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BARTLOW PARK, CAMPS ROAD, BARTLOW, CAMBRIDGESHIRE CB21 4PP

AN ARCHAEOLOGICAL EVALUATION

CHER ECB 5331

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NGR: TL 5855 4501	Report No: 5733
District: South Cambs	Site Code: ECB 5331
Approved: Claire Halpin MCIfA	Project No: P4812
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CONTENTS

PROJECT SUMMARY

SUMMARY

- 1 INTRODUCTION
- 2 DESCRIPTION OF THE SITE
- **3 TOPOGRAPHY, GEOLOGY AND SOILS**
- 4 ARCHAEOLOGICAL & HISTORICAL BACKGROUND
- 5 METHODOLOGY
- 6 RESULTS
- 7 CONFIDENCE RATING
- 8 DEPOSIT MODEL
- 9 DISCUSSION
- 10 CONCLUSION

ACKNOWLEDGEMENTS BIBLIOGRAPHY

APPENDIX 1	CONCORDANCE OF FINDS
APPENDIX 2	SPECIALIST REPORTS

Project details Project name					
Project name Land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP			low,		
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Project dates (fieldwork)	December	2018			
Previous work (Y/N/?)	Y	Future	e work	TBC	
P. number	P4812	Site c	ode	ECB	
Type of project	Archaeolog	ical ev	valuation		
Site status	-				
Current land use					
Planned development	Residential				
	Pits (Roman)				
Main features (+dates)	Pits (Roma	Pottery, Animal Bone & Coin (Roman)			
Main features (+dates) Significant finds (+dates)		-	Bone & Coin (Ro	man)	
		imal B	one & Coin (Ro South Cambs	oman)	Bartlow
Significant finds (+dates)	Pottery, An Cambridges	imal E shire	South Cambs	,	
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BARTLOW PARK, CAMPS ROAD, BARTLOW, CAMBRIDGESHIRE CB21 4PP

AN ARCHAEOLOGICAL EVALUATION

SUMMARY

In December 2018 Archaeological Solutions (AS) carried out an archaeological evaluation of land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP (NGR TL 5855 4501; Figs. 1 - 2). The evaluation was undertaken to provide for the initial requirements of a planning condition attached to outline planning approval for the construction of a single-storey dwelling and associated works (South Cambs Council Approval Ref. S/3115/15/FL). The evaluation was undertaken based on the advice of Cambridgeshire County Council Historic Environment Team.

The archaeological features were located in Trench 2 which was closest to the earlier excavation (Fig.3), and the features comprise predominantly Roman pits. The earliest finds were prehistoric struck flint, including a blade core that may relate to evidence for early Neolithic activity in the near vicinity. The Roman pits appear to represent the disposal of domestic rubbish associated with a villa to the east, and are a continuation of the dense Roman remains recorded by an excavation adjacent to the east. The patterns of consumption are also consistent, with the pottery focussed on the products of kilns at Hadham and Horningsea and supplemented by fine ware beakers and dishes, and mortaria. The animal bone is dominated by cattle supplemented by pig/boar and oyster, with extensive evidence for butchery and skinning. The early-mid 4th century AD chronology of the pottery is supported by a coin (nummus) of the House of Constantine, dated c.AD330-1. The small finds included two bone pins that were potentially lost during domestic life.

1 INTRODUCTION

1.1 In December 2018 Archaeological Solutions (AS) carried out an archaeological evaluation of land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP (NGR TL 5855 4501; Figs. 1 - 2). The evaluation was undertaken to provide for the initial requirements of a planning condition attached to outline planning approval for the construction of a single-storey dwelling and associated works (South Cambs Council Approval Ref. S/3115/15/FL). The evaluation was undertaken based on the advice of Cambridgeshire County Council Historic Environment Team.

1.2 The evaluation was undertaken in accordance with a brief issued by Cambridgeshire County Council Historic Environment Team (HET, Gemma Stewart; dated 13th October 2017), and a Written Scheme of Investigation prepared by AS (dated 29th October 2018) and approved by CCC HET. It followed the procedures outlined in the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Evaluation* (2014). It also adhered to the relevant sections of *Standards for Field Archaeology in the East of England* (Gurney 2003).

1.3 The objectives of the evaluation were to determine the location, date, extent, character, condition significance and quality of any archaeological remains liable to be threatened by the proposed development.

Planning Policy Context

1.4 The National Planning Policy Framework (NPPF 2018) states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The NPPF aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. The NPPF requires applications to describe the significance of any heritage asset, including its setting that may be affected in proportion to the asset's importance and the potential impact of the proposal.

1.5 The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE

2.1 The site lies in an area of archaeological potential within the walled garden at Bartlow Park, within the historic core of the medieval and post-medieval village, some 125m south of the medieval parish church of St Mary. A disused railway line course borders the central southern part of the site.

3 TOPOGRAPHY, GEOLOGY AND SOILS

3.1 The site is located *c*. 90m south of the River Granta at the base of the river valley (*c*. 50-52m AOD). The land rises steadily to the south-east and north of the site, while sloping gently to the south-west towards the River Bourne.

3.2 The solid geology of the area comprises (Cretaceous) Upper Chalk (British Geological Survey 1978), and the overlying soils are of the Swaffham Prior Association, described as 'well drained calcareous coarse and fine loamy soils' and 'deep non-calcareous loamy soils in places' (Soil Survey of England and Wales 1983, 8).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 The site is located within an area of high archaeological potential with nearby archaeological remains recorded on the Cambridgeshire Historic Environment Record (CHER), and remains previously excavated within the site itself. The Cambridgeshire Historic Environment Record records the presence of a rich archaeological landscape, dominated by the presence of a series of very large, nationally important Roman burial mounds, which lie close to the site and which are Scheduled Ancient Monuments (CHER DCB303). A cemetery and villa also lie to the east of the site (CHER MCB 16319 & MCB 7463). An earthwork immediately to the north of the walled garden may be associated with these monuments (CHER MCB 7519).

4.2 The site (walled garden) comprises a rectangular plot of grass with a glasshouse situated in the central northern part of the site. A narrow rectangular peach house is located in the eastern part of the site and a small area of woodland is located in the south-west part. A garage is located in the north-west corner of the site. An east/west drive is located along the southern boundary of the site and separates a triangular patch of woodland and grassland. Bartlow is located at the base of a river valley and the river Granta runs on a NW/SE course *c*.62m to the north of the site. To the south the land slopes from *c*.100m AOD to *c*.50m AOD at the location of the river Granta and Bartlow Park (the site). To the north in the direction of Linton, the land rises from *c*.50m AOD to *c*.90m AOD. The solid geology of the site comprises (Cretaceous) Upper Chalk (BGS 1978).

4.3 A Palaeolithic handaxe (CHER 06134) and Mesolithic flint implements (CHERs 06170 & 11148) have been discovered *c*.10m – 60m to the west of the site and *c*.250m to the south-east respectively. A Neolithic arrowhead (CHER 09845) was discovered at the site of the Bartlow Hills Roman barrow cemetery (CHER 09838, SAM 33355) *c*.200m to the south-east of the site. Bronze Age ring ditches have been recorded to the east of Bartlow; these were identified from aerial photographs and Bronze Age lithic material was later recovered from them (CHER 06247). A flint axe of unspecified prehistoric date was recovered from a location to the east of the Bartlow Hills Roman burial mounds in the later 19th century (CHER 09846).

4.4 There is a significant quantity of Romano-British archaeological remains within the vicinity of the site, mostly located to the south of the site. The Bartlow Hills Tumuli (CHER 09838, SAM 33355), located *c*.200m to the south-east, comprises two parallel rows of Roman barrows. Excavations in the mid-19th century revealed that all seven mounds contained regular walled graves at the centre of each one. The dating of the grave goods indicates that the tumuli date from the 1st to 2nd century AD. Archaeological investigations (ECBs 2538, 1956 & 2052) revealed numerous anomalies at the site of the tumuli (Hay 2004, Astin *et al* 2007). Two cores were taken from Mound VII (ECB3154), revealing a central collapse feature and a possible revetment (Eckardt *et al* 2008, Eckardt *et al* 2009). Roman greyware pottery has been recovered as a spot find from the base of one of the tumuli (CHER 11148A).

4.5 The site of a Roman villa (CHER 06164) is located to the south-east of the site. Originally excavated by E.C. Neville in the mid-19th century (ECB554), the building comprised two heated rooms with furnaces. Coins within in a pit indicated a long occupation of the site ending in *c*.350 AD. An archaeological excavation (ECB2881) recorded a late Roman pit which contained a substantial quantity of animal bone, building material, pottery and shells (Eckardt & Clarke 2007). A large linear east/west aligned earthwork (CHER 06178) is located *c*.70m to the north-west of the villa (CHER 06164) and runs through an area of woodland located directly north of the walled gardens at Bartlow Park.

4.6 An extensive geophysical and topographical survey (ECB2556) was conducted to examine the landscape of the Bartlow Hill Roman barrows and in particular to investigate the enclosing rectangular earthwork (CHER 06178) and Roman villa (CHER 06164) (Eckardt 2007). The eastern extension of the east/west earthwork was identified by magnetometer and resistivity survey in the southernmost part of Bartlow Park located directly north-east of the site, although the nature and location of its assumed north/south turn has been obscured by later boundary features and recent landscaping. A double ditched feature, which may represent part of the same enclosing earthwork (CHER 06178), was also identified *c*.400m to the south-east of the site in Hill Paddock Farm. No linear features were identified with a course that appears to run into the site.

4.7 Magnetometer survey located a number of rectangular and linear features in the area of the Roman villa (CHER 06164) located c.125m to the south-east. Three large enclosures were located in fields c.125m to the north-east (MCB17490) and c.250m to the south-east of the site (MCB17488), which are suggested to be of Iron Age or Roman date, and which may relate to settlement in the vicinity. Finally a large circular feature was identified to the immediate east of the surviving barrows and c.150m to the south-east of the site, which may represent a lost barrow.

4.8 Two Roman inhumation cemeteries (CHER 06132A & MCB16319) were discovered *c*.62m – 125m to the south-east of the site, the latter burial site uncovered during an archaeological evaluation (ECB 1858, Beauchamp & Macaulay 2004). Pottery scatters (MCB 17489 & CHER 1114A) have been discovered *c*.200m - 300m to the south-east of the site and within 100m of the Bartlow Hills tumuli. An enamelled vessel (CHER 06177) was discovered *c*.450m to the east and a coin depicting Hadrian (CHER 06135) was found at the Rectory to the north of the site.

4.9 Archaeological remains of Anglo-Saxon date are virtually absent within the vicinity of the site with the exception of a possible cemetery site (CHER 06132) located to the south-east of the site. An iron shield boss was discovered at this site in the mid-19th century.

4.10 Medieval archaeological remains within the wider vicinity of the site have been discovered at Linton *c*.2km to the west and include the 13th century chapel and priory (CHER 06101), a medieval tile kiln and pit (CHERs 06128), a pottery scatter (CHER 10141) and medieval wall foundations (CHER 06044). Archaeological remains of medieval date are virtually absent within the vicinity of the site with the exception of the 13th century parish church of St Mary (CHER 06068, LB 51241).

