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30-30A ORCHARD STREET, CHELMSFORD, ESSEX

AN ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

Authors: Kerrie Bull (Fieldwork and report)	
NGR: TL 7082 0626	Report No: 5439
District: Chelmsford	Site Code: CF88
Approved: Claire Halpin MCIfA	Project No: 6924
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OASIS SUMMARY SHEET

Project details			
Project name	30 – 30A Orchard Street, Chelmsford, Essex		
<p><i>In September 2017 Archaeological Solutions (AS) carried out an archaeological trial trench evaluation on land at 30-30A Orchard Street, Chelmsford, Essex (NGR TL 7082 0626; Figs. 1 – 2). The evaluation was carried out in compliance with the initial requirements of a planning condition attached to planning approval for a proposed new building to comprise two flats with associated access, bin/cycle stores and parking (Chelmsford Council Planning Ref. 16/00436/FUL). The evaluation was required based on the advice of the Historic Environment Advisor of Essex County Council (ECC HEA).</i></p> <p><i>The evaluation revealed several modern made ground deposits which overlay modern (19th + century) features: Ditches F1005 and F1007, Post Hole F1015, Brick Wall S1041 and a cobbled surface (L1009). The latter was exposed for a length of 7m.</i></p> <p><i>Below the modern features a medieval pit (F1044) and Roman archaeology was revealed. The latter comprised four ditches (F1010, F1017, F1034 and F1036); Gullies F1028 and F1032; three large pits (F1019, F1024 and F1038); Post Holes F1030 and F1042 and a possible Surface F1022. The pottery derived from the features is mid 1st to mid 2nd century AD pottery, and Pit F1024 contained the largest assemblage of 111 sherds (1525g).</i></p>			
Project dates (fieldwork)	September 2017		
Previous work (Y/N/?)	N	Future work (Y/N/?)	TBC
P. number	6924	Site code	CF88
Type of project	Archaeological Evaluation		
Site status	Conservation Area		
Current land use	Car park		
Planned development	2 x Flats and associated bin/cycle stores and parking		
Main features (+dates)	Pits, ditches, post holes		
Significant finds (+dates)	Medieval and Roman Finds Assemblages		
County/ District/ Parish	Essex	Chelmsford	Chelmsford
HER/ SMR for area	Essex Historic Environment Record		
Post code (if known)	-		
Area of site	c.170m ²		
NGR	TL 7082 0626		
Height AOD (min/max)	c.m AOD		
Project creators			
Brief issued by	Essex County Council		
Project supervisor/s	Archaeological Solutions Ltd		
Funded by	T Rippon Estates Ltd		
Full title	30 – 30A Orchard Street, Chelmsford, Essex. An Archaeological Evaluation		
Authors	Bull, K.		
Report no.	5439		
Date (of report)	November 2017		

30-30A ORCHARD STREET, CHELMSFORD, ESSEX

AN ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

SUMMARY

In September 2017 Archaeological Solutions (AS) carried out an archaeological trial trench evaluation on land at 30-30A Orchard Street, Chelmsford, Essex (NGR TL 7082 0626; Figs. 1 – 2). The evaluation was carried out in compliance with the initial requirements of a planning condition attached to planning approval for a proposed new building to comprise two flats with associated access, bin/cycle stores and parking (Chelmsford Council Planning Ref. 16/00436/FUL). The evaluation was required based on the advice of the Historic Environment Advisor of Essex County Council (ECC HEA).

The Essex Historic Environment Record (EHER) notes the site lies in the heart of the Roman town of Caesaromagus and the medieval settlement of Chelmsford. The site itself lies within an area where a Roman masonry structures have been recorded, one of a number in the Roman town, and the line of a Roman road serving the town is also thought to cross the site.

The historic development of Chelmsford is discussed in detail in the historic town assessment report (Medlycott 1999). Evidence of prehistoric activity is known from a number of sites within the Roman town. The Roman town dates from the aftermath of the Boudiccan revolt in the mid 1st century AD, and was established around a fort on the main London-Colchester Road. The civilian settlement developed along this road (now Moulsham Street) and a side road off to Heybridge and Wickford, with a mansio and bath house and temple precinct. The mansio and its bath house were rebuilt and enlarged in the mid 2nd century, with substantial earthen defences built around 160-175AD. The southern part of this defensive circuit was abandoned by the mid 3rd century, but settlement continued along the road frontages to the south/east.

Archaeological investigations in the town have revealed extensive surviving Roman evidence. The route of the main Roman road to the south is known to have had extensive occupation along it, and finds of coins further east along Marlborough Road are suggestive of occupation here, although trial trenching to the east in Marlborough Road revealed no remains (HER 18936).

The site had a high potential for archaeological remains specifically that of Roman activity with numerous previous investigations throughout the town having revealed extensive surviving Roman remains. In addition, the site also had some potential for prehistoric and medieval archaeology.

The evaluation revealed several modern made ground deposits which overlay modern (19th + century) features: Ditches F1005 and F1007, Post Hole F1015, Brick Wall S1041 and a cobbled surface (L1009). The latter was exposed for a length of 7m.

Below the modern features a medieval pit (F1044) and Roman archaeology was revealed. The latter comprised four ditches (F1010, F1017, F1034 and F1036); Gullies F1028 and F1032; three large pits (F1019, F1024 and F1038); Post Holes F1030 and F1042 and a possible Surface F1022. The pottery derived from the features is mid 1st to mid 2nd century AD pottery, and Pit F1024 contained the largest assemblage of 111 sherds (1525g).

1 INTRODUCTION

1.1 In September 2017 Archaeological Solutions (AS) carried out an archaeological trial trench evaluation on land at 30-30A Orchard Street, Chelmsford, Essex (NGR TL 7082 0626; Figs. 1 – 2). The evaluation was carried out in compliance with the initial requirements of a planning condition attached to planning approval for a proposed new building to comprise two flats with associated access, bin/cycle stores and parking (Chelmsford Council Planning Ref. 16/00436/FUL). The evaluation was required based on the advice of the Historic Environment Advisor of Essex County Council (ECC HEA).

1.2 The evaluation represents the first phase of works required by the condition. If archaeological remains are present, ECC HEA may require further archaeological mitigation prior to the development.

1.3 The evaluation was undertaken in accordance with a brief issued by the Historic Environment Advisor of Essex County Council (ECC HEA; *Brief for Archaeological Trial Trenching and Excavation at 30-30A Orchard Street, Chelmsford, Alison Bennett*, dated 28th September 2016), and a written scheme of investigation (specification) prepared by AS (dated 3rd October 2016), and approved by ECC HEA. The project conformed to the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for an Archaeological Evaluation* (2014), and the document *Standards for Field Archaeology in the East of England* (Gurney 2003).

1.4 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.

1.5 Specific aims were to:

- Identify any evidence of Roman settlement
- Identify any evidence of Roman structures
- Identify any evidence of medieval settlement activity

Planning policy context

1.6 The National Planning Policy Framework (NPPF 2012) 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.

1.7 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 at the western end of Orchard Street in the centre of Chelmsford, to the rear (south east) of Moulsham Street and north of Grove Road. It comprises an existing open parking area to the immediate west of Nos.30-30A Orchard Street.

3 TOPOGRAPHY AND GEOLOGY

3.1 Chelmsford is situated at the confluence of the rivers Can and Chelmer, located c.500m to the east of the site. The site is situated c.300m to the south of the course of the River Can, at c.27m AOD towards the base of the gentle lower slope of the river valley.

3.2 The solid geology of the site comprises the clay, silt and sand of the London Clay Formation, overlain by the margins of two types of superficial (drift) deposit. To the north, approaching the River Can are River Terrace

deposits of sand and gravel; while extending upslope to the south are Head Deposits of clay, silt, sand and gravel.

4 ARCHAEOLOGICAL & HISTORICAL BACKGROUND

Prehistoric

4.1 The historic development of Chelmsford is discussed in the historic town assessment report (Medlycott 1999). The Chelmer and Can valleys were conducive to prehistoric activity though the sparse evidence is known close to site. At Orchard Street Hall c.75m to the north-east, a Mesolithic pit and artefacts were recorded (HER 5859). A scatter of Mesolithic and Neolithic flint flakes have also been recorded close by (HER 5831, 5860, 5862-3 and 5909). Iron Age activity is also present c.25m to the east; during the excavations of the Roman Mansio, postholes were recorded and are interpreted as an agricultural or religious building probably dating to the 4th century BC (HER 5833), and possibly associated with a second post-built structure c.100m to the south-west (HER 5844) and a mound-like earthwork c.150m to the north (HER 5864).

Roman

4.2 Modern Chelmsford developed from two historic centres, the Roman town, *Caesaromagus* in the Moulsham area south of the river, and the medieval market town to the north of the River Can. The site is located in the heart of the Roman town, and the area has produced a very high density of Roman remains and artefacts through numerous investigations (e.g. Drury 1988); while this area was re-occupied in the medieval period, becoming a suburb of the market town, thus medieval stratigraphy has also been fairly regularly encountered. The Roman town (HER 5831) dates from the aftermath of the Boudiccan revolt in the mid 1st century AD, and was established around a fort on the main London to Colchester Road (Moulsham Street; i.e. HER 5855), with a detached annexe, bath house and temple precinct. The fort was abandoned in c.AD70, and a civilian settlement developed along the road that included enclosures interpreted as a 'road station'; which following extensive re-planning of the town between c.AD120-150 developed into a mansio (government posting station) within a large official precinct. The town grew to its maximum extent in mid 2nd century, with defences constructed in c.AD160-175, but the urban centre gradually declined in the mid 3rd to 4th centuries AD.

4.3 The site is located in the relatively narrow area between the mid 1st century AD fort and the fort annexe, and c.40m to the east of Moulsham Street, the main London to Colchester Roman road. The fort was located c.50m to the north (i.e. HER 5884) and the fort annexe c.75m to the south (i.e. HER 5845, 16134), with subsequent Roman occupation to the east of Moulsham Street continuing through the 4th century AD. The original posting station appears to have been located within c.50m to the south (HER16133). The main temple precinct was c.150m to the north-east (HER 5865), with

wide range of votive practices beginning in the mid/late 1st century AD and continuing throughout the life of the town, including a temple dedicated to Mercury built in the early 4th century AD. Sections of the town defences have been recorded c.75m to the south, c.150m to the east (HER 5847, 5849-51). Extensive Roman occupation evidence has been recorded c.50-100m to the north on the eastern side of Moulsham Street, notably at Orchard Street Hall, 37 Moulsham Street and Hall Street (HER 5861, 5866, 5879, 5881, 5886-7, 5910, 5917, 5940, 17513, 17531, 17758, 47222, 48336). It is notable that Roman deposits are frequently encountered beneath overburden of up to 1-1.3m in depth. Plots on the western side of Moulsham Street have also revealed extensive Roman occupation deposits, including a probably metal-working establishment (HER 5852, 5858, 5920, 5942, 5945, 16140).

4.4 One of the most extensively investigated area of the Roman town was the mansio (government posting station); the main buildings and courtyard of which certainly extended to within 50m east of the site (HER 5835-9, 5938, 14543, 17248-9, 17510, 17524), with a bathhouse adjacent to the east of the mansio (HER 5843, 17267, 17538-9). Importantly a late Roman ditch on these sites (Chelmsford Trust sites Z and AK) continued to the west into an area excavated immediately adjacent to the east of the site, Chelmsford Trust site AR (HER 5834). The evidence from this site suggests military occupation from c.AD60-65, after which it developed in conjunction with the mansio, and is interpreted as part of its precinct, including a street that linked the mansio to the east with the London-Colchester road to the west. Trenches alongside this street appeared to have contained wooden water pipes with iron connectors, and timber buildings were initially located on the north side of the street, to be replaced by masonry structures in the early/mid 2nd century AD. A water cistern was recorded, as were shafts containing quantities of human and horse bones, potentially associated with cult or religious activity. Other investigations close to the site include the Bay Horse, Moulsham Street c.25m to the north, where Roman pits were recorded beneath deep (7 feet) foundations (HER 16101) and the Wig and Murkin c.25m to the west where a Roman timber structure and pits were identified (HER18462). However at 36 Orchard Street, close to the north, only residual roman finds were recovered as the site had been truncated by post-medieval rubbish pits and 18-19th century development (HER 48537).

Medieval & Post-medieval

4.5 In the Saxon period, the former town appears to have been abandoned in favour of rural estates, however at the site of the Roman mansio, an aceramic phase of middle Saxon activity has been postulated, in which it appears the alignment of the former buildings was respected (HER 5840). The medieval town was founded at the end of the 12th century on a now site within the manor of the Bishop of London, to the north of the River Can in the area of the modern High Street. A hamlet grew in Moulsham on the south side of the river, which from 1199 was incorporated into the *vill* of Chelmsford, with the town prospering as the main staging point between London and Colchester. Moulsham street appears to have comprised a hollow way that incorporated layer of metalling (HER 5856-7). The site appears to have been on the

eastern edge (back) of plots that fronted onto Moulsham Street, such as the post hole-built structures recorded on Moulsham Street to the north (HER 5882, 5884, 5888, 5913, 5921, 5931-2, 5943, 5946), a medieval pit recorded within 25m of the west of the site (HER 18463). Further north, on modern Parkway, timber-lined tanks have identified a dyer's establishment (HER 5866). Immediately to the north of the site a 'Wealden' house survives, probably built in the 15th century (HER 5897-8). The extent of the medieval settlement appears to extend c.50m to the south of the site along Moulsham Street, beyond which medieval furrows were recorded behind a roadside ditch (HER 5846). By the 16th century occupation had spread further south along Moulsham Street (i.e. HER 5847). The area of the site was fully incorporated into the built-up area (i.e. HER 5854) and archaeological investigations along Moulsham street have frequently encountered post-medieval rubbish pits (i.e. HER 5914, 5939-41, 5944, 5947, 6781, 17531). Excavations at the Wig and Murkin close to the west of the site recorded a post-medieval pit, containing pottery, a dress maker's pin and 18-19th century clay pipe (HER 18464); while at 46 Moulsham Street a brick well of comparable date was recorded (HER 5890).

5 METHODOLOGY

5.1 The brief required a sample of the proposed development site to be investigated by trial trenching, with a single trial trench across the proposed new building footprint. A trench 10m x 2.3m was excavated (Fig. 3).

5.2 The topsoil and subsoil was mechanically excavated under close archaeological supervision. Exposed surfaces were cleaned by hand and examined for archaeological features. Deposits were recorded using *pro forma* recording sheets, drawn to scale, and photographed as appropriate. Excavated spoil was searched for finds and the trenches were scanned by a metal detector.

6 DESCRIPTION OF RESULTS

6.1 The individual trench description is presented below:

Trench 1 Figs. 3 - 5

Sample section 1 Northeast end, northwest facing 0.00 = 28.83m AOD		
0.00 – 0.04m	L1000	Tarmac. Existing car park surface.
0.04 – 0.23m	L1001	Made ground. Friable pale-mid brownish yellow silty sand with frequent large bricks.
0.23 – 0.34m	L1014	Layer. Friable, mid grey brown sandy clay with moderate medium sub-angular flints and CBM flecks.
0.34 – 0.55m	L1009	Modern (19 th - 20 th C.) cobbled surface. Friable, pale yellow brown, with mid orange yellow lenses, silty clay with frequent sub-rounded and rounded stones.
0.55 – 0.82m	L1037	Fill of Ditch F1036. Firm, dark yellow brown sandy clay.
0.82m+	L1002	Natural deposits. Firm, mid grey yellow sandy clay.

