
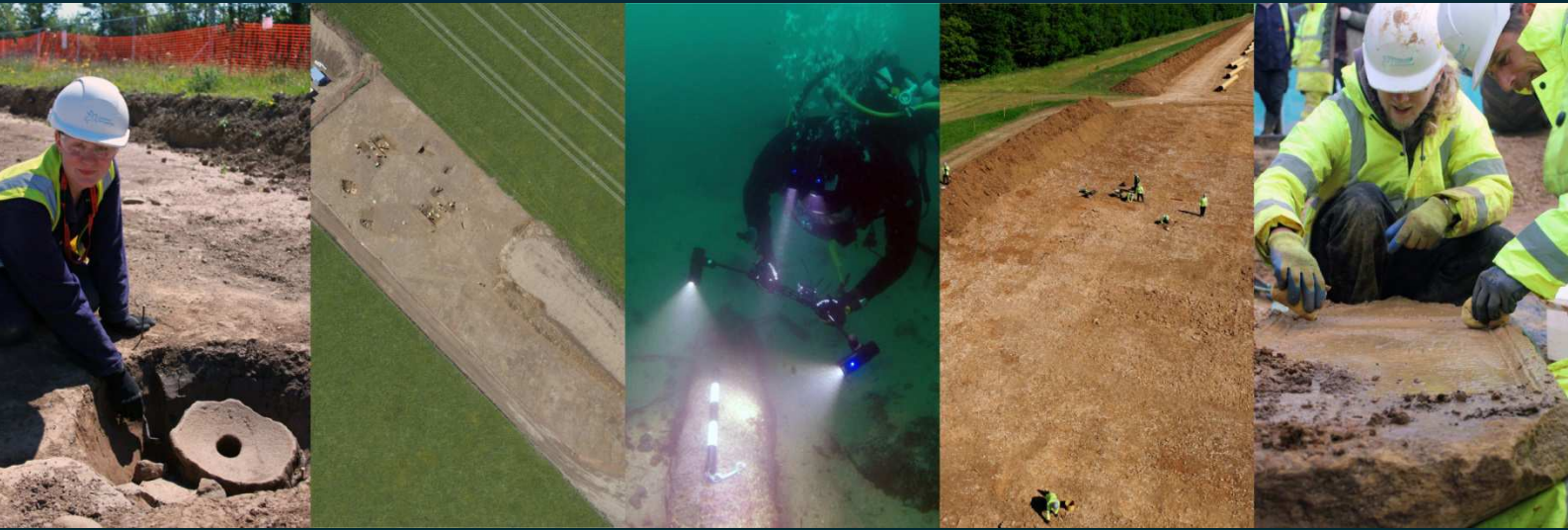


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Project		Contract No. / Orig. Co				Asset		System		Doc. type			Chrono No.									
						/ Zone		/ Building														
DESCRIPTION																						
Archaeological Works: Excavations Cannington Bypass, Post-excavation Assessment																						
CONTRACTOR REF. No N/A						CONTRACTOR Revision : 2			CONTRACTOR WBS CODE N/A													
CONTRACTOR COMPANY TRADE NAME : COTSWOLD ARCHAEOLOGY																						
<b>APPLICABILITY:</b> <i>Tick the boxes corresponding to the unit and site(s).  The numbers must correspond to the "Asset/zone" in  the Doc ref. Number above: U0 = 0, U1 = 1, U2 = 2,  U9 = 9, AU=1&amp;2</i>						NUCL/REP/EPR/UKX						BUILDING N/A										
						HPC (doc: HK)				SZC (doc:SZ)												
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SCALE			SIZE A4			PAGE 1/197			SAFETY RELATED			YES <input type="checkbox"/>			NO <input checked="" type="checkbox"/>							
DOCUMENT SUB-TYPE						EDF CLASSIFICATION CODE																
SUBCONTRACTOR COMPANY TRADE NAME						SUBCONTRACTOR DOCUMENT REF. No 9177 Cannington Bypass Assess Report 16141																
 <p style="margin-top: 10px;">This pattern shall be fully readable For A0 and A1 ABERPFTHLIJDOCGQUVWMNSZXKY</p> <p style="margin-top: 5px; font-family: monospace; font-size: small;">zsaeoemuvnwxi1rfkhbdpqgyjlt714238569d</p>																						
Version	Date	Prepared by	Checked by	Status	Reasons for revision				Approved by													
1	7 April 2016	J Hart	A. Mudd	PREL	First issue for comment																	
2	14 June 2016	J Hart	A Mudd		Following comment from AMECFW																	
3																						
4																						
5																						
6																						
INTELLECTUAL PROPERTY :			NNB : OWNERSHIP				EDF :															

# Hinkley Point C Associated Development: Cannington Bypass Somerset

*Archaeological Works: Post-Excavation Assessment*



for  
NNB Generation Co.  
(HPC) Ltd

on behalf of  
EDF Energy

CA Project: 9177  
CA Report: 16141


June 2016



# Hinkley Point C Associated Development Cannington Bypass Somerset

## Archaeological Works: Post-Excavation Assessment

CA Project: 9177  
CA Report: 16141

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date	29 March 2016
issue	02

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## SUMMARY

<b>Project Name:</b>	Cannington Bypass Excavations
<b>Location:</b>	Cannington, Somerset
<b>NGR:</b>	SPE 1: ST 255405 SPE 2: ST 251400 SPE 3: ST 249393
<b>Type:</b>	Excavation
<b>Date:</b>	9 June 2014 to 7 November 2014
<b>Location of Archive:</b>	To be deposited with Somerset County Museum Service (SCMS)
<b>SCMS Accession Number:</b>	TTNCM 4/2010
<b>Cotswold Archaeology</b>	
<b>Site Code:</b>	CTW 14

This report relates to three Set Piece Excavations (SPEs) undertaken along the route of Cannington Bypass on land west of Cannington, Somerset (site centred on National Grid Reference, NGR ST 25100 40000; Fig. 1). This bypass is part of the associated development for the proposed construction of Hinkley Point C nuclear power station in Somerset. The excavations were undertaken by Cotswold Archaeology (CA) between 9 June and 7 November 2014 at the request of AMEC on behalf of EDF Energy.

The findings of most interest were in SPEs 1 and 2, with features of lesser interest in SPE3. In SPE1 was found a Middle Bronze Age settlement enclosure defined by a ditch with an entrance to the south-west. In its interior were groups of shallow pits and postholes, which may have been the location of houses or other structures, although they formed no clear pattern. Finds of Trevisker-related pottery and charred plant remains came from the ditch and the interior features, but there were few other finds and any animal bone had not survived.

In SPE2 was found a late Iron Age enclosed ridge-top settlement with evidence for several roundhouses. In the Roman period the settlement developed in to villa complex with three distinctive stone-founded buildings – a bath-house (Building A), a barn-like structure (Building B), and a villa residence (Building C). Building A showed several episodes of construction including a hypocaust that was later filled in. The gallery of Building C was the site of four infant burials. On the whole the site was poorly preserved because of extensive

post-medieval quarrying as well as ploughing. Pottery, ceramic building material and animal bones were plentiful, although metalwork and exotic finds were quite rare and the settlement does not seem to have been a grand one in comparison with other villas.

In SPE3 was found a hollow-way that had filled in during the medieval period and was subsequently used as a boundary.

This document presents a quantification and assessment of the evidence recovered from the excavation. It considers the evidence collectively in its local, regional and national context and presents a summary statement of potential of the evidence for further work to contribute to archaeological knowledge.

## 1 INTRODUCTION

- 1.1 Between 9 June and 7 November 2014 Cotswold Archaeology (CA) carried out archaeological excavations on three set-piece excavation areas (SPEs) along the route of the Cannington bypass west of Cannington, Somerset, as part of the associated development for the proposed construction of Hinkley Point C nuclear power station (Figs 1 and 2). The work was undertaken in accordance with a Written Scheme of Investigation (WSI) for Archaeological Mitigation prepared by AMEC on behalf of EDF Energy and approved by Somerset County Council's Development Control Archaeologist, Mr Steven Membery (AMEC 2011).
- 1.2 The excavations, which followed stages of geophysical survey and trial trench evaluation (Stratascan 2010; CA 2011), were carried out in accordance with ClfA's Standards and Guidance (2008), and the Somerset County Council Heritage Service's Archaeological Handbook (SCC 2008). The fieldwork was monitored by Steven Membery for Somerset County Council.
- 1.3 This assessment follows the procedural model of English Heritage (now Historic England; English Heritage 1991). Its purpose is to outline the results of the excavations and assess the nature and quality of the findings in terms of their archaeological potential. It does not, however, include proposals for further analysis of the results. This will be undertaken alongside the results gained from the earlier and subsequent stages of archaeological work connected with the Hinkley Point C project, including fieldwork currently in progress.

### ***Location, topography and geology***

- 1.4 At the time of fieldwork, the course of the bypass comprised arable and pasture fields to the north and west of Cannington. The route runs for c. 1.5 km, starting to the south-west of Cannington village from a roundabout on the A39, passing west of Cannington, crossing the entrance to Brymore School, Withiel Drive, Sandy Lane and Chad's Hill, and then joining up with the Rodway to the north of Cannington (Fig. 2). The total new land-take amounted to c. 26ha. Topographically, the route climbs from 20m OD at its southern end (SPE 3) to a little over 30m at Sandy Lane (SPE 2), and then falls to 8m OD at its northern end (SPE 1).
- 1.5 The underlying solid geology of SPE areas 1, 2 and 3 is recorded as bedrock of the Mercia Mudstone Group with a band of Otter Sandstone and Rodway Siltstone that



starts north of Cannington and extends west to Knoll Green. Superficial deposits of sand and gravel overlie the Mercian Mudstone at the northern end of the site (as observed at SPE 1). A large outcrop of Carboniferous Limestone lies to the north-west of Cannington and there are other smaller outcrops of Otter Sandstone and Rodway Siltstone nearby (BGS 1984).

### ***Archaeological background***

- 1.6 A full description of the archaeological and historical background of the site, included in a Desk-Based Assessment (DBA) produced by AMEC (AMEC 2010), is briefly summarised here. The archaeological remains discovered lie within the wider context of sites in the surrounding area. Immediately to the north-west lies Cynwit Castle, also known as Cannington Camp, an Iron Age hillfort which is a Scheduled Monument (NMRSO 26). South-east of the hillfort, an Iron Age or Roman/post-Roman settlement and associated banks and lynchets are also a Scheduled Monument (NMRSO 459). Furthermore, a ditched and palisaded enclosure immediately to the north of the hillfort (excavated in 1963 and subsequently destroyed by quarrying) also dates to the Iron Age. Roman remains have been found in the hillfort and in Cannington Park Quarry, where a large inhumation cemetery was partly excavated in 1962-3. The cemetery was used from AD 350 to 800 and probably originally contained over 2,000 burials. It may therefore have been a graveyard for several communities in Somerset. There are no known settlements of this date within the DBA study area.
- 1.7 A magnetometer survey was carried out in 2010 in the road corridor to identify anomalies of possible archaeological origin (Stratascan 2010). These were subsequently targeted by trial trenches used to evaluate their character (CA 2011). The evaluation identified three areas of concentrated archaeology. A sub-rectangular enclosure in the north of the site that had been identified by the geophysical survey was dated to the early Bronze Age (subsequently redefined as Middle Bronze Age). A second area of activity was characterised as a probable settlement of late Iron Age to Roman date. A third area was identified as a likely cobbled track or road that had gone into disuse during the medieval period. These three sites were subsequently designated for excavation as SPEs 1, 2 and 3 respectively.

## **2 PROJECT OBJECTIVES**

- 2.1 The broad aim of the archaeological set-piece excavations were to mitigate the impacts of the proposed works on known archaeological remains at selected locations within the site boundary via preservation by record (AMEC 2011).
- 2.2 The objectives for the archaeological set-piece excavations were to:
- investigate specific areas of archaeological interest using set-piece excavation;
  - identify and record all archaeological features, deposits, artefacts or other material uncovered through the set-piece excavation. The identification and recording effort will incorporate an environmental sampling strategy;
  - prepare a fully illustrated report on the results of the set-piece excavation that are compliant with all relevant regulations, guidance and good practice;
  - archive all documentary, material and digital records created as a result of the set-piece excavation in the correct repository; and
  - provide information on specific themes/questions (see below) identified in the South West Archaeological Research Framework (SWARF) research agenda (Webster 2008).
- 2.3 The proposed archaeological set-piece excavation may provide information that may help to fulfil the following SWARF research aims:
- Research Aim 2: Encourage works of synthesis within and across periods, settlement, monuments and areas;
  - Research Aim 17: Improve the quality and quantity of environmental data and our understanding of what it represents; and
  - Research Aim 29: Improve our understanding of non-villa Roman rural Settlement (AMEC 2011)

## **3 METHODOLOGY**

- 3.1 Set-piece excavations were undertaken in the following three areas of archaeological interest (SPE 1 to 3).

<b>Set-piece excavation</b>	<b>Area (ha)</b>
-----------------------------	------------------

SPE1	0.23
SPE 2	0.95
SPE3	0.42
Total	1.60

- 3.2 Fieldwork commenced with the removal of topsoil and subsoil from the excavation area by mechanical excavator with a toothless grading bucket, under archaeological supervision. Topsoil and subsoil was removed from all SPE areas by 360° degree mechanical excavators under archaeological supervision, with bulldozers used to remove the spoil from site, and subsequent excavation of all identified features. Significant archaeological activity was identified within SPEs 1 and 2, with only limited archaeological activity present in SPE 3.
- 3.3 The archaeological features thus exposed were hand-excavated to the bottom of archaeological stratigraphy. The following hand excavation sampling strategy was implemented (AMEC 2011).
- 3.4 A portion of each feature was excavated in an archaeologically controlled manner in order to provide the maximum amount of information with emphasis on stratigraphic relationships between features, recovery of dating evidence, form, extent, level of preservation and function. This comprised:
- a minimum of 10% of the identified feature excavated along the length of all linear features (with each excavated section not less than 1m). Key intersections investigated to determine the stratigraphic relationship between features, and sections located at all ditch terminals and to provide equal spatial coverage along the length of the feature;
  - discrete features, such as postholes and pits less than 1m in diameter, half-sectioned (50%);
  - a minimum of 25% of the identified feature excavated from all discrete features, such as pits, greater than 1m in diameter;
  - smaller discrete features, such as stakeholes, 100% excavated;
  - structures 100% excavated; and
  - all burials fully excavated (prior to excavation of human remains an exhumation licence was obtained).

- 3.5 All features were planned and recorded in accordance with CA Technical Manual 1: *Excavation Recording Manual* (CA 2013). Deposits were assessed for their environmental potential and sampled appropriately in accordance with CA Technical Manual 2: *The taking of samples for paleoenvironmental and palaeoeconomic analysis from archaeological sites* (CA 2003). All artefacts recovered from the excavation were retained in accordance with CA Technical Manual 3: *Treatment of finds immediately after excavation* (CA 1995).

## 4 SITE SUMMARIES

### ***Set Piece Excavation Area 1 (SPE 1)***

- 4.1 SPE 1 was located at the northern end of the route and comprised approximately 0.23ha of former agricultural land (Fig. 2). It lay at approximately 14.4m AOD and was bounded on all sides by arable farm land. The underlying solid geology is mapped as the Triassic Mercia Mudstone Group overlain by sand and gravel river terrace deposits (BGS 2016). The excavation was targeted on a sub-rectangular enclosure that was first identified by geophysical survey (Stratascan 2010) and investigated during a subsequent trial trench evaluation (CA 2011). Following the initial stripping of the site, a south-eastern extension measuring approximately 15m by 12m was added in order to define part of the enclosure (Fig. 3).
- 4.2 The evaluation examined the enclosure ditch in Trenches T7 and T9. In T7, four sherds of pottery, defined as broadly late prehistoric, were recovered from ditch 703 (fill 705). In T9, two sherds of Middle Bronze Age pottery and one sherd of late prehistoric pottery were recovered from ditch 905 (fill 904). Other small discrete features were without finds (CA 2011). The data from the excavation has amplified this phasing and superseded the evaluation findings.
- 4.3 Features have been assigned to provisional periods based on spot dates from finds and on spatial relationships to dated features where these are reasonably clear. Only features which could be ascribed to a provisional period with reasonable confidence based on these criteria have been so; other features have been described as *unphased*, although further analysis may resolve the phasing of these in some cases. Features with multiple interventions have been assigned labels (Ditch A, B, etc.) for ease of reference.

- 4.4 A Hinkley Point C project-wide phasing scheme has been devised. Within this scheme the findings from this site are limited and, based on the criteria described above, features have been assigned to the following provisional periods:-

Period 3.2: Middle Bronze Age (1600–1150 BC)

Period 8: post-medieval (AD 1530–1900)

Unphased

*Period 3.2: Middle Bronze Age (1600–1150 BC)*

- 4.5 Activity ascribed to Period 3.2 centred on the enclosure first identified during the preliminary works. Three sides of this were fully exposed, whilst the fourth, south-eastern side, was exposed intermittently along the edge of the baulk in order to define the extent of the enclosure. The enclosure proved to be sub-rectangular and was defined by a single ditch (Ditch A) with an entrance along its south-western side (Figs 3 and 4). Internally it was 32m by 26m in extent; the entrance was 3m wide and defined by ditch terminals with no evidence that a gate had existed.
- 4.6 Ditch A was 1.3m–2.4m wide and 0.6m deep with a steep-sided, flat-based profile (Fig. 5). It seems to have filled naturally since it contained a series of largely horizontal fills derived from the substrate. Although initial analysis suggests that no clear tip lines were present, it is possible that some of these fills derived from an adjacent bank; further analysis of the fill sequences within Ditch A is needed to fully assess this.
- 4.7 Externally, two ditches (B and C) were found immediately north-east of the enclosure. Of these, Ditch B was recorded as having been truncated by Ditch A but further analysis is required to assess whether Ditches B and C were either the remains of an earlier enclosure, or were broadly contemporary with Ditch A and formed an annexe to the main enclosure. Ditch B was 0.85–1.0m wide and up to 0.3m deep, while Ditch C was slightly smaller. The gap between Ditches B and C may have been an entrance and a gap between the south-eastern terminus of Ditch C and Ditch A may have been either a wider entrance or have been closed off by a barrier that has left no archaeological trace.

- 4.8 Internally, the enclosure contained scatter of postholes and pits, mostly within its north-western half. These have yet to be fully analysed, and only those which contained Middle Bronze Age pottery have so far been assigned to Period 3.2. In view of their location, it is likely that most or all of the currently unphased pits and postholes were also Middle Bronze Age although there is no clear patterning.
- 4.9 The postholes indicate that some structures were present. No definitive building plans have yet been identified, and this is a matter for further analysis and wider comparisons. The possible location of a structure, 2.8m wide, is indicated by an arc of five currently unphased postholes (10139, 10152, 10154, 10142 and 10156) towards the centre of the enclosure. A further posthole, 10158, within the area defined by this arc and containing Middle Bronze Age pottery may have been associated. A further concentration of postholes within the north-eastern part of the enclosure may also indicate the location of a building, although structural plans amongst these are less readily apparent.
- 4.10 The pits were mostly oval in plan with bowl-shaped profiles and typically ranged in size from 0.4m wide and 0.1m deep to 1.4m wide and 0.3m deep. Most of the pits contained one or two pale fills with little in the way of anthropogenic material. Their purposes are unclear and not obviously related to food storage. Further analysis of the forms and patterning of the pits may help elucidate their possible functions.
- 4.11 A large hollow, 10083, was present within the centre of the enclosure. This was an irregular oval-shaped feature up to 5m wide and 0.07m deep with gently sloping sides and a slightly rounded base. It seems to have filled naturally and contained Middle Bronze Age pottery. It perhaps represents erosion by livestock within a former corral, but could instead represent a hollow within a former structure lacking any surviving earth-fast foundations. It was sealed by buried soil 10011, which also sealed dated Bronze Age features and was itself sealed by the subsoil.

*Period 8: post-medieval (AD 1530–1900)*

- 4.12 Two field boundaries of post-medieval date were identified but not excavated. Both boundaries comprised double ditches and were probably originally hedge-banks. Pottery of 16th to 17th-century date was recovered from the surface of the north-east/south-west aligned boundary and it may correlate with a boundary depicted on



the 1st Edition 1:2500 Ordnance Survey map of 1888 (Old Maps.co.uk 2016). The other boundary does not appear on any of the OS mapping.

- 4.13 A deposit within the Bronze Age enclosure was unexcavated as it was clearly a post-medieval feature, perhaps filling in the top of a waterhole associated with the fields enclosed by the boundaries.

### ***Set Piece Excavation Area 2 (SPE 2)***

- 4.14 SPE 2 comprised two areas located north and south of Sandy Lane (Figs 2 and 6). The underlying solid geology is mapped as comprising the Triassic Otter Sandstone Formation to the north of Sandy Lane (BGS 2016). South of Sandy Lane the solid geology comprises the Rodway Siltstone Formation (interbedded siltstone and limestone). No superficial deposits are recorded within the site (ibid.).
- 4.15 Significant remains were found in T23 and T25 of the evaluation. These included stone wall foundations and pits (including quarry pits) in both trenches, and Late Iron Age and Roman pottery. In view of the clear importance of the features minimal excavation was undertaken within the limits of the trenches, under the advice of Steven Membery, and the area was designated for further excavation.
- 4.16 Much of the site had been truncated by post-medieval quarrying which has reduced the potential for a full understanding of the site's development. Features have been assigned to provisional periods based on spot dates from finds and on spatial relationships to dated features. Only features which could be ascribed to a provisional period with reasonable confidence based on these criteria have been so; other features have been described as *unphased*, although further analysis may resolve the phasing of these in some cases.
- 4.17 The earliest dated remains comprised a late prehistoric enclosed settlement and this was superseded by a Roman villa. Features have been assigned labels (Ditch A, Building A, etc.) for ease of reference. Based on the criteria described above, features have been assigned to the following provisional periods:-

Period 4.3–4.4: Late Iron Age to Late Iron Age/Roman Transition (300 BC–AD 70)

Period 5.1–5.2: Early to Mid Roman (AD 50–AD 250)

Period 5.3: Late Roman (AD 250–425)  
Period 7: medieval (AD 1000–1530)  
Period 8: post-medieval: (AD 1530–1900)  
Period 9: modern (AD 1900+)  
Unphased

*Period 4.3–4.4: Late Iron Age–Late Iron Age/Roman Transition (300 BC–AD 70)*

- 4.18 The earliest dated features contained pottery dateable to the Late Iron Age and Late Iron Age/Early Roman transition period (Figs 6 and 7). The recovered pottery assemblage includes wares in the south-western decorated tradition, dateable to the 3rd to 1st (possibly mid 1st) centuries BC, but undecorated wares in the same fabric and wheel-thrown pottery from the site may belong to the transitional Late Iron Age to Early Roman period spanning the mid to late 1st century AD. A small number of features undated by finds have also been assigned to this period where it seems clear that they were related to features containing finds of this date. Other features (primarily postholes and pits) which may well belong to this period are provisionally unphased as there is potential for some to belong to either the Roman or later periods or to a period of as yet unidentified activity.

*Enclosure ditches*

- 4.19 During this period, part of the site was enclosed by the creation of parallel curvilinear ditches (Ditches L, N and O; Figs 6 and 8). The full extent of this enclosure was not recorded since the south-easternmost part of the ditch circuit had been lost to post-medieval quarrying, whilst the western part extended beyond the baulk. However, since Ditch O respected the location of Period 5.1–5.3 Ditch W, it seems likely that Ditch W followed the line of an existing boundary, perhaps the western boundary of the late prehistoric settlement. If this is accepted, then the area enclosed was perhaps some 60m by at least 50m in extent.
- 4.20 Entrances were not found along the exposed part of the circuit but it is possible that Ditches DF, DA, Y and Z flanked a trackway leading to an entrance along the eastern side of the settlement, a suggestion comparable to that made for the villa period occupation (see below). The ditches themselves had broad u-shaped profiles and were up to 3m wide and 0.7m deep. Most excavated sections across the ditches revealed sequences of up to three fills including deposits containing frequent

sandstone fragments which may have derived from an adjacent bank. Pottery from the ditches included both Late Iron Age/Roman transitional wares and Roman pottery, but the latter probably relates to either late infilling or indicates that the ditches remained as earthworks into the Roman period, potentially as late as the 2nd to 3rd centuries AD, which was the date of the latest material from these ditches.

#### *External features*

- 4.21 A rectilinear field system has also been assigned to this period, although the relationship between this and the enclosed settlement is currently unclear and the phasing of this field system requires further analysis. The ditch fills contained both Iron Age and Roman pottery and, given the truncated nature of the ditches and the small size of the recovered pottery assemblage, it is not known at present whether the earlier material was residual within Roman ditches or whether the Roman material had collected into remnant Iron Age features. Much of the field system had been lost to truncation, but what survived comprised ditches, perhaps enclosing small fields. North of the ditched enclosure, a smaller enclosure defined by Ditches DD and DE may have been for corralling livestock. South of Sandy Lane, the field boundary ditches included several which were parallel to one another (for example, Ditches DT and DS) and which might have been either hedge-bank boundaries or ditches defining stock runs; the narrow gap between Ditch DR and the terminus of Ditch DY in this part of the site might also have been designed to control the movement of livestock.

#### *Internal features*

- 4.22 Within the enclosed area, much of the site had been truncated by the post-medieval quarrying. However, the remains of three curvilinear ditches (Curvilinear Ditches A–C; Figs 7 and 9) were present, all just inside the easternmost extent of the enclosure ditch circuit. All three curvilinear ditches were found as semi-circular arcs; comparable features found during the Hinkley C excavations seem to have been untruncated and it may be that such features were a local phenomenon. Their functions are not yet understood, but they may have partially defined roundhouse plots.
- 4.23 The largest, Curvilinear Ditch A (ditches DQ and T), would have partially enclosed an area c. 16m in diameter, and consisted of a u-profiled cut up to 0.5m wide and 0.2m deep. This is suggestive of a drainage gully rather than a foundation trench, although the nature of these curvilinear ditches will require further analysis. A gap along the

circuit of this ditch faced east and may have been an entrance but could instead have been the result of truncation from passage to and fro through the entrance of the later Roman Building B. Ditch LL seems to have been related to Curvilinear Ditch A, although whether it was directly contemporary or represents a different phase of any associated structure is not known.

- 4.24 Curvilinear Ditch B was somewhat smaller and would have partially enclosed an area c. 11m in diameter. It included intercutting ditches. Four of these intercutting ditches were found and stratigraphically it is possible that these formed two pairs (V and R replaced by Q and S); the relationship between ditches S and R was not clear either in plan or section (Fig. 9). Whilst it is not proven that two, rather than four, phases of ditch were present, it is possible that this was the case and that each pair represented a wall line foundation trench with an external drip gully. Alternatively, it may be that each ditch represents successive re-cutting of a drip gully, although whether or not any associated roundhouse was rebuilt during these episodes is not known. Very little survived of Curvilinear Ditch C, and it was too shallow (0.08m deep) to determine whether or not it survived to its full extent or had been truncated, although it was large enough to have partially enclosed an area comparable in size to that partially enclosed by Curvilinear Ditch B.
- 4.25 Postholes and pits were found within this part of the site. A number of these contained late prehistoric pottery and it seems likely that many of the currently unphased postholes and pits were also of this period, although some clearly related to Roman and post-medieval activity. No structural features have been currently identified from the layout of the postholes, although some at least may have been associated with the curvilinear ditches.
- 4.26 There was also an oven (20600) of 'figure-of-eight' form, 2.74m long and 1.05m wide, surviving to a depth of 0.35m. Charred plant remains from two samples contained possible broad beans as well as cereals.

*Period 5.1–5.3: Early to Mid Roman (AD 50–250) and Late Roman (AD 250–425)*

- 4.27 A major re-organisation of the site occurred during the Roman period. Pottery dating suggests that this occurred during the Early to Mid Roman period, but the question of continuity or hiatus from the Iron Age occupation remains to be addressed. The

Roman pottery, of which just over half comprised Dorset Black-burnished ware, spans the 1st to 4th centuries AD.

- 4.28 The Iron Age enclosure was augmented in the Roman period with ditches further down the slope (Ditches J, K, DI and DG; Fig. 6) and the western boundary re-established with the creation of Ditch W, which is assumed to have removed an earlier boundary. Ditch W was 2.8m–4m wide and up to 1.4m deep with a steep-sided, fairly flat-based profile and it contained a series of natural infills which yielded pottery dateable to the late 1st to 3rd centuries AD. A few tip lines suggest that there may have been a bank along the outer (western) edge of Ditch W.
- 4.29 The Iron Age ditches remained as earthworks into the Roman period as some (for example, Ditches DU and DW) continued to collect Roman pottery into the 2nd to 4th centuries AD. The enclosed area seems to have been accessed from the north via an entrance flanked by ditches DI and DH. Between these, 'Ditches' DC and DJ may in fact have been hollow-ways.
- 4.30 Within the areas unaffected by quarrying, the remains of three stone-founded buildings (Buildings A, B and C) were found and represent the remains of a villa settlement. A detailed consideration of the structure and interpretation of these buildings awaits further analysis, although it is unlikely that the phasing presented below will change significantly.

### ***Building A (Figs 10–14)***

#### *Building A Phase 1 (2nd century AD); Fig. 10*

- 4.31 Building A was the westernmost of the three surviving Roman buildings and seems to have been a bath-house, although the clearest evidence for this came from Phase 3 of the building's use and it is possible that its function changed over time. A small number of features pre-dated the building but contained no finds and the dates of these are unknown, beyond being earlier than the construction works. The date of the construction works is currently uncertain, but seems to have been in the 1st to 2nd centuries AD based on pottery recovered from the construction cuts.
- 4.32 The earliest identifiable building works comprised the construction of at least two rooms (Rooms 1 and 2; others may have been quarried away). Room 1 was the only one of these to have a largely intact floor plan; this measured 6.5m by 5.8m and

survived only as a single course of stone rubble wall footings (20484) laid within a shallow construction trench, 20518 (not illustrated).

- 4.33 On the western side of Room 1 was Room 2, a rectangular space 3.6m wide and at least 6m long. It had been built within a terrace (20267) cut into the natural north to south hillslope. It included north/south-aligned foundations 20462 and 20471 along the eastern side of the cut, both constructed using roughly squared sandstone rubble, laid to regular courses and bonded with pink-orange mortar. It seems likely that comparable foundations were originally present along the western and southern sides of the cut, although none survived due to later robbing. The terrace cut had been backfilled with deposits (20256, 20350, 20351 and 20352 – not illustrated) which contained pottery only broadly dateable as Roman.
- 4.34 Due to later alterations it could not be established if Rooms 1 and 2 were of a single construction phase; the similarity in construction techniques used in Room 1 and the residence (Building C; see below) suggests that Room 1 was part of the original build, but the different technique used for Room 2 may suggest that it was a later addition. Alternatively, it may have been a response to Room 2 having had a different function (later receiving underfloor heating). None of the rooms contained features other than foundations and details of their functions and of construction techniques used above ground level are unknown.

*Building A Phase 2; Fig. 11*

- 4.35 Building A was altered after its construction, although the dates of each phase of alteration are unclear as most of the finds recovered are only broadly dateable within the Roman period. The earliest known modification comprised the addition of a central room (Room 3) between Rooms 1 and 2 which involved inserting north/south wall 20472 across wall 20484 of Room 1, with the existing eastern wall of Room 2 being utilised as the western wall of the new room. Wall 20472 was constructed on sand bedding layer 20272/20274/20555 (not illustrated) and comprised a course of roughly squared, flat-laid sandstone blocks overlain by a second course of pitched sandstone blocks. Internally, Room 3 contained several sub-floor channels defined by sandstone blocks laid, unbonded with mortar, onto sand bedding deposits. These channels either formed elements of a hypocaust system or were for drainage. The presence of wall 20471 in this and the subsequent phase shows that the channels did not connect with the hypocaust in Room 2b of Phase 3.

*Building A Phase 3; Figs 12–14*



- 4.36 During Phase 3, Room 2 was significantly updated with the provision of a hypocaust. Remodelling also occurred within Rooms 1 and 3, although the extent of this is less apparent, and an additional room (Room 4) was added to the north of Room 1.
- 4.37 Room 2 was sub-divided into three cells (Rooms 2a, 2b and 2c) by the insertion of east/west aligned walls 20473 and 20463 and north/south wall, 20462. Room 2a, the northernmost of these, had been largely truncated by later quarrying but included a patch of *in situ opus signinum* flooring, 20478, upon which two ceramic *pilae* stacks survived. Wall 20463 between Rooms 2a and 2b included a cross-channel (not visible on plan), probably a hot air conduit. At this time wall 20471 was remodelled with the insertion of limestone wall 20461 slightly to the east, accommodating the stacks of *pilae* tiles. This had the effect of filling in part of the east/west subsurface channel of Room 3.
- 4.38 Room 2b survived almost to its full ground-plan and was 2.6m wide (east to west) and 2.4m long (north to south). Within Room 2b, sandy bedding layers (20557 and 20552; not illustrated) underlay *opus signinum* surface 20475, which was 33mm thick and formed the base onto which a ceramic *pilae* hypocaust system had been built. This surface comprised concrete, mixed with broken tiles and had perhaps been laid onto cobbles, since a few of the latter were preserved within the base of the surface. Two phases of this hypocaust were found, the earliest of which (20448) comprised five (surviving) stacks of tiles measuring 0.2m by 0.2m. These were replaced or supplemented by twenty stacks of larger tiles (20477/20371/20372/20373/20374), each measuring 0.3m by 0.3m, in a 5 x 5 formation across the room. No traces of the floor above these *pilae* survived, but it may have comprised large tiles bridging the gaps across the *pilae*. Within this room, the walls had been rendered (below floor level) with plaster 20474 with chalk and gravel inclusions.
- 4.39 The southernmost cell, Room 2c, was poorly defined and largely robbed out, although the surviving walls were rendered with mortar (20490).
- 4.40 Although the functions of these rooms isn't certain at this stage, it is probable that they provided a suite of rooms for a bath-house, including a *caldarium* or hot room (Room 2b) above the hypocaust and a plunge pool (Room 2c) within the southernmost cell, the base of which was found low enough below the projected floor level within Room 2b to have contained a pool.

- 4.41 Room 1 was also altered during this phase, with at least partial partition by the insertion of east/west wall 20464. This was probably contemporary with the alterations to Room 2 as similar construction techniques were used but it is not clear how far eastwards this wall originally projected since it had been truncated. The underfloor channels previously in use beneath Room 3 were infilled with dumped deposits (20452, 20453, 20486 and 20238). Amongst these were finds dateable to the late 2nd to 3rd centuries AD. Some repairs to existing walls using limestone (as opposed to sandstone which was exclusively used in previous phases) were also undertaken. Amongst these repairs, sand, CBM and stone fragments (20461) were used to repair wall 20471 and included a fragment of moulded plaster, possibly from a door or window reveal, but this was a fragment re-used within the wall repair rather than having been found *in situ*.
- 4.42 A further major change was the addition of Room 4 on the northern side of Room 1. Very little of this had survived the later quarrying but the construction techniques used seem to have been comparable to those used during most of the other Phase 3 alterations, utilising faced sandstone foundations laid onto sand bedding layers. Internally, a patch of flooring survived within Room 4, and consisted of sandstone rubble 20441 levelled with mortar 20440 laid onto sandy bedding layers (20489 and 20460). Pottery dateable to the late 2nd to 3rd centuries was retrieved from bedding layer 20460.

*Building A Phase 4 (not illustrated)*

- 4.43 Phase 4 saw further remodelling of Building A, exclusively within the modified Room 2. The floor, which must have formerly rested on the *pilae*, was demolished in its entirety and the resulting mortar, clay, CBM and sandstone rubble (20375 and 20376) was compacted between and above the surviving *pilae* stacks. The only dateable finds from these demolition deposits were broadly Roman. This demolition debris formed the formation level for a new *opus signinum* floor, 20240, a yellow/grey surface 80mm thick which included fragments of tile and plaster debris, which occupied both Room 2a and 2b. A small patch of polished pale brown-grey plaster, 20344 (0.2m by 0.2m in extent), overlaid the floor and may either have been a decorative finish or an area of collapse from a former wall.
- 4.44 Further demolition deposits in other rooms may point to other modifications during this phase, but no structural elements of these survived. As with the other demolition

deposits within Building A, the finds were only broadly dateable as Roman. One of these demolition deposits, 20572 (Fig. 12), contained the skeletons of three puppies.

#### *Building A disuse*

- 4.45 The date of the abandonment of Building A is currently unknown, and it is also not known whether it was demolished or was left to decay. Two demolition deposits (20476 and 20282) overlaid the latest *opus signinum* floor in Room 2, although these lacked closely dateable finds. Several pits had truncated parts of Building A, but at least some of these were part of the post-medieval quarrying.

#### **Building B (Fig. 7)**

- 4.46 Building B was constructed on the footprint of late Iron Age Curvilinear Ditch A, and the choice of this location may have been deliberate although this is not clear. Building B seems to have consisted of a single phase of construction, with no evidence for repair or alteration. Two fragments of white wall plaster from Building B (external layer 20298) perhaps point to how its exterior was finished.
- 4.47 The surviving ground-plan of Building B was simple, comprising two parallel wall footings and a rear wall enclosing a space sub-divided into two cells by an internal partition (walls 20433, 20492 and 20520). The foundations were of coursed rubble and internally the building contained beaten earth surfaces. The western cell measured 4.5m by 4m and was presumably accessed via a threshold set within the internal partition. The eastern cell measured 4.5m by 2.5m and may have been accessed from the east via two entrances located either side of a central pier resting on stone foundations 20420). On the northern side of Building B a layer of limestone cobbles (20298), some of which seem to have been pitched, abutted a T-shaped stone-capped drain (20300). This limestone layer could have formed the sub-base deposit for a surface, perhaps for an external yard or alternatively for a further structure, perhaps a lean-to or byre built on a sill beam whose foundation would not have survived.
- 4.48 The partial remains of a separate structure (20527) were identified to the south of and parallel to Building B. Little survived of these stone foundations but they most probably represent a further outbuilding or lean-to.

#### **Building C (Figs 15–20)**

- 4.49 Building C was the largest building that survived, and is likely to have been the main residence. Pottery recovered from the building foundations suggests that it is likely to have been constructed in the 3rd century AD. The earliest Roman feature here was a large, irregular but broadly rectangular pit, 20742, which was 15m long, 5.3m wide and 0.7m deep. This may have been an extraction pit related to the construction works or have related to pre-villa activity. It contained no closely dateable finds but a few sherds of Roman pottery.
- 4.50 Immediately south of this, the main surviving element of Building C was constructed, a long gallery on a broadly east/west alignment, 2.45m wide internally and surviving to a length of 21m. It would have been 23m long, assuming the portico (Room 3) was positioned centrally. The building survived at foundation level, and these foundations, which were up to 0.75m wide and 0.2m deep (shallowing to the east), consisted of sandstone rubble laid within foundation trenches. Clear evidence for the build above foundation level was absent but a line of three postholes (20636, 20681, 20690) along the inner edge of the southern gallery wall 20610 may have been either associated with its construction, perhaps having supported scaffolding, or have supported timber uprights as part of the superstructure.
- 4.51 Four infant graves were found cut along the inner edge of the southern gallery wall 20610, although it is not known if these pre- or post-dated any former surfaces within the gallery. Skeleton 20706 (Fig. 17) was found within oval grave 20697 and had been placed in a crouched position, on a north/south alignment with its head to the north. Skeletons 20746 and 20747 (Fig. 18) had been placed in an elongated grave (20748), running parallel to wall 20610, and were laid end-to-end in an east/west-aligned crouched position with the head to the east and with skeleton 20747 looking north and skeleton 20746 looking south. Skeleton 20735 (Fig. 19) had been buried within a further grave (20736) cut into the eastern end of grave 20748, but located so as not to disturb the earlier burials. This neonate had been laid out in a position that directly reproduced that of burial 20746. Pit 20658 on the same alignment contained the skull and partial skeleton of a sheep.
- 4.52 Ditches DN and DM may have been sub-floor drains running through the wall foundations, although they might instead relate to post-Roman activity. In light of the latter possibility, it is notable that Ditch DN contained metallurgical residues, raising the possibility of late or sub-Roman use of the villa for metal processing. Ditch DL was earlier than wall 20610 and appears to have related to pre-villa activity.