4.11 Sixteenth century archaeological remains within the vicinity of the site comprise the late 16th century Old Hall (CHER 06180) located c.300m to the northeast of the site and the extant listed building at The Maltings, 1 and 2 Dean Road (CHER MCB19887). The Old Hall was owned by the Dayrell family from c.1751-1898. The Great Eastern railway (CHERs 06326 & MCBs 16590 - 16694) located to the south and south-east of the site, comprised a branch of the Great Eastern railway and opened in 1819 (Garwood 2005). Bartlow Halt consists of a former railway platform on the former Saffron Walden branch line (CHER MCB16591); this rail line is also represented by an incomplete iron railway signpost (CHER MCB16592), a derelict signal box (CHER MCB16593), and the remains of an underbridge (CHER MCB16594). A World War II ammunition dump was looked along the railway line to the east of the barrows at Bartlow Hills (CHER MCB17806). Bartlow House (CHER 06180) located c.60m to the north of the site, was constructed in the mid 19th century. The grounds associated with the mansion comprised parkland to the east (CHER 12275) and walled kitchen gardens to the south (the site, MCB17807, LB 492994). The walled gardens comprised an earlier eastern garden (the site) and a later western garden (the latter is Grade II listed, NHLE 1391577). A building was constructed in the south-east corner of the eastern garden and later demolished. A magnetometer survey of the eastern walled garden (the site) revealed anomalies in the south-east corner which are possibly associated with the demolished building (Eckardt & Clarke 2007). Bartlow House and the grounds were purchased by Reverend Charles Henry Brocklebank in 1899 was destroyed in a fire in 1947 and was replaced in 1962 by a Neo-Georgian house named Bartlow Park Hall (CHER MCB18528), constructed c.250m to the north of the walled garden (the site, MCB17807) and directly west of Bartlow Park (CHER 12275). The western walled garden was constructed in the 20th century and comprised a regular grid-plan ornamental garden with central teak glasshouse and a basement boiler. A peach house was built in the east garden (the site, MCB17807). The post-medieval park and garden at Little Barham Hall lies nearby in neighbouring Linton (CHER 12143). The National school, Bartlow (CHER MCB23974) was built in 1875. It was attended by 27 boy s and 17 girls in 1877 and reached its highest average attendance of 47 in 1889. Attendance slowly declined thereafter to 15 in 1992.

4.12 Undated entries on the Cambridgeshire HER for the surrounding area include an L-shaped linear feature identified as a cropmark (CHER 11467), and a ring ditch recorded 400m north of Little Barham Hall (CHER 11468).

4.13 Land adjacent to the proposed development site has been subject to an archaeological evaluation by AS (Quinn & Stoakley 2012) and follow up excavation and watching brief (Barlow & Mustchin 2013; CHER MCB19761) in association with the planning approval for a previous proposed dwelling on the site. In summary:

The excavation of the footprint of the proposed new dwelling and adjacent access etc chiefly revealed archaeological remains dating to the Romano-British period (Phase 2), comprising a series of linear ditches/ gullies, quarry pits and possible quarry features. Smaller pits, several layers and a well were also present. The associated pottery is largely 4th century AD in character. Other Phase 2 finds attest to occupation and/ or demolition activity, possibly linked to the later use/ abandonment of a nearby villa. Romano-British activity at the site appears to significantly post-date the construction of the Bartlow Hills Tumuli. The Phase 2

quarrying activity may however be linked to the construction of later, funerary earthworks surrounding these monuments. Phase 2 was preceded by an earlier Neolithic phase (Phase 1) and was succeeded by moderate post-medieval agricultural/ horticultural activity (Phase 3).

Within the formal walled garden the monitoring and recording identified sections of the original cruciform pathways. No archaeological material was present along the line of the new site access road.

5 METHODOLOGY

5.1 The evaluation provided for a sample of the area to be subject to development to be trial trenched (this focused on the new proposed building footprints, avoiding areas subject to previous archaeological excavation in association with the previous house proposals, and avoid affecting the root systems of trees. The brief required a sample of the development area to be investigated by trenching. The trenches targeted the new house, yard, garage and finalised proposed access route. One trench of 25m x 1.8m and one trench of 20m x 1.8m were excavated in the area of the new house/yard/car port (Trench 2). Three trenches of 16 - 21m x 1.80m were excavated for the initial sample of the new access road (Trenches 1 and 3 - 4). The client confirmed that the proposed gardeners store lies on the line of the former railway track bed where the area will have been truncated, and the course of this track is shown on historic mapping. The new length of driveway is now proposed to follow the course of the previously approved scheme which was subject to archaeological monitoring at the time, but three further trenches were provided for in this area.

5.2 The archaeological investigation comprised the inspection of the subsoil and natural deposits for archaeological features, the examination of spoil heaps and the recording of soil profiles. Encountered features and deposits were cleaned by hand and recorded using *pro forma* recording sheets, drawn to scale and photographed as appropriate. The excavated spoil was checked for finds.

5.3 The topsoil and subsoil were bucket sampled and sorted by hand at each end of the trenches to characterise their artefact content. Soil from this sampling procedure was kept separate from the main spoil heaps. Site records were completed to reflect this exercise and an on-site record was made of the finds recovered. A metal detector was used to enhance finds recovery. The metal detector survey was conducted when the trenches were opened, and the detector was not set to discriminate against iron. The spoil tips were also surveyed.

6 DESCRIPTION OF RESULTS

Individual trench descriptions are presented below:

Trench 1 Fig. 3

Sample Section 1	A	
0.00 = 52.47m AC	DD	
0.00 – 0.06m	L3003	Tarmac
0.06 – 0.12m	L3004	Hardcore. Compact, pale reddish yellow sand and gravel.
0.12 – 0.28m	L3005	Made Ground. Compact, dark grey brown silty sand.
0.28 – 0.46m	L3006	Subsoil. Friable, mid grey brown silty sand with frequent roots.
0.46m +	L3002	Natural. Firm, pale yellow white sandy chalk with occasional
		small to large angular flint.

Sample Section 1	В	
0.00 = 52.24m AOD		
0.00 – 0.06m	L3003	Tarmac. As above.
0.06 – 0.18m	L3004	Made Ground. As above.
0.18 – 0.28m	L3005	Made Ground. As above.
0.28 – 0.48m	L3006	Subsoil. As above.
0.48m +	L3002	Natural. As above.

Description: Trench 1 contained no archaeological features or finds.

Trench 2A Figs. 3 - 5

Sample Section 2	2A	
0.00 = 52.79m A	OD	
0.00 – 0.36m	L3000	Topsoil. Friable, dark grey brown silty sand
0.36 – 0.65m	L3001	Subsoil. As above.
0.65m +	L3002	Natural. As above.

Sample Section 2 0.00 = 54.06m A0		
0.00 – 0.22m	L3000	Topsoil. As above.
0.22 – 0.48m	L3001	Subsoil. As above.
0.48m +	L3002	Natural. As above.

Sample Section 2	2C	
0.00 = 52.86m A0	DC	
0.00 – 0.43m	L3000	Topsoil. As above.
0.43 – 0.84m	L3001	Subsoil. As above.
0.84m +	L3002	Natural. As above.

Description: Trench 2A contained Pits F3011 F3016 and F3020, and Post Hole F3018. Pits F3011 and F3016 contained Roman pottery. Pit F3020 and Post Hole F3018 were undated. Subsoil L3001 contained Roman (late 3rd – 4th century) pottery (3; 41g), CBM (18g), animal bone (3g) and struck flint (1; 9g).

Pit F3011 was ?sub rectangular in plan (1.50 + x 4.60 + x 0.42m). It had moderately sloping sides and an undulating base. Its fill, L3012, was a friable, mid grey brown silty sand with frequent small rounded chalk pebbles and sub angular flint. It contained Roman (4th century) pottery (210; 2122g), CBM (379g), animal bone (1136g), oyster shell (181g), struck flint (13; 177g), burnt flint (15g), Fe fragments (2; 39g), bone pins (2; 4g), Roman coin (3g), clinker (80g) and fired clay (72g). F3011 was cut by Pit F3020.

Post Hole F3018 was located at the base of Pit F3011. It was sub circular in plan $(0.30 \times 0.28 \times 0.09m)$. It had moderately sloping sides and a concave base. Its fill, L3019, was a friable, dark grey brown silty sand. It contained no finds.

Pit F3016 was sub rectangular in plan (1.50+ x 2.84 x 0.39m). It had moderately sloping sides and a flattish base. Its fill, L3017, was a friable, dark reddish brown silty sand. It contained Roman (mid $3^{rd} - 4^{th}$ century) pottery (5; 209g), animal bone (33g), oyster shell (6g), and a lead nail (2g).

Pit F3020 was sub rectangular in plan $(1.00+ x 4.21 \times 0.45m)$. It had moderately sloping sides and a flattish base. Its fill, L3021, was a friable, pale yellow grey silty sand. It contained no finds. F3020 cut Pit F3011.

Trench 2B Figs. 3 - 5

Description: Trench 2B contained Pits F3007 and F3013, Ditch F3009 and Layer L3015. Pits F3007 and F3013 contained Roman pottery. Ditch F3009 and Layer L3015 were undated. The latter contained struck flint.

Pit F3007 was sub rectangular in plan (1.50+ x 4.49+ x 0.38m). It had moderately sloping sides and a flattish base. Its fill, L3008, was a friable, mid yellow grey brown silty sand with frequent small rounded chalk pebbles. It contained Roman (4th century) pottery (40; 839g), CBM (1066g), animal bone (3009g), oyster shell (12g), struck flint (4; 96g), burnt flint (15g) and a Fe fragment (1; 27g). F3007 was cut by Ditch F3009.

Ditch F3009 was linear in plan (1.80+ x 1.40 x 0.21m), orientated N/S. It had moderately sloping sides and a concave base. Its fill, L3010, was a friable, dark grey brown silty sand with occasional small sub angular an sub rounded flint pebbles. It contained no finds. F3009 cut Pit F3007.

Pit F3013 was sub circular in plan ($1.50 + x 2.84 \times 0.39m$). It had moderately sloping sides and an undulating base. Its fill, L3014, was a friable, pale yellow grey brown silty sand. It contained Roman (late $3^{rd} - 4^{th}$ century) pottery (27; 340g), CBM (12g), animal bone (45g), struck flint (1; 8g), Fe fragments (3; 42g) and worked antler (1; 15g). F3013 cut Layer L3015.

L3015 was a friable, very pale yellowish grey silty sand with occasional sub angular flint and sub rounded chalk pebbles. It contained oyster shell (62g) and struck flint (3; 24g). L3015 was cut by Pit F3013.

Trench 3 Figs. 3

Sample Section 0.0 52.97m A		
0.00 – 0.28m	L3003	Tarmac. As above.
0.28m +	L3002	Natural. As above.