Sample section 2 Southwest end, southeast facing 0.00 = 28.83m AOD		
0.00 – 0.03m	L1000	Tarmac. As above
0.03 – 0.26m	L1001	Made ground. As above
0.26 – 0.62m	L1014	Layer. As above
0.62 – 0.89m	L1027	Fill of Pit F1024. Friable, mid grey brown silty sandy clay with occasional small sub-angular and sub-rounded flints, and shell.
0.89 – 1.19m	L1026	Fill of Pit F1024. Friable, mid brown yellow sandy clay with moderate small sub-angular flints.
1.19 – 1.79m	L1025	Fill of Pit F1024. Firm, pale-mid brown grey silty clay with occasional small sub-rounded flints.
1.79m+	L1002	Natural deposits. As above

Description: Trench 1 contained Ditches F1005 and F1007, Post Hole F1015, Wall S1041 and a cobbled surface L1009. All these features were modern (19th-20th century).

Pit F1044 contained medieval (11th - 13th century) and intrusive Roman pottery.

Below the modern horizon were 12 Roman features: Ditches F1010, F1017, F1034 and F1036; Gullies F1028 and F1032; large Pits F1019, F1024 and F1038; Post Holes F1030 and F1042; and a possible Surface F1022. Each feature contained a minimum of 1 or 2 sherds of Roman (mid 1st to mid 2nd century) pottery. The largest assemblage was from Pit F1024 which contained 111 sherds (1525g). Several intrusive sherds of medieval (11th-13th century) pottery were also recovered within Ditch F1017 and Pit F1019.

Roman (Mid 1st – early 2nd century)

Ditch F1010 was linear (2.30+ x 0.82+ x 0.55+m), orientated north west / south east. It had steep sides and a flattish base. It cut Pit F1019 and

Surface F1022. It was cut by Ditch F1017 and Pit F1024. Its fill, L1011, was a firm, mid yellow brown silty clay with occasional small sub-angular and sub-rounded flints. It contained Roman (early - mid 2nd century) pottery (33; 1051g), CBM (4618g), animal bone (75g), and Fe fragments (11; 108g).

Ditch F1017 was linear (2.30+ x 1.08 x 0.29m), orientated north west /south east. It had moderately sloping sides and a shallow concave base. It cut Ditch F1010 and Surface F1022, and was cut by Pit F1044. Its fill, L1018, was a friable, mid grey brown sandy clay with occasional small sub-angular and sub-rounded flints. It contained Roman (mid 1st – early 2nd century) pottery (16; 388g), CBM (4532g), animal bone (98g), and Fe fragments (3; 61g). It also contained an intrusive sherd of medieval (11th – 13th century) pottery.

Pit F1019 was large and sub circular (2.00+ x 1.00+ x 0.57m). It had moderately sloping sides and a shallow concave base. It was cut by Ditch F1010, Pits F1024 and F1044, and Gully F1028. Its basal fill, L1020, was a firm, pale grey brown silty clay. It contained Roman (mid 1st – early 2nd century pottery) (34; 603g), CBM (447g), animal bone (4g), and slag (25g). Its upper fill, L1021, was a friable, mid yellowish grey brown silty sandy clay with moderate small sub-rounded flints. It contained early Roman pottery and intrusive 11th – 13th century pottery (50; 827g), CBM (1707g), and animal bone (295g).

F1022 appeared trampled and was a possible surface (2.30+ x 2.30 x 0.22m). Its fill, L1023, was a friable, pale yellowish orange, mottled with dark grey brown, sandy clay with sparse rounded stones. It contained Roman (mid 1st – early 2nd century) pottery (38; 197g), CBM (112g), animal bone (31g), and an Fe fragment (1; 7g).

Pit F1024 was ?sub-circular (2.30+ x 2.50 x 0.86m). It had steep sides and a flattish base. It cut Ditch F1010 and Pit F1019, and was cut by Pit F1024. Its fill, L1025, was a firm, pale-mid brown grey silty clay with occasional small sub-rounded flints. It contained Roman (early - mid 2nd century) pottery (111; 1525g), CBM (4934g), animal bone (604g), Fe fragments (63g), glass (1g), shell (17g), struck flint (9g), and slag (6g).

Gully F1028 was linear (0.55+ x 0.70+ x 0.43m), orientated west north west / east south east. It had moderately sloping sides and a shallow concave base. It cut Pit F1019 and was cut by Pit F1044 and Post Hole F1030. Its fill, L1029, was a firm, mid yellow grey silty sandy clay with occasional small sub-angular flints. It contained Roman (mid 1st-2nd century) pottery (2; 31g), animal bone (22g) and Fe fragments (2; 13g).

Post Hole F1030 was a sub-circular (0.16m+ x 0.64 x 0.30m). It had steep sides and a flattish base. It cut Gully F1028. Its fill, L1031, was a firm, mid grey silty clay with very occasional small sub-rounded gravel. It contained Roman (late 1st century - early 2nd century) pottery (4; 21g), animal bone (2g) and an Fe fragment (1; 25g).

Gully F1032 was linear (0.25+ 0.6+ x 0.18m), orientated north/ south. It had gently sloping sides and a shallow concave base. It was cut by Pit F1044. Its fill, L1033, comprised a friable, mid grey brown silty sandy clay with occasional small sub-angular flints and shell fragments. It contained a sherd of Roman (early-mid 2nd century) pottery (8g), CBM (41g) and animal bone (35g).

Ditch F1034 was linear (2.00m+ x 0.20 x 0.30+m), orientated north / south. It had moderately sloping sides and its base was unseen. It cut Ditch F1036 and Post Hole F1042 and was cut by Pit F1038. Its fill, L1035, was a firm, mid yellow brown sandy clay with occasional small sub-angular flints. It contained Roman (mid 1st century / early 2nd century) pottery (8; 37g), CBM (613g), and animal bone (13g).

Ditch F1036 was linear (1.00m+ x 0.40 x 0.20m) orientated north / south). It had gently sloping sides and flattish base. It cut Post Hole F1042 and F1022, and was cut by Ditch F1034 and Pit F1038. Its fill, L1037, was a firm, dark yellow brown sandy clay. It contained Roman (mid-late 1st century) pottery (49; 669g), CBM (374g), and animal bone (12g).

Pit F1038 was sub-rectangular (0.7+ x 1.2 x 0.3m). It had moderately sloping sides and a flattish base. It cut Ditches F1034 and F1036, Post Hole F1042 and ?Surface F1022 (L1023). It was cut by Wall S1041. Its lower fill, L1039, was a firm, dark yellow brown sandy clay with frequent small CBM fragments. It contained Roman (mid 1st – early 2nd century) pottery (15; 476g) and CBM (27g). Its upper fill, L1040, comprised a firm mid grey brown sandy clay with moderate small sub-rounded gravel. It was devoid of finds.

Post Hole F1042 was sub-square (0.3+ x 0.3+ x 0.26m). It had near vertical sides and a flattish base. It was cut by Ditches F1034 and F1036, and Pit F1038. Its fill, L1043, was a mottled mid grey orange brown friable, silty clay with occasional small sub-rounded flints. It was devoid of finds.

Medieval (11th – 13th century)

Pit F1044 was sub-rectangular (2.30+ x 2.60 x 0.82m). It had steep sides and a concave base. It cut Ditch F1017, Pit F1019, Gully F1028, and Ditch F1032. Its basal fill, L1026, was a friable, mid brown yellow sandy clay with moderate small sub-angular flints and gravel. It contained It also contained medieval (11th-13th century) pottery and residual early Roman pottery (38; 331g), CBM (2466g), animal bone (1331g), glass (6g) and an Fe fragment (1; 67g). Its upper fill, L1027, was a friable, mid grey brown silty sandy clay with occasional small sub-rounded to sub-angular flints and sparse shell fragments throughout. It contained medieval (11th-13th century) pottery and early Roman pottery (84; 939g), CBM (3962g), animal bone (1080g), shell (9g) and a struck flint (1g).

Modern (19th – 20th century)

Ditch F1005 was linear (2.30+ x 0.42 x 0.34m), orientated southeast /northwest. It had moderately steep sides and a concave base. It cut Cobbled Surface L1009 and was cut by Wall S1041. Its fill, L1006, was a friable, mid grey brown sandy clay. It contained residual Roman (mid 1st – 2nd century) pottery (2; 11g), and CBM (6g).

Ditch F1007 was linear (2.30+ x 0.58 x 0.52m), orientated southeast / northwest. It had steep sides and a concave base. It cut Cobbled Surface L1009. Its fill, L1008, was a friable, mid grey brown silty sandy clay. It contained modern (19th century +) pottery (95; 3059g), CBM (4104g), shell (11g), glass (221g), slag (99g), and Fe fragments (263g).

L1009 was a cobbled surface (2.60 x 2.30+ x 0.13m) comprising a friable, pale yellow brown, with mid orange yellow lenses, silty clay with frequent sub-rounded and rounded stones. It contained modern (19th century +) pottery (9; 197g), CBM (178g), and animal bone (10g).

Post Hole F1015 was sub-circular (0.30 x 0.29 x 0.15m). It had steep sides and a concave base. It cut Cobbled Surface L1009 and Surface F1022. Its fill, L1016, was a friable, mid grey brown silty clay. It contained modern (19th century +) pottery (1; 16g) and CBM (1068g).

Structure S1041 was a brick wall (0.75+ x 2.4+ x 0.20m), aligned northwest / southeast. It truncated Roman features: Surface F1022, Ditches F1034 and F1036, Pit F1038 and Post Hole F1042. It also cut Ditch F1005 and was abutted by modern (19th-20th century) Cobbled Surface L1009.

7 CONFIDENCE RATING

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

8 DEPOSIT MODEL

8.1 The site was commonly overlain by Tarmac L1000 (0.03 – 0.04m thick). L1000 overlay Levelling Layer L1001, a friable, pale-mid brownish yellow silty sand with frequent large bricks (0.20 – 0.23m thick). Below L1001 was Made Ground L1014, a mid grey brown, friable sand clay with moderate medium sub-angular flints and CBM flecks (0.11 – 0.36m thick). Below L1014 the deposits varied across the trench. At the north-eastern end, underlying L1014, was a modern (19th-20th century) cobbled surface (L1009; 0.14 - 0.24m thick) and Brick Wall S1041 (0.20m thick). At the south-eastern end of the trench, L1014 directly overlay the natural deposits, L1002, and Roman features.

8.2 The natural deposits, L1002, was present at 0.52 – 1.79m below the existing ground level and comprised a firm, mid grey yellow sandy clay with sparse small sub-rounded flints.

9 DISCUSSION

9.1 The recorded features are tabulated:

Trench	Context	Description	Spot Date
1	F1005	Ditch	Modern (19 th C +)
	F1007	Ditch	Modern (19 th C +)
	L1009	Layer	Modern (19 th C +)
	F1010	Ditch	Early Roman
	F1015	Post Hole	Modern (19 th C +)
	F1017	Ditch	Early Roman
	F1019	Pit	Early Roman
	F1022	Surface	Early Roman
	F1024	Pit	Early Roman
	F1028	Gully	Early Roman
	F1030	Post Hole	Early Roman
	F1032	Gully	Early Roman
	F1034	Ditch	Early Roman
	F1036	Ditch	Early Roman
	F1038	Pit	Early Roman
	S1041	Wall	Modern (19 th C +)
F1044	Pit	Medieval	

9.2 The site had a high potential for archaeological remains, specifically that of Roman activity, with numerous previous investigations throughout the town having revealed extensive surviving Roman remains. The site is located within the precinct of the *mansio* of *Caesaromagus* (Chelmsford), an imperial posting station, whose main building was located to the east of the site (Fig.6). The previous excavation of Site AR (Drury 1988), directly adjacent to the east of the site revealed the remains of a road and roadside building on the approach to the *mansio* building (Figs. 7-11), and the Roman ditches recorded as part of this evaluation appear to correlate closely with the previously identified alignment, in particular the redevelopment of the buildings into masonry structures in Period VI.1 (c.AD130). Ditch F1010, and possible re-cut F1017 appear to represent a continuation of AR88, while Ditch F1034 may represent a continuation of ditch or drain AR290. Furthermore Surface F1022 is consistent with a make-up layer of the Roman road established in the early 2nd century AD; however it was previously noted the extant patches of metalling were patchy (Drury 1988, 13) and none were conclusively identified here. Close to the south of the Ditch F1010 was a deep, steep-sided Roman Pit F1024, which may represent similar urban activity to the well identified on site AR. The extent of the area investigated by this evaluation did not extend quite far enough north to expose foundation trenches or walls associated with buildings along the road.

9.3 The dating evidence within these features is closely consistent with those identified in Period VI.1 within site AR and the wider *mansio*; characteristic of deposition in the early to mid 2nd centuries AD with occasional late 1st century AD sherds likely re-deposited from previous phases of Roman occupation. The pottery assemblage included a significant diagnostic component, including samian ware from south and central Gaul, amphora from Baetica and southern Gaul, a range of fine ware and colour-coated beakers, sparse flagon and a limited range of local coarse wares, as well as rare mortaria. This consumption pattern appears to reflect the consumption of pottery within the domestic or hospitality sphere (there is no evidence of cooking or other processing), likely of elevated to prestigious status, reflecting both the location within the urban centre and within the *mansio*. This theory is supported by the relative absence of carbonised grains, limited to a low density of barley, wheat and oats characteristic of scattered domestic debris rather than a direct association with food preparation. The Roman features also contained a sparse distribution of CBM, notably a large fragment of *opus signinum*, comparable to that from Site AR; as well as rare Roman slag possibly produced by ferrous metal working, low quantities of oyster shell and a limited animal bone assemblage, notable for a sagittally split skull of a pig; a common feature of Roman butchery.

9.4 In addition, the site also had some potential for medieval archaeology, arising from the development and use of plots that fronted onto Moulsham Street in the 12th to 15th centuries. The principal evidence for this activity is large pit F1044, which contained small quantities of locally-produced coarse ware pottery, probably manufactured in the 11th-13th centuries. This pit also included the highest concentration of animal bone in the assemblage, including cattle, sheep and pig, as well as carbonised wheat grains; consistent with the deposition of domestic rubbish, although it is unclear to what extent material was re-deposited from Roman features truncated by this pit. Very low quantities of medieval sherds were also recorded in the upper fills of Roman ditches, potentially representing intrusive material from the layers which seal them.

9.5 The evaluation revealed several modern made ground deposits which overlay modern (19th + century) features: Ditches F1005 and F1007, Post Hole F1015, Brick Wall S1041 and a cobbled surface (L1009). The latter was exposed for a length of 7m. These layers and structural features are consistent with the re-development of the area in the late 19th century (Drury 1988, 22).

DEPOSITION OF THE ARCHIVE

Archive records, with inventory, will be deposited at Chelmsford Museum in accordance with their requirements. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. In addition to the overall site summary, it will be necessary to produce a summary of the artefactual and ecofactual data.

