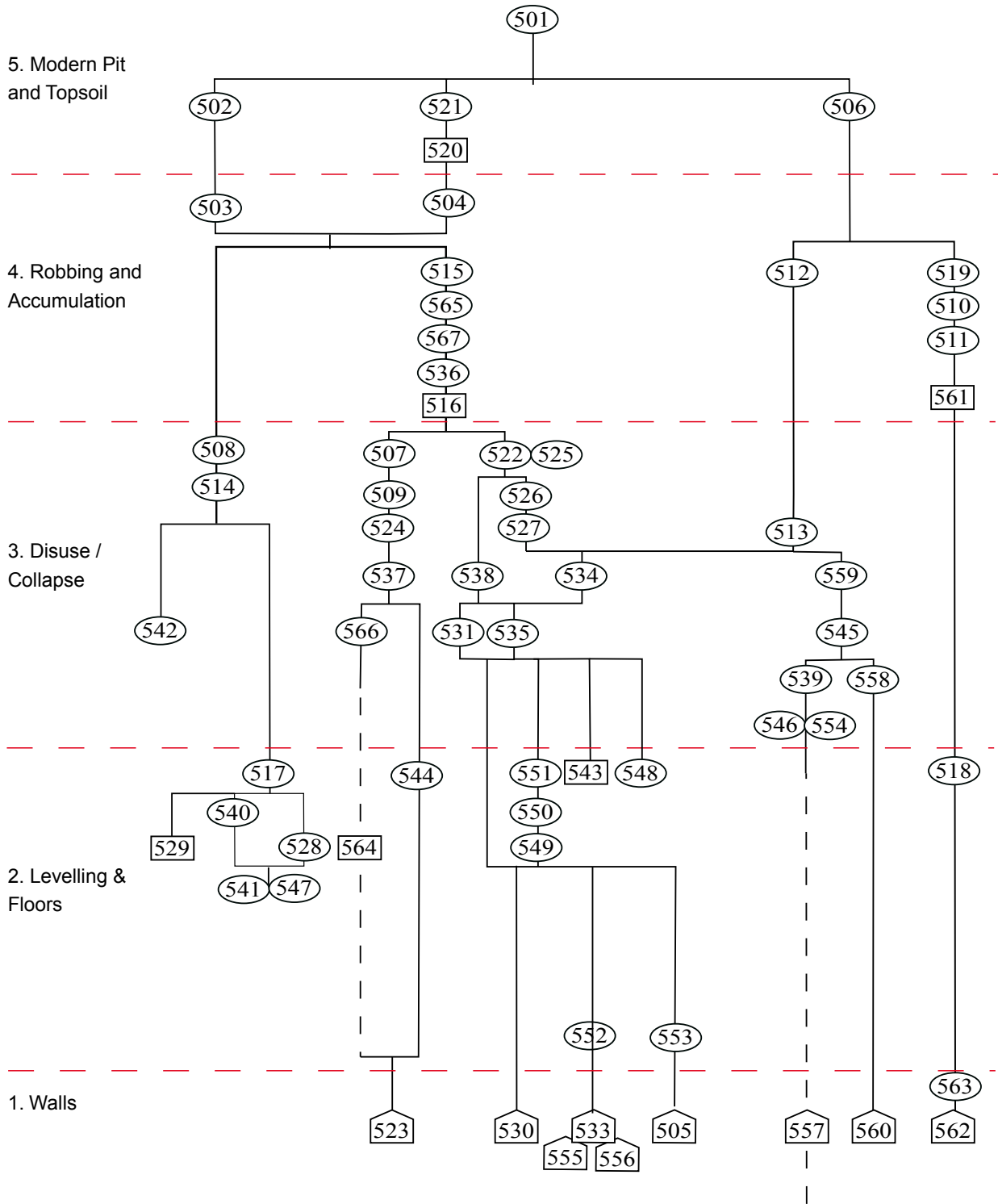
Trench 3 Stratigraphic Matrix



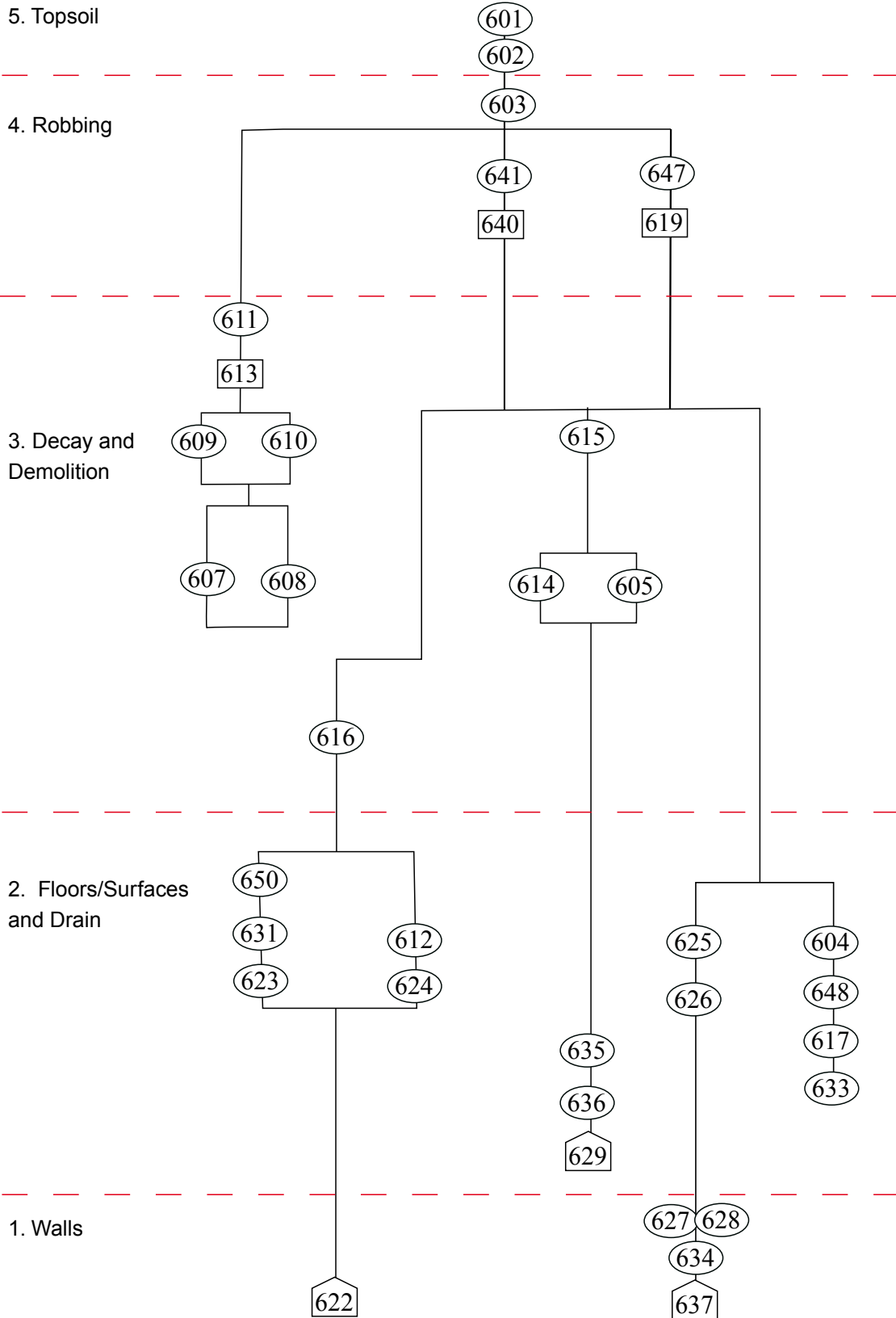
Trench 4 Stratigraphic Matrix



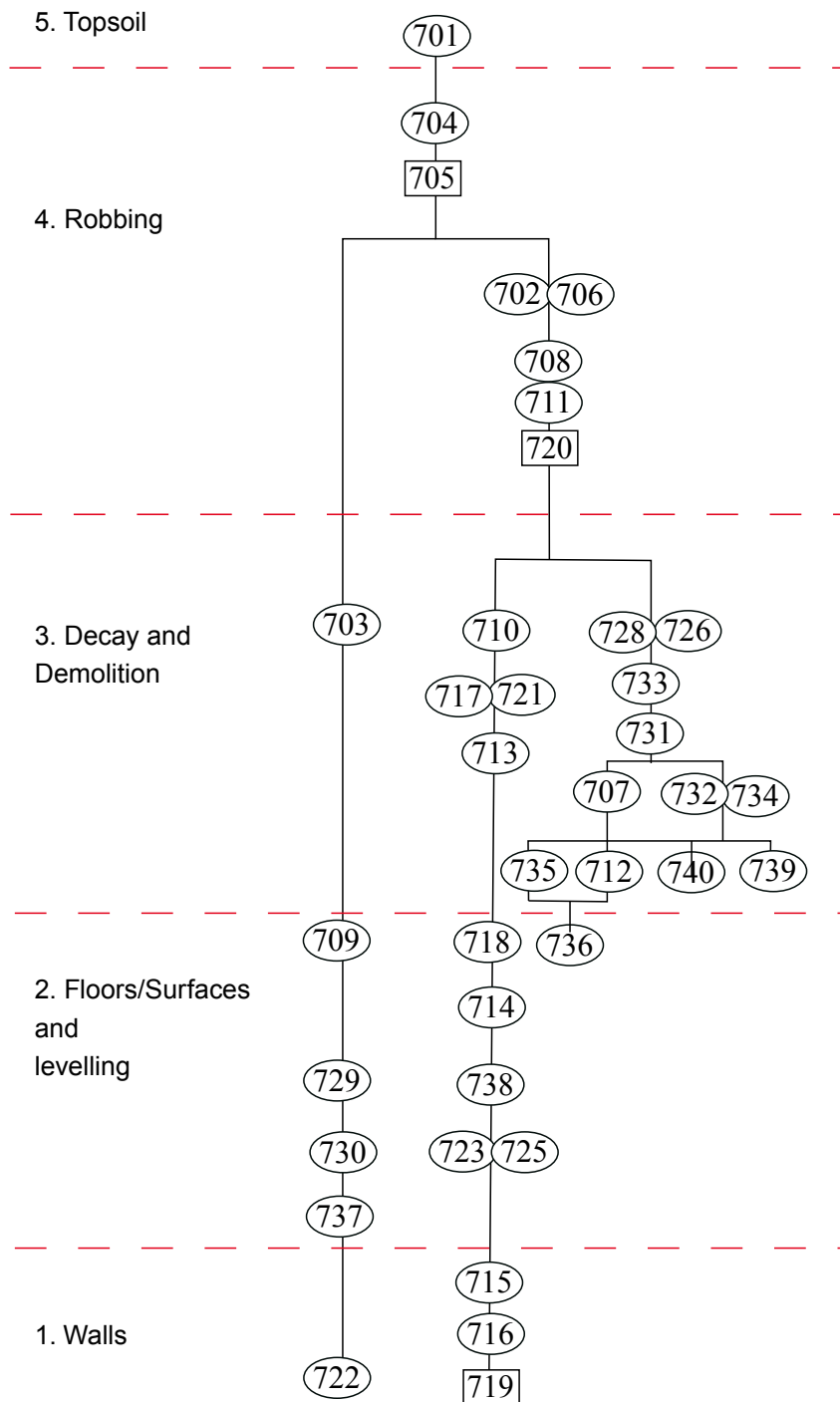
Trench 5 Stratigraphic Matrix



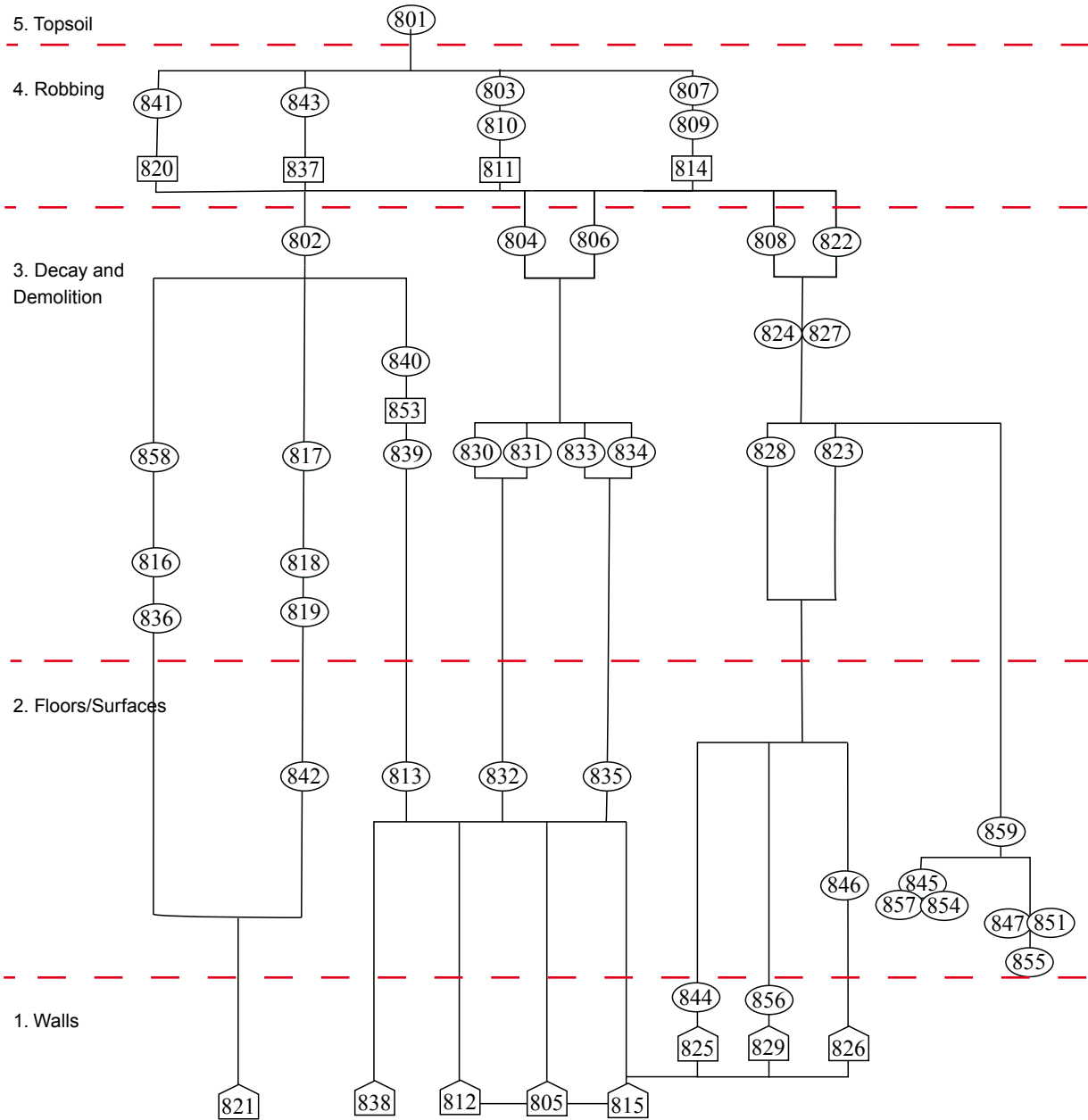
Trench 6 Stratigraphic Matrix



Trench 7 Stratigraphic Matrix



Trench 8 Stratigraphic Matrix



Appendix 2 - Public Participation & Community Engagement

An important element of the *Southern Canabae* project was the aspiration to bring the results of the excavation to as wide an audience as possible, and to allow members of the public the opportunity to participate in the process of archaeological fieldwork and discovery. The outreach strategy for 2011 included providing places for volunteers on site, running twice-daily tours for visitors, holding special Open Days during the Summer Bank Holiday weekend (27-29 August), and using the internet and social media to communicate with people across the world.¹

Several TV companies filmed the excavation in 2011 and the work at Caerleon featured in two of the BBC's new series - *The Story of Wales* with Huw Edwards and *The Great British Story: A People's History* with Michael Wood. The excavation was also filmed for the Channel 4's Time Team, which brought the *Southern Canabae* project to an estimated 1.5 million viewers.