- 4.53 Internally, the long gallery contained a single partition which survived only as a foundation trench, 20707, 0.2m wide and 0.07m deep. This partition was probably made after the gallery walls were built, although whether it was part of the original build or a later insert is not known. It created a western room (Room 1), 8m long and 2.45m wide internally, and an eastern room (Room 2), 2.45m wide and at least 12.5m long internally. It is possible that further partitions have been lost to truncation or were built in a form which has left no trace. Also within the gallery were a few pits, of which several contained Roman pottery; the function(s) of these are unclear.
- 4.54 To the south, a further room (Room 3) adjoined the gallery and must have been accessed via a threshold along the gallery wall. The initial build of Room 3 created a cell 3.9m wide by 2.35m deep but this was subsequently extended southwards, enlarging the room slightly to 2.75m deep. An internal L-shaped foundation trench, 20731, was 0.2m wide and 0.11m deep and may have been the remains of an internal partition or stair setting. This room may have been an entrance portico, and the extension, which added little extra space, perhaps represents a rebuilding of the façade from the foundations. Pit 20625, located within Room 3, was cut through wall 20610 and contained roof tile fragments and burnt bone, perhaps relating to a demolition or remodelling phase.
- 4.55 The northern part of the gallery was adjoined by a much larger room, Room 4. The full ground-plan of this room was not recoverable. The surviving walls (20612 and 20614) show that it was 12.4m wide and at least 4.75m deep but other partitions may have been completely removed as neither surviving wall was higher than 0.25m. Wall 20614 would seem to have been of the same construction as 20611 of the gallery. Internally, a patch of stone 'surfacing' (20613) survived, although this may have been a sub-floor rather than the finished surface as it was fairly rough. The function of this room is currently undetermined, but it may have been a public room, such as a dining room.
- 4.56 Aside from the alterations to Room 3, Building C seems to have been of a single phase, at least in its surviving form. Its remains and the truncated substrate were overlain by demolition deposits (Fig. 20) which provide further insights into the building methods used since they contained architectural elements including painted wall plaster (mostly from burnt deposit 20626). Stone roof tiles and ceramic box-flue tiles suggest that the building had a stone roof and at least some under-floor heating. The plaster included small fragments with fresco designs characteristic of 2nd-

century AD techniques, although the surviving fragments are too small to enable the original designs to be reconstructed. The date range represented by these demolition deposits is broad and the date of demolition is at present not clear.

*Period 7: medieval (AD 1000–1530)*

- 4.57 A single sherd of medieval pottery from this site indicates a lack of activity here at this time.

*Period 8: post-medieval (AD1500–1900)*

- 4.58 Post-medieval activity across the site largely comprised a series of extensive quarry pits which followed north-east/south-west outcrops of sandstone. These quarry pits had truncated much of the Iron Age and Roman settlements and it is possible that as well as accidentally truncating the Roman buildings, the quarrying was associated with more systematic stone robbing. The quarry pit backfills contained few finds but, as well as residual Iron Age and Roman finds, they included pottery of 16th to 18th-century date. A ditch (EA and EB) also seems to have been of this date, although its function is not known.

*Period 9: modern (AD1900+)*

- 4.59 Modern activity comprised land drains only (not illustrated).

*Unphased*

- 4.60 Unphased features were found in all areas, and mostly comprised pits and postholes located close to the Iron Age settlement, as well as a small number of features immediately east of Building C. As discussed above, many of the pits and postholes are likely to relate to the Iron Age settlement.
- 4.61 The unphased features found to the east of Building C included short ditches and pits, of which Ditch DN (currently phased as Roman but potentially a later feature) contained charcoal-rich fills with metallurgical residues. Although these deposits have yet to be analysed, one possibility is that the abandoned (and perhaps ruinous) Roman buildings were re-used as workshops during the sub-Roman or early medieval periods, although this possibility has yet to be examined.



- 4.62 An alternative possibility is that the unphased ditch segments east of Building C represent a pre-villa structure since one of these, Ditch DL, was stratigraphically earlier than the villa's southern gallery wall. These ditches, which were generally flat-based and typically 0.65m wide and 0.2m deep, could have been beam slots for a timber framed building built on an alignment followed by the later villa.

### ***Set Piece Excavation Area 3 (SPE 3)***

- 4.63 SPE 3 was located at the southern end of the bypass route and measured approximately 0.33ha in extent (Fig. 2). The site comprised arable farmland bounded to the south and east by the A39, to the north by a tree-lined avenue known as the 'ride' which approaches Brymore School, and to the west by further arable farmland. The site is flat and lies at 19m AOD. The underlying solid geology is mapped as the Mercia Mudstone Group; no superficial deposits are recorded (BGS 2016). The excavation area was targeted on a possible medieval trackway or road running north-east towards Cannington which was identified following geophysical survey (Stratascan 2010) and subsequent archaeological evaluation (CA 2011).
- 4.64 The evaluation identified a wide ditch-like feature running ENE/WSW in T52, T55 and T57. On the advice of Stephen Membery one ditch section was excavated (feature 5703) and the area was reserved for more detailed set-piece excavation (Fig. 21).
- 4.65 The natural substrate 30002 was overlain by subsoil 30001 which was in turn sealed by topsoil 30000. All archaeological features recorded were cut through the natural substrate and were sealed by the subsoil. Features have been assigned labels (Ditch A, B, etc.) for ease of reference. Features have been assigned to the following provisional periods:

Period 7: medieval (AD 1000–1530)

Period 8: post-medieval: (AD 1530–1900)

*Period 7: medieval (AD 1000–1530); Fig. 21*

- 4.66 Stratigraphically, the earliest feature revealed was north-east/south-west aligned Ditch C. This was undated by finds but conformed to the alignment of dated medieval

Ditch A, with which it intercut, and therefore it seems likely to have been a medieval feature. Ditch C was 1.45m wide and 0.5m deep with a steep-sided, flat-based profile and contained a single natural infill (Fig. 22). Ditch A was larger, being 5.6m wide and 0.6m deep with steep sides and a flat base, and contained a sequence of up to three horizontal sandy silt infills, all of which seem to have formed naturally. Pottery dateable to the 12th to 13th and 13th to 14th centuries was recovered from secondary fills of Ditch A. The broad nature of Ditch A suggests that it was likely to have been a hollow-way, part of the trackway suggested by the pre-excavation investigations. Ditch A was re-cut along part of its length by Ditch B, which was undated by finds but was much smaller than Ditch A and may represent re-use of the silted hollow-way as a boundary.

- 4.67 None of these remains relate to features depicted on the 1st Edition or later OS mapping but faint cropmarks are visible on Google Earth imagery of 12 December 2010, suggesting that this former hollow-way and/or boundary continued south-westwards towards a mature tree that now stands as an isolated feature within the field containing SPE 3. The somewhat sinuous nature of this cropmark is consistent with the shape of a medieval pre-enclosure boundary, perhaps following a trackway through open fields.

*Period 8: post-medieval: (AD 1530–1900)*

- 4.68 The upper fill of the hollow-way, Ditch A, was overlain at its north-easternmost exposed limit by a rough cobbled surface, 30030, perhaps intended to provide a crossing point over a damp area formed above the infilled hollow-way from which the latest pottery was dated to the 13th to 14th centuries. The cobbled surface was therefore a late medieval or later deposit, but may have been associated with the setting out of parallel east/west-aligned Ditches D and E, probably during the post-medieval or modern periods, in which case it could have been intended to infill any remnant earthwork. Surface 30030 was overlain by deposit 30029 which probably represents natural infilling above the surface where it had slumped into Ditch A. Ditches D and E truncated the hollow-way and were some 8m apart and probably flanked a trackway. This isn't depicted on the 1st Edition or later OS mapping but is parallel to the driveway known as 'The Ride' which is depicted on the 1888–89 1st Edition OS map and which led to Brymore House to the west from a lodge to the east. This driveway remains in use.

## 5 FACTUAL DATA AND STATEMENTS OF POTENTIAL

### ***Stratigraphic Record: factual data***

- 5.1 Following the completion of the fieldwork an ordered, indexed, and internally consistent site archive was compiled in accordance with specifications presented in the *Management of Archaeological Projects* (EH 1991). A database of all contextual and artefactual evidence and a site matrix was also compiled and cross-referenced to spot-dating. The fieldwork comprises the following records:

	SPE1	SPE2	SPE3
Context sheets	274	879	37
Hand-drawn plans and sections	100	252	6
Sample sheets	16	74	4
Digital photographs	231	1470	53
Matrices	digital	n/a	n/a

- 5.2 A breakdown of contexts by site and Period is presented in Appendix 1, together with a summary of the stratigraphic nature of each site.

### ***Stratigraphic record: statement of potential***

#### *Set Piece Excavation Area 1*

- 5.3 The Middle Bronze Age enclosure and internal pits and postholes formed a stratigraphically simple site with few intercutting features and no vertical separation of stratigraphy. The lack of site complexity is of benefit in that all features, whether dated by finds or not, can, with some degree of confidence, be assumed to have belonged to a single phase. There is little potential for much analysis of the site itself beyond the patterns of features and possible evidence of structures.

#### *Set Piece Excavation Area 2*

- 5.4 The stratigraphic potential of the late Iron Age and Roman settlement is compromised by the degree of post-Roman plough truncation and later quarrying. This has led to a general lack of vertical separation of stratigraphy except in the case of Building A where the hypocaust survived below modern truncation levels, and in a limited number of other places with details of wall construction. This allows some, if limited, examination of vertical sequences and construction episodes. In plan form

post-medieval quarrying has also severely limited an understanding of the site in any phase. Intercutting has allowed sequences of features to be proposed (and to be analysed in more detail later) although dating is not helped by the undiagnostic nature of most of the finds and the amount of redeposition and mixing. On the whole the potential is probably average for a plough-truncated site.

### *Set Piece Excavation Area 3*

- 5.5 The limited character of the medieval hollow-way and later features give little potential for further stratigraphic analysis.

### ***Artefactual record: factual data***

- 5.6 All finds collected during the excavation have been cleaned, marked, quantified and catalogued by context. All metalwork has been x-rayed and stabilised where appropriate. Detailed assessments are presented in Appendices 2–10.

### *Set Piece Excavation Area 1*

Type	Category	Count	Weight (g)
Pottery	Earlier prehistoric	922	9166
Flint	Worked	31	
	Burnt	7	

- 5.7 A moderately large assemblage of Middle Bronze Age pottery forms almost the entire collection of artefacts from this site. The pottery is 'Trevisker-related' and a significant group for Somerset. The identification is supported by three radiocarbon dates. There is also a small collection of worked flint, most if not all likely to be of this date.

### *Worked flint (Appendix 2)*

- 5.8 There were 31 pieces of worked flint, mostly flakes and other debitage, but including four tools – three scrapers and a miscellaneous retouched piece. They do not provide any firm indication of activities carried out.

### *Pottery (Appendix 3)*

- 5.9 The pottery is all Middle Bronze Age and related to Trevisker Ware of Cornwall and Devon, although the identification of 'horseshoe handles' point to affinities with Wessex Biconical Urns. Some contexts yielded joining sherds suggesting the deposition of parts of vessels but the group was generally well fragmented and there

is no suggestion that substantially complete vessels were deposited. A small proportion of the group carry incised decoration.

### *Set Piece Excavation Area 2*

Type	Category	Count	Weight (g)
Pottery	Late prehistoric/Roman	3224	55,300
	Medieval	1	5
	Post-medieval/modern	36	656
	<i>Total</i>	<i>3379</i>	<i>56,721</i>
Flint	Worked	21	
Plaster	Painted	125	2589
Brick/tile	All		124,800
Mortar/Plaster	Roman	345	7208
Coins	Roman	2	
Metals	Iron	218	
	Copper alloy	2	
	Lead	2	
	Residues		890
Stone	Objects	3	
	Building stone	9	
	Burnt (sample)	4	

### *Worked flint (Appendix 2)*

- 5.10 Twenty-one items of worked flint were recovered. There are a few tools of intrinsic interest (scrapers and a barbed-and-tanged arrowhead) but all pieces are residual in later deposits.

### *Late prehistoric and Roman pottery (Appendix 4)*

- 5.11 There was a large quantity of late prehistoric and Roman pottery. These include 'transitional' Late Iron Age/Roman wares (bead-rimmed jars; wheel-thrown calcitic and grog-tempered wares), and some with La Tène-inspired decoration, which may be earlier. Most of the late prehistoric pottery is undiagnostic of close dating and was probably mostly locally made. The Roman pottery is dominated by south-east Dorset Black-burnished ware, which was made across the 1st to 4th centuries and is common in the region. The local coarsewares come in a number of fabrics, probably all fairly local, and have forms influenced by Black-burnished ware. Specialist and imported wares are few but include amphorae and Central and East Gaulish Samian wares. There is a shortage of late Roman (late 3rd and 4th century) pottery and in general the assemblage suggests a period of occupation most strongly represented from the mid second to 3rd centuries AD. The assemblage is utilitarian in character and not suggestive of high status among the occupants of the villa.

*Ceramic Building Material (Appendix 5)*

- 5.12 There was a large quantity of ceramic building material including pieces diagnostic of roof-tiles (tegulae and imbrices), flue tiles and brick (pedales and bessales). Much of the material came from demolition deposits associated with the hypocaust in Building A. The material gives an indication of building methods for the Roman-period buildings, but it also seems likely that some pieces (particularly tegulae) were used for other purposes were used for purposes other than what they were manufactured for (eg drain covers or other surfaces).

*Painted Wall Plaster (Appendix 6)*

- 5.13 A small collection of painted wall plaster was recovered, mostly from a demolition layer in the villa residence (Building C). A range of colours and colour combinations were present, although the material was too fragmentary for any patterns or motifs to be recognisable. The techniques point to a date in the 2nd century AD for most of the material rather than later.

*Mortar and Plaster (Appendix 7)*

- 5.14 A large group of mortar and plaster came from Building A. Two types of mortar were identified – Type 1 with large inclusions of sandstone, and Type 2 with more but smaller inclusions. These were differentiated from coarse backing plaster, which was softer with crushed CBM inclusions. To this can be added the surface and paint layers of the decorated pieces (Appendix 6).

*Stone (Appendix 8)*

- 5.15 There were a few stone artefacts (a spindle whorl, a hone and probable quern fragments) and a small collection of worked stone that was probably used for flooring and/or roofing. The collection is unremarkable and indicates a lack of architectural sophistication as far as stonework is concerned.

*Metals (Appendix 9)*

- 5.16 The large majority of metal items were of iron and most of these (139 items) were nails. Only 27 were from late Iron Age/Roman deposits and so a great many are either later in date or were redeposited, although there is no way to be sure which. Artefacts of more interest are few but include an iron latch lifter, an iron knife, two copper alloy coins, a copper alloy brooch, a copper alloy tweezer and a lead pot-repair.

*Metallurgical residues (Appendix 10)*

- 5.17 There is sparse record of blacksmithing in the late Iron Age /Roman periods in the form of smithing hearth cakes and small quantities of hammerscale. These indicate that blacksmithing was practised near the site, but no hearths or metallurgical features were identified. There was no material indicative of smelting or other processes.

*Set-Piece Excavation Area 3*

Type	Category	Count	Weight (g)
Pottery	Medieval	118	760

*Medieval pottery (Appendix 4)*

- 5.18 A moderately large assemblage of medieval pottery came from Ditch A. It dates broadly to the 11th to 14th centuries, with little refinement of dating possible.

***Artefactual record: statements of potential****Worked flint (Appendix 2)*

- 5.19 The lithic assemblage is small and 39% is known to be residual (all the material from SPE2, the Roman villa site). Two items (the arrowhead and thumbnail type scraper) demonstrate activity during the Early Bronze Age period, although they are redeposited (and the arrowhead without provenance) and they have no potential to contribute to an understanding of the site.
- 5.20 The items recovered from SPE1, the Middle Bronze Age site, include some which are typical of that period, in addition to items which can only broadly be dated to the prehistoric period. They add to the corpus of stratified Middle Bronze Age lithic assemblages in Somerset, which includes sites such as Brean Down (c. 32km north of Cannington), which produced 69 lithics from Middle Bronze Age contexts. The Middle Bronze Age activity included three domestic structures (Bell 1990, 51–4). The flint assemblages featured 21 retouched tools, including end scrapers and miscellaneous retouched pieces (Saville 1990, 156–7). The small size of both lithic assemblages precludes the possibility of a detailed analysis and comparison.

*Middle Bronze Age Pottery (Appendix 3)*

- 5.21 The pottery (all from SPE 1) is moderately large and significant in its regional context. It has been recorded in detail but further microscopic examination of the pottery

fabrics by a petrologist (Roger Taylor) has the potential to support the present fabric classifications and suggest sources of manufacture. Six samples are recommended.

*Late Prehistoric and Roman Pottery (Appendix 4)*

- 5.22 The pottery assemblage from SPE 2 is of significance in providing dating evidence for the site and in supporting the stratigraphic sequence. Although moderate quantities of the Late Prehistoric group are seemingly re-deposited in Roman/late-phased deposits (Table 4.1), there is good correspondence of pottery of this period and late Iron Age/1st century AD (Period 4.3–4.4) deposits, including from Ditch O and pits/gullies south of Building B.
- 5.23 In its composition the late prehistoric pottery compares to others from the region and supports dating in the later Iron Age, probably continuing into the mid/late 1st century AD. In recent decades, there have been relatively few analyses of material of this period and there remain questions regarding the dating and disuse of south-western decorated wares, and ‘transitional’ pottery styles current in the 1st century AD.
- 5.24 The larger Roman assemblage compares, in terms of fabric range, with published assemblages from the area including from Shapwick (Timby 2007), Ilchester (Leach 1982; Leach 1994), and also with groups from Roman sites at Hinkley Point, approximately 10km to the north-west (CA 2014). The assemblage is of coherent character and suggests a discrete period of occupation spanning the mid/late 2nd and 3rd centuries AD. Unusually, for a group associated with villa-like structures, there appears to be very little evidence either from the pottery, ceramic building material or from the coins/metalwork for continuance into the 4th century AD.
- 5.25 The recording undertaken on the assemblage as part of the assessment is to the standards recommended by the Prehistoric Ceramic Research Group (1997) and Study Group for Roman Pottery (1993) and is sufficient for the purposes of the archive. Publication of the assemblage is recommended with the aim of characterisation, determination of chronology and patterns of pottery supply and use. Final reporting and discussion of dating should follow from the refinement of the stratigraphical sequence. Examination of such issues as changing pottery supply should make use of comparisons with material from other sites in the region and outlined above.



*Medieval and later pottery (Appendix 4)*

- 5.26 The small medieval and post-medieval assemblage is of limited significance, other than as dating evidence for the use of for Ditch A in SPE 3. The level of recording undertaken at assessment stage, is considered appropriate for the purposes of the archive. A short descriptive report might be included in any publication, which might take the form of an amended version of the report and data table presented here.

*Ceramic Building Material (Appendix 5)*

- 5.27 The ceramic building material has been fully recorded as part of this assessment and no further recording is proposed. The large quantity and moderately large range of material, including two types of *tegulae* and perhaps two types of box-flue tile, together with measurable bricks (identifying *pedales* and *bessales*), *imbrices* and a possible chimney pot, provide information on the nature of the buildings present. The material is, however, mixed and (with the exception of the *in situ* parts of the hypocaust in Building A) to a great extent redeposited. This limits the potential for an understanding of individual constructions, although detailed consideration of phasing and context for functionally diagnostic pieces will provide some basis for proposing reconstructions of building types and sequences.

*Plaster (Appendix 6)*

- 5.28 A group of 125 fragments of painted wall plaster was recovered, mostly from destruction deposit 20626 in Building C. Although containing interesting elements, the size and condition of the assemblage recovered negates any further study. The decorative schemes are in contrast to those in the region previously examined by the author, a chronological reflection of the earlier date assigned to the Cannington villa. A short report on the painted plaster, based on this report, could be included in any final publication. The material has been recorded in full according to nationally recognised standards (CIFA 2014) and is suitably packaged for long-term storage.

*Mortar/Plaster (Appendix 7)*

- 5.29 The mortar and plaster from Building A was characterised in terms of fabric. It indicates different episodes of construction and therefore has some potential for refining the construction sequence of the bath-house and, in conjunction with other architectural materials, the nature of the buildings represented.

*Stone (Appendix 8)*

- 5.30 A small quantity of worked stone included some possible roofing or flooring stone. The stone assemblage has fairly limited potential to add to our understanding of the site; it is much less varied than the assemblage from nearby Cannington Park Cemetery (Rahtz *et al.* 2000). The rotary quern, hone and spindle whorl hint at domestic activity. The roofing and flooring indicate the presence of a significant structure nearby – one that had at least some stone roofing and probably slabbed flooring. The presence of these stones should be considered alongside evidence for ceramic building material and any structural evidence recorded in the field.

*Metalwork (including coins) (Appendix 9)*

- 5.31 The metalwork is a sizeable group, although it is dominated by iron and in particular nails from Period 5. Objects of Roman and medieval date are of use in informing overall site chronology and refining phasing.
- 5.32 The metal objects are currently stored in air-tight, plastic containers and with humidity control as appropriate. The cleaning/stabilisation of selected objects of copper alloy (brooch Ra. 210 and tweezers Ra. 221) and of iron (knife/cleaver Ra. 202 and latch lifter from context 20378) is recommended to facilitate longer-term stability and facilitate illustration for publication purposes.
- 5.33 The x-radiographs undertaken as part of this assessment provide a permanent record of the ironwork. The majority, mainly the iron nails / hobnails, is of very limited significance and it is proposed that this material is discarded. Reporting to publication standard, to include catalogue descriptions and illustrations for objects noted above requiring conservation, is recommended.
- 5.34 The Roman coins are of significance as dating evidence, although Ra. 228, from deposit 20556 (Building A) dated to Period 7/8, would seem to be residual. A coin list, including RIC or other appropriate classifications, should be included in any publication. Cleaning by a specialist conservator is recommended both coins, including conservation of Ra. 208 to facilitate long term preservation.

***Biological record: factual data***

- 5.35 All ecofacts recovered from the excavation have been cleaned, marked, quantified and catalogued by context. A total of 68 bulk samples were taken for the recovery of environmental remains.

*Set Piece Excavation Area 1*

Type	Category	Count
Animal bone	Fragments	scraps
Samples	Environmental	16

*Animal bone (Appendix 12)*

- 5.36 Bones were virtually absent from this site and all, bar one or two sheep and cattle teeth, unidentifiable.

*Plant macrofossils and charcoal (Appendix 13)*

- 5.37 Sixteen soil samples from Middle Bronze Age and currently undated features yielded varied but on the whole moderately abundant assemblages of charred crops and wood charcoal. Grain, including emmer and spelt wheat and barley, was identified, and one sample was dominated by flax. Wild plant seeds (eg. vetches, goosefoots and ribwort plantain) probably represent weeds, while a small quantity of hazelnut shell is likely to represent a wild food resource. The charcoal derives from a range of wood species with oak and hazel/alder common.

*Set Piece Excavation Area 2*

Type	Category	Count
Human bone	Inhumation burials	4
Animal bone	Fragments	1327
Samples	Environmental	48

*Human bone (Appendix 11)*

- 5.38 Four human neonatal infant inhumations came from the villa, within Building C. Full osteological analysis was undertaken. Bone preservation was generally good or very good. Sex could not be determined, as is usual with juveniles, and there were no pathological lesions or distinguishing characteristics.

*Animal bone (Appendix 12)*

- 5.39 A total of 1327 animal bones were recorded and assessed. They were phased in broad periods (late Iron Age with late Iron Age/Roman transitional, and Roman proper). The main domesticates – sheep and cattle in almost equal numbers, and then pig – were present throughout. Horse was also present, mainly in the Roman period, and there was a minor presence of birds, small mammals, amphibians and fish, again mainly or exclusively in the Roman period.

*Plant macrofossil and charcoal (Appendix 13)*

- 5.40 Moderately large and well-preserved charred plant macrofossils and charcoal were recovered from each of the main phases (Late Iron Age/ late Iron Age-Roman transitional, and Roman). Remains include cereals (grain and chaff) and herbaceous seeds. Charcoal comprised a range of wood species such as oak, ash, hazel, birch, hawthorn-type and cherry. The remains are fairly typical of these periods and will help to characterise the farming economy and environment at this time.

*Set Piece Excavation Area 3**Animal bone*

- 5.41 The collection of animal bones comprised only three, poorly preserved, items: a cattle tooth, a sheep/goat tooth and a long bone of a probable sheep/goat. These are of no archaeological significance.

*Plant macrofossils and charcoal (Appendix 13)*

- 5.42 Small quantities of remains came from three samples from post-Conquest Medieval Ditch A. These included cereal grains of barley, rye, wheat and possibly oats, as well as other possible food species, and charcoal identified as oak and hazel or hazel/alder. These are unremarkable findings from a feature of this period.

***Biological record: statements of potential****Human bone (Appendix 11)*

- 5.43 The infant bones from SPE 2 have been fully recorded and provide no potential for further physical examination. The main potential of the bones are to provide radiocarbon dates on the bone, and information from the analysis of aDNA and stable isotopes. The small and demographically restricted nature of this sample makes further work of relatively limited value, although further consideration can be given to:
- Providing information on the sex of the infants through aDNA. This can provide baseline information exploring attitudes to burial in relation to buildings;
  - Radiocarbon dating to examine whether the burials are strictly contemporaneous or spread out over the course of the occupation. Modelling (by S Cobain) suggests that radiocarbon can potentially

discriminate between dates if the burials are sufficiently spread throughout the Roman period.

#### *Animal bone (Appendix 12)*

5.44 The animal bone from both the Iron Age and Roman periods on SPE 2 is relatively well preserved and there is the potential to look in more detail at the following topics:

- The spatial patterning of food and non-food waste disposal
- The nature/source of the calcined bone – which may either simply have been cooked, or destroyed by fire
- The nature and changes in livestock farming over the course of the occupation, including changes in livestock breeds through the metrical data
- The nature of the microfauna in the drain fills from Building B, which may be derived from owl pellets. There is extensive literature on owl pellets based on modern investigations (Beven 1982; Dodson and Wexlar 1979; Glue 1970; Kusmer 1990; Lawrence and Brown 1973; Teagle 1963; Yalden 1977) and archaeological assemblages (Armitage 2011a and 2011b; Armitage and West 1985; Baxter 1993; Dobney et al. 1996; Sharpe 2006a and 2006b; West and Milne 1993)
- The Associated Bone Groups and their contexts, examining the nature of the burials and possible comparisons. They include dog and cat burials in Building A, a partial skeleton of a sheep in Building C (in the same alignment as the infant burials) and articulating dog and horse bones in ditch DI.

5.45 There is also the potential for articulating (ie. clearly non-redeposited) bones to provide samples for radiocarbon dates. These may be useful to help define the foundation and/or abandonment phase of the buildings or site.

#### *Plant macrofossil and charcoal (Appendix 13)*

5.46 The carbonised plant macrofossils were recovered in varying quantities and were generally moderate to well-preserved. The charcoal was recovered in small to large quantities and was variable in preservation. There were a very small number of modern plant macrofossils identified, which were most likely incorporated into the

features by bioturbation. Since these were recovered in small quantities, it is not thought that they represent a significant risk of contamination.

- 5.47 For the Middle Bronze Age (Period 3.2) on SPE 1, the plant macrofossil and charcoal from features located within the enclosure defined by Ditch A have the potential to elucidate activities within the enclosed space. Further work on the cereal and herbaceous taxa assemblages from selected samples has the potential to reveal additional information regarding crop selection, processing techniques and the intensification of agriculture in the Bronze Age. Of particular significance was posthole 10263 containing a large assemblage of flax seeds and other herbaceous taxa which may indicate linen production, or the use of flax seeds for nutritional or medicinal purposes. Charcoal species suggest that the woodland during the Bronze Age consisted oak, ash, and maple with shrub areas of alder, hazel, hawthorn/rowan/crab apple and cherry. It is hoped that further charcoal work will allow a summary of fuel-wood use and acquisition, and characterisation of the local woodland resource.
- 5.48 The plant macrofossils and charcoal from features dating to the Later Iron Age/Late Iron Age to Romano-British transition (Period 4.3–4.4) on SPE 2 have the potential to inform about activities taking place during this period. Of particular interest are the remains within Ditch T and the oven 20600, which can potentially reveal information about activities undertaken within or near Curvilinear Ditch A, such as crop selection and processing techniques, together with diet. Further charcoal work will allow a summary of fuel-wood use and acquisition, and characterisation of the local woodland resource.
- 5.49 It is anticipated that samples from both these sites will provide information which can contribute towards achieving aims outlined in the South West Archaeology Research Framework Research Strategy 2012-2017. These include Research Aim 21a, which suggests more information is needed on the development of field systems and the intensification of agriculture in the Bronze and Iron Ages (Grove and Croft 2012, 28); Research Aim 20 which suggests more information is required to improve understanding of wild and cultivated plants and Research Aim 40, which suggests a need improve understanding of agricultural intensification and diversification in later prehistory (Grove and Croft 2012, 28 and 35).

- 5.50 Plant macrofossils and charcoal from the Romano-British phase of activity (Periods 5.1–5.3) were generally low in volume, with only scattered remains, mostly indicative of wind-blown hearth debris. For this reason, the plant remains in particular do not provide detailed interpretation regarding activities taking place within the buildings. There were however more diverse and rich samples recovered from Ditch W, to the west of Building A and Ditch DN to the east of Room 2 within Building C, both of which contained large charred plant and charcoal assemblages. These may represent dumped waste from processing activities taking place nearby. In addition fill 20545 (SS 221) within drain 20300, adjacent to Building B, had a large charred plant and charcoal assemblage and may inform about activities taking place within or just outside Building B. In addition, selected charcoal samples can further inform on fuel-wood use and characterisation of the local woodland resource.
- 5.51 It is hoped the selected samples will provide information which can contribute to achieving aims outlined in the South West Archaeology Research Framework Research Strategy 2012-2017. These include, in addition to Research Aims 20 and 40 (para. 5.49), Research Aim 41, which is to assess the impact of the Roman Empire on farming (Grove and Croft 2012, 28 and 35).
- 5.52 The presently unphased features have the potential to contribute to the aims identified above, if dating evidence becomes available. There is potential for individual charred remains from SPE 1 and SPE 2 to be directly dated by AMS radiocarbon and provide a basis for further chronological resolution of some of these features (subject to detailed considerations of context and the quality of the dating samples).
- 5.53 Given the small number of plant macrofossil remains recovered from SPE 3 (Post-Conquest Medieval, Period 7) no further work is recommended. The charcoal, whilst abundant, is poorly preserved and as such no further work is recommended.

## 6 SUMMARY STATEMENT OF POTENTIAL

### *Earlier prehistoric*

- 6.1 There is no defined occupation earlier than the Middle Bronze Age domestic enclosure on SPE1. This is a relatively uncommon type of site in the region, Brean Down being the only other excavated site in Somerset (Webster 2008, 118). However, it was not well preserved and, apart from the enclosure ditch itself and a scatter of pits and postholes, all relatively shallow, the features were limited in number and type. The stratigraphic potential of the site is therefore quite low, although further examination of the groupings and patterns of features may suggest domestic buildings or other structures which are at present elusive. Three AMS radiocarbon dates are in close agreement indicating occupation c. 1500–1300 BC. Although many of the features are technically undated they are most likely to be Middle Bronze Age and this can be confirmed by additional radiocarbon dates from selected features. The pottery (922 sherds, 9166g) is relatively abundant for this period and the composition of Trevisker-related ware (with affinities to Devon and Cornwall) together with elements the Wessex Biconical Urn tradition, make it significant in Somerset. The pottery assemblage has the potential for microscopic analysis to help determine sources of manufacture. This will represent significant information on the cutting edge of prehistoric ceramic research in the region. Other finds from this site were sparse. The flintwork (31 pieces) are of no great significance but of some interest as being from a single-period site and therefore not comprising much redeposited material. It provides an indication of Middle Bronze Age lithic technology, which is characterised as being opportunistic and ‘unsystematic’. The artefacts themselves do not add significantly to an understanding of activities on the site.
- 6.2 The charred botanical remains are of greater significance and include some good samples providing evidence of crop selection – mostly wheat, but including flax – and sources of fuel. There is also some potential for looking at spatial distributions to identify locations of processing and activity. The charred remains also offer the potential for further AMS dating to tighten the chronology. There were no identifiable animal bones from this site and the excavations were unable to provide any information at all on animal husbandry.



- 6.3 At SPE2 there was no indication of earlier prehistoric activity and the small collection of 21 worked flints were all superficial or redeposited in Iron Age and Roman features. There are some intrinsically interesting tools, probably all of early Bronze Age and later date, but nothing that adds to further understanding of these periods.

### ***Later prehistoric and Roman***

#### *Chronology and nature of site SPE2*

- 6.4 The occupation at SPE2 provides evidence of a pre-Roman Iron Age enclosed settlement that became a villa in the Roman period. The site holds potential for investigating the themes of transition both from Iron Age to Roman, and (less certainly) from Roman to early post-Roman, both of which have been identified as important contributions to villa studies where excavations in the past have tended to concentrate on building plans (Webster 2008, 152). There is a moderate potential for a greater understanding of these developments with further examination of the site stratigraphy in relation to the dating evidence, but this is limited by the poor preservation of the site, due in particular to dense post-medieval stone quarrying, as well as more recent agricultural activity. Three stone-founded Roman buildings were found across the site, but in only one case (Building B) did the building appear to be complete, while overall extent of the bath-house (Building A) and the villa residence (Building C) were not recoverable, and any buildings in the quarried central part of the site have presumably been lost without record. Late prehistoric occupation (largely later Iron Age and probably of the 1st century AD) was mostly associated with Building B, where site locations of circular or semi-circular structures suggest an immediate precursor to the Roman barn-like building. This part of SPE 2 has greater potential than the others for an examination of the transition of building styles from the 1st century through to the 2nd and 3rd centuries AD. Further contextual investigation of the features in relation to pottery and other finds may shed light on this question. The bath-house (Building A) showed several phases of stone construction which have been examined stratigraphically although at this stage the nature of the buildings is not entirely clear. The evidence does provide a basis for proposing a structural sequence which can be elaborated upon using the range of materials recovered and comparisons. The villa residence (Building C) has less surviving evidence and is less amenable to further consideration of structural sequence. There are, however, insecurely dated features that appear to relate to ironworking. This may be a post-Roman phase of occupation (without finds

diagnostic of date) and can be explored through radiocarbon dating of some of the features with suitable material, particularly those at the eastern end of the gallery.

- 6.5 Over 3000 sherds of later prehistoric and Roman pottery provide dating evidence for the site. Of significance is the evidence for continuity in occupation from the later Iron Age and the apparent demise of the site by the 4th century AD. Further work, with detailed consideration of context ought to refine the site chronology, which is at present broad, but the assemblages of both the later prehistoric and Roman pottery are limited in range and not closely datable. The earliest pottery (with La Tène affinities) may date to the 1st century BC, but this does not correspond to a clear phase of occupation. The pottery may have been redeposited from occupation outside the excavated area, or have extended in use alongside the later wares. Overall, a relatively large proportion of the pottery is redeposited, making a clear chronology challenging. Other aspects of the site with potential to be examined through the pottery include status and function. Immediate indications suggest a site of not very high status, in view of the limited number of fine wares and exotica, but a more detailed pottery profile and comparisons may help characterise this in more detail. Similarly, broad comparisons of pottery types and variables between buildings may suggest functional differences although the high degree of redeposition makes the potential for identifying spatial distinctions not particularly high.

### *Buildings*

- 6.6 There is some potential for more detailed consideration of the buildings and constructional techniques, despite the high degree of redeposition. The surviving building foundations show some evidence for a range of techniques employed. Ceramic building material was common and is closely assignable to specific buildings or building phases where found *in situ* in the hypocaust in Building A. Even there, the two different sets of *pilae* present have no clear relationship to different phases of construction (although this seems a likely explanation). Details of the *tegulae* show two phases of roofing in this material, and the same may be true of box-flue tiles for distributing heat around the walls. There is also a possible fragment of chimney pot (Appendix 5, Plate 4), but again unrelated to a specific building in specific phase. Architectural fragments in stone are not common, although roof slates give an indication of a different kind of roofing material in one or more phases of building. The pieces, however, are not specific to any building identified and come from a range of contexts, and may have been acquired for other purposes. There

were 125 fragments of painted wall plaster in a range of colours giving an indication of the decoration or finish in some of the interior rooms. The overwhelming majority came from just one deposit – destruction layer 20626 in Building C – and as such does not help provide information on how individual rooms were decorated. It is assumed the deposit represents a dump of material from the villa generally. The small size of the fragments also precludes the identification of individual designs. The painted plaster does, however, provide corroboration of the 2nd-century date of the decoration independently of the pottery, a point of interest in the regional context. Therefore, while there is some potential for a consideration of the architecture of the buildings on the site the evidence is not of a high quality. The mortar fabrics from Building A indicate at least two phases of construction and this may help with an understanding the structure and its development.

### *Material culture*

- 6.7 Aside from the pottery, items of material culture at SPE2 were not prolific. Much of the metalwork recovered consisted of iron objects, particularly nails (141 of the 218 pieces). It is not clear that these can provide specific information on constructions, either of the buildings themselves or associated fixtures. Ironworking waste shows that there was some, although sparse, ironworking here in the Roman period. Smithing hearth cakes, indicative of blacksmithing, are unremarkable in a rural settlement context. There were no metallurgical features identified and no particular concentrations of residues. Of most interest is the metallurgical material from ditch DN, which may post-date the use of the villa residence (Building C). The material includes lining slag as well as smithing residues. Items of copper alloy comprise two (residual) Roman coins, a T-shaped brooch and a pair of tweezers. These suggest a low level of adoption of these classes of artefact and have little potential for more detailed work. The artefacts of stone include a spindle whorl and fragments of possible quern, but these are also unremarkable in a rural settlement context. The character, quantity and range of all the artefacts from the site have a profile not dissimilar to rural farmsteads of late Iron Age to Roman date rather than villas, which tend to yield greater quantities of material of a wider range. This itself is of interest in the social context of rural Somerset at this time.

### *Economy and environment*

- 6.8 With regard to the economy and environment, the botanical remains provide information on the range of crops grown and consumed. In particular, the late Iron Age/transitional samples (Period 4.3-4.4) from ditch T and oven 20600 provide evidence of crop processing, which may have taken place in this part of the site. The charcoal provides evidence of fuel use at this time. The Roman period shows relatively few significant deposits, most of the material being sparse general accumulations, although there are dumps of material in the enclosure ditch (Ditches W and DN) that provide better potential for information. The material from drain 20300 (Building B) may contribute to an understanding of activities associated with this building (see also animal bones), with the possibility that it was a barn for processing and storing crops. To the east of the villa residence (Building C), pits that are mostly unphased at present (e.g. pits 20671, 20666) contain important charred remains that will add to an understanding of the development of the site if supported by radiocarbon dates. By their location, the features seem to be unrelated to the occupancy of the villa and may be late- or post-Roman.
- 6.9 The animal bones are relatively well-preserved from SPE2 and have potential to provide information on the livestock economy across the Late Iron Age and Roman periods. The microfauna also provide some detail on the local environment (e.g. the presence of rough grassland) and perhaps also the nature of Building B (the possible presence of owl pellets in drain 20300). The integration of the botanical and bone evidence has the potential to enhance both. Particular areas identified for further research include an examination of spatial patterns, the origin of the burnt bone, and the possibility of stock breed variation over time (particularly with regard to the size of the domestic livestock). Another important aspect is further consideration of associated bone groups, and the possibility of deliberate burials/placements of bone. The partial sheep skeleton associated with the infant burials is of particular interest, as are the possible puppy burials in demolition debris 20572 associated with Building A. In common with the botanical remains, there is the potential for radiocarbon dating on bone from key contexts.

#### *Infant burials*

- 6.10 Clear evidence for structured deposition takes the form of four perinatal infant burials in the gallery of the villa residence (Building C). These are also the only direct evidence of the inhabitants of the site. The bones themselves have been examined in detail and no further recording is needed. Further contextual and

scientific analyses would have the potential to provide answers to questions about the burials here, and these kinds of deposits more widely. Radiocarbon dating of each of the skeletons may help determine whether the burials were strictly contemporaneous, perhaps as a foundation deposit for the construction of the villa or other commemorative act, or whether they were spread out over a longer period (presumably while the villa was in use). It may also be possible to determine the sex of the infants using aDNA, which would explore whether any distinctions were made with regard to the form and location of burial. While the success of aDNA is not guaranteed and the sample small, there is some potential to provide baseline data of significance at the forefront of archaeological research.

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

- 6.11 There is no medieval occupation identified at SPE2, the occasional sherds of medieval pottery probably a by-product of manuring, or perhaps an early phase of quarrying. The extensive quarrying on the site can largely be shown to have been post-medieval by the pottery in the infills. It is of comparatively little interest. The dating may be refined with further consideration, but since the quarries were not examined except to clarify the earlier remains, no detailed account of this activity can be prepared.
- 6.12 The principal feature of interest is the probable hollow-way (Ditch A) on SPE3. It was 0.65m deep and medieval pottery provides a 14th-century *terminus post quem* for its infilling, so it could have had much earlier origins. While this feature has significance as a historic landscape feature (in a part of the country where early origins to the medieval landscape are a significant research topic), there is realistically no potential for further information from the site. None of the features here are depicted on historical OS maps and it would seem that the potential the site offers can only be explored through further investigations in the area, perhaps particularly non-intrusive surveys to plot the further course of the hollow-way and any associated features.

## 7 STORAGE AND CURATION

- 7.1 The archive is currently held at CA offices, Kemble, whilst post-excavation work proceeds. Upon completion of the project and with the agreement of the legal landowners, the site archive and artefactual collection will be deposited with Somerset County Museum, Taunton (accession number: 4/2010), which has agreed in principle to accept the complete archive upon completion of the project.