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**APPENDIX 1 Concordance of Finds
CF88, P6924, Orchard St, Chelmsford**

Feature	Context	Segment	Trench	Description	Spot Date (Pot Only)	Pot Qty	Pottery (g)	CBM (g)	A.Bone (g)	Other Material	Other Qty	Other (g)
	1003				19th C+	52	751	206	5	Glass Slag		48 344
	1004									Fe Frag	1	1
	1005							312		Glass		10
1005	1006			Fill of Ditch	Residual Mid 1st-2nd C AD	2	11	286				
	1007				Early/Mid 2nd C AD	3	15	6				
1007	1008			Fill of Ditch	19th C+	95	3059	4104		Shell Glass Slag Fe Frag	2	11 221 99 263
	1009				19th C+	9	197	178	10			
1010	1011			Fill of Ditch	Early/Mid 2nd C AD	33	1051	4618	75	Fe Frags Pb	9 2	85 21
	1016			Fill of Post Hole	19th C+	1	16	1068				
1017	1018			Fill of Ditch	11-13th C (1 sherd; remainder E.Roman)	17	388	4532	98.69	Fe Frag	3	61
1019	1020			Basal Fill of Pit	Mid 1st-Early 2nd C AD	34	603	447	4	Slag		25
1019	1021			Upper Fill of Pit	11-13th C (bulk E.Roman)	50	827	1707	295			
1022	1023			Surface	Mid 1st-Early 2nd C AD	38	197	112	31	Fe Frag	1	7
1024	1025			Fill of Pit	Early/Mid 2nd C AD	111	1525	4934	604	Fe Frag Glass Shell S.Flint Slag	2	62 1 17 9 6
1044	1026			Fill of Pit	11-13th C (bulk E.Roman)	38	331	2466	1331	Fe Frag Glass	1	61 6
	1027			Fill of Pit	11-13th C (bulk E.Roman)	84	939	1098	1080	Shell S.Flint	1	9 1
								2864				
1028	1029			Fill of Gully	Mid 1st-2nd C AD	2	31		22	Fe Frag	2	13
1030	1031			Fill of Post Hole	Late 1st-Early 2nd C AD	4	21		2	Fe Frag	1	25
1032	1033			Fill of Gully	Early/Mid 2nd C AD	1	8	41	35			
1034	1035			Fill of Ditch	Mid 1st-Early 2nd C AD	8	37	613	13			
1036	1037			Fill of Ditch	Mid-Late 1st C AD	49	669	374	12			
1038	1039			Fill of Pit	Mid 1st-Early 2nd C AD	15	476	27				
	U/S			Unstratified	Roman	38	388	22	159	Fe Frag	1	50

APPENDIX 2 SPECIALIST REPORTS

The Roman and Medieval Pottery

Andrew Peachey

The evaluation recovered a total of 499 sherds (8354g) of Roman pottery and 24 sherds (265g) of medieval pottery (Table 1); generally in an un-abraded and moderately fragmented condition, with a high degree of diagnostic and cross-joining sherds. Several significant groups of Roman sherds were identified notably from Ditches F1036 and F1010, Surface F1022 and the basal fill of Pit F1024 L1025. Substantial quantities of Roman sherds were contained in Pit F1019. The upper fills of Pit F1024 (L1026 and L1027) contained residual Roman pottery contained within a medieval feature. The Roman pottery appears to be entirely of early Roman date, potentially including late 1st century AD vessels, but with the bulk of the sherds of early/mid 2nd century AD date. The Roman assemblage presents a typical profile of consumption within an urban centre, in this case the precinct of the *mansio* at *Caesaromagus*. The range of coarse wares, probably produced locally around Chelmsford and in east Essex (including Colchester), is supplemented by a diverse range of fine ware, notably Samian ware from south and central Gaul, as well as beakers from specialist industries in south-eastern England and the Continent. The Roman pottery also includes amphorae from southern Spain and southern Gaul (used to import olive oil and wine respectively), as well as mortaria produced at Colchester. The sparse medieval pottery is limited to body and basal sherds of locally-produced cooking pots, typically with soot-blackened external surfaces, and likely dating to the 11th to 13th centuries.

Feature Group	Roman Pottery		Medieval Pottery	
	Sherd Count	Weight (g)	Sherd Count	Weight (g)
Ditch F1036	49	677	-	-
Ditch F1010	34	1109	-	-
Surface F1022	38	201	-	-
Pit F1019	74	1394	8	57
Pit F1024	225	3378	15	113
Other discrete features	55	1094	1	95
Un-stratified	40	620	-	-
<i>Total</i>	<i>515</i>	<i>8473</i>	<i>24</i>	<i>265</i>

Table 1: Quantification of pottery

Methodology

The pottery was quantified by sherd count, weight (g) and R.EVE with fabrics examined at x20 magnification in accordance with the guidelines of the Study Group for Roman Pottery (Barclay *et al* 2016). All data has been entered into a Microsoft Excel spreadsheet that forms part of the site archive.

Roman fabric codes and descriptions were cross-referenced, where possible, to the National Roman Fabric Reference Collection (Tomber & Dore 1998)

and to the fabric series developed for Chelmsford (Going 1987: fabric no. highlighted in **bold**), while local or indistinguishable coarse wares were assigned an alpha-numeric code and are fully described in the report. To avoid the repetition of lengthy references in the text, italicised alpha-numeric form types (i.e. *B3*) are used to refer to the form type series developed for Chelmsford (Going 1987).

Samian ware form types reference Webster (1996), with decorative figure types referencing Oswald (1936) and Rogers (1978), cited as O. and R. respectively, with catalogue numbers (i.e. RGZM.1000474) referring to the Terra Sigillata-Resarches host by the Römisch-Germanisches Zentralmuseum (RGZM) (<https://www1.rgzm.de/samian/home/frames.htm>).

Medieval fabrics were cross-referenced to the synthesis of ceramic research for Colchester (Cotter 2000).

Fabric Descriptions

Roman (**bold**, fabric code after Going 1987)

LGF SA	La Graufesenque samian ware (Tomber & Dore 1998, 28) (60)
LMV SA	Les Martres-de-Veyre samian ware (Tomber & Dore 1998, 30) (60)
LEZ SA2	Lezoux samian ware 2 (Tomber & Dore 1998, 32) (60)
CNG BS	Central Gaulish black-slipped ware (Tomber & Dore 1998, 50) (8)
KOL CC	Cologne colour-coated ware (Tomber & Dore 1998, 57; Davies et al 1994, 131) (6)
COL CC2	Colchester (late) colour-coated ware 2 (Tomber & Dore 1998, 132) (1)
HGW RE C	Highgate Wood reduced ware C (Tomber & Dore 1998, 136; Davies et al 1994, 82) (37)
LON FR	'London' (fine-reduced) ware (Tomber & Dore 1998, 137; Davies et al 1994, 151) (19)
GRF1	Fine Grey ware. Dark grey surfaces/margins fading to a red or mid grey core. Inclusions of common-abundant fine quartz (generally <0.1mm, occasionally to 0.5mm), sparse fine mica and dark grey/black iron ore or iron rich pellets (<0.25mm) (39)
COL WH	Colchester white/buff ware; non-mortaria (Tomber & Dore 1998, 133) (27)
UNS WH1	Un-sourced white ware. White/cream surfaces and core with pale orange margins. Inclusions comprises well-sorted common quartz, predominantly rounded and translucent (largely 0.1-0.25, occasionally 0.5mm) and sparse red iron rich grains (<0.25mm). A hard fabric with a slightly hackly break and slightly abrasive 'pimply' feel. Probably a Verulamium/Brockley Hill product (Tomber & Dore 1998, 154) although a Colchester source cannot be discounted (26/31)
UNS WS1	Un-sourced white slipped ware. An orange-red fabric with an external white slip. Inclusions comprise common fine silty quartz (<0.1mm) and sparse red clay pellets (<0.25mm). Probably a local product (15)
BSW1	Romanising/Black-Surfaced grey ware. Dark grey to black surfaces and core, with oxidised margins. Inclusions comprise moderately-sorted common quartz (0.1-0.5mm) with sparse grog (<2mm), red and black iron ore/-rich grains and fine mica. A smooth to slightly abrasive finish. The coarseness and frequency of quartz and grog in this fabric varies, with some sherds close to Belgic grog-tempered ware, and some to GRS1 (45)
GRS1	Sandy Grey ware. Mid grey, occasionally with oxidised margins or core. Inclusions comprise common moderately sorted quartz (0.1-0.25mm, occasionally to 1mm), sparse fine mica and dark grey/black iron ore or iron rich pellets (0.2-0.5mm), and occasional flint (<5mm) (47)
OXS1	As GRS1 but oxidised orange-red, probably a Chelmsford product (21)

COL BB2	Colchester black-burnished ware 2 (Tomber & Dore 1998, 131) (41)
ROB SH	Romano-British (early) shell-tempered ware (Tomber & Dore 1998, 212), wheel-made with common, moderately sorted shell (0.5-3mm, occasionally larger) (50)
COL WH (M)	Colchester white ware mortaria (Tomber & Dore 1998, 133) (27)
STOR	Storage Jar fabric. Mid orange to black surfaces fading to a thick dark grey core. Inclusions comprise common angular grog (0.25-2.5mm), quartz (0.1-0.25mm) and sparse-occasional chalk (0.5-4mm). A hard fabric with a slightly soapy feel (44)
BAT AM2	Baetican (Late) amphorae 2 (Tomber and Dore 1998, 85) (55), from the Guadalquivir Valley, Baetica in southern Spain
GAL AM1	Gaulish amphorae 1 (Tomber & Dore 1998, 93), from Gallia Narbonensis (Provence) in southern France (56)

Medieval and later (**bold**, fabric code after Cotter 2000)

EMS	Early medieval sandy ware, 11 th -13 th C (13)
EMSS	Early medieval sandy shelly ware, 11 th -13 th C (12C)

Fabric Code	Sherd Count	Weight (g)	R.EVE
LGF SA	14	85	0.12
LMV SA	2	34	-
LEZ SA2	12	109	0.10
CNG BS	1	1	-
KOL CC	3	9	0.07
COL CC2	1	2	-
HGW RE C	4	45	-
LON FR	5	22	0.12
GRF1	15	85	-
COL WH	16	175	-
UNS WH1	12	143	0.25
UNS WS1	2	11	-
BSW1	212	1909	1.90
GRS1	123	1218	0.82
OXS1	13	108	-
COL BB2	2	161	0.20
ROB SH	8	89	-
COL WH (M)	3	238	0.15
STOR	63	3745	0.35
BAT AM2	3	229	0.25
GAL AM1	1	55	0.20
EMS	23	170	-
EMSS	1	95	-
<i>Total</i>	<i>539</i>	<i>8738</i>	<i>4.53</i>

Table 2: Quantification of Roman & medieval fabric types

The Roman Pottery

The Roman pottery, at its broadest spanning the mid 1st to mid 2nd centuries AD, but probably limited to the early/mid 2nd century AD can be considered as two related groups. This is highlighted in part by cross-joins identified between sherds across two or three separate deposits within both groups, notably including distinctive fine ware vessels such as samian ware (i.e. LGF SA) bowls and fine ware (i.e. GRF1) beakers, but also evident on BSW1 jars. These associations of sherds reflect the inter-cutting nature of the Roman and

post-Roman features and stratigraphy, and the confined spatial area that the site occupies. The two postulated groups appear to derive from specific 'source' (primary) deposits, whose contents have been re-distributed as they were truncated, though the presence of other related but completely truncated deposits cannot be entirely discounted.

- The first and principle group is centred on Ditch F1010, which was subsequently cut by Ditches F1017 and F1019, and then by large Pit F1024. Collectively this group accounts for 349 sherds of Roman pottery (6216g), and 24 sherds (265g) of medieval pottery; with Ditch F1010 (L1011) and the basal fill of Pit F1024 (L1025) containing only pottery characteristic of a date in the early/mid 2nd century AD.
- The second group appears to represent primary deposition within Surface F1022, which was cut by the Roman Ditches F1034 and F1036, Pit F1038 and Modern Ditches F1005 and Ditch F1007. In total this group comprises 119 sherds (1576g) of Roman pottery (some residual in modern features e.g. Ditch F1005), generally sparsely distributed but with small groups in F1022, Ditches F1036 and F1038 that also appear consistent with a date in the early/mid 2nd century AD, likely representing contemporary activity within the excavated area. However, the presence of BSW1 vessels in Surface F1022 L1023 that have a currency in the mid to late 1st century AD suggest that if the deposit is a layer, it may have accumulated over the post-Conquest, early Roman period.

The confined spatial distribution, and apparent contemporary character of the two deposits are evidenced by a relatively diverse range of fabric and form types that are consistent with the pattern of trade and consumption defined within Ceramic Phase 2 (c.AD80-120/25) of activity in Chelmsford, possibly extending into the early decades of Ceramic Phase 3 (c.AD120/5-160/175), but not exceeding c.AD150 (Going 1987, 108-110). Thus, this pattern of consumption is discussed thematically by fabric group below:

Samian ware accounts for c.5.5% of the Roman pottery by sherd count (c.2.7% by weight), approximately equal in quantity to all the other fines wares (imported and local) in the assemblage, and approximately equally split between the products of south Gaul (LGF SA) and central Gaul (LMV SA & LEZ SA2) (Table 2). The LGF SA includes small fragments of a Dr.18 platter and Dr.27 cup (Table 3), characteristic of vessels imported in the latter half of the 1st century, with fragments of the former distributed across Pits F1019, F1024 and Ditch F1017. However the LGF SA is more notable for fragments from three mould decorated bowls, including small body sherds of potential Dr.29/37 bowls: in Pit F1019 with a small section of gadroon decoration too incomplete to be assigned as style; and in Pit F1024 with the head and upper body of a satyr or faun (O.601A) that although it cannot be assigned to a specific potter it is likely Domitian (late 1st century AD) in date. The most well-represented LGF SA vessel is a Dr.30 bowl, of which fragments were recovered from Ditch F1010 (L1011) and Pit F1024 (L1026 and L1027); with a double-bordered ovolo with a rosette-centred tongue (RGZM: 000015) above a scroll design. The scroll incorporates several plant details, including

repeated lanceolate, tridid and twist motifs that are paralleled on numerous late Flavian (last quarter 1st century AD) pieces recorded at the La Graufesenque kiln site, but are not associated with a specific potter (i.e. RGZM: 1000474, 1000579, 1003316 & 5000002).

Form type	Vessel type	LGF SA		LMV SA		LEZ SA2	
		R.EVE	MNV	R.EVE	MNV	R.EVE	MNV
<i>Mould-decorated bowls</i>							
Dr.30	Bowl	-	1	-	-	-	-
?Dr.29/37	Bowl	-	2	-	1	-	-
<i>Plain ware</i>							
Dr.18	Platter	0.12	1	-	-	-	-
Dr.27	Cup	-	1	-	-	-	-
Dr.31	Dish	-	-	-	-	1	0.03
Dr.36	Dish	-	-	-	-	1	0.07
Dr.38	Bowl	-	-	-	-	1	-
<i>Total</i>		<i>0.12</i>	<i>5</i>	<i>0</i>	<i>1</i>	<i>3</i>	<i>0.10</i>

Table 3: Quantification of Samian ware form types by fabric, R.EVE and minimum no. of vessels (MNV)

While the Samian ware from south Gaul probably represents material imported in the final decades of the late 1st century AD, potentially maintaining currency or consumed in the early 2nd century AD, the Samian ware from central Gaul is consistent with an early to mid 2nd century AD date, including plain ware form types that emerge in this period (Table 3), notably a Dr.31 dish in the upper fill of Pit F1019 that does not pre-date the mid 2nd century AD and may be the 'latest' diagnostic Roman vessel. The only mould-decorated bowl from central Gaul recovered was a LMV SA Dr.29 or Dr.27, in the basal fill of the same Pit: F1019 (L1020) probably re-deposited from Ditch F1010. The body sherd exhibits a section of basal wreath (R.G366) below a wavy line border and scroll decoration that incorporated a lanceolate (tip visible), identifying the bowl as a likely product of Potter X-2, or possibly the associated Potter of the Rosette or Medetus, dating to c.AD100-120.

