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LAND SOUTH OF DUNMOW ROAD, GREAT HALLINGBURY, ESSEX CM22 7DG

RESEARCH ARCHIVE REPORT

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NGR: TL 52693 21332	Report No: 5109
District: Uttlesford	Site Code: GHSH15
Approved: Claire Halpin MCIfA	Project No: 6409
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In September and October 2015 Archaeological Solutions (AS) carried out an archaeological excavation on land south of Dunmow Road, Great Hallingbury, Essex (NGR TL 52693 21332). The excavation was undertaken in compliance with a planning condition based on the advice of the Historic Environment Advisor of Essex County Council. It followed a trial trench evaluation. Dunmow Road follows the line of Roman Stane Street which ran E/W linking the settlements at Braughing and Colchester (HER 4697). Extensive multi-period occupation is known from Stansted Airport and from other sites along the line of Stane Street. Cropmarks are recorded close by the site. The important medieval site of Thremhall Priory lies close by to the north-east, and listed buildings are present in the vicinity of the site. The excavation recorded eight ditches, ten possible quarry pits, seven other pits, and a buried soil. Of these six ditches, ten quarry pits, three other pits, and the buried soil were medieval, two ditches were post-medieval or modern, and four pits and one ditch were undated. The results of the excavation accord well with the evaluation. During the medieval period the site appears to have been used for quarrying, mostly for the clay in the layer below the upper chalky material and not for the underlying sand. Also during the medieval boundary ditches were dug with the majority of the quarrying taking place to the north of a large ditch (F2087), aligned east-west and parallel to the road.			
Project dates (fieldwork)	*21st September – 23rd October 2015*		
Previous work (Y/N/?)	*Y*	Future work (Y/N/?)	*N*
P. number	*6409*	Site code	*GHSH15*
Type of project	*Archaeological Excavation*		
Site status	*None*		
Current land use	*Open field*		
Planned development	*Industrial Units*		
Main features (+dates)	*Medieval ditches, pits and possible quarry pits*		
Significant finds (+dates)	*Medieval pottery, animal bone and shell*		
Project location			
County/ District/ Parish	*Essex*	*Uttlesford*	
HER/ SMR for area	*Essex Historic Environment Record*		
Post code (if known)	*CM22 7DG*		
Area of site	*c. 2.3ha.*		
NGR	*TL 52693 21332*		
Height AOD (min/max)	*c.94m AOD*		
Project creators			
Brief issued by	*Essex County Council*		
Project supervisor/s (PO)	*Gareth Barlow*		
Funded by	*Marshgate Group of Companies*		
Full title	*Land South of Dunmow Road, Great Hallingbury, Essex. Research Archive Report*		
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LAND SOUTH OF DUNMOW ROAD, GREAT HALLINGBURY, ESSEX CM22 7DG

RESEARCH ARCHIVE REPORT

SUMMARY

In September and October 2015 Archaeological Solutions (AS) carried out an archaeological excavation on land south of Dunmow Road, Great Hallingbury, Essex CM22 7DG (NGR TL 52693 21332). The excavation was undertaken on behalf of the Marshgate Group of Companies in compliance with a planning condition based on the advice of the Historic Environment Advisor of Essex County Council. It followed a trial trench evaluation.

Dunmow Road follows the line of Roman Stane Street which ran east to west linking the settlements at Braughing and Colchester (HER 4697). Extensive multi-period occupation dating from the Bronze Age to the post-medieval period is known from Stansted Airport and from other sites along the line of former Stane Street. Cropmarks are recorded close by the proposed development site. The important medieval site of Thremhall Priory lies close by to the north east, and listed buildings are present in the vicinity of the site.

The excavation recorded eight ditches, ten possible quarry pits, seven other pits, and a buried soil. Of these six ditches, ten quarry pits, three other pits, and the buried soil were medieval, two ditches were post-medieval or modern, and four pits and one ditch were undated. The results of the excavation accord well with the evaluation. During the medieval period the site appears to have been used for quarrying, mostly for the clay in the layer below the upper chalky material and not for the underlying sand. Also during the medieval boundary ditches were dug with the majority of the quarrying taking place to the north of a large ditch (F2087), aligned east-west and parallel to the road.

1 INTRODUCTION

1.1 In September and October 2015 Archaeological Solutions (AS) carried out an archaeological excavation on land south of Dunmow Road, Great Hallingbury, Essex CM22 7DG (NGR TL 52693 21332; Figs. 1 and 2). The excavation was undertaken on behalf of the Marshgate Group of Companies in compliance with a planning condition attached to planning permission for the construction of six employment units within three buildings for B1, B2 and B8 use with associated access, parking and turning facilities (Planning Ref. UTT/14/0138/FUL), based on the advice of the Historic Environment Advisor of Essex County Council. It followed a trial trench evaluation.

1.2 The excavation was undertaken in accordance to a brief prepared by the Historic Environment Advisor of Essex County Council (ECC HEA; *Brief for Archaeological Trial Trenching and Excavation on Land South of Dunmow Road, Great Hallingbury,* dated 25 August 2015), and a written scheme of investigation

(specification) prepared by AS (dated 15th September 2015), and approved by ECC HEA. The project conformed to the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* and *Standard and Guidance for an Archaeological Excavation* (revised 2014), and the document *Standards for Field Archaeology in the East of England* (Gurney 2003).

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

1.4 The specific aims of the project were to identify and characterise any evidence of prehistoric, Roman or medieval activity.

Planning Policy Context

1.5 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.

1.6 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 north-west of Hatfield Forest and directly to the south of the junction of the M11 and A120 in the county of Essex (Fig. 1). Directly to the north is London Stansted Airport and *c.*2.4km to the west is Bishop's Stortford, Hertfordshire.

2.2 The site is on the southern side of Dunmow Road at Start Hill, Great Hallingbury, bounded to the south by the Flitch Way path (formerly a railway line). It extends to some 2.3ha.

3 TOPOGRAPHY, GEOLOGY AND SOILS

3.1 The surrounding topography is dominated by London Stansted Airport *c.*200m to the north of the site. Hatfield Forest and Country Park is located to the south-east with the land sloping downwards towards the south-west. The River Stort runs through Bishop's Stortford on a north/south alignment *c.*3km to the west. The surrounding landscape has smaller brooks which run towards the confluence with the River Stort.

3.2 The underlying geological bedrock is of the London Clay Formation, formed of clay, silt and sand in the Palaeogene period. The overlying soil type is a freely draining, slightly acidic but base-rich soil.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prehistory

4.1 The modern development of Stansted Airport dominates the historic record as large scale excavations were concurrent with its development. Fieldwalking and later excavations revealed areas of Mesolithic activity, evidence for which was recorded in the form of flint flakes near natural springs (EHER 9028 & 14338). Further Mesolithic struck flint, including tools and cores. was found during field walking *c.*120m to the north of the site at Priory Farm; no excavation was undertaken here as the site was unaffected by the airport development (EHER 14330). Bronze Age pits containing large quantities of pottery, worked antler and bird bones were also been recorded in advance of the development of Stansted Airport. Further evidence of this period included an isolated middle-late Bronze Age cremation (EHER 9029) and large pits with pottery (EHER 14339).

4.2 Iron Age settlement was also present at Stansted, most notably recorded in an area *c.*1km to the north of the current site. Features included pits and gullies possibly representing the remains of roundhouses that were later truncated by WWII USAAF buildings (EHER 9037). During the development of Stansted a series of late Iron Age cremations were excavated in a similar position to the possible settlement. They were clustered in small groups and the earliest date attributable to them is 50 BC (EHER 14332 & 14340). Further to the south, adjacent to the current site, Dunmow Road follows the route of the Roman road of Stane Street. It is thought this road is Iron Age in origin (EHER 4698).