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**APPENDIX 1: STRATIGRAPHIC ASSESSEMENT BY ANDREW MUDD**

A total of 1158 contexts was recorded during the excavations as detailed below:

Period no.		SPE1	SPE2	SPE3
3.2	MIDDLE BRONZE AGE	107	-	-
4.3-4.4	LATE IRON AGE/ROMAN TRANSITIONAL	-	319	-
5.1-5.3	ROMAN	-	243	-
7	MEDIEVAL	-	1	20
7/8	MEDIEVAL/POST-MEDIEVAL	-	1	-
8	POST-MEDIEVAL	6	96	6
9	MODERN	3	7	9
	UNDATED	155	185	-
	TOTALS	271	852	35

In addition 261 contexts were recorded in the evaluation (CA 2011).

The provisional phasing for all sites is based upon spot dates from pottery groups, together with some estimation of the likelihood of redeposition or intrusion gained from stratigraphic and spatial information. All three sites had been truncated by ploughing and there was little or no vertical separation of stratigraphy (with the exception noted in SPE 2).

**SPE 1**

All the Middle Bronze Age features were relatively shallow, perhaps due more to their original slightness than to above average truncation by ploughing. Few were intercutting and the site layout is relatively simple although not informative with regard to the patterns and purposes of the pits and postholes. There are a number of strictly undated features, but the lack of any post-Middle Bronze Age occupation identified (except obviously modern features) gives grounds for supposing that these are also Middle Bronze Age. This assumption can be tested with further radiocarbon dates (to add to the three taken) from the limited number of suitable deposits. There is little potential for further refinement of dating or sequence.

**SPE 2**

The amount of post-Roman intrusion through quarrying adds to the difficulty of obtaining a clear understanding of the pattern and development of this site. There are a relatively large number of contexts that will therefore not be useful for further analysis. The reasonably large amount of pottery aids an examination of the chronological development of each area of the site, and this can be refined



with further work. At present the phasing scheme has been kept broad, but it is hoped that further contextual analysis will enable a tighter chronology for the Later Iron Age to Roman phases (to bring the site closer in resolution to the Iron Age/Roman occupations at Hinkley Point C). The complexities of Building A, which retains some vertical separation of stratigraphy in the sunken hypocaust room, can be further examined with considerations of construction methods and sequences. Building B and surrounding features provide the potential to look more closely at the development of structures here and the late Iron Age–Roman transition. For Building C in particular, further consideration needs to be given to the later stages of the building and the possibility of post-Roman activity.

### SPE 3

The sequence of 'hollow way' and ditches in this area have limited potential for further examination of the fills and their contents. There would seem to be a simple sequence of features without a clearly refinable chronology.

## APPENDIX 2: LITHICS BY JACKY SOMMERVILLE

A total of 53 worked lithics (210g) was retrieved from 32 deposits and as unstratified finds, both via hand-excavation and bulk soil sampling on sites SPE1 and SPE2. In addition, seven pieces of burnt, unworked flint (0.4g) were recovered from bulk soil sampling of a Middle Bronze Age-dated pit (fill 10033 of feature 10031) on SPE1 (Table 2.1).

The artefacts were recorded according to broad artefact/debitage type and catalogued directly onto a Microsoft Access database. Attributes recorded include: raw material; dimensions; weight; degree of edge damage (microflaking), rolling (abrasion) and recortication (a white or blueish surface discoloration resulting from soil conditions [Shepherd 1972, 109]); colour; cortex description; and the presence of breakage and burning. For debitage: butt and termination type; hammer mode (whether hard or soft hammer struck); and evidence of utilisation and of preparation of the striking platform were also recorded. Only the colour of chips was recorded, as it is their presence which is considered to be significant as providing evidence of stratified/*in situ* knapping activity.

### **Provenance**

#### **SPE1**

This site featured a Middle Bronze Age enclosure ditch with internal features. Thirty-one of the worked lithics came from this area. A small number derive from currently undated pits and postholes, but the majority were retrieved from Middle Bronze Age ditches, pits and postholes.

None of the deposits produced more than six lithics; however, eight were recorded in three fills of Middle Bronze Age-dated ditch terminal 10056. Radiocarbon determinations in the Middle Bronze Age were returned on two features: fill 10033 of pit 10031 (which contained the burnt flint mentioned above) (1495-1300 cal BC at 95.4%; SUERC 63442); and fill 10262 of pit 10263 (which contained one piece of shatter and one chip) (1418-1266 cal BC at 95.4%; SUERC 62337).

#### **SPE2**

The second area is a Roman villa site with several buildings uncovered. This site produced 21 of the worked lithics. Four lithics were recovered from subsoil and the rest are from cut features: mostly Roman-dated ditches but also pits, postholes, a gully and a tree throw. The majority of the latter features have also been dated to the Late Iron Age or Roman period on the basis of associated pottery, and it can be assumed that all of the worked lithics from this area are redeposited.

### **Raw material and condition**

The raw material for five items (11%) is Greensand chert and the remainder are made on flint (89%). Greensand outcrops in the region of the Devon/Somerset border. Abbots Leigh on the south side of the River Avon, close to Bristol (Barton *et al.* 1995, 90), is another possible source, though at a greater distance: c. 55km northeast of the site. The flint retains chalky cortex on 11 items (46%) and

abraded cortex on 13 (54%), indicating the exploitation of a mixture of primary (e.g. chalk) and secondary (e.g. river/beach gravel) sources, with no difference in proportions across the two sites. The primary flint will have been imported from unknown sources to the east or north-east.

Fifteen items (28%) have been broken and three of the worked items have also been burnt. There are twice as many broken items in the Roman villa site compared to the Middle Bronze Age site, which is to be expected with a residual assemblage. The majority of items are grey in colour: brown or honey-coloured staining was noted on three flakes, and one chip has been fully recorticated white.

### ***Range and variety***

The breakdown of the assemblages is detailed in Table 2.1. Retouched elements, all of which are made on flint, total 12 (23%).

### ***Primary technology***

A total of 40 items of debitage was recorded. Debitage comprises flakes, chips and shatter which do not feature secondary working: much of it represents knapping waste but a proportion is also likely to have been used as cutting implements in an unmodified state. Evidence of utilisation was noted on two flakes from features in the Middle Bronze Age area.

Terminations are feathered in all cases, which is the preferred type. The debitage does not display features often associated with Bronze Age flintworking technology, e.g. only two flakes are notably thick and there are no hinge terminations. However, attributes typical of earlier periods (such as the presence of blades and evidence for preparation of the working platform) are also absent. The assemblage is too small for very meaningful analysis. It is, however, in keeping with Middle Bronze Age dating, although the possibility of some of the debitage deriving from earlier activity cannot be ruled out.

No cores were recovered and the ten chips were spread across four deposits. Therefore, the lithics do not provide evidence of on-site flint knapping.

### ***Secondary technology***

The only flint recovered as an unstratified find (it is not known from which site) is a barbed and tanged arrowhead. This accords most closely with Green's Sutton A(e), with a clear tang and vestigial barbs (Green 1980, 122). A small piece has also broken off the left hand barb. The dorsal face has been reworked around all edges with regular, abrupt to semi-abrupt, slightly invasive retouch. An area of buff-coloured, chalky cortex remains in the centre. The dorsal face has been retouched at the base to form the barbs and tang; the lateral edges feature only small, shallow removals. Barbed and tanged arrowheads are dateable to the Early Bronze Age period, so this is clearly a residual item. Sutton A is the predominant type of barbed-and-tanged arrowhead in the area north of Somerset which comprises the Cotswolds, Midlands and Upper Thames (*ibid.*, 119).

The four retouched tools from SPE1, the Middle Bronze Age site, comprise a miscellaneous piece and three scrapers, all of which were recovered from fills of Middle Bronze Age dated ditch terminal 10056. The end-and-side scraper from fill 10059 has been made on a flake with quite fine, regular, abrupt to semi-abrupt retouch on the distal dorsal edge which extends along two-thirds of the right dorsal edge. A scraper fragment from fill 10057 cannot be classified: it features an area of steep, rather crude retouch along one convex edge. The miscellaneous scraper from fill 10060 appears to be a very small discoidal core which has had one portion made into a scraper with rather irregular, semi-abrupt retouch. Discoidal cores typically date to the Late Neolithic period (Butler 2005, 157) and the reuse of flints previously worked in an earlier period is a typical Bronze Age strategy (Edmonds 1995, 175–6).

A miscellaneous piece from fill 10057, also of terminal 10056, has been made on a flake blank with flakes removed from the ventral face. The removals do not resemble retouch and are too small for the item to be convincing as a core. Unsystematic and opportunistic flintworking is also most common from the later Neolithic, continuing through the Bronze Age (Butler 2005, 155–8). Tool types from SPE1 (scrapers and miscellaneous pieces) hint at domestic activity, although the assemblage is too small to assert this with confidence.

Retouched items from SPE2, the villa area, consist of a notched flake, a notched and spurred flake, two retouched flakes, two end scrapers, one side scraper and one double-end scraper. Four of these tools are broken and one is burnt. The end scraper from fill 20035 of Period 4 ditch 20036 is roughly D-shaped in plan and features fine, regular, semi-invasive retouch along the distal dorsal edge. This is identified as a probable Early Bronze Age thumbnail type, although it is not a 'classic' example (which would be expected to display fully invasive retouch) (*ibid.*, 168). The remainder of the retouched items are made on flake blanks, which are not chronologically diagnostic. Most display fine, regular retouch, which would be most typical of Mesolithic or Early Neolithic flintworking.

Table 2.1: Breakdown of the assemblages

	SPE1	SPE2	Unknown
Burnt unworked	7		
<b>Primary technology</b>			
Chip	7	3	
Flake	18	9	
Shatter	2	1	
<b>Secondary technology</b>			
Arrowhead (barbed and tanged)			1
Miscellaneous	1		
Notched flake		1	
Notched/spurred flake		1	
Retouched flake		2	

	<b>SPE1</b>	<b>SPE2</b>	<b>Unknown</b>
Scraper	3	4	
<b>Total</b>	<b>38</b>	<b>21</b>	<b>1</b>

## APPENDIX 3: PREHISTORIC POTTERY FROM SPE 1 BY HENRIETTA QUINNELL

### *The assemblage and fabrics*

The assemblage consists of 922 sherds 9166 g from 58 contexts. It appears to be in several fabrics which macroscopically look similar, but contain differing amounts of grog, rock and sand, in various sizes and amounts. Context 10033 contains parts of a possible biconical vessel with an applied horseshoe handle, probably incorporated in a Trevisker-related design. Biconical vessels are generally dated to the end of the Early Bronze Age: however SUERC-63442 3131 +/- 31 BP calibrating to 1495-1300 BC is only slightly earlier than other dates with Trevisker-related ceramics from the site and suggests that this style of vessel continued in use into the Middle Bronze Age. The remainder of the assemblage is of Trevisker-related vessels, for which the radiocarbon dates obtained, SUERC-62337 3082 +/- 30 BP calibrating to 1418-1266 BC from (10262) and SUERC-62336 3089 +/- 30 BP calibrating to 1426-1276 BC from (101460) are appropriate.

### *Biconical vessel*

**(10033)** fill pit (10031) 57 sherds 2158 g. All the sherds from this context appear to come from a single large vessel of biconical shape and mainly make up three large sherds blocks: rim diameter c 340mm. Above the girth there is a decorated zone, appearing at first glance to be very coarse cord impressions but in fact made up of separate stab/impression marks, forming an irregular zig-zag design. The lower part of this zone, on one of the sherd blocks, incorporates an applied horseshoe handle, only part of which survives: the applied handle is either a double cordon or a very wide single cordon with a broad depression along its centre. Close to this there is a large pre-firing perforation, part of which survives. Below this zone there is a wide girth cordon, decorated with long diagonal slashes and flattening beneath the applied handle. Below this again is a second line of long nearly vertical slashes. The depth of the decorated zone is 190mm down from the rim top. A single small base angle sherd survives.

The vessel is in a slightly grogged fabric.

The partial horseshoe handle on the vessel has affinities with the variant of biconical vessels termed Wessex Biconical Urns, with the few artefactual associations belonging broadly to the end of the Early Bronze Age (Calkin 1962, 35, Fig 14). A few fragments of parts of applied horseshoe handles from biconical vessels occurred in the assemblage of this material which occurred in Unit 6 which precedes stratigraphically Unit 5B with Trevisker pottery at Brean Down (Woodward 1990, 124). Horseshoe handles are not usually found in Trevisker assemblages. The only two known from Cornwall, from Duloe (Patchett 1944, G.15; Borlase 1872, and from Morvah (Patchett 1944, G.14; Borlase 1972, 248), come from incomplete vessels which do not survive today. The illustrations published by Borlase show decoration in addition to the applied handles. There are none from Devon nor, apparently, from Somerset. The engravings published by Borlase would merit scanning and inclusion in a report on the Cannington vessel.

The radiocarbon determination from 10033, SUERC-63442 3131 +/- 31 BP calibrating to 1495-1300 BC, shows the use of applied horseshoe handles continued into the Middle Bronze Age and that, as might be expected, elements of the Biconical Urn tradition influenced the Trevisker-related ceramic tradition on occasion in Somerset.

## DRAW JOINS

### *Trevisker-related*

Contexts described below contain vessels which merit illustration. A number of other contexts have sherds with incised lines or are from simple rims but do not merit illustration. Overall the 57 contexts contain sherds in a similar range of fabrics and of a similar style.

**(10008)** fill ditch (10007) 86 sherds 736 g. Parts of at least 3 vessels present

- (a) body sherds and two small horizontally perforate lugs
- (b) five adjoining sherds from girth of vessel with narrow imperforate lug: incised untidy lines, two around girth, remainder forming zig-zag pattern above this. DRAW JOINS
- (c) three non-joining sherds, one with rim, slightly out-turned. Decoration of broad grooves, in groups below rim and above girth. Straight fractures along parts of breaks suggest a triangular pattern between rim and girth. DRAW

**(10132)** fill pit (10130) 28 sherds 599 g includes one sherd with broad horizontal cordon with coarse incised herringbone lines along it DRAW

**(10136)** fill posthole (10135) 182 sherds 3494 g. Sherds from at least four vessels

- (a) two broad cordon sherds from an apparently plain vessel
- (b) about a dozen sherds, some in joining blocks, from a vessel with a very irregular rim and with untidy decoration underneath DRAW JOINS
- (c) about 16 sherds, thicker than (b) from a vessel with an irregular rim and deeply incised untidy herring decoration beneath: a scar suggests that the vessel originally had a cordon. DRAW JOINS
- (d) another vessel similar to ( c ) but with different fabric and finish

**(10214)** fill pit (10192) 53 sherds 167 g includes one sherd with slightly inturned rim and untidy incised herring bone beneath DRAW. A second sherd with a similar rim has ends of an incised design and may be from the same vessel.

**(10146)** fill of posthole (10145) 10 sherds 120 g plain sherds. SUERC-62336 3089 +/- 30 BP calibrating to 1426-1276 BC comes from this context.

**(10262)** fill pit (10263) 2 sherds 32 g includes flat-topped rim with horizontal incised line beneath above deep incised stab-marks set in vertical row (two impressions surviving) beneath DRAW. C14 SUERC-62337 3082 +/- 30 BP calibrating to 1418-1266 BC comes from this context.

Trevisker pottery has not been recognised in the prehistoric material from the site of Cannington cemetery (Rahtz *et al.* 2000, 281-286) but is well represented at Norton Fitzwarren hillfort near Taunton (Woodward 1989) with a range of six different fabrics but without radiocarbon dates. A large assemblage from Unit 5B at Brean Down (Woodward 1990) radiocarbon dates at least two centuries later than those from Cannington. Initial study suggests that there are considerable similarities between the Norton Fitzwarren assemblage and that from Cannington. However there are no cord impressed vessels from Cannington as there are from Norton Fitzwarren. The Cannington assemblage is important because it is of moderate size, associated with radiocarbon dates and on the south side of the Somerset Levels.



## APPENDIX 4: LATE PREHISTORIC, ROMAN AND MEDIEVAL POTTERY BY E.R. MCSLOY

### Late prehistoric and Roman pottery from SPE2

Pottery amounting to 3244 sherds (55.3kg) was recovered, the large majority dating to the Roman period (Tables 4.3–4.4). The assemblage was derived from 183 stratified contexts and in addition small quantities were recovered as unstratified finds. The pottery was recorded direct to an Ms Access database; quantification is according to fabric within context and by sherd count, weight and rim EVEs (Estimated Vessel Equivalent). Identification of pottery fabric has been aided by microscope (at x 20 magnification).

Codes utilised for pottery fabrics are for late prehistoric types primarily related to primary/secondary inclusion types. For the bulk of the Roman assemblage consisting of local reduced coarseware types, codes describe primary inclusion, inclusion size/abundance and aspects of firing (Table 4.3). For the widely-traded regional or continental imports codes matching those of the National Roman Fabric Reference Collection have been utilised (Tomber and Dore 1998).

The assemblage is described below according to period (Late Prehistoric/Roman). Comment on provenance and condition are included as appropriate for the period-based divisions.

### Late Prehistoric

Pottery categorised thus amounts to 608 sherds, weighing 6265g. Most was recovered by hand, with 45 sherds (132g) coming from bulk soil samples. The bulk of the assemblage is considered to belong to the later Iron Age (after c. 400/300 BC), and probably the period continuing into the early decades of the Roman period. For a small proportion of less diagnostic material (mainly unfeatured body sherds), dating potentially spans a longer period and for which the term later prehistoric is most appropriate.

The majority of the late prehistoric pottery was recovered from ditches/gullies (300 sherds or 49%) and pits/postholes (159 sherds or 26%). Largest groups are those from Ditches O (Fig. 6; 85 sherds) and T (Fig. 7; 41 sherds) and the probable roundhouse gully S (Fig. 7). Most among the remainder, appears to be re-deposited, from (Roman) walls and robber trenches (79 sherds or 13%) and from Roman or later quarrying (40 sherds or 7%). High levels of residually are also suggested when the assemblage is compared with the provisional site phasing (Table 4.1), with approximately half deriving from Roman or later-phased deposits.

The apparent high levels of residually notwithstanding, the late prehistoric pottery survives in moderately good condition. This is reflected in a mean sherd weight (10.3g), which is on the high side for a late prehistoric group, and by good surface survival/low incidence of recorded abrasion. Good

surface preservation has permitted survival of evidence for use as carbonaceous and other residues, although incidence is low quite (40 sherds).

### *Range and dating*

The compositional range of the late prehistoric group (according to fabric) is shown in Table 4.3. The largest proportion (Types QZ1–3: 228 sherds or 38%) occurs in fabrics containing abundant quartz inclusions. These are likely to be local although determining source at this stage is impossible due to the ubiquity of quartz sand bearing clays in Somerset (Morris 2007, 569). A proportion might derive from the same Mendips source as the polycrystalline quartz-bearing (sandstone-tempered) types SS1 and SS2, which amount to 175 sherds or 29% of the total. A smaller, but relatively sizeable proportion (129 sherds or 21%) occurs as calcareous (limestone/calcite) fabrics, the source for these also likely to be the Mendips Hills (below). For the remainder of the group, occurring in a mix of grogged/argillaceous, coarse quartz/quartzite-tempered and vesicular types, local origins are likely or possible.

The late prehistoric group includes rim sherds from a minimum 64 vessels. Rim forms are mainly simple: bead-like, short-everted/simple rounded and squared. The vessel forms represented are mostly jars of neck-less barrel-shaped or globular profile, and fineware bowls of globular or shouldered form. Decoration of all kinds was recorded on 58 sherds (9.5%) representing 25 vessels. Most simply this consists of single or paired horizontal grooves below the rim or at the shoulder of jar-proportioned vessels (from 20110, 20149 [both ditch S], 20235 [quarry pit P], 20327 [ditch DF] and 20412 [building B]). A small number of vessels (probably bowls) exhibit a zone of simple incised geometrical decoration at the shoulder (vessels from 20036 [ditch F], 20245 [pit 20244], 20346 [ditch O]). More complex decoration occurs with fineware bowls and consists of incised or incised and stamped curvilinear patterns, commonly incorporating hatched 'in-fill' (vessels from 20053 [ditch N], 20093, 20110 [both ditch S], 20134 [ditch T], 20315 [ditch O] and 20457 [posthole 20456 under Building B]). Where more complete (vessels from 20093 and 20315), designs are close to the La Tène-inspired designs seen at Glastonbury and Meare (in Peacock 1969; Fig. 4).

All of the decoration described falls within the south-western decorated tradition which characterises Iron Age assemblages across the 3rd to 1st centuries BC, possibly extending into the mid 1st century AD. Peacock's (1969) study of this tradition (then referred to as 'Glastonbury ware') equated the style with six fabric groups, with Groups 2 (Sandstone) and 3 (Calcite) dominant in the north Somerset area. The polycrystalline fabrics recorded in the assemblage, and making up the majority of decorated vessels clearly equates with Peacock's Group 2 (Peacock 1969, 46), and a later study by Rouillard (1987) indicates that this grouping also encompasses undecorated vessels. The origin for this material (or its primary inclusions) is thus likely to be the Mendip Hills and the sandstones of the Old Red series (ibid, 46). The origin of the limestone-tempered fabrics (Peacock's Group 3) is similarly the palaeozoic limestones of the Mendips or hills extending northwards to the Bristol area (Allen 1998).

It has been suggested that the elaborate La Tène-inspired designs typifying the South-western decorated style had fallen out of use by c. 50 BC (Coles and Minnitt 1995), but with undecorated wares probably continuing in a similar range of fabrics (Timby 2007, 599). The plainer, bead-rimmed jar forms in calcareous, quartz or sandstone-bearing fabrics may certainly belong to a 'transitional' phase spanning the mid/late 1st century AD as might the small quantities of wheelthrown calcitic (LI2) and grog-tempered fabrics (GR1), and the Durotrigian-related Black-burnished ware (described below with the 'Roman' pottery).

Table 4.2 shows the incidence of featured sherds among the late prehistoric group and the Durotrigian material (below). Of stratified (Period 4.3–4.4) material, most derives from Period 4.3–4.4 Ditch O and from Period 4.3–4.4 curvilinear ditch features A and B. There is no clear evidence for chronological separation of La Tène decorated and simply decorated plain styles, although the assemblage is small and derived primarily from, potentially long-lived ditches.

## Roman

A total of 2636 sherds (49.02kg) of Roman pottery was recovered, the majority by hand and with 198 sherds retrieved from bulk soil sample residues.

Distribution of the Roman assemblage according to site phase is set out in Table 4.1. The appreciable quantities from Late Iron Age/'transitional' Period 4.3–4.4 may result from later disturbance, or from continuing 'use' of these features (mostly ditches) beyond the mid 1st century AD. A small proportion comprises Black-burnished ware in 'Durotrigian' styles (Table 4.2) where dating can be expected to span the Late Iron Age/Roman transition (below). The largest proportion among the Roman group was recovered from pits/postholes (826 sherds or 31%), with the remainder mostly from ditches/gullies (776 sherds or 29%) and layers (654 sherds or 25%). Most among the latter category comprises material from deposits internal to buildings, hypocaust structures and demolition rubble associated with the villa. Period 5.1–5.2 Building A was associated with 78 sherds and Period 5.1–5.2 Building C, a group of 109 sherds. Further material was derived from unphased robbing activity (39 sherds) and from Period 7/8 demolition deposit 20556 above Building C (253 sherds). A number of deposits/features have produced sizeable pottery groups, including Period 5.1–5.2 Pit 20305 and Period 8 Quarry 20451 (424 and 53 sherds), and Period 5.1–5.2 Ditches DI (208 sherds), W (165 sherds), DN (66 sherds) and DC (55 sherds).

The condition of the (hand-collected) Roman assemblage is good with minimal surface loss resulting from abrasion or burial environment. The mean sherd weight 18.6g is fairly high for a Roman group, and whilst this is likely to be raised by the quantities of amphora and thick-walled storage jar sherds, does appear to reflect an assemblage which is not subject to much disturbance.

### *Range and dating*

The assemblage composition is set out in Table 4.3. Southeast Dorset Black-burnished ware is the single most common type (1178 sherds or 45%), followed by the range of reduced coarsewares (BS1-2; GGW1-2; GW1-4 and GWf), which collectively make up 51% of the total (1351 sherds). Most or all of the reduced coarsewares are likely to be local, from one of several production sites known (but poorly documented) from Somerset.

Abundance of Black-burnished wares is a feature of most Roman assemblages from the area and it appears that Somerset sites were receiving material throughout its production period, across the 1st to 4th centuries. A small proportion, including jars from Period 4.3–4.4 Ditch O (single fill 20254 and upper fill 20346), and a footring vessel from Period 4.3–4.4 pit 20342 (fill 20343), conform to 'Durotrigian' vessel classes (Brailsford 1958), which are typical of the 1st century AD. Typically for the majority of BB1 'export' groups, the very large bulk of identifiable forms comprise jar and dish/bowl forms characteristic of 'Middle' and Later Roman assemblages (c. mid 2nd to late 3rd/4th centuries). Non-'utilitarian' vessel classes are confined to flagons, represented by ribbed 'strap' handle fragments from two deposits (Period 4.3–4.4 enclosure Ditch L fill 20055 and unphased Building A robber trench 20341, fill 20313). An abundance of bowls with flat, grooved rims and of jars with wide acute lattice below a horizontal groove are among factors suggesting the assemblage is weighted heavily to the later 2nd to mid/late 3rd centuries (Holbrook and Bidwell 1991).

Variability in fabric among the local reduced coarsewares almost certainly reflects origins from a number of sources. In common with the pre-Roman quartz-bearing types described above, conventional visual/microscopic examination is unable to narrow source. As is typical for the 'local' reduced types (Timby 2007, 596-7) the influence of Black-burnished ware is widely apparent; the dominant form being the neck-less jar/cooking pot with everted rim, commonly with a zone of burnished lattice decoration. Coarseware dishes and bowls also replicate BB1 forms; however a smaller number of necked jars with rolled or bifid rims, lids and bag-shaped or indented beakers reflect other influences. With knowledge limited for local ceramic traditions by an absence of published production sites, close dating of the reduced coarsewares is possible only through association with better-understood types (below). A form which is common among coarse Greyware fabric GW2 is the distinctive large storage jar class, abundant from Somerset and Devon and known to date to mid/late 2nd to the 4th centuries. Such forms typically feature a bifid rim and fingertip/thumb impressions to the rim top and shoulder zones. The wide distribution and dissimilarities in fabric of this storage jar class suggests production at more than one centre and there some evidence for manufacture near Axminster, East Devon (Holbrook 1991), and nearer to Cannington at Norton Fitzwarren, Somerset (Timby 2007, 597)

The remainder of the assemblage is limited in its range; the small number of sherds in sandy oxidised types cannot be assigned to a particular source or closely dated. The few body sherds of Severn Valley ware type (SVW OX2) are similarly only broadly dateable. The likely source for this type is near Shepton Mallet, where kilns representing an offshoot of the main Gloucestershire/Worcestershire

group are known to have operated in the 2nd and 3rd centuries AD (Webster 1976). The source for oxidised mortaria types (two small sherds in fabrics MORT1 and MORTRS), cannot at this stage be determined with confidence although a non-local source is certain. Further regional fineware/specialist types (mortaria) comprise products from the New Forest and Oxfordshire. The latter (types OXF WH and OXF RS) are largely confined to from a single deposit (5 sherds from Period 4.3–4.4 Ditch DW) relating to a feature in the southern part of the site. Dating after *c.* AD 250/270 is probable for this group which consists of a whiteware mortarium of Young's Type M17 and a bowl of C45 form in red-slipped fabric OXF RS (Young 1977). Identifiable forms among the New Forest wares (NFO CC) consist of indented and bag-shaped beakers (Period 5.1–5.2 outer earthwork Ditch DH fill 20331, Period 8 Quarry Pit DK fill 20443 and unphased pit 20661 [Fig. 15] fill 20663) and a bottle (Period 8 Quarry Pit M fill 20412). All date after *c.* AD 260.

Imported (Continental) wares are present in the assemblage as amphorae types of southern Spanish (BAT AM) and South Gaulish (BAL AM), Gaulish samian (LEZ SA; EG SA) and Gaulish Black-slipped wares (MOS KER; CNG BS). The amphorae types are representative of the most common types represented from Roman Britain and current across the mid 1st to 3rd centuries AD. Sherds of Batican type (BAT AM) from Period 5.1–5.2 Ditch W (fill 20194) are notable in having been re-worked/ground to form a rudimentary rim and in a manner suggesting re-use following partial breakage. The small samian assemblage (37 sherds or 1.4%) comprises plainware forms in Central (LEZ SA2) and East Gaulish fabrics (EG SA). Three vessels among the east Gaulish samian exhibit evidence for repair. The relative abundance of the East Gaulish material (16 sherds) signifies this being a 'late group', dateable after *c.* AD 150 and as late as *c.* AD 250. Identifiable forms among the east Gaulish group comprise a Dr. 45 wall-sided mortarium (one or more vessel from Ditch W fill 20165 and subsoil 20001) which is dateable after *c.* AD 170, and Dr. 31r bowl sherds, dateable after *c.* AD 160 (from unphased pit 20304 fill 20165, Period 5.1–5.2 Ditch W fills 20198 and 20334). A more varied range of vessels characterises the Central Gaulish assemblage although forms dating after *c.* AD 150 still dominate: dishes/bowls Dr. 31 and Dr. 31, and mortarium Dr. 45. The non-sigillata continental finewares (MOS KER; CNG BS) comprise small sherds, all probably from beakers/cups. They share corresponding dating, *c.* AD 150–200/250. Evidence for repair is exhibited by one sherd in fabric CNG BS.

#### *Evidence for pottery function and 'status'*

Evidence for pottery use, probably for cooking, was recorded in the form of internal (14 sherds) and external (59 sherds) carbonaceous residues. Internal limey residues, presumed to result from storage or heating of water, were also recorded (67 sherds). Residues of all kinds were confined to Black-burnished ware (95 sherds) and the 'local' reduced coarsewares (45 sherds).

The utilitarian character inherent within the very large majority of all Romano-British pottery assemblages is apparent from the vessel forms breakdown shown in Table 4.5. Jar forms utilised for kitchen tasks including cooking and storage are heavily dominant (67.2% of EVEs total), although less

so compared with Roman groups (of similar size) from excavations at Hinkley Point (78%). It is unclear whether this difference in representation relates to the patterns of pottery use at sites of unequal social status. That the difference results from greater number of utilitarian dishes/bowls and not finewares/tablewares at the Cannington bypass site, suggests that if related to 'status' it reflects methods of cooking practices or other kitchen usage. As is commonly the case with villa-derived assemblages, the assumed 'high status' of (some among) the villa occupants is not reflected in an abundance of pottery finewares or exotica. Samian makes up a modest 1.3% of the group, a figure within the range expected for Romano-British rural assemblages (Willis 2005). Similarly, vessel forms associated with serving/drinking of liquids and 'specialist' types (amphorae, mortaria) are present only in small quantities.

No incidences of literate graffiti were recorded in the assemblage. Of note however are four sherds (all in southeast Black-burnished ware) with post-firing marks consisting of crosses and paired or more vertical strokes. The significance of such marks, which are fairly common in Roman pottery groups, is not fully understood although the most favoured interpretation is as ownership marks.

### **Medieval and later pottery**

A small post-Roman pottery assemblage was recorded, amounting to 155 sherds, weighing 1421g (0.49 EVEs). The largest portion of the assemblage (119 sherds) dates to the medieval period, almost all of which was recorded from Excavation Area SPE 3. The remainder comprises post-medieval and later pottery recorded from Area SPE 2.

The pottery was recorded direct to an Ms Access database; quantification is according to fabric within context and by sherd count, weight and rim EVEs (Estimated Vessel Equivalent). Recording also included vessel form/rim morphology. Pottery fabric codings utilised for recording are defined in Table 4.6. Assessment of the assemblage is set out chronologically.

#### *Medieval*

A total of 119 sherds of medieval pottery, weighing 765g (0.29 EVEs) was recovered. All but one sherd comes from Area SPE 3, this material all from a single feature Ditch A. The single sherd from Area SPE 2 was seemingly an intrusive find from Roman-dated (Period 5.1-5.3) wall construction cut 20267. It consists of a bodysherd in a glazed sandy fabric probably of South Somerset type and dateable to the 13th to 15th centuries.

The medieval assemblage is moderately-well broken up, as is reflected in a mean sherd weight (6.4g), which is on the low side for pottery of this period. Most of the assemblage consists of unglazed coarseware types and identifiable vessel forms comprise jars with everted rims. The dominant fabric, type ARGQT and variant ARGQT1, are characterised by coarse or finer rounded quartz quartzite,

chert and mudstone/clay relict inclusions. Similar fabrics have been recorded at Taunton (Burrow 1988, 117–8) and Shapwick (Gutiérrez 2007, 603) and all appear to be part of the same ‘chert-tempered ware’ tradition common throughout Somerset and East Devon. A likely source in the Blackdown Hills of south Somerset has been suggested and dating appears to span the 11th to 14th centuries. Some refinement of this dating is possible for the Ditch A group, which includes a single glazed sherd of South Somerset type, a fabric dating in 13th to 15th century range.

#### *Post-medieval/modern*

Pottery attributable to this period amounts to 36 sherds, weighing 656g (0.20 EVEs). All was recovered from Area SPE 2, primarily from quarry fills and topsoil/subsoil deposits. The composition of this material is set out in Table 4.6. Most consists of glazed earthenwares from local (south or east Somerset) sources, with a few sherds from Bristol/Staffordshire and a single sherd of Westerwald stoneware from the Rhineland. Most material probably dates to the period after 1600/1650 and the Creamware and other refined whiteware types after c. 1750.

Table 4.1: Pottery summary by Provisional period (quantities as sherd count).

<b>Prov. Period</b>	<b>Late pre./transitional</b>	<b>Roman</b>	<b>Med.</b>	<b>Post-med/mod</b>	<b>Totals</b>
4.3-4.4	341	380			<b>721</b>
5.1-5.2	90	670	1	1	<b>762</b>
5.3	1	71			<b>72</b>
7		1	118	1	<b>120</b>
7/8	6	253			<b>259</b>
8	105	535		29	<b>669</b>
9	2	2		2	<b>6</b>
Unph.	63	753		3	<b>819</b>
<b>Totals</b>	<b>608</b>	<b>2665</b>	<b>119</b>	<b>36</b>	<b>3428</b>

Table 4.2: Late Prehistoric and ‘transitional’ pottery: occurrence of decorated and featured sherds

<b>Type</b>	<b>Prov. Period</b>	<b>Context</b>	<b>Fill of</b>	<b>Feature</b>
Complex La Tène dec.	4.3-4.4	20053	20052	Ditch N
Complex La Tène dec.	4.3-4.4	20093	20092	Ditch S (Ring-ditch B)
Complex La Tène dec.	4.3-4.4	20315	20314	Ditch O
Complex La Tène dec.	4.3-4.4	20457	20456	Posthole
Simple linear dec.	4.3-4.4	20065	20064	Ditch O
Simple linear dec.	4.3-4.4	20070	20071	Pit
Simple linear dec.	5.1-5.2	20099	20098	Pit
Simple linear dec.	4.3-4.4	20110	20092	Ditch S (Ring-ditch B)
Simple linear dec.	4.3-4.4	20134	20133	Ditch T (Ring-ditch A)
Simple linear dec.	4.3-4.4	20149	20151	Ditch S (Ring-ditch B)
Simple linear dec.	4.3-4.4	20327	20326	Ditch DF



Type	Prov. Period	Context	Fill of	Feature
Simple linear dec.	4.3-4.4	20346	20345	Ditch O
Simple linear dec.	4.3-4.4	20389	20388	Ditch DD
Simple linear dec.	8	20412	20411	Quarry Pit M
Simple linear dec.	Unph.	20606	-	Tree throw
Undec./bead/simple rims	4.3-4.4	20055	20054	Ditch L
Undec./bead/simple rims	4.3-4.4	20110	20092	Ditch S (Ring-ditch B)
Undec./bead/simple rims	4.3-4.4	20119	20120	Ditch V (Ring-ditch B)
Undec./bead/simple rims	4.3-4.4	20183	20182	Ditch R (Ring-ditch B)
Undec./bead/simple rims	5.1-5.2	20194	20195	Ditch W
Undec./bead/simple rims	8	20235	20236	Quarry Pit P
Undec./bead/simple rims	5.1-5.2	20266	20267	Building A
Undec./bead/simple rims	u	20340	20341	Building A
Undec./bead/simple rims	5.1-5.2	20352	20267	Building A
Undec./bead/simple rims	5.1-5.2	20364	20366	Ditch DI
Undec./bead/simple rims	8	20412	20411	Quarry Pit M
Undec./bead/simple rims	8	20416	20415	Quarry pit
Undec./bead/simple rims	8	20444	20442	Quarry pit
Undec./bead/simple rims	4.3-4.4	20488	20487	Pit
Undec./bead/simple rims	Unph.	20500	-	us
Undec./bead/simple rims	8	20579	20587	Quarry Pit M
Undec./bead/simple rims (gr)	4.3-4.4	20216	20214	Ditch O
Undec./bead/simple rims (gr)	4.3-4.4	20229	20227	Ditch O
Durotrigian	4.3-4.4	20254	20253	Ditch O
Durotrigian	4.3-4.4	20343	20342	Posthole
Durotrigian	4.3-4.4	20346	20345	Ditch O



Table 4.3: Late prehistoric/'transitional' pottery summary quantification by fabric.

Code	Description	Ct	Wt.(g)	EVEs
ARG1	Argillaceous (mudstone?) inclusions	3	27	0
ARGQ1	Argillaceous (mudstone?) and quartz inclusions	3	69	.10
GR1	Grog	40	453	.35
GRLI1	Grog/limestone	1	39	0
GRQZ1	Grog/quartz	4	81	.03
GRVES1	Grog/vesicular (limestone?)	1	3	0
LI1	Limestone	109	851	.26
LI2	Fine limestone (wheelthrown)	2	8	0
Llcalc	Limestone (including calcitic)	18	135	8
QT1	Coarse quartzite	21	100	.10
QT2	Finer quartzite	2	40	0
QZ1	Quartz (sandstone-derived)	194	1528	1.15
QZ2	Quartz (sandstone-derived) wheelthrown	33	763	.25
QZ3	Fine quartz/silty	1	9	.05
SS1	Sandstone	174	2136	1.87
SS2	Fine/sparse sandstone	1	18	.02
VES	Vesicular (limestone?)	1	5	0
<b>Total</b>		<b>608</b>	<b>6265</b>	<b>12.18</b>

Table 4.4: Roman pottery summary quantification by fabric.

Source	Code	Description	Ct.	Wt.(g)	EVEs
Local/ unsourced	BS1	Fine/medium sandy dark grey/black-fired	271	2913	3.31
	BS1m	Fine, black-fired, micaceous	1	6	0
	BS2	Coarse black-firing (late BB imit.)	64	634	.75
	GGW1	Grogged greyware	37	675	.49
	GGW2	Grogged greyware (finer)	17	715	0
	GRQZ1	Coarse grogged with quartz	7	349	.20
	GW1	Greyware, sparse quartz, red core	343	6297	3.87
	GW2	Greyware, coarse quartz/fe	422	13658	2.04
	GW3	Sandy greyware	153	1900	2.88
	GW4	Hard, grey with red margin	34	511	1.06
	GWf	Fine (silty) greyware	2	46	.20
	buff1	Buff-firing	3	79	0
	OX1	Fine oxidised (sparse quartz)	10	64	.04
	OX2	Coarse, sandy oxidised	1	4	0
	OXRS3	Fine oxidised/micaceous with red wash	1	1	0
(mortaria)	MORT1	Gritty pink/white mortaria	1	114	.12
	MORTRS	Pale orange mortaria with red slip/wash	1	31	.05
Regional	<b>DOR BB1</b>	Southeast Dorset Black-burnished	1178	12884	14.19
	<b>NFO CC</b>	New Forest slipped	4	85	1.31
	<b>OXF RS</b>	Oxford red slipped ware	5	30	.15

Source	Code	Description	Ct.	Wt.(g)	EVEs
(mortaria)	<b>OXF WH</b>	Oxford whiteware	5	182	.22
Imports	<b>CNG BS</b>	Central Gaulish black-slipped	2	5	0
	<b>MOS KER</b>	Trier black-slipped (Moselkeramik)	4	7	0
(samian)	<b>LEZ SA2</b>	Central Gaulish (Lezoux) samian	21	314	.40
	EG SA	East Gaulish samian	16	296	.24
(amphorae)	<b>BAT AM2</b>	Baetican amphorae	31	7214	0
	<b>GAL AM</b>	South Gaulish wine amphorae	1	4	0
	GAL AM?	South Gaulish wine amphorae?	1	3	0
<b>Total</b>			<b>2636</b>	<b>49021</b>	<b>31.52</b>

\* type codes in bold equate to NRFRC (Tomber and Dore 1998)

Table 4.5: Roman pottery: forms breakdown

Form (generic)	No.	%No.	EVEs	%EVEs
bottle	1	<1	1.00	3.2
flagon	2	<1	0	-
beaker	6	1.8	.68	2.2
cup	2	<1	.05	<1
jar	183	56.3	20.03	63.7
Jar (large)	14	4.3	1.11	3.5
bowl	44	13.5	3.72	11.8
dish/bowl	2	<1	.09	<1
dish	59	<1	3.91	12.4
lid	4	18.2	.26	<1
mortarium	8	2.5	.61	1.9
<b>Total</b>	<b>325</b>	<b>-</b>	<b>31.46</b>	<b>-</b>

Table 4.6: Post-Roman (medieval and later) pottery

Date	fabric		Ct.	Wt. (g)	EVEs
Med.	ARGQT	Coarse quartz; with mudstone and chert	106	410	.13
	ARGQT1	Finer quartz; with mudstone and chert	5	225	.10
	MQZ	Unglazed sandy (South Somerset?)	4	20	.06
	QT	Coarse quartz/quartzite	2	19	-
	SOMSGL	South Somerset glazed	2	91	-
<i>Total</i>			<i>119</i>	<i>765</i>	<i>0.29</i>
Pmed./	BLGLZ	Black-glazed earthenware (Midlands)	1	12	-
mod.	SSOMGRE	South Somerset glazed earthenware	239	571	0.290
	WESTW	Westerwald stoneware	1	19	-
	YSW	Bristol/Staffordshire yellow slipware	2	6	-
	CREAM	Creamware	4	25	-

Date	fabric		Ct.	Wt. (g)	EVEs
	REF WH	Refined whiteware	2	3	-
	REF WHtp	Refined whiteware (transfer-printed)	3	20	-
Total			490	2186	0.290

## APPENDIX 5: CERAMIC BUILDING MATERIAL BY P. WARRY

Just over 100kg of Ceramic Building Material (CBM) was examined from this rural villa site. The *tegulae* are of second/third century date and have at least two phases (making three phases with the stone tile that was also present). There were also two varieties of box flue tile present possibly together with a third, first/early second century form.