Sample Section 3	3B	
0.00 = 53.94m A	OD	
0.00 – 0.14m	L3000	Topsoil. As above.
0.14 – 0.28m	L3001	Subsoil. As above.
0.28m +	L3002	Natural. As above.

Description: Trench 3 contained no archaeological features or finds.

Trench 4 Fig. 3

Sample Section 4	A	
0.00 = 56.39m AC	D	
0.00 – 0.18m	L3001	Subsoil. As above.
0.18m +	L3002	Natural. As above.

Sample Section 4	В	
0.00 = 56.22m AC	D	
0.00 – 0.26m	L3001	Subsoil. As above.
0.26m +	L3002	Natural. As above.

Description: Trench 4 contained no archaeological features or finds. Subsoil L3001 contained $18^{th} - 19^{th}$ century pottery (1; 17g).

7 CONFIDENCE RATING

7.1 It is not felt that any factors significantly inhibited the recognition of archaeological features or finds.

8 DEPOSIT MODEL

8.1 Tarmac and Made Ground deposits were recorded in Trench 1. Elsewhere uppermost was Topsoil L3000, a friable, dark grey brown silty sand. It overlay Subsoil L3001, a friable, mid grey brown silty sand with frequent roots. At the base of the sequence was the natural, L3002, a firm, pale yellow white sandy chalk with occasional small to large angular flint.

9 DISCUSSION

Trench	Context	Description	Spot Date
2A	F3011	Pit	Roman (4 th C)
	F3016	Pit	Roman (mid 3 rd - 4 th C)
	F3018	Post Hole	-
	F3020	Pit	-
2B	F3007	Pit	Roman (4 th C)
	F3009	Ditch	-
	F3013	Pit	Roman (late 3 rd - 4 th C)

9.1 The recorded features are tabulated:

9.2 The archaeological features were located in Trench 2 which was closest to the earlier excavation (Fig.3), and the features comprise predominantly Roman pits. The earliest finds were prehistoric struck flint including a blade core of probable early Neolithic origin. Although residual it may be derived from the same phase of activity associated with a highly truncated deposit of accumulated material identified during the excavation to the east that possibly included evidence for early Neolithoc flint knapping (Mustchin & Barlow 2013, 29).

The dated features in Trench 2 comprised large pits with relatively shallow 9.3 profiles that contained late Roman pottery, animal bone, highly fragmented Roman CBM, iron nails, two bone pins and possibly part of an antler knife handle. These deposits appear to represent a clear continuation of the denser distribution of features recorded to the east (Mustchin & Barlow 2013, 29-30). The features appear to represent the disposal of domestic waste with a focus on occupation in the 4th century AD, probably related to a Roman villa recorded slightly further to the east by E.C.Neville in 1852 (CHER 06164). Investigations close to the villa have previously recorded a pit containing a closely comparable assemblage of domestic waste (Eckardt & Clarke 2007). The original excavation of the pits may be related to the guarrying of material for the Bartlow Hills funerary mounds in the early Roman period, although their shallow profiles perhaps mitigates against this. A possible further relationship with the evidence for occupation/settlement revealed by the excavation to the east is undated Ditch F3009. It appears to form a perpendicular boundary to the enclosure system that may extend between the site and the villa, and may form a western boundary of that enclosure system, possibly explaining why no archaeological features were recorded in Trenches 1, 3 and 4.

9.4 Roman Pit F3013 truncated Layer L3015, which had a limited extent and contained oyster shell and a struck flint. The excavation to the east recorded a late Roman layer that contained pottery and also oyster shell (Mustchin & Barlow 2013, 15), and was interpreted as a buried soil. Although there is no relationship or clear continuity between these layers, it is possible that they represent remnants of a buried soil preserved within natural undulations.

9.5 The Roman pottery contained in the pits reflects a chronology and pattern of consumption closely consistent with that recorded in the assemblage from the

excavation close to the east (Peachey 2013, 48-9), probably in the early to mid 4th century AD. The fine wares are dominated by highly-burnished oxidised wares from the Hadham kilns, supplemented by colour-coated/slipped dishes and beakers from the Lower Nene Valley and Oxfordshire. Coarse wares were principally sourced from the Hadham and Horningsea kilns although there are a diverse range of unsourced sandy grey wares. A lightly worn mortaria was also produced by the Hadham kilns. The pottery is particularly notable for a large sherd size and common cross-joining sherds; indicative of a primary deposit of domestic rubbish that was probably deposited rapidly in a single episode. The relative paucity of CBM is consistent with the apparent distance from the main villa building. The presence of domestic activity is supported by the utilitarian small finds including bone pins that may have been lost from clothing, and a possibly un-finished antler knife handle that may have been abandoned during manufacture, as well as sparse iron nails and fittings. The chronology of the pottery is also supported by a coin (nummus) of the House of Constantine, dated *c*.AD330-4. The animal bone and shell from the pits is also consistent with the domestic Roman diet, in this instance dominated by cattle and pig/boar; with limited sheep and oyster also present, as well as evidence for working animals such as dog and horse. All species exhibited evidence for butcherv. including skinning, which suggests pelts were a valued resource as well as meat The presence of neonatal pigs suggests they may have been bred on site and consumed as suckling pig roasts. Conversely to the quantity of pottery and animal bone there was a paucity of carbonised cereal remains from the environmental samples. Although glume wheat and hulled barley are present and consistent with components of the Roman diet, their relative scarcity suggests the rubbish deposits did not derive from areas in which cereals were processed or cooked.

10 CONCLUSION

10.1 The site is located close to the south of the River Granta, within an area of high archaeological potential, in particular for Roman activity that may be associated with a Roman villa close to the east or the Bartlow Hills burial mounds, close to the south-east. The Roman villa was originally investigated in the mid 19th century, and excavations adjacent to the east of the site have previously recorded a well, pits, quarry pits, layers, ditches and gullies associated with late Roman (4th century AD) domestic occupation (Mustchin & Barlow 2013) that was likely associated with the villa.

10.2 The evaluation revealed four Roman pits, and an un-dated pit, post hole, layer and ditch, located entirely in Trench 2 that likely form part of the same pattern of activity. The pits appear to represent the disposal of domestic rubbish, principally pottery and animal bone in the early to mid 4th century AD, and a clear continuation of the evidence for late Roman occupation recorded by the excavation adjacent to the east, related to the nearby villa. An undated ditch appears to correspond with the alignment of enclosure systems recorded in the adjacent excavation, and if it formed a western boundary to a Roman enclosure, may explain the absence of features in Trenches 1, 3 and 4. The finds assemblages present a comparable pattern of consumption to the assemblages from the adjacent excavation. The pottery is dominated by products of the Hadham and horningsea kilns, supplemented by mortaria and finewares from the Lower Nene Valley and Oxfordshire, including beakers and dishes. The animal bone exhibits extensive evidence for butchery including skinning, and is dominated by cattle, with pig/boar and oysters also an integral part of the diet. The early to mid 4^{th} century AD chronology of the assemblage indicated by the pottery is supported by a coin (nummus) of the House of Constantine, dated *c*.AD330-4.

DEPOSITION OF THE ARCHIVE

Archive records, with an inventory, will be deposited with any donated finds from the site at Cambridge County Archaeological Store. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. The archive will be deposited following the gaining of the transfer of title.

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Web resources

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Appendix 1 - Concordance of Finds

ECB5331 - P4812, Bartlow Park, Camps Road, Bartlow

Feature	Context	Segment	Trench	Description	Spot Date	Pot	Pottery	CBM	A.Bone	Other Material	Other	Other
		_			(Pot Only)	Qty	(g)	(g)	(g)		Qty	(g)
	3001		2	Subsoil	Late 3rd-4th C AD	3	41	18	3			
	3001		4	Subsoil	18th-19th C	1	17					
3007	3008		2B	Fill of Pit	4th C AD	40	839	1066	3009	O.Shell		12
										S.Flint	4	96
										B.Flint		15
										Fe Nail	1	27
3011	3012		2A	Fill of Pit	4th C AD	210	2122	379	1136	Bone Pins	2	4
										Roman Coin	1	3
										S.Flint	10	87
										Fe Nail	2	39
										Clinker		80
										F.Clay	9	75
										O.Shell		181
3013	3014		2B	Fill of Pit	Late 3rd-4th C AD	27	340	12	45	Worked Antler	1	15
										S.Flint	1	8
										Fe Frags	3	42
	3015		2B	Layer						O.Shell		62
3016	3017		2A	Fill of Pit	Mid 3rd-4th C AD	5	209		33	Pb Nail	1	2
										O.Shell		6

APPENDIX 2 SPECIALIST REPORTS

The Struck Flint

Andrew Peachey

The evaluation recovered a total of 15 pieces (191g) of struck flint and 27 fragments (826g) of burnt flint (Table 1), generally in an un-patinated, sharp condition, but as residual material in Roman pits. The assemblage includes a blade core with sparse debitage that is consistent with earlier Neolithic technology, but the remainder of the assemblage comprises relatively crude debitage flakes that may be the result of prehistoric nodule trimming or possibly Roman wall dressing.

Implement/Flake Type	Frequency	Weight (g)
Core	1	80
Debitage (blade-like)	3	16
Debitage (core trimming?)	11	95
Total	15	191

Table 1: Quantification of struck flint implement and flake types

Methodology & Terminology

The flint was quantified by fragment count and weight (g), with all data entered into a Microsoft Excel spreadsheet that will be deposited as part of the archive. Flake type (see 'Dorsal cortex,' below) or implement type, patination, colour and condition were also recorded as part of this data set, along with free-text comments.

The term 'cortex' refers to the natural weathered exterior surface of a piece of flint, and the term 'patination' to the colouration of a flaked surface exposed by human or natural agency. Dorsal cortex is categorised after Andrefsky (2005, 104 & 115) with 'primary flake' referring to those with cortex covering 100% of the dorsal face; 'secondary flake' with 50-99%; 'tertiary' with 1-49% and 'uncorticated' to those with no dorsal cortex. A 'blade' is defined as an elongated flake whose length is at least twice as great as it's breadth, often exhibiting parallel dorsal flake scars (a feature that can assist in the identification of broken blades that, by definition, have an indeterminate length/breadth ratio). Terms used to describe implement and core types follow the system adopted by Healy (1988, 48-9).

The Core Technology of the Assemblage

The flint utilised for knapping is uniformly dark grey in colour, or slightly lighter close to the cortex, which is typically off-white or very pale orange (iron-stained) with a slightly chalky finish. This type of flint was sourced from the Cretaceous Upper Chalk that underlies south-east Cambridgeshire, outcropping in the Granta Valley or present in secondary glacial deposits.

In the earlier Neolithic core preparation was undertaken systematically, with substantial areas of cortex deliberately trimmed from a nodule to allow for blade production to be started from a striking platform. The core from Pit F3007 is a single platform type (A2) that is consistent with this process, with cortex retained on one 'rear' side of the core and extensive blade removals from around part of the platform until the core was exhausted. The blade-like flakes in the same deposit may have been removed from this core but are not cross-joining. This presence of this early Neolithic technology is consistent with that common in the more extensive assemblage recovered from an adjacent excavation (Peachey 2013).