Under the title '*The Lost City of the Legion*', the 2011 excavations were a hugely successful public engagement event attracting thousands of visitors to the site and generating interest in archaeological research at this internationally important site from across the world.

Volunteering at Caerleon

A total of 61 volunteers (approximately 20 per day) joined the team to take part in the excavations. This was very successful and feedback was extremely positive. The volunteers were from a diverse range of ages and backgrounds, from school pupils interested in careers in archaeology, local history enthusiasts, experienced amateurs, metal detectorists, local shopkeepers, teachers, and retired nurses. The volunteers included groups from sixth form colleges in Colchester and Cirencester who each camped with the team for a week. The volunteer scheme was heavily over-subscribed and enquiries about volunteering continued until the last day of the dig.

Site Visits and Open Days

Through tours and a variety of family-centred interactive activities with tangible learning outcomes, the excavators sought to increase public awareness of the archaeological fieldwork that was being undertaken. Visitors during the Open Days were welcomed by students dressed in authentic Roman costumes and were given guided tours of the site, thereby experiencing an archaeological excavation at first hand. Members of the public were encouraged to examine the many types of finds recovered

	2011*	2010**	2008**	Total
Volunteers	61	41	36	138
Visitors total	6,225	3,904	3,090	13,219
Open Days	3,292	1,643	934	8,969
Dig blog hits	19,315	24,188	13,103	37,291
Facebook 'Interactions'	41,102	-	-	41,102
Twitter followers	471	104	-	585

Table 11 Summary of outreach activities at Caerleon 2011

* 4 weeks ** 6 weeks

1. Dr Paula Jones co-ordinated the volunteer programme and the schedule of engagement events on site. Cardiff University's Community Engagement Team helped organise the engagement strategy and also arranged a series of family centred activities for the Open Days. Staff from the National Roman Legion Museum provided significant resources and support for the Open Days including Roman costumes, small suits of Roman armour for children and a range of literature for display.



Fig. 95. Volunteers young & younger joyfully help uncover the archaeology



Fig. 96. The hustle and bustle of the busy open days

during the excavation, and they could take part in various archaeological and fun activities devised and arranged by the students and volunteers. These included

- make your own Roman pot workshop
- Finds handling activity – learning about pottery and animal bone
- authentic Roman food - cookery display (with Edith Evans of the Gwent Glamorgan Archaeological Trust)
- childrens' Roman dig
- a 'gallery' of colouring sheets & colouring competition for younger children.
- trying on Roman armour for younger children

In terms of attendance the excavation was a huge success with a 6,225 people visiting during the 4 week season in 2011 - an average of 1,556 people per week. Over 3,200 visitors came to the site during the bank holiday weekend - 1,611 visitors attended on the Monday alone.

Almost 1,400 copies of the commemorative *Lost City of the Legion* booklet were taken away during the excavation season by members of the public as souvenirs of their visits.

Special Visits

The *Southern Canabae* project aimed to engage all sections of society with archaeological research, including people from disadvantaged backgrounds, those with disabilities, and ethnic minorities who tend not to

visit historic sites. In 2011 we welcomed special group visits by the charities Fairbridge and Scope.

Fairbridge work with 'disengaged' young people (between 13-25 years old) and help them to gain the motivation, self-confidence and skills they need to change their lives. Two young people accompanied by Fairbridge staff came to site and spent the day working in the trenches alongside the archaeologists and also having an extended tour of the site and lunch with the team. It was clear that the experience was enjoyed by all, but particularly inspiring to one of the participants who would now like to go on to pursue a course in archaeology in the future.

Scope work with adults with a range of learning difficulties and disabilities, providing care, support, and enjoyable activities. A group from Scope visited the excavations on two occasions, helping out in the trenches as well as cleaning finds. All of the individuals involved are now researching the Roman period in their spare time and have become committed voluntary diggers.