Romano-British

4.3 The Iron Age cemetery present under the modern Stansted long stay car parks to the north appear to have continued in use up until the 2nd century AD. A total of 50 burials were excavated, two of which were of high status; one contained a

complete set of Samian and glass vessels and five bronze vessels, the second burial contained glass and pottery, a pair of sandals, a mirror and a decorated box. Occupation of this area also continued with re-cut ditches forming enclosures and cobbled surfaces (EHER 14333). Further to the south of this site another cemetery contained 14 cremations, some richly furnished, but was abandoned in the mid-Roman period. A series of pits and ditches and a small structure suggested the site was reoccupied again in the late Roman period (EHER 7293).

4.4 The line of the Roman road, Stane Street, runs under the modern road of Dunmow road which fronts the north of the site. As previously mentioned this was an Iron Age, or earlier, track which was subsequently metalled and linked Braughing to Colchester (EHER 1226). In the industrial park to the west of the site Roman pottery has been found (EHER 4633).

Medieval

4.5 Evidence for Saxon occupation of the area surrounding the site is limited; two pits excavated at the car park site at Stansted produced pottery dating to between 550 & 800 AD. This pottery was considered typical of settlement assemblages and its presence suggests the existence of a small settlement close by (EHER 7287). Although no further evidence of this settlement has been found during excavations, medieval occupation is evident in field ditches and post holes with substantial amounts of 12th to 14th century pottery in the same area (EHER 14334). There is documentary evidence suggesting a medieval hunting park was located on the Stansted site (EHER 46757).

4.6 The Augustinian priory, founded by Gilbert Mountfichet, in the 12th century, lies *c.*450m to the north-east of Thremhall Park. To the north of the current house, excavations revealed a large medieval building, comprising clunch and mortar pads for columns, robbed out walls and tiled floor surfaces (EHER 4599). The bowl of the 13th century font was found buried in a flower border and removed in 1938 (Doel 1999, 3). Further to the south is a moated mill mound which is suspected to have been attached to the priory (EHER 4663). An inventory of the Priory at the Dissolution in 1536 records a quire, two alters, a Lady Chapel, Convent Hall and parlour, buttery, kitchen, brewhouse, cakehouse, 'osarye', hall, second chamber and third, dairy and stable (Fowler 1906). The goods from the site were valued at £17 2*s*. 3*d*. as well as cattle worth £8, 10*s*. 4*d*, corn worth £14, 16*s*. 8*d*. and 20 ounces of plate valued at £3, 12*s*. 0*d*. At the Dissolution the site and manor was granted to John Cary and Joyce Walsingham and the prior was given a pension of £10 (Goldsmith 2005, 7).

4.7 The possible site of a medieval tile kiln lies *c.*800m to the west of the site, along Dunmow Road. Evidence for this comprises large quantities of broken, unused tile on the surface of a ploughed field, similar to that from the tile kiln at Stebbing (EHER 4661). Land to the north-west of the site also shows evidence of medieval occupation comprising pottery scatters, beam slots and several postholes identified during excavations following field walking. However no clear building plan could be identified and relatively few features were found; it is possible the site has been badly damaged by ploughing (EHER 672).

4.8 Hatfield Forest, located *c.*440m to the south-east, is another remnant of the medieval landscape. It is a royal forest preserving elements of its medieval form, including areas of coppice and tracts of rough grazing with pollarded trees, other trees, and scrub. The pollards are now the oldest living examples and the coppice woods certainly existed in the 17th century, but probably much earlier (EHER 17333).

Post-Medieval

4.9 Evidence from the post-medieval period comprises field boundaries (EHER 14335 & 14341) and a windmill *c.*1.4km to the north-west (EHER 47455). Lewis's or Lewismead is a 16th/17th century timber framed house *c.*700m to the south-west (EHER 4640). The Pyghtle is a 17th century timber framed house *c.*870m to the south (EHER 37996) and Harp's farm, a 19th century house and 18th century stables, has a late 16th/eary 17th century barn to the south which suggests that a farm pre-dated the building of the farmhouse (EHER 37988).

4.10 The hamlet of Tilekiln Green, within which Pyghtle and Lewis's are located, is named after a common local industry. The earliest record of brick and tile making in the parish was in 1553 when William Naylor owed an annual rent of 1,000 tiles. His descendant John Naylor was still paying for it in 1653 (EHER 15631). There are many references to brickmakers and brickmaking in the late 17th and 18th centuries. Great Hallingbury has a 'Brick Kiln Field' and Little Hallingbury a 'Kiln Croft' field. Bedlar's Green Brick and Tile Works is located *c.*1km to the south of the site, perhaps dating to the 1870s (EHER 15677).

4.11 There is evidence of a transitional building on the Thremhall Priory site following the Dissolution, and before the current 18th century house was built. Wall foundations of this transitional structure were found during excavations in 2005. The current house foundations and cellar also incorporate numerous masonry blocks and column fragments from the medieval Priory building (EHER 4600). During the 19th century a servants' wing was added to the original late 18th century form (EHER 36642). Most of the Thremhall Priory Farm buildings are 18th or 19th century and include a dovecote, cart lodge and a granary (EHER 36656, 36652 & 36654). Archaeological monitoring directly to the west of Thremhall Priory recorded evidence of post-medieval features and structures (EHER 46521).

4.12 The introduction of the railway in the 1860s impacted the surrounding landscape. The line from Braintree and Bishop's Stortford runs directly to the south of the site, creating its southern limit. It was closed in the 1950s and dismantled (EHER 19629).

Modern

4.13 Stansted Airport was originally an American built wartime airfield with three runways, perimeter track and bomb stores. In 1946 it opened for civilian use and subsequently was developed into a major international airport. The current runway follows the course of the original but much has been altered beneath the modern development (EHER 16639).

Previous Investigation

A trial trench evaluation was undertaken (Barlow 2015). In summary:

The trial trenches revealed ditches and pits. Five of the ditches were medieval and three had been re-cut. Four ditches were undated and one was post-medieval/modern. Six of the pits were medieval, one was undated and four were modern. No evidence of activity prior to the medieval period was present within the trenches excepting sparse struck flint.

Medieval Ditch F1021 (=F1036, =F1064) was orientated east/west and was a Recut of Ditch F1043 (=F1061). It was parallel to Dunmow Road and Ditches F1029 and F1069 ran off it at 90º northwards towards the road. It may represent the rear boundary of plots fronting the road. It had been in use for some time, long enough for it to have silted up and been re-cut.

Within the plot bounded by Ditches F1029, F1021, and F1069 was a large medieval pit (F1077 (Trench 11). The scarcity of finds from this feature suggests it may be the result of quarrying. Also in the medieval period, some time after this pit had been in-filled, another, smaller, enclosure was excavated with the south-eastern corner represented by Ditches F1054 and F1075 (Trench 11).

Four medieval pits were recorded. F1025 and F1027 (Trench 6) intercut, were quite deep and vertically sided, and may represent small scale quarrying. They did, however, yield a large assemblage of pottery suggesting a subsequent use for waste disposal. Pits F1009 and F1011 (Trench 6) just to the west were much shallower.

Post-medieval/modern activity is represented by north/south Ditches F1003 and F1005/F1007; part of a post-medieval/modern field system. A very large modern pit (F1059), and a smaller, but still large, Pit (F1057) were recorded in Trench 6.

Undated Ditches F1045 and F1049 were present in Trench 7. F1045 may be an earlier ditch terminus, however, it slightly irregular shape and profile suggests it may be of natural origin. Whilst Ditch F1049 is likely of late medieval, or later, date as it appears to cut the subsoil (L1001).

5 METHODOLOGY

5.1 Prior to the commencement of the archaeological excavation the whole site had been mechanically stripped and the ground level reduced. This stripping amounted to a reduction in excess of 1m at the southern edge of the site, removing all soil/build up layers and extending deep into the natural deposits, removing any archaeological features in the process. Due to the natural slope of the site the ground reduction was far less significant on the northern side of the site adjacent to Dunmow Road. Here a thin layer of subsoil remained.