The other fine wares include fabrics imported from the continent (CNG BS & KOL CC) and made locally or in the south-east (COL CC2, HGW RE C, LON FR & GRF1), but they are united by being entirely represented by sherds from beakers, and almost entirely associated with Ditch F1010 and derived deposits. The beaker from central Gaul (CNG BS) in Pit F1024 was very thin-walled (2.5mm), while those from Cologne (KOL CC) in Pit F1024 and Ditch F1007 appear to have been *H20* types with a cornice rim and roughcast decoration; all imported in the early/mid 2nd century AD. The Colchester colour-coated ware (COL CC2) could not be assigned a more specific form; but the reduced fine wares (HGW RE C, LON FR & GRF1) all included examples of *H6* beakers with poppyhead rims, decorated with panels of barbotine dot decoration (overlaid on the HGW REC beaker by a thin white slip), probably spanning the late 1st to early 2nd centuries AD. In addition to this type, the GRF1 also included sherds from a contemporary *H1/3* globular beaker with comb-stabbed decoration distributed across Ditch F1010 and Pit F1024, the most common type of beaker at Chelmsford and Colchester in the

post-Conquest 1st century AD, continuing in decreasing numbers into the early/mid 2nd century AD.

White or white-slipped ware, excluding mortaria, produced at Colchester (COL WH), locally (UNS WS1) and likely Verulamium/Brockley Hill (UNS WH1) are relatively rare in the assemblage and appear restricted to sherds derived from flagons. The UNS WH1 includes a *J2.2* pulley rim flagon in Pit F1024, also associated with the footring base of a COL WH flagon; while Ditch F1005 included fragments of a globular body with a handle scar from an UNS WS1 flagon; a range of vessels commensurate with a currency spanning the late 1st to early/mid 2nd centuries AD.

Locally-produced coarse wares (BSW1, GRS1 and OXS1) account for 67.6% of the Roman pottery by sherd count (38.2% by weight), but are generally quite fragmentary with diagnostic sherds largely limited to the everted bead rims of jars, broken at the weakest/thinnest point of the vessel. It is notable that the Romanising wares (BSW1) are the dominant type (Table 2), reflecting the early Roman chronology indicated by the fine wares. Although Ditch F1036 contained a *G16* jar with a slightly bulging neck cordon that is wheel-made but sloppily hand-burnished, and seemingly of mid/late 1st century AD date, the bulk of the BSW1 jars appear consistent with types common through the mid/late 1st to 2nd centuries AD, including a *G4* neckless jar, *G23* shouldered jars with everted bead rims (probably the dominant type) and a *G45* large jar. Open vessels in BSW1 do not appear common but single examples of a *B2* or *B4* bead rim dish and a *B7* angular rim dish were contained in Posthole F1032 and Pit F1019 respectively. The sandy grey wares (GRS1) appear largely limited to the same jars with everted bead rims (probably *G23*) as are common in BSW1, although as with the Romanising wares one *G5.2* lid-seated jar in Pit F1024 is a notable 1st century AD type, while the same deposit includes a *C16.1* reed-rimmed bowl that is characteristic product of late 1st-early 2nd century AD kilns. In contrast, reflecting its scarcity, the oxidised coarse wares (OXS1) do not present any evidence for jars, only a 2-rib strap handle from a flagon recovered as unstratified material, that perhaps suggest a closer association with UNS WS1 than the other local-coarse wares.

The other coarse wares in the assemblage were probably all produced in Essex, thus the hinterland of the urban centres of Chelmsford and Colchester. The shell-tempered wares (ROB SH) were likely produced in south Essex and though no diagnostic sherds were present, the fabric had its flourish in the 1st century AD, declining rapidly thereafter. Black-burnished ware from Colchester (COL BB2) remains scarce and limited to a *B1.3* plain rim dish and *B2* bead rim dish in Ditches F1007 and F1010 respectively; types that emerge in the early/mid 2nd century AD, which perhaps had yet to make an impact on consumption patterns when these vessels were deposited. A more substantive presence is the grog-tempered and highly-fired storage jar fabric (STOR) (Table 2), though the raw quantity is likely the result of the large volume of single vessels, and it appears that single examples of the small and large variants of storage jars with upright, almond-profile rims (*G42* and *G45*) are represented by sherds in the related deposits in Pits F1019 and F1024.

Mortaria are rare in this assemblage but include fragments of Colchester white ware (COL WH (M)) in Pit F1024 and as un-stratified material that are indicative of types that emerge in the mid 2nd century AD. These mortars comprise a D13.2 wall sided type in Pit F1024 and the spout of a D1.3 type with a rounded drooping flange recovered as un-stratified material; but neither extend to parts of the body, or are associated with body sherds, that would exhibit trituration grits, thus allow levels of use and wear to be assessed.

In addition to the storage jars, transport vessels are also well-represented by amphorae imported from the Continent, entirely contained in Pit F1024, and representing two staple commodities of the Roman Empire: olive oil and wine. Amphorae from Baetica in southern Spain (BAT AM2) are the most common amphorae in Roman Britain and were used to import olive oil, and here include the cupped rim with an internal bead of a classic Dressel 20 type (*P1*), whose profile is consistent with a date within the mid 1st to mid 2nd century AD stages of the evolution of the type (Martin-Kilcher 1983: no.17). Dressel 20 amphorae of this type are extensively paralleled at Colchester (Symonds & Wade 1999, 155: fig.3.13.16) but are only ever present in relatively low number in the south-eastern sector of Chelmsford (Going 1987, 35). The second amphora was imported from *Gallia Narbonensis* in southern Gaul (Provence) (GAL AM1), probably as a contained for wine. The GAL AM1 is represented by a distinctive flattish, thick rim with a slight ledge or concavity to the top; characteristic of Gauloise 5 (P&W Class 30) amphorae imported from that region between the mid 1st and early 2nd centuries AD (Williams 2005). Gauloise 5 amphorae are present in low numbers at Colchester, including a precise parallel of this rim type (Symonds & Wade 1999, 149: fig.3.9.173); while although amphorae from southern Gaul (variants of Dressel 28) are present in low quantities in the main assemblage from the *mansio* at Chelmsford (Going 1987, 35), the Gauloise 5 was not previously identified.

The Medieval Pottery

Small quantities of medieval pottery were present in the groups from Ditch F1017, Pits F1019 and F1024, probably representing the deposition of domestic detritus as part of backyard activity to the rear of properties that fronted Moulsham Street. Pits F1019 and F1024 contained 8 body sherds (57g) and 15 body sherds (265g) of locally-produced sandy coarse ware (EMS), while Ditch F1017 contained the slightly sagging base of a vessel in sand-and-shell-tempered coarse ware (EMSS). In each instance the medieval sherds occurred in significantly lower quantity than the Roman sherds. The bases and a high incidence of the body sherds exhibit external sooting, sometime forming a thick crust, consistent with their use as cooking pots, and almost certainly reflecting the domestic nature of occupation on Moulsham Street in the 11th to 13th centuries.

Discussion

The principal components of the pottery assemblage are two related, homogenous groups of Roman pottery, almost, if not wholly derived from deposition in the early/mid 2nd century AD, potentially including vessels manufactured or imported in the late 1st century AD. The Roman pottery appears to have been principally deposited or accumulated in Ditch F1010 and Surface F1022. The ceramic profile of the assemblage reflects the relative wealth and character of the urban centre of *Caesaromagus* (Chelmsford), and the location of the site within the precinct of the *mansio* (posting station). Thus, even from within the limited confines of the excavation trench, Samian ware is well-represented including several mould-decorated bowls from south and central Gaul, along with a range of beakers in colour-coated ware and fine ware fabrics of Continental and south-east British origin. These are supplemented by flagons and a limited range of local coarse wares, with mortaria rare, but a notable component of local storage jars and imported amphorae from Baetica and southern Gaul, used to import olive oil and wine respectively.

The fabric and form types appear consistent with the pattern of trade and consumption defined within Ceramic Phase 2 (c.AD80-120/25) of activity in Chelmsford (Going 1987, 108), with deposition ceasing by the mid 2nd century. Previous excavations adjacent to the east, at Site AR within Roman Chelmsford recorded boundaries, a road and (initially) timber-framed buildings, whose chronology is consistent with this assemblage. The fabric and form types associated with occupation, including wells in the *mansio* precinct in Period V (late 1st to early 2nd century AD) (Drury 1988, 13) corroborate closely with the samian ware, fine ware beakers, flagons and coarse ware jars in this assemblage. These deposits were significantly disturbed by the redevelopment of Site AR in c.AD120/5 to establish a new road and associated timber buildings in Period VI.1, reconstructed in masonry c.AD130 in Period VI.2, with the pottery from these phases also closely comparable to this assemblage, but slight contrasts emerge when this assemblage is compared to pottery introduced in groups of c.AD150 from Period VI.3 (Drury 1988, 15-19). The balance in this assemblage of table wares and amphorae with local coarse wares that do not exhibit any evidence of cooking suggests that whatever activity occurred within this area of the *mansio* precinct, was probably within the domestic or hospitality sphere of food and drink consumption but not directly associated with more mundane storage or processing; rather of relatively elevated or prestigious status within the everyday environment, potentially enabled by both the urban location and the resources of those that frequented the *mansio*, be they civilian or military. Therefore, this assemblage almost certainly reflects the deposition of rubbish from the significant occupation and buildings previously identified in Site AR, probably the succession of timber and masonry building of c.AD120/5-130, but possibly incorporating material from the preceding phase of activity in the late 1st/early 2nd century AD. The assemblage is not extensive enough to provide a definitive chronology relative to the building sequence, but can confirm and supplement an affluent pattern of diverse dining and consumption derived from their inhabitants.

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The Modern Pottery

Peter Thompson

The evaluation recovered 149 sherds weighing 3.574kg from 2 features and 2 layers. The pottery all comprises early modern to modern sherds that would fit a date between the second half of the 19th and the early 20th century. The wares present are listed below.

Methodology

The sherds were examined according to the Medieval Pottery Research Group Guidelines (Slowikowski et al 2001). Fabric codes (in brackets) are those used for the Essex County Council pottery type series.

List of wares present

English stoneware (45M) 18th+
 Porcelain (48B) mid 18th+
 White earthenware (48) late 18th+
 Transfer Printed Ware (48) late 18th+
 Mocha ware (48) late 18th+
 Yellow ware (48E) late 18th-19th
 Late glazed red earthenware mid 18th+
 Late slipped kitchen ware (51A) 19th-early 20th

Feature	Context	Quantity	Date	Comment
	1003	49x520g early modern to modern	Early 19 th -early 20 th	Green and blue Transfer Printed Ware (TPW) including willow pattern, factory made white earthenware, English stoneware, porcelain, mocha ware, yellow ware, kitchen ware
Ditch 1007	1008	90x2,857g early modern to modern	early19 th – early 20 th	Includes – yellow ware, modern stoneware, factory made white earthenware, blue and green Transfer Printed Ware, porcelain, kitchen ware, late glazed red earthenware 1x92g cement
Metalled surface	1009	9x181g early modern to modern	Early 19 th -early 20 th	Kitchen ware, stoneware, TPW,
Post-hole 1015	1016	1x16g early modern to modern	19 th -early 20 th	Kitchen ware

Table 4: Quantification of pottery by context

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The Ceramic Building Materials

Andrew Peachey

Excavations recovered a total of 339 fragments (36872g) of CBM in a highly-fragmented condition. The bulk of the CBM is of Roman date (Table 5), potentially associated with buildings in the precinct of the *mansio* at *Caesaromagus* (Chelmsford). However, the CBM does not represent primary demolition deposits or dumps, rather the small groups are likely the result of the scattering of debris into ditches and layers as the area was re-developed within the Roman period, possibly with the secondary function of improving drainage. The post-medieval CBM is present in only low quantities and includes a variety of tile and brick types, probably deposited in back yard deposits as the area to the east of Moulsham Street expanded and developed in the 18th to 19th centuries.

Period	CBM type	Frequency	Weight (g)
Roman	Tegula roof tile (flanged fragment)	18	3395
	Tegula roof tile (flat fragment)	273	23255
	Imbrex	6	849
	Bessalis brick	13	3820
	Opus signinum	1	1037
Post-medieval/early	Peg tile	13	1081
Modern	Field drain	1	198
18 th -19 th century	Soft red Brick	7	3261
Modern	Pantile	3	289
	Nibbed tile	3	201
	Salt-glazed water pipe	3	353
<i>Total</i>		<i>341</i>	<i>37739</i>

Table 5: Quantification of CBM

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), with the cutaways on tegula roof tile classified after Warry (2006, 4: fig.1.3). All data was entered into a Microsoft Excel spreadsheet that forms part of the site archive.

Discussion

The Roman roof tile and brick were manufactured in a single homogenous fabric that reflects the substantial local resources and production of CBM

around the urban centre, likely with kilns operating to serve particular the construction of particular buildings, such as the *mansio*. The fabric is oxidised mid-dark orange; with inclusions of common quartz (0.1-0.25mm), sparse fine mica and black iron rich/ore grains (<0.5m), and occasional chalk (<2.5mm) and flint (<10mm). It is hard-fired, typically with a powdery to slightly abrasive finish and often slightly lumpy surfaces.

The bulk of the Roman CBM: 94% by fragment count (85% by weight) comprises of tegula roof tile (Table 5), the flanged roof tile that is the principal component of the classic Roman roof. The tegula roof tile in this assemblage is 25-30mm thick, with a flange of equal width and thickness. The flanges have a steep internal slope with a fairly square/flat top; however flanges fragments are generally rare and small; highlighting that a relatively high degree of fragmentation had occurred prior to deposition. All the flanged fragments of tegula, including a single type D1 lower cutaway, were contained in early/mid 2nd century Ditch F1010, or the medieval features that truncate it: Pits F1024 and F1019 and Ditch F1017; and appear to contain significant re-deposited artefactual evidence from it (supported by associated pottery sherds). Collectively, this group of features account for 68% of the Roman CBM by fragment count (75% by weight), and also include rare fragments of imbrex curved (ridge) roof tile and bessalis brick, consistent with the presence of a (expected) substantial building in the vicinity. A small group of tegula and bessalis brick was also contained in mid-late 1st century AD Ditch F1036, but is more highly fragmented, with a sparse distribution elsewhere on the site.

That the CBM assemblage is of limited magnitude is put into perspective by the fact that a complete tegula roof tile would weigh in excess of 5kg, thus the entire assemblage is equivalent to less than eight complete tegula, when several hundred would be required for even a modest urban building. Nonetheless the elevated status of the urban building in the vicinity is highlighted by a large fragment of *opus signinum* also in Ditch F1010. *Opus signinum* was a type of cement formed by mixing crushed tile (2-20mm) into a lime mortar and ramming it down to form a floor or pavement and it is notable that this fragment, which as laid as a layer approximately 65mm thick, has a finer 'skimming' or dusting of ground CBM on its upper surface, presumably to achieve a smoother textured or more evenly coloured finish. It is postulated based on evidence from the adjacent Site AR that the site was in part occupied by substantial timber buildings in the early Roman period, with were re-constructed in masonry in c.AD130 (Drury 1988, 17). This building would have had a tiled roof, and also utilised tile and brick in wall packing and possibly the lining of drains. *Opus signinum* fragments were also recovered from ditch AR88 on that site, of which Ditch F1010 is a likely continuation; therefore this assemblage appears to represent the same phase of re-development in Period VI.2 in the sequence of Roman Chelmsford and its *mansio*.

The post-medieval CBM is predominantly comprised of peg tile (Table 5) manufactured in a similar but slightly smoother and higher-fired fabric to the Roman CBM. It is possibly that the peg tile was derived from buildings that fronted on to Moulsham Street from the 16th century, but is more likely to

reflect 18th to 19th century re-development similar to the very sparse fragments of brick, tile, drain and pipe notably recovered from Ditch F1007 but remaining of negligible quantity.

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The Metalworking Residues

Andrew A. S. Newton

Introduction

A total of 6 pieces (369g) of slag, originating from 4 contexts, were recovered during archaeological excavation at Orchard Street, Chelmsford, Essex. The slag was identified on morphological grounds by visual examination.