The remaining debitage flakes contained in Pits F3011 and F3013 are of contrasting character, with broad-squat profiles, corticated butts and a generally irregular or crude finish. It is possible that these flakes were removed by hard-hammer percussion during the trimming of cortex from a nodule, as a preparatory stage prior to the systematic reduction of an early Neolithic blade core, however based on their relatively crude character it is equally possible that they represent the expedient trimming and shaping of flint cobbles during the process of wall-dressing during the Roman period.

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The Roman Pottery

Andrew Peachey

The evaluation recovered a total of 285 sherds (3641g) of Roman pottery and a sherd (17g) of post-medieval pottery (Table 2). The Roman pottery vessel types appear to entirely date to the late Roman period, within the late 3rd to 4th centuries AD. The proportions and presence of fabric groups suggest a date within, or after, the early/mid 4th century AD as most likely, however this is based on a limited sample, with a high concentration of sherds contained in a single pit (F3011), and smaller groups in two further pits (F3007 and F3013).

The assemblage is dominated by products of the Hadham and Horningsea pottery industries, notably bead-and-flange rim dishes but these are supplemented by a range of regional imports, in particular fine oxidised wares and mortaria from Hadham (Hertfordshire), colour-coated (slipped) wares from Oxfordshire and the Lower Nene Valley. Other late Roman imports include rare black-burnished ware 1 from Dorset and shell-tempered ware from the south-east midlands, as well as storage jars typical of the region. The assemblage is well-preserved with a relatively low degree of abrasion and high incidence of cross-joining fragments. The combination of fabric and form types, discrete pottery groups and preservation suggest the pottery assemblage was deposited as primary refuse from a substantial domestic setting in the immediate vicinity, probably closely adjacent to the site.

The post-medieval pottery dates to the late 18th to 19th centuries and is limited to un-glazed red earthen ware from the subsoil.

Methodology

The pottery was quantified by sherd count and weight (g), with fabrics analysed at x20 magnification, and all data entered into a Microsoft Excel spreadsheet that forms part of the site archive. Samian ware forms reference Webster (1996). For the purposes of brevity, references to the form type series for the Horningsea kilns (Evans et al *forthcoming*), the Lower Nene Valley (Perrin 1999) and Colchester (Symonds & Wade 1999) have been abbreviated to *Horningsea*, *Perrin and Cam.* respectively. The pottery fabrics are described, below, and quantified (Table 2)

Fabric Descriptions

<u>Samian ware a</u> TRI SA LNV CC HAD OX OXF RS	<u>nd fine ware</u> Trier samian ware (Tomber & Dore 1998, 41) Lower Nene Valley colour-coated ware (Tomber & Dore 1998, 118) Hadham oxidised ware (Tomber & Dore 1998, 151) Oxfordshire red-slipped ware (Tomber & Dore 1998, 177)
<u>Coarse ware</u> HOR RE	Horningsea reduced ware (Tomber and Dore 1998, 116; Evans 1991, 35). Mid to dark grey surfaces with a reduced mid-grey core and sometimes oxidised margins. Inclusions comprise common quartz (0.1-0.5mm) with sparse limestone and grog/ironstone (generally <2mm) and occasional flint (0.5-5mm)
HOR BS	Horningsea black-surfaced-ware (Evans <i>et al</i> 2017: R04), black-slipped variant of HOR RE, typically imitating black-burnished ware forms
HAD RE1	Hadham reduced ware (Tomber & Dore 1998, 152); typically mid grey with a smooth to powdery feel.
HAD RE2	Hadham reduced ware (Tomber & Dore 1998, 153); typically with burnished black surfaces.
GRS1	Sandy grey ware 1. Mid grey surfaces over a lighter/pale grey core. Inclusions comprise common quartz (0.1-0.25mm), sparse fine mica and sparse black iron rich grains (0.25-1.5mm). A hard fabric with a slightly abrasive to smooth feel.
ROB SH	Romano-British shell-tempered ware (Tomber & Dore 1998, 212), wheel-
DOR BB1	made with common, moderately sorted shell (0.5-3mm) (South-east) Dorset Black-burnished ware 1 (Tomber & Dore 1998, 127)
<u>Mortaria</u> HAD OX (M)	Hadham oxidised ware mortaria (Tomber & Dore 1998, 151)

Amphora and transport vessels

STOR Storage Jar fabric 1. Mid orange-brown surfaces fading to a thick dark grey core. Inclusions comprise common angular grog - reduced in the core/oxidised on the surfaces (0.25-2.5mm), quartz (0.1-0.25mm) and sparse-occasional chalk (0.5-4mm). A hard fabric with a slightly soapy feel.

Fabric	Sherd Count	Weight (g)	R.EVE
TRI SA	1	12	-
LNV CC	8	121	0.20
HAD OX	67	465	0.42
OXF RS	7	96	0.20
HOR RE	46	633	0.15
HOR BS	20	250	0.30
HAD RE1	31	489	0.40
HAD RE2	29	287	0.45
GRS1	64	514	0.30
ROB SH	3	7	-
DOR BB1	1	16	-
HAD OX (M)	4	250	0.30
STOR	4	501	0.10
Post-medieval	1	17	-
Total	286	3658	2.92

Table 2: Quantification of pottery

Distribution

The distribution of pottery across the site demonstrates a narrow bias that reflects the limited scope of evaluation, with a high concentration of Roman pottery contained in Pit F3011, small groups in Pits F3007 and F3013, and very sparse sherds elsewhere (Table 3). Notably, the principal group from Pit F3011 is dominated by products from the Horningsea and Hadham industries, in particular reduced (grey), highly-burnished bead-and-flange rim dishes (Horningsea B6.1), supplemented by a range of well-burnished Hadham oxidised ware vessels that exhibit a characteristic glossy orange-red finish. Limited quantities of regionally-imported fine ware from the Oxfordshire and the Lower Nene Valley appear to represent bowls and dishes. The composition of these groups is summarised (by fabric) below, however, although no cross-joins were identified between features it appears numerous individual vessels may be represented in more than one group, notably between Pits F3007 and F3011. This suggests that a single episode or event of deposition, possibly connected with the abandonment or re-development of a building may be responsible for the majority of the assemblage, thus explaining the apparently narrow chronological range of the Roman pottery. The composition of the assemblage is broadly consistent with a late 3rd to 4th century AD date, though the rise to prominence of products from the Hadham kilns and the presence of Oxfordshire red-slipped ware vessels suggests a date from or after the early/mid 4th century AD, which would also be consistent with the assemblage from an adjacent excavation that revealed an occupation layer, well, ditches and pits that contained significant pottery groups (Peachey 2013).

Feature Group	No. of features	Sherd Count	Weight (g)	R.EVE
Pit F3011	1	210	2212	2.00
Pit F3007	1	40	839	0.72
Pit F3013	1	27	340	0.10
Pit F3016	1	5	209	0.10
Subsoil	na	4	58	-
Total		286	3658	2.92

Table 3: Distribution of pottery in feature groups

Commentary by Fabric Group

Imported fabrics and regional fine wares

Continental imports in the assemblage are limited to a body sherd of Samian ware from east Gaul (TRI SA) contained in Pit F3007. It has a very 'chalky' fabric typical of fabric variants produced towards the end of the exportation period in the mid 3rd century AD, and the extensive scratches on the exterior surface/slip (only) suggest it may have been heavily worn or re-used, thus potentially been long lived into the late 3rd /early 4th centuries AD (or it may represent residual material also from the adjacent area of occupation).

The fine wares are dominated by the highly burnished red-orange HAD OX, manufactured in the area of Much Hadham, Hertfordshire *c*.30km to the south in the 3^{rd} to 4^{th} centuries AD. The range of form types includes an s-profile bowl (*Cam*.299) and bead-and-flange rim dish, both from Pit F3007 and typical of late Roman assemblages in East Anglia. Also from Pit F3007 is a perforated basal fragment from a HAD OX strainer; while fragments from Pits F3007 and F3011 may derive from a single narrow-neck jar with a plain neck cordon (*Cam*.281).

The limited quantities of colour-coated/slipped fabrics include the products of the major industries in the Lower Nene Valley (LNV CC) and Oxfordshire (OXF RS). The LNV CC included dishes with a triangular bead rim and a plain rim (Perrin 218 & 233-4), contained in Pits F3011 and F3013 respectively, and with the latter typically only after the late 3rd century. The OXF RS vessels were produced from the mid 3rd century AD, but were not likely imported to the region until the 4th century AD, likely becoming common only after the middle of that century. From Pit F1007 the OXF RS comprises body sherds of a beaker with white-painted lattice decoration, while from Pit F3011 it is present as a hemispherical bowl and a bowl with an overhanging rim, upturned at the tip (Young 2000: types C55 & C49).

Horningsea Fabrics

Coarse ware products from the Horningsea kilns (HOR RE & HOR BS), which are situated c.20km to the north account for c.23% of the assemblage by sherd count (c.24% by weight), which is actually less than may be expected of supply patterns in the area, and may reflect the particularly late Roman date

of these specific feature groups. The industry is essentially conservative with limited evolution of form types, but the limited repertoire of form types may reflect a mid 4th century AD or later dater (if not the limited extent of the groups). Pit F3007 contained a HOR RE bead-and-flange rim dish (*Horningsea* B6.1), while HOR RE and HOR BS jars with everted bead rims from Pit F3011 may be associated with rilled shoulder/body sherds from the same deposits but are not cross-joining. Body sherds of storage jars with characteristic comb-strike 'decoration' are also present.

Other coarse ware and storage jar fabrics

Coarse wares from the Hadham kilns account for a similar proportion of the assemblage to those from Horningsea (*c*.21% by sherd count and weight), albeit with a uniformly higher finish (well-burnished), which reflects the industry rather than chronology, but may have influenced consumer selection in the 4th century AD. Form types are dominated by bead-and-flange rim dishes that have burnished interior and exterior surfaces, with at least four examples contained in Pit F3011, consistent with a currency in the late 3rd to 4th centuries AD, and potentially contemporary with single examples of shallow plain rim 'dog' dishes in Pits F3011 and F3016. One HAD RE1 bead-and-flange rim dish from Pit F3011 is notable for having four small vertical grooves carved *post cocturum* into a 20mm section of the edge of the flange; presumably to act as an identifier of function or owner's mark

The remaining sandy grey wares (GRS1) may mask less distinct products of the Horningsea and Hadham kilns, but it is clear the group is not at all homogenous and it is clear that individual vessels may have been supplied by a diverse range of sources, potentially spanning Hertfordshire, Essex, Cambridgeshire and Suffolk. A jar with a stubby lid-seated rim (*Cam*.307) from Pit F3011 is likely of 4th century AD date, and exhibits a slightly micaceous self-slipped fabric that may originate around Colchester, while in contrast the same deposit contained fragments of a plain funnel neck beaker in a hard, steely dark grey fabric that is perhaps more typical of the Braintree/Chelmsford area but this is far from certain. The other coarse wares, including shell-tempered ware (ROB SH) and black-burnished ware 1 (DOR BB1) are typical of late Roman assemblages in the region but are limited to non-diagnostic body sherds.