5.2 In the circumstances the area designated for open area excavation was a 140 x 50m area on the northern side of the site.

5.3 The 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 Figs. 3-8

The excavation revealed a medieval buried soil and pits and ditches; the majority of the features were of medieval date and the remainder were either post-medieval, modern or undated.

6.1 Prehistoric

Prehistoric activity was represented by a few residual struck flints recovered from some of the medieval features and Buried Soil L2007.

6.2 Medieval

Layer L2007 Figs. 3 and 4

Buried soil Layer L2007, up to 0.37m thick, was present in the north-eastern quadrant of the site. It comprised a firm, mid red brown clay silt with occasional small, medium, and large angular and sub-rounded flints. Adjacent to the northern baulk, Test Pit 1, a large mid 12th-14th century decorated storage vessel was recovered. Elsewhere L2007 contained sherds of mid 12th-14th century pottery (310; 13459g), struck flint, burnt flint and a lead fragment. Features were cut through this layer.

Boundaries and Associated Features Figs. 3-7

Although sufficient stratigraphic evidence to produce a complete model of the chronological development of the medieval site is lacking, amongst the earliest of the medieval features was Pit F2078. This was sub-circular in plan (1.42 x 0.63 x 0.98m) with vertical sides and it could only be excavated to a depth of 0.72m for practical reasons. It was augered to establish its full depth of 0.98m. Its complete profile is therefore unknown. The lowest exposed fill, L2080, was a firm, dark red brown silty clay with moderate small sub-rounded chalk. It contained 12th-14th century pottery (2; 7g). The uppermost fill, L2079, was a firm, dark grey brown silty clay with moderate small and medium rounded flint and chalk. It contained 12th-14th century pottery (2; 4g) and struck flint (27g).

F2078 was cut by Pit F2065, a moderately large (4.40 x 1.68 x 1.26m), sub-rectangular feature which has been interpreted as a quarry pit. It contained seven fills (Table 1) possibly suggesting that it was used over a period of time for the convenient deposition of refuse material.

Context №	Fill description	Finds
L2066	Compact, dark red brown silty clay with moderate small and medium sub-rounded chalk, and frequent chalk flecks.	None
L2067	Firm, dark red brown silty clay with occasional small and medium sub-rounded flint.	None
L2068	Firm, pale yellow brown chalky clay with frequent small and medium sub-rounded chalk.	None
L2069	Firm, dark grey brown silty clay.	12th-13th C pot (2; 5g), animal bone (5g)
L2070	Firm, mid red brown silty clay with moderate small and medium sub-angular and sub-rounded flint.	12th-14th C pot (6; 92g), animal bone (1g)
L2071	Firm, pale yellow brown chalky clay with frequent small and medium sub-rounded chalk.	None
L2072	Firm, mid grey brown silty clay with frequent small and medium sub-angular and sub-rounded flint.	None

Table 1. Fills of F2065

Pit F2065, in turn, was cut by F2047, ditch or gully orientated north-east/south-west (12.00 x 0.93 x 0.82m). Its south-western terminus was immediately to the south of the terminus of Ditch F2083 and its north-eastern terminus was cut by Pit F2116. It had very steep sides and an uneven base. Its basal fill, L2048, was a compact, dark grey brown clay silt with moderate small, medium and large sub-angular flint and sub-rounded chalk. It contained 12th-14th century pottery (4; 11g) and animal bone (3g). L2048 was overlain by a thin layer of redeposited material (L2058) comprising a firm, pale yellow brown chalky clay silt with frequent small and medium sub-angular and sub-rounded chalk, and occasional small angular flints. The uppermost fill, L2049, was a compact, dark grey brown clay silt with moderate small, medium and large sub-angular flint and sub-rounded chalk. It contained 12th-14th century pottery (37; 261g) and slag.

F2073 was a re-cut of Ditch F2047. It had steep sides and a narrow base. Its lower fill, L2074, was a firm, dark grey brown silty clay with occasional small and medium sub-angular flints. The upper fill, L2075, was a firm, pale yellow brown silty clay. It contained no finds but stratigraphic relations confirm its medieval date.

F2047 and F2073 ran on the same alignment as two linear features, F1045 and F1049, recorded slightly to the north-east in Trench 7 of the preceding trial trench evaluation (Barlow 2015). Despite both extending beyond the limits of the trench, neither of these features were identified during excavation; however, their similarity in alignment to F2047 and F2073 suggests that there may have been some direct relationship between these sets of features possibly representing some kind of boundary or a drainage system.

Whatever the function of these north-east/south-west aligned ditches, the features that proceeded them represent a clear change in the axes of alignment of the linear features present at the site. A large re-cut ditch (F2019, F2087, F2108, and F2114) running west to east across the centre of the site appeared to form a boundary aligned parallel to Dunmow Road. The majority of the rest of the medieval archaeology was recorded to the north of this ditch, suggesting that it represents the southern boundary of a plot or plots of land running back from Dunmow Road to the north.

The western end of the first cut of this ditch (F2114 = F2108) curved slightly to the north. Its terminus was cut by Pit F2103. The terminus of the first re-cut (F2083) lay to the south as a result of this end of the ditch being straightened. This had then been re-cut by F2019. Finally, 13m from the western end, was a deeper, wider re-cut (F2087).

Feature	Context	Profile (dimensions)	Fill	Comments	Finds
F2114 = F2108	L2115	Moderately sloping sides, concave base (65.00+ x 1.30 x 0.80)	Compact, mid red brown silty clay with moderate small, medium, and large sub-angular and sub-rounded chalk.	Re-cut by Ditch F2087	13th-15th C pot (7; 37g) 12th – 14th C pot (35; 243g), shell
	L2119 = L2109		Compact, mid grey brown silty clay with moderate small, and medium sub-angular and sub-rounded chalk.		12th – 14th C pot (11; 115g), shell
F2083	L2084	Steep sides, flattish base. Sub square terminus. (5.00 x 0.52 x 0.41m)	Firm, mid yellow brown silty clay with moderate small, and medium sub-angular and sub-rounded chalk, and occasional small angular sub-angular flints.	Re-cut by Ditch F2019	
F2019	L2020	Irregular sides, concave base. (12.00 x 1.43 x 0.51m)	Firm, mid grey brown silty clay with occasional small and medium sub-angular and sub-rounded flint.	Re-cut of Ditch F2083. Re-cut by Ditch F2087.	12th-14th C pot (2; 13g) 13th-15th C pot (5; 16g), animal bone (5g), shell, fired clay
F2087	L2088	Irregular sides, concave base. (50.00+ x 3.30 x 1.20m)	Firm, pale orange / yellow chalky clay silt with frequent small rounded chalk and occasional small and medium angular flint.	Re-cut of Ditch F2019	12th-14th Cent pot (7; 29g)
	L2089		Firm, mid orange brown silty clay with occasional small, medium, and large angular and sub-angular flint, and small and medium sub-angular and sub-rounded chalk.		mid 12th-14th C pot (29; 196g); 13th-15th C pot (7; 63g); CBM (574g); animal bone (165g), Fe Fragment SF1 Fe Blade
	L2090		Firm, mid orange grey brown silty clay with occasional small, medium, and large angular and sub-angular flint, and sub-angular and sub-rounded chalk.		

	L2122		Compact, very dark grey brown silty clay with moderate small rounded chalk.		

Table 2. Constituent features of main medieval boundary ditch

Two ditches ran perpendicular to this large ditch, aligned north to south leading towards the Dunmow Road. It appears that these would represent the delineation of adjacent roadside plots. The easternmost of these ditches (F2092) was recorded during the preceding evaluation as F1069. Twenty five metres to the west of F2092 was Ditch F2094 (10.00+ x 1.61 x 0.67m). It did not quite meet with Ditch F2087 as it turned 90º west for 7m before terminating. Its fill, L2095, was a firm, dark-mid grey brown clay silt with occasional small and medium angular flints and sparse large flint nodules. It contained 13th-14th century pottery (26; 204g) and an iron fragment.