Visual examination of metalworking residues allows them to be categorised according to morphology, colour, density, and vesicularity. It should be noted, however, that not all slags are diagnostic of a particular metalworking process or part of that process. Slags are also particularly susceptible to morphological and composition alteration by secondary corrosion products.

Reference was made to the National Slag Reference Collection (Dungworth *et al* 2009) where appropriate and to the relevant subject-specific (Bayley *et al* 2008) and regional (Medlycott 2011) research frameworks.

Results

Context	Feature	Feature type	Quantity	Observations	Type
L1003	-	-	3; 287g	Black to dark grey. Rough dull surfaces. Some slight vitrification. Small stones embedded. Very slightly magnetic	Undiag.
			10; 48g	Highly magnetic. Fragments from a thin sheet of ferrous metal, including a thicker piece with a triangular cross section, with moderately heavy corrosion concretions.	-
L1008	F1007	Ditch	1;50g	Dark grey with one yellow brown patch and occasion white/grey flecks. Large air pockets (up to 10mm diam.). Some minor flow-form surface morphology present.	?Blast furnace slag

				Generally very glossy. No response to magnet.	
			3; 47g	One small flake of ferrous metal. Two large fragments of corrosion products, probably from the same ferrous metal object but these do not respond to magnet.	-
L1020	F1019	Pit	1; 26g	Dark brown to mid grey brown. Dull, rough surfaces. No response to magnet but appearance suggest ferritic material. No diagnostic morphology.	Undiag.
L1025	F1024	Pit	1; 6g	Very dark to mid grey. Rough dull surfaces. Small stones adhere. Strong response to magnet. No clear diagnostic morphology.	Undiag.

Discussion

Slags from L1003 and L1008 appeared to contain low quantities of iron due to their weak magnetic response. This may suggest that they derive from efficient smelting techniques, as would be in keeping with the 19th century dates assigned to the contexts from which they were recovered. The presence of some flow-form morphology on the very small section of unbroken surface present on the fragment from L1008 might indicate that this material is broken from a large slag prill from a smithing hearth; however, the site lies in proximity to the site of the former Coleman and Morton Iron Foundry which was established in 1848 and it is perhaps likely that this material derives from the processes carried out there. The dark, glassy character of these slags, particularly that from the L1008, might be consistent with the material produced in a cupola furnace of the type that would have been used in a foundry of this type (Young 2012).

The two pieces of material from Roman Pits F1019 and F1024 are small and display limited morphology from which it is possible to identify the process from which they derived. Both appear to be from ferrous metalworking. Given the proximity of the Roman mansion, and other elements of Roman settlement, it is possible that this material derived from small scale metalworking, such as smithing, in the surrounding area. The evidence is too slight to suggest such activity occurred at or in the immediate vicinity of the site.

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The Shell

Julia E. M. Cussans

A very small quantity of marine shell was recovered from trial trench excavations at Orchard Street, Chelmsford. These are quantified in Table 6 along with context descriptions and spot dates. Preservation was rated as poor or ok on a five point scale from very poor through to excellent. Most of the fragments were fairly abraded and fresh breaks were common. All of the shell fragments belonged to oyster (*Ostrea edulis*). None of the shells were measurable and none showed signs of human modification or parasitic infestation.

Feature	Context	Description	Spot Date	Preservation	Oyster		
					Lower	Upper	Frag
1007	1008	Fill of Ditch	19 th C+	poor			2
1024	1025	Fill of ?Pit	Early/Mid 2nd C AD	ok	1		
1024	1027	Fill of Pit	11-13th C (bulk E.Roman)	poor		2	2

Table 6. Quantification of marine shell from Orchard Street, Chelmsford

The Animal Bone

Julia E M Cussans

A moderately sized animal bone assemblage was recovered from trial trench evaluation at Orchard Street, Chelmsford. Bone material derived from a series of pits, ditches and gullies (Table 7) which resulted from both Roman and medieval activity. Pit F1024, likely created in the medieval period, contained substantial quantities of re-deposited Roman pottery and it is likely that a large proportion of the animal bone material also dated from the Roman period.

Bone preservation was rated from very poor through to good on a five point scale ranging from very poor through to excellent; the majority of contexts were rated as ok or poor (Table 7). Low levels of bone abrasion were present throughout and fresh breaks were common. Canid (likely dog) gnawed bones were noted in half of the contexts. A single fragment of calcined (burnt white) bone was noted from L1027 (Pit F1024).

The majority of bone fragments could only be identified as large (cattle or horse sized) or medium (sheep or pig sized) mammal. Of the identified taxa cattle were most abundant followed by pig and then sheep/goat (Table 7). A collection of unstratified small (cat or hare sized) mammal bones were thought to belong to cat. Two bird bones were identified indicating the presence of chicken and duck.

Cattle were represented by a mix of elements, although Pit F1024 L1026 was particularly noteworthy as it contained at least four horn cores of varying sizes. At least one of which had possible cuts around the base; a small number of other butchery marks were also noted. These included a scapula which had been pierced through the blade; a feature often associated with Roman butchery practices (e.g. Cussans & Bond 2010). A small number of unfused epiphyses were present indicating that at least some of the cattle were killed before reaching full maturity; no ageable mandibles were present. A small number of measurable elements were noted, but no pathological elements.

Sheep/ goat were represented by a mix of elements but principally by bones of the head and foot. None of these elements could be identified to species. No butchered elements were noted, but a number of ageable elements were present including two mandibles; one adult mandible with the third molar present and in wear and one juvenile mandible with the deciduous fourth premolar still intact. A small number of unfused epiphyses were also present. No pathological and very little measurable material was noted.

Pig was principally represented by head and limb elements. Small quantities of butchered and ageable remains were present. Butchered pig elements included a sagittally split skull (F1024 L1025). A canine tooth belonging to a male animal was recovered from F1024 L1026. No pathological or measurable elements were present.

Both the large and medium mammal assemblages yielded rib bones that had been chopped through. A larger assemblage from this site would likely shed light on Roman and medieval economy at the site however issues of residuality and re-deposition would need to be addressed.

Feature	Context	Description	Spot Date	Preservation	Cattle	Sheep/ Goat	Pig	Large mammal	Medium mammal	Small mammal	Bird	Total
	1009	Cobbled Surface	19th C+	very poor				2	1			3
1010	1011	Fill of Ditch	Early/Mid 2nd C AD	poor		3		1	7			11
1017	1018	Fill of Ditch	11-13th C (1 sherd; remainder E.Roman)	poor	1			6	2			9
1019	1020	Basal Fill of Pit	Mid 1st-Early 2nd C AD	ok		2		3	5		1	11
1019	1021	Upper Fill of Pit	11-13th C (bulk E.Roman)	ok	4		3	18	1			26
1022	1023	Surface	Mid 1st-Early 2nd C AD	poor				1	1			2
1024	1025	Fill of Pit	Early/Mid 2nd C AD	ok	3	1	13	42	11			70
1024	1026	Fill of Pit	11-13th C (bulk E.Roman)	ok	18	3	4	100	4		1	129
1024	1027	Fill of Pit	11-13th C (bulk E.Roman)	ok	10	1		60	15			87
1028	1029	Fill of Gully	Mid 1st-2nd C AD	ok	1				1			2
1030	1031	Fill of Post Hole	Late 1st-Early 2nd C AD	poor				1				1
1032	1033	Fill of Gully		ok		1						1
1034	1035	Fill of Ditch	Mid 1st-Early 2nd C AD	ok				3				3
1036	1037	Fill of Ditch	Mid-Late 1st C AD	ok				1	1			2
	U/S	Unstratified	Roman	ok		2	2	10	2			16
	U/S	Unstratified	Roman	good	3			7	1	27		38
				Total	40	13	22	255	52	27	2	411

Table 7. Quantification of animal bone from Orchard Street, Chelmsford

Reference

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The Environmental Samples

Dr John Summers

Introduction

During the evaluation at Orchard Street, Chelmsford, nine bulk soil samples for environmental archaeological investigation were taken and processed. The sampled deposits include the fills of both Roman and medieval features, and have the potential to add to current understanding of contemporary diet and economy.

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 sorted 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.

Results

The data from the bulk sample light fractions are presented in Table 8. Material from the bulk sample light fractions was in the form of carbonised plant macrofossils and charcoal. No evidence of waterlogged anaerobic preservation or mineralisation was identified.

Roman

Eight samples were recorded from Roman deposits, seven of which contained carbonised remains of cereals. Hulled barley (*Hordeum* sp.), glume wheat (*Triticum dicoccum/ spelta*) and oat (*Avena* sp.) were all identified, with wheat occurring in the greatest concentrations. Oat was least abundant, occurring as single grains in five samples. Crop processing by-products, in the form of glume bases, were present in L1025, L1033 and L1037, although only single specimens were encountered in each.

Non-cereal remains included seeds of meadow/ bulbous buttercup (*Ranunculus acris/ bulbosus*), dock (*Rumex* sp.), cabbage/ mustard (*Brassica/ Sinapis* sp.), legumes (Fabaceae), eyebright/ bartsia (*Euphrasia/ Odontites*

sp.), ribwort plantain (*Plantago lanceolata*), cleavers (*Galium aparine*), wild carrot (*Daucus carota*), sedge (*Carex* sp.), brome grass (*Bromus* sp.) and other wild grasses (Poaceae). Many of these, such as dock, medium-sized legumes, ribwort plantain, cleavers, wild carrot and brome grass commonly grow as arable weeds. Eyebright/ bartsia and wild carrot often reflect poorer soil conditions, although dock (*Rumex* sp.), recorded in L1021, tends to grow on more fertile soils. Cleavers is often considered characteristic of autumn-sown cereals.

Overall, the density of carbonised remains was low, with a maximum of 0.65 items per litre in L1033. This is characteristic of scattered debris and background material amongst other refuse being deposited. No discrete dumps of carbonised debris were present and it is likely that the remains from small-scale use of cereals, such as from food preparation activities, is represented.

Charcoal remains were common, with a range of wood types recorded, including oak (*Quercus* sp.), and non-oak ring- and diffuse porous wood types. This is likely to represent spent fuel debris from domestic hearths in the vicinity.

Medieval

A single sample was recovered from medieval deposit L1027 (F1044). This contained a small number of wheat grains, including one germinated specimen, accompanied by a single plantain seed (*Plantago* sp.). Charcoal fragments recognisable as oak (*Quercus* sp.) and diffuse-porous wood were also recorded as common.

Conclusions

The carbonised plant remains from Orchard Street have indicated the routine carbonisation of cereals in the vicinity of the sampled features, perhaps as part of food preparation and consumption activities. Considering the site's location, it is likely that the cereals utilised in the vicinity were imported from surrounding farmland. Based on the present evidence, it is difficult to be certain of the level of processing undertaken prior to the crop being sent to the town. Evidence from large-scale agricultural sites indicates that spelt wheat in particular, was bulk processed and exported as clean grain, based on the shear volumes of crop-processing by-products routinely encountered (e.g. Carruthers 2008, 34.22; Mustchin *et. al* 2016; van der Veen 1989). The burned down Roman grain store at Great Holts Farm demonstrated that cereals were stored following threshing and winnowing, most likely to reduce bulk for storage and transportation (Murphy 2003, 208) There were small numbers of glume bases and arable weed taxa in the Orchard Street assemblage but the density of material is too low to be certain whether this represents debris from fine-sieving or the retention of a small amount of chaff and weeds within the imported processed crop. Traditional processing

techniques would not have been completely effective at removing all contaminants from the crop (e.g. Hillman 1984).

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Site code	Sample number	Context	Feature	Description	Volume (litres)	Cereals		Non-cereal taxa		Charcoal		Molluscs					Contaminants					Other remains
						Cereal grains	Cereal chaff	Notes	Seeds	Notes	Charcoal>2mm	Notes	Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules			
CF88	1	1018	1017	Fill of Ditch	40	XX	-	E/S (4), Trit (7), Oat (1), NFI (6)	XX	Ranunculus acris/ bulbosus (1), Brassica/ Sinapis sp. (1), Medium Fabaceae (1), Euphrasia/ Odonites sp. (1), Plantago lanceolata (1), Daucus carota (1), Bromus sp. (1)	-	XX	Quercus sp., Diffuse porous	-	-	X	-	XX	-	-	-	Indet. Carb (X)
	2	1011	1010	Fill of Ditch	40	XX	-	Hord (2), Trit (4), Oat (1), NFI (5)	-	-	XX	Quercus sp., Diffuse porous	-	-	X	-	-	XX	-	-	-	Bone (X), Root/ tuber (X), Coal (X), Indet. Carb (X)

CF88	3	1021	1019	Upper Fill of Pit	40	X	-	E/S germ (1), Trit (2), NFI (5)	X	<i>Rumex</i> sp. (1)	-	XX	Diffuse porous, Ring porous	X	<i>Vallonia</i> sp.	-	XX	-	Small mammal bone (X), Bone (X), Coal (X), Indet. Carb (X)
CF88	4	1020	1019	Basal Fill of Pit	40	XX	-	Hord (3), E/S (1), Trit (4), NFI (4)	X	Medium Fabaceae (1)	-	XX	Diffuse porous incl. RW	X	-	-	XX	-	Indet. Carb (X)
CF88	5	1025	1024	Fill of Pit	40	XX	X	Trit (4), Oat (1), NFI (3), E/S GB (1)	X	<i>Rumex</i> sp. (1), <i>Galium</i> sp. (1), <i>Carex</i> sp. (1)	-	XX	Diffuse porous	X	-	-	-	Bone (X)	
CF88	6	1023	1022	Surface	20	-	-	-	-	-	-	XX	<i>Quercus</i> sp.	X	-	-	X	Indet. Carb (X)	
CF88	7	1033	1032	Fill of Posthole	20	XX	X	HB (1), E/S (2), Trit (3), Oat (1), NFI (2), E/S GB (1)	X	<i>Ranunculus</i> sp. (1), <i>Galium aparine</i> (1), Large Poaceae (1)	-	XX	<i>Quercus</i> sp.	X	-	-	X	Bone (X)	
CF88	9	1037	1036	Fill of Ditch	20	X	X	Trit (2), Oat (1), NFI (2), E/S GB (1)	X	<i>Brassica/Sinapis</i> sp. (1), Large Poaceae (1)	-	XX	Diffuse porous	X	-	-	X	-	
Medieval																			
CF88	8	1027	1044	Fill of Pit	20	X	-	Trit (2), Trit germ (1), NFI (2)	X	<i>Plantago</i> sp. (1)	-	XX	<i>Quercus</i> sp., Diffuse porous	X	-	-	X	-	Bone (X), Fish scale (X)

Table 8: Results from the assessment of bulk sample light fractions from Orchard St, Chelmsford. Abbreviations: HB = hulled barley (*Hordeum* sp.); Hord = barley (*Hordeum* sp.); E/S = emmer/ spelt wheat (*Triticum dicoccum/ spelta*); Trit = wheat (*Triticum* sp.); Oat (*Avena* sp.); NFI = not formally identified (indeterminate cereal grain); germ = germinated; GB = glume base.