Dig Blog and the Internet

The internet allowed the *Southern Canabae* project to build on the successes of previous seasons and to communicate the results of the archaeological excavations to as wide an audience as possible. The project generated interest from across the world and the team used a variety of means to satisfy the demand for updates about how the excavation was getting on and news of the latest finds as they came



Fig. 97. Reconstruction of Isca and the Southern canabae (©7reasons)

out of the ground. The 2011 internet resources included:

- Project pages on Cardiff University's website
- Dig Blog
- Animated digital reconstruction of the legionary fortress
- Facebook page
- Twitter feed
- Youtube channel for dig videos

The 2011 Dig Blog, hosted on the Council for British Archaeology's 'Community Archaeology Forum', was updated daily with illustrated archaeological and social stories written by students and volunteers as well as staff. In total the blog received over 19,000 hits during the 4 weeks of the excavation (an increase of some 20% over the previous year).

The new animated digital reconstruction of the legionary fortress, including a 90 second fly-thru over Roman buildings and roads, was released to coincide with a new webpage describing some of the spectacular discoveries made in the first 3 weeks of the excavation. This received extensive coverage and the animation was featured in

newspapers, television, radio and online in the UK and in many countries all over the world

The Facebook page was new in 2011 while the Twitter account built on the success of the first trial in 2010. Both were very popular and members of the excavation team updated both sites throughout the day with the latest news from the trenches. The Facebook site received over 40,000 interactions during the month-long season, and 471 people followed the dig tweets. Also new this year was the Youtube channel where 3 videos were uploaded. These described the excavation, showed a hypocaust underfloor heating system being dug, and an interview with 2 retired volunteers.

The success of the engagement strategy at Caerleon in 2011 is evidenced by the constructive feedback from volunteers and the enormous popularity of the project in terms of visits and positive evaluation. The *South ern Canabae* excavation shows how archaeology has the power to provoke and inspire people from all over the world to get involved with archaeological fieldwork and cutting-edge university research in the UK.

Appendix 3 - Excavation Team

Ninety people in total worked on the excavations at Caerleon in 2011. Many of the project's core staff have worked together on previous excavations in Caerleon and elsewhere, though this year we were pleased to welcome Paula Jones, Becky Smith, Meg Tudor and Scott Williams as new members of the team. The excavators were either undergraduate archaeologists from Cardiff University or volunteers in various guises. The students and volunteers did not just dig - they also gave tours to the hundreds of visitors to the site, organised and set up various activities during the open day weekend, and coped admirably with the presence of numerous tv crews throughout the season. The small army of volunteers were of all ages and backgrounds, and came to Caerleon from all parts of the UK and beyond - some for a day here-and-there, while others camped with us for several weeks. Many volunteers had worked on the Priory Field excavations in 2008 and 2010, and several former students from these seasons returned during their holidays in 2011 (James Goodsell, for instance, is a veteran of Priory Field who was persuaded to help supervise Trench 2 during his vacation in Caerleon). Time Team spent three days with the project at the end of our third week and we would like to thank Phil Harding, Raksha Dave, Matt Williams and Alex Langlands for their hard work in the trenches.

The team camped in Priory Field and we are indebted to Cadw for allowing us to use the field again. Many people provided the excavation with assistance during our time in Caerleon, but we are particularly grateful to Miguel Santiago of the Priory Hotel for the loan of his generator and for letting us use his hotel's garden to celebrate Elizabeth Guest's 8th and Rachael Sarson's 21st birthdays (including a memorable performance from our special friends The Widders). Sustenance this year was provided by Steve Waite who, ably assisted by Archie Gillespie (and Rob Riddett in the 'breakfast tent'), did a fantastic job of feeding dozens of hungry archaeologists every day, while somehow maintaining a semblance of civilisation in the camp and keeping spirits up even in wet boots.

Thank you to everyone who helped dig Caerleon's Southern Canabae in 2011 and for making our month on site once again such a rewarding and enjoyable experience.