Three north/south aligned ditches (F2085, F2052 and F2050), representing successive recuts of the same feature, located to the south of main east/west boundary would appear to be the southerly continuation of F2092.

Feature	Context	Profile (dimensions)	Fill	Finds	Relationships/ Comments
F2050	L2051	Vertical sides and concave base (20.00+ x 0.45 x 0.41m)	Compact, pale yellow brown silty clay with occasional large sub-rounded flints.	None	Re-cut by Ditch F2052
F2052	L2053	Moderately steep sides and a flattish base (20.00+ x 0.90 x 0.20m)	Compact, pale brownish grey silty clay with occasional medium and large sub-rounded flints.	Mid 12th-14th C pottery (1; 23g)	Re-cut of Ditches F2050 and F2085
F2085	L2086	Moderately steep sides and a concave base (15.00+ x 0.76 x 0.24m)	Compact, pale yellow brown silty clay with occasional medium sub-rounded flints.	None	Re-cut of Ditch F2050. Re-cut by Ditch F2052

Table 3. Recut ditches to the south of the main east/west aligned medieval boundary

Quarry Pits Figs. 3-7

A cluster of possible quarry pits (Table 3) was present around, and to the north of, the terminus of the large east-west aligned boundary. None of the quarry pits were excavated into the underlying sand layer suggesting the target for extraction was the clay layer overlying the sand.

Feature	Context	Plan/Profile (dimensions)	Fill	Comments	Finds
F2036	L2037	Sub-rectangular. Vertical, slightly undercutting sides. Flat base. (3.57 x 2.45 x 0.99m)	Firm, mid yellow brown silty clay with moderate large flint nodules and small and medium sub-round chalk.		13th-15th C pot (93; 437g) Fe fragment (1; 9g)
	L2038		Firm, mid red brown silty clay with		Late 12th-14th C pot (34; 189g);

			moderate small and medium sub-angular flints and sub-round chalk.		13th-14th C pot (98; 573g), CBM (19g), animal bone (98g), Fe. frag., slag
F2045	L2046	Rectangular. Vertical, slightly undercut sides. Flat base. (1.70 x 1.30 x 0.82m)	Compact, mid grey brown clay silt with moderate small, medium, and large chalk and flint.		13th-15th C pot (34; 112g), CBM (33g), animal bone (4g), struck flint
F2099	L2100	Sub-rectangular. Vertical sides. Flat base. (3.40 x 1.20 x 1.07m)	Firm, dark red brown silty clay with occasional small and medium angular flint, and sub-angular and sub-rounded chalk.	Cut by Pit F2116	13th-14th C pot (15; 99g), animal bone (6g), struck flint
	L2101		Mixed patches of firm pale yellow brown chalky clay silt and dark red brown silty clay. Occasional small and medium sub rounded and rounded chalk, angular flint.		Mid 12th-14th C pot (7; 70g); 13th-14th C pot (11; 34g), animal bone (3g)
	L2102		Firm, mid orange brown clay silt with occasional small, medium, and large angular and sub-angular flint, and small sub-round chalk.		Mid 12th-14th C pot (16; 200g); 13th-15th C pot (10; 52g); animal bone (141g), fired clay
F2103	L2104	Oval. Steep sides. Flat base. (4.50 x 2.10 x 0.75m)	Compact, pale yellow brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk.		None
	L2105		Compact, dark grey brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk.		12th-14th C pot (75; 633g)
	L2106		Mixed compact, mid red brown and mid yellow brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk		None
	L2107		Firm, mid brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk		Mid 12th-14th C pot (147; 754g)

F2116	L2117	Sub-rectangular. Steep sides. Flat base. (2.040 x 1.60 x 0.70m)	Mixed compact, mid grey brown and pale yellow brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk	Cut Ditches F2047 and F2114, and Pit F2099	Late 12th-14th C pot (7; 23g)
	L2118		Firm, dark grey brown silty clay with moderate small, medium, and large sub-angular and sub-rounded flint, and sub-rounded chalk		13th-15th Cent pot (29; 223g), shell
F2125	L2126	Oval. Steep sloping sides. Concave base. (2.12 x 1.42 x 1.00m)	Firm, mid orange grey brown sandy clay with occasional small, medium, and large angular and sub-angular flint, and sub-angular and sub-rounded chalk.	Cut Pit F2123	Late 12th-15th C pot (10; 84g), animal bone (43g)
	L2127		Mixed patches of firm pale yellow brown chalky clay silt and mid orange brown silty clay with occasional small and medium sub rounded and rounded chalk, angular flint.		
	L2128		Firm, mid grey brown silty clay with occasional small, medium, and large angular and sub-angular flint, and sub-angular and sub-rounded chalk.		13th-15th C pot (61; 371g), animal bone (83g), iron fragment, shell
	L2129		Firm, pale-mid orange brown silty clay with occasional small and medium angular flint, and large flint nodules.		None

Table 4. Quarry pits

Beyond the cluster of pits, further quarry pits were located at the eastern (F2110) and western ends (F2059) of the site. Another, elongated, quarry pit (F2055) was located to the south of the east-west aligned Ditch F2087.

Pit F2055 was elongated and sub-rectangular in plan (9.80 x 1.71 x 1.10m) with very steep sides and a concave base. Its lower fill, L2091, comprised mixed patches of mid red brown and pale greyish yellow silty clay with frequent small and medium rounded chalk, and occasional medium and large angular and sub-rounded flint. It contained prehistoric pottery (1; <1g). The upper fill, L2056, was a firm, mid red brown silty clay with occasional small and medium rounded chalk and sub-angular

flint. It contained mid 12th-14th century pottery (8; 72g), 13 th-14th century pottery (9; 54g), animal bone (40g), struck flint and oyster shell.

Pit F2059, located at the western end of the excavated area, was sub-rectangular in plan with vertical sides and a flat base (3.34 x 1.80 x 1.20m). Its basal fill, L2060, was a very firm, dark orange brown silty clay with occasional small, medium, and large angular and sub-angular flint, and sparse small and medium sub-angular and sub-rounded chalk. It contained 13th-14th century pottery (38; 304g), animal bone (13g), oyster shell, struck flint and an iron fragment. Slumped material on the eastern side only, L2061, comprised mixed patches of very firm, dark orange brown clay silt and pale yellow brown chalky clay silt with occasional small and medium angular and sub-angular flint, and frequent small and medium sub-angular and sub-rounded chalk. L2062 was a very firm, dark orange brown clay silt with occasional small, medium angular and sub-angular flint, and sparse small and medium sub-angular and sub-rounded chalk. It contained 13th-14th century pottery (108; 1131g), animal bone (68g), struck flint (64g), oyster shell (86g) and burnt stone. L2063 was mostly redeposited material comprising mixed firm, pale yellow brown chalky clay silt (*c*.80%), and dark orange brown clay silt (*c*.20%), with occasional small and medium angular and sub-angular flint, and frequent small and medium sub-angular and sub-rounded chalk. L2064 was a very firm, dark orange brown clay silt with occasional small and medium angular and sub-angular flints, and sub-angular and sub-rounded chalk.

Sub-rectangular Pit F2110 was in plan (2.70+ x 2.20 x 0.50m), located at the eastern end of the site. It had vertical sides and a flat base. It basal fill, L2111, was a compact mid orange brown silty clay with moderate small, medium and large sub-angular flint and sub-rounded chalk. It contained 13th-15th century pottery (23; 123g), CBM (365g) and animal bone (142g). The middle fill (L2112) was a compact, mid grey brown silty clay with occasional small, medium and large sub-angular flint and sub-rounded chalk. It contained 13th-15th century pottery (88; 737g), CBM (361g), animal bone (29g), shell and an iron fragment. The uppermost fill (L2113) was a compact, pale grey brown silty clay with moderate small, medium and large sub-angular flint and sub-rounded chalk. It contained 13th-15th century pottery (5; 177g).

