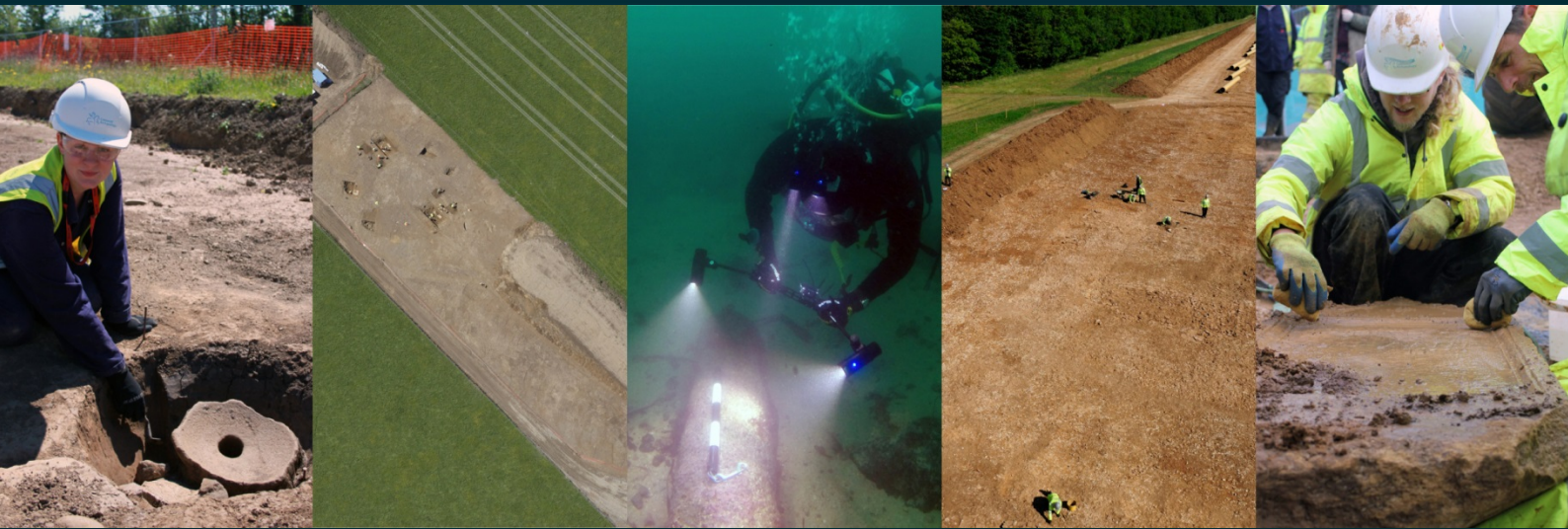


Geotechnical Investigations
Waterloo Car Park
Cirencester
Gloucestershire
Archaeological Evaluation



for
The Environmental Partnership (TEP)

CA Project: 6836
CA Report: 6836_1

April 2019



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CONTENTS

1.	INTRODUCTION.....	3
2.	ARCHAEOLOGICAL BACKGROUND.....	3
3.	AIMS AND OBJECTIVES.....	5
4.	METHODOLOGY.....	6
5.	RESULTS (FIGS 2-6).....	7
6.	THE FINDS.....	8
7.	THE BIOLOGICAL EVIDENCE.....	10
8.	DISCUSSION.....	12
9.	CA PROJECT TEAM.....	13
10.	REFERENCES.....	13
	APPENDIX A: CONTEXT DESCRIPTIONS.....	16
	APPENDIX B: THE FINDS.....	17
	APPENDIX C: THE PALAEOENVIRONMENTAL EVIDENCE.....	18
	APPENDIX D: LEVELS OF PRINCIPAL DEPOSITS AND STRUCTURES.....	19
	APPENDIX E: OASIS REPORT FORM.....	20

LIST OF ILLUSTRATIONS

- Fig. 1 Site location plan (1:25,000)
- Fig. 2 Trench location plan, showing archaeological features and previous investigations (1:750)
- Fig. 3 Trenches 1 and 2: sections and photographs (1:20)
- Fig. 4 Trench 3: plan, section and photographs (1:20)

SUMMARY

Project Name:	Geotechnical Investigations, Waterloo Car Park
Location:	Cirencester, Gloucestershire
NGR:	402644 202057
Type:	Evaluation
Date:	18-20 March 2019
SMC:	1003426
Location of Archive:	To be deposited with Corinium Museum
Site Code:	CALOO 19

An archaeological evaluation was undertaken by Cotswold Archaeology in March 2019 at the Waterloo Car Park, Cirencester, Gloucestershire. Three trenches were excavated.

A Roman cobbled surface and probable post-Roman 'dark earth' deposits were identified within the northern half of the site.



1. INTRODUCTION

1.1 In March 2019 Cotswold Archaeology (CA) carried out an archaeological evaluation for The Environmental Partnership (TEP) at the Waterloo Car Park, Cirencester, Gloucestershire (centred at NGR: 402644 202057; Fig. 1). The evaluation was undertaken to facilitate geotechnical investigations (GI) to inform the design of any future development.

1.2 As the GI works had the potential to impact upon archaeological remains that form part of a Scheduled Monument (SM), which encompasses much of the Roman town of Corinium (HE ref. 1003426), the evaluation was carried out in accordance with the requirements of Mel Barge, Inspector of Ancient Monuments, Historic England (HE), following the required acquisition of Scheduled Monument Consent (SMC; HE ref 1003426). A programme of geo-archaeological analysis was also undertaken on the extracted geotechnical cores (ARCA 2019). The fieldwork also followed *Standard and guidance: Archaeological field evaluation* (ClfA 2014). It was monitored by Mel Barge, including a site visit on 20 March 2019.

The site

1.3 The proposed development area is approximately 0.58ha, and comprises an open-air car park and is bounded to the north by the River Churn, to the south by The Waterloo road, and to the east and west by residential properties and gardens. The site lies at approximately 108.5m AOD and is broadly level.

1.4 The underlying bedrock geology of the area is mapped as Mudstone of the Forest Marble Formation of the Jurassic Period, with superficial gravel River Terrace deposits of the Quaternary Period (BGS 2019). The natural geological substrate was identified in all excavated trenches and consisted of sandy-clay and gravels.