PHOTOGRAPHIC INDEX



1
Trench 1 before excavation



2
Trench 1 post excavation



3
Ditches 1005 and 1007



4
Section edge showing features 1010, 1017, 1019,
1024, 1028, 1030 and 1044



5
Ditches 1010 and 1017 with Pits 1024 and 1044



6
Post Hole 1015



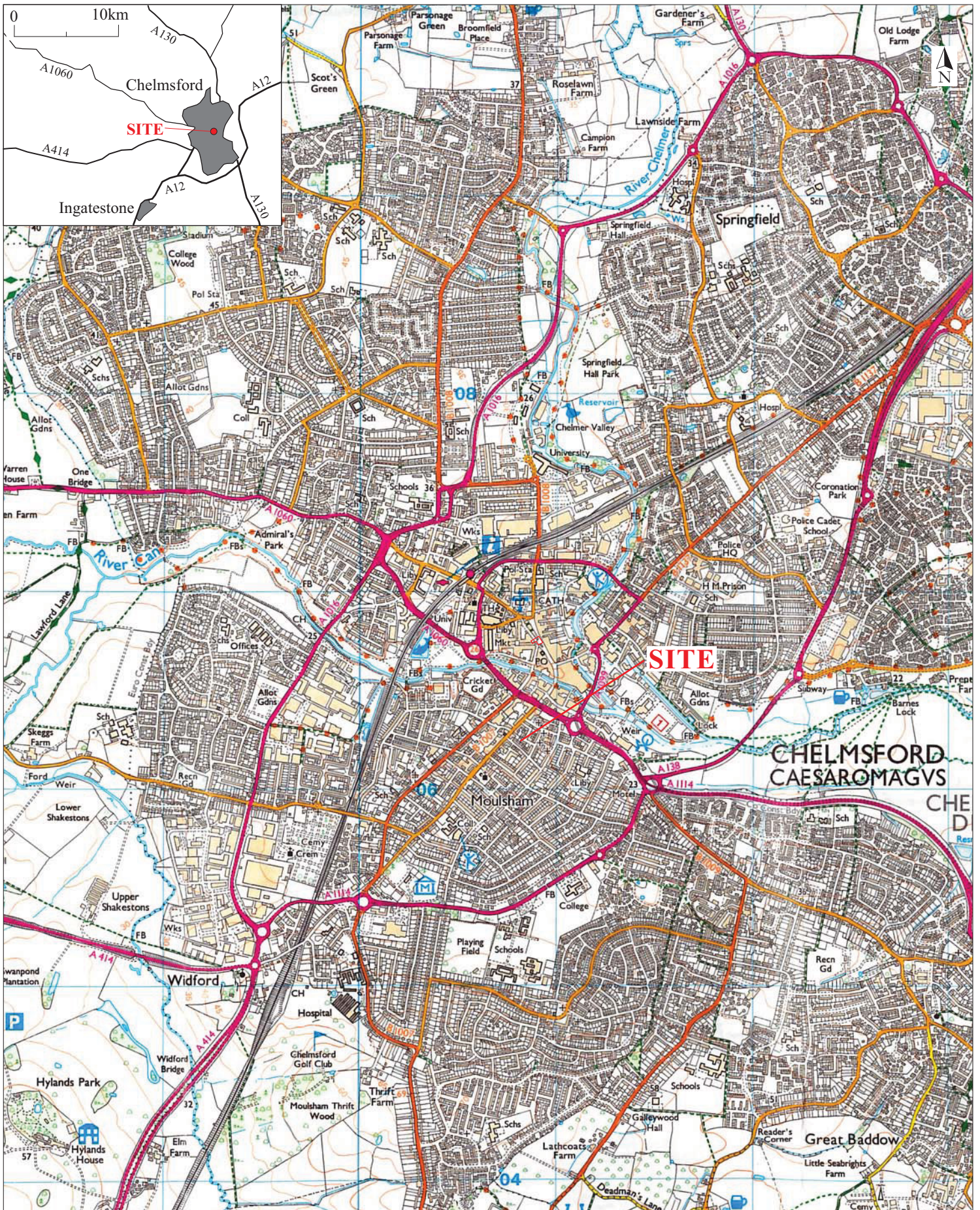
7
Possible Roman surface 1022



8
Brick Wall S1041 seen in section only



9
Post Hole 1042 with Ditch 1034

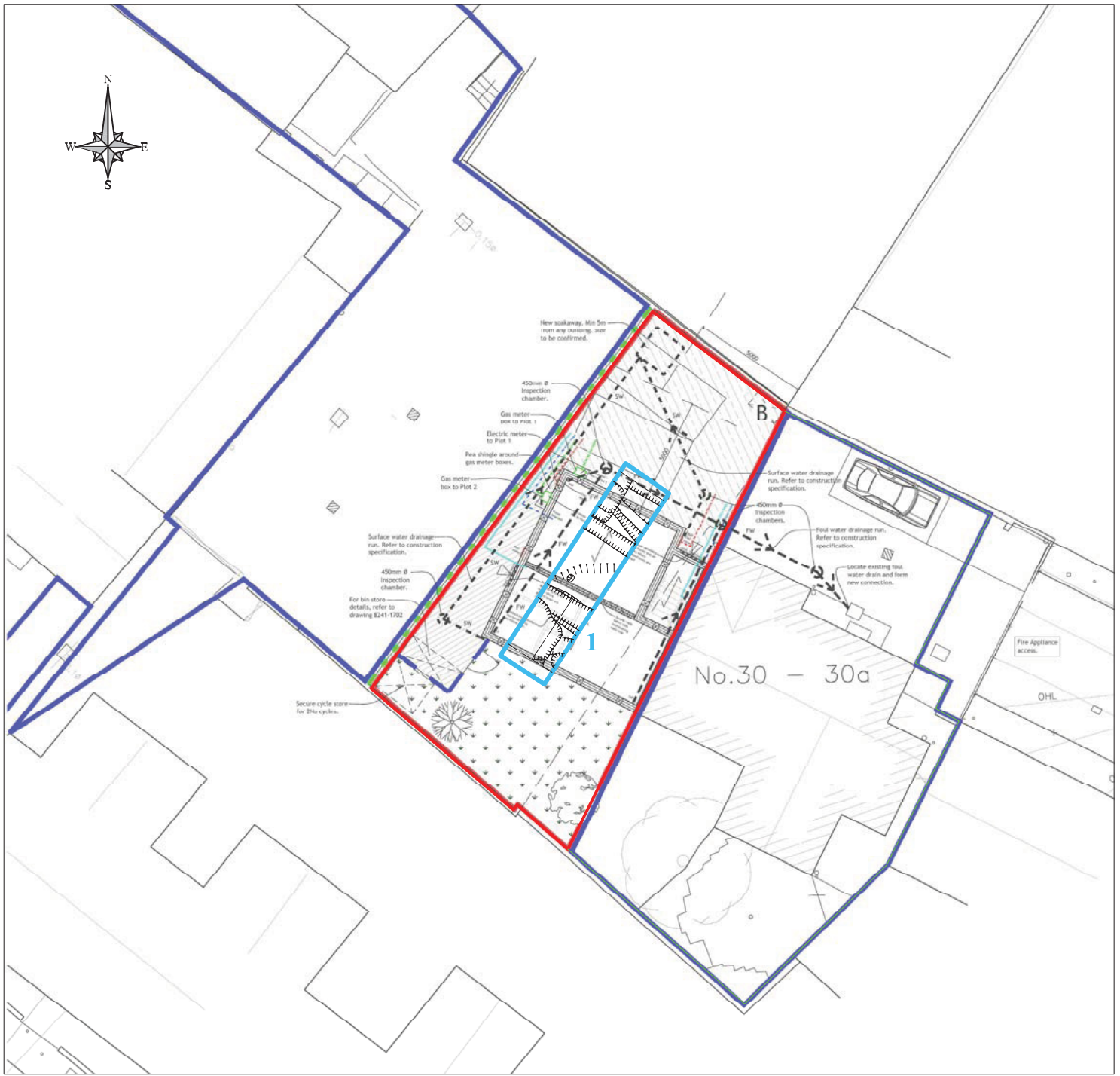


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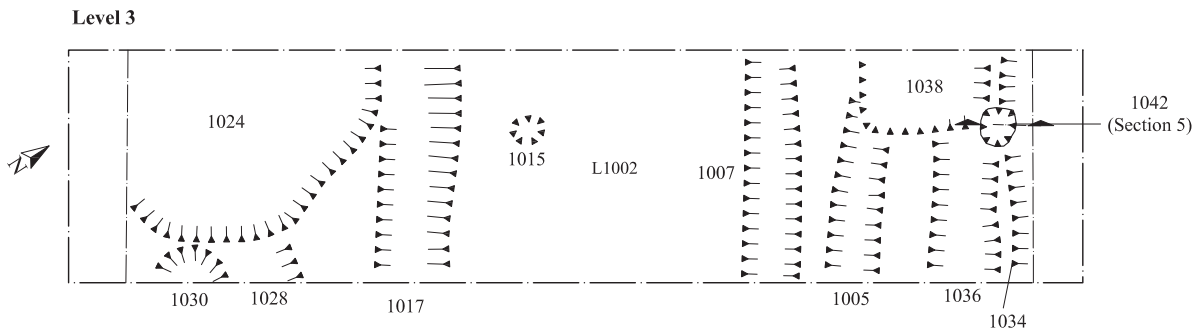
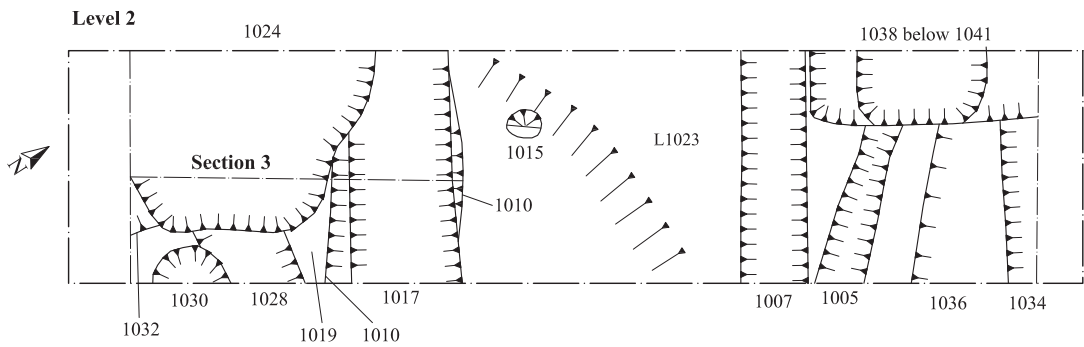
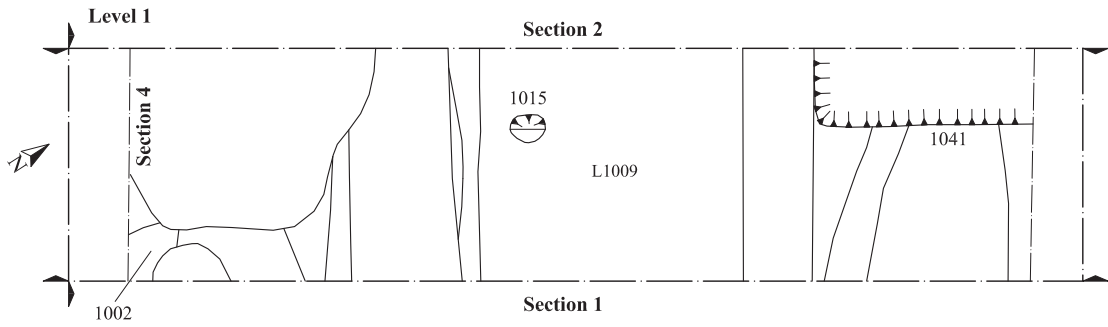
Archaeological Solutions Ltd
Fig. 1 Site location plan
 Scale 1:25,000 at A4
 30 Orchard St, Chelmsford, Essex (P6924)



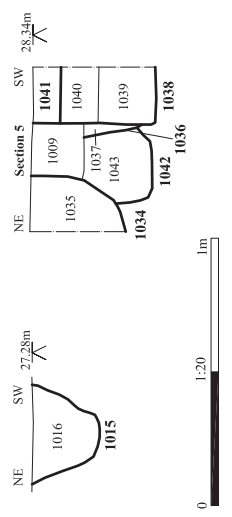
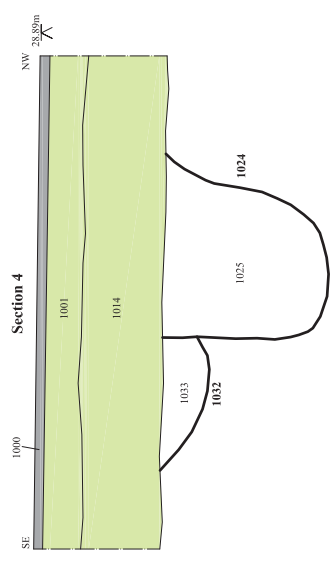
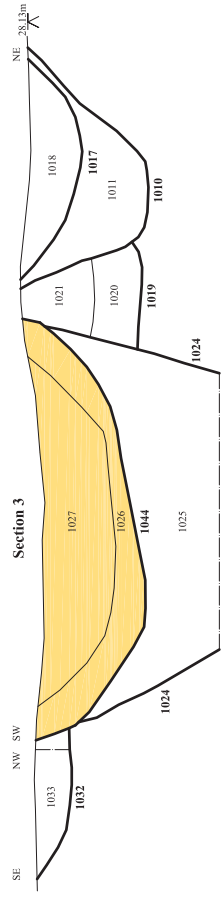
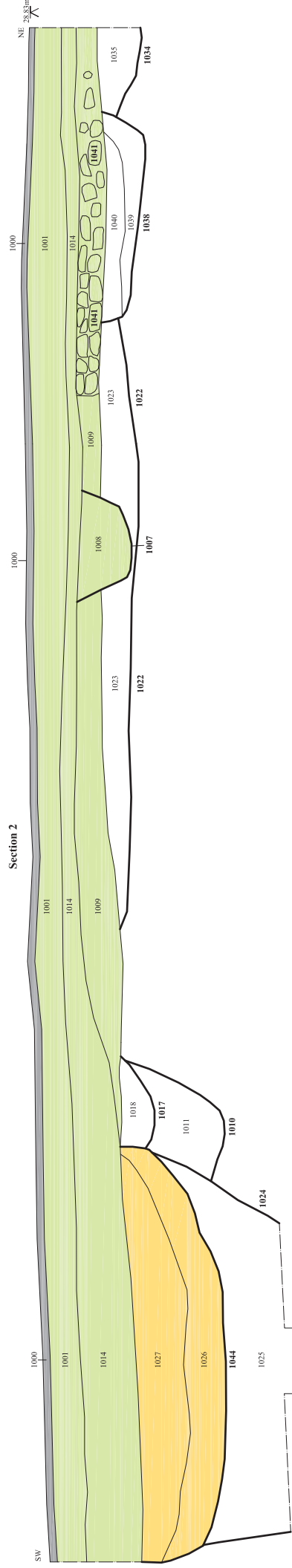
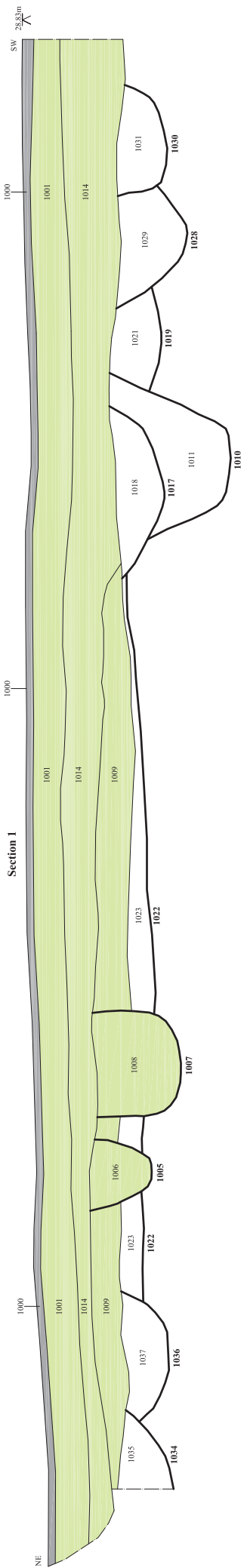
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Fig. 2 Detailed site location plan
 Scale 1:750 at A4
 30 Orchard St, Chelmsford, Essex (P6924)