CAERLEON SOUTHERN CANABAE 2011 EXCAVATION TEAM

Core staff

Peter Guest - Director	Anna Gow - Site assistant
Mike Luke - Director	Robert Riddett - Site assistant
Ian Dennis - Site supervisor	Rebecca Smith - Site assistant
Caroline Pudney - Site supervisor	Megan Tudor - Site assistant
Chris Waite - Finds supervisor	Scott Williams - Site assistant
Paula Jones - Community Archaeologist	Steve Waite - Cook
Archie Gillespie - Site assistant	

Student archaeologists

Kelsie Armstrong	Luke Green	Kai Lumber
Daevid Bedwell	Matthew Gwynn	Ana Lutescu
Emmelia Booth	Jade Hanley	Christopher Matthews
Emily Bowyer	Elliot Heade	Rachael Sarson
Gwion Dafydd	Michelle Humphreys	Hollymae Steane Price
Cassandra Davis	Owen Jones	Emma Stephens
Nicholas Dawson	Rebecca Lewis	Rebecca Trower
Jonathan Durman	Daniel Lovelace	

Pre-university taster students

Jacob Ball	Lucy Hannam	Marie Wall
Dominic Chorney	Charlotte Haywood	Hannah White
Jess Evans	James Lorimer	
Alex Fallows	Radu Pitis	

Roman Society Fieldwork Bursary holders

Jack Donnelly (Colchester Sixth Form College)
Rebecca Jenkinson (Colchester Sixth Form College)
Eleanor Merry (Colchester Sixth Form College)
Martha Page (Cirencester College)
Oliver Swindall (Cirencester College)

Volunteers

Sue Adams	Morgan Jones	Linda Stanton
Jane Ashwell	Freya Knowles	Anne Sterry
Amanda Chadburn and Torin MacDonald	Jonathan Lambert	Greg Tasker
David Chapman	Ryan Linton	Sally-Anne Taylor
Kelsey Dronfield	Phillip Mills	Dawn Thomas
Lynn Earley	Warren Moore	Lisa Venables
Keith Edger	Jennifer Nye	Neil Whatley
Sarah Jayne Evans	Kate Pannel	
Catherine Ferguson	Lesley Parratt	
James Goodsell	Kia Perryman	
Sam Grainger	Alex Raymond	
Tony Hearn	Elliot Rees	
Verdun Howells	Babs Roberts	
Angelo Italiano	Amelia Schafer-Rutherford	
David James	David Standing	
	Hywel Stanton	

Time Team

Phil Harding
Matt Williams
Raksha Dave
Alex Langlands

CARDIFF STUDIES IN ARCHAEOLOGY

The excavations at Caerleon in the summer of 2011 were focused on the complex of monumental buildings outside the fortress of Isca. Discovered during recent geophysical surveys between the amphitheatre and the River Usk, this impressive suburb extended over about 5 hectares and included some very large Roman buildings. The Caerleon Southern Canabae 2011 season of evaluation excavation produced the first glimpses of these ancient structures' remains, which lie close to the surface of the fields around Broadway Farm and are very well preserved. This report presents the preliminary results of the nine trenches opened across the full extent of the complex, beginning with the stratigraphic narratives and followed by summaries of the finds and environmental evidence. The preliminary study of the pottery assemblage indicates the suburb could have been first constructed at about the same time as the fortress (i.e. A.D. 70s), but that the majority of the buildings would seem to have been abandoned perhaps as soon as the early-third century. They were possibly used for the disposal of rubbish during the late Roman period, including the remains of unusually large quantities of pigs and birds, after which the buildings were stripped of their stone and tile before disappearing for 1,500 years. The final discussion looks to provide possible answers to the project's original research questions, concluding with some observations regarding the layout and architecture of the Southern Canabae and its relationship with the fortress and the legionary command in this part of Britannia.

Peter Guest is Senior Lecturer in Roman Archaeology at Cardiff University, Mike Luke is Senior Project Manager at Albion Archaeology, and Caroline Pudney undertook the initial archiving and post-excavation work at Cardiff University after supervising during the 2011 season. Caroline currently works at Cadw.