2. ARCHAEOLOGICAL BACKGROUND

2.1 The site has previously been the subject of a Desk-Based Assessment (DBA, CAT 1998a) and an archaeological evaluation (CAT 1998b). Furthermore, extensive archaeological studies have been undertaken for much of Cirencester; what follows is a summary of the available information for the site.

- 2.2 The Roman town of *Corinium Dobunorum* was an important provincial civitas capital, the 2nd largest in Roman Britain, the extent of which underlies much of present-day Cirencester. Significant Roman structures and deposits have been recorded in the area (i.e. McWhirr 1986; Holbrook 1994) and the site lies within the Scheduled Monument of Roman *Corinium* (HE ref. 1003426). The site lies within insula XVI of the Roman town and the street between this insula and insula XVII (Street K) is considered to lie within the western part of the study area (see Fig. 2 of this report and Holbrook 1998). This street was observed in 1974-5 approximately 90m to the south of the current site, where it was approximately 12m wide with a sequence of metalling 2m thick (Zeepvat 1979, 67).
- 2.3 One of the most significant factors governing archaeological activity within the site is the proximity of the River Churn (CAT 1998a). The river is currently divided into two channels, the Inner and Outer Churn. The former runs alongside the north-east boundary of the site and is thought to represent the approximate line of the pre-Roman course of the river. However, with the establishment of the town defences in the mid second century, (at least part of) the river was diverted to run outside the eastern section of the town wall. It has previously been unclear when the Inner Churn was established on its current course, although the preceding evaluation points to a date within the Roman period (CAT 1998b, 7). As such, there is a possibility of waterlogged deposits dating to the Roman period surviving within the site, as seen in nearby excavation works (CAT 1998a, 10).
- 2.4 During the course of the preceding evaluation within the site, six test pits were excavated (see Fig. 2 for locations). A level horizon of alluvial clay was sealed by Roman urban stratigraphy, including walls, surfaces and occupation deposits (CAT 1998b). The top of the Roman horizon ranged between depths of 0.68m (TP3) and 1.57m (TP6) below present ground level (*ibid.*). The depths of the principal deposits recorded during the current evaluation are shown in Appendix C.
- 2.5 Little is known of the early post-Roman period in Cirencester, although it has been assumed that the basic foci of activity remained broadly the same (*ibid.*) and it is thought that the site lies within an area outside of the main settlement areas of the Anglo-Saxon town (Darvill and Gerrard 1994, 89). The latest Roman/earliest post-Roman deposits in Cirencester, as in many other Roman towns, generally consist of a layer of 'dark earth'. This material was recorded in two of the test-pits (TPs 2 & 3) excavated during the preceding evaluation (CAT 1998b).

- 2.6 During the medieval period, Cirencester was an important commercial, economic, political and religious centre. The site lies within the township, to the rear of medieval tenements on Dyer Street. As such, no medieval settlement remains are anticipated within the site, although some robbing of Roman structures and a medieval surface were recorded during the evaluation (CAT 1998b). During the medieval period water from the Outer Churn was drawn into a new channel, breaching the north-western defences of the Roman town, to feed the Abbey fishponds. This new watercourse then drained southwards as the Inner Churn in a channel which is still largely extant. It is this channel which runs alongside the north-eastern boundary of the site (*ibid.*).
- 2.7 Little is known of the land use and development of the study area during the late medieval and early post-medieval period. However, the town map of 1795 by Richard Hall & Son shows the study area as an open field (*ibid.*). Cultivation soils were recorded throughout the preceding evaluation test-pits (CAT 1998b). This picture is seen on mapping throughout the 19th and early 20th centuries. The current car park was constructed in the 1960s (*ibid.*).

3. AIMS AND OBJECTIVES

- 3.1 The objectives of the evaluation are to provide information about the archaeological resource within the site, including its presence/absence, character, extent, date, integrity, state of preservation and quality, in accordance *Standard and guidance: Archaeological field evaluation* (ClfA 2014). The objectives of the evaluation were also to identify, investigate and record all buried archaeological deposits revealed on the site prior to the GI works taking place.
- 3.2 Specifically, the aims of the fieldwork were:
- to identify suitable locations for boreholes within the excavated trenches to ensure no significant archaeology is harmed or removed without record;
 - to identify the presence of any waterlogged deposits in the field and to target appropriate sampling where the potential for preserved waterlogged remains is high;

- to obtain a better understanding of the formation processes of the post-roman soils ('dark earth') if encountered.

4. METHODOLOGY

- 4.1 The fieldwork comprised the excavation of three trenches, measuring 1m by 1m, in the locations shown on the attached plan (Fig. 2). Trenches were set out on OS National Grid (NGR) co-ordinates using Leica GPS and surveyed in accordance with CA Technical Manual 4 *Survey Manual*.
- 4.2 All trenches were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision to the top of the first significant archaeological horizon or the natural substrate, whichever was encountered first. Where archaeological deposits were encountered they were excavated by hand in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*.
- 4.3 Deposits were assessed for their palaeoenvironmental potential in accordance with CA Technical Manual 2: *The Taking and Processing of Environmental and Other Samples from Archaeological Sites* and five deposits were sampled. These samples are currently stored at the CA office in Kemble. All artefacts recovered were processed in accordance with Technical Manual 3 *Treatment of Finds Immediately after Excavation*.
- 4.4 Geoarchaeological sampling and recording was also undertaken in accordance with Historic England guidance 'Geoarchaeology: Using earth sciences to understand the archaeological record' (2015). A geo-archaeologist (Nick Watson, ARCA) was present on site during the course of the evaluation and geotechnical exercises. The results of the geoarchaeological assessment are summarised in a separate report (ARCA 2019).
- 4.5 The archive and artefacts from the evaluation are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Corinium Museum, along with the site archive. A summary of information from this project, set out within Appendix E, will be entered onto the OASIS online database of archaeological projects in Britain.

5. RESULTS (FIGS 2-6)

- 5.1 This section provides an overview of the evaluation results; detailed summaries of the recorded contexts, finds and palaeoenvironmental evidence are to be found in Appendices A, B and C respectively. Details of the relative heights of the principal deposits and features expressed as metres Above Ordnance Datum (m AOD) appear in Appendix D.
- 5.2 All three trenches were hand excavated to a depth of 1.2m below present ground level (bpgl), at which point an auger was used to examine deeper deposits.
- 5.3 A broadly similar stratigraphic sequence was recorded across the site. The natural substrate, encountered at depths of between 1.85 and 2.6m bpgl, comprised sandy-clay and gravels. In Trench 2 this was overlain by alluvial deposits, consisting of silty-clay, measuring a total of 1.56m in thickness (see Fig. 3). Three small fragments of Roman ceramic building material (CBM) were recovered from alluvium 2003.
- 5.4 A surface and a demolition layer were identified within Trench 3 and 'dark earth' deposits were identified in Trenches 1 and 3. Pre-modern deposits were sealed by the modern car park levelling layers and surfacing throughout the excavated trenches, which measured up to 0.9m in thickness.