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Fig. 3 Trench location plan
 Scale 1:250 at A4
 30 Orchard St, Chelmsford, Essex (P6924)

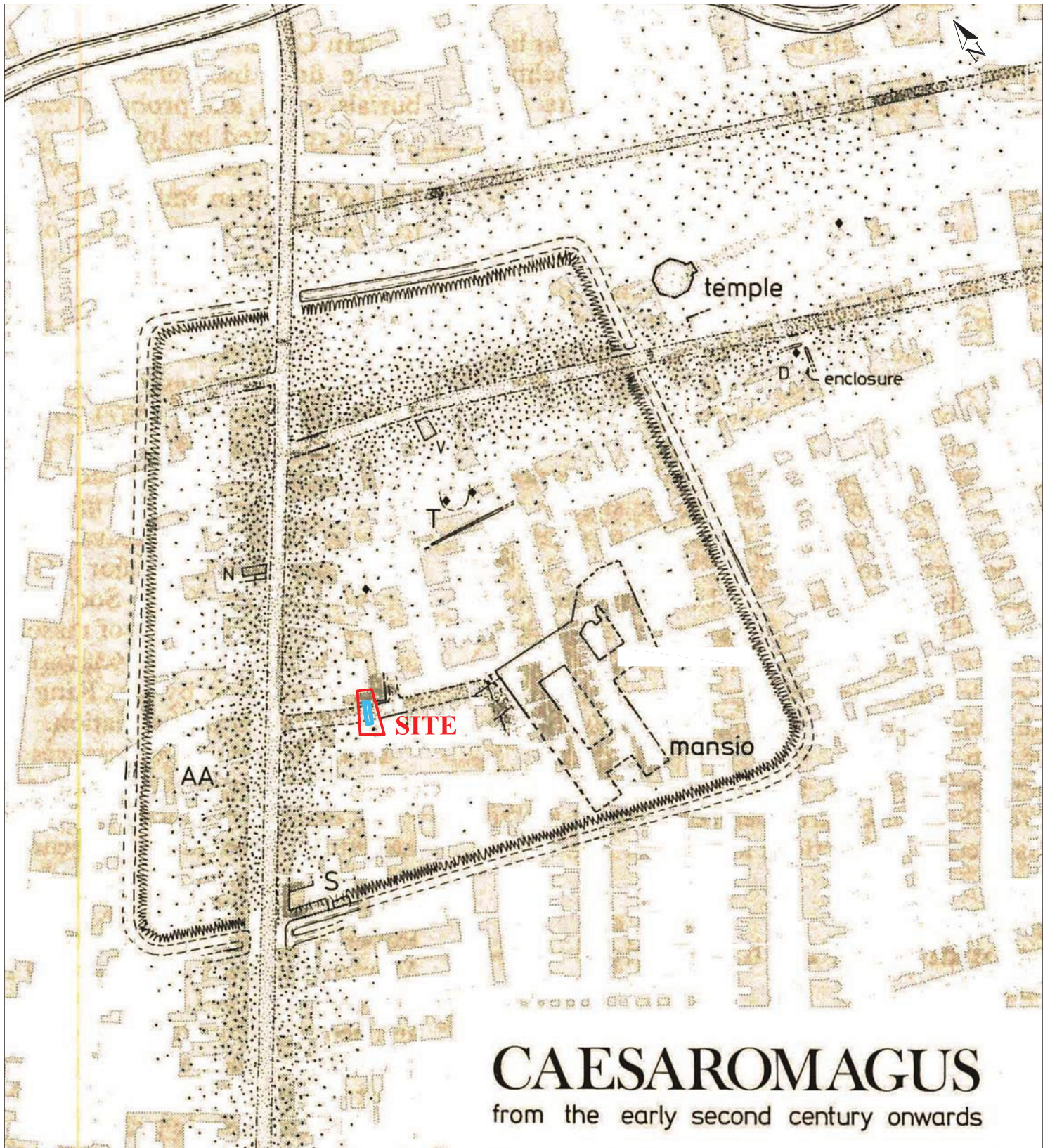


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Fig. 4 Trench plans
Scale 1:75 at A4
30 Orchard St, Chelmsford, Essex (P6924)



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Fig. 5 Sections
 Scale 1:25 and 1:20 at A3
 30 Orchard St, Chelmsford, Essex (P6924)

Roman
 Medieval
 Modern



CAESAROMAGUS
 from the early second century onwards

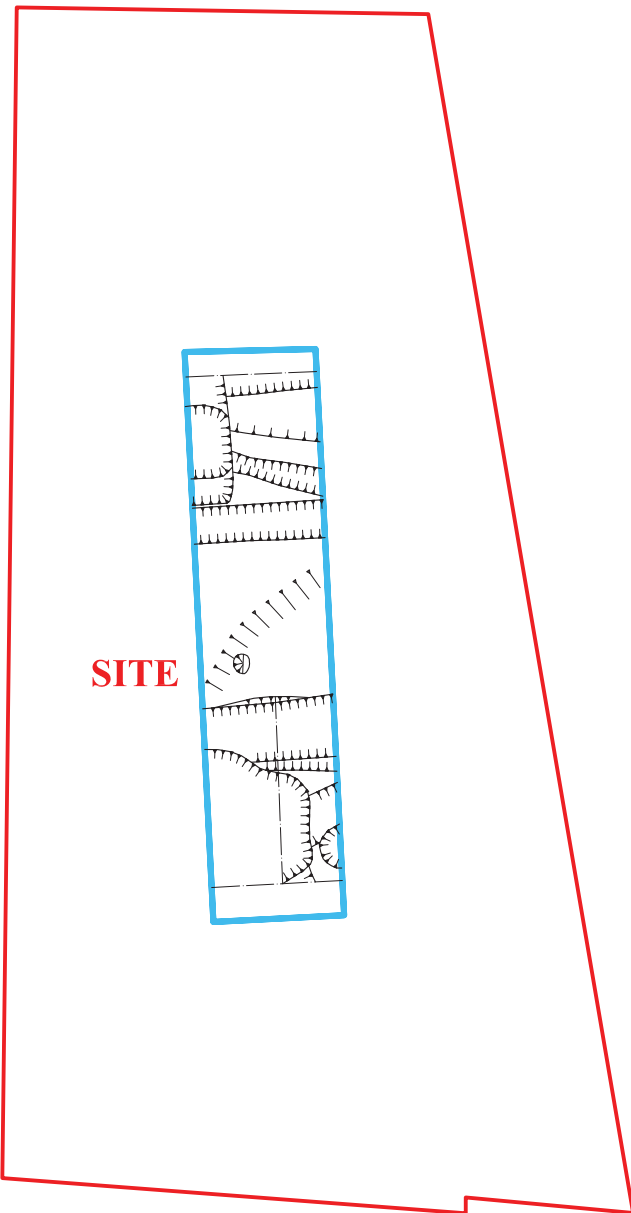
0 1:2500 150m

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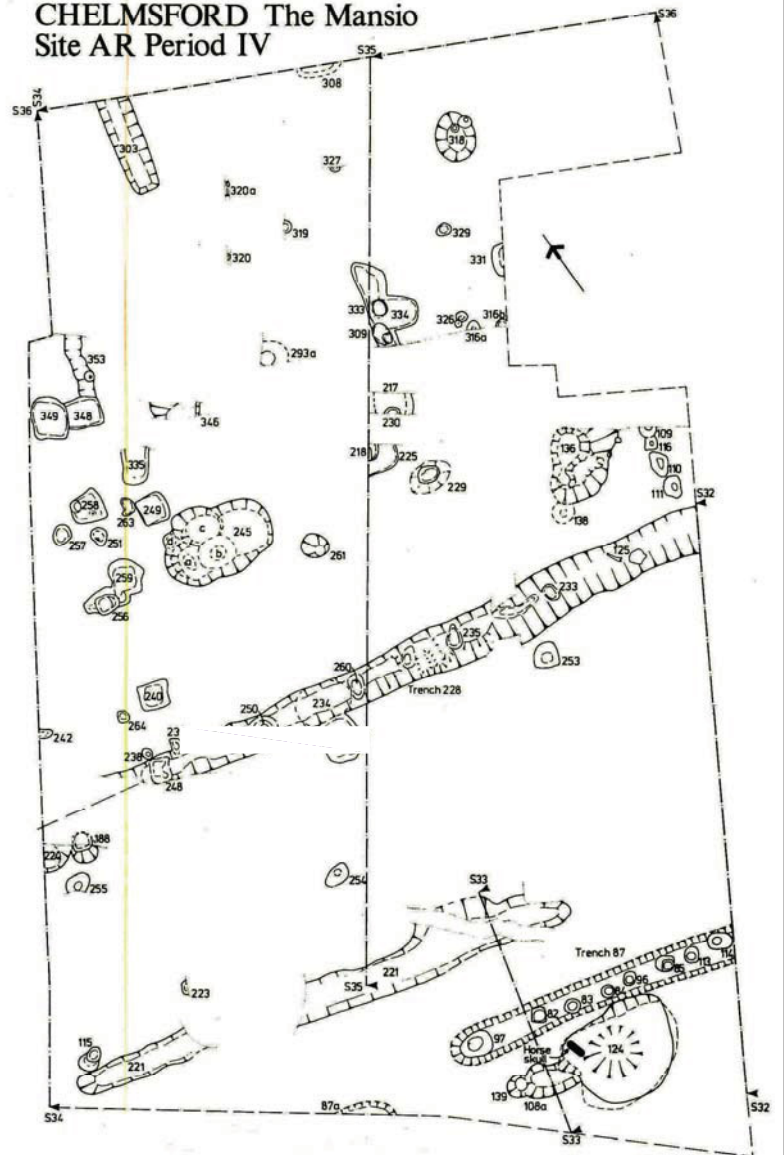
Fig. 6 Location in Mansio of Roman Chelmsford (after Drury 1988)

Scale 1:2500 at A4

30 Orchard St, Chelmsford, Essex (P6924)



CHELMSFORD The Mansio
Site AR Period IV

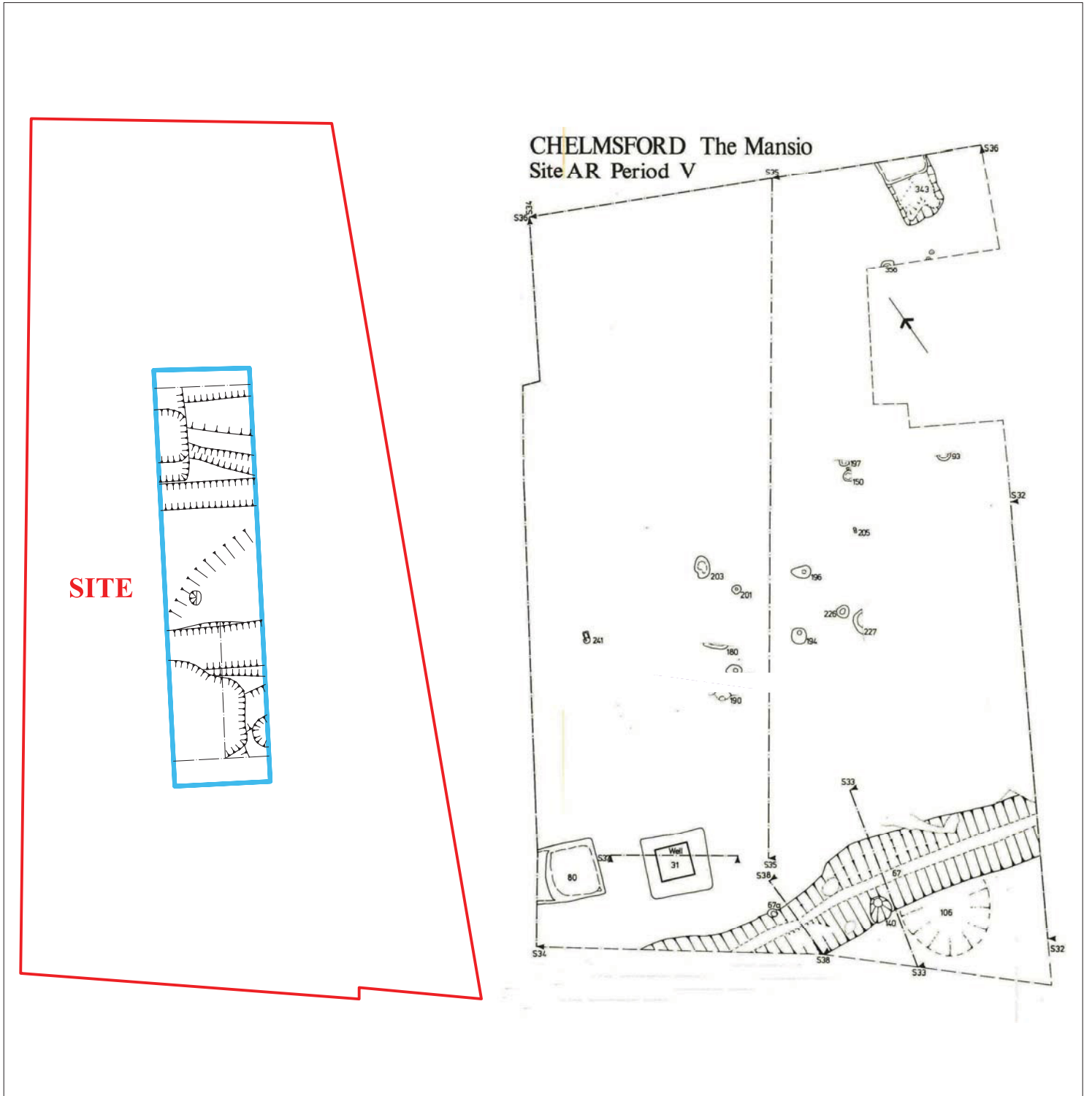


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Fig. 7 AS site in relation to Site AR Period IV (after Drury 1988)