Other Medieval Features *Figs. 3-7*

A small number of features that were not directly (either stratigraphically or functionally) associated with the boundary features or with the quarry pits were also recorded across the site.

Pit F2009 was oval (0.75 x 0.70 x 0.23m), located in the centre north of the site. It had steep sides and a concave base. Its fill, L2010, was compact, dark grey brown silty clay with moderate small and medium sub-angular flint and sub-rounded chalk. It contained 12th-14th century pottery (4; 11g).

Ditch F2015 was linear in plan (3.10+ x 0.45 x 0.14m), orientated southeast/northwest, with moderately sloping sides and a concave base. Its fill, L2016, was a firm, mid grey brown silty clay with occasional small and medium sub-angular flint and sub-rounded chalk. It contained no finds.

Gully F2017 was linear (2.00m+ x 0.44 x 0.13m), orientated north/south, with shallow sides and a flattish base. It was cut by Ditch F2087. Its fill, L2018, was a firm, pale yellow brown silty clay with frequent small sub-rounded chalk. It contained 12th-14h century pottery (1; 3g).

Pit F2120 was sub-circular (1.44 x 1.06 x 0.67m), located close to the cluster of quarry pits in the centre of the site. It had near vertical sides and a flat base. Its fill, L2121, was a compact, pale grey brown silty clay with occasional small sub-angular flints. It contained 12th-14th century pottery (10; 71g) and shell (23g).

During the preceding evaluation, a small group of features were recorded in the western end of Trench 6, in close proximity to Quarry Pit F2059.

Pit F1011 was sub-circular (1.20 x 0.50 x 0.05m). It had gently sloping sides and a concave base. Its fill (L1012) was a firm, mid grey brown silty clay with occasional small sub-rounded chalk. It contained medieval (13th – 15th century) pottery (4; 9g).

Pit F1025 was sub-circular (2.50 x 0.90+ x 0.80m). It had steep sides and a concave base. It was cut by Pit F1027. Its fill (L1026) was a firm, dark grey brown silty clay with occasional small and medium sub-rounded flints. It contained medieval (13th – 14th century) pottery (15; 58g), animal bone (13g) and CBM (4g).

Pit F1027 was a sub-circular (3.90 x 1.80+ x 0.88m). It had near vertical sides and a flattish base. It cut Pit F1025. Its lower fill (L1028) was a firm, dark grey brown silty clay with moderate medium sub-rounded flints, and occasional medium sub-angular flints, charcoal and chalk flecks. It contained medieval (13th – 15th century) pottery (208; 1457g), animal bone (542g), CBM (1825g), Fe fragments (48g), struck flint (1; 3g) and oyster shell (24g). The middle fill (L1056) was a firm mid yellow brown silty clay with moderate chalk flecks, and occasional small sub-rounded flints. It contained medieval (13th – early 14th century) pottery (7; 32g), animal bone (6g), and CBM (140g). The upper fill (L1033) was a firm, dark grey brown silty clay with occasional medium sub-rounded flints, chalk and charcoal flecks. It contained medieval (13th – mid 14th century) pottery (53; 292g), animal bone (285g), and CBM (1571g), shell (76g), Fe. Fragments (5; 24g) and fired clay (16g).

6.3 Post-Medieval/ Modern Features (Figs. 3-7)

Ditches F2039 and F2043 contained artefactual evidence to indicate that they were of post-medieval or modern date. The axes of alignment that they appeared to follow were the same as those followed by the more recent of the medieval boundary ditches, running parallel and perpendicular to Dunmow Road to the north of the site.

Ditch F2039 was linear (50.00+ x 1.70 x 0.75m) orientated north/south, running across the central part of the excavated area. It had steep sides and a flattish base. Its basal fill, L2040, was a very firm, dark yellowy grey brown silty clay with occasional small and medium sub-angular and sub-rounded chalk and sparse small angular flints that contained no finds. The middle fill (L2041) was a very firm, dark orange brown silty clay with very occasional small, medium, and large angular and sub-angular flint, and sub-angular and sub-rounded chalk. It contained 12 th-14th century pottery with 16th–17th century CBM (5; 69g) and a clay pipe fragment (2g).

The uppermost fill (L2042) was a firm, dark red brown clay silt with sparse small and medium angular and sub-angular flint, and, sub-angular and sub-rounded chalk that contained no finds.

Ditch F2043 (16.00+ x 1.17 x 0.18m) ran on an east/west alignment extending from beyond the western limit of the excavated area and running for 16m, gradually becoming indistinct towards the east. It had moderate to steep sides and a concave base. Its fill, L2044, was a compact, mid brownish yellow clay silt with moderate small and medium sub-angular and sub-rounded chalk, and occasional small angular flints. It contained 12th – 14th century pottery (3; 104g), CBM (444g), and hemp-backed Lino tile fragments.

6.4 Undated Features (Figs. 3-8)

Pits F2003, F2005, F2013 and F2013 were undated. In addition, cleaning the southern baulk in the area truncated by earlier spoil removal, revealed seven pits or ditches in section (F2022, F2024, F2026, F2028, F2030, F2032 and F2034) that could not be dated.

Pit F2003 was oval (0.40 x 0.30 x 0.10m), located near the centre of the site, with moderately sloping sides and a concave base. Its fill, L2004, was a compact, mid grey brown clay silt with occasional small angular flints. It contained no finds.

Pit F2005, located near the centre of the site, was oval with moderately sloping sides and a concave base (1.50 x 0.50 x 0.20m). Its fill, L2006, was a firm, mid red brown silty clay with moderate small and medium angular and sub-angular flints, and sub-angular and sub-rounded chalk. It contained no finds.

Pit F2013 was sub-circular (0.76 x 0.40 x 0.17m), located near the northern baulk. It was cut by Pit F2011. It had moderately sloping sides and a flattish base. Its fill, L2014, was a compact, mid red brown silty clay with occasional small sub-angular and sub-rounded chalk, angular flints. It contained no finds.

Pit F2123 was oval (0.64 x 0.27 x 0.40m) with steep sides and a concave base. Its fill, L2124, was a firm, mid orange brown silty clay, with patches of pale yellow brown chalky clay silt, and occasional small and medium sub-angular and sub-rounded chalk, and angular flint. It contained a burnt red deer antler (199g). F2123 was cut by Pit F2125.

A length of the baulk at the far southern edge of the site was cleaned and any features exposed were recorded:

Feature	Context	Profile (dimensions)	Fill	Finds	Relationships/ Comments
F2022	L2023	Moderately sloping sides and concave base (0.75 x 0.30m)	Very firm, mid red brown silty clay with occasional medium angular and sub-angular flints.	None	
F2024	L2025	Moderately sloping sides and concave base (1.00 x 0.40m)	Ditto	None	
F2026	L2027	Steep sides and concave base (1.25 x 0.75m)	Very firm, mid grey brown silty clay with occasional small and medium angular and sub-angular flints.	None	Cut F2028
F2028	L2029	Moderately sloping sides and concave base (0.70 x 0.68m)	Firm, dark red brown silty clay with occasional small and medium angular and sub-angular flints.	None	Cut F2030 Cut by F2026
F2030	L2031	Moderately sloping sides and concave base (0.95 x 0.25m)	Very firm, mid red brown silty clay with occasional small and medium angular and sub-angular flints.	None	Cut by F2028
F2032	L2033	Moderately sloping sides and concave base (1.20 x 0.50m)	Very firm, mid red brown silty clay with occasional medium angular and sub-angular flints.	None	
	L2130		Firm, pale yellow brown chalky clay silt.		
	L2131		Very firm, mid red brown silty clay with occasional medium angular and sub-angular flints.		
F2034	L2035	Steep sides and concave base (1.35 x 0.65m)	Very firm, mid orange brown silty clay with frequent small and medium angular and sub-angular flints.	None	

Table 5. Features recorded in section only

7 CONFIDENCE RATING

7.1 The site was truncated as a consequence of the recent ground clearance operations and the truncation resulted in the potential loss of archaeological remains that may have been present within approximately the southern two thirds of the site. The truncation was less severe on the northern side of the site, adjacent to Dunmow Road. This area was subject to full archaeological excavation. Here a thin layer of subsoil remained on the northern half of the excavated area and this sealed the archaeological features. Even in this part of the site there were large areas of earlier modern truncation, particularly in the north-eastern sector. With the exception of the areas of modern truncation, preservation of the archaeological features beneath the subsoil layer was good.