Trench 1 (Fig. 3)

- 5.5 Within Trench 1, the natural substrate, 105, was directly overlain by silty-clay 'dark earth' deposit, 104, which measured 0.5m in thickness. Overlaying this, a further silty-clay 'dark earth' deposit, 103, was identified, measuring up to 0.7m in thickness. Fifteen sherds of Roman pottery, dating to the mid 3rd to 4th centuries, along with ten fragments of Roman *tegula* and thirteen fragments of animal bone were recovered from this deposit.

Trench 3 (Fig. 4)

- 5.6 The natural substrate, 309, was overlain by silty-clay levelling material, 308, which measured 0.62m in thickness. This was overlain by a sandy-clay levelling/trample layer, 306, measuring 0.34m in thickness, from which a Severn Valley Ware pottery sherd and four fragments of *tegula*, broadly dateable to the Roman period, were recovered.

- 5.7 Deposit 306 was overlain by a probable bedding layer, 305, consisting of tightly packed, pitched limestone fragments and sandy matrix, measuring up to 0.3m in thickness, from which a single fragment of Roman *opus signinum* was recovered. This was overlain by cobble surface 304, which survived in plan in the south-western extent of the excavated trench. Constructed from randomly lain limestone cobbles, the surface measured at least 0.9m in length, 0.5m in width and up to 0.15m in thickness, with the stones bedded into a brown silty-clay, from which six small fragments of Roman CBM were recovered.
- 5.8 Surface 304 was partially overlain by demolition layer 303. This layer extended from the north-western extent of the trench and tapered out towards the south-east. The demolition deposit consisted of silty-clay with lime mortar and sub-angular limestone fragments, and measured up to 0.08m in thickness. Seven sherds of pottery dating to the late 3rd to 4th centuries were recovered from the demolition layer, along with 21 fragments of Roman CBM, including box flue tile and *imbrex* fragments.
- 5.9 Demolition deposit 303 was overlain by silty-clay 'dark earth' layer 307, which was only extant in the south-eastern extent of the trench, where it measured up to 0.14m in thickness and no dateable material was recovered from this layer. This was in turn overlain by further silty-clay 'dark earth' deposit 302, which measured 0.18m in thickness. Two fragments of pottery, dateable to the mid-2nd to mid-3rd centuries, along with nineteen fragments of Roman CBM, including *imbrex* and *tegula*, were recovered from within this deposit.

6. THE FINDS

- 6.1 Artefactual material was recovered via hand excavation and bulk soil sampling from nine deposits ('dark earth' deposits, make-up and demolition layers, a surface and alluvium). The recovered material dates to the Roman and post-medieval periods and quantities of the artefact types are given in Appendix B. The pottery has been recorded according to sherd count/weight per fabric and form/rim morphology where possible. Pottery fabric codes, in parenthesis in the text, are equated to the Cirencester pottery type series (Rigby 1982, Keely 1986), where possible. Where applicable, National Roman Fabric Reference Collection codes are also given in Appendix B (Tomber and Dore 1998).

Pottery

- 6.2 A total of 29 sherds (601g) was retrieved from four deposits. Pottery of probable local manufacture of broadly Roman date, include Severn Valley ware (106-9), a fine oxidised fabric (OXF) and greywares (GWS, GWC). Products of the Oxford potteries consist of Oxford red-slipped ware (83), including a base sherd from a mortarium, and Oxford white ware (90) – mortarium Types M1 and M22 (Young 1977, 68–9, 76–7). The red-slipped ware and the M22 mortarium both date to the mid 3rd to 4th centuries and the M1 mortarium to the mid to late 2nd century. Other regional imports are an unfeathered bodysherd in Lower Nene colour-coated ware (81), of mid 2nd to 4th-century date, and Southeast Dorset Black-burnished ware (74), including a rimsherd from a (Seager Smith and Davies) Type 3 cooking pot with an everted rim, of late 3rd to 4th-century date (Seager Smith and Davies 1993, 230–1). The continental imports are a base sherd from a vessel in east Gaulish samian (154C), which would have been imported to Britain during the mid 2nd to mid 3rd centuries (Webster 1996, 2–3) and rimsherds from a Drag. 79 dish in central Gaulish samian. The latter is of mid to late 2nd-century date (*ibid.*, 64).

Ceramic building material

- 6.3 Ceramic building material totals 53 fragments (2649g) from six deposits. Several fragments are classifiable – deriving from tegulae, imbrices and box flue tiles.

Other finds

- 6.4 A fragment of worked sandstone from 'dark earth' deposit 302 is likely to represent roofing of Roman date. A small chalk tessera (10 x 9 x 7mm) was retrieved from dark earth deposit 307.
- 6.5 Bedding layer 305 produced a fragment (47g) of *opus signinum*, which is a waterproof mortar mostly used in flooring.
- 6.6 A fragment of clay tobacco pipe stem was recorded from dark earth deposit 302. Such pipes were in use from the late 16th to late 19th centuries.
- 6.7 Dark earth deposit 302 also produced a fragment from a bottle in dark green-coloured glass of post-medieval date.

7. THE BIOLOGICAL EVIDENCE

Animal Bone

- 7.1 Animal bone amounting to 21 fragments (130g) was recovered via hand excavation and bulk soil sampling from layers 102, 103, 306, 307 and 2003. Artefactual material dating to the Romano-British period was also recovered (See Table 1, Appendix C). The material was fragmentary but well preserved enough to make possible the identification of cattle (*Bos taurus*), sheep/goat (*Ovis aries/Capra hircus*) and pig (*Sus domesticus*). Each of these species was identified primarily by loose molar or incisor teeth. The recovery was too low to provide any information other than species identification but, each was a commonly exploited domestic animal in this period, so their presence is to be expected. A partial bird humerus was also recovered from layer 306 but it lacked appropriate osteological landmarks to make a confident species identification.