The coarse wares also include the heavily grog-tempered storage jar fabric (STOR), which has a consistent low presence in Pits F3007, F3011 and F3013. The STOR from Pit F3011 includes a thick 'almond-shape' rim of a storage jar (Cam.273), a form type that persisted throughout the Roman period but is particularly common Essex, including at Chelmsford and Colchester, but not at Cambridge where the characteristic Horningsea storage jars are more common (Hull & Pullinger 1999). It suggests that Bartlow was drawing on the supply of a staple product from the south-east in Essex as well as from the Fen-edge.

<u>Mortaria</u>

Pit F3007 contained cross-joining fragments from a single HAD OX (M) mortaria, the only such vessel type in these pit groups; but likely representing a specialist product imported alongside products of the major late Roman industry at Hadham that also supplied fine and coarse products to the site. The HAD OX (M) comprises a mortar with a upright bead that is out-turned at the tip, and an angular hooked flange that is paralleled at Colchester and Chlemsford (Symonds & Wade 1999: fig.4.20.26; Going 1987: type D7 1/1) in late 3rd to 4th century AD groups, but is perhaps more pertinently likely heavily influenced in its design of products originating in the Oxfordshire kilns. Notably, the relatively fine and dense quartz triturations grits are very lightly worn, suggesting the mortar was unfortunately broken when nearly new, likely representing a domestic accident rather than wear or stress.

Discussion

The distribution of Roman pottery combined with the supply of form and fabric types give the assemblage a quite singular character that appears to result from the rapid disposal of domestic material, likely in the early/mid 4th century AD or later, and consistent with the pattern defined by the larger assemblage from an adjacent excavation (Peachey 2013, 48-9). The principal concentration of Roman pottery was contained in Pit F3011, and it is likely that sherds from Pits F3007, F3013 and F3016 are derived from related episodes of deposition, if not contemporary rubbish disposal arising from moderate to high status consumption associated with substantial domestic The primary suppliers to the site were the Horningsea and occupation. Hadham industry, which supplied high proportions of bead-and-flange rim and shallow plain rim 'dog' dishes, while the Hadham kilns also supplied a range fine oxidised wares and mortaria. In addition to the highly burnished orangered Hadham fine wares, further fine colour-coated vessels arrived from the Lower Nene Valley and Oxfordshire and from east Gaul, notably Trier. The converging chronologies of the vessel types in the assemblage suggest a date in the late 3rd to 4th century AD, with the pattern of supply perhaps most typical of a chronology from the early/mid 4th centuries AD onward

This pattern of supply and consumption is closely comparable to 4th century AD pottery groups recorded at Cambridge (Hull & Pullinger 1999) and similar to Great Chesterford (Miller 1995, 40-41; Martin 2011, 305-7), both associated with urban settings, although the latter appears even more dependent on the Hadham industry and less so on the Horningsea kilns. The assemblage from the ribbon settlement on Ermine Street at Wimpole (Lucas 1994) also contains many close parallels. It has previously been observed that in northern Cambridgeshire the divide between urban and rural assemblages may be obscured with very high levels of tableware apparent, possibly because the close proximity of a pottery industry allowed the market to be saturated at low cost (Evans 2001, 30-31). A similar phenomenon may be observed at Bartlow, with the burnished Hadham and Horningsea coarse ware bead-and-flange rim dishes taking the place of the colour-coated ware in north Cambridgeshire. However the presence of numerous regional imports,

notably fine ware and mortaria serves to highlight that the settlement at Bartlow comprised an economically affluent node in the network of Roman occupation to the south of the Fens, benefiting from easy access to road and river trade networks, closely linked to urban centres such as Cambridge and Great Chesterford nearby.

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The Ceramic Building Materials

Andrew Peachey

The evaluation recovered 12 fragments (1475g) of Roman CBM and nine fragments (75g) of Roman daub (Table 4). The Roman CBM is generally in a substantially fragmented and moderately abraded condition, and probably represents debris scattered from the construction, re-development or demolition of a major structure such as a villa.

CBM type	Fragment Count	Weight (g)
Tegula roof tile	12	1475
Daub	9	75
Total	12	1550

Table 4: Quantification of Roman CBM by fragment count and weight (grams)

Methodology

The CBM was quantified by fragment count and weight with fabrics examined at x20 magnification and all data entered into a Microsoft Excel spreadsheet that will be deposited as part of the archive. Roman CBM forms were identified using the conventions defined by Brodribb (1987).

Roman CBM Fabric Descriptions

The Roman CBM was manufactured in a single fabric, likely local and probably to cater specifically for the construction of a building in the near vicinity:

Fabric 1Orange to orange-red, with inclusions of common to abundant fine quartz
(<0.2mm), sparse to common fine mica, and sparse red/cream rounded clay
pellets (0.25-0.75mm). A hard fabric with a smooth to slightly powdery feel.

Discussion

Roman CBM is only present in limited quantities: contained in Pits F3007, F3011, F3013 and Subsoil L3001 (Trench 2). The CBM is limited to fragments of flat body from tegula roof tiles, although occasionally the grooves and scars of the flanged edges are partially visible. Pit F1011 also contained small fragments of daub tempered with abundant rounded chalk, which may have been used in the construction of walls or floors.

In conjunction with the assemblage from an adjacent excavation (Peachey 2013), the CBM assemblage appears typical of the scattered remnants of a substantial building but does not nearly approach the quantities that would be indicative of a demolition deposit, and therefore may have been scattered a moderate distance from the principal structure, or represent minor construction, redevelopment or repair work conducted around the building.

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Metalwork and Other Finds

Rebecca Sillwood

Introduction

Eleven finds were submitted for reporting from trial trenching at Bartlow Park. The finds include six objects of iron, two of bone, and one each of antler, copper alloy, and lead. The finds were recovered from four separate pits, all of Roman date.

Iron

The six iron finds consisted of five nails and one unidentified object. The pieces were recovered from the fills of Pits F3007, F3011, F3013, and F3017. The nails are all described and measured within the Excel spreadsheet, summarised below, which will be submitted as part of the archive. The nails do not warrant further description, as they are not intrinsically dateable, and they have many purposes. It is likely, given their context, that they are all of Roman date.

Feature F3007	Context L3008	Fe object Nail	Weight (g) 27	Dimensions/Comment >71x12.8mm, circular section
F3011	L3012	Nails (x2)	39	90mm long (circular head) & >62mm long (t-shape head); both 5mm diameter; square shank
F3013	L3014	Nails (x2)	18	 >66mm long (dome head) & >40mm long (missing head); both 5mm diameter; square shank
		Leaf-shape blade	24	108x17x7mm, leaf-shaped terminal with twisted transition to solid circular-section shaft

The unidentified object was recovered from Pit F3013 and consists of a leafshaped blade with a twisted shoulder leading to a solid circular sectioned shank. The purpose of this object is uncertain, even Manning (1985, Plate 69, S128) is not sure of the use for this type of object. It may be decorative, as seems most likely, perhaps a mount for a box or casket, but this is not certain.

Other

A copper alloy coin (2.38g, 17mm diameter) was found in Pit F3011. The coin is identifiable, though worn, as a nummus of the House of Constantine, certainly minted between AD330-340. The coin (*AE3*) has the helmeted, mantled bust of Roma with the legend VRBS ROMA, with a reverse of a shewolf standing left suckling Romulus and Remus, two stars above with a palm leaf in between. The mint mark TRS is in exergue, indicating it was mint in Trier, most likely under Constantine I in AD330-334 (c.f. RIC 522&561).

Two bone pins were recovered together from Pit F3011, along with the coin mentioned above. The pins, one complete, one missing the tip, are of a similar type, that is, of Crummy's Type 3 'Pins with a more or less spherical head' (1981, 21). One of the pins is a type 3A and one is 3B, the difference being only a slight deviation in the shape of the head. Crummy states that though these are the most frequently found type of bone pin at Colchester, there are very few which are in contexts earlier than the late 3rd century (1981, 22).

Feature	Context	Bone/Ar object	ntler	Weight (g)	Dimensions/Comment
F3011	L3012	Bone Pir	n	1.4	>81x7mm; spherical elongated head, swollen centre of shaft, tapering to (missing) point. Crummy type B
				2.2	>57.6x10mm; globular oval head, swollen end of shaft, tapering to point. Crummy type A
F3013	L3014	Sawn Tine	Antler	15	37x25x21mm; heavy striations at both ends, deep scored slot near one end

A segment of antler tine was also recovered from Pit F3013. The piece has been sawn at both ends, and a deep cut made in a section of the body. This is likely to have been cut in preparation for use, perhaps as a knife handle or similar.

A lead nail was found in Pit F3016. It is difficult to date nails, as stated above, and lead is an unusual material for a nail, being soft. However, lead Roman nails are a possibility, and could be used for small furnishings.

Feature	Context	Lead object	Weight (g)	Dimension	s/Comr	ment	
F3016	L3017	Nail	2	33x9mm;	flat	circular	head,
				rectangular sectioned shank			

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FAUNAL REMAINS AND MOLLUSCS

Dr Julie Curl

THE ANIMAL BONE

Methodology

The assessment was carried out following a modified version of guidelines by English Heritage (Davis, 1992) and Baker and Worley, 2014. All of the bone was examined to determine range of species and elements present. A record was also made of butchering and any indications of skinning, hornworking and other modifications. When possible ages were estimated along with any other relevant information, such as pathologies. Counts and weights were noted for each context and counts made for each species. Where bone could not be identified to species, they were grouped as, for example, 'large mammal', 'bird' or 'small mammal'. The results were input into an Excel database for quantification and analysis. A summary catalogue is included with this report and a full catalogue (with additional counts) of the faunal remains is available in the digital archive.

The bone assemblage

Quantification, provenance and preservation

A total of 4226g of bone, consisting of 248 elements, was recovered from this excavation. The assemblage is quantified in Tables 5 and 6.

The bone was mostly recovered from pit fills, with a small amount of bone (3g) from subsoil, all of the bone is associated with finds of a 3rd to 4th century date.

Trench		Feature Type, count and weight		
	Pit	Subsoil		
2		1/3g	1/3g	

2A	69/1169g		69/1169g
2B	178/3054g		178/3054g
Totals	247/4223g	1/3g	248/4226g

Table 5. Quantification of the faunal remains by context, feature and weight.

All of the bone is in good condition, with little or no erosion of surfaces. Invertebrate damage is low, suggesting the remains were rapidly buried. Seven bones from pit fills showed clear canid gnawing, with most gnawing from pit fill 3012, the frequency of gnawing in a relatively small assemblage, coupled with the lack of invertebrate activity, would rule out wild scavengers and strongly suggests that meat waste was given to domestic or working dogs and the dogs food waste was disposed of with human debris.

One burnt bone was seen, with slight charring on a distal equid metatarsal from pit fill 3008.