8 DEPOSIT MODEL Fig. 8

8.1 No topsoil remained on the excavation area. Some subsoil (L2001) remained in its northern half, comprising a firm, mid orange brown clay silt with occasional small and medium angular, sub-angular, and rounded flint and small rounded chalk. This was present in a layer increasing in depth from 0.00m in the south to 0.07m in the north. It overlay the natural deposits (L2002) of a very firm, very pale yellow brown chalky clay silt with occasional small, medium, and large sub-rounded and rounded chalk. Also patches of very firm, dark-mid brown orange silty clay with occasional medium and large sub-rounded and rounded flints, and firm, mid brown orange clay silt with sparse medium sub-angular and sub-rounded flint.

8.2 Previously excavated geotechnical pits revealed three layers of natural deposits. Uppermost L1002 (= L2002) was present between 0.20m and 1.00m thick. It overlay L1015, a very firm, pale yellow brown silty clay with occasional small medium and large sub-rounded and rounded chalk, and occasional small and medium angular and sub-angular flints. On the northern side of the site, at a depth of between 1.20m and 1.40m a layer (L1016) of friable, pale brown yellow sand, 0.80m+ thick, was present.

9 SPECIALISTS ARTEFACTUAL AND ENVIRONMENTAL REPORTS

9.1 The Struck Flint

Andrew Peachey

Excavations recovered a total of 12 pieces (128g) of struck flint in an un-patinated to slightly patinated condition, including sparse residual prehistoric scrapers and debitage (Table 6), however, a significant proportion is comprised of sub-rectangular trimmed flakes probably produced by the dressing of flint walls in the medieval period.

Flint implement/ flake type	Frequency	Weight (g)
Scraper	2	31
Blade	1	8
Debitage: core reduction (prehistoric)	3	5
Debitage: trimming/dressing (medieval?)	6	84
Total	*12*	*128*

Table 6. Quantification of struck flint

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. Terms used to describe implement and core types follow the system adopted by Healy (1988, 48-9). 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 'un-corticated' to those with no dorsal cortex.

Discussion

The struck flint uniformly utilized high quality raw material, predominantly near black and occasionally ranging to dark grey with, where extant, a chalky white cortex. Three implements were recovered as part of the assemblage, all from medieval Quarry Pit F2059 (L2060 & L2062), and include a horseshoe scraper, a side scraper and a serrated blade. The horseshoe scraper was formed on a Levallois-type flake with a characteristic 'tortoiseshell' pattern of dorsal scars, while the serrated blade was formed on a crested flake that retained a corticated butt; characteristics indicative, if these implements are contemporary, of a probable origin in the early Bronze Age. The occasional debitage flakes in this quarry pit, as well as Quarry Pit 2110 and Layer L2007, are blade-like, but are very small with rippled ventral faces consistent with hard-hammer percussion and therefore may have been produced in the Neolithic or early Bronze Age.

A total of six debitage flakes (84g), including primary and tertiary flakes from Quarry Pit F2059, Pit F2078, Ditch F2094 and Layer L2007, exhibit sub-rectangular to square profiles, with distinctive shallow, chipped bulbs of percussion and evidence of trimming. One flake in Quarry Pit F2059 (L2062) has been trimmed around all edges, an example in Pit F2078 (L2079) has a facetted butt deliberately made square, while flakes in Layer L2007 (Seg.B) have severely truncated lateral edges. These traits are typical of debitage produced by the use of metal hammers and anvils utilized when constructing and finishing dressed flint walls, predominantly in the medieval period.

9.2 The Medieval Pottery

Peter Thompson

Introduction

The archaeological evaluation recovered 444 sherds weighing 3.034kg from 17 features, and the excavation recovered a further 1,672 sherds weighing 21kg from 24 features and one layer. The combined total is 2,116 sherds weighing 24.034kg. The pottery assemblage is all medieval bar seven small, heavily abraded residual prehistoric flint tempered sherds (15g), and three post-medieval red earthenware sherds (8g), which have not been processed further. The assemblage overall is generally abraded ranging from moderate to heavy abrasion. However, just over one fifth of the sherd total derives from a single virtually complete vessel which is in good condition but with occasional small localised patches where applied decorative strips have fallen off. Table 7 below gives a breakdown of the pottery into its broad fabric groups.

Ware	Date Range	Sherd Number	Fabric Weight (g)
Early Medieval sandy ware	11th/ 12th-mid 12th	965	15,619
Medieval sandy greywares	Mid 12th-14th	449	3,431
Medieval sandy orange wares	13th-mid16th	675	4,805
Other	13th-mid 16th	17	156
		2,106	24,011

Table 7. Quantification of sherds by fabric group

Methodology

The sherds were examined under x35 binocular microscope and recorded on Excel database, in keeping with the Post-Roman Pottery Research Group Guidelines (Slowikowski 2001, Table 2), which will form part of the archive. The fabrics have been assigned codes used in Essex for Post-Roman pottery (Cotter 2000), and forms are identified according to the Medieval Pottery Research Group guidelines (MPRG 1998). Dating is consistent with that used in Essex and also for fabrics listed on the Museum of London Database (Cotter 2000; MoLA 2014).

The Fabrics

The majority of the assemblage can be divided between F13 early medieval sandy wares, F20 medieval sandy greywares, and F21 medieval sandy orange wares (Table 7). Out of the 965 early medieval sandy wares, 446 sherds (12.200 kg) are from a single large storage jar from Occupation Layer L2007 (Fig. 9.3). Another group of 41 sherds (538g) containing poorly sorted medium to coarse quartz matches the description of early medieval Stansted ware (F12st), although this now appears to be part of a more widespread tradition across present Essex (Mepham 2014, Chap.19.3). A group of kilns have been excavated at Frogs Hall, Takeley approximately 6km north-west of Great Hallingbury, which produced a coarse early medieval sandy fabric that is borderline with medieval coarse wares. It is possible that some of the Great Hallingbury pottery came from there. However, the Frogs Hall pottery frequently contained incised or combed horizontal lines around the body, of which only five similar examples are present in the Great Hallingbury assemblage (Walker 2006, 67 & 71).

The medieval sandy greywares (449/3.431kg) fall into three broad groups. The first group are the Essex type greywares generally containing abundant sub-rounded and rounded quartz sand (332/1,854g). The second group are in fabrics more typical of Hertfordshire greywares (101/1,517), and the third small group of 16 sherds (60g), are in keeping with Hedingham type coarseware. The medieval sandy orange wares (675/4.805kg) are mainly unsourced but include Colchester ware, while Hedingham and Mill Green fine wares are also included in this category. Approximately half of the medieval sandy orange wares have glaze, usually clear and patchy, and/or white slip. These include two late medieval conjoining sherds of sgraffito ware thought to have been produced in Cambridgeshire (Cotter 2000, 166). In addition there are ten sherds of London type ware, and nine unidentified medieval glazed wares, of which one is probably late medieval to early post-medieval ‘Tudor Green’ ware (Cotter 2000, 184).