### CBM assemblage

The CBM is analysed in aggregate in Table 5.1 and a detailed listing by context is given in Table 5.2. The proportion of brick and flue tile is far higher than normal but the bulk of this is accounted for by a single context (20447: Building A hypocaust pilae; Fig. 12). However, even if this context is ignored, the proportion of flue tile remains unusually high which may reflect the inclusion of combed *pedalis* tiles which are discussed later. Not included in Table 5.1 are deposit 20478 (Building A, Room 2A floor) which contained 19.9kg of Roman mortar and deposit 20753 (post-medieval ditch EB, fill; Fig. 6) which comprised 6 pieces of flat tile 13cm wide and 1.5 cm thick that were either medieval or later.

### Roofing

The average weight of the *tegula* sherds at 0.3kg was a little over twice the average sherd weight of the *imbrices* and quite close to the expected ratio of 2.5 times, which is the average of a complete *tegula* weight to that of a complete *imbrex*. However, both the number of *imbrex* sherds compared to *tegula* sherds, and the ratio of their aggregate weights, are far lower than expected. Most sites suffer from preferential robbing of the flat *tegulae* for reuse in walls and floors leaving a disproportionate quantity of *imbrices*, but the opposite is the case here. This would suggest that the sample of CBM recovered is unrepresentative of the building as a whole or that many *tegulae* were used to form drainage channels etc rather than all being on the roof.

Nine *tegulae* with diagnostic cutaways were noted, all of these were Group C which normally dates between the mid-second and mid-third centuries. These divided into two groups: the first, and probably earlier group, had chunkier flanges and deeper cutaways of which two examples came from deposit 20257 (Demolition layer, Building B; not illus.) and other examples of chunky flanges but without cutaways were noted from deposits 20239, 20352 (both Building A), 20364 (ditch DI) and 20395 (ditch DH; both Fig. 6). The second, and probably later, group were observed in deposits 20165 (ditch W; Fig. 6), 20556 and 20626 (both Building C; Fig. 20). Some of this latter group had smooth undersides and squarish flanges which are typical of production using an inverted rather than upright former. This method of production starts around the middle of the third century. Other possible examples of inverted formed production were noted in deposits 20298 (Building B masonry; Fig. 7) and 20559 (Building B 'make-up', not illus.).

This would suggest that there were at least two phases of ceramic tile present which, when coupled with the stone tiles also present, would suggest that there were at least three phases of roofing present.

### Flue tile and brick

The majority of the flue tile and brick came from deposit 20447 (Building A, hypocaust *pilae*) which included one complete *pedalis* and 14 further fragments, in total weighing 10.9kg, and one partially complete *bessalis* together with 33 further probable fragments, in total weighing 17.7kg. The complete *pedalis* measured 32.5cm by 31.5cm by 3.0cm and weighed 7.2kg. This is consistent with Brodribb's average measurement of 28.1cm square and thickness ranging from 2.5 to 7.0cm (Brodribb 1987, 36). One side of the *pedalis* was combed with a saltire cross pattern stretching from corner to corner. All the fragmentary *pedales* appeared similar. The partially complete *bessalis* had a side of 21.0cm and a thickness of 4.5cm; the fragmentary *bessales* appeared to be similar. Other deposits no doubt contained further fragments of these tiles which could not be so easily identified, but a definite example of a *pedalis* was observed in deposit 20793 (post-medieval clay extraction pit 20792, fill), and a further fragment of a *bessalis* in deposit 20490 (Building A, masonry).

Hypocaust *pilae* were typically constructed using a *pedalis* as a base followed by a stack of around ten *bessales* with a further *pedalis* to cap the *pila*. A large *bipedalis* was then placed on top to bridge across four *pilae*. Only one possible fragment of *bipedalis* was seen (ditch W, cut 20336, fill 20334) which was 6.5cm thick and scored on its upper surface. It is unusual to find proportionately so many *pedalis* fragments relative to *bessalis* ones. A possible explanation could relate to the peculiar arrangement of the *pilae* shown in the site plan where on one side of the hypocaust additional *pilae* have been inserted into the interstices of the main set of *pilae*. These additional *pilae* would have obstructed the flow of air within the hypocaust and would not have provided additional floor support because the same size *bipedales* would still have been required. There is no obvious explanation for the additional *pilae* but, whatever it was, it might also link with the unusual number of *pedales*.

Plate 5.1 shows an unusual piece of fired clay found in deposit 20656 (fill, Ditch DN; Fig. 15). Although broken it appears to have originally been part of a thick and roughly formed squat cylinder. It is just possible that this was a spacer bobbin used to create an air gap between a wall and flat tiles (*parietales*) set against the spacer bobbins which would allow heat from a hypocaust to be conducted up a wall. The flat tiles were locked in position by T-shaped fixings which were inserted through the spacer bobbins and hammered into the wall. If this interpretation is correct then the *pedales*, instead of being used in the *pilae*, might actually have been used as *parietales* to form the air gap. The combing on the *pedales* (which is slightly unusual) would have provided a key for the plaster which would have been spread over them. *Parietales* normally have notches in their sides to allow the tiles to butt against each other, whilst still leaving space for the metal fixings. No notches were observed on the *pedales* but it is not crucial that they should butt seamlessly, as any gap would have been

plastered over. Such a heating system would likely date to the first or early second century, so does not appear to be related any of the rooms discovered in the present excavations.

By number (but not weight) most of the flue tile observed was conventional box flue tile. At least two varieties were present; one with the normal rectangular vent hole (Subsoil 20001) and the other with an offset triangular vent as shown in Plate 5.2 (Ditch DN, fill 20556; Fig. 15). The width of the vent side of this latter tile was 11.5cm. A complete combed side measuring 17.0cm by 9.5cm was noted in deposit 20235 (post-medieval quarry 20236, fill). Deposit 20156 (ring ditch R, fill) included a combed waster (Plate 5.3), although this would seem to have been intrusive in this 'late Iron Age' ditch; no other wasters were noted in the assemblage.

An enigmatic but carefully formed sherd came from Building C masonry rubble 20613 (Plate 5.4). Its presumed lower surface had a series of preformed notches; the width of the one complete notch was 28mm which would have fitted neatly over the flange of one of the later *tegulae*. There was then a space of 23mm before the next (incomplete) notch. *Tegulae*, particularly later *tegulae*, were trapezoidal rather than rectangular in plan being wider at the top than the bottom. When rows of *tegulae* were placed on a roof there would have been a varying gap between the rows – if each pair of horizontally adjacent *tegulae* abutted at the top then a widening would develop towards the bottom of the tiles; for Group C *tegulae* of average dimensions this gap would grow to 22mm (Warry 2006, 136, table 9.1). This gap equates to the spacing between the notches on the sherd and therefore implies it may have been designed to be placed on top of the tiles when laid on a roof. This suggests that it could be a fragment of a chimney pot although all the known Romano-British chimneys are circular whereas the sherd was straight which would have created a rectangular base for the chimney. Above the notched section of the sherd there was an ornamental rim which further reinforces the idea that it came from a chimney pot.

**Plate 5.1: Possible spacer bobbin (Context 20656)**





**Plate 5.2: Flue tile with triangular vent (Context 20556)**





**Plate 5.3: Flue tile waster (Context 20156)**



**Plate 5.4: Possible chimney fragment (Context 20613)**



Table 5.1: Overall CBM analysis

	<i>Tegulae</i>	<i>imbrices</i>	brick	flue	Unid.	total
Weight(kg)	16.0	4.7	26.4	23.3	32.8	103.2
% of total	15	5	25	23	32	100
% of identifiable	23	7	37	33		
No. pieces	54	34	48	97		
Av weight	0.30	0.14	0.55	0.24		
<b>No of contexts</b>	<b>19</b>	<b>18</b>	<b>11</b>	<b>28</b>		<b>55</b>

Table 5.2: CBM analysis by context

context	Feature	tegulae		imbrices		brick		flue tile		other	type	residue	total
		kg	no	kg	no	kg	no	kg	no	kg		kg	kg
20000								0.1	2			0.1	0.2
20001		0.6	4			1.0	2	1.7	13			1.0	4.3
20002						0.6	2	0.2	1			0.5	1.3
20146	Pit DK	0.2	2	0.1	1							0.2	0.5
20156	Ditch R							0.5	3			0.1	0.6
20165	Pit 20304	0.9	4	0.1	2			0.3	4			1.6	2.9
20194	Ditch W	1.1	1	0.3	3							1.0	2.4
20198	Ditch W							0.5	3			0.6	1.1
20235	Quarry P							1.1	4			0.1	1.2
20237	Pit 20269			0.2	1			0.1	1			0.3	0.6
20238	Building A							0.5	7				0.5
20239	Building A	0.2	1	0.6	2								0.8
20240	Building A	0.2	1			1.5	1	0.1	1				1.8
20241	Quarry M											0.8	0.8
20257	Building B	0.7	5	0.1	1			0.2	1			0.8	1.8
20259	Quarry P							0.5	6			0.5	1.0
20262	Ditch DC											0.6	0.6
20265	Ditch DD			0.1	1								0.1
20272	Building A			0.2	1							0.1	0.3
20278	Ditch DE											0.2	0.2
20281	Pit 20269							0.1	1				0.1
20290	Ditch DG											0.1	0.1
20298	Building B	0.4	1	0.2	1							0.1	0.7
20325	PH 20324					0.8	1	0.8	7				1.6
20334	Ditch					0.9	1						0.9

context	Feature	tegulae		imbrices		brick		flue tile		other		residue	total
	20336												
20352	Building A	0.2	1	0.2	1								0.4
20362	Ditch DE							0.1	1			0.9	1.0
20363	Ditch DI	0.8	2	0.1	2			0.2	3			0.3	1.4
20364	Ditch DI	0.6	3	0.1	1							0.4	1.1
20378	Ditch DJ	0.1	1										0.1
20395	Ditch DH	0.1	1									0.2	0.3
	Pit												
20401	20338			0.1	1							0.4	0.5
20444	Ditch DK			0.3	2								0.3
20447	Building A					17.7	34	10.9	15			0.1	28.7
20478	Building A									19.9	mortar		19.9
20484	Building A											0.1	0.1
20490	Building A					0.8	1					3.1	3.9
20556	Building C	5.4	18	1.5	11	0.5	1	2.7	8			9.2	19.3
20579	Quarry M								1			0.5	0.5
20599	Quarry M	0.3	1									0.3	0.6
20613	Building C											3.1	3.1
20618	Building C							0.7	2			0.3	1.0
20626	Building C	3.0	5					0.2	1			0.8	4.0
20656	Ditch DN	0.3	1						1			0.5	0.8
	Pit												
20672	20671			0.2	1				1			0.1	0.3
	Pit												
20678	20677			0.2	1	1.3	2						1.5
	Pit												
20702	20710							0.3	1				0.3

context	Feature	tegulae		imbrices		brick		flue tile		other		residue	total
20713	PH 20712	0.2	1					0.5	1				0.7
20753	Ditch EB									1.7	later		1.7
20768	Pit 20767	0.7	1					0.3	2			1.7	2.7
20773	Ditch DW											0.1	0.1
20774	Ditch DW											0.1	0.1
20779	Ditch DZ					0.2	1					0.5	0.7
20793	Pit 20792							0.5	1			0.2	0.7
20794	Pit 20792											0.2	0.2
20829	Quarry 20828							0.2	5			0.2	0.4
us				0.1	1	1.1	2					0.8	2.0

## APPENDIX 6: PAINTED WALL PLASTER BY KAYT M BROWN

A total of 125 fragments (2589g) were recovered, with a total estimated surface area of 0.10m<sup>2</sup>. Monochrome colours (white, red, blue, green, pink and black) accounted for just over 61% of the assemblage by fragment count, with white the single most dominant colour (21.6% of fragment count). Painted plaster was recovered from all three buildings; however the bulk of material (86% by count) was retrieved from a single layer of demolition debris (20626) within the Villa building (C).

### Methodology

The whole assemblage was examined as part of this assessment. All the wall-plaster, painted and plain, was recorded by count and weight, with estimated surface area also calculated for painted pieces (mm<sup>2</sup>). A range of colours and colour combinations were observed, forming a simple type series presented in Table 6.1. A quantification of these different types is summarised in Table 6.2, with a further quantification by context in Table 6.3. The plaster fragments recovered were in a highly comminuted state; although some surfaces were in relatively good condition, fragmentation levels were high and consequently only broad conclusions can be drawn concerning the decorative schemes employed.

### Construction techniques

In terms of construction techniques, at least three layers were observed; two coarse layers of mortar (*arriccio*) were present on most fragments underlying a single plaster surface layer. The two mortar layers comprise a thick undercoat, or levelling layer of mortar, and a second, thinner and finer mortar layer applied at a relatively uniform thickness of 10mm. Based on a examination by hand lens, both mortar layers appear to comprise a mix of local sand and lime and naturally occurring rock aggregates, the second layer containing a higher proportion of sand as is common in Roman Britain (Davey and Ling 1982, 54). Overlying this second mortar application was a single plaster or *intonaco* layer, approximately 0.25-0.5mm in thickness.

The plaster has been painted in the *fresco* style, the pigments applied whilst the plaster was still damp. Fragments from the villa itself show a high level of design and execution, characteristic of 2nd-century painted plaster rather than the rougher techniques that appear in the 3rd and 4th centuries (Ibid, 59).

None of the pieces exhibited reed impressions or 'pecking' marks, necessary to ensure good adhesion to a wall surface; however a rough masonry wall finish may have negated the need for such a bonding technique. One fragment from building A (20461) was the only piece with evidence of possible moulding on the reverse surface, possibly from a door or window reveal.

## Distribution

### *Building A*

Nine painted and six unpainted plaster fragments were recovered from three contexts (20375; 20413; 20461). In addition to the monochrome red piece with possible moulding on the reverse, a red and white stripe fragment from rubble layer 20413 displayed evidence of possible repainting – the only example of this in the entire assemblage. The rough surface finish of the few red painted fragments from destruction layer 20375 is in contrast to the smooth finish of the plaster from Building C.

### *Building B*

Just two fragments were retrieved (20298), both painted in monochrome white.

### *Building C*

With the exception of a single fragment from 20556, all the remaining painted plaster (107 fragments) were recovered from context 20626, both demolition layers. An indication of high status decoration is implied by the quality of the wall plaster recovered, however the small amount retrieved (0.10m<sup>2</sup>) suggests that, in addition to the high levels of truncation encountered, much of the wall plaster may have already collapsed and been moved or cleared away prior to the final demolition of the building. It is, therefore, unclear whether the material recorded represents decoration from a single room scheme, or an accumulation from numerous rooms. With the exception of monochrome pink, possibly from a plain dado, the remaining fragments are likely to originate from middle zone panels; the red, white and black panel schemes are particularly characteristic of Flavian–Trajanic designs in Britain (Davey and Ling 1982, 33). A second scheme of blue panels delineated with black and white bands would appear to contain figurative elements; several fragments with black brush strokes over brown are reminiscent of garments, whilst two further pieces exhibit fruit or foliate designs in yellow and white over maroon with possible green tendrils. Unfortunately none survive in sufficient size or quantity to elaborate more on the design.



Table 6.1: Type series

<b>Colour Code</b>	<b>Description</b>
1	Monochrome white
2	Monochrome red
3	Monochrome blue
4	Monochrome pink
5	Monochrome green
6	Monochrome black
7	Red with white band
8	Red, white band 8mm thick, black
9	White band 8mm, red band 32mm
10	Blue, black band 6mm, green and white
11	White base with black strip, white stripe 4mm, light blue
12	Green and pink
13	Maroon, yellow and white motif
14	Composite design, pink with black lines, blue, white, yellow
15	Black, red over-painted with green/blue zone
16	Blue/green with red stripe 8mm, bordered by maroon stripes 2mm
17	Degraded black/grey with 2mm stripe
18	Maroon and pink, possibly part of design 14
19	Degraded maroon with green
20	White over-painted with red, black and blue/green

Table 6.2: Quantification of types by fragment count and estimated surface area mm<sup>2</sup>

<b>Colour Code</b>	<b>Count</b>	<b>Est. Surface Area (mm<sup>2</sup>)</b>
1	27	27050
2	5	1867
3	25	6684
4	6	1988
5	5	1012
6	9	680
7	2	2042
8	10	2520

Colour Code	Count	Est. Surface Area (mm <sup>2</sup> )
9	1	900
10	2	640
11	1	288
12	1	200
13	2	480
14	9	1616
15	2	288
16	1	40
17	5	480
18	3	360
19	1	80
20	1	140
Unpainted	7	51230
<b>Total</b>	<b>125</b>	<b>100585</b>

Table 6.3: Quantification by context by count, weight and estimated surface area

Context	Feature	Count	Weight (g)	Est. Surface Area (mm <sup>2</sup> )
20298	Building B foundation	2	51	1840
20375	Building A demolition	9	1199	69626
20413	Building A rubble	1	44	1558
20461	Building A wall repair	5	229	1767
20556	Building C demolition	1	12	0
20626	Building C demolition	107	1054	25794
<b>Total</b>		<b>125</b>	<b>2589</b>	<b>100585</b>

## APPENDIX 7: MORTAR AND PLASTER BY KEVIN HAYWARD

### INTRODUCTION

In addition to a large group 345 fragments (7207.63g) of mortar and plaster obtained from different parts of a bath-house building (Building A) uncovered during the Cannington Bypass Excavations, Somerset (CTW14), there was one large example of *opus signinum* (5120g). These were assessed macroscopically. This building formed part of a substantial, long lasting villa complex located in Trench Area SPE 2 NGR ST 251400. The purpose of this post-excavation assessment was to:

- Differentiate between walling mortar (*opus caementatum*) and wall plaster.
- Identify the basic ingredients from the *opus signinum* (concrete flooring)
- Examine the basic ingredients (recipe) of each mortar type, taking into account contributory factors such as the local geology, burning, and the purpose to which the mortar/plaster was used for.
- Ascertain whether certain mortar recipes are diagnostic of a particular construction phase associated with the bath-houses development.
- Produce a catalogue (Mortar Catalogue Cannington) which accompanies this document

### METHODOLOGY

Ten bags of mortar and plaster, and one box of *opus signinum* from nine contexts were counted, weighed and analysed using a hand lens (Gowland x10) during March 2016. Each sample underwent further visual analysis using a long arm stereomicroscope to determine the basic mortar ingredients, whilst the texture, angularity, sorting and colour of the mortar mix were assessed with the aid of a Munsell Colour Chart (Munsell Color Group 1980).

Consultation of the local geological memoir (Edmonds & Williams 1985) and associated 1:50,000 map provided background to the local geology from the part of Somerset as well providing some idea as to the composition of any rock inclusions.

### GEOLOGICAL BACKGROUND

The underlying geology of this part of Somerset is dominated by Permo-Triassic sands and marls, including the Otter Sandstone characterised by red-brown desert sandstone as at the nearby roadside cutting GR 2487 3997 (Edmonds & Williams 1985, 38). The overlying Mercia Mudstone Group on the other hand consists of red cuboidally-splitting red mudstones and siltstones (Edmonds & Williams 1985, 27).

### RESULTS

#### *Mortars*

#### Type 1

Light red-brown 2.5YR 6/4 heterogeneous very coarse gravelly mortar with yellow calcareous marl and large dark brown 5YR 3/2 new red sandstone and siltstone fragments

This by far the most common mortar type consisted of a very hard cement-like bedding mortar (*opus caementatum*), present in the earliest (Phase 1) N-S wall foundations of the hypocaust Room 2 [20462] and [20471] where they were used to bond the regularly coursed roughly squared sandstone rubble walls. However, they were also used to bond the masonry hypocaust drain in the North West part of Room 2 Building A [20466].

In detail these mortars are characterized by a relatively low percentage of inclusions (5-7%) set within a fine light red brown sandy matrix. However this low number of inclusions is more than made up for their sheer size. Typically large angular lumps of hard country rock can be as big as 40mm across. These are dominated (80%) by red-brown fine sandstones comparable in their lithology to descriptions to the locally outcropping Permo-Trias Otter Sandstone (Edmonds & Williams 1985, 38). Other inclusions (15%) include smaller (15mm) fine pale yellow marls that could well derive from weathered clay and marl particles from the Mercia Mudstone Group (Blue Anchor Formation) (Edmonds & Williams 1985, 27) as could the white inclusions (5%). The red-brown colour of the mortar should be seen more in terms of the oxidised red-brown lithology of the local bedrock rather than any effect of oxidation caused by the high temperatures associated with the pilae. In essence this heterogeneous relatively dense mixture bonded with a hard cement (probably from lime extracted from the local marl or Carboniferous limestone slightly further away) would only have been suitable for bonding or holding together large stone masonry foundations of the heated bath-house.

A fourth example of *opus caementatum* recorded in a sample taken from the later phase 3 E-2 dividing wall of Room 2, separating Room 2b from Room 2c [20473]. is somewhat similar to the type 1 having the same colour and large inclusions of country rock. However the presence small rods of charcoal together with finer red silty laths of what may be red cuboidally-splitting red mudstones and grey-green sandstones and siltstone from the Mercia Mudstone suggest a slightly different recipe and are thus in accordance with a later build. Some of these pieces are smoothed included evidence for incision or cut marks perhaps to paste or smear the mortar onto the sandstone walling.

#### Mortar Type 2

Red-Brown 2.5YR 4/4 Concretionary sandy mortar with new red sandstone and siltstone fragments, chalk and charcoal.

A second type of hard concretionary mortar only identified from a poorly-dated fill of Building A [20237] has a slightly higher proportion of inclusions than Type 1 but these are much smaller in size (5-10mm). The red brown sandstones so prevalent in type 1 now only form a quarter of all inclusions, with white lime (75%) far more common supplemented by small black charcoal rods (5%). It is not clear from where it came in Building A from but judging by its density and strength must have been used to bond a wall.

## Plaster

Light-red to salmon-pink 2.5YR 7/6 Low density mottled chaff rich crushed tile coarse plaster backing (*arriccio*)

Present in three samples including the Masonry Wall Plaster of Building A [20474] but also in a burnt deposit from a hypocaust [20398] and surrounding a hypocaust pilae [20447] both also from Building A is coarse wall plaster backing (*arriccio*).

This has an entirely different composition and character to the *opus caementatum*. First and foremost is it's of a much lower density almost disaggregated, with numerous voids and chaff marks suggesting that vegetation and twigs were very important in its production. The voids and the rather globular or cellular structures are reminiscent of impressions left by inclusions of a low density Holocene spring water deposit (calcareous tufa) and there may have been deposits from the adjacent River Parrett. Second is the light red mottled colour a product of numerous crushed ceramic roof tile or brick inclusions, lumps of a lighter marly rock, and paler lime. These produce a much higher proportion of inclusions (30%), typically forming a homogeneous angular to sub-angular mosaic, with each inclusion typically 8-12mm across.

Examples of combing on examples from [20398] [20447] suggest preparation of a flat surface for an upper fine plaster layer *Intonaco* and finally the paint layer or *fresco*. It is not clear whether the extensive wafer thin (2-3mm) layer of crushed tile on the upper surface of the plaster from [20474] represents further attempts at preparing the upper surface for plaster and paint.

## *Opus signinum*

Light-red to salmon-pink 2.5YR 7/6 dense, concretionary aggregate or *opus signinum* used as flooring in Building A [20240] SF 208. This was 120mm thick with frequent large chunks (up to 50mm across, though typically 15-20mm) of broken up angular pink red ceramic building material. These inclusions account for 90% of the fabric. A further 5% had been vitrified black whilst 5% consisted of dark-brown 5YR 3/2 rock inclusions of Otter sandstone. These were set in a hard pale cream grey vuggy calcareous matrix with chaff and wood inclusions as well as small concretionary, nodular lumps of what may be tufa. The scraping or smoothing of the regular upper surface would have been treated whilst the mixture was still in a semi-fluid state, almost certainly set within a mould.

The fabric of this sizeable chunk of pink *opus signinum* is a recipe typical of this type of flooring material. The large angular chunks of Roman tile and brick had evidently been collected from discarded, broken up or burnt material from the villa and it is possible that the vitrified material may simply be burnt recycled hypocaust material. The recipe, albeit much denser, coarser and concretionary appears to be comparable to the wall plaster packing [20474] especially in terms of its colour and inclusions. The final product a hard impenetrable, waterproof block of flooring would have

been ideally suited to rooms where there was plenty of moisture and water flow such as in a bath-house structure.

## SUMMARY

Hand specimen visual analysis of the texture, colour and inclusion content of 10 bags of mortar and plaster have been successful in the first instance of discriminating between what is wall plaster and bedding mortar or *opus caementatum*. The earliest phase 1 walls of Room 2 from Building A [20462] and [20471] the bath-house consist of much harder red brown concretionary mortars (Type 1) defined by their high inclusion content of local country rock and their red-brown colour which is the result of the local red sandstone Permian lithologies rather than the effects of burning.

Later additions to the structure of the bath-house represented by the phase 3 E-W dividing wall [20473] have a slightly different mortar recipe whilst it is possible that there was a third build represented by a dump mortar deposit [20237] (Type 2).

The wall plaster backing or *arriccio* from [20474] [20398] and [20447] on the other hand is of much lower density (including vegetation and possible tufa used in its preparation). It had a mottled fabric, the product of crushed up lumps of ceramic building material and paler rock types. More consideration had gone into the preparation of this material as shown by the variety of ingredients all geared towards producing a low density, homogeneous recipe. The presence of comb marks and a very thin dusting layer of crushed tile support this idea. Nevertheless, the absence of bright paint and plaster merely supports evidence from elsewhere in this report that this was a low status bath-house building.

A tub of thick (120mm) waterproof, robust *opus signinum* flooring from Building A [20240] was found to be typically very hard and concretionary and comparable in colour to the salmon pink hue of the wall plaster. These properties made it ideally suited to the paving of rooms where there was a great deal of moisture or water flow such as in a bath-house.

## Mortar Catalogue

Context	Feature	Prov. Period	Spot Date	Number	Wt g	Mortar Type
20237	Fill Building A	5.1-5.3	C3-C4	12	171.20	Red-Brown 2.5YR 4/4 Concretionary sandy mortar with new red sandstone and siltstone fragments, chalk and charcoal
20240 SF208	Building A	5.1-5.3		1	5120.00	Light-red to salmon-pink 2.5YR 7/6 Dense <i>Opus signinum</i> floor deposit 120mm thick with large chunks (up to 50mm across) of broken up angular pink red ceramic building material some of it vitrified black set within a compact pale cream grey calcareous matrix with chaff and wood and possible remnant tufa. Odd fragment of dark brown Otter sandstone
20398	Burnt Deposit in Hypocaust Building A	5.1-5.3		44	354.71	Light Red 2.5YR 7/6 Low density mottled chaff rich crushed tile mortar
20447	Masonry Hypocaust Pilae Building A	5.1-5.3	RB	108	1055.15	Light Red 2.5YR 7/6 Low density mottled chaff rich crushed tile mortar
20462	Masonry Wall N-S Foundation Building A Phase 1 2 <sup>nd</sup> Century AD Room N-S Room 2	5.1-5.3		42	1536.95	Light red-brown 2.5YR 6/4 heterogeneous very coarse gravelly mortar with yellow calcareous marl and large dark brown 5YR 3/2 new red sandstone and siltstone fragments
20466	Masonry Hypocaust/ Drain NW part Building A	5.1 -5.3		46	207.86	Light red-brown 2.5YR 6/4 heterogeneous very coarse gravelly mortar with yellow calcareous marl and large dark brown 5YR 3/2 new red sandstone and siltstone fragments
20471	Masonry Wall N-S Foundation Building A Phase 1 2 <sup>nd</sup> Century AD Room N-S Room 2 Repair 3	5.1 -5.3		19	152.71	Light red-brown 2.5YR 6/4 heterogeneous very coarse gravelly mortar with yellow calcareous marl and large dark brown 5YR 3/2 new red sandstone and siltstone fragments
20473	Masonry Wall Foundation Building A Phase 3 dividing wall E-W Room 2b and Room 2c	5.1-5.3		33	1692.25	Light red-brown 2.5YR 6/4 heterogeneous very coarse gravelly mortar with yellow calcareous marl and large dark brown 5YR 3/2 new red sandstone and siltstone fragments
20474	Masonry Plaster of Wall Building A	5.1-5.3		53	2036.80	Light Red 2.5YR 7/6 Low density mottled chaff rich crushed tile mortar

## APPENDIX 8: STONE BY RUTH SHAFFREY

All the worked, burnt and unusual stone was retained from contexts of likely archaeological significance. They comprise fragments of roofing and flooring as well as a spindle whorl, hone and a possible weight. The stone was examined with the aid of a x10 magnification hand lens. Unworked stone was discarded after identification. All other stone was fully recorded and entered into a Microsoft Access database.

### Description of worked stone

A single stone spindle whorl of neat disc form is the only complete stone object and is of typical size and form (enclosure ditch L, context 20213; Fig. 6). Some small worn fragments of lava presumably represent rotary querns. These were recovered from an unphased pit 20802. They are highly unlikely to predate the Roman period, but may have been redeposited in a later feature. A chunk of red sandstone with one worn face has two deep grooves across this face indicating its use as a hone (Late Iron Age oven 20600, context 20601). The worn face may also be associated with whetting, but seems more likely to indicate a previous function for the stone. It is possible it is from a quern, but the fragment is too small for any identification of function to be anything other than speculative. It is likely to be from the Otter sandstone.

A thick stone of rectangular form but with a rounded top and a perforation at this end is of uncertain function (Roman enclosure ditch DI, context 20364). It is similar in form to stone roofing, however, the edges are straight and thick, whilst those of stone roofing are typically tapered/bevelled to allow the stones to overlap neatly. A more likely function of this stone is a use as a weight of some kind. This context also produced a square piece of the same stone type – Lias limestone – which was relatively straightforward to ‘snap’ into these straight edged pieces. No tesserae were found during this fieldwork, but it is possible that the pieces seen here are related to tesserae manufacture.

Other retained stones certainly represent sandstone roofing (Building C demolition 20556) or likely roofing (post-medieval quarry 20442, context 20443) and probable Lias flooring (20443, Roman ditch DI, context 20363). With the exception of the lava quern, from unphased pit 20802, and probably from the Niedermendig source, all the stone types are thought to be local.

### Description of other stone

Other items that were retained and require comment include SF 230, which is an unworked and unused cobble. Samples of burnt (reddened) stones were kept from unphased pits 20671 (context 20672), 20668 (context 20669), and 20871 (context 20872) (Figs 6 & 15). These are fine or medium grained red sandstones, probably from the Otter sandstone. Three pieces of shale (from ditch W, context 20199) are unworked but were retained.

Slate was found in the following contexts: Roman ditch W (contexts 20198, 20165 and 20199); Roman building B (cut 20301, context 20542); post-medieval quarry M (context 20597); and post-



medieval quarry 20442 (context 20444). It most probably originated in Devon. All may be fragments from medieval or later roofing, though all are too small for evidence of their use to survive. The slate from Roman contexts was probably not used as roofing because that would imply the long-distance transport of quantities of building material not commonly undertaken until the industrial era.

## Catalogue

Function	Notes	Ctx	Phase	Size	Lithology
Spindle whorl	Neat disc with flat faces and straight vertical edges. Perforation measures 9mm at narrowest point and is not perfectly circular. Fine scratch marks are visible on all the surfaces from manufacture.	Ditch L, 20213	4.3–4.4	Measures 10mm thick x 35mm diameter	Fine grained micaceous red sandstone
Possible floor stone	Large square slab - no perforation	Ditch DI, 20363	5.1–5.3	Measures 210mm x 199mm x 18mm thick	Lias
Possible weight or roof stone	Neatly shaped with slightly rounded base, straight sides and tapered top. Hole perforated from one side only and 3mm wide at narrowest point. Seems thick for a roof stone and sides are very straight (they are usually bevelled)	Ditch DI, 20364	5.1–5.3	Measures 205mm long x 125mm wide x 17mm thick	Lias
Possible flooring/structural stone	Possible roofing or flooring	Quarry 20422, 20443	8	Measures 16mm thick	Fine grained micaceous red sandstone
Possible flooring/structural stone	Straight edges - presumably broken deliberately	Quarry 20422, 20443	8	Measures 26mm thick	Lias
Roofing	Fragment of upper end of stone roofstone with slightly irregular circular hole of 6mm	Layer 20556	8	Measures 12mm thick	Lias
Hone (secondary whetstone)	Fragment with one worn surface with two deep sharpening grooves in it. The worn (and rounded) face	Oven 20600, 20601	4.3–4.4		Medium grained red sandstone, well sorted with

Function	Notes	Ctx	Phase	Size	Lithology
	suggests the stone functioned as something else first. A quern is a possibility				occasional red siltstone pebble
Probable rotary quern fragments	Non-diagnostic	Pit 20802, 20801	Unph.		Volcanic lava
Slates	See text for contexts with slate (probably roofing but not diagnostic)	various			?Devonian slate

## APPENDIX 9: METAL ARTEFACTS (INCLUDING COINS) BY KATIE MARSDEN

A total of 222 metal objects, the large majority (218) comprising items of iron, were recorded. The metalwork has been recorded to an Access database and identifications are summarised in Tables 9.1 and 9.2. The assemblage has been examined by a specialist conservator (Karen Barker) and items other than those of lead were subjected to x-radiography (X-ray plates K15/107-113).

### *Condition*

The extent of corrosion is variable. Most of the iron items are brittle and some fragmentary, commonly characterised by heavy corrosion/soil adhesion. Active corrosion appears to be present on some objects and increased humidity control has been applied to slow the rate of degradation. The non-ferrous objects were in general less severely corroded. All items are currently stored in sealable plastic boxes with desiccating silica gel and, with the exception of the items outlined above, are currently considered to be stable.

### **Range and variety: Iron**

A total of 218 items of iron were recorded, recovered from 39 deposits. Of these items, some were too heavily corroded for identification. Where investigative cleaning could potentially reveal more information about the identity of the objects, it has been stated in Table 9.2. The largest group of identifiable objects are nails/nail fragments (141) and hobnails (45).

The hobnails were associated with Period 5.1-5.3 deposits, with the exception of twenty two from deposit 20673, currently unphased. A further 5 hobnails were identified from samples; deposit 20669 (3) and deposit 20667 (1), both currently unphased and deposit 20624 (1), assigned to Period 8.

The 139 iron nails were present in 28 deposits and of these, 95 came from the Post Conquest medieval / post-medieval phased deposits. A further 27 nails are from Period 5.1-5.3, 2 from Period 4.3-4.4 deposits and 15 from currently unphased deposits.

There are few iron objects from the assemblage which are dateable by form or otherwise notable. Deposit 20378 (Ditch DJ), assigned to Period 5, contained a latch lifter, a simple form of key (Manning 1982), in use in the late Iron Age and Roman periods. Deposit 20165 contained Ra. 202, a knife of Manning Type 12a, a form datable to the Roman period (*ibid.*).

### **Copper alloy**

A total of two items of copper alloy were recorded, recovered from two deposits. Ra. 210, a brooch, was recovered from deposits assigned to the transitional period (Ditch DD, deposit 20265, Period 4.3–4.4). Ra. 221 was recovered from demolition deposit 20556, assigned to Periods 7/8. Ra. 221 is similar in form and decoration to tweezers found in Cadbury/Congresbury, Somerset (Eckardt and Crummy 2008, 156, Fig. 99, no. 1146), dated to the late Roman period. All items of copper alloy have been recommended for conservation and illustration.

**Lead**

A total of two items of lead were recorded, both from deposits provisionally dated to Period 5.2. Ra. 209 from Ditch DC, deposit 20262, consists of a lead pot repair with a surviving body sherd of pottery remaining within the mend. This artefact is recommended for cleaning and stabilisation.

**Copper alloy coins**

A total of two coins, both copper alloy issues of Roman date were recorded. The recovered coins have been x-rayed to assist with identification. Both items are currently stored in sealable plastic boxes with desiccating silica gel. Ra. 228 is currently considered to be stable, although Ra. 208 is displaying signs of active corrosion.