Species range and modifications and other observations

Six species were identified in this assemblage. The highest number of bones were from **cattle**, which were seen in pit fills 3008 and 3012, with adult and juvenile present. **Pig/boar** were seen in three fills and in slightly larger numbers than the ovicaprids. The porcine remains included adult, juvenile and neonatal remains, suggesting onsite breeding or perhaps the cull of a pregnant wild boar. **Sheep/goat** were seen in two pit fills and included adult and juvenile remains. A small horned sheep was seen from pit fill 3008

Species		pe and NISP	Total
	Pit	Subsoil	
Bird - Fowl	2		2
Cattle	24		24
Dog/wolf	3		3
Equid	10		10
Mammal	185	1	186
Pig/Boar	13		13
Sheep/goat	10		10
Total	247	1	248

Table 6. Quantification of the faunal remains by feature, species and NISP.

Pit fill 3008 produced remains (limbs, scapula, hoof) of an adult and neonatal/prenatal **equids**. The adult metatarsal had been slightly burnt, perhaps as a method of disposal, some of the equid bones had also been gnawed, suggesting the equid meat may have been used to feed dogs and perhaps people. The presence of such young bones is unusual on archaeological sites and is a clear indication of on-site breeding. The equids had been butchered, perhaps for their hides and perhaps to use the meat for feeding dogs on site and maybe for human consumption if meat was in short supply.

Dog/wolf was identified from Pit Fill F3007 L3008 with a tibia, caudal (tail) vertebrae and tooth. The measurements of the tibia (following Von Den Driesch, 1976) suggest a shoulder height of approximately 511mm or 20.5 inches, this is in the range for a small female wolf, but the slender build of the canid would suggest a lightly built but tall hound like a lurcher or Saluki, which could have been used for hunting. The tibia showed a fine cut, which suggests the animal was at least skinned. Butchering of canids, even domestic dogs, is common in most periods.

Two bones from a **fowl** (chicken or pheasant) were recorded from Pit Fill F3011 L3012 with a tibiotarsus and ulna, with a cut mark on the tibiotarsus suggesting removal of the legs prior to cooking.

Butchering

Knife cuts from skinning were noted. Chops were seen from dismemberment of the carcass and preparation of cuts of meat. Fine knife cuts from meat removal were seen. Butchering in this assemblage included the equid and dog remains, which were at least used for pelts and possibly meat.

Pathologies

Pit 3012 produced a cattle pelvis with possible septic arthritis. Cattle were commonly kept for traction in earlier periods and suffered arthritic problems as a result.

A pig/boar mandible from Pit Fill F3011 L3012 showed severe infection that appears to be osteomyelitis. Osteomyelitis is an infection that travels in the blood and can enter the body at one location and infect a bone in another location. Pig/boar feed on a rough diet and this can include carcasses and they can gnaw bone; such rough pieces in the food can pierce the gums and allow bacterial infection that can result in such infections.

Discussion

This is a small assemeblage but rich in the main food and domestic species.

The presence of such young bones is unusual on archaeological sites and is a clear indication of on-site breeding. A young foal was seen in Roman waste at Beck Road, Mildenhall (Curl, 2009). Foals can suffer predation from wolves and stray dogs and this may be the explanation for the foal at Bartlow, but its association with adult remains would suggest the mother perhaps died in birth or shortly after. Butchering of equids is common in most periods, although meat is not popular for human consumption, it may be used in times of shortage or to feed domestic or working dogs, hides may have also been used.

The neonatal for the pig/boar remains also suggest they were bred on site, with neonatal pigs often accidently killed by notoriously clumsy mothers that lie on young. There is a possibility that excess piglets might have been killed for suckling pig roasts.

It is interesting that the majority amount of gnawing was observed on bones from Pit Fill F3011 L3012, which produced a third of the weight of bones than Pit Fill F3007 L3008, which might suggest the waste in Fill L3012 was from a household with a dog. The dog in this assemblage may have been a hunting dog. The skinning of the dog is not surprising, pelts of dogs would have been useful and meat of working dogs may have been used to feed other dogs as they are today.

THE MOLLUSC ASSEMBLAGE

Methodology

The molluscs were identified to species using a variety of reference material. Shells were catalogued by species and where appropriate, counts were made of the number of individual species present (NISP), counts of top and base shells and an estimate of the minimum number of individuals (MNI). Bivalve shells are known to be used as painter's palettes and the remains are examined for any traces of pigments. Shells are also examined for any cut marks that would confirm their use for food from the prising apart of the shells or removal of meat with a knife and examined for parasites and other information following Winder (2011).

Quantification, provenance and preservation

A total of 261g of shell, consisting of twenty elements, was recovered from one pit fill and found with 3rd to 4th century artefacts. The assemblage is quantified in Table 7, with a full catalogue in Table 9.

Context	Trench	Feature	Ctxt Qty	Weight	F	М	L	Species	NISP
3008	2B	3007	2	12		2		Oyster	2
3012	2A	3011	14	181		14		Oyster	14
3015	2B	3015	3	62		3		Oyster	3
3017	2A	3016	1	6		1		Oyster	1

Table 7. Quantification of the mollusc assemblage.

The mollusc assemblage

All of the shells in this assemblage were identified as the Common Oyster (*Ostrea edulis*), three of the shells had been cut when prised open with a knife, attesting to use of the oysters for meat.

Distortion of shells, sponge and worm marks, a barnacle marks and attached shells were all noted, indicating that the oysters were obtained from a natural marine environment rather than from farmed stock.

Conclusions

This is a small assemblage of the most common marine mollusc found on archaeological sites. The marine sponges and worms show these oysters were collected from a marine environment rather than from farmed oysters. The cut marks confirm that these were collected for food use to supplement the diet.

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Tables 8 and 9

- 1. Summary catalogue of the faunal remains.
- 2. Catalogue of the mollusc assemblage.

Table 8

Catalogue of the animal bone recovered from ECB5331 Listed in context order. A full catalogue (with additional counts) is available as an Excel file.

Key:

Gnaw = gnawed bone, C = canid, F = feline

NISP = Number of Individual Species elements Present

Age – ad = adult, juv = juvenile (older than 1 month), Neo = less than one month old

Ctxt	Trench	FNo	Gnaw	C/F/R	Gnaw	Ctxt Qty	Wt (g)	Species	NISP	Ad	Juv	Neo	Element	Butchering	Comments
					Elem								range		
3001	2	3001				1	3	Mammal	1						
3008	2В	3007				172	3009	Cattle	15	1	1		tibias, mandible, radius, vertebrae, tibia, scapula, talus, isolated teeth	cuts, chops	adult and unfused juvenile elements, heavy calculus on one well worn third molar, several knife cuts on end of talus
3008	2B	3007	2	С	femur, neonatal metatarsal			Equid	10	1		1	scapula, hoof, metatarsal, tibia, femur	cut, chopped	neontal tibia, metatarsal, radius, adult tibia, metatarsal and other bones, gnawing , slight charring on adult distal metatarsal
3008	2B	3007						Sheep/goat	3	1			mandible (no teeth), metatarsal shaft, horn/skull	chopped	small horncore of 60mm on length with skull frag (frontal bone) attached
3008	2B	3007						Pig/Boar	7		1	1	juv vertebrae, mos, phalange, neonatal	cut MP	

												humerus		
3008	2B	3007						Dog/wolf	3	1		tibia (slender), caudal vertebrae, tooth	cut	slender canid, heavily worn upper left canine tooth - bone gnawing
3008	2B	3007						Mammal	134				butchered	mostly large mammal, some of pig/sheep/canid size
3012	2A	3011	2	с	scapula and metatarsal	65	1136	Cattle	9	1		mandible condyle, isolated teeth, scapula, metacarpal metatarsal, radius, proximal phalange, pelvis	cut, chopped	chopped and cut scapula, proximal metacarpal, proximal metatarsal, cut proximal phalange, pelvis with infection/arthritic problems
3012	2A	3011	1	С	juv metacarpal			Sheep/goat	7	1	1	adult humeri, metatarsals juv metacarpal femur, radius	,	boiled MT and humerus
3012	2A	3011	1	С	radius			Pig/Boar	5	1	1	adult scapula, mandible, radius, juv mandible	cut, chopped	juv mandible has Dp4 at TWS: B-C, Severe infection in adult mandible - possible osteomyelitis and teeth lost
3012	2A	3011	1	F?	tibiotarsus			Bird - Fowl	2	1		tibiotarsus	cut	cut tib and gnawed by cat/mustelid or small
3012	2A	3011						Mammal	42			and ulna		dog
3012	2A 2B	3013				6	45	Pig/Boar	42	1		tooth		
3014	2B 2B	3013				0	40	Mammal	5	1		100111		
3014	2A	3013				4	33	Mammal	4			vertebrae fragments		

Context	Trench	Feature	Ctxt Qty	Weight	Freshwate	Marine	Land snail	Species	NISP	Тор	Base	INN	Apex	Frag	Distort	Worms	Sponge	Barnacles	Attached	Cuts	Burnt	Gnaw	Condition	Pigment?	Comments
300 8	2 B	300 7	2	12		2		Oyste r	2		2	1	1	1	1		1						goo d		?some cess/urine depoists in pit
301 2	2 A	301 1	1 4	18 1		1 4		Oyste r	1 4	6	8	8	1 4		4	3	2	1	2	2			goo d		
301 5	2 B	301 5	3	62		3		Oyste r	3	2	1	2	3		1	2	1			1			goo d		
301 7	2 A	301 6	1	6		1		Oyste r	1	1		1	1		1								goo d		

 Table 9. Catalogue of the mollusc remains from ECB5331

The Environmental Samples

Dr John Summers

Introduction

During the archaeological evaluation at Bartlow Park, six bulk soil samples for environmental archaeological assessment were taken and processed. The majority of the sampled features have been spot dated to the 3rd-4th century AD. This report presents the results from the assessment of the bulk sample light fractions, and discusses the significance and potential of any remains recovered.

Methods

Samples were processed at the Archaeological Solutions Ltd facilities in Bury St. Edmunds using standard flotation methods. The light fractions were washed onto a mesh of 500µm (microns), while the heavy fractions were sieved to 1mm. The dried light fractions were scanned under a low power stereomicroscope (x10-x30 magnification). Botanical and molluscan remains were identified and recorded using reference literature (Cappers *et al.* 2006; Jacomet 2006; Kerney and Cameron 1979; Kerney 1999) and a reference collection of modern seeds. Potential contaminants, such as modern roots, seeds and invertebrate fauna were also recorded in order to gain an insight into possible disturbance of the deposits.

For the purpose of the assessment, the bulk samples were 50% sub-sampled. Any found to have potential to produce >30 identifiable specimens or abundant charcoal remains will be fully processed and the resulting light fraction retained with the site archive.

Results

The assessment data from the bulk sample light fractions are presented in Table 10. Carbonised cereal remains were present in low concentrations throughout the assemblage. Wheat, including glume wheat (*Triticum dicoccum/ spelta*), and barley (*Hordeum* sp.) were the two cereals identified. No associated non-cereal arable weed taxa were present and only small quantities of charcoal were recognised. The low density of remains indicates that the sampled features were not routinely receiving dumps of carbonised debris from domestic or arable processing activities. The material most likely represents background scatters of wind blown carbonised debris associated with activity in the vicinity of the excavated features.