Essex Fabric Code	Ware	Date Range	Sherd Number	Fabric Weight
13	Early medieval sandy ware *(as in Cotter 2000)*	11th-13th Century	904	14,927
F13C	Early medieval calcareous sandy ware *(as in Cotter 2000)*	11th-13th	2	35
F13i	Early medieval sandy ware *(as in Mepham 2014)*	11th-13th	1	2
F13j	Early medieval sandy ware - flinty *(as in Mepham 2014)*	11th-13th	12	37
F13k	Early medieval sandy ware – Frogs Hall products? *(Walker 2006)*	Late 12th-early 13th	5	80
F13st	Early medieval sandy ware *(as in Mepham 2014)*	11th-13th	41	538
20	Medieval sandy greyware *(as in Cotter 2000)*	Mid 12th-14th	332	1,854
20	Medieval sandy greyware/SHER (*as in Blackmore & Pearce 2010*)	Late 12th-mid 14th	101	1,517
20	Hedingham type coarse ware *(as in Cotter 2000)*	Mid 12th-mid 14th	16	60
22	Hedingham Fine Ware *(as in Walker 2012))*	Mid 12th-mid 14th	42	361
22	S'graffito ware *(as in Cotter 2000)*	14th-15th	2	22
21	Medieval sandy orange ware *(as in Cotter 2000)*	13th-mid 16th	581	3.916
21A	Colchester type ware *(as in Cotter 2000)*	13th-mid 16th	36	437
35	Mill Green ware (*as in Cotter 2000*)	Mid 13th-mid 14th	14	69
36	London ware (*as in Cotter 2000)*	12th-mid 14th	8	84
98	Unprovenanced medieval glazed wares	13th-14th	9	72
			2106	24,011

Table 8. Quantification of pottery by ware

Forms

Forms are based on rims (Table 8). The identifiable rims came mainly from jars (66), the majority are cooking pots but at least two are from storage jars. There were just 10 identifiable bowls, and 17 jugs. The presence of handles and glazed sherds, particularly from the medieval sandy orange wares, indicate the presence of further jugs. At Frogs Hall there were also few bowls, with the overwhelming majority of rims deriving from cooking pots (Walker 2006, 71). Occupation Layer L2007 contained an almost complete storage jar with applied thumb impressed clay strips, and a band of thumb impressions below the rim (Fig. 9.3). There was no evidence for handles or tripod legs attached to the base. Quarry Pit F2059 contained an upper profile of a

large bowl with flanged rim in a medieval sandy orange ware fabric. The fabric and form are unusual but would fit a late medieval date (Fig. 9.11).

Ware	**Jar**	**Bowl**	**?Pipkins**	**Jug**
Early medieval sandy wares	27	2		
Medieval sandy greywares	13	5		5
Medieval sandy greyware (SHER type)	6	2		
Medieval sandy orange ware	20	1	2	10
Hedingham ware				1
Mill Green ware				
Colchester ware				1
London ware				
	66	*10*	*2*	*17*

Table 9. Vessel types

The commonest rim forms are Type H1 flanged rims on upright necks (Table 10). Next are Type B flat topped on upright necks, which were mainly present on the early medieval sandy wares (Table 10; Fig. 9.9). These are followed by Type C beaded rims (Fig. 9.1). The later medieval sandy orange ware rims were more commonly Type B flat topped everted or Type H1 flanged (Fig. 9.12), but no H3 squared, neckless rims that were present at Stansted Airport were evident (Mephall 2014, 19.10).

Rim Type / Ware	Plain or slightly thickened everted (A1/4)	Flat topped upright (A2)	Thickened flat topped (B)	Beaded (C1)	Flat topped everted (H1)
Early medieval sandy wares	8		11	8	3
Medieval grey sandy wares		1	5	2	9
Medieval sandy grey ware SHER type	1		2	4	
Medieval sandy orange ware	3	3	2	5	11
Hedingham ware			1		1
Colchester ware		1			1

Table 10. Rim forms

Decoration

Other than white slip and glazing mainly applied to the medieval sandy orange wares, decoration was uncommon (Table 11). An exception is the storage jar from L2007 which contained numerous vertical thumb impressed clay strips that extended beneath the base of the vessel.

decoration / *ware*	*Thumb impressed clay strips*	*Horizontal incised lines*	*Incised wavy line decoration*	*Frilled jug base*	*Stab or impressed decoration to handle*	*Stab or impressed decoration to rim*
Early medieval sandy wares	2	6	1			
Medieval greywares	2	1	2		1	
Medieval sandy grey ware SHER type	1		2			
Medieval sand orange ware				5	1	1
Hedingham ware					1	
Colchester ware				1	1	

Table 11. Decorated sherds

Features Containing the Most Pot

There were twelve features that contained in excess of 40 sherds totalling 1,737 sherds or 82.3% of the medieval pottery assemblage (Table 12). Six features yielded over 100 sherds each; Occupation Layer L2007 contained the most pottery, although this is somewhat skewed by the majority of sherds (446/12.2kg) deriving from the large almost complete early medieval storage jar. Sherds representing at least three other vessels were also present including a second storage jar in a quartz sandy fabric of the Hertfordshire greyware category (Fig. 9.4). One tiny sherd of medieval sandy orange ware was also present (1g) although this is probably intrusive. If so, then a late 12th century to early 13th century date is likely for the context, although the early medieval storage jar is in a form that could be a little earlier (see Discussion for further analysis). Pit F2103 contained 208 sherds (1.201kg), all in similar fabrics to L2007, including an early medieval cooking pot rim (Fig. 9.1), and an early medieval greyware jug rim with decorated handle (Fig. 9.6), indicating a broadly similar date of mid 12th to 13th centuries.

Pit F2036 contained 227 sherds (1.053kg), including London type ware, Mill Green ware and Hedingham ware which all went out of production around the mid 14th century, and so a probable date of mid 13th-mid 14th centuries is indicated, subject to residuality. Quarry Pit F2059 and Ditches F2099 and F2125 contained Hedingham ware and/or Mill Green ware indicating a similar date range (Fig. 9.7). Pit F2125 also contained the tiny sherd of possible 'Tudor Green' ware, but this could either be intrusive or another earlier white ware. Quarry Pit F2059 also contained a Colchester ware jug rim and handle (Fig. 9.8), and Pit F1027 was also dominated by medieval sandy orange wares including Hedingham and Colchester wares. Ditches F2114 and F2094 contained otherwise undiagnostic F21 medieval sandy orange wares and so have a broader date range of 13th-15th centuries. However, as Ditch F2114 is cut by Pit F2103, it is unlikely to be much later than the end of the 13th century, unless all the pottery in F2103 is residual.

Feature	Context	Sherd No.	Fabric Wgt. (g)	F13	F20	F21	Other
Layer	2007	469	13,047	450	17	1	1
Pit	2036	227	1,053	87	55	81	4
Pit	2103	208	1,201	111	97		
Pit	1027	207	1,461	2	14	249	1
Q. Pit	2110	148	1,102	43	20	85	
Q. Pit	2059	151	1,106	38	27	85	1
Ditch	2099	60	457	35	16	6	3
Pit	2125	60	628	34	8	18	
Ditch	1069	57	498		34	23	
Ditch	2114	53	394	38	11	4	
Ditch	2087	51	335	24	5	22	
Ditch	2094	45	196	33	4	8	
		1,737	*21,478*				

Table 12. Features containing the most pottery

Stratigraphically Ditch F2087 is one of the latest features on the site overlying a fairly complex group of intercutting features, and it contained a small sherd of Hedingham ware of mid 12th to mid 14th century date. However, some of the late medieval F21 medieval sandy orange ware body sherds with fine to medium well-sorted sub-rounded quartz and clear/brown glaze and white slip, could be later. In particular, a base/body angle with internal clear/brown glaze is similar to late medieval transitional (late 14th-16th centuries). Also the upper profile of an unglazed small cooking pot with flanged rim has parallels with examples in Colchester ware which were common between *c.*1375 and 1475 which continued into the 16th century (Fig. 9.12; Cotter 2000, 141). The absence of F40 post-medieval red earthenware which began in this part of Essex in the late 15th century (Mepham 2014 19.7), and the absence of imported German stoneware which also tends to make an appearance from that time, indicates that Ditch F2087 is probably not later than the end of the 15th century. A late 14th-late 15th century date is therefore likely, as is the case with parallel Ditch F2110 which contained a similar assemblage.