Table 9.1 Coin catalogue

Material	Area	Period	Context	Ra.	Type	Classification	Type	X-ray	quantity	Further requirements
<i>Cu. al.</i>	Villa	5.1-5.3	20252	208	Coin	As of Marcus Aurelius, 153-4 AD.	RIC vol. III, no. 1317, pg. 184	XRK15/107	1	conservation, illustration
<i>Cu. al.</i>	Villa	7/8	20556	228	Coin	Radiate of Tetricus II, 270-3 AD.	RIC. Vol Vb, no. 272, pg. 424.	XRK15/107	1	conservation, illustration

Table 9.2 Metal artefacts catalogue

Material	Area	Period	Context	Ra.	Type	Classification	X-ray	quantity	Further requirements
<i>Cu. al.</i>	Villa	4.3-4.4	20265	210	Brooch	T shaped	XRK15/107	1	conservation, illustration
<i>Cu. al.</i>	Villa	7/8	20556	221	Tweezers		XRK15/107	1	conservation, illustration
<i>Fe.</i>	Villa	u	20001		Nail, square sectioned shank, flat head		XRK15/107	1	
<i>Fe.</i>	Villa	u	20001		Nails		XRK15/107	3	
<i>Fe.</i>	Villa	5.1-5.3	20165	202	Knife or cleaver	Manning type 12a (knife) or 2a (cleaver)	XRK15/110	1	conservation, illustration
<i>Fe.</i>	Villa	5.1-5.3	20165	203	Object		XRK15/110	1	
<i>Fe.</i>	Villa	5.1-5.3	20165	201	Object		XRK15/111	2	
<i>Fe.</i>	Villa	5.1-5.3	20165		10 x nails (7 with square sectioned shanks, 2 with circular sectioned shanks and one shank undetermined), 3 pieces of possible industrial waste, one unidentified		XRK15/108	14	
<i>Fe.</i>	Villa	5.1-5.3	20165		5 x nails		XRK15/111	5	
<i>Fe.</i>	Villa	5.1-5.3	20165		Square sectioned nail with flat head		XRK15/111	1	

Material	Area	Period	Context	Ra.	Type	Classification	X-ray	quantity	Further requirements
Fe.	Villa	8	20179		Probable middle section of nail shank, breaks to both ends		XRK15/110	1	
Fe.	Villa	4.3-4.4	20192		Nail		XRK15/110	1	
Fe.	Villa	5.1-5.3	20198		Strip		XRK15/107	1	
Fe.	Villa	4.3-4.4	20223	214	Object - possible nail		XRK15/109	1	
Fe.	Villa	u	20239		Nail, square sectioned shank, flat head		XRK15/110	1	
Fe.	Villa	5.1-5.3	20240	213	nail with head missing		XRK15/110	1	
Fe.	Villa	8	20241		2x nails		XRK15/110	2	
Fe.	Villa	u	20257		6x nails. 5 square sectioned. One rectangular (flatter in section than the rest)		XRK15/115	6	
Fe.	Villa	5.1-5.3	20262		Nail		XRK15/110	1	
Fe.	Villa	5.1-5.3	20266		Strip, rectangular in plan and section		XRK15/109	1	
Fe.	Villa	8	20283		Nail		XRK15/108	1	
Fe.	Villa	7	20321		nail		XRK15/110	1	
Fe.	Villa	5.1-5.3	20334		Nails		XRK15/112	3	
Fe.	Villa	5.1-5.3	20363		Nail		XRK15/107	1	
Fe.	Villa	5.1-5.3	20364		Small hobnail or tack. Rounded head		XRK15/107	1	
Fe.	Villa	5.1-5.3	20378		Latch lifter		XRK15/111	1	Active corrosion in parts. Conservation and cleaning, illustration
Fe.	Villa	5.1-5.3	20395		2x Nails		XRK15/110	2	
Fe.	Villa	8	20401		Nail		XRK15/107	1	
Fe.	Villa	8	20405		Nail		XRK15/107	1	

Material	Area	Period	Context	Ra.	Type	Classification	X-ray	quantity	Further requirements
Fe.	Villa	8	20412		Strip, rectangular in plan with breaks at each end. Square sectioned bar, tapering to each end terminating in probable breaks. C. 90 degree bend at one end and curve to middle.		XRK15/110	2	
Fe.	Villa	u	20445		Nail, square sectioned shank, flat head		XRK15/109	1	
Fe.	Villa	8	20451		Objects, possibly nails		XRK15/111	11	
Fe.	Villa	5.1-5.3	20470		Nail		XRK15/107	1	
Fe.	Villa	7/8	20556		2x Nails			2	
Fe.	Villa	7/8	20556		17 x nails, mostly complete and rectangular in section with heads. 1 x strip, rectangular in plan and section 135 degree bend (probably modern damage). Two unidentified lumps (x-ray inconclusive). 1 x iron lump with potential.		XRK15/112	22	
Fe.	Villa	7/8	20556		13x nails, square sectioned. One bent		XRK15/113	13	
Fe.	Villa	7/8	20556		28 x nails, mostly complete and with square sectioned shanks and flat heads. 1 x nail has large, rounded head. 2 x strips, rectangular in plan and section, one curving. 2 x inconclusive fragments		XRK15/109	32	
Fe.	Villa	7/8	20556		Nails		XRK15/107	2	
Fe.	Villa	7/8	20556		Nail		XRK15/107	1	
Fe.	Villa	8	20579		Nails		XRK15/108	14	
Fe.	Villa	5.1-5.3	20593		Large nail with heavy corrosion. Square sectioned shank		XRK15/107	1	

Material	Area	Period	Context	Ra.	Type	Classification	X-ray	quantity	Further requirements
Fe.	Villa	7	20599		Nail, corroded but probably complete. Square sectioned shaft and flat head			1	
Fe.	Villa	u	20618		Nail, square sectioned shank, flat head			1	
Fe.	Villa	u	20626		Rod, circular section, possible nail shaft		XRK15/107	1	
Fe.	Villa	5.1-5.3	20628	227	rectangular in plan section and broadly rectangular in plan, tapering in thickness and width to narrowed, rounded end. Break to top. Possible tip of file		XRK15/109	1	
Fe.	Villa	5.1-5.3	20631		Possible waste?		XRK15/109	1	
Fe.	Villa	5.1-5.3	20656	246	Hobnails		XRK15/113	21	
Fe.	Villa	5.1-5.3	20656		Nail, square sectioned shank, flat head		XRK15/109	1	
Fe.	Villa	5.1-5.3	20656	224	Object - poss. brooch, buckle?		XRK15/107	1	
Fe.	Villa	u	20663		Probable middle section of nail shank, breaks to both ends		XRK15/110	1	
Fe.	Villa	u	20673		Hobnails, 1 x nail		XRK15/107	23	
Fe.	Villa	4.3-4.4	20733		Square sectioned bar with circular sectioned, narrowed bar extending from one end. Ed suggests needle - more like 'fabricator' ?		XRK15/107	1	
Fe.	Villa	5.1-5.3	20745	258	hobnail		XRK15/112	1	
Fe.		NA	U/S		Bar/strip		XRK15/112	1	
Fe.		NA	U/S		Objects		XRK15/113	5	
Pb.	Villa	5.1-5.3	20262	209	Lead pot repair			1	
Pb.	Villa	5.2	20611	229	Object			1	



## APPENDIX 10: ARCHAEOLOGICAL RESIDUES BY DR T.P. YOUNG

### Summary

This assemblage provides a sparse record of ironworking (blacksmithing) and of the use of coal, which may not have entirely been for metallurgical purposes (and which may, at least in part, be intrusive from overlying post-medieval contexts). The smithing evidence points to blacksmithing (the end use of iron to fashion and repair artefacts), rather than any part of the process of iron production.

Small quantities of fuel ash slag in mainly prehistoric contexts is probably not associated with metallurgical activities. One pit [20802] produced a quantity of vesicular lava that may have been a decomposed fragment of imported quern, an identification supported by macroscopic examination of associated stone (Appendix 8).

### Methods

The material described here derives from two areas excavated on the route of the Cannington bypass, part of the Hinkley Power Station infrastructure.

All materials were examined visually with a low-powered binocular microscope where required. As an evaluation, the materials were not subjected to any high-magnification optical inspection, not to any form of instrumental analysis.

The examined materials are listed in Table 10.1.

### Results

#### *Description of residues*

The submitted materials amounted to approximately 890g of metallurgical residues.

#### *Smithing slags*

There was a total of 710g of slag identified as smithing hearth cake (SHC). Six items were identified:

20107 (unphased pit 20106): 58g, SHC fragment

20055 (Ditch L, Period 4.3–4.4): 46g, SHC fragment

20199 (Ditch W, Period 5.1–5.3): 69g, SHC fragment

20239 (unphased robber trench 20341, Building A): 97g, small 50x50x30mm SHC

20656 (Ditch DN, Period 5.1–5.3): 160g, dense SHC resting on slag sheet

20334 Ditch W, Period 5.1–5.3): 280g, 161g, small SHC, 55x65x45mm 119g, fragmented SHC

The small SHCs are indicative of blacksmithing. They are typically dense, rather deep in shape and of a pale grey colour. They are similar in morphology to those from the assemblage from Uffington (Young 2015b).

In addition to the pieces indicative of being from SHCs, there was a further 80g of dense iron slag and 84g of lining slag, that are also likely to have been produced during smithing. The hearth lining itself was only represented by 19g of material.

#### *Smithing microresidues*

Very small quantities of hammerscale were recovered. No assemblages were sufficiently rich to give firm indication of direct input of smithing residue to the context. In such small amounts, issues of residuality and intrusion must be considered.

#### *Fuel Ash Slag*

Very small particles of fuel ash slags (FAS; pale glassy vesicular materials of very low density) were seen in the sieved samples. They occurred particularly in Area 1 in contexts of probable prehistoric age. FAS may be produced in a variety of settings – including with cereal drying kilns and in domestic hearths (Young 2010, 2015a).

#### *Coal and coke*

Small particles of coal and partially-burnt coal (coke) occurred widely in low density. Larger pieces of coal/coke were restricted to deposits of Periods 7 and 8.

Use of coal during the Roman period is well established both for metallurgical and other purposes, so the fuel need not necessarily be uniquely associated with the blacksmithing activity. The presence of larger pieces of coal and coke in deposits of Periods 7 and 8 also raises issues of intrusion of smaller particles into underlying deposits.

#### *Other*

The only significant 'other' material was an assemblage of fragments (162g) from (20801) (a fill of pit [20802]) bagged as 'fuel ash'. These pieces are rather decomposed fragments of a siliceous vesicular lava. They bear phenocrysts of quartz, biotite and an elongate dark mineral, possibly an amphibole. The decomposition has resulted in breakage and spalling of the fragments.

Such materials are commonly seen in Roman and post-Roman contexts as fragments of imported lava querns. In the context of SW England, it is just possible, although less likely, that this lava is from one of the 'Exeter lavas', that crop out in the area around Exeter and to its NE (but there are no potential sources close to Cannington).

**Distribution of residues**

The residues are not associated with metallurgical features and presumably represent either residual material or a low level of casual disposal.

In Area 1, residues were restricted to small particles of fuel ash slag, coal and coke (burnt coal). The occurrence of coal in features of prehistoric age would not be expected, but intrusion of such small particles is possible.

In Area 2, there is a general low background level of both ironworking residues and coal/coke. No assemblages contained significant amounts of material, indicating that the focus of activity was probably outside the investigated area (or in a location destroyed by the later quarrying). Most of the macroscopic metallurgical slags (except for those from Ditch L (20055) and Pit 20106 (20107)) occurred in deposits attributed to Period 5.1–5.3.

**Interpretation**

The amount of archaeometallurgical waste recovered from the site is very low, making it unlikely that the smithing activity was conducted within the preserved areas of Roman archaeology. The material is sufficiently concentrated within deposits of Periods 5.1–5.3 to be confident that blacksmithing was conducted at/near Area 2 in the Roman period.

**Discussion**

The limited archaeometallurgical residue from the site implies the existence of a smithy nearby, but not within the site limits.

**Further work**

The material would be unlikely to produce further useful information from additional analysis, so none is recommended. A sparse collection of material found with no direct association to metalworking structures is of limited value; retention of these residues with the site archive is of low priority.

Table 10.1: summary catalogue.

C#	S#	Label	Sample wt	Item wt	Item no	Notes
<b>SPE1</b>						
10032	100	coal	<1	<1	2	coal
10033	101	coal	<1	<1	4	coal
10033	101	hammerscale	<1	<1	4	3 fragments probably burnt bone, one is probably slate.
10033	101	slag	<1	<1	13	11 rounded blebs and fragments of FAS, 2 fragments of sandstone, possibly partially melted
10048	113	coal	<1	<1	5	coal
10057	115	industrial waste	<1	<1	5	2 pieces probably coke, 3 pieces probably glassy lining slag
10100	103	industrial waste	<1	<1	4	pale vesicular siliceous material - FAS or bloated sandstone?
10178	107	industrial waste	<1	<1	(1)	fragmented piece of dark glassy vesicular material - probably degraded FAS
10214	111	industrial waste	<1	<1	5	coal and coke
10262	114	magnetic res.	<1	<1	2	small irregular granules - probably slag
<b>SPE2</b>						
20001		industrial waste	5	5	1	coke

C#	S#	Label	Sample wt	Item wt	Item no	Notes
20001		coal	<1	<1	1	coal
20001		coal	<1	<1	1	coal
20001		slag	25	25	1	worn nub of dense iron ore with quartz inclusions (natural)
20055		slag	46	46	1	fragment of possible proto SHC- heavily fragmented
20107		slag	72	58	1	dense, almost burr-like thin sheet, probably part of a very thin SHC
				12	1	broken small rounded nub, with a well-fluxed dense lobe on one side.
20134	201	industrial waste	<1	<1	12	coal and coke, with one fuel ash slag/lining slag fragment
20165	203	industrial waste	5	5	1	irregular bleb of gravelly lining slag
20199	204	coal	<1	<1	3	coal
20199	204	slag	74	69	1	fragment of dense SHC, dimpled top and finely dimpled base. Dense crust with tubular vesicles
				5	11	small debris of stones, pottery fragment and burnt organic material (degraded charcoal?)
20239		slag	97	96	1	50x50x30mm, small irregular probable SHC, damaged on two steep faces - but probably almost complete. Wispy top and dimpled base, grey vesicular slag internally.
20331		slag	16	16	1	gravelly slag fragment
20334		slag	280	161	1	most or all of small SHC, 55x65,45mm. Vesicular, weathered, fuel clasts present but ,any ambiguous, at least some charcoal, mass appears to be made of merged denser dimpled sheets, rather

C#	S#	Label	Sample wt	Item wt	Item no	Notes
						than being one neat bowl
				119	8	fragmented SHC, at least one fragment appears to show charcoal mould
20364		industrial waste	2	2	1	bleb of glassy lining slag
20365	206	coal	<1	<1	9	2 pieces of coal, 2 probable slag pieces, the rest stone
20380		coal	8	8	3	coal
20398	209	coal	<1		10	8 pieces of coal, 2 pieces may be glassy slag
20398	209	magnetic residue	7	7	assm	assemblage of fragments of rusty shale, some with spheroidal iron oxide crusts
20416		slag	5	4	1	small fragment of grey glassy lining slag
20455		industrial waste	<1	<1	4	coke
20486	213	industrial waste	<1	<1	2	sandy lining slag
20556		slag	24	24	1	small angular fragment of slag with large (or at least medium large) charcoal moulds. Slag coarsely crystalline with equant grains
20579		industrial waste	2	2	3	coke
20579		coal	24	24	6	coal

C#	S#	Label	Sample wt	Item wt	Item no	Notes
20601	234	coal	<1	<1	1	coal
20603	235	industrial waste	<1	<1	1	coarse FHS
20603	235	magnetic residue	<1	<1	6	several pieces of thin slag, probably scale, one stone, one charcoal fragment
20610		coal	3	3	2	coal
20610		slag	9	9	1	irregular fragment of sandy lining slag, vesicular
20656		industrial waste	16	16	1	glazed mass of siliceous fragments - unclear if gravel or a hearth wall. Glaze is clear green on pebbles, but slag elsewhere is dark and sandy
20656	246	industrial waste	<1	<1	6	coked organic matter, some of which appear to be formed from ?grass rather than coal
20656		slag	266	160	1	small dense SHC resting on sheet of burr like material, perhaps from a very shallow hearth? Top shows probable charcoal impressions
				46	1	concretion on sheet iron object
				14	2	concretions
				44	2	blebby masses of lining slag. Fuel ash slag, upper surface of each slightly dark glaze, otherwise pale, weathered vesicular.
20665	248	slag	2	2	1	fragment of thin slag sheet
				<1	1	bleb of lining slag
				<1	1	tiny wisp of dense slag

C#	S#	Label	Sample wt	Item wt	Item no	Notes
20667	249	slag	<1	<1	1	maroon gravelly slag fragment
20672	251	coal	<1	<1	3	coal
20672	251	magnetic residue	<1	<1	4	1 rusty rod, possibly corroded iron, 3 pieces of clinkery slag, one with FHS attached
20673			3	3	1	fragment of blebby slag with tubular vesicles
20683		industrial waste	<1	<1	1	large angular fragment of highly-bloated ceramic or perhaps shale
20687	254	metal residue	<1	<1	3	1 piece of coal and two pieces of dark, probably clinkery slag
20696	253	slag	2	2	4	two fragments of glazed gravelly material, two fragments of sandy slag
20713	252	magnetic residue	<1	<1	7	possible FHS x2, 1 stone, 1 hollow slag sphere (SHS?), several rusty sheets of uncertain nature.
20716	255	magnetic residue	<1	<1	2	two dense particles, one possibly slag sphere, the other an angular fragment
20733		slag	39	39	1	rounded nub of slag, smooth top, dimpled base, slightly irregular, maroon surfaced
20734	257	industrial waste	<1	<1	21	mostly coal and coke, one piece of burnt bone
20745	258	hammerscale	<1	<1	1	single spheroid 3mm diameter - probably SHS, but might just be slag droplet



C#	S#	Label	Sample wt	Item wt	Item no	Notes
20801	260	fuel ash	162	162	assm	vesicular rock with quartz phenocrysts. Probably fragments from an imported lava quern, but derivation from one of the quartz-bearing Exeter lavas is also possible.
20801		slag	4	4	1	sandy lining slag fragment
20838		industrial waste	19	19	1	piece of slagged sandy lining, broken in two. Traces of grass temper. Slag coating is dark and sandy.

Table 10.2: distribution of residues by class and context. FAS = fuel ash slag, conc. = concretion.  
Presence of class in sieved samples is indicated by 'y'.

C #	context notes	period	SHC	dense iron slag	scale	lining slag	lining	FAS	coal	coke	lava	conc.
site 1												
10100	fill of p/hole [10099]	1						y				
10178	secondary fill of pit [10177]	1						y				
10032	fill of pit [10031]	2							y			
10033	fill of pit [10031]	2						y	y			
10048	fill of ditch [10045]	2							y			
10057	fill of terminus [10056]	2						y		y		
10214	charcoal rich fill of pit [10192]	2							y	y		
10262	fill of pit [10263]	2						y				
site 2												
20455	fill of p/hole [20454]	1								y		
20107	fill of pit [20106]	1	58	12								
20380	fill of pit [20379]	1							y			
20672	fill of pit [20671]	1			y	y			y			
20687	fill of pit [20688]	1				y			y			
20713	fill of p/hole [20712]	1			y							
20716	fill of pit [20717]	1			y							
20801	fill of pit [20802]	1					4				162	
20838	fill of pit [20839]	1						19				
20134	fill of ditch [20133]	4						y	y	y		
20416	fill of pit [20415]	4					4					
20601	oven backfill [20600]	4							y			
20603	oven backfill/lining [20600]	4				y						
20055	fill of ditch recut [20054]	5	46									
20199	fill of ditch [20164]	5	69						y			
20398	burnt deposit in hypocaust	5				y			y			
20696	fill of p/hole [20697]	5				y		y				
20734	fill of grave [20736]	5							y	y		
20745	fill of grave [20748]	5			y							
20165	fill of pit [20304]	5.2					5					
20239	Backfill within robber cut [20341]	5.2	97									
20364	fill of ditch [20366]	5.2					2					
20365	fill of ditch [20366]	5.2				y			y			
20486	dark deposits inside the drain	5.2				y						
20656	fill of ditch [20657]	5.2	160				44			y		60
20665	fill of cut [20664]	5.2		2		y						
20673	destruction debris	5.2		3								
20683	fill of pit [20682]	5.2						y				
20733	fill of ditch [20732]	5.2		39								
20331	fill of ditch [20332]	5.3					16					
20334	fill of ditch [20336]	5.3	280									
20610	s building s corridor wall; rubble	5.3					9		3			
20667	fill of pit [20666]	5.3				y						
20556	demolition overlying S building	5.3/6/7		24								
20001	subsoil	7 or 8							y		5	
20579	quarry fill	7									2	
20579	quarry fill	7							24			

## APPENDIX 11: HUMAN REMAINS BY SHARON CLOUGH

Four inhumations were recovered from SPE 2. The skeletal remains were all neonates in earth-cut graves dating to Period 5.1–5.3 Roman. The graves lay inside the gallery of Building C (dating to 2nd–4th century) apparently cut up against the wall foundation. They may have been contemporary with the construction of this building, or have been inserted later. The skeletal remains had no pathological lesions.

### Methodology

All skeletal material was examined and recorded in accordance with national guidelines (Hillson 1996; Brickley and McKinley 2004; Mays *et al.* 2004).

### Biological Age Assessment

Aging is a highly variable process whose causative factors and biological mechanics are not fully understood (Cox 2000). In addition, ‘biological age’ does not always equate to ‘chronological age’ or ‘social age’ (Lewis 2007) of which adulthood is primarily a culturally defined concept (Cox 2000, Lewis 2007). With this in mind, a multi-method approach was taken (Table 11.1) to provide a range of estimates. Then each indicator was weighted on reliability. Where only one (less reliable) method was available, then this individual was determined to be only adult or subadult. As all the skeletons were subadult these techniques only are listed.

Table 11.1: Macroscopic techniques used

Epiphyseal fusion – McKern and Stewart 1957 and Owings Webb and Suchey 1985
Dental eruption – Moorees <i>et al.</i> 1963
Long bone length (subadults) – Maresh 1970, Gowland and Chamberlain (2002), Jeanty 1983, Scheuer <i>et al.</i> (1980)

### Sex Estimation

No attempt was made to sex subadults defined as individuals below 20 years of age for whom there are no accepted methods (Cox 2000).

### Skeletal condition and completeness

The completeness of each skeleton was classified as a percentage of the whole and divided into four groups, 0–25% 25–50% 50–75% and 75+%. The condition of the bone surface of each skeleton was recorded in detail with reference to different anatomical areas (skull, arms, hands, legs and feet) after McKinley (2004, 16) and given an overall summary score.

## **Metrics**

Measurements of long bones were used to estimate age in the subadult remains.

## **Nonmetric**

The presence or absence of frequently recorded non-metrical cranial and post-cranial traits were scored (Berry and Berry 1967; Schwartz 1995; Hillson 1996).

## **Dental**

As the remains were neonate, dentition was recorded for development only.

## **Pathology**

Skeletal pathology and/or bony abnormality was described and differential diagnoses explored with reference to standard texts (Ortner and Putschar 1981; Resnick 1995; Aufderheide and Rodriguez-Martin 1998). Where it was considered appropriate the extent and range of pathology was explored by calculating crude prevalence rates (the number of individuals with a condition out of the total number of individuals observed) and true prevalence rates (the number of elements or teeth with a particular condition out of the number of elements or teeth observed).

## **Results**

The inhumations are discussed as individual burials.

### *SK 20706 (Fig. 17)*

This individual was estimated to have died at 36–44 weeks gestation (normal gestation is 38–42 weeks), or at or around the time of birth. This was based on femoral bone length (Gowland and Chamberlain 2002) and places it in the neonate category. The cranium, mandible, arms, legs and torso were present for analysis, over 75% of the skeleton and the bone was in excellent condition, grade 1. The bone did not display any features suggestive of pathology, which is not unusual for a neonate.

### *SK 20735 (Fig. 19)*

This individual had all parts of the skeleton represented, apart from left lower leg, left hand and facial area, 75% was considered present with the bone surface in excellent condition, grade 1. The age at death was estimated using the right humerus to 38–46 weeks gestation (Gowland and Chamberlain 2002) and tooth development to the same age (Moorees *et al.* 1963). There were no pathological lesions or other indicators of any kind on the bones present.

### *SK 20746 (Fig. 18)*

This individual had 50–75% of the skeleton available for examination which comprised most of the upper half and left femur. The bone surface had slight and patchy erosion, grade 1, all the bones were

fragmented. The left femur was used for age estimation 36–44 weeks (Gowland and Chamberlain 2002). This individual lay adjacent to SK 20747.

#### *SK 20747 (Fig. 19)*

This skeleton was also of a neonate aged to between 38–48 weeks. The skull was very fragmented with the facial area and maxilla and mandible absent. Fragmentation continued across the post-cranial skeleton and the ends of the long bones had suffered post mortem damage. The loose teeth aged it to neonate. The long bone lengths (tibia, humerus and clavicle) were estimated to be 38–48 weeks (Gowland and Chamberlain 2002, Scheuer *et al.* 1980).

### **Conclusion**

The remains represented four neonate burials. Neonate (also called perinate ‘at around the time of birth’) is defined as up to the age of one month (Lewis 2007). Average gestation is 38 weeks, though commonly falls two weeks either side of this (36–42 weeks). Therefore these skeletons are likely to have been full term babies that lived a short time after birth or were still-born.

It has been frequently recognised (Lewis 2007, 22–23) that children are treated differently regarding burial location, and in the Roman period are often found in association with buildings (Philpott 1991, 97). It is therefore not unusual to find these burials in this context. The neonates have no pathology or other distinguishing skeletal characteristics, which is to be expected.

### **Skeleton Catalogue**

Skeleton Number: 20706

Sex: N/A

Age: Neonate 36-44 weeks

Long bone length: Right femur 73 mm

Completeness: 75+%

Condition: (McKinley 2004) grade 1

Pathologies: none

Dental: 11 unerupted

Skeleton Number: 20735

Sex: N/A

Age: Neonate 38-46 weeks

Long bone length: right humerus 66.7 mm

Completeness: 75+%

Condition: (McKinley 2004) grade 1

Pathologies: None

Dental: 6 unerupted

Skeleton Number: 20746

Sex: N/A

Age: Neonate 36-44 weeks

Long bone length: Left femur 75.7 mm

Completeness: 50-75%

Condition: (McKinley 2004) grade 1

Pathologies: none

Dental: 2 unerupted

Skeleton Number: 20747

Sex: N/A

Age: Neonate 38-48 weeks

Long bone length: Left tibia 69.4 mm, Right tibia 68.4mm, Left humerus 67.9 mm

Completeness: 75+%

Condition: (McKinley 2004) grade 1

Pathologies: none

Dental: 5 unerupted

## APPENDIX 12: ANIMAL BONES FROM SPE 2 BY PHILIP L. ARMITAGE

This report summarises the results of an assessment of the 1,327 hand-collected and sieved animal bone (5 boxes) from the Cannington Bypass SPE2 site.

### *Methodology*

Bone elements/fragments that had been hand collected from each context were assigned to taxa using the author's modern comparative osteological collections and with reference to published works (see Appendix) and recorded employing the spreadsheet format designed by Umberto Albarella - as recommended by English Heritage *Animal Bones and Archaeology. Guidelines for Best Practice* (2014: 20). Included on the spreadsheet were indications as to the numbers of ageable and measureable specimens. Wherever possible, sheep and goat bones and teeth were differentiated following Boessneck et al's (1964) and Payne's (1985) criteria. Although no positive identifications of goat were made and all elements with diagnostic features proved to be sheep, it remained a possibility there may have been a few unrecognised goats among the broken elements. All *ovicaprid* material in this report is therefore referenced as sheep/goat, except where specific mention is made to positively identified sheep elements. Associated/articulating bone groups (ABGs) were documented to species and anatomy level. Microvertebrate remains from the sieved samples were also identified to both taxon and anatomy level and recorded independently from hand collected material. Owing to the absence of diagnostic features in the brittle, highly fragmented calcined bone (57 sieved samples) this burnt material could not be identified as to taxa/anatomies and has therefore been omitted from the results of the assessment presented here. It is suggested however that the bulk – if not all - this material derives from food scraps that had been accidentally or purposely dropped/thrown into cooking fires (?).

### *Numbers of identified bone elements/fragments (NISP) and taxa/species represented*

Table 12.1 provides a summary of the identified bone by taxa and period. Overall, the following numbers of species are represented: 14 mammalian, 9 bird, 3 fish, 1 amphibian and 1 reptile. Microsoft Excel spreadsheets showing the complete sets of NISP data for each of the species by period/context are held in the site archive. Associated/articulating bone groups (ABGs) are summarised in Table 12.2. Possible microfaunal ABGs remain to be verified by more detailed analyses – but are tentatively catalogued in the site archival spreadsheet.

### *Condition and taphonomy of the bone*

Apart from the relatively few weathered/eroded/corroded exceptions referenced in Table 12.3, the overall state of preservation of the SPE2 animal teeth and bones is assessed as moderate to good. Post-depositional disturbances are reflected in the degree of fragmentation noted in the skeletal elements from many of the contexts examined. The relatively high frequencies of detached/loose

cattle, sheep, pig, and horse teeth (Table 12.4) are an especially notable manifestation of such damage. Ditch W fills in particular yielded high frequencies of loose cattle (20.2%) and sheep/goat (24%) teeth. Several fragmented cattle jawbones from (20194) fill of Ditch W also provided further examples of depositional damage; as do fragmented sheep skulls from (20728) fill of pit [20729]. Post-depositional abrasion caused by hydrodynamic action on small mammal bone in water and sediment (silt/clay) as documented by Fernández – Jalvo & Andrews (2003: 159 - 160) is well illustrated in the bank vole jawbone from (20549) <222> Roman drain fill [Building B].

Of special note is the presence of unburnt animal bones in samples collected from “burnt deposits”. For instance, whilst “burnt deposit” (20398) in the hypocaust (Building A) yielded some calcined bone fragments, the microfaunal remains from this same deposit showed no evidence of burning. “Burnt demolition debris” (20626) (Building C) likewise yielded some calcined bone fragments but also unburnt microfaunal bones.

There is only very limited evidence of butchery in the form of chopped bones and those with knife cutting marks (Table 12.7). No obvious signs of dog gnawing were found.

## DESCRIPTIONS OF THE ASSEMBLAGES

### **Period 4.3 - 4.4 Late Iron Age (300 BC - AD50) - LIA/Roman transitional (10 BC - AD 70)**

The cattle, sheep/goat and pig bones represent remains of animals bred, slaughtered/butchered and consumed locally. Based on relative percentage frequencies calculated from the NISP data (Table 12.8) the local livestock economy appears to have been based on sheep and cattle in almost equal proportions, followed by pig. As noted by Hambleton (1998: 78) this pattern is common to the majority of Iron Age sites throughout Britain. Microfaunal remains from curvilinear ditch A provide information on the vegetation surrounding the site; based on favoured habitats of the different species represented (see Corbet 1977: 50; Evans 1977: 189; and Flowerdew 1993: 25). This is illustrated with reference to the presence of common and pygmy shrews together with field vole, which indicate thick vegetation cover (e.g. rough ungrazed grassland) in the vicinity.

### **Period 5.1 - 5.3 Early Roman (AD 50 - 150) - Late Roman (AD 250 - 425)**

As in the preceding period (above) the cattle, sheep/goat and pig bones represent remains of animals bred, slaughtered/butchered and consumed locally. Based on relative percentage frequencies calculated from the NISP data (Table 12.8) the local livestock economy appears to have been based on sheep and cattle in almost equal proportions, followed by pig. The relatively low proportion of pig seems at variance with other Roman sites, where the frequencies of this animal tend to be noticeably higher (King 1978 and 1984; Hambleton 1998: 79). Horses seem to have played an important part at



the site in this period and the evidence of the presence of at least one foal may suggest local equine breeding - or importation of replacement stock.

Whilst the presence of frogs and grass snake among the microfaunal remains in the sieved residues are not unexpected given the existence at the site of ditches that probably provided suitable wet habitat areas for these animals (see van Wijngaarden-Bakker and Troostheide 2003 for habitats of grass snake), the occurrence of bones of small wild mammals, birds and amphibians in the drain fills of Building B requires more detailed consideration as to the possible source of these remains. The following scenario may be proposed: the bones derive from decayed/disaggregated owl pellets that had been washed into the drain and where hydrodynamic action further dispersed the bones in the drain sediment. Given Building B was a barn or cattle byre, the possibility of a roosting owl in the structure producing pellets would seem highly plausible. However further detailed analysis of the microfaunal material will be required to confirm or refute the owl pellet scenario.

Table 12.1: Summary counts of the identified animal bone elements/fragments (NISP). H = hand collected; S = sieved samples

Period	4.3 - 4.4	4.3 - 4.4	5.1 - 5.3	5.1 - 5.3	8	8	U	U	
Number of contexts	36	1	28	17	17	3	15	3	
	H	S	H	S	H	S	H	S	TOTALS
<i>Mammals:</i>									
horse <i>Equus caballus</i> (domestic)	3		29	2	9		3		
cattle <i>Bos</i> (domestic)	101		152	2	76	1	40		
sheep/goat <i>Ovis/Capra</i> (domestic)	114	2	172	13	77	2	163		
pig <i>Sus</i> (domestic)	43	2	25		9	1	9		
dog <i>Canis</i> (domestic)			22	1			54		
cat <i>Felis</i> (domestic)			31						
roe deer <i>Capreolus capreolus</i>			1						
brown hare <i>Lepus capensis</i>							2		
house mouse <i>Mus musculus</i>			2	10			1		
wood mouse <i>Apodemus sylvaticus</i>		1		3					
mouse <i>Mus/Apodemus</i> sp.				8					
field vole <i>Microtus agrestis</i>		2	1	4			1	1	
bank vole <i>Clethrionomys glareolus</i>				2					
vole (sp.indet.)		3		1					
common shrew <i>Sorex araneus</i>		5		4					
pygmy shrew <i>Sorex minutus</i>		1		1					
small mammal				8		1		3	
Subtotals	261	16	435	59	171	5	273	4	1224
<i>Birds:</i>									
domestic fowl <i>Gallus gallus</i> (domestic)			1	1	2		1		

Period Number of contexts	4.3 - 4.4 36 H	4.3 - 4.4 1 S	5.1 - 5.3 28 H	5.1 - 5.3 17 S	8 17 H	8 3 S	U 15 H	U 3 S	TOTALS
rock dove/domestic pigeon <i>Columba livia</i> /domestic mallard/domestic duck <i>Anas platyrhynchos</i> /domestic carrion crow <i>Corvus corone</i> jackdaw <i>Corvus monedula</i> magpie <i>Pica pica</i> songthrush <i>Turdus ericetorum</i> thrush <i>Turdus</i> sp. cf.house sparrow <i>Passer domesticus</i> indet.small wild birds			1  1   1 3   16	  1 1     19			1       3 2		
Subtotals	0	0	7	19	2	0	3	5	36
<i>Fish:</i> plaice <i>Pleuronectes platessa</i> plaice/flounder <i>Pleuronectes platessa</i> / <i>Platichthys flesus</i> freshwater eel <i>Anguilla anguilla</i> <i>Salmonid</i> salmon/trout				1 1 1 1		1			
Subtotals	0	0	0	4	0	1	0	0	5
<i>Amphibian:</i> Common frog <i>Rana temporaria</i> Anura (frog/toad)		2 5		43 10					
Subtotals	0	7	0	53	0	0	0	0	60
<i>Reptile:</i> grass snake <i>Natrix natrix</i>									
	0	0	0	2	0	0	0	0	2

<b>Period</b>	<b>4.3 - 4.4</b>	<b>4.3 - 4.4</b>	<b>5.1 - 5.3</b>	<b>5.1 - 5.3</b>	<b>8</b>	<b>8</b>	<b>U</b>	<b>U</b>	
<b>Number of contexts</b>	<b>36</b>	<b>1</b>	<b>28</b>	<b>17</b>	<b>17</b>	<b>3</b>	<b>15</b>	<b>3</b>	
	<b>H</b>	<b>S</b>	<b>H</b>	<b>S</b>	<b>H</b>	<b>S</b>	<b>H</b>	<b>S</b>	<b>TOTALS</b>
<b>TOTALS</b>	261	23	442	137	173	6	276	9	1327

## Key to Periods:

4.3 - 4.4 = Late Iron Age (300 BC - AD50) - LIA/Roman transitional (10 BC - AD 70)

5.1 - 5.3 = Early Roman (AD 50 - 150) - Late Roman (AD 250 - 425)

8 = Post medieval (AD 1530 - 1900)

U = unknown date

Table 12.2: Associated/Articulating Bone Groups (ABGs). Hand collected bone

Area/Site Code	Context	Feature	Period	Context Description	Taxa	NISP	Anatomy & notes
SPE 2/ Villa	20238	Building A	5.1-5.3	Infill of hypocaust	cat	29	Part skeleton of an adult cat - no evidence of burning
SPE 2/ Villa	20363	Ditch DI	5.1-5.3	Fill of Ditch DI	dog	21	Partially skeleton of a young dog
SPE 2/ Villa	20364	Ditch DI	5.1-5.3	Fill of Ditch DI	horse	3	Lower fore foot/h hoof
SPE 2/ Villa	20365	Ditch DI	5.1-5.3	Fill of Ditch DI	horse	2	R & L (pair) humerus
SPE 2/ Villa	20659	Building C	5.1-5.3	Fill pit containing bones	sheep	49	Skull & partial post cranial skeleton of a sheep aged 2 to 3 years
SPE 2/ Villa	20572	Building A	u	demolition debris	dog	54	Partial skeletons of three puppies

Table 12.3: Weathered/leached/corroded bones. Hand collected bone.

Area/Site Code	Context	Feature	Period	Context Description	Taxa	NISP	Anatomy & notes
SPE 2/ Villa	20146		8	Fill of Quarry	sheep	1	radius - weathered/leached
SPE 2/ Villa	20198	Ditch W	5.1-5.3	Fill of Ditch W	pig	1	ulna - weathered
SPE 2/ Villa	20315	Ditch O	4.3-4.4	Fill of Ditch O	cattle	1	metapodial - very much leached/corroded
SPE 2/ Villa	20315	Ditch O	4.3-4.4	Fill of Ditch O	sheep	2	long bones - weathered
SPE 2/ Villa	20331	Ditch DH	5.1-5.3	Fill of Ditch DH	horse	1	hoof core - eroded
SPE 2/ Villa	20391	Ditch DC	5.1-5.3	Fill of Ditch DC	cattle	1	metacarpus - eroded
SPE 2/ Villa	20402		8	Fill of Quarry	horse	1	radius - weathered

Table 12.4: Percentage frequencies of loose cattle, sheep/goat, pig and horse teeth. Hand-collected.  
Key to periods: see Table 12.1

Period	4.3 - 4.4	5.1 - 5.3	8	U
cattle	13.9%	15.1%	21.0%	20.0%
sheep/goat	16.7%	23.2%	23.4%	20.9%
pig	32.6%	24.0%	44.4%	33.3%
horse	33.3%	41.4%	55.5%	33.3%

Table 12.5: Ageable bones (NISP). Hand collected teeth &amp; bones.

Period	4.3 - 4.4	5.1 - 5.3	8	U
cattle				
mandibles	2	3	3	
teeth		2	1	
bones	5	12	6	4
sheep/goat				
mandibles	7	6	2	4
teeth	2	4	4	8
bones	2	7	3	21
pig				
mandibles	4			
teeth	2			
bones	3		1	
horse				
mandibles	2	2		
teeth				1
bones	1	1		



Table 12.6: Measureable bones (a): Hand collected teeth &amp; bones

Period	4.3 - 4.4	5.1 - 5.3	8	U
cattle	4	10	4	3
sheep/goat	2	6	2	4
pig	1	1		
horse	1	2	1	2
(a) All elements (NISP mandibles, teeth & bones combined)				

Table 12.7: Evidence of butchery in the cattle, sheep/goat &amp; hare bones (NISP). Hand collected bones

Period	4.3 - 4.4	5.1 - 5.3	8	U
cattle				
chopped		2		
knife cut marks	1	4		
sheep/goat				
chopped				
knife cut marks				1
Hare				
chopped				1
knife cut marks				

Table 12.8: Percentage frequencies of the cattle, sheep/goat and pig remains based on NISP data.  
Hand collected bones

<b>4.3 - 4.4 = Late Iron Age (300 BC - AD50) - LIA/Roman transitional (10 BC - AD 70)</b>			
	cattle	sheep/goat	pig
Bones & teeth	39%	44%	17%
Omitting loose teeth	41%	45%	14%
<b>5.1 - 5.3 = Early Roman (AD 50 - 150) - Late Roman (AD 250 - 425)</b>			
	cattle	sheep/goat	pig
Bones & teeth	44%	49%	7%
Omitting loose teeth	46%	47%	7%

## APPENDIX 13: PLANT MACROFOSSILS AND CHARCOAL BY SARAH COBAIN

### Methodology

Following flotation (CA Technical Manual No 2), the residue was dried and sorted by eye, the floated material scanned and seeds identified using a low power stereo-microscope (Brunel MX1) at magnifications of x10 to x40. Identifications were carried out with reference to images and descriptions by Cappers *et al.* (2006), Neef *et al.* (2012), Berggren (1981) and Anderberg (1994). Nomenclature follows Stace (1997). A selection of charcoal fragments were fractured by hand to reveal the wood anatomy on radial, tangential and transverse planes. The pieces were then supported in a sand bath and identified under an epi-illuminating microscope (Brunel SP400) at magnifications from x40 to x400. Identifications were carried out with reference to images and descriptions by Gale and Cutler (2000) and Schoch *et al.* (2004) and Wheeler *et al.* (1989). Nomenclature of species follows Stace (1997).

### SPE1: Middle Bronze Age enclosure

A total of 16 bulk soil samples were retrieved from Period 3.2 Middle Bronze Age ditch, four pits and a posthole and nine undated pits and postholes. The aim of this assessment is to determine the type, preservation and quantity of plant macrofossil and charcoal remains recovered and use this to assess the potential of these remains to provide evidence of socio-economic activities being undertaken on the site (crop husbandry, diet, living conditions of communities, exploitation of woodlands for fuel, woodland management), and to infer the composition of the local flora and woodlands.

### Results

The results are presented in tabular form (Tables 13.1–13.4) and are discussed below. SS refers to the Soil Sample number. All remains are carbonised unless highlighted as modern.

#### *Period 3.2 Middle Bronze Age*

Fills 10048 (SS 113) and 10057 (SS 115) from Ditch A (cuts 10045 and 10056 respectively) contained small numbers of plant macrofossils and a small to moderate amount of charcoal. Fill 10048 (SS 113) contained well preserved emmer (*Triticum dicoccum*) and spelt wheat (*Triticum spelta*) cereal grains and moderately well preserved charcoal identified as alder/hazel (*Alnus glutinosa/Corylus avellana*) and oak (*Quercus*). Fill 10057 (SS 115) contained poorly preserved possible hazelnut shell and a culm node and poorly preserved charcoal identified as oak. The paucity of this material means no further plant macrofossil or charcoal work is recommended.

Pit 10263 (fill 10262; SS 114) contained a large and well preserved assemblage of plant macrofossils dominated by flax (*Linum usitatissimum*) seeds and a large assemblage of charred weed seeds including goosefoots (*Chenopodium*), medick/clover (*Medicago/Trifolium*), vetches/peas

(*Vicia/Lathyrus*) and ribwort plantain (*Plantago lanceolata*) (full range of species not identified and will need to be done during analysis stage). A small number of emmer/spelt wheat grains and spikelet forks were also identified. The charcoal was moderately abundant and moderately well preserved and identified as oak, alder/hazel and maple (*Acer campestre*). Further plant macrofossil and charcoal work is recommended.

Samples were recovered from fills 10032 (SS 100) and 10033 (SS 101) within pit 10031. The charred plant assemblages from the two fills were similar in composition, abundant and well preserved. Plant remains were dominated by emmer and spelt wheat cereal grains and included a single emmer/spelt wheat glume base and herbaceous taxa including vetches/peas, ribwort plantain, black-bindweed (*Fallopia convolvulus*) and a possible cherry species (*Prunus*) pip fragment. Charcoal was present in small quantities and variable in preservation; oak dominated with a single alder/hazel fragment recorded in fill 10033 and cherry species fragment in fill 10032. Further plant macrofossil and charcoal work is recommended on the samples from this pit. Given the similarity in the two assemblages, further plant macrofossil and charcoal work is recommended on the sample from fill 10033 (SS 101).