Molluscan remains were common and included a number of grassland (*Helicella itala*, *Pupilla muscorum* and *Vallonia* sp.) and ground litter (*Trichia hispida* group and *Cochlicopa* sp.) taxa.

Conclusions

The bulk sample light fractions from the evaluation at Bartlow Park showed a low intensity of deposition of carbonised plant macrofossil remains. This is consistent with background scatters of material generated by activity in the vicinity of the sampled deposits but not necessarily directly associated.

The results from the evaluation are comparable to those from an adjacent excavation (Summers 2013), which produced predominantly low density samples, with the primary cereal remains being glume wheat (including spelt) and hulled barley.

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										Cei	reals	Nor	n-cereal taxa	_	С	harcoal		Molluscs		Con	tamin	ants	I				
Site code	Sample number	Context	Feature	Descriptior	Spot date	Volume taken (litres)	Volume processed (litres	% processed	Cereal grains	Cereal chaf	Notes	Seeds	Notes	Hazelnut shel	Charcoal>2mm	Notes	Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules	Other remains			
есв5331	1	3017	3016	Fill of Pit	Mid 3rd- 4th C AD	20	10	50%	x	-	Trit (1)	-	_	_	X	-	XX	Pupilla muscorum, Trichia hispida group, Vallonia sp.	XX	xx		x	-	_			
ECB5331	2	3012	3011	Fill of Pit	4th C AD	20	10	50%	x	-	Hord (1), E/S (1), NFI (5)	-	-	_	X	-	xx	Pupilla muscorum, Trichia hispida group	xx	XX		x	-	-			
ECB5331	3	3019	3018	Fill of Pit	_	10	10	100%	x	-	Hord (1), NFI (1)	_	_	_	x	_	xx	Pupilla muscorum, Trichia hispida group, Vallonia sp.	x	x	_	_	_	Coal (X)			
ECB5331	4	3008	3007	Fill of Pit	4th C AD	40	20	50%	x	-	NFI (1)	_	-	-	x	-	XX	Pupilla muscorum, Trichia hispida group, Vallonia sp., Vertigo sp.	x	xx	x	_	-	-			

ECB5331	5	3021	3020	Fill of Pit	-	40	20	50%	x	_	NFI (1)	-	-	_	x	-	xx	Helicella itala, Pupilla muscorum, Trichia hispida group, Vallonia sp.	xx	xx	-	×	-	Coal (X)
ECB5331	6	3014	3013	Fill of Pit	Late 3rd- 4th C AD	40	20	50%	x	_	Hord (1)	_	_	_	x	_	XX	Cochlicopa sp., Helicella itala, Pupilla muscorum, Trichia hispida group, Vallonia sp.	x	XX	_	_	_	-

Table 10: Results from the assessment of bulk sample light fractions from Bartlow Park. Abbreviations: Hord = barley (*Hordeum* sp.); E/S = emmer/ spelt wheat (*Triticum dicoccum/ spelta*); Trit = wheat (*Triticum* sp.); NFI = not formally identified (indeterminate cereal grain)

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OASIS ID: archaeol7-339398

Project details

BARTLOW PARK, CAMPS ROAD, BARTLOW, CAMBRIDGESHIRE CB21 4PP (TT)
In December 2018 Archaeological Solutions (AS) carried out an archaeological evaluation of land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP (NGR TL 5855 4501; Figs. 1 - 2). The evaluation was undertaken to provide for the initial requirements of a planning condition attached to outline planning approval for the construction of a single-storey dwelling and associated works (South Cambs Council Approval Ref. S/3115/15/FL). The evaluation was undertaken based on the advice of Cambridgeshire County Council Historic Environment Team. The archaeological features were located in Trench 2 which was closest to the earlier excavation (Fig.3), and the features comprise predominantly Roman pits. The earliest finds were prehistoric struck flint, including a blade core that may relate to evidence for early Neolithic activity in the near vicinity. The Roman pits appear to represent the disposal of domestic rubbish associated with a villa to the east, and are a continuation of dense Roman remains recorded by an excavation adjacent to the east. The patterns of consumption are also consistent, with the pottery focussed on the products of kilns at Hadham and Horningsea and supplemented by fine ware beakers and dishes, and mortaria; while the animal bone is dominated by cattle supplemented by pig/boar and oyster, with extensive evidence for butchery and skinning. The early-mid 4th century AD chronology of the pottery is supported by a coin (nummus) of the House of Constantine, dated c.AD330-1; while the small finds included two bone pins that were potentially lost during domestic life.
Start: 01-12-2018 End: 31-12-2018
Yes / Not known
P4812 - Contracting Unit No.
ECB5331 - Sitecode
Field evaluation
Area of Archaeological Importance (AAI)
Other 15 - Other
PITS Roman
POTTERY Roman
ANIMAL BONE Roman
COIN Roman
"Targeted Trenches"
Urban residential (e.g. flats, houses, etc.)

Prompt	Planning condition
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	CAMBRIDGESHIRE SOUTH CAMBRIDGESHIRE BARTLOW Land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP
Postcode	CB214PP
Study area	0 Square metres
Site coordinates	TL 5855 4501 52.080260263737 0.314041447589 52 04 48 N 000 18 50 E Point
Height OD / Depth	Min: 52m Max: 52m

Project creators

Name of Organisation	Archaeological Solutions Ltd
Project brief originator	CCC HET
Project design originator	Jon Murray
Project director/manager	Jon Murray
Project supervisor	Archaeological Solutions Ltd
Type of sponsor/funding body	Mr and Mrs Miller
Name of sponsor/funding body	Mr & Mrs Miller

Project archives

Physical Archive recipient	Cambridgeshire Council Archaeological Store
Physical Contents	"Animal Bones","Ceramics","Metal","other"
Digital Archive recipient	Cambirdge County Archaeological Store
Digital Contents	"Animal Bones","Ceramics","Metal","other"
Digital Media available	"Database","Images raster / digital photography","Spreadsheets","Text"
Paper Archive recipient	Cambridge County Archaeological Store
Paper Contents	"Animal Bones","Ceramics","Metal","other"
Paper Media available	"Context sheet","Drawing","Map","Photograph","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Land at Bartlow Park, Camps Road, Bartlow, Cambridgeshire CB21 4PP. An Archaeological Trial Trench Evaluation

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PHOTOGRAPHIC INDEX (P4812)



General site overview



3 Sample section 2A looking west



2 Trench 2 looking north



Sample section 2B looking north



5 Sample section 2C looking north



7 Pit F3007 and Ditch F3009 in Trench 2 looking north-east



6 Pit F3007 and Ditch F3009 in Trench 2 looking south



8 Pit F3011 in Trench 2 looking east



10 Pit F3013 in Trench 2 looking south

9 Pit F3011 in Trench 2 looking south



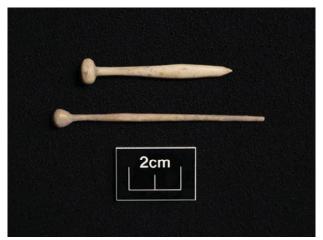
11 Pit F3016 in Trench 2 looking east



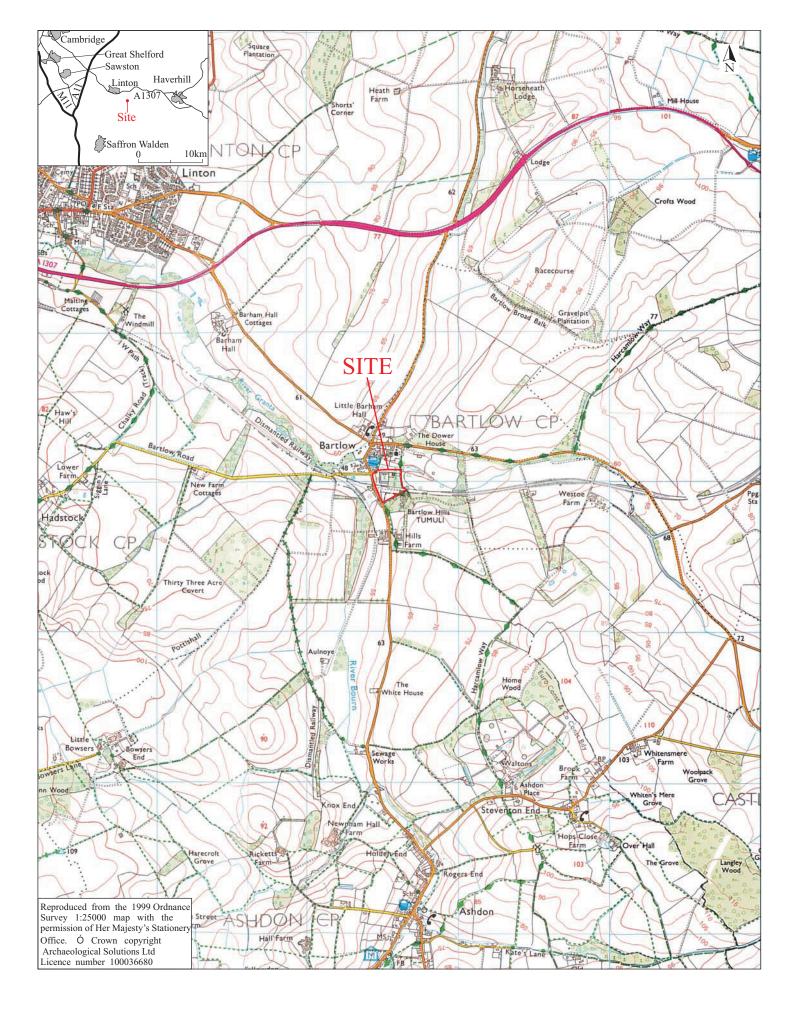
12 Post Hole F3018 in Trench 2 looking south