As scale bar

30 Orchard St, Chelmsford, Essex (P6924)

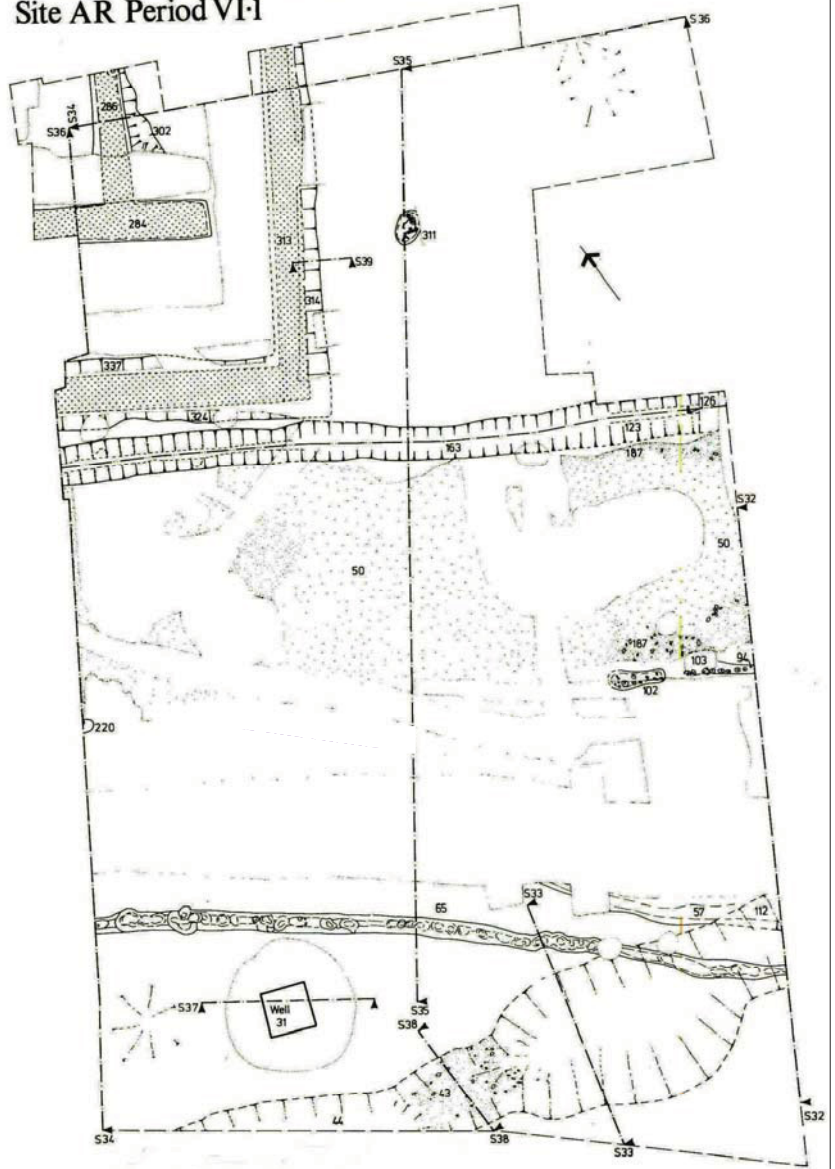
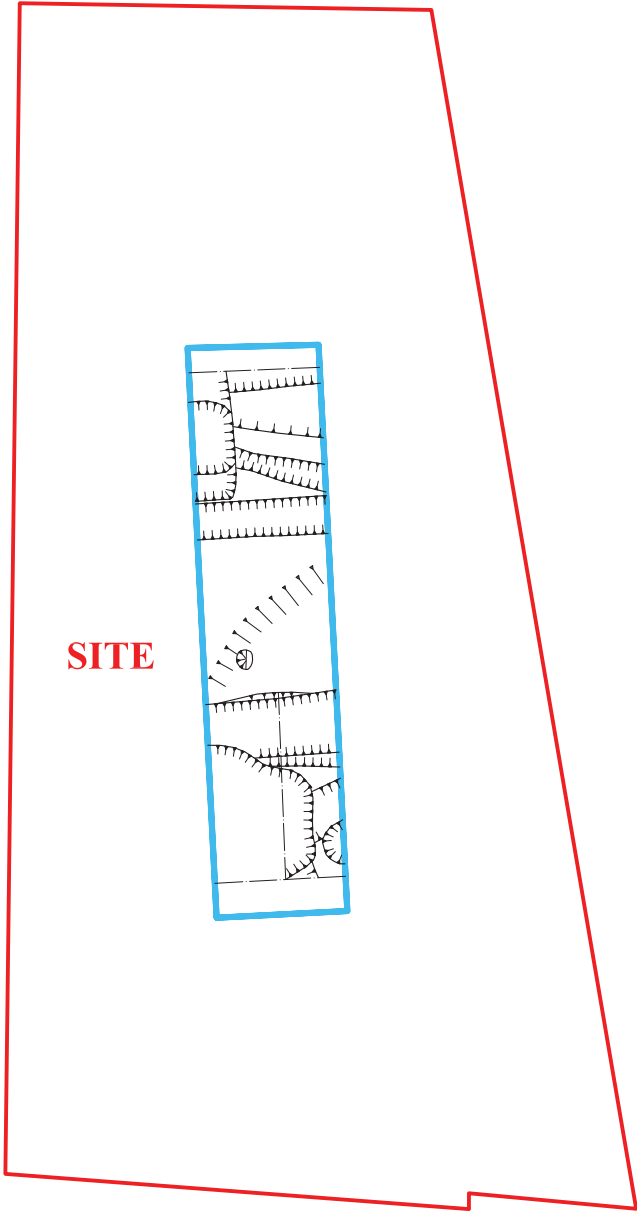


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Fig. 8 AS site in relation to Site AR Period V (after Drury 1988)

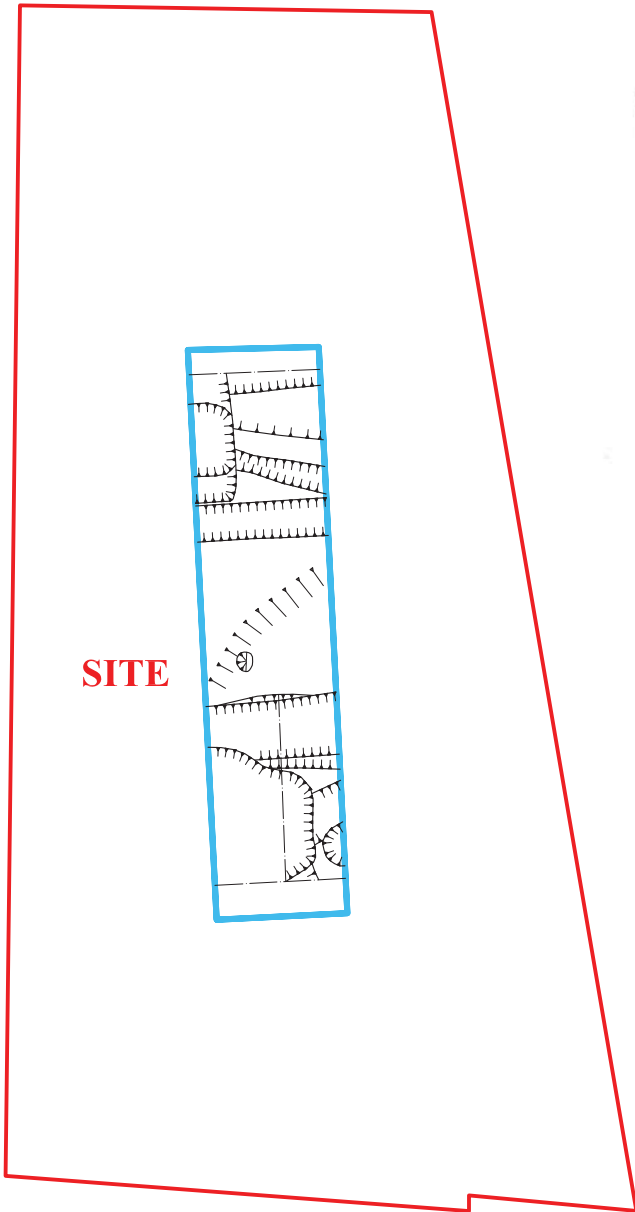
As scale bar
 30 Orchard St, Chelmsford, Essex (P6924)

CHELMSFORD The Mansio
Site AR Period VI-1

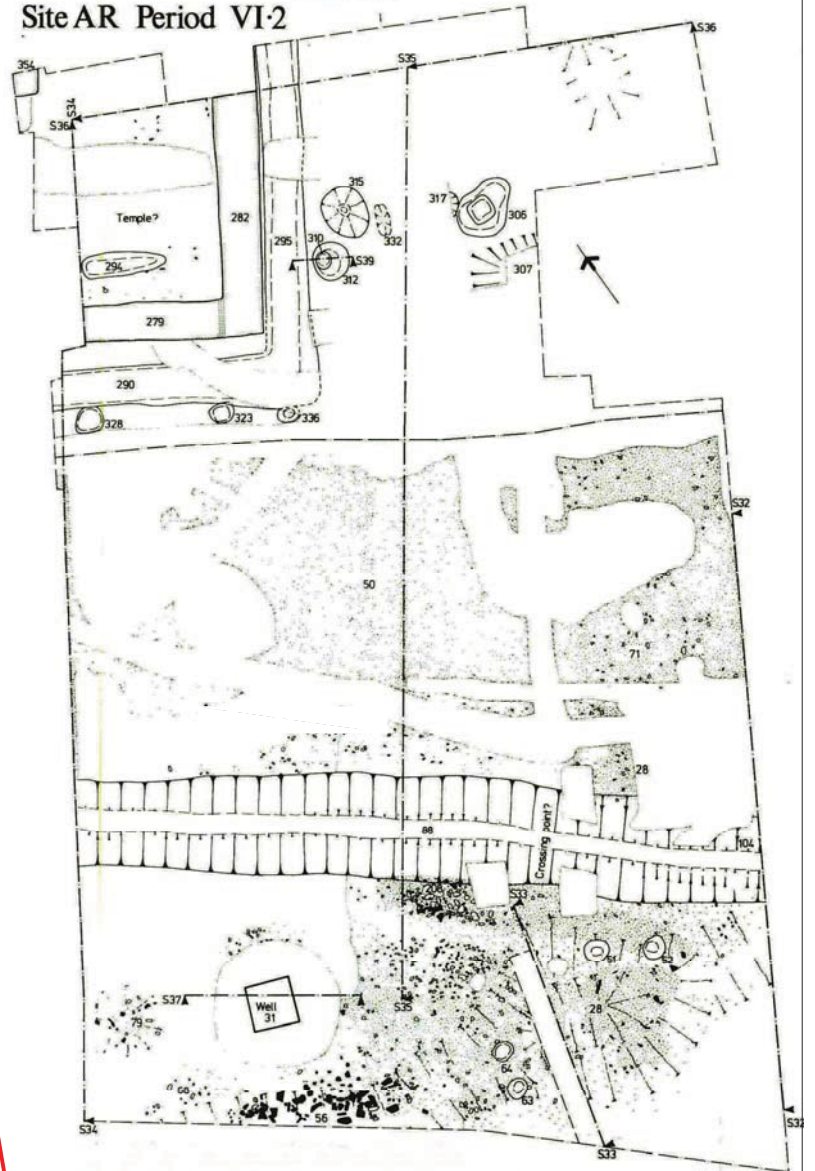


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Fig. 9 AS site in relation to Site AR Period VI.1 (after Drury 1988)
As scale bar
30 Orchard St, Chelmsford, Essex (P6924)

CHELMSFORD The Mansio
Site AR Period VI-2



SITE



0 10m

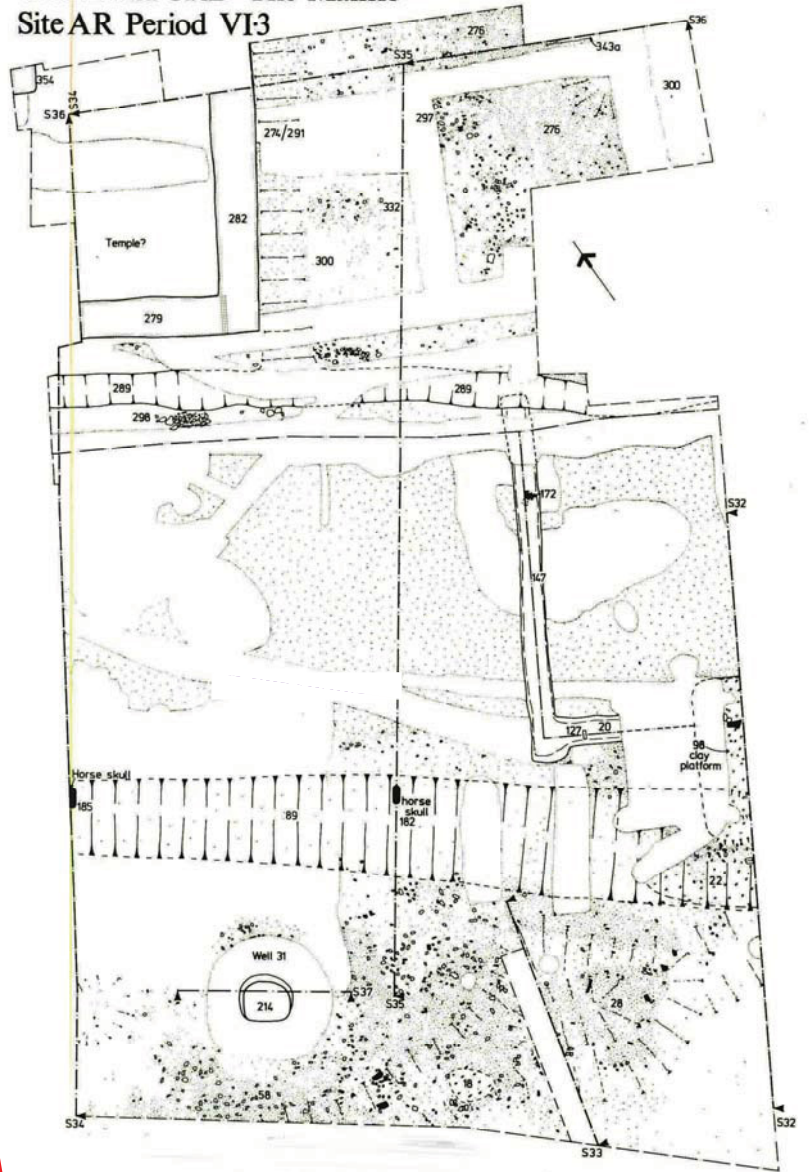
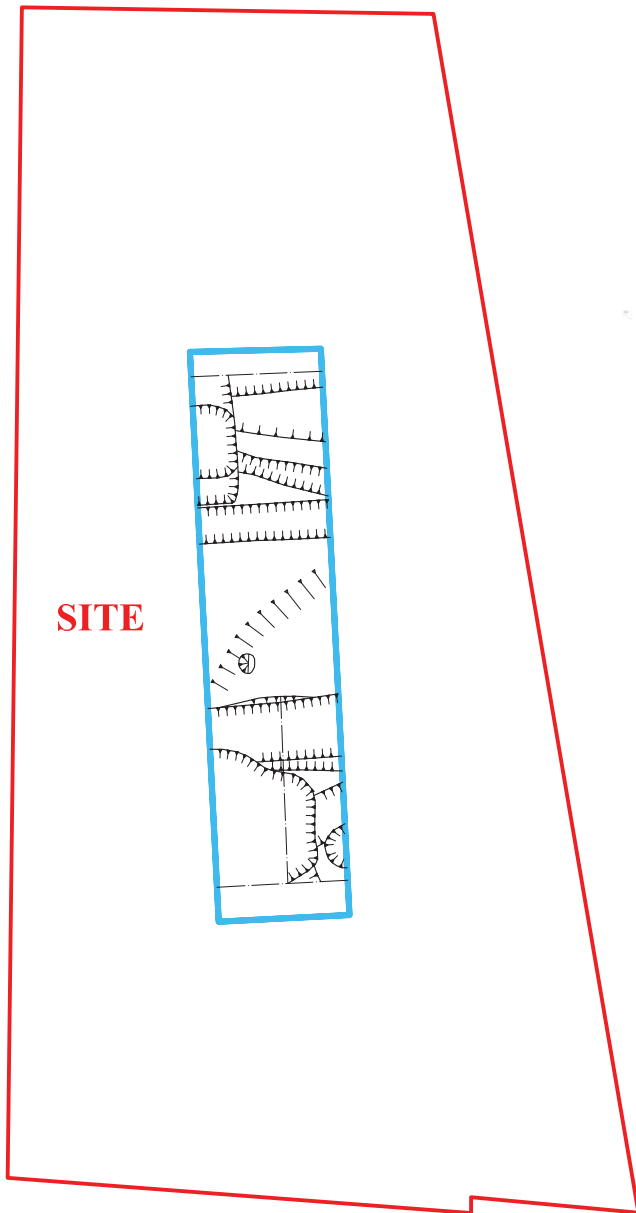
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Fig. 10 AS site in relation to Site AR Period VI.2 (after Drury 1988)

As scale bar

30 Orchard St, Chelmsford, Essex (P6924)

CHELMSFORD The Mansio
Site AR Period VI3



0 10m

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Fig. 11 AS site in relation to Site AR Period VI.3 (after Drury 1988)

As scale bar

30 Orchard St, Chelmsford, Essex (P6924)