Pit 10192 (SS 111) contained no plant macrofossils but did contain a large assemblage of well preserved charcoal identified as oak, alder and alder/hazel. Posthole 10145 (SS 105) contained a small number of plant macrofossils including barley (*Hordeum vulgare*) and emmer wheat grains, a possible oat (*Avena*) grain and vetches/peas and black-bindweed seeds. Charcoal was abundant, moderately well preserved and identified as oak. No plant macrofossil work is recommended on either feature, but the abundant charcoal remains mean further work is recommended.

#### Undated

Two samples were recovered from fill 10178 (SS 107) and 10187 (SS 108) within pit 10177. Small numbers of charred hazelnut shells were identified. Charcoal was abundant, but poorly preserved and only a single fragment of oak was identifiable. Further plant macrofossil work is recommended on both samples, however the poor preservation means no further charcoal work is recommended.

Pit 10130 (SS 104) contained a small number of plant macrofossils including emmer/spelt wheat grains, glume bases and spikelet forks, barley and wheat species grains and a possible grass species stem. Charcoal was moderately abundant and identified as oak and cherry species. Posthole 10167 (SS 106) contained a small number of spelt and emmer/spelt grains, spelt wheat glume bases, hazelnut shells and black-bindweed seeds. Charcoal was moderately abundant and recorded as oak and cherry species. Should phasing information become available, further plant macrofossil and charcoal work on both samples is recommended.

Posthole 10069 (SS 102) contained a sedge seed, emmer/spelt wheat glume base and indeterminate bud stem. Charcoal was moderately abundant and identified as oak, alder and hazel. Posthole 10099 (SS 103) contained goosefoots, possible thistle (*Cirsium/Carduus*), sedge and docks (*Rumex*) seeds

and a culm node. Charcoal was present in small quantities and identified as oak and ash. Pit 10189 (SS 109) contained a vetches/peas and cleavers (*Galium aparine*) seed. Charcoal was moderately abundant and identified as alder/hazel, oak and cherry species. Posthole 10199 (SS 110) contained a culm node and a small amount of charcoal identified as maple, oak, ash, hawthorn/rowan/crab apple (*Crataegus monogyna/Sorbus/Malus sylvestris*) and blackthorn. Posthole 10237 (SS 112) contained a possible barley grain and thistles seed and a small amount of charcoal identified as oak, alder and ash. The small number of plant macrofossil and charcoal remains from these features means no further work is recommended.

## **SPE2: Late Iron Age – Roman settlement**

A total of 48 bulk soil samples were retrieved from a Period 4.3–4.4 Later Iron Age/Late Iron Age to Romano-British (transitional) oven, ditches and a posthole; Period 5.1–5.3 Romano-British pits, postholes, drain, trample deposit and grave fills; Period 8 post-medieval pits and undated pits, hearth, hearth/posthole, postholes and demolition deposit. The aim of this assessment is to determine the type, preservation and quantity of plant macrofossil and charcoal remains recovered; and use this to assess the potential of these remains to provide evidence of socio-economic activities being undertaken on the site (crop husbandry, diet, living conditions of communities, exploitation of woodlands for fuel, woodland management), and to infer the composition of the local flora and woodlands.

## **Results**

The results are presented in tabular form (Tables 13.5–13.14) and are discussed below. SS refers to the Soil Sample number. All remains are carbonised unless highlighted as modern.

### *Period 4.3–4.4 Later Iron Age/Late Iron Age to Romano-British (transitional)*

Sample 201 was recovered from fill 20134 within Ditch T (cut 20133) part of circular structure (Curvilinear Ditch A) (Fig. 7) and contained a small assemblage of moderately well preserved plant macrofossils including emmer (*Triticum dicoccum*) and emmer/spelt wheat (*Triticum dicoccum/Triticum spelta*) cereal grains, an emmer/spelt wheat spikelet fork, grass species stem and knotweed, vetches/peas and goosefoots (*Chenopodium*) seeds. Charcoal was abundant and identified as oak (*Quercus*), ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*), hazel (*Corylus avellana*) and willow/poplar (*Salix/Populus*). Further plant macrofossil and charcoal work are recommended on this sample.

Two samples were recovered from fills 20601 (SS 234) and 20603 (SS 235) within oven 20600 inside circular structure (Curvilinear Ditch A) (Fig. 7). Fill 20601 (SS 234) contained possible broad bean fragments, emmer/spelt wheat grain, spelt and emmer/spelt glume bases and a ribwort plantain

(*Plantago lanceolata*) seed. Further plant macrofossil work is recommended. Charcoal was rare poorly preserved and identified as oak, hawthorn/rowan/crab apple (*Crataegus monogyna*/*Sorbus*/*Malus sylvestris*) and alder/hazel. The poor preservation means no further charcoal work is recommended. Fill 20603 (SS 235) contained hazelnut shells, possible broad bean fragments, emmer and emmer/spelt wheat and a possible barley (*Hordeum vulgare*) cereal grain, emmer/spelt wheat glume bases and a black-bindweed (*Fallopia convolvulus*) seed. Further plant macrofossil work is recommended. The charcoal was moderately abundant and moderately well preserved identified as oak, alder/hazel, hawthorn/rowan/crab apple and cherry (*Prunus*) species. Further work on the charcoal from sample is recommended.

Fill 20733 (SS 256) recovered from Ditch DL (cut 20732) pre-dating villa building C (Fig. 15) contained a large assemblage of plant macrofossils including hazelnut shells, barley, spelt and emmer/spelt wheat cereal grains and cereal chaff including barley rachis, spelt and emmer/spelt wheat glume bases and spikelet forks. A large assemblage of herbaceous taxa including medicks/clover, bromes (*Bromus*) and docks were recorded, although the full range of species not fully identified during this assessment. Charcoal was abundant, well preserved and identified as oak, ash, alder/hazel, hazel, birch (*Betula*) and hawthorn/rowan/crab apple. Further plant macrofossil and charcoal work is recommended on this sample.

Posthole 20169 (SS 202) contained a single poorly preserved barley and possible emmer/spelt wheat grain. Charcoal was moderately well preserved and identified as oak and alder/hazel. Given the poor preservation of the charred plants, no further plant macrofossil work is recommended, although further work on the charcoal should be considered if this deposit comprises a deliberate dump of hearth waste.

Fill 20773 (SS 261) within Ditch DW (cut 20775), south of the villa (Fig. 6) contained no plant macrofossils but did contain a large assemblage of well-preserved charcoal identified as oak and hawthorn/rowan/crab apple. Further charcoal work is recommended.

#### *Period 5.1–5.3 Romano-British*

##### *Building A*

Four samples were recovered from features associated with Building A and included burnt deposit 20398 (SS 209) from the hypocaust in Room 2, trample/burnt deposit 20561 (SS 225), posthole 20430 (SS 210) and deposit 20486 (SS 213) from the hypocaust in Room 3. The plant macrofossils within these samples were rare and consisted of barley, emmer/spelt wheat cereal grains, spelt and emmer/spelt wheat glume bases and spikelet forks and knotweeds (*Persicaria*), vetches/peas and bromes seeds and a hazelnut shell scattered across these four features. No further plant macrofossil work is recommended.

Charcoal was more variable in quantity. Burnt deposit 20398 (SS 209) contained no identifiable charcoal. Small amounts of charcoal were present within posthole 20430 (SS 210) and identified as oak, hawthorn/rowan/crab apple and cherry species. Charcoal within trample/burnt deposit 20564 (SS 225) was present in small quantities and identified as maple (*Acer campestre*), alder/hazel, oak ash and cherry species. No further work is recommended on any of these three features. Charcoal in deposit 20486 (SS 213) was abundant and identified as oak, alder/hazel and elder (*Sambucus nigra*). This material is thought to represent dumped material from the hypocaust in Room 3 and as such further charcoal work is recommended.

#### *Enclosure boundary ditch on western side*

Two samples were recovered from Ditch W, located to the west of Building A. Fill 20165 (SS 203) from Ditch W (cut 20304) contained a moderate assemblage of well preserved plant macrofossils including possible broad bean fragments, oats (*Avena*), spelt and emmer/spelt wheat cereal grains, a spelt wheat glume base and herbaceous taxa including thistle (*Cirsium/Carduus*), cabbage/mustards, sedge (*Carex*), medicks/clover, vetches/peas, bromes, amphibious bistort (*Persicaria amphiba*), cleavers and docks seeds. Charcoal was abundant and identified as oak, ash, hawthorn/rowan/crab apple, cherry species and hazel. Further plant macrofossil and charcoal work is recommended. Fill 20199 (SS 204) from Ditch W (cut 20164) contained indeterminate cereal grain fragments and goosefoots, vetches/peas and docks seeds. Charcoal was present in small quantities and identified as oak, ash, maple and alder/hazel. The small number of plant macrofossil and charcoal remains means no further work is recommended.

#### *Building B*

Eight samples were recovered from fills 20534 (SS 219), 20535 (SS 217 and SS 218), 20542 (SS 220), 20545 (SS 221) 20549 (SS 222), 20550 (SS 223) and 20551 (SS 224) within drain 20300 (cut 20301) making up an outbuilding associated with Building B (Fig. 7). Fills 20535 (SS 218) and 20551 (SS 224) contained no plant macrofossil material. Fills 20534 (SS 219), 20535 (SS 217), 20542 (SS 220), 20549 (SS 222) and 20550 (SS 223) contained a small number of variably preserved plant macrofossils scattered across these five fills and included oat, spelt and emmer/spelt wheat, a possible barley and indeterminate cereal grains, spelt and emmer/spelt wheat glume bases and bromes, vetches/peas and goosefoots seeds. Charcoal from the above seven fills was present in small quantities, moderate to well preserved, and identified as oak, ash, alder/hazel, hawthorn/rowan/crab apple and willow/poplar. Given the small quantities of material recorded, no further plant macrofossil or charcoal work is recommended.

Fill 20545 (SS 221) of drain 20300 contained a large well preserved assemblage of plant macrofossils including oats, spelt and emmer/spelt wheat cereal grains, spelt and emmer/spelt wheat glume bases and docks, vetches/peas and bromes seeds. Charcoal was abundant and identified as alder/hazel, oak and ash. Further plant macrofossil and charcoal work is recommended on this sample.

*Enclosure boundary ditch on eastern side*

Fill 20365 (SS 206) was recovered from Ditch DI (cut 20366) located to the north-east of Building B (Fig. 6) and contained a small number of plant macrofossils identified as emmer/spelt wheat and barley cereal grains, spelt wheat glume base and bromes seeds. Charcoal was moderately abundant and identified as maple, oak, alder/hazel and cherry species. No further plant macrofossil work is recommended, although further charcoal recording is recommended.

*Building C*

A total of five samples were recovered from features associated with Building C. Pit 20635 (SS 243) contained a single moderately well preserved emmer/spelt wheat grain. Posthole 20697 (SS 253) contained a single poorly preserved indeterminate cereal grain fragment and a grass species seed. Grave 20736 (SS 257) contained a small number of plant macrofossils identified as wheat species and indeterminate cereal grains. Grave 20748 (SS 258 and SS 259) contained a small number of well-preserved plant macrofossils including spelt and emmer/spelt wheat grains, spelt and emmer/spelt wheat glume bases and grass species seeds. Charcoal from all five features was rare, moderately well preserved and identified as oak, alder/hazel, birch, gorse/broom (*Ulex/Cytisus*), cherry species and hawthorn/rowan/crab apple. Given the small numbers of plant macrofossils and charcoal within these five samples, no further work is recommended.

Ditch DN located to the east of Room 2 within Building C, Phase 1 of the building's construction. Fill 20656 (SS 246) within Ditch DN (cut 20657) contained a moderate assemblage of plant macrofossil remains recorded as barley, possible oat, spelt and emmer/spelt wheat cereal grains; cereal chaff including spelt and emmer/spelt wheat glume bases, culm nodes and herbaceous taxa including sedge, medicks/clover, vetches/peas bromes and docks seeds. A large assemblage of well preserved charcoal was identified as oak, ash and hawthorn/rowan/crab apple. Further plant macrofossil and charcoal work is recommended.

*Period 8 Post-medieval*

Pit 20569 (SS 233) contained a small number of moderately well preserved plant macrofossils identified as barley and wheat cereal grains and emmer/spelt wheat glume bases, vetches/peas (possible broad bean), grass species stem and dock seeds. Charcoal was well preserved and present in small quantities identified as alder/hazel, oak and cherry species. The paucity of charred material means no further work is recommended.

Pit 20625 (SS 241) contained a small assemblage of charred plant remains including an emmer wheat grain and sedge, spike-rushes (*Eleocharis*) and bramble (*Rubus*) seeds alongside a moderate number of cherry pip fragments and possible wild plum (*Prunus domestica*) pips. Charcoal was rare and identified as oak and hawthorn/rowan/crab apple. This type of assemblage, containing a relatively large number of hand gathered food items, is typical of that found within earlier prehistoric features. If found to be earlier in date, further plant macrofossil work is recommended.



Quarry pit 20674 (SS 244) contained a small number of hazelnut shells. Charcoal was abundant and well preserved, identified as oak and hazel. As the origin of this material is uncertain, no further plant macrofossil or charcoal work is recommended.

#### *Undated*

A total of thirteen undated features were sampled. The results from these are summarised below and further work recommended only if further phasing information becomes available.

Hearth 20020 (SS 200) contained a large assemblage of plant macrofossils identified as wheat species, barley, rye (*Secale cereale*) and oat cereal grains and a large assemblage of herbaceous taxa including vetches/peas, goosefoots, mallows (*Malva*), ribwort plantain, grass species, docks and knotgrass (*Polygonum aviculare*). Charcoal was abundant and identified as oak, alder/hazel, hazel and willow/poplar. Further plant macrofossil and charcoal work is recommended.

Hearth/posthole 20324 (SS 205) contained a large assemblage of plant macrofossils including large numbers of bracken fronds (*Pteridium*), small numbers of spelt and emmer/spelt wheat glume bases, grass species stems and goosefoots, sedges, bromes, knotweeds and pale persicaria (*Persicaria lapathifolia*) seeds. Further plant macrofossil work is recommended pending availability of dating evidence. Charcoal was rare, highly fragmented and consequently unidentifiable.

Pit 20666 (SS 249) east of the villa remains (Fig. 15) contained a large assemblage of well preserved plant macrofossil identified as hazelnut shells; oat, spelt and emmer/spelt wheat cereal grains and emmer/spelt wheat glume bases; and herbaceous taxa including medicks/clovers (*Medicago/Trifolium*), vetches/pea, ribwort plantain, bromes, knotweed and cleavers. Charcoal was abundant and well preserved, identified as oak, alder/hazel and hazel. Further plant macrofossil and charcoal work is recommended should further phasing evidence become available.

Pit 20671 (SS 251) east of the villa remains (Fig. 15) contained a small number of charred spelt wheat grains but a large assemblage of herbaceous taxa including grass species, sedges, medicks/clovers. Time constraints meant it was not possible to fully identify all the herbaceous taxa within this sample, and for this reason if further phasing evidence becomes available, further work is recommended. Charcoal was abundant and well preserved and identified as ash. Further charcoal work is recommended should further phasing evidence become available.

The remaining undated features consisted of posthole 20438 (SS 211), posthole 20449 (SS 216), posthole 20523 (SS 215), pit 20644 (SS 245), pit 20661 (SS 247), fill 20665 (SS 248) within ditch DP (cut 20664, pit 20668 (SS 250), pit 20688 (SS 254), posthole 20712 (SS 252), pit 20717 (SS 255), pit 20802 (SS 260), pit 20871 (SS 262) and deposit 20626 (SS 242). The plant macrofossils in these features were present in small quantities and variably preserved consisting of a small number of

hazelnut shells, possible broad bean (*Vicia faba*) fragments, possible flax (*Linum usitatissimum*) seeds, cereals including oat, wheat species, spelt and emmer/spelt wheat and cereal chaff including emmer/spelt wheat glume bases. Herbaceous taxa includes goosefoots, sedges, spike-rushes, vetches/peas (*Vicia/Lathyrus*), bromes, pale persicaria, docks and cleavers seeds. The charcoal was recorded in similar small quantities and identified as oak, alder/hazel, ash, hawthorn/rowan/crab apple, cherry species, blackthorn and elm (*Ulmus glabra*). Given the small number of charred remains within these samples, no further work is recommended.

The exception to this is charcoal from pits 20644 (SS 245) (Fig. 15) and 20871 (SS 262). Charcoal from these two features was abundant and well preserved and identified as oak, blackthorn, alder, hazel, alder/hazel and birch. If phasing for these features becomes available, further charcoal work is recommended.

### **SPE3: medieval hollow way**

Four bulk soil samples were retrieved for plant macrofossil and charcoal assessment taken from a Period 7 Ditch A. The aim of this assessment is to determine the type, preservation and quantity of plant macrofossil and charcoal remains recovered and use this to assess the potential of these remains to provide evidence of socio-economic activities being undertaken on the site (crop husbandry, diet, living conditions of communities, exploitation of woodlands for fuel, woodland management), and to infer the composition of the local flora and woodlands.

## **Results**

The results are presented in tabular form (Tables 13.15-16) and are discussed below. SS refers to the Soil Sample number. All remains are carbonised unless highlighted as modern.

### *Period 7 Post-Conquest Medieval*

Fills 30010 (SS 301), 30009 (SS 302) and 30008 (SS 303 and SS 304) were recovered from Ditch A (intervention 30003). No plant macrofossils were identified from fill 30010 (SS 301). A small number of poorly preserved remains were identified from fills 30009 (SS 302) and 30008 (SS 304) which included a possible oat (*Avena*) and barley (*Hordeum vulgare*) cereal grain and a vetch/pea (*Vicia/Lathyrus*) seed. Fill 30008 (SS 303) contained a small number of well-preserved plant macrofossils identified as rye (*Secale cereale*) and free-threshing wheat grains (*Triticum aestivum/Triticum turgidum/Triticum durum*), hazelnut shell (*Corylus avellana*), vetches/peas and a possible fragment of a cherry pip (*Prunus*). Charcoal within all samples was moderately abundant to abundant and poorly preserved and identified as oak (*Quercus*) with alder/hazel (*Alnus glutinosa/Corylus avellana*) and hazel in fills 30010 (SS 301) and 30008 (SS 303).



Table 13.1 SPE1 Plant macrofossil identifications

Context number				10032	10033	10048	10057	10146	10214	10262
Feature number				10031	10031	10045	10056	10145	10192	10263
Feature label						Ditch A	Ditch A			
Sample number (SS)				100	101	113	115	105	111	114
Flot volume (ml)				6	288	2	4	101	405	23
Sample volume processed (l)				13	36	32	34	30	45	36
Period				3.2	3.2	3.2	3.2	3.2	3.2	3.2
Plant macrofossil preservation				Good	Good	Good	Poor	Good	N/A	Good
Recommendations for further work				No	Yes	No	No	No	No	Yes
Habitat Code	Family	Species	Common Name							
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots							+
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells				?+			
D/P	Fabaceae	<i>Medicago</i> L./ <i>Trifolium</i> L.	Medicks/Clovers							++
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)	+	+			+		++
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (half)		+			+		+
E	Linaceae	<i>Linum usitatissimum</i> L.	Flax (whole)							+++
E		<i>Linum usitatissimum</i> L.	Flax (fragments)							++++
P	Plantaginaceae	<i>Plantago lanceolata</i> L.	Ribwort Plantain	?+	+					+
E	Poaceae	<i>Avena</i> L.	Oats grain					?+		
E		<i>Hordeum vulgare</i> L.	Barley grain					+		
E		<i>Triticum dicoccum</i>	Emmer wheat grain			+		+		
E		<i>Triticum spelta</i>	Spelt wheat grain			+				
E		<i>Triticum spelta</i>	Spelt wheat glume base							
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer & spelt wheat and emmer/spelt wheat grain	++++	+++++					

Context number				10032	10033	10048	10057	10146	10214	10262
Feature number				10031	10031	10045	10056	10145	10192	10263
Feature label						Ditch A	Ditch A			
Sample number (SS)				100	101	113	115	105	111	114
Flot volume (ml)				6	288	2	4	101	405	23
Sample volume processed (l)				13	36	32	34	30	45	36
Period				3.2	3.2	3.2	3.2	3.2	3.2	3.2
Plant macrofossil preservation				Good	Good	Good	Poor	Good	N/A	Good
Recommendations for further work				No	Yes	No	No	No	No	Yes
Habitat Code	Family	Species	Common Name							
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat grain							+
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat glume base		+					
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat spikelet fork							+
E		<i>Poaceae</i>	Indet. cereal grain (whole)	++	+++					
E		<i>Poaceae</i>	Indet. cereal grain (fragment)	++	++++			+		
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)	++	+++++	+				+
E		<i>Poaceae</i>	Culm node (whole)				?+			
D/A	Polygonaceae	<i>Fallopia convolvulus</i> (L.) A. Löve	Black-bindweed	+				+		
D/A/P		<i>Rumex</i> L.	Docks							++
HSW	Rosaceae	<i>Prunus</i> L.	Cherry species pip fragment	?+						
HSW/D		<i>Rubus</i> L.	Brambles							+
			Modern seeds	+	+			++		

Table 13.2 SPE1 Plant macrofossil identifications

Context number				10070	10100	10131	10169	10178	10187	10188	10200	10246
Feature number				10069	10099	10130	10167	10177	10177	10189	10199	10237
Sample number (SS)				102	103	104	106	107	108	109	110	112
Flot volume (ml)				5	3	12	42	8	2	16	3.5	11.5
Sample volume processed (l)				10	6	5	34	14	18	16	8	3
Period (old phasing from 2015, needs updating)				U	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Good	Good	Moderate	Good	Good	Moderate	Good	Poor	Moderate
Recommendations for further work				No	No	Yes	Yes	Yes	Yes	No	No	No
Habitat Code	Family	Species	Common Name									
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots		+							
D/P	Asteraceae	<i>Cirsium</i> Mill./ <i>Carduus</i> L.	Thistles		?+							+
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells				+	+++	++			
M/D	Cyperaceae	<i>Carex</i> L.	Sedges	+	++							
D/A/P	Fabaceae	<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)							+		
E	Poaceae	<i>Hordeum vulgare</i> L.	Barley grain			+						?+
E		<i>Triticum</i>	Wheat grain			+						
E		<i>Triticum spelta</i>	Spelt wheat grain				+					
E		<i>Triticum spelta</i>	Spelt wheat glume base				+					
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat grain			+	++					
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat glume base	+		+						
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat spikelet fork			+						
E		Poaceae	Indet. cereal grain (whole)			+						
E		Poaceae	Indet. cereal grain (fragment)			+	++					+
E		Poaceae	Indet. cereal grain (fragment <1mm)			++	+					+
E		Poaceae	Culm node (whole)		+						+	
P		Poaceae	cf grass species stem			+						

Context number				10070	10100	10131	10169	10178	10187	10188	10200	10246
Feature number				10069	10099	10130	10167	10177	10177	10189	10199	10237
Sample number (SS)				102	103	104	106	107	108	109	110	112
Flot volume (ml)				5	3	12	42	8	2	16	3.5	11.5
Sample volume processed (l)				10	6	5	34	14	18	16	8	3
Period (old phasing from 2015, needs updating)				U	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Good	Good	Moderate	Good	Good	Moderate	Good	Poor	Moderate
Recommendations for further work				No	No	Yes	Yes	Yes	Yes	No	No	No
Habitat Code	Family	Species	Common Name									
D/A	Polygonaceae	<i>Fallopia convolvulus</i> (L.) Á. Löve	Black-bindweed				+					
D/A/P		<i>Rumex</i> L.	Docks		+							
A/D	Rubiaceae	<i>Galium aparine</i> L.	Cleavers				+			+		
			Indet. bud stem	+								
			Modern seeds	+	+		++					+

Table 13.3 SPE1 Charcoal identifications

<b>Context number</b>			10032	10033	10048	10057	10146	10214	10262
<b>Feature number</b>			10031	10031	10045	10056	10145	10192	10263
<b>Feature label</b>					Ditch A	Ditch A			
<b>Sample number (SS)</b>			100	101	113	115	105	111	114
<b>Flot volume (ml)</b>			6	288	2	4	101	405	23
<b>Sample volume processed (l)</b>			13	36	32	34	30	45	36
<b>Period</b>			3.2	3.2	3.2	3.2	3.2	3.2	3.2
<b>Charcoal quantity</b>			+++	++++	++++	++++	+++++	+++++	++++
<b>Charcoal preservation</b>			Good	Moderate	Moderate	Poor	Moderate	Good	Moderate
<b>Recommendations for further work</b>			No	Yes	No	No	Yes	Yes	Yes
<b>Family</b>	<b>Species</b>	<b>Common Name</b>							
Aceraceae	<i>Acer campestre</i> L.	Field maple							1
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn.	Alder						1	
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel		1	1			1	2
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w							2
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak	7	9	6	10	10	8	4
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak h/w			1				1
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w	2		1				
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak twig			1				
Rosaceae	<i>Prunus</i> L.	Cherries r/w	1						
<b>Total</b>			10	10	10	10	10	10	10



Table 13.4 SPE1 Charcoal identifications

<b>Context number</b>			10070	10100	10131	10169	10178	10187	10188	10200	10246
<b>Feature number</b>			10069	10099	10130	10167	10177	10177	10189	10199	10237
<b>Sample number (SS)</b>			102	103	104	106	107	108	109	110	112
<b>Flot volume (ml)</b>			5	3	12	42	8	2	16	3.5	11.5
<b>Sample volume processed (l)</b>			10	6	5	34	14	18	16	8	3
<b>Period</b>			U	U	U	U	U	U	U	U	U
<b>Charcoal quantity</b>			++++	+++	++++	++++	+++++	+++	++++	+++	+++
<b>Charcoal preservation</b>			Moderate	Moderate	Moderate	Good	Poor	Poor	Moderate	Good	Moderate
<b>Recommendations for further work</b>			No	No	Yes	Yes	No	No	No	No	No
<b>Family</b>	<b>Species</b>	<b>Common Name</b>									
Aceraceae	<i>Acer campestre</i> L.	Field maple								1	
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn.	Alder	1								
	<i>Alnus glutinosa</i> (L.) Gaertn.	Alder r/w									2
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel	2					1			
	<i>Corylus avellana</i> L.	Hazel	2								
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak	4	5	8	9			7	5	7
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak h/w		2			1				
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w	1								
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak twig		2	1			1			
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash		1						1	1
Rosaceae	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple								2	
	<i>Prunus</i> L.	Cherries			1	1		1			
	<i>Prunus spinosa</i> L.	Blackthorn								1	
		Indet.					9	10			5
<b>Total</b>			10	10	10	10	1	0	10	10	10

Table 13.5 SPE2 Plant macrofossil identifications

Context number				20134	20168	20601	20603	20733	20773	20165	20199	20365	20398
Feature number				20133	20169	20600	20600	20732	20775	20304	20164	20366	-
Feature label				Ditch T				Ditch DL	Ditch DW	Ditch W	Ditch W	Ditch DI	Building A
Sample number (SS)				201	202	234	235	256	261	203	204	206	209
Flot volume (ml)				111	53	7	5	170	2383	81	7.5	11.5	19
Sample volume processed (l)				32	3	7	10	10	32	32	40	30	32
Period				4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
Plant macrofossil preservation				Moderate	Poor	Good	Good	Moderate	N/A	Good	Good	Moderate	Poor
Recommendations for further work				Yes	No	Yes	Yes	Yes	No	Yes	No	No	No
Habitat Code	Family	Species	Common Name										
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots	+							+		
D/P	Asteraceae	<i>Cirsium</i> Mill./ <i>Carduus</i> L.	Thistles							+			
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells				++	+					
D	Brassicaceae	<i>Brassica</i> L./ <i>Sinapis</i> L.	Cabbages/Mustards							+			
M/D	Cyperaceae	<i>Carex</i> L.	Sedges							+			
D/P	Fabaceae	<i>Medicago</i> L./ <i>Trifolium</i> L.	Medicks/Clovers					++		+			
E		<i>Vicia faba</i> L.	Broad Bean (half)			?+				?+			
E		<i>Vicia faba</i> L.	Broad Bean (fragments)				?+						
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)	+						+	+		
P	Plantaginaceae	<i>Plantago lanceolata</i> L.	Ribwort Plantain			+							
E	Poaceae	<i>Avena</i> L.	Oats grain							++			
A/D		<i>Bromus</i> L.	Bromes					+		+		+	+
E		<i>Hordeum vulgare</i> L.	Barley grain		+		?+	+				+	
E		<i>Hordeum vulgare</i> L.	Barley rachis					+					

Context number				20134	20168	20601	20603	20733	20773	20165	20199	20365	20398
Feature number				20133	20169	20600	20600	20732	20775	20304	20164	20366	-
Feature label				Ditch T				Ditch DL	Ditch DW	Ditch W	Ditch W	Ditch DI	Building A
Sample number (SS)				201	202	234	235	256	261	203	204	206	209
Flot volume (ml)				111	53	7	5	170	2383	81	7.5	11.5	19
Sample volume processed (l)				32	3	7	10	10	32	32	40	30	32
Period				4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
Plant macrofossil preservation				Moderate	Poor	Good	Good	Moderate	N/A	Good	Good	Moderate	Poor
Recommendations for further work				Yes	No	Yes	Yes	Yes	No	Yes	No	No	No
Habitat Code	Family	Species	Common Name										
E		<i>Triticum</i>	Wheat grain				+						
E		<i>Triticum dicoccum</i>	Emmer wheat grain	+			+						
E		<i>Triticum spelta</i>	Spelt wheat grain					+		++			
E		<i>Triticum spelta</i>	Spelt wheat glume base			+		+++		+		+	
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat grain	+	?+	+	++	+++		++		+	+
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat glume base			+	+	+++++					
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat spikelet fork	+				++					
E		<i>Poaceae</i>	Indet. cereal grain (whole)				+	++		+			
E		<i>Poaceae</i>	Indet. cereal grain (fragment)	+	+		+	+++		++	+	++	
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)	++				++++		+			++
E		<i>Poaceae</i>	cf grass species stem	+								+	
D/A	Polygonaceae	<i>Fallopia convolvulus</i> (L.) A. Löve	Black-bindweed				+						
D		<i>Persicaria</i> Mill.	Knotweeds	+									

<b>Context number</b>				20134	20168	20601	20603	20733	20773	20165	20199	20365	20398
<b>Feature number</b>				20133	20169	20600	20600	20732	20775	20304	20164	20366	-
<b>Feature label</b>				Ditch T				Ditch DL	Ditch DW	Ditch W	Ditch W	Ditch DI	Building A
<b>Sample number (SS)</b>				201	202	234	235	256	261	203	204	206	209
<b>Flot volume (ml)</b>				111	53	7	5	170	2383	81	7.5	11.5	19
<b>Sample volume processed (l)</b>				32	3	7	10	10	32	32	40	30	32
<b>Period</b>				4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
<b>Plant macrofossil preservation</b>				Moderate	Poor	Good	Good	Moderate	N/A	Good	Good	Moderate	Poor
<b>Recommendations for further work</b>				Yes	No	Yes	Yes	Yes	No	Yes	No	No	No
<b>Habitat Code</b>	<b>Family</b>	<b>Species</b>	<b>Common Name</b>										
M/W/D		<i>Persicaria amphiba</i> (L.) Gray	Amphibious Bistort							+			
D/A/P		<i>Rumex</i> L.	Docks					+		+	+		
HSW/D	Rosaceae	<i>Rubus</i> L.	Brambles thorn					+					
A/D	Rubiaceae	<i>Galium aparine</i> L.	Cleavers							+			
			Indeterminate nut fragment							+			
			Modern seeds			++	+++				+		+++++

Table 13.6 SPE2 Plant macrofossil identifications

Context number				20431	20486	20534	20535	20535	20542	20545	20549	20550
Feature number				20430	-	20301	20301	20301	20301	20301	20301	20301
Feature label				Building A	Building A	Building B	Building B	Building B	Building B	Building B	Building B	Building B
Sample number (SS)				210	213	219	217	218	220	221	222	223
Flot volume (ml)				14	29	6.5	2	5.5	1.5	35	1.5	5
Sample volume processed (l)				20	4	10	8	6	9	9	8	9
Period				5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
Plant macrofossil preservation				Good	Moderate	Moderate	Moderate	N/A	Poor	Good	Poor	Good
Recommendations for further work				No	No	No	No	No	No	Yes	No	No
Habitat Code	Family	Species	Common Name									
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots	+					+			
D/P	Asteraceae	<i>Cirsium</i> Mill./ <i>Carduus</i> L.	Thistles	+								
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells	+								
D/A/P	Fabaceae	<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)	++						+		
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (half)							+		+
E	Poaceae	<i>Avena</i> L.	Oats grain			+				+++		
A/D		<i>Bromus</i> L.	Bromes	+		+				+		
E		<i>Hordeum vulgare</i> L.	Barley grain	+					?+			
E		<i>Triticum spelta</i>	Spelt wheat grain	+		+				++++		
E		<i>Triticum spelta</i>	Spelt wheat glume base		+	+				++++		
E		<i>Triticum spelta</i>	Spelt wheat spikelet fork			+				+		
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat grain		+	++	+			++		
E		<i>Triticum dicoccum</i> /	Emmer/spelt wheat	+						+		+

<b>Context number</b>				20431	20486	20534	20535	20535	20542	20545	20549	20550
<b>Feature number</b>				20430	-	20301	20301	20301	20301	20301	20301	20301
<b>Feature label</b>				Building A	Building A	Building B	Building B	Building B	Building B	Building B	Building B	Building B
<b>Sample number (SS)</b>				210	213	219	217	218	220	221	222	223
<b>Flot volume (ml)</b>				14	29	6.5	2	5.5	1.5	35	1.5	5
<b>Sample volume processed (l)</b>				20	4	10	8	6	9	9	8	9
<b>Period</b>				5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
<b>Plant macrofossil preservation</b>				Good	Moderate	Moderate	Moderate	N/A	Poor	Good	Poor	Good
<b>Recommendations for further work</b>				No	No	No	No	No	No	Yes	No	No
<b>Habitat Code</b>	<b>Family</b>	<b>Species</b>	<b>Common Name</b>									
		<i>Triticum spelta</i>	glume base									
E		<i>Triticum dicoccum/</i>	Emmer/spelt wheat	+								
		<i>Triticum spelta</i>	spikelet fork									
E		<i>Poaceae</i>	Indet. cereal grain (whole)	+		+	+			+		
E		<i>Poaceae</i>	Indet. cereal grain (fragment)	++	+	+				+	+	
D	Polygonaceae	<i>Persicaria</i> Mill.	Knotweeds	+								
D/A/P		<i>Rumex</i> L.	Docks							+		
			Modern seeds	+++++	+++						++	

Table13.7 SPE2 Plant macrofossil identifications

<b>Context number</b>				20551	20561	20635	20656	20696	20734	20745	20745	20570
<b>Feature number</b>				20301	-	20636	20657	20697	20736	20748	20748	20569
<b>Feature label</b>				Building B	Building A	Building C	Ditch DN	Building C	Building C	Building C	Building C	
<b>Sample number (SS)</b>				224	225	243	246	253	257	258	259	233
<b>Flot volume (ml)</b>				2	2.5	2	48	3	16	5	12	3
<b>Sample volume processed (l)</b>				6	10	1	40	9	15	16	27	9
<b>Period</b>				5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	8
<b>Plant macrofossil preservation</b>				N/A	Moderate	Moderate	Good	Poor	Poor	Good	Good	Moderate
<b>Recommendations for further work</b>				No	No	No	Yes	No	No	No	No	No
<b>Habitat Code</b>	<b>Family</b>	<b>Species</b>	<b>Common Name</b>									
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots								+	
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells		+							
M/D	Cyperaceae	<i>Carex</i> L.	Sedges				+					
D/P	Fabaceae	<i>Medicago</i> L./ <i>Trifolium</i> L.	Medicks/Clovers				+					
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L. (cf <i>Vicia faba</i> L.)	Vetches/Peas (? broad bean)				+					+
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)		+		+					
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (half)		+							+
E/D	Linaceae	<i>Linum usitatissimum</i> L.	Flax (whole)									
E	Poaceae	<i>Avena</i> L.	Oats grain				?+					
A/D		<i>Bromus</i> L.	Bromes		+		+					
E		<i>Hordeum vulgare</i> L.	Barley grain		+		+					+
E		<i>Triticum</i>	Wheat grain		+				+			+
E		<i>Triticum spelta</i>	Spelt wheat grain		+		++			+	+	
E		<i>Triticum spelta</i>	Spelt wheat glume base				++			+	+	
E		<i>Triticum dicoccum</i> /	Emmer/spelt wheat			+	+++			++	+	

Context number				20551	20561	20635	20656	20696	20734	20745	20745	20570
Feature number				20301	-	20636	20657	20697	20736	20748	20748	20569
Feature label				Building B	Building A	Building C	Ditch DN	Building C	Building C	Building C	Building C	
Sample number (SS)				224	225	243	246	253	257	258	259	233
Flot volume (ml)				2	2.5	2	48	3	16	5	12	3
Sample volume processed (l)				6	10	1	40	9	15	16	27	9
Period				5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	8
Plant macrofossil preservation				N/A	Moderate	Moderate	Good	Poor	Poor	Good	Good	Moderate
Recommendations for further work				No	No	No	Yes	No	No	No	No	No
Habitat Code	Family	Species	Common Name									
		<i>Triticum spelta</i>	grain									
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat glume base				+			+	+	+
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat spikelet fork		+							
E		<i>Poaceae</i>	Indet. cereal grain (whole)							+		+
E		<i>Poaceae</i>	Indet. cereal grain (fragment)				+	+	+	++	+	+
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)				+++					
E		<i>Poaceae</i>	Culm node (whole)				+++					
E		<i>Poaceae</i>	cf grass species seed				+	+		+	+	
E		<i>Poaceae</i>	cf grass species stem		+							+
D	Polygonaceae	<i>Persicaria</i> Mill.	Knotweeds		+							
D/A/P		<i>Rumex</i> L.	Docks				+					+
			Modern seeds		++		++	++	++++	++		++



Table 13.8 SPE2 Plant macrofossil identifications

Context number				20624	20648	20019	20325	20439	20450	20524	20626	20645	20663
Feature number				20625	20674	20020	20324	20438	20449	20523	-	20644	20661
Feature label											Building C		
Sample number (SS)				241	244	200	205	211	216	215	242	245	247
Flot volume (ml)				7	226	144	8.5	24.5	38	18	30.5	21	33
Sample volume processed (l)				18	15	36	2	4	2	8	33	5	16
Period				8	8	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Good	Good	Good	Good	Moderate	Moderate	N/A	Good	Moderate	Good
Recommendations for further work				Yes	No	Yes	Yes	No	No	No	No	No	No
Habitat Code	Family	Species	Common Name										
D/A	Amaranthaceae	<i>Chenopodium</i> L. ( <i>Blitum</i> L.)	Goosefoots			+	+		+				+
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells		++								
M/D	Cyperaceae	<i>Carex</i> L.	Sedges	++			+						+
M/W		<i>Eleocharis</i> R. Br.	Spike-rushes	+							+		+
HSW/H	Dennstaedtiaceae	<i>Pteridium</i> Gled. Ex Scop.	Bracken >2mm				++++						
HSW/H	Dennstaedtiaceae	<i>Pteridium</i> Gled. Ex Scop.	Bracken <2mm				+++++						
D/P	Fabaceae	<i>Medicago</i> L./ <i>Trifolium</i> L.	Medicks/Clovers								++		+
		<i>Vicia faba</i> L.	Broad Bean (half)						?+				?+
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)			++							+
D	Malvaceae	<i>Malva</i> L.	Mallows			++							
P	Plantaginaceae	<i>Plantago lanceolata</i> L.	Ribwort Plantain			+							
E	Poaceae	<i>Avena</i> L.	Oats grain		?+	+							
A/D		<i>Bromus</i> L.	Bromes				+						+
E		<i>Hordeum vulgare</i> L.	Barley grain			++							
E		<i>Secale cereale</i> L.	Rye grain			+							
E		<i>Triticum</i>	Wheat grain		+	++						?+	+