Palaeoenvironmental Evidence

- 7.2 A series of five environmental samples (42 litres of soil) were processed from a series of deposits of Roman date in Trenches 1, 2 and 3 with the intention of recovering environmental evidence of industrial and domestic activity on the site as well as an indication of any waterlogged deposits on the site. A further aim of the sampling was to ascertain whether there was any potential for the samples from the dark earth deposit to provide information on the nature of this deposit and add to the understanding of the history of the site and wider area in the Late Roman and early post-Roman period. Four of these samples were processed by standard flotation procedures (250 micron flot, 500 micron residue) and one (sample 2.1) by wet sieving (250 micron mesh size) (CA Technical Manual No. 2).
- 7.3 Preliminary identifications of plant macrofossils are noted in Table 2, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary *et al* (2012) for cereals. The presence of mollusc shells has been noted. Nomenclature is according to Anderson (2005) and habitat preferences according to Kerney (1999) and Davies (2008).
- 7.4 The flots were generally small and included 10-40% rooty material and uncharred seeds. The uncharred weed seeds are likely to be intrusive within the samples and included those of goosefoot (*Chenopodium* sp.), common nettle (*Urtica dioica*), small nettle (*Urtica urens*), stitchworts (*Stellaria* sp.), nightshade (*Solanum* sp.),

dead-nettle (*Lamium* sp.), buttercup (*Ranunculus* sp.) and black bindweed (*Fallopia convolvulus*) and brambles (*Rubus* sp.). These are species typical of scrub and waste/rough ground environments. The charred material comprised varying levels of preservation within the samples. A small amount of clinker/industrial type waste was observed within sample 3.1 from dark earth deposit 302 in Trench 3.

Trench 1

- 7.5 Dark earth deposit 103 (sample 1.1) contained a small amount of charred material. This included a few free-threshing wheat (*Triticum turgidum/aestivum* type) and barley (*Hordeum vulgare*) grain fragments, seeds of celtic bean/garden pea (*Vicia faba/Pisum sativum*) and goosefoot, and fragments of charcoal greater than 2mm. A moderate quantity of mollusc shells was recovered and included those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Pupilla muscorum*, and the intermediate species *Cochlicopa* sp. and *Trochulus hispidus*. This assemblage is likely to be representative of dispersed material.

Trench 2

- 7.6 A single sample (2.1) was processed from alluvial layer 2003 by wet sieving. No environmental remains were recovered.

Trench 3

- 7.7 Low levels of charred material were recorded from dark earth deposits 302 (sample 3.1) and 307 (sample 3.2), and from made-ground layer 306 (sample 3.3). These included wheat (*Triticum* sp.) and indeterminate grain fragments and a few charcoal fragments. The small numbers of mollusc shells included those of the open country species *Vallonia costata*, *Vallonia excentrica* and *Pupilla muscorum*, the intermediate species *Cochlicopa* sp. and *Trochulus hispidus*, and the shade-loving species *Discus rotundatus* and *Oxychilus cellarius*. Again these assemblages are likely to be reflective of dispersed material.

Summary

- 7.8 There is no indication from these assemblages of any specific activities taking place in the immediate vicinity. These samples provide no potential for any detailed examination of the nature of the dark earth deposits on the site due to the sparse quantity of charred remains recovered. It was suggested that some waterlogged deposits would be encountered within these trenches, but there is no evidence for preserved waterlogged material within these samples.

8. DISCUSSION

- 8.1 Alluvial deposits were identified within Trench 2. The geoarchaeological report describes this as an “alluvial unit laid down in slack water as flood water regressed” (ARCA 2019, 16). Similar deposits were also recorded in Test Pit 5, roughly 20m to the south-east of the current Trench 2. The geoarchaeological report considered that alluvial clay 2003 had lain undisturbed and went on to suggest that the layer represented decades of undisturbed deposition (ibid.). A single sample was processed from alluvial layer 2003. No environmental remains were recovered. It overlays another silty clay, 2004, that contained frequent grains and granules of CBM and charcoal. This appears to be water lain like layer 2003 (ARCA 20129, 13).
- 8.2 The made ground deposit 308, identified within Trench 3, likely represents a land-reclamation layer, deposited to consolidate the boggy ground in the area of the River Churn. Bedding layer 305 and surface 304 are unlikely to represent the remains of the postulated line of Street K, which ran between *insula* XV1 and *insula* XV11, as they appear nowhere as substantial as the portion of Street K found 90m to the south. They are more likely to represent surfacing related to yards associated with buildings fronting on to Street K, which may lie further to the south-west. Located roughly 10m to the west of Trench 3, a wall and cobbled surface of Roman date were recorded within Test Pit 1 during the 1998 evaluation, and it is possible that surface 304 identified here may relate to these features, although this cannot be proven at this stage. Overall, the top of the Roman horizon has been identified across site at depths of between 0.68m bpgl and 2.2m bpgl.
- 8.3 Probable ‘dark earth’ deposits were identified within Trenches 1 and 3. This ‘dark earth’ material represents the accumulation of post-Roman, medieval, post-medieval and modern deposits within the site and is typical of Roman towns within Britain, probably representing an amalgam of cultivation soils, decayed wooden structures and animal and vegetable remains. The ‘dark earth’ deposits identified during the current works are probably the same as those described as ‘allotment soils’ in the 1998 evaluation, as identified in Test Pits 2 and 3. Small amounts of charred material were recovered from the environmental samples recovered for the dark earth. The sparse quantity of charred remains recovered means these samples

provide no potential for any detailed examination of the nature of the dark earth deposits on the site.

- 8.4 Modern deposits associated with the existing car park were recorded throughout the evaluation as descending to a depth of up to 0.9m bpgl. The varying thickness of the 'dark earth' deposits identified across the site (between 0.32m and 1.2m), and the fact that it was not recorded within Trench 2, suggests that successive phases of post-medieval and modern truncation have occurred across the area.

9. CA PROJECT TEAM

Fieldwork was undertaken by Jerry Austin, assisted by Richard Scurr, Thomas Millington and Scott Gordon. The report was written by Jerry Austin. The finds, animal bone and biological evidence reports were written by Jacky Sommerville, Andy Clarke and Sarah Wyles respectively. The illustrations were prepared by Ryan Wilson. The archive has been compiled by Jerry Austin, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Richard Young.