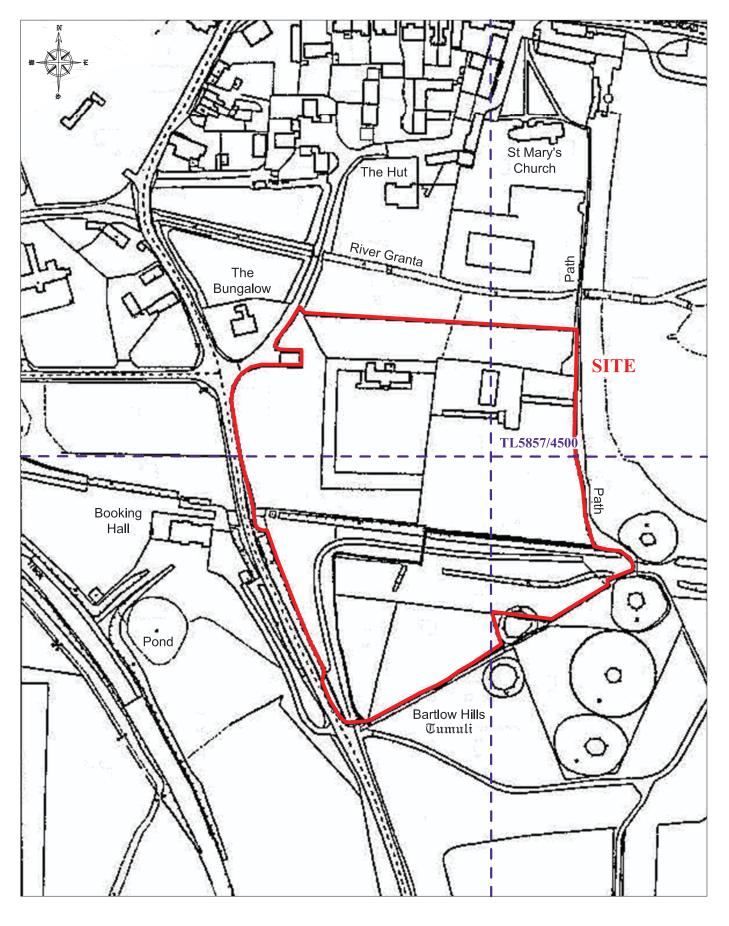
13 Pit F3020 in Trench 2 looking east



14 Bone pins from Pit F3011 in Trench 2A



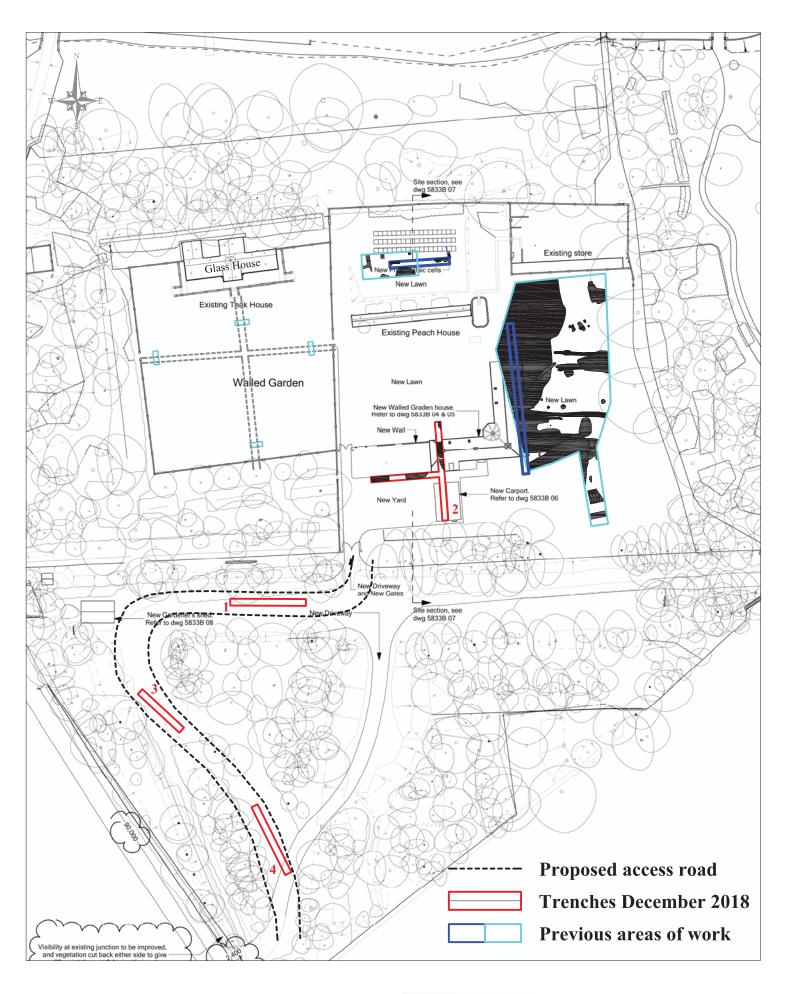
Archaeological Solutions Ltd
Fig. 1 Site location plan
Scale 1:25,000 at A4
Bartlow Park Walled Garden House, Cambridgeshire (P4812)



0 15

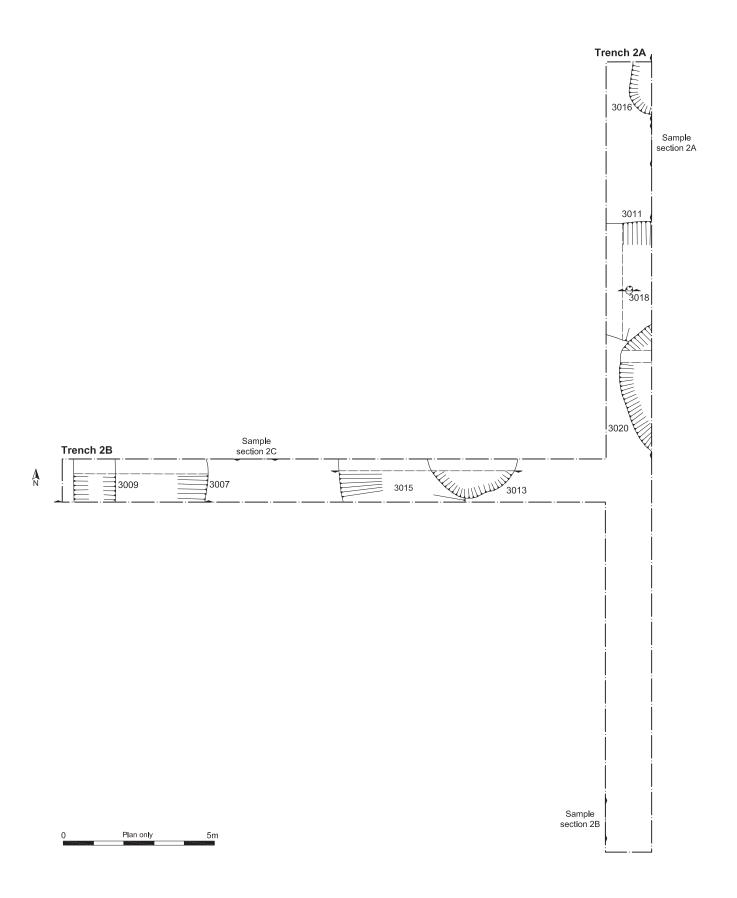
150m



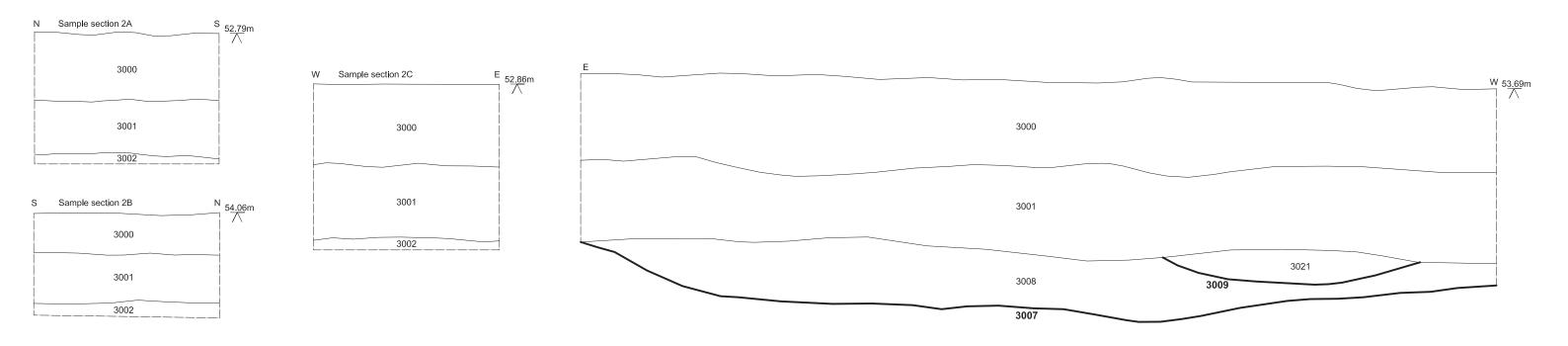


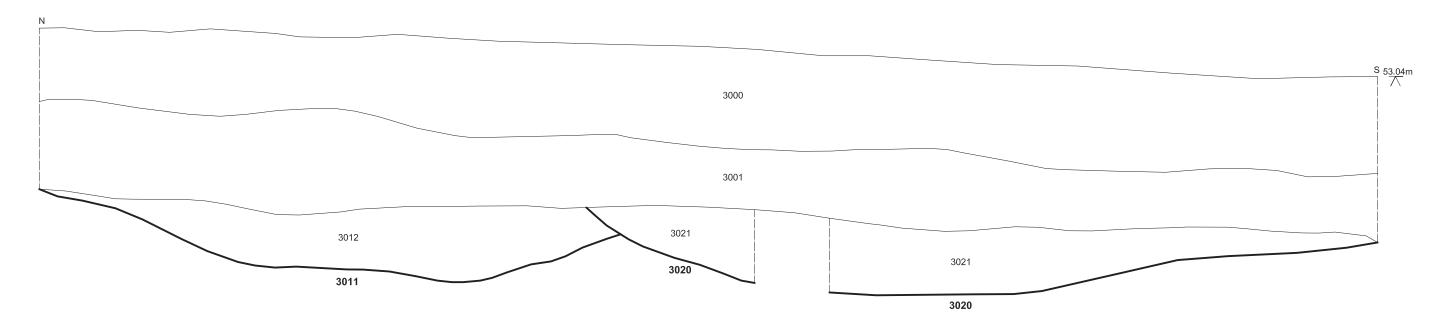


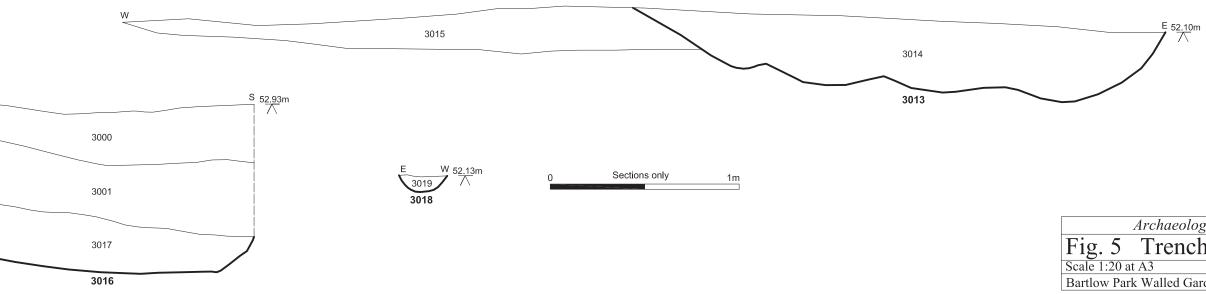




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Fig. 4 Trench plan
Scale 1:125 at A4
Bartlow Park Walled Garden House, Cambridgehsire (P4812)







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ig. 5 Trench sections
ale 1:20 at A3
rtlow Park Walled Garden House, Cambridgehsire (P4812)