Context number				20624	20648	20019	20325	20439	20450	20524	20626	20645	20663
Feature number				20625	20674	20020	20324	20438	20449	20523	-	20644	20661
Feature label											Building C		
Sample number (SS)				241	244	200	205	211	216	215	242	245	247
Flot volume (ml)				7	226	144	8.5	24.5	38	18	30.5	21	33
Sample volume processed (l)				18	15	36	2	4	2	8	33	5	16
Period				8	8	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Good	Good	Good	Good	Moderate	Moderate	N/A	Good	Moderate	Good
Recommendations for further work				Yes	No	Yes	Yes	No	No	No	No	No	No
Habitat Code	Family	Species	Common Name										
E		<i>Triticum dicoccum</i>	Emmer wheat grain	+	+								
E		<i>Triticum spelta</i>	Spelt wheat grain		+								
E		<i>Triticum spelta</i>	Spelt wheat glume base				+		+	+	+		
		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat grain		+						+		+
E		<i>Triticum dicoccum/Triticum spelta</i>	Emmer/spelt wheat glume base				+				+		
E		<i>Poaceae</i>	Indet. cereal grain (whole)			+							
E		<i>Poaceae</i>	Indet. cereal grain (fragment)			+++		+			++	++	
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)		+						+		
E		<i>Poaceae</i>	Culm node (whole)			+							
E		<i>Poaceae</i>	cf grass species seed								+	+	
		<i>Poaceae</i>	cf grass species stem	+		++	++						++
D	Polygonaceae	<i>Persicaria</i> Mill.	Knotweeds				+						
D/A/M		<i>Persicaria lapathifolia</i> (L.) Gray	Pale Persicaria				+	+					
D		<i>Polygonum aviculare</i> L.	Knotgrass			+							
D/A/P		<i>Rumex</i> L.	Docks	++		++					+		+

Context number				20624	20648	20019	20325	20439	20450	20524	20626	20645	20663
Feature number				20625	20674	20020	20324	20438	20449	20523	-	20644	20661
Feature label											Building C		
Sample number (SS)				241	244	200	205	211	216	215	242	245	247
Flot volume (ml)				7	226	144	8.5	24.5	38	18	30.5	21	33
Sample volume processed (l)				18	15	36	2	4	2	8	33	5	16
Period				8	8	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Good	Good	Good	Good	Moderate	Moderate	N/A	Good	Moderate	Good
Recommendations for further work				Yes	No	Yes	Yes	No	No	No	No	No	No
Habitat Code	Family	Species	Common Name										
HSW	Rosaceae	<i>Prunus</i> L.	Cherry species pip	+									
HSW		<i>Prunus</i> L.	Cherry species pip fragment	++++									
HSW		<i>Prunus domestica</i> L. ( <i>P. insititia</i> L.)	Wild Plum (whole pip)	?+									
		<i>Prunus domestica</i> L. ( <i>P. insititia</i> L.)	Wild Plum (pip fragment)	?+									
HSW/D		<i>Rubus</i> sect. 2 <i>Glandulosus</i> Wimm. & Grab. ( <i>Rubus fruticosus</i> L. agg.)	Bramble (Blackberry)	++									
			Rodent poo	++++									
			Modern seeds	+++						+++	+++	+	++

Table 13.9 SPE2 Plant macrofossil identifications

<b>Context number</b>				20665	20667	20669	20672	20687	20713	20716	20801	20872
<b>Feature number</b>				20664	20666	20668	20671	20688	20712	20717	20802	20871
<b>Feature label</b>				Ditch DP								
<b>Sample number (SS)</b>				248	249	250	251	254	252	255	260	262
<b>Flot volume (ml)</b>				6	164	3	32	5	3	6.5	3.5	22
<b>Sample volume processed (l)</b>				16	36	8	8	8	6	4	31	37
<b>Period</b>				U	U	U	U	U	U	U	U	U
<b>Plant macrofossil preservation</b>				Moderate	Good	Good	Good	Moderate	Good	Moderate	Moderate	N/A
<b>Recommendations for further work</b>				No	Yes	No	Yes	No	No	No	No	No
<b>Habitat Code</b>	<b>Family</b>	<b>Species</b>	<b>Common Name</b>									
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells		+				+			
M/D	Cyperaceae	<i>Carex</i> L.	Sedges			+	+					
D/P	Fabaceae	<i>Medicago</i> L./ <i>Trifolium</i> L.	Medicks/Clovers		++	+	+			+		
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)		+					+		
D/A/P		<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (half)		+				+			
E/D	Linaceae	<i>Linum usitatissimum</i> L.	Flax (whole)	?+							?+	
P	Plantaginaceae	<i>Plantago lanceolata</i> L.	Ribwort Plantain		+							
E	Poaceae	<i>Avena</i> L.	Oats grain		++				?+			
A/D		<i>Bromus</i> L.	Bromes		++							
E		<i>Triticum</i>	Wheat grain							+		
E		<i>Triticum spelta</i>	Spelt wheat grain		+	++	+			+		
E		<i>Triticum spelta</i>	Spelt wheat glume base				+		++			
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat grain		+++	+			+			
E		<i>Triticum dicoccum</i> / <i>Triticum spelta</i>	Emmer/spelt wheat glume base		++				+			

Context number				20665	20667	20669	20672	20687	20713	20716	20801	20872
Feature number				20664	20666	20668	20671	20688	20712	20717	20802	20871
Feature label				Ditch DP								
Sample number (SS)				248	249	250	251	254	252	255	260	262
Flot volume (ml)				6	164	3	32	5	3	6.5	3.5	22
Sample volume processed (l)				16	36	8	8	8	6	4	31	37
Period				U	U	U	U	U	U	U	U	U
Plant macrofossil preservation				Moderate	Good	Good	Good	Moderate	Good	Moderate	Moderate	N/A
Recommendations for further work				No	Yes	No	Yes	No	No	No	No	No
Habitat Code	Family	Species	Common Name									
E		<i>Poaceae</i>	Indet. cereal grain (whole)		+							+
E		<i>Poaceae</i>	Indet. cereal grain (fragment)	+	+++	+	+		+			
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)	+	+++							
E		<i>Poaceae</i>	cf grass species seed			+	+	+				
E		<i>Poaceae</i>	cf grass species stem				+					
D	Polygonaceae	<i>Persicaria</i> Mill.	Knotweeds		+							
D/A/P		<i>Rumex</i> L.	Docks				+			+		
A/D	Rubiaceae	<i>Galium aparine</i> L.	Cleavers		+							
			Modern seeds					++		+++		++

Table 13.10 SPE 2 Charcoal identifications

<b>Context number</b>			20134	20168	20601	20603	20733	20773	20165	20199	20365	20398
<b>Feature number</b>			20133	20169	20600	20600	20732	20775	20304	20164	20366	-
<b>Feature label</b>			Ditch T				Ditch DL	Ditch DW	Ditch W	Ditch W	Ditch DI	Building A
<b>Sample number (SS)</b>			201	202	234	235	256	261	203	204	206	209
<b>Flot volume (ml)</b>			111	53	7	5	170	2383	81	7.5	11.5	19
<b>Sample volume processed (l)</b>			32	3	7	10	10	32	32	40	30	32
<b>Period</b>			4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
<b>Charcoal quantity</b>			+++++	+++++	+++	++++	+++++	+++++	+++++	+++	++++	+
<b>Charcoal preservation</b>			Moderate	Moderate	Poor	Good	Good	Good	Good	Moderate	Moderate	N/A
<b>Recommendations for further work</b>			Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No
<b>Family</b>	<b>Species</b>	<b>Common Name</b>										
Aceraceae	<i>Acer campestre</i> L.	Field maple						1		2	2	
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn.	Alder r/w	1									
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel	2	8	2	4	1			1	1	
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w								1		
	<i>Betula</i> L.	Birches					1					
	<i>Corylus avellana</i> L.	Hazel	2				2					
	<i>Corylus avellana</i> L.	Hazel r/w	1						1			
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak	1	2	5	1	2	6	1	5	6	
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak h/w							1			
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w	1					1	2			
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash	1						3	1		

<b>Context number</b>			20134	20168	20601	20603	20733	20773	20165	20199	20365	20398
<b>Feature number</b>			20133	20169	20600	20600	20732	20775	20304	20164	20366	-
<b>Feature label</b>			Ditch T				Ditch DL	Ditch DW	Ditch W	Ditch W	Ditch DI	Building A
<b>Sample number (SS)</b>			201	202	234	235	256	261	203	204	206	209
<b>Flot volume (ml)</b>			111	53	7	5	170	2383	81	7.5	11.5	19
<b>Sample volume processed (l)</b>			32	3	7	10	10	32	32	40	30	32
<b>Period</b>			4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	4.3-4.4	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
<b>Charcoal quantity</b>			+++++	+++++	+++	++++	+++++	+++++	+++++	+++	++++	+
<b>Charcoal preservation</b>			Moderate	Moderate	Poor	Good	Good	Good	Good	Moderate	Moderate	N/A
<b>Recommendations for further work</b>			Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No
Rosaceae	<i>Fraxinus excelsior</i> L.	Ash r/w					3					
	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple			3	2	1	2	1			
	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple r/w				1						
	<i>Prunus</i> L.	Cherries				2			1		1	
Salicaceae	<i>Salix</i> L./ <i>Populus</i> L.	Willows/Poplars	1									
<b>Total</b>			10	10	10	10	10	10	10	10	10	0

Table 13.11 SPE2 Charcoal identifications

Context number			20431	20486	20534	20535	20535	20542	20545	20549
Feature number			20430	-	20301	20301	20301	20301	20301	20301
Feature label			Building A	Building A	Building B	Building B	Building B	Building B	Building B	Building B
Sample number (SS)			210	213	219	217	218	220	221	222
Flot volume (ml)			14	29	6.5	2	5.5	1.5	35	1.5
Sample volume processed (l)			20	4	10	8	6	9	9	8
Period			5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3
Charcoal quantity			+++	+++++	+++	++	++	+++	+++++	++
Charcoal preservation			Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Good	Good
Recommendations for further work			No	Yes	No	No	No	No	Yes	No
Family	Species	Common Name								
Adoxaceae	<i>Sambucus nigra</i> L.	Elder		1						
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel		1		1			1	
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w			1					
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak	1	8	1	4	10	8		4
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w	4		8			2	1	
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash	1							
	<i>Fraxinus excelsior</i> L.	Ash r/w							8	
Rosaceae	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple	1							4
	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple r/w	1							
	<i>Prunus</i> L.	Cherries	2							
Salicaceae	<i>Salix</i> L./ <i>Populus</i> L.	Willows/Poplars								1
Total				10	10	5	10	10	10	9



Table 13.12 SPE2 Charcoal identifications

Context number			20550	20551	20561	20635	20656	20696	20734	20745	20745	20570
Feature number			20301	20301	-	20636	20657	20697	20736	20748	20748	20569
Feature label			Building B	Building B	Building A	Building C	Ditch DN	Building C	Building C	Building C	Building C	
Sample number (SS)			223	224	225	243	246	253	257	258	259	233
Flot volume (ml)			5	2	2.5	2	48	3	16	5	12	3
Sample volume processed (l)			9	6	10	1	40	9	15	16	27	9
Period			5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	5.1-5.3	8
Charcoal quantity			++	++	+++	++	+++++	+	+	+	+	+++
Charcoal preservation			Good	Good	Good	Good	Good	Moderate	Moderate	Moderate	Moderate	Good
Recommendations for further work			No	No	No	No	Yes	No	No	No	No	No
Family	Species	Common Name										
Aceraceae	<i>Acer campestre</i> L. r/w	Field maple r/w			1							
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel						2				
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w			3							3
	<i>Betula</i> L.	Birches								1		
Fabaceae	<i>Ulex</i> L./ <i>Cytisus</i> Desf.	Gorses/Brooms r/w							1			1
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/ Pedunculate Oak	2	5	1	3	6	2	1	1	1	3
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/ Pedunculate Oak r/w									1	2
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash	1	1			3					
	<i>Fraxinus excelsior</i> L.	Ash r/w			1							
Rosaceae	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/ Crab apple					1		1			
	<i>Prunus</i> L.	Cherries				1						

	Prunus L.	Cherries r/w			2							1
	Total		3	6	8	4	10	4	3	2	2	10

Table 13.13 SPE2 Charcoal identifications

<b>Context number</b>	20624	20648	20019	20325	20439	20450	20524	20626	20645	20663
<b>Feature number</b>	20625	20674	20020	20324	20438	20449	20523	-	20644	20661
<b>Feature label</b>								Building C		
<b>Sample number (SS)</b>	241	244	200	205	211	216	215	242	245	247
<b>Flot volume (ml)</b>	7	226	144	8.5	24.5	38	18	30.5	21	33
<b>Sample volume processed (l)</b>	18	15	36	2	4	2	8	33	5	16
<b>Period</b>	8	8	U	U	U	U	U	U	U	U
<b>Charcoal quantity</b>	++	+++++	+++++	++	++	++++	+++	++	+++++	++++
<b>Charcoal preservation</b>	Moderate	Good	Good	Poor	Moderate	Moderate	Moderate	Poor	Good	Good
<b>Recommendations for further work</b>	No	No	Yes	No	No	No	No	No	Yes	No
<b>Family</b>	<b>Species</b>	<b>Common Name</b>								
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn.	Alder								
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel								
	<i>Betula</i> L.	Birches								
	<i>Corylus avellana</i> L.	Hazel								
	<i>Corylus avellana</i> L.	Hazel r/w twig								
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/ Pedunculate Oak								
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/ Pedunculate Oak r/w								
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash								
Rosaceae	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/ Crab apple								
	<i>Salix</i> L./ <i>Populus</i> L.	Willows/Poplars								
Salicaceae	<i>Salix</i> L./ <i>Populus</i> L.	Willows/Poplars r/w								
		Indeterminate								

---

Total	10	10	10	0	3	10	3	10	10	10
-------	----	----	----	---	---	----	---	----	----	----

Table 3.14 SPE2 Charcoal identifications

Context number			20665	20667	20669	20672	20687	20713	20716	20801	20872
Feature number			20664	20666	20668	20671	20688	20712	20717	20802	20871
Feature label			Ditch DP								
Sample number (SS)			248	249	250	251	254	252	255	260	262
Flot volume (ml)			6	164	3	32	5	3	6.5	3.5	22
Sample volume processed (l)			16	36	8	8	8	6	4	31	37
Period			U	U	U	U	U	U	U	U	U
Charcoal quantity			++++	+++++	+++	++++	++	+	++	+++	+++++
Charcoal preservation			Good	Good	Moderate	Good	Good	Good	Poor	Moderate	Moderate
Recommendations for further work			No	Yes	No	Yes	No	No	No	No	Yes
Family	Species	Common Name									
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel		2	1			1		3	1
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w			1						
	<i>Corylus avellana</i> L.	Hazel		3							
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak		4	3				2	5	6
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w		1							1
Oleaceae	<i>Fraxinus excelsior</i> L.	Ash	3			9	2				
	<i>Fraxinus excelsior</i> L.	Ash r/w				1					
Rosaceae	<i>Crataegus monogyna</i> Jacq./ <i>Sorbus</i> L./ <i>Malus sylvestris</i> (L.) Mill.	Hawthorn/Rowans/Crab apple	1		2		1	2			
	<i>Prunus</i> L.	Cherries			1				1	2	
	<i>Prunus spinosa</i> L.	Blackthorn									2
Ulmaceae	<i>Ulmus glabra</i> Huds.	Wych Elm			1						
Total			4	8	9	10	3	3	3	10	10

Table 13.15 SPE3 Plant macrofossil identifications

<b>Context number</b>				30008	30008	30009	30010
<b>Feature number</b>				30003	30003	30003	30003
<b>Feature label</b>				Ditch A	Ditch A	Ditch A	Ditch A
<b>Sample number (SS)</b>				303	304	302	301
<b>Flot volume (ml)</b>				41	10.5	606	2
<b>Sample volume processed (l)</b>				17	16	32	35
<b>Period</b>				7	7	7	7
<b>Plant macrofossil preservation</b>				Good	Poor	Poor	N/A
<b>Recommendations for further work</b>				No	No	No	No
<b>Habitat Code</b>	<b>Family</b>	<b>Species</b>	<b>Common Name</b>				
HSW	Betulaceae	<i>Corylus avellana</i> L.	Hazelnut shells	+			
D/A/P	Fabaceae	<i>Vicia</i> L./ <i>Lathyrus</i> L.	Vetches/Peas (whole)	+		+	
E	Poaceae	<i>Avena</i> L.	Oats grain		?+		
E		<i>Hordeum vulgare</i> L.	Barley grain		?+		
E		<i>Secale cereale</i> L.	Rye grain	+			
E		<i>Triticum aestivum</i> L./ <i>Triticum turgidum</i> L./ <i>Triticum durum</i> Desf.	Free-threshing wheat	+		+	
E		<i>Poaceae</i>	Indet. cereal grain (fragment)	++	+		
E		<i>Poaceae</i>	Indet. cereal grain (fragment <1mm)	+			
HSW	Rosaceae	<i>Prunus</i> L.	Cherry sp. pip fragment and flesh	?+			
			Modern seeds				+

Table 13.16 SPE3 Plant macrofossil identifications

<b>Context number</b>			30008	30008	30009	30010
<b>Feature number</b>			30003	30003	30003	30003
<b>Feature label</b>			A	A	A	A
<b>Sample number (SS)</b>			303	304	302	301
<b>Flot volume (ml)</b>			41	10.5	606	2
<b>Sample volume processed (l)</b>			17	16	32	35
<b>Period</b>			7	7	7	7
<b>Charcoal quantity</b>			+++++	+++	+++++	++++
<b>Charcoal preservation</b>			Poor	Poor	Poor	Poor
<b>Recommendations for further work</b>			No	No	No	No
<b>Family</b>	<b>Species</b>	<b>Common Name</b>				
Betulaceae	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel				1
	<i>Alnus glutinosa</i> (L.) Gaertn./ <i>Corylus avellana</i> L.	Alder/Hazel r/w	1			
	<i>Corylus avellana</i> L.	Hazel r/w	2			
Fagaceae	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak	7	8	10	9
	<i>Quercus petraea</i> (Matt.) Liebl./ <i>Quercus robur</i> L.	Sessile Oak/Pedunculate Oak r/w		2		
<b>Total</b>			10	10	10	10

## Key

r/w = roundwood (evidence of curved growth rings)

indet. = indeterminate

+ = 1-4 items; ++ = 5-20 items; +++ = 21-40 items; ++++ = 40-99 items; +++++ = 100-500 items; ++++++ = &gt;500 items

A = arable weed; D= opportunistic species; P = grassland species; M = marshland species;; HSW = hedgerow/shrub/woodland plant; E = economic plant

? = morphology of seed similar to this species

## APPENDIX 14: RADIOCARBON DATING BY SARAH COBAIN

Radiocarbon dating was undertaken from site SPE 1 in order to confirm the dates of pits 10031 and 10263 and posthole 10145. The samples were analysed during September 2015 at Scottish Universities Environmental Research Centre (SUERC), Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow, G75 0QF, Scotland.

The uncalibrated dates are conventional radiocarbon ages. The radiocarbon ages were calibrated using the University of Oxford Radiocarbon Accelerator Unit calibration programme OxCal 4.2 (Bronk Ramsey 2009) using the IntCal13 curve (Reimer *et al.* 2013).

The results are in close agreement and confirm the Middle Bronze Age date of these features.

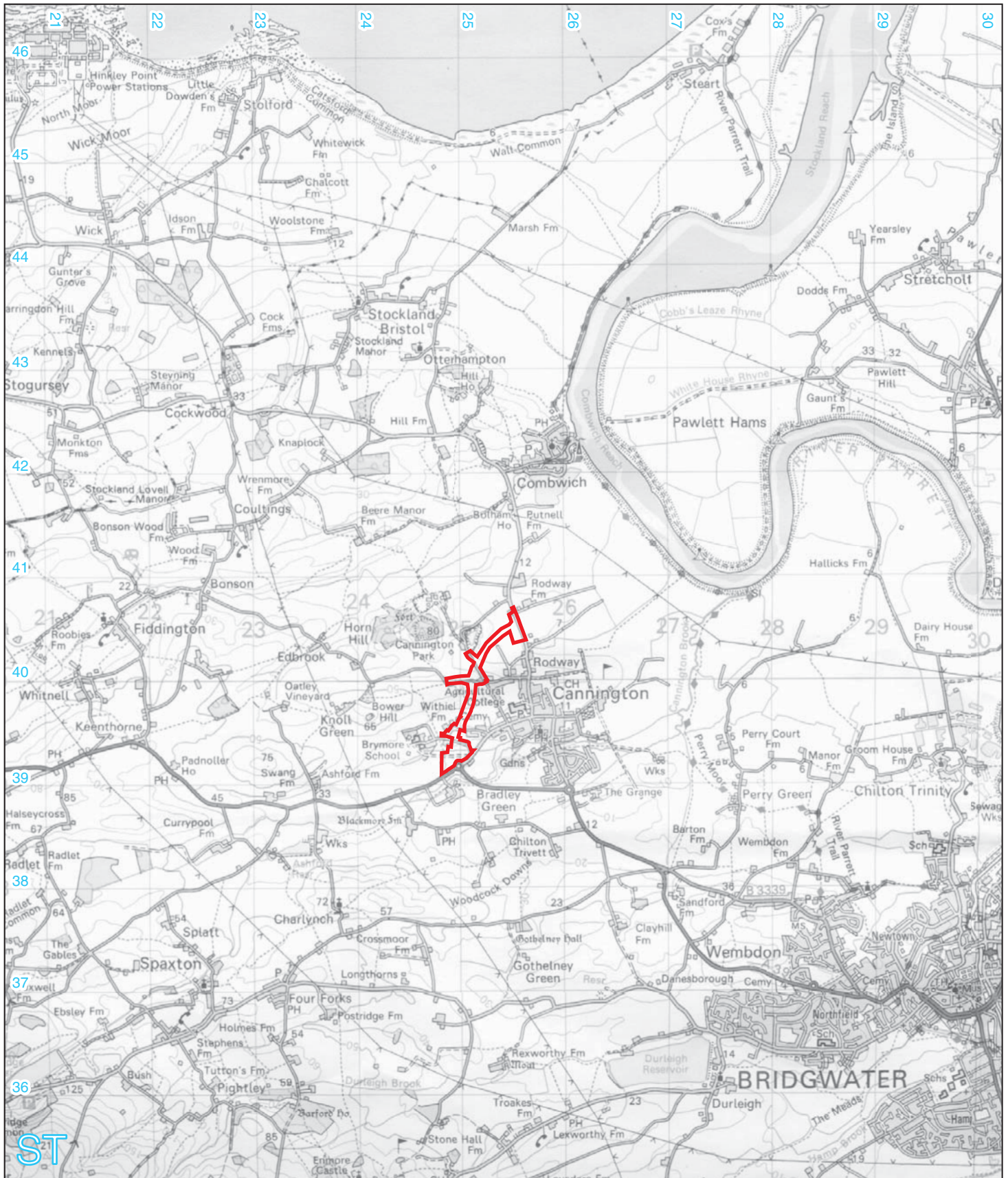
Table 14.1 Radiocarbon dating results

Feature	Lab No.	Material	$\delta^{13}\text{C}$	Radiocarbon age	Calibrated radiocarbon age 95.4% probability	Calibrated radiocarbon age 68.2% probability
Context 10033 Pit 10031	SUERC-63442	Charcoal - <i>Prunus</i> (Cherry species)	-25.0‰	3131 ± 31 yr BP	1495–1476 cal BC (4.0%) 1460–1371 cal BC (66.1%) 1359–1300 cal BC (25.3%)	1441–1388 cal BC (54.2%) 1339–1319 cal BC (14.0%)
Context 10146 Posthole 10145	SUERC-62336	Charcoal - <i>Alnus glutinosa</i> / <i>Corylus avellana</i> (Alder/hazel)	-26.5‰	3089 ± 30 yr BP	1426–1276 cal BC (95.4%)	1410–1374 cal BC (26.8%) 1355–1302 cal BC (41.4%)
Context 10262 Pit 10263	SUERC-62337	Charred seed - <i>Linum usitatissimum</i> (Flax)	-27.5‰	3082 ± 30 yr BP	1418–1266 cal BC (95.4%)	1404–1373 cal BC (23.4%) 1358–1300 cal BC (44.8%)



**APPENDIX 15: OASIS REPORT FORM**

<b>PROJECT DETAILS</b>	
Project Name	Cannington Bypass Excavations, Somerset
Short description	<p>In SPE1 was found a Middle Bronze Age settlement enclosure defined by a ditch with an entrance to the south west. In interior were groups of shallow pits and postholes, which may have been the location of houses or other structures, although they formed no clear pattern. Finds of Trevisker-related pottery and charred plant remains came for the ditch and the interior features, but there were few other finds and animal bones had not survived.</p> <p>In SPE2 was found a late Iron Age enclosed ridge-top settlement with evidence for several roundhouses. In the Roman period the settlement developed in to villa complex with three distinctive stone-founded building – a bath house (Building A) a barn-like structure (Building B) and a villa residence (Building C). Building A showed several episodes of construction including a hypocaust that was later filled in. The gallery of Building C was the site of four infant burials. On the whole the site was poorly preserved because of extensive post-medieval quarrying as well as ploughing. Pottery, ceramic building material and animal bones were plentiful, although metalwork and exotic finds were quite rare and the settlement does not seem to have been a grand one in comparison with other villas.</p> <p>In SPE3 was found a hollow way that had filled in during the medieval period and was subsequently used as a boundary.</p>
Project dates	Excavations June – September 2014
Project type	Excavation
Previous work	DBA (AMEC Ltd 2010); Geophysics (Stratascan 2010); Evaluation (Cotswold Archaeology 2011)
Future work	None
<b>PROJECT LOCATION</b>	
Site Location	Cannington, Somerset
Study area (M <sup>2</sup> /ha)	26 ha
Site co-ordinates	ST 2510 4000
<b>PROJECT CREATORS</b>	
Name of organisation	Cotswold Archaeology
Project Brief originator	AMEC Ltd
Project Design (WSI) originator	AMEC Ltd (2011)



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**PROJECT TITLE**  
 Cannington Bypass, Somerset

**FIGURE TITLE**  
 Site location plan

0 2km

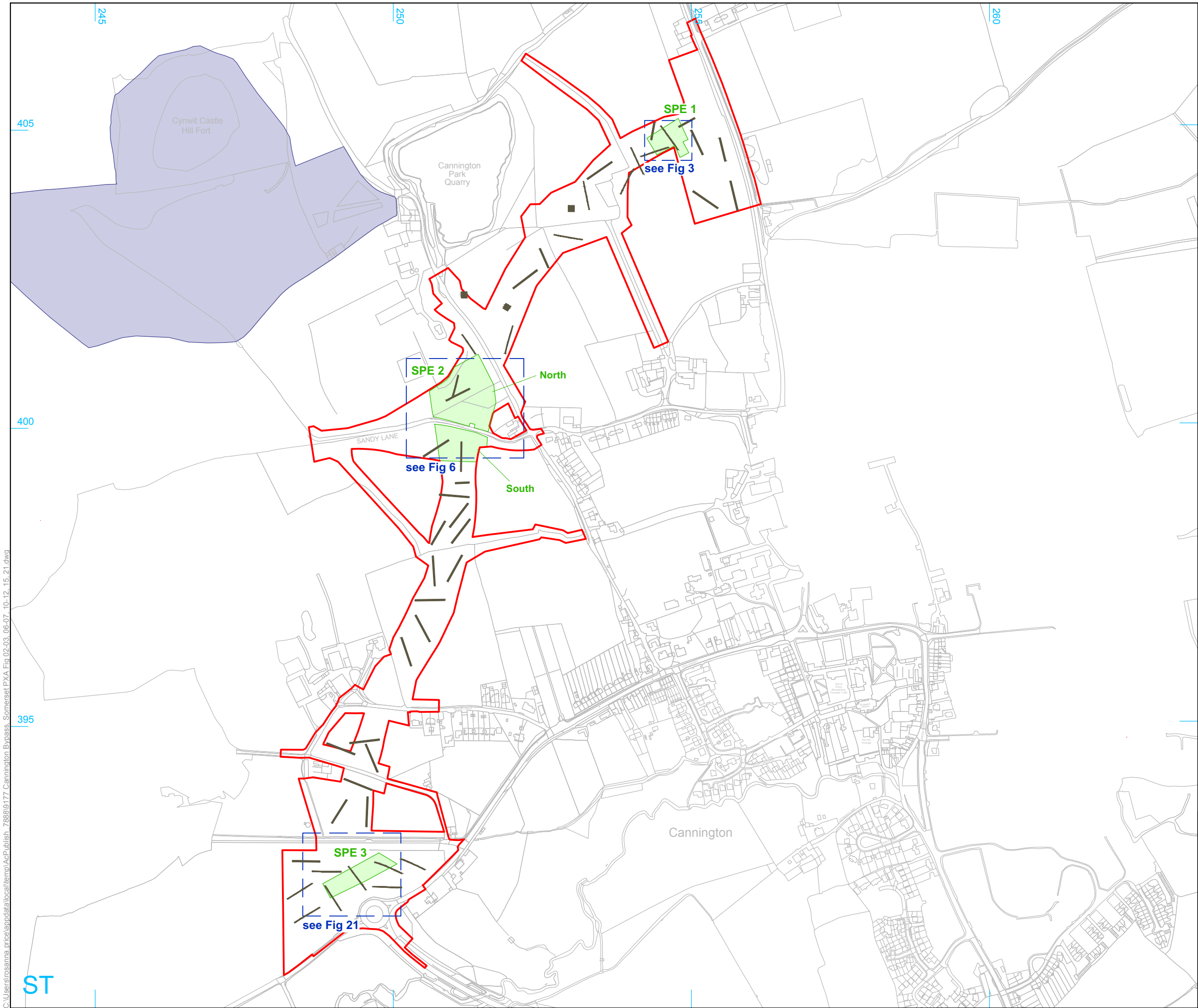
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<b>CHECKED BY</b>	<b>DJB</b>	<b>DATE</b>	<b>20.01.16</b>
<b>APPROVED BY</b>	<b>AM</b>	<b>SCALE@A4</b>	<b>1:50,000</b>

**FIGURE NO.**

**1**





- site boundary
- excavation area
- evaluation trench
- Scheduled Monument

0 300m

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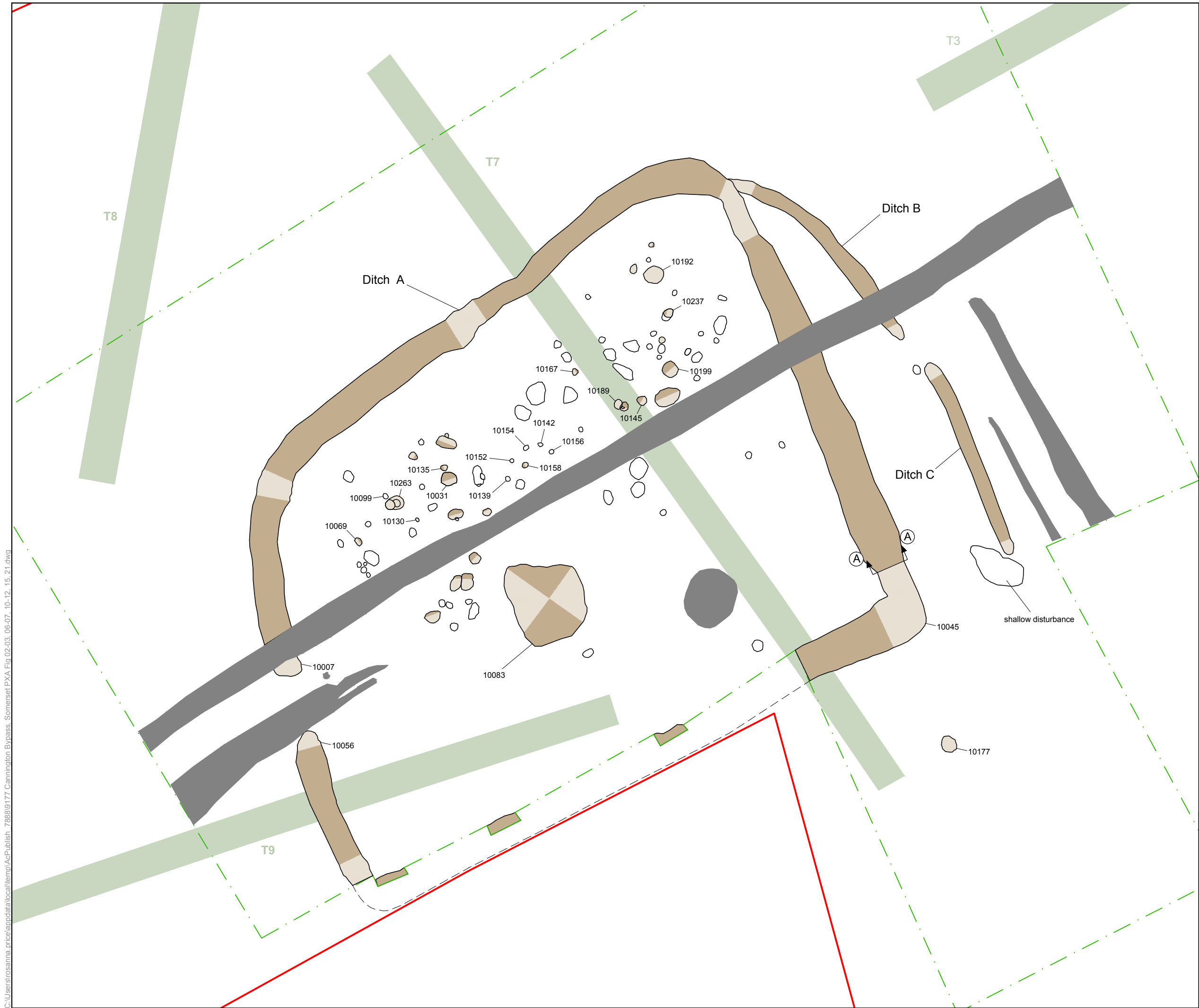
PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
Location of groundworks, evaluation  
trenches and excavation areas

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CHECKED BY LM  
APPROVED BY AM

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DATE 29.07.15  
SCALE@A3 1:6000

FIGURE NO.  
2



- site boundary
- excavation area
- evaluation trench
- excavated segment
- Period 3.2: middle Bronze Age
- Period 8: post-medieval
- unphased
- projected feature
- section location

0 10m



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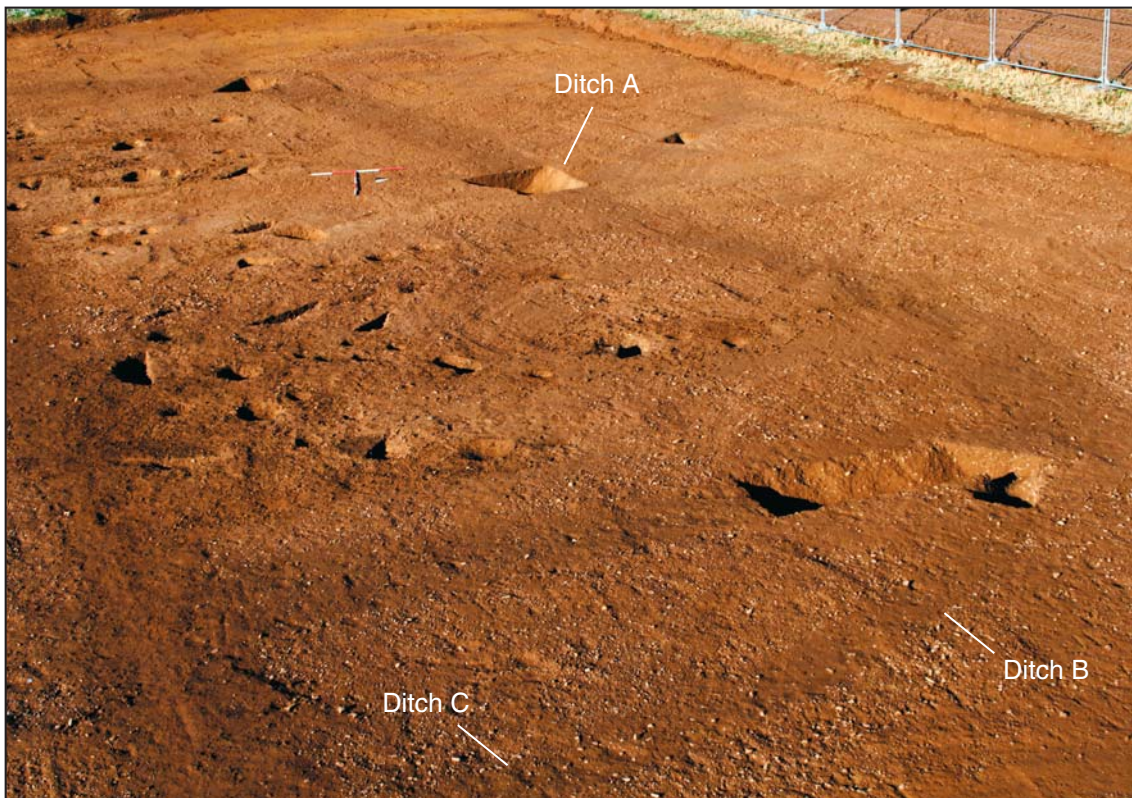
01908 564660

PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
SPE 1: site plan

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SCALE@A3 1:200

FIGURE NO.  
3



4

#### 4 SPE 1, general view of site, looking west (scales 2m)



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FIGURE TITLE

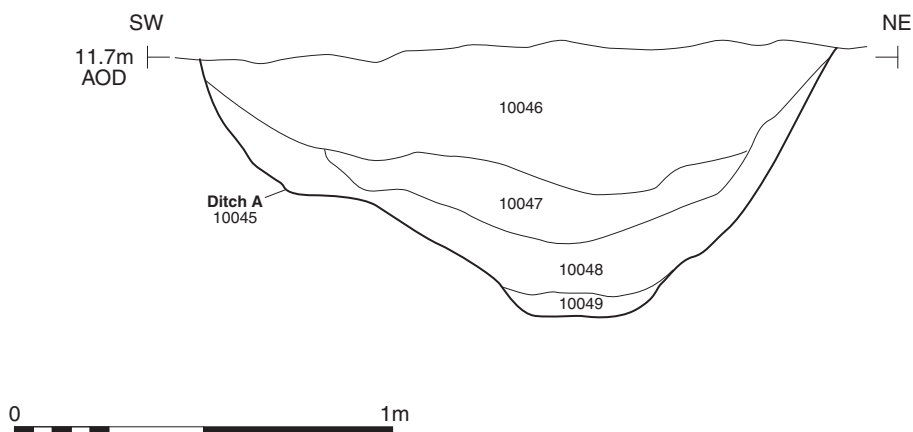
**Photograph**

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FIGURE NO.

**4**

Section AA



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FIGURE TITLE

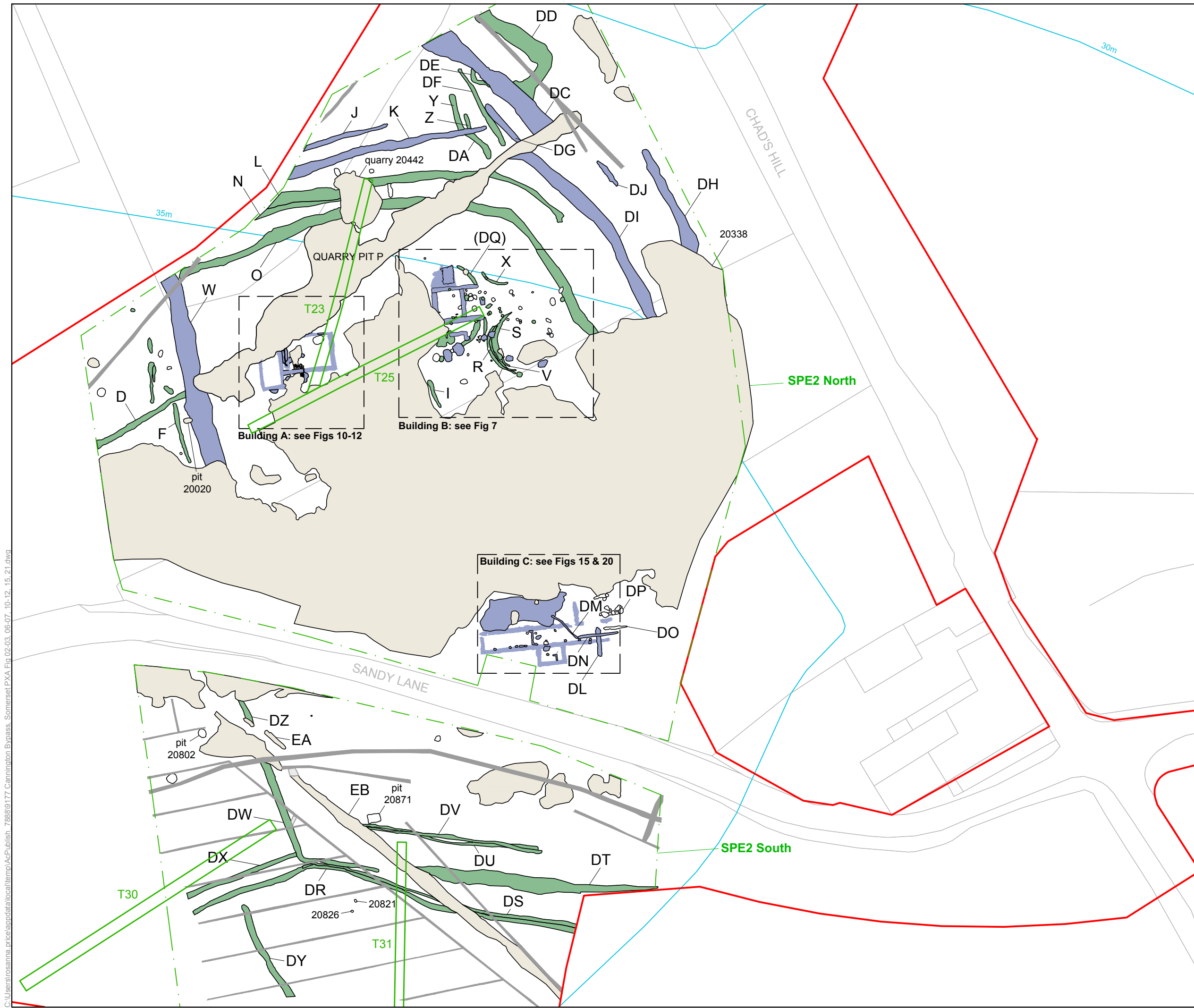
**SPE 1: south-east facing section through Ditch A**

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 APPROVED BY AM SCALE@A4 1:20

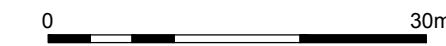
FIGURE NO.