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APPENDIX A: CONTEXT DESCRIPTIONS

Trench No.	Context No.	Type	Context interpretation	Description	L (m)	W (m)	D (m)	Spot-date
1	100	Layer	Modern surface	Tarmacadam car park surface	>1	>1	0.15	
1	101	Layer	Bedding layer	Yellow sand and gravels	>1	>1	0.75	
1	103	Layer	'Dark earth'	Humic dark brown silty-clay with occasional limestone fragments, lime mortar flecks and CBM inclusions	>1	>1	0.7	MC3-C4
1	104	Layer	'Dark earth'	Grey silty clay with limestone fragments, CBM and shell			0.5	
1	105	Layer	Natural substrate	Light yellow sandy clay and gravels				
2	2001	Layer	Modern surface	Tarmacadam car park surface	>1	>1	0.1	
2	2002	Layer	Bedding layer	Yellow sand and gravels	>1	>1	0.75	
2	2003	Layer	Alluvium	Greenish-grey alluvial clay. Rare CBM	>1	>1	0.26	RB
2	2004	Layer	Alluvium	Greyish-brown oxidised silty clay. Charcoal flecks and limestone grit inclusions	>1	>1	1.3	
2	2005	Layer	Natural substrate	Light yellow sandy clay and gravels				
3	300	Layer	Modern surface	Tarmacadam car park surface	>1	>1	0.1	
3	301	Layer	Bedding layer	Yellow sand and gravels	>1	>1	0.56	
3	302	Layer	'Dark earth'	Dark brown silty-clay with limestone fragments, CBM and molluscs	>1	>1	0.18	MC2-MC3
3	303	Layer	Demolition deposit	Light brown silty-clay with lime mortar and subangular limestone fragments	>0.9	>0.5	0.08	LC3-C4
3	304	Layer	Surface	Grey subrounded limestone cobbles	>1	>1	0.15	RB
3	305	Layer	Bedding material	Large yellow subangular limestone rubble	>1	>1	0.3	RB
3	306	Layer	Made ground	Green brown sandy clay. Rare oyster shell and CBM inclusions	>1	>1	0.34	RB
3	307	Layer	'Dark earth'	Grey brown silty clay. Rare CBM charcoal flecks, lime mortar and lime stone fragments	>1	>1	0.14m	
3	308	Layer	Made ground	Stiff oxidised reddish brown silty-clay. Occasional degraded limestone fragments and mollusc shells			0.62	
3	309	Layer	Natural substrate	Light yellow sandy clay and gravels				

APPENDIX B: THE FINDS

Table 1: Finds concordance

Context	Category	Description	Fabric Code/ NRFRC*	Count	Weight (g)	Spot-date	
102	<1.1>	Roman pottery	Southeast Dorset Black-burnished ware	74	1	5	C2-C4
	<1.1>	Roman pottery	Severn Valley ware	106-9	2	10	
	<1.1>	Iron	Hobnail		1	1	
103		Roman pottery	Southeast Dorset Black-burnished ware	74/DOR BB1	2	23	MC3-C4
		Roman pottery	Oxford Red-slipped ware	83/OXF RS	2	14	
		Roman pottery	Oxford White ware	90/OXF WH	1	105	
		Roman pottery	Lower Nene Valley Colour-coated ware	81/LNV CC	1	3	
		Roman pottery	Severn Valley ware	106-9/ SVW OX2	5	28	
		Roman pottery	White-slipped flagon fabric	95	1	2	
		Roman pottery	Sandy greyware	GWS	1	6	
		Roman pottery	Coarse greyware	GWC	1	5	
		Roman pottery	Fine oxidised fabric	OXF	1	15	
		Roman ceramic building material	Tegula, fragments		10	281	
		Mollusc	Left oyster shell		2	15	
302		Roman pottery	East Gaulish samian	154C	1	6	Post-medieval
		Roman pottery	Oxford White ware	90/OXF WH	1	71	
		Roman ceramic building material	Tegula, imbrex, fragments		19	996	
	<3.1>	Worked stone	Sandstone roofing		1	223	
	<3.1>	Clay tobacco pipe	Stem		1	3	
	<3.1>	Post-medieval glass	Bottle		1	7	
303		Roman pottery	Central Gaulish samian	154B/ LEZ SA2	2	20	LC3-C4
		Roman pottery	Southeast Dorset Black-burnished ware	74/DOR BB1	1	19	
		Roman pottery	Sandy greyware	GWS	4	41	
		Roman ceramic building material	Imbrex, box flue, fragments		21	1114	
		Mollusc	Left oyster shell		3	104	
304		Roman ceramic building material	Fragments		6	14	RB
305		<i>Opus signinum</i>			1	47	RB
306		Roman pottery	Severn Valley ware	106-9/ SVW OX2	1	5	RB
		Roman ceramic building material	Tegula, fragments		4	227	
307	<3.2>	Worked stone	Tessera		1	1	RB
2003		Roman ceramic building material	Fragments		3	17	RB

* National Roman Fabric Reference Collection codes in bold

APPENDIX C: THE PALAEOENVIRONMENTAL EVIDENCE

Table 1: Identified animal species by fragment count (NISP) and weight and context.

Context	BOS	O/C	SUS	Bird Sp	MM	Total	Weight (g)
102		1				1	3
103	4	4	1			4	92
306		1		1		3	21
307	1					1	21
2003	1					1	17
Total	6	6	1	1	7	21	
Weight	88	33	4	6	23	154	

BOS = Cattle; O/C = sheep/goat; SUS = pig; MM = sheep-size mammal

Table 2: Assessment table of the palaeoenvironmental remains

Deposit Type	Context	Sample	Processed vol (L)	Unprocessed vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other
Trench 1													
dark earth	103	1.1	10	30	10	10	*	-	F-t wheat + barley grain frags	*	<i>Vicia faba/Pisum, Chenopodium</i> (Uncharred seeds (***) <i>Chenopodium, Urtica, Stellaria, Solanum</i>)	*/**	Sab (*). Moll-t (***)
Trench 2													
alluvial layer	2003	2.1	2	38	no environmental material recovered								
Trench 3													
dark earth	302	3.1	10	0	20	10	-	-	-	-	(Uncharred seeds (****) <i>Chenopodium, Stellaria, Solanum, Urtica, Lamium, Rubus, Fallopia, Ranunculus</i>)	*/**	Sab (*), Moll-t (**), clinker type material
dark earth	307	3.2	10	0	5	40	*	-	Indet. grain frag	-	(Uncharred seeds (**) <i>Chenopodium, Stellaria, Solanum, Urtica</i>)	*/*	Moll-t (**)
made-ground	306	3.3	10	0	10	30	*	-	Wheat grain	-	(Uncharred seeds (*) <i>Chenopodium</i>)	-/*	Moll-t (**)

Key: * = 1–4 items; ** = 4–20 items; *** = 21–49 items; **** = 50–99 items; ***** = >100 items, Moll-t = land snails, Sab = small animal bone

APPENDIX D: LEVELS OF PRINCIPAL DEPOSITS AND STRUCTURES

Levels are expressed as metres below current ground level and as metres Above Ordnance Datum (AOD).

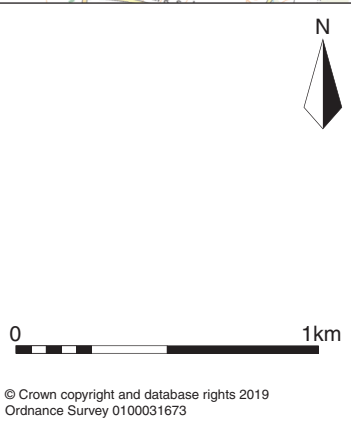
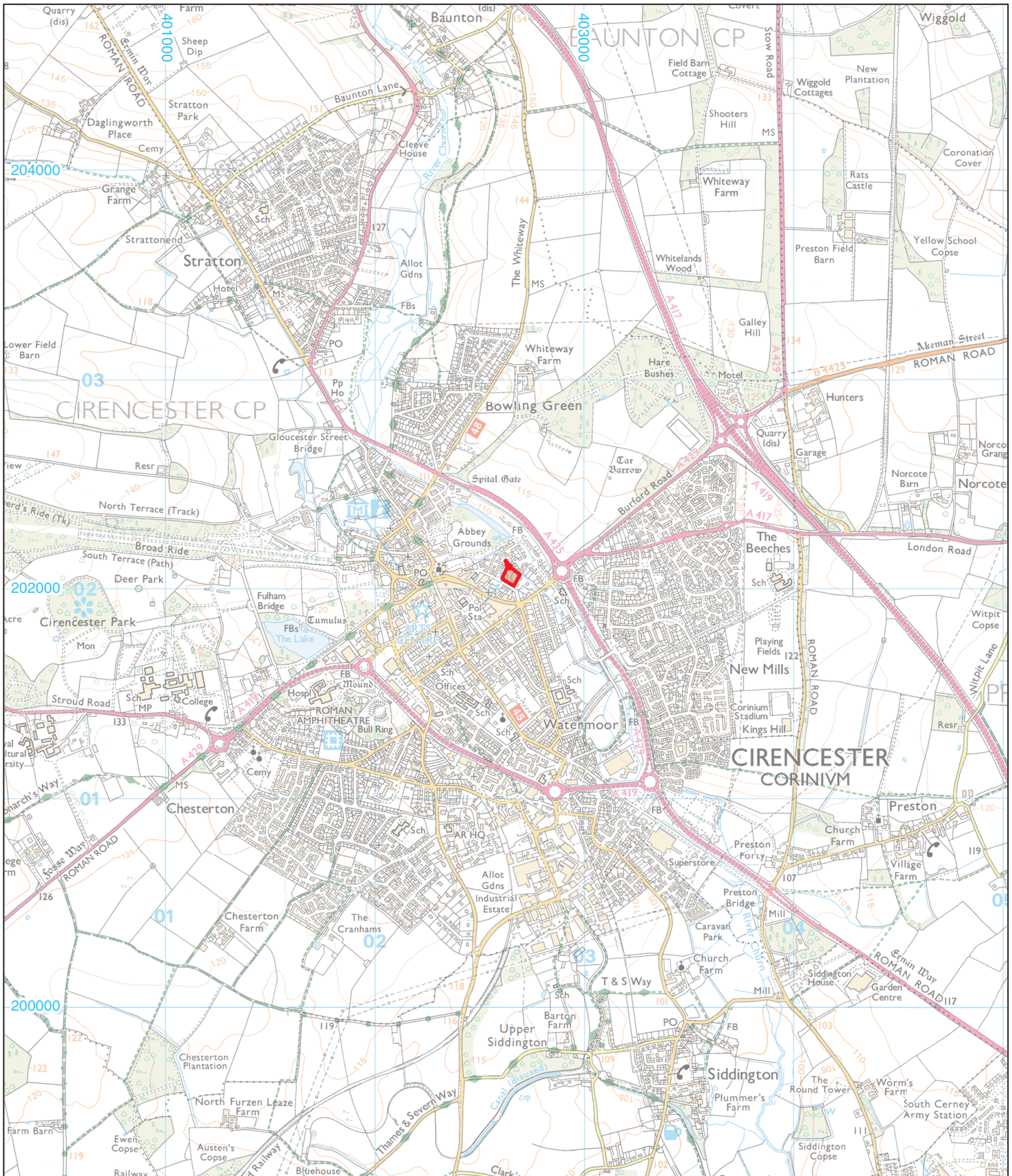
	Trench 1	Trench 2	Trench 3
Current ground level	0.00m (108.74m)	0.00m (108.65m)	0.00m (108.47m)
Limit of modern truncation	0.9m (107.84m)	0.9m (107.75m)	0.58m (107.89m)
Top of 'dark earth'	0.9m (107.84m)	N/A	0.66m (107.81m)
Top of Roman horizon	N/A	N/A	0.72m (107.75m)
Limit of hand excavation	1.2m (107.54m)	1.2m (107.45m)	1.2m (107.27m)
Top of alluvial clays	N/A	0.85m (107.8m)	N/A
Natural substrate	1.85m (106.33m)	2.6m (106.05m)	2.2m (106.27m)

	Test Pit 1 (CAT 1998)	Test Pit 2 (CAT 1998)	Test Pit 3 (CAT 1998)	Test Pit 4 (CAT 1998)	Test Pit 5 (CAT 1998)	Test Pit 6 (CAT 1998)
Current ground level	0.00m (108.82m)	0.00m (108.69m)	0.00m (108.49m)	0.00m (108.54m)	0.00m (108.74m)	0.00m (108.21m)
Top of 'dark earth'/'allotment soil' deposits	1.01m (107.81m)	0.78m (107.91m)	0.67m (107.82m)	0.47m (108.07m)	1.01m (106.73m)	0.54m (107.67m)
Top of Roman horizon	1.14m (107.68m)	1.22m (107.47m)	0.68m (107.81m)	0.76m (107.78m)	2.20m (105.54m)	1.57m (106.64m)
Limit of hand excavation	1.60m (107.22m)	1.42m (107.27m)	1.12m (107.37m)	1.13m (107.41m)	2.23m (106.52m)	2.01m (106.20m)
Top of alluvial clays	2.20m (106.62m)	N/A	1.70m (106.79m)	N/A	2.30m (105.44m)	1.76m (106.03m)
Natural substrate	3.50m (105.32m)	N/A	2.20m (106.29)	2.00m (106.54m)	2.80m (104.94m)	1.97m (106.24m)

Upper figures are depth below modern ground level; lower figures in parentheses are metres AOD.