**5**





- site boundary
- excavation area
- evaluation trench
- Period 4.3: Late Iron Age and Period 4.4: Late Iron Age/Roman transition
- Period 5.1-5.3: Roman
- Period 8: post-medieval
- Period 9: modern
- unphased
- section location



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PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
SPE 2: site plan

P:\9177 Cannington bypass PXA\Illustration\Drafts\PXA\9177 Cannington Bypass Somerset PXA Fig 02-03\_06-07\_10-12\_15\_21.dwg

T25

20300/20301

Curvilinear Ditch A

DQ

Curvilinear Ditch C

X

20520

20298

posthole  
20563

20492

posthole  
20456

20433

20418

20420

20106

20311

pit  
20342

LL

Curvilinear Ditch B

20527

Oven 20600

pit  
20071

pit  
20098

T

pit  
20169

20187

R

Q

S

©

V

pit  
20487

I

- Period 4.3: Late Iron Age and Period 4.4: Late Iron Age/Roman transition
- Period 4.3-4.4: early phases
- Period 4.3-4.4: later phases
- Period 5.1-5.3: Roman
- Period 8: post-medieval
- unphased
- section location

0 5m

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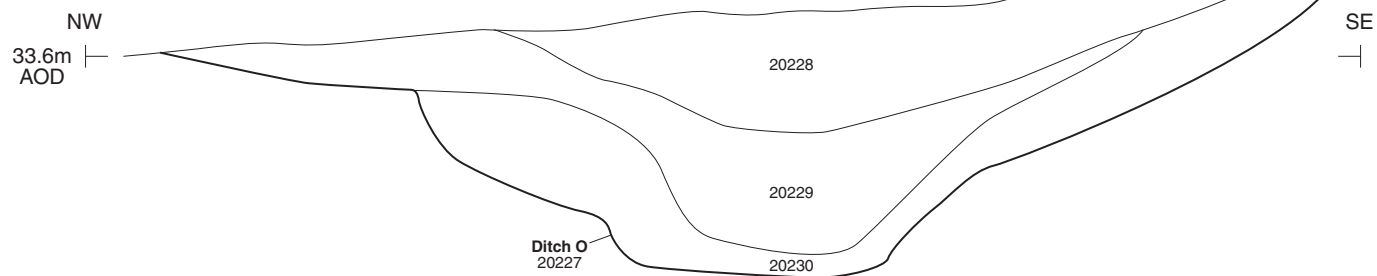
FIGURE TITLE

Plan of Iron Age curvilinear ditches and Building B

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Section BB



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FIGURE TITLE

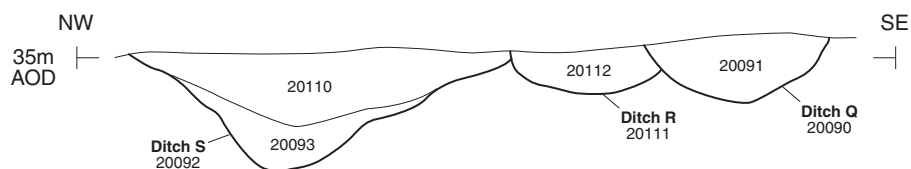
**SPE 2: south-west facing section  
 through Ditch O**

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FIGURE NO.

**8**

# Section CC



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## PROJECT TITLE

Cannington Bypass, Somerset

## FIGURE TITLE

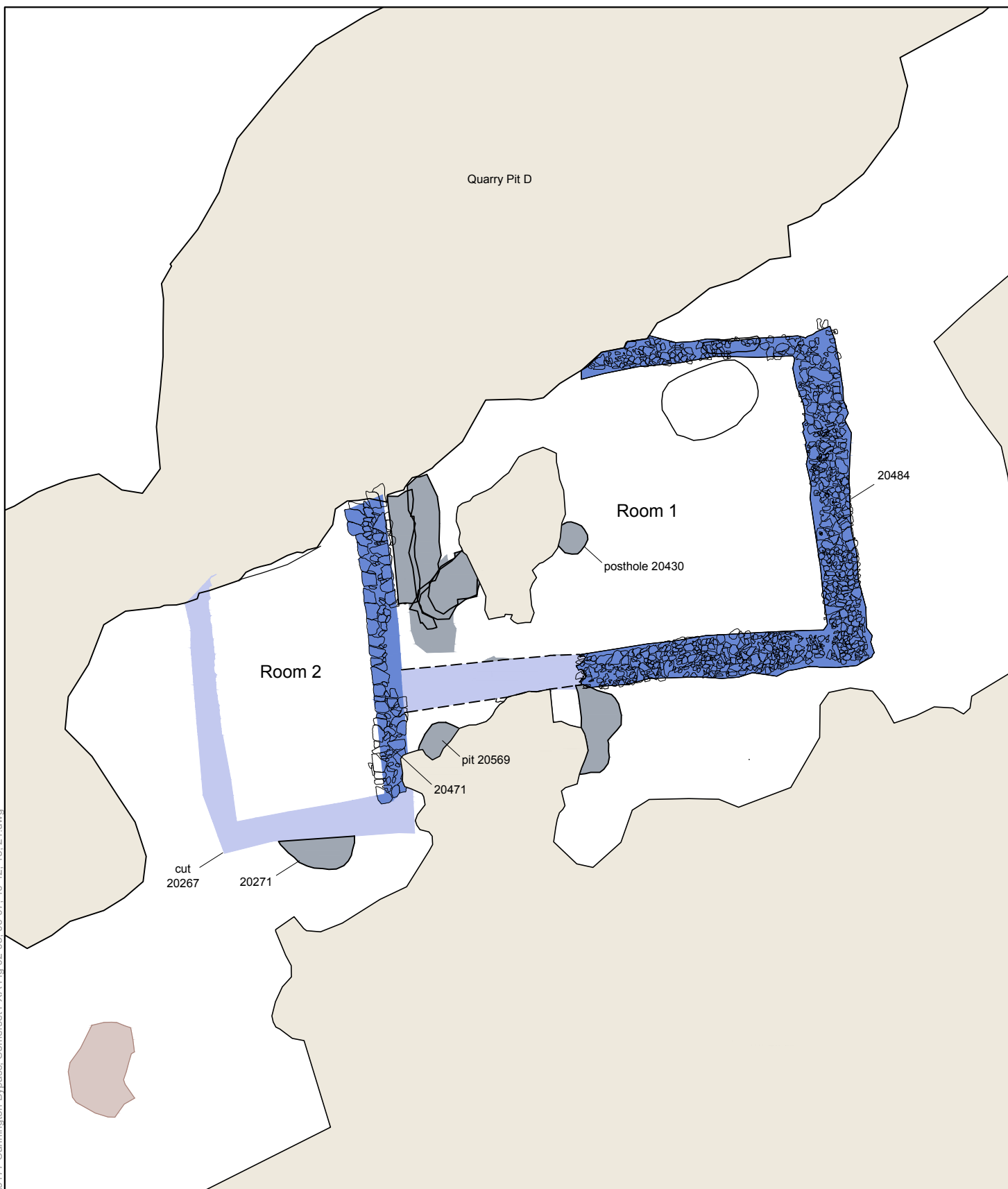
**SPE 2: north-west facing section  
 through curvilinear Ditch B**

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 APPROVED BY **AM** SCALE@A4 **1:20**

FIGURE NO.

**9**

C:\Users\rosanna\_price\appdata\local\temp\AcPublish\_106491777 Cannington Bypass, Somerset PXA Fig 02-03, 06-07, 10-12, 15, 21.dwg



- Figure 5: Roman pre-Phase 1
- Figure 5: Roman Phase 1 wall
- Figure 5: Roman Phase 1 projected wall
- Period 8: post-medieval
- unphased
- tree-throw pit

0 5m



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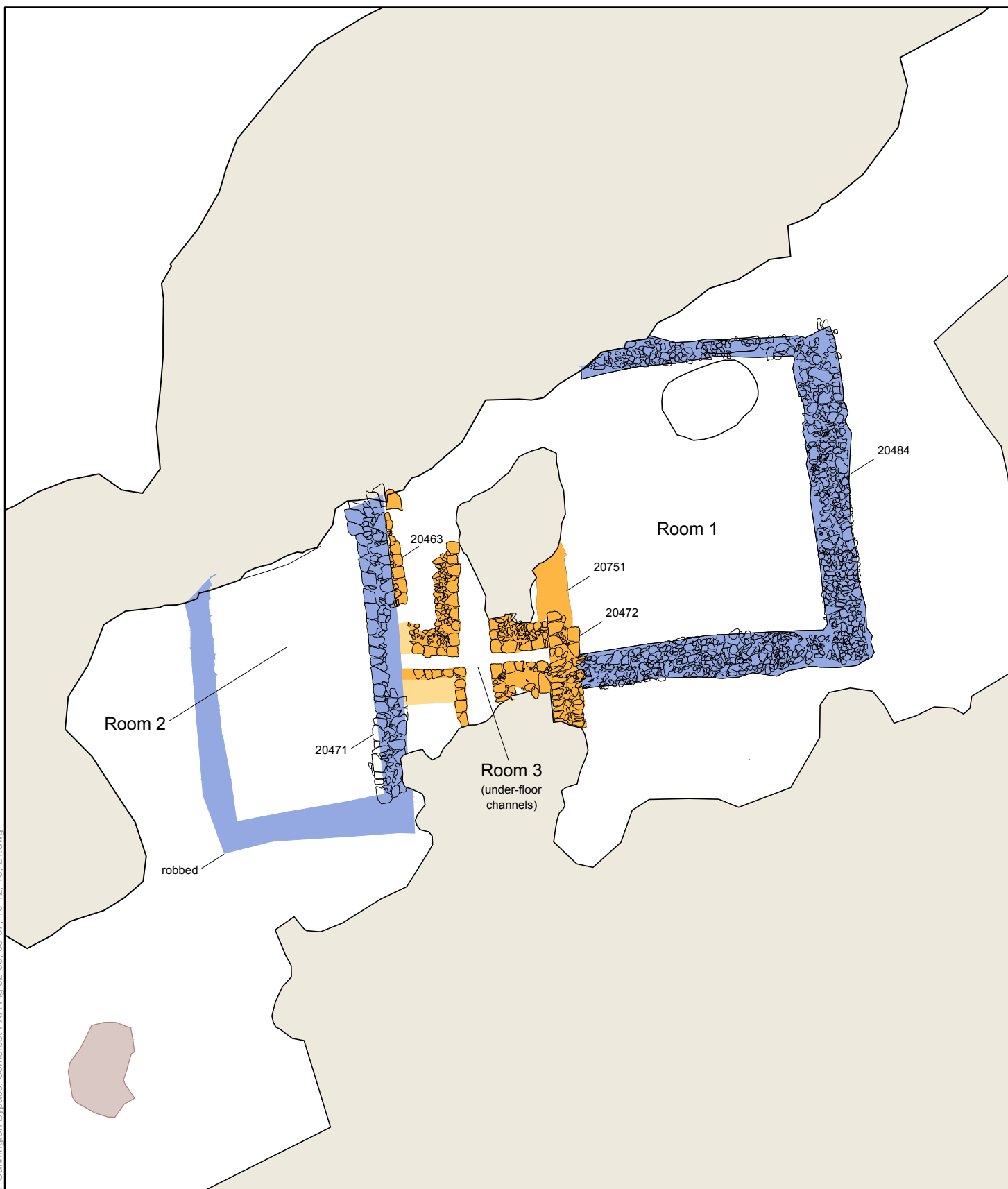
FIGURE TITLE

Building A: plan of Phase 1

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FIGURE NO.

10



- Period 5: Roman Retained from Phase 1
- Period 5: Roman Phase 2 wall
- Period 5: Roman Phase 2 projected wall
- Period 8: post-medieval
- unphased
- tree-throw pit



0 5m



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PROJECT TITLE

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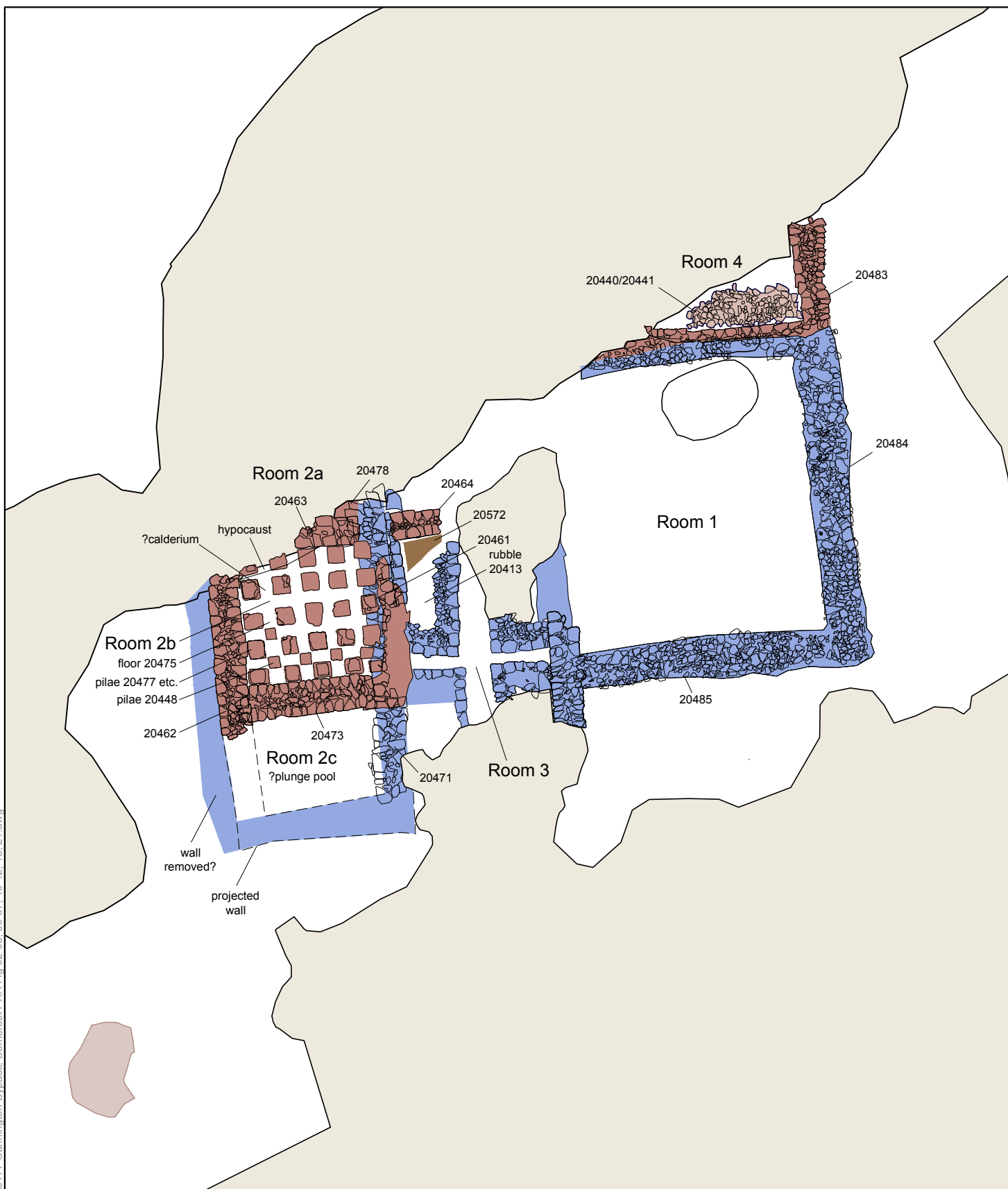
FIGURE TITLE

Building A: plan of Phase 2

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FIGURE NO.

11



- |  |                               |  |                               |
|--|-------------------------------|--|-------------------------------|
|  | Retained from previous phases |  | unphased                      |
|  | Period 5: Roman Phase 3 wall  |  | Post-Phase 3 demolition layer |
|  | Phase 3 surface               |  | tree-throw pit                |
|  | Period 8: post-medieval       |  | projected feature             |

0 5m



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Cannington Bypass, Somerset

FIGURE TITLE

Building A: plan of Phase 3

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FIGURE NO.

12





13



14

**13 Building A during excavation, showing its landscape setting, looking north-east**

**14 Detail of Building A, Phase 3 hypocaust in Room 2, looking west (scale 2m)**



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PROJECT TITLE

Cannington Bypass, Somerset

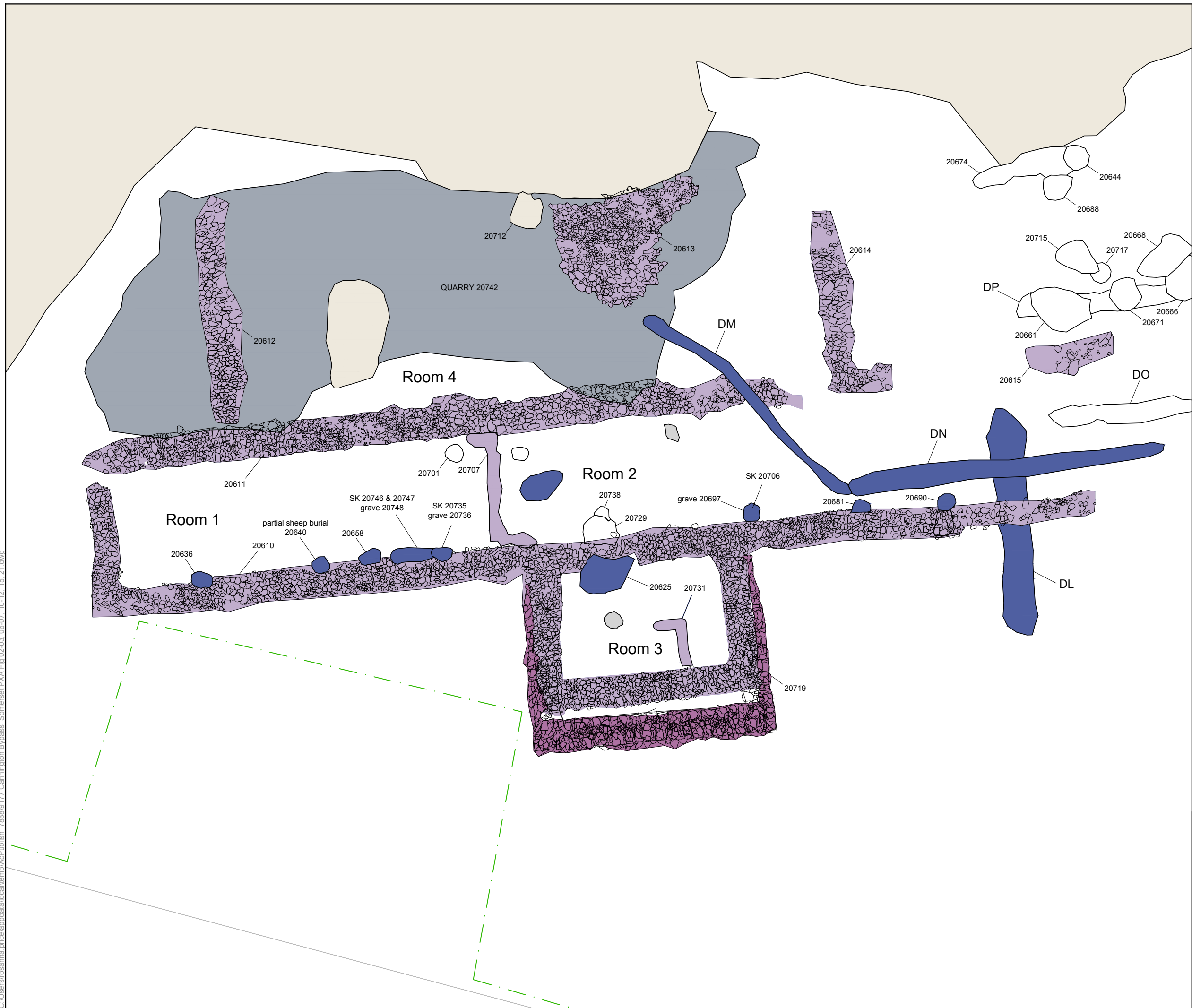
FIGURE TITLE

**Photographs**

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CHECKED BY	DJB	DATE	23.02.16
APPROVED BY	AM	SCALE@A4	N/A

FIGURE NO.  
**13 & 14**

C:\Users\rosanna.pricelap\data\local\temp\AcPublish\_78889177\_Cannington Bypass, Somerset\PSA Fig 02-03\_06-07\_10-12\_15\_21.dwg



- pre Phase 1
- Period 5: Roman Building C Phase 1
- Period 5: Roman Building C Phase 2
- Roman
- Period 8: post-medieval
- unphased
- demolition layer

0 3m

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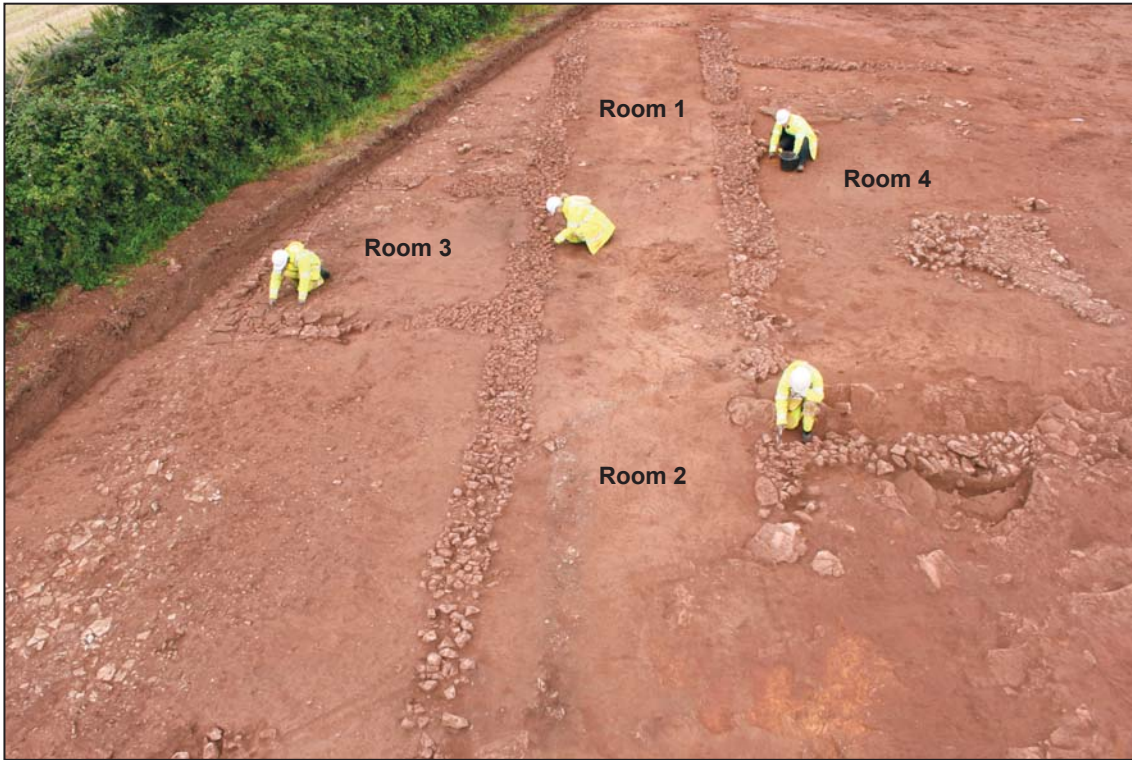
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PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
Plan of Building C

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16



17

16 Building C during cleaning, looking west

17 Skeleton 20706, looking east (scale 0.5m)



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PROJECT TITLE

Cannington Bypass, Somerset

FIGURE TITLE

**Photographs**

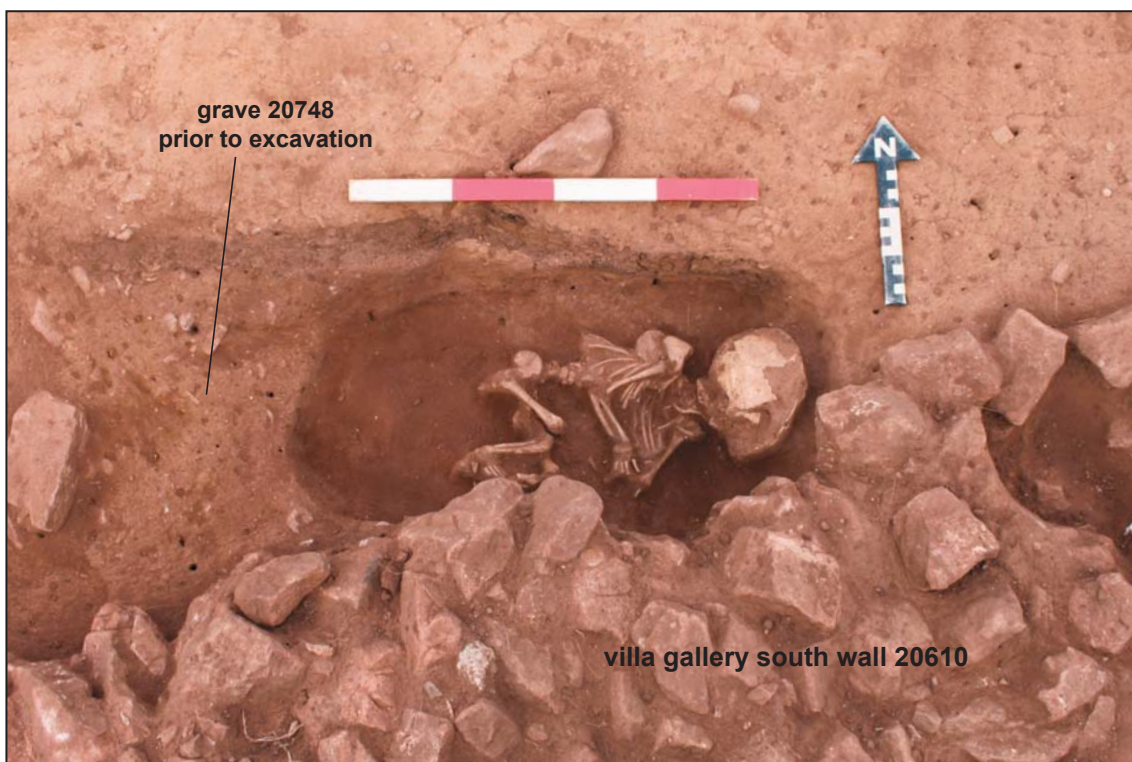
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FIGURE NO.  
**16 & 17**





18



19

18 Skeletons 20746 and 20747, looking north (scale 1m)

19 Skeleton 20735, looking north (scale 0.5m)



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PROJECT TITLE

Cannington Bypass, Somerset

FIGURE TITLE

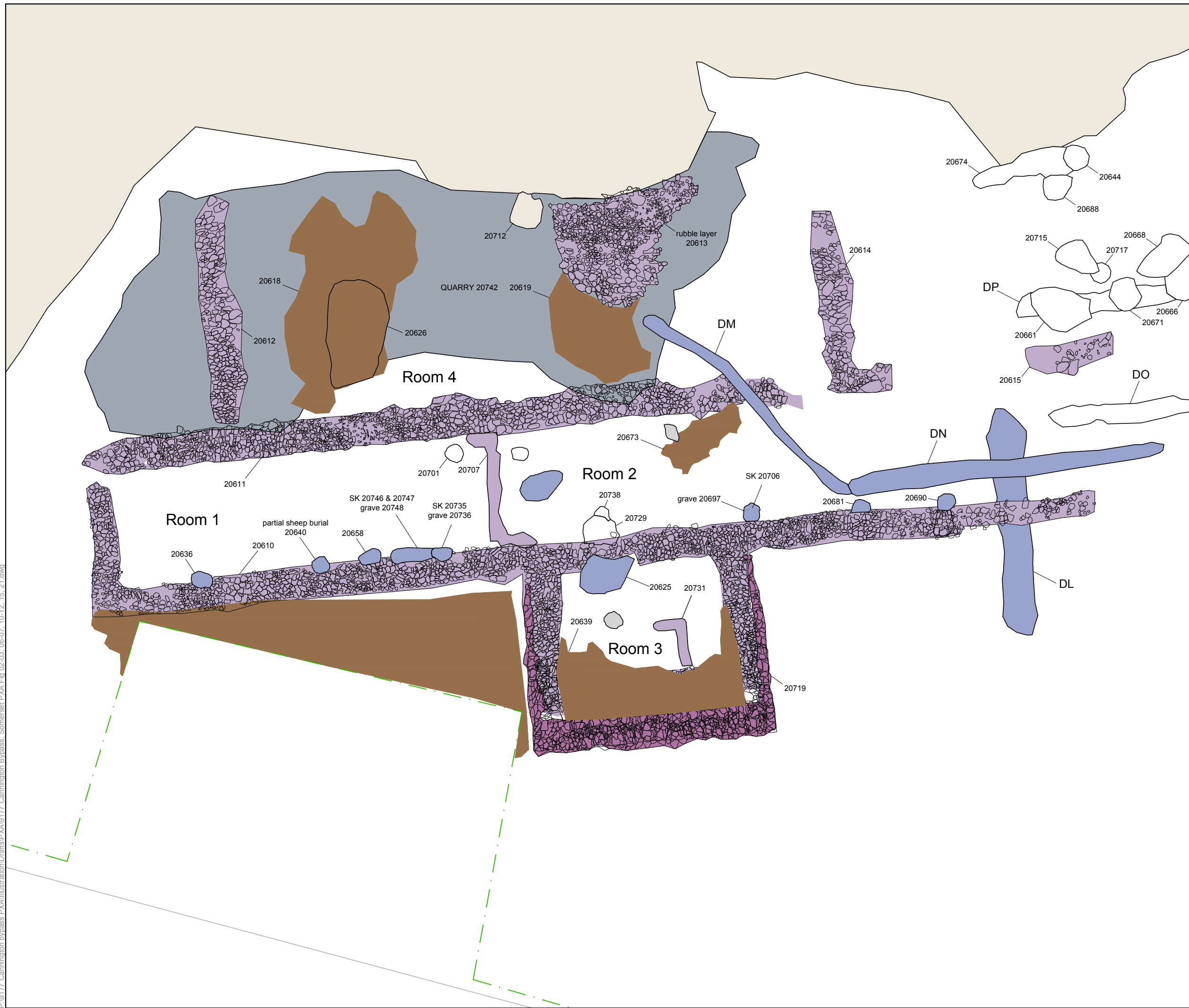
**Photographs**

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CHECKED BY	DJB	DATE	26.01.16
APPROVED BY	AM	SCALE@A4	N/A

FIGURE NO.

**18 & 19**

P:\9177 Cannington bypass PXA\Illustration\Drafts\PXA\9177 Cannington Bypass Somerset PXA Fin 02-03 06-07 10-12 15 21.dwg



- demolition layer
- pre Phase 1
- Period 5: Roman**
- Building C Phase 1
- Building C Phase 2
- Roman
- Period 8: post-medieval
- unphased

0 3m

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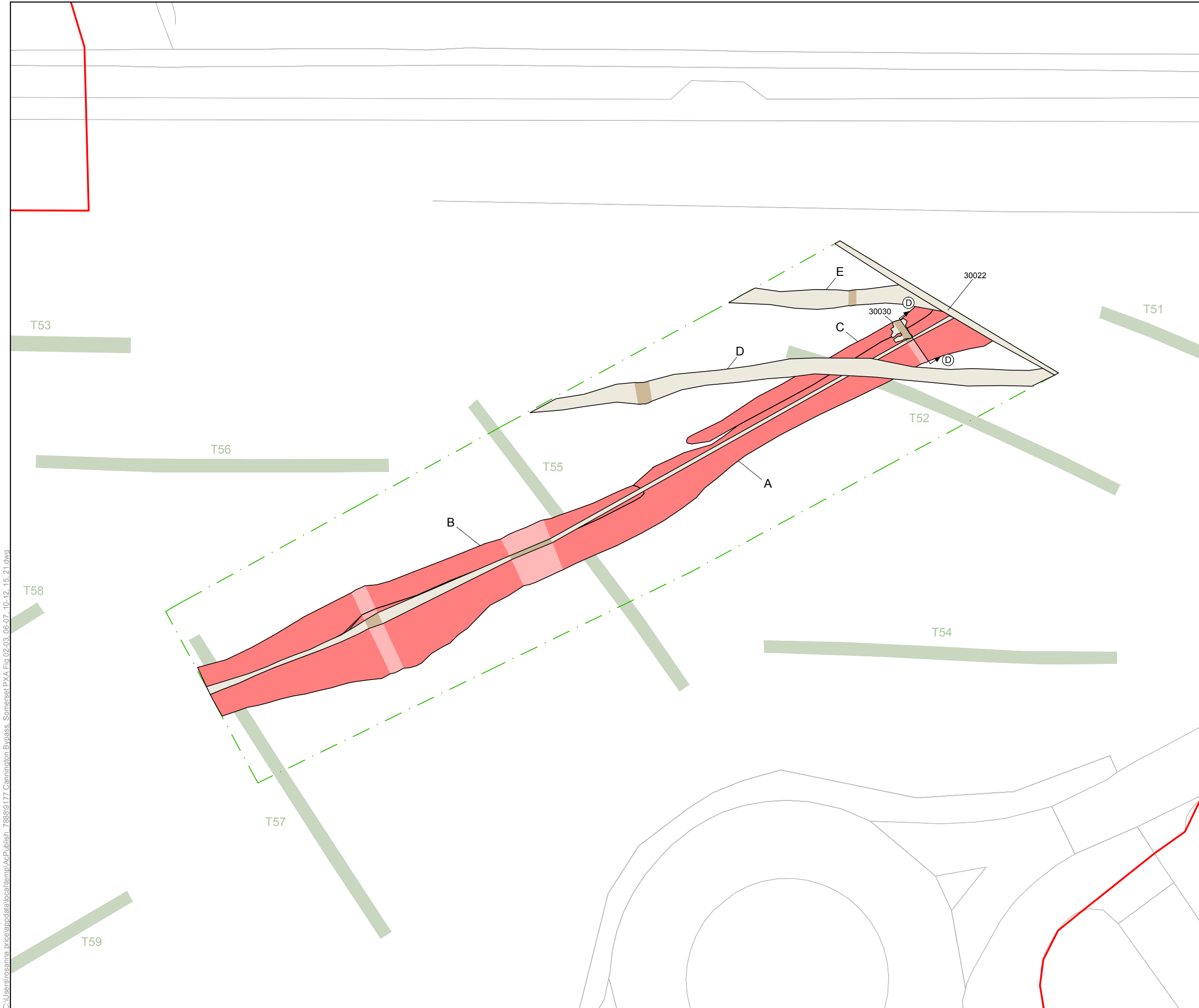
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PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
**Plan of demolition deposits overlying Building C**

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- site boundary
- excavation area
- evaluation trench
- Period 7: medieval
- Period 8: post-medieval
- excavated segment
- section location



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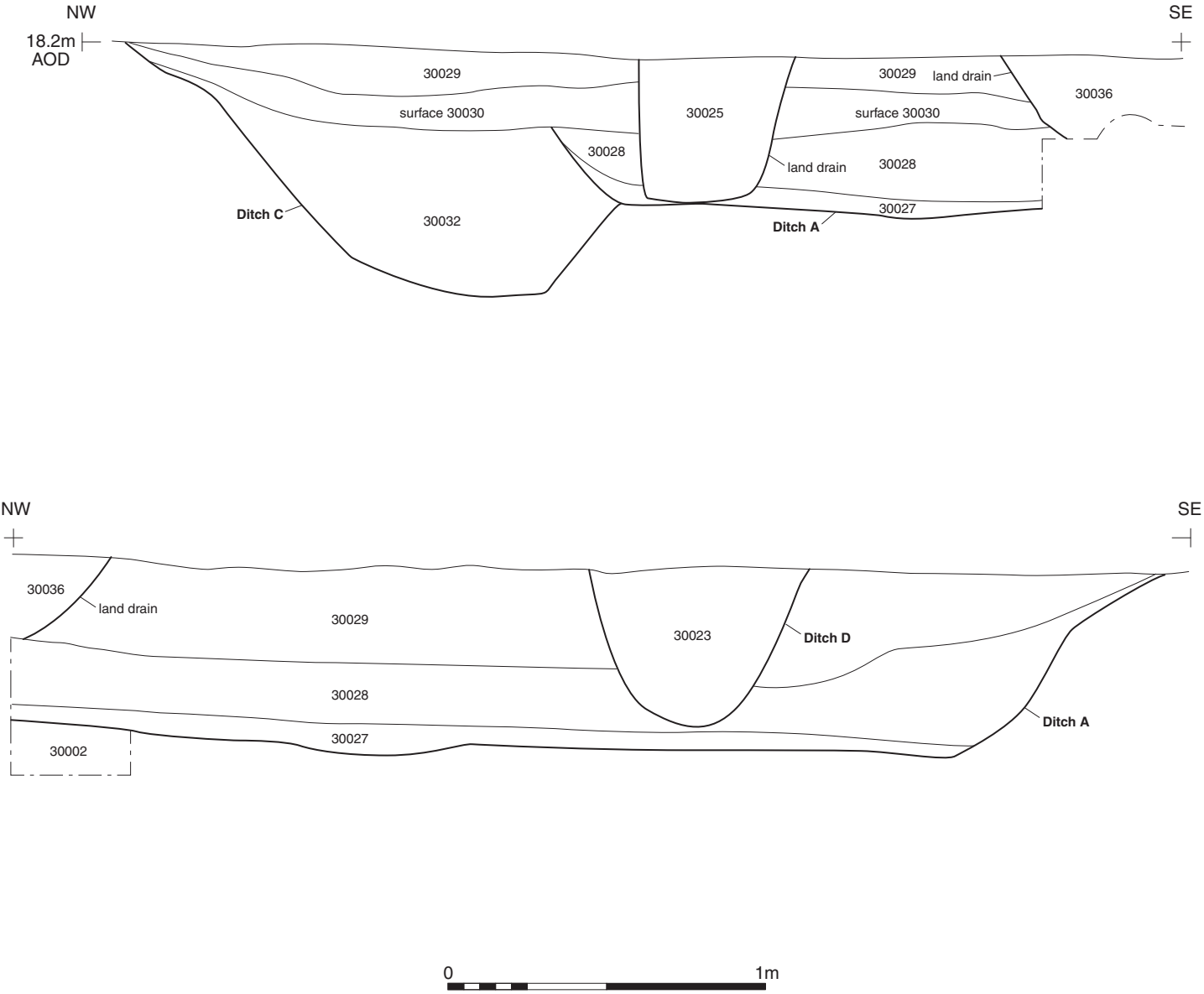
PROJECT TITLE  
Cannington Bypass, Somerset

FIGURE TITLE  
SPE 3, site plan

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Section DD



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PROJECT TITLE

Cannington Bypass, Somerset

FIGURE TITLE

**SPE 3: south-west facing section  
through Ditches A, C and D**

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FIGURE NO.

**22**

Project Manager	Richard Young	
Project Supervisors	Mark Brett with Charlotte Haines and Sian Reynish	
<b>MONUMENT TYPE</b>	Bronze Age enclosure, Iron Age settlement and Roman villa	
<b>SIGNIFICANT FINDS</b>	Trevisker Ware, Iron Age pottery, Roman pottery, CBM, mortar, plaster, human bone, animal bone, charred plants	
<b>PROJECT ARCHIVES</b>	Intended final location of archive: Somerset County Museum, Taunton, Accession No. TTNCM 4/2010	Content (e.g. pottery, animal bone etc)
Physical		Pottery x7; CBM x10; metals x4; slag x1; plaster x2; mortar x2; stone x1; hu bone x2; an bone x5; environ x2 boxes
Paper		Context sheets, matrices, plans, sections, registers, photo contacts. X5 boxes
Digital		Databases, photos, GPS survey, registers
<b>BIBLIOGRAPHY</b>		
CA (Cotswold Archaeology) 2016 <i>Hinkley Point C Associated Development, Cannington Bypass, Somerset. Archaeological Works: Post-Excavation Assessment</i> , Report 16141		

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