APPENDIX E: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Geotechnical Investigations, Waterloo Car Park, Cirencester, Gloucestershire	
Short description	An archaeological evaluation was undertaken by Cotswold Archaeology in March 2019 at the Waterloo Car Park, Cirencester, Gloucestershire. Three trenches were excavated. A Roman cobbled surface and probable post-Roman 'dark earth' deposits were identified within the northern half of the site.	
Project dates	18-20 March 2019	
Project type	Field evaluation	
Previous work	Archaeological Assessment (CAT 1998) Field evaluation (CAT 1998)	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Waterloo Car Park, Cirencester, Gloucestershire	
Study area	0.58ha	
Site co-ordinates	402644 202057	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	Historic England	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Richard Young	
Project Supervisor	Jerry Austin	
MONUMENT TYPE		
SIGNIFICANT FINDS		
PROJECT ARCHIVES		
	Intended final location of archive	Content
Physical	To be deposited with Corinium Museum	Ceramics and animal bone
Paper	To be deposited with Corinium Museum	Field recording sheets
Digital	To be deposited with Corinium Museum	Digital photos
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2019 <i>Geotechnical Investigations, Waterloo Car Park, Cirencester, Gloucestershire: Archaeological Evaluation</i> . CA typescript report 6836_1		




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PROJECT TITLE
 Geotechnical Investigations, Waterloo Car Park, Cirencester

FIGURE TITLE
 Site location plan

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CHECKED BY	DJB	DATE	17/05/2019	1
APPROVED BY	AT	SCALE@A4	1:25,000	

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Ordnance Survey 0100031673



- Site outline
- Previous evaluation trench (CAT 1998)
- Previous archaeological feature (CAT 1998)
- Evaluation trench
- Scheduled Monument
- Projected alignment of Roman Street K (after Holbrook *et al* 1998)



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PROJECT TITLE

Geotechnical Investigations, Waterloo Car Park, Cirencester

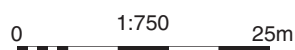
FIGURE TITLE

Trench location plan, showing archaeological features and previous archaeological investigations

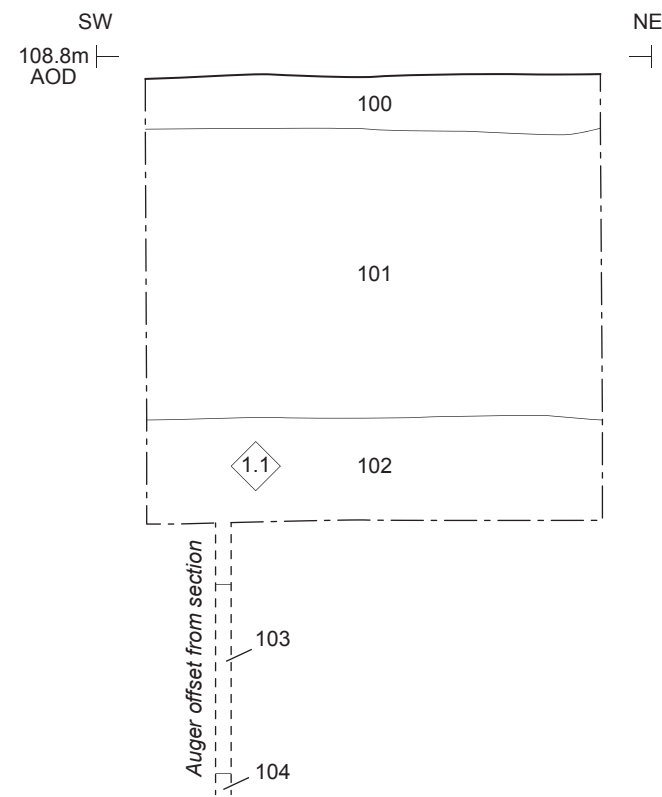
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FIGURE NO.

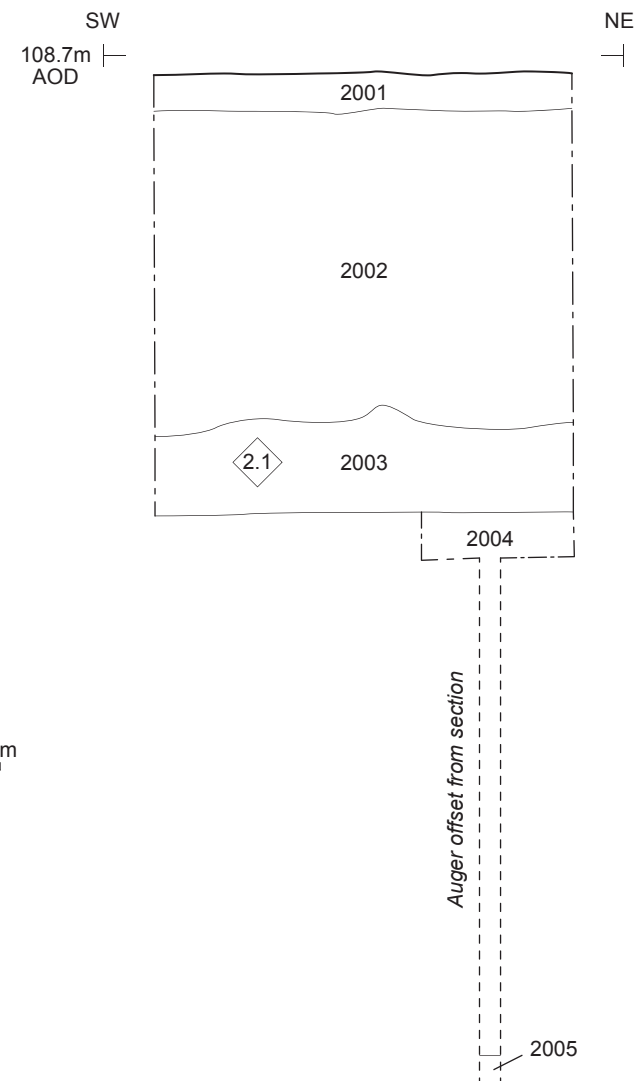
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Section AA



Section BB



1.1 Sample number



Trench 1, looking north-west (1m scale)



Trench 2, looking north-west (1m scale)

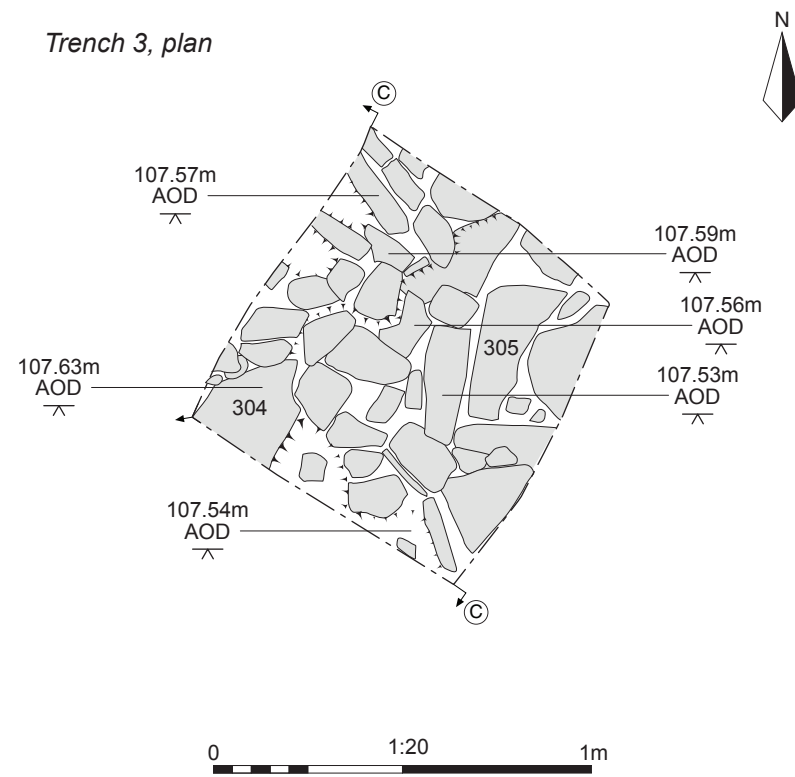
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PROJECT TITLE
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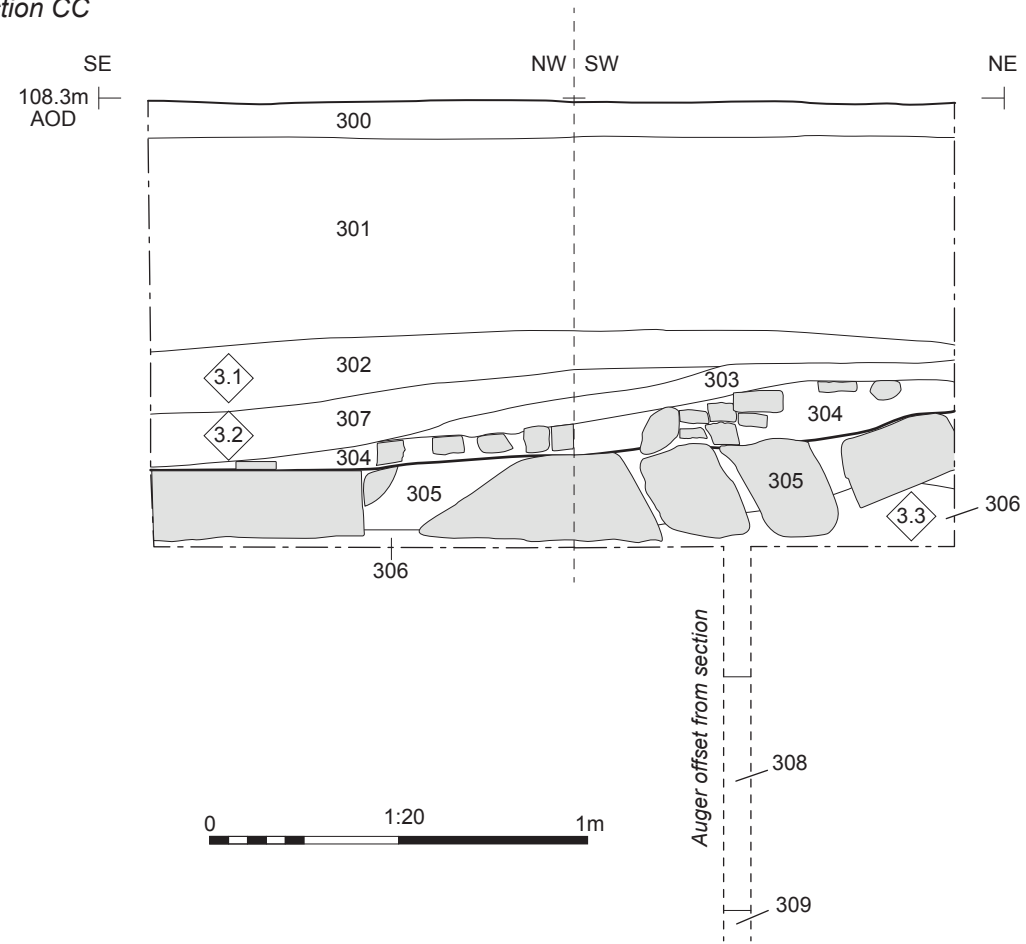
FIGURE TITLE
 Trenches 1 and 2: sections and photographs

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CHECKED BY	DJB	DATE	17/05/2019	3
APPROVED BY	AT	SCALE@A3	1:20	

Trench 3, plan



Section CC



1.1 Sample number
 Cobbles



Trench 3, looking north-west (1m scale)



Surface 304 and bedding layer 305, looking north-west (1m scale)

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PROJECT TITLE
 Geotechnical Investigations, Waterloo Car Park, Cirencester

FIGURE TITLE
 Trench 3: plan, section and photographs

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