Discussion

The assemblage, which is all of a domestic nature, spans the majority of the medieval period and comprises approximately 45.8% early medieval sandy wares, 21.3% medieval sandy greywares, and 32% medieval sandy orange ware. The latter category also includes the small number of products from the Hedingham, Colchester, and Mill Green industries which amount to 13.6% of the sandy orange ware total. There is clearly quite a high degree of residuality of the early medieval sandy wares which probably ceased production by the mid 13th century. St Neots ware is absent from the site, which was present at the Stansted Airport excavation in 10th century contexts and alongside shelly wares in 11th century deposits (Mepham 2014, 19.10). It was also present in small amounts at Colchester where it is thought to have arrived in the 11th century and been gradually replaced by sandier fabrics during the 12th (Cotter 2000, 32-3). At Stansted Airport early medieval sandy wares featured in late 11th-late 12th century contexts (Mepham 2014, 19.10), and so this is likely to be the case for the Great Hallingbury site.

The large, almost complete, storage jar from Great Hallingbury is a form that has parallels with Late Saxon Thetford ware (Rogerson & Dallas 1984, fig. 166.250). Storage jars are also found in early medieval ware including examples produced at the Middleborough kilns, Colchester (Cotter 2000, 62 Fig. 37), and at the Frogs Hall site (Walker 2006, Fig. 7. 40-48). They are also found in medieval coarse ware fabrics at the Sible Hedingham sites in north Essex (Walker 2012, Plate 32-3, Fig. 28). The 'late' early medieval sandy ware vessels produced at Frogs Hall are border line with medieval coarseware and have comparisons with Middleborough products and Hertfordshire greywares from Middlesex (Walker 2006, 65). The closest known Hertfordshire greyware production site to Great Hallingbury is at Great Munden, 16km to the west (Blackmore and Pearce 2010, 91-2). However, Hertfordshire greyware found at a moated manor site at Whomerley Wood, Stevenage which included horizontal incised decoration may have closer affinities with Frogs Hall (Walker 2008, 78).

Frogs Hall kiln products do not appear to have been consumed locally in general, and may have been made for a specific market or ones more further afield (Walker 2006. 78). However, the large storage jar from L2007 could be a Frogs Hall product. The bulbous form is similar to Thetford ware (Rogerson and Dallas 1984, 146-151), but the flat topped everted rim appears simpler than the more elaborate Thetford rims. The firing of the vessel is similar to some 'transitional' vessels present on a number of sites across southern Herts (Berni Seddon pers. comm.). The Frogs Hall kilns (and Middleborough kilns) were of a similar late 12th-early 13th centuries date (McCarthy & Brooks 1988, 299; Walker 2006, 77), and it is suggested that the large storage jars from Frogs Hall with thumbed applied strips, may have been indirectly copying Thetford ware storage jars, which were probably no longer being produced by *c*.1100. The Frogs Hall kilns also produced vessels of earlier traditions such as spouted pitchers which are more typically 11th-12th century forms (Walker 2006, 77, 78). The reason why an intact vessel may have been deposited in the ground is likely to be for either a ritual or functional purpose. There are examples of medieval pots being ritually buried beneath hearths or the threshold or walls of buildings, although these are quite rare. Alternatively, pots were sometimes buried in order to keep their contents cool (Walker 2006, 67 & 84).

Table 13 (below) compares the medieval pottery by weight with the medieval pottery from Stansted Airport. The main difference is that medieval Harlow ware (Davey & Walker 2009, 12), which makes up more than half of the Stansted assemblage, and was also present at Frogs Hall, is absent from the Great Hallingbury site. The medieval sandy orange ware present at Great Hallingbury appears to derive from different sources to Harlow, of which Colchester ware forms a very small part. The remaining wares otherwise compare quite favourably. Mill Green ware which was absent at Stansted was present in a small amount at Frogs Hall.

The volume of early medieval wares from Great Hallingbury also suggests a similar pattern to Stansted Airport and Frogs Hall in that the main focus of occupation was during the 12th and 13th centuries with continued occupation at a more reduced scale into the 14th century and beyond (Walker 2006, 80 & 82). At Stansted Airport medieval sandy orange wares dated between the late 13th and 15th centuries were present, with post-medieval red earthenware commencing in the late 15th century. However, unlike Frogs Hall and Stansted Airport, activity at the Great Hallingbury

site appears to have ceased before the end of the 15th century, and possibly by the end of the 14th century.

Great Hallingbury	% by weight	Stansted	% by weight
		St Neots ware	4.1
Shelly & sandy/shelly wares	0.15	Shelly & sandy/shelly wares	7.4
Early medieval sandy ware	62.2	Early medieval sandy ware	4.9
Early medieval stansted ware	2.2	Early medieval stansted ware	7
Early medieval ware inclusion free	>0.1	Early medieval ware inclusion free	1.2
		Early medieval ware – rose quartz	0.2
Early medieval – flinty ware	0.1	Early medieval – flinty ware	2.3
Early medieval – Frogs Hall products?	0.3	Early medieval –Frogs Hall products?	0.8
		Early medieval transitional	1.2
Medieval coarse ware	7.7	Medieval coarse ware	11.7
SHER type Medieval coarse ware	6.3		
Hedingham coarse ware	0.25	Hedingham coarse ware	0.2
Sandy orange ware	16.3	Sandy orange ware	1.3
S'grafito ware	0.1	S'grafito ware	0.2
		Harlow ware	56.5
Hedingham fine ware	1.5	Hedingham fine ware	0.2
Mill Green	0.3		
Colchester type ware	1.8		
Tudor Green?	>0.1	Tudor Green	0.2
		Saintonge	0.2
London type ware	0.3	London type ware	0.4
UPG	0.3		

Table 13. Comparison between medieval wares from Great Hallingbury and Stansted by weight

9.3 The Ceramic Building Materials

Andrew Peachey

Excavations recovered a total of 123 fragments (8811g) of CBM, with a further 26 fragments (72g) of daub. The CBM assemblage is predominantly comprised of medieval roof tile, in particular peg tile but also with rare fragments of crested ridge tile or louver (Table 14). The CBM is highly fragmented and slightly abraded, but the presence of several cross-joining fragments in a single pit, with small groups in ditch and quarry pits suggests that the CBM may represent deposits associated with a nearby structure, albeit possibly re-deposited as material to aid packing or drainage.

The CBM was quantified by fragment count and weight, with fabrics examined at x20 magnification, all extant dimensions characterised/measured, and all date entered into a Microsoft Excel spreadsheet that forms part of the site archive.

The medieval CBM accounts for 105 fragments (5284g) of the assemblage, of which the bulk, 58 fragments (3536g), was contained in Pit F1027 (L1028, L1033 & L1056), with lesser groups of 13-14 fragments (570-690g) in Ditch F2087 and Quarry Pit F2110, and a very sparse distribution of peg tile fragments in other ditch and quarry pit features. The medieval CBM was manufactured in a single fabric consistent with the exploitation of local resources, and potentially indicative of temporary production

associated with a local foundation. The fabric typically has orange surfaces fading to red margins and a red/dark grey core, occasionally over-fired to brown-grey. Inclusions comprise common to abundant quartz (0.25-0.5mm) with fine mica, occasional quartzite and flint (both <5mm); it is a hard fabric with an abrasive, slightly pimply feel.

CBM type	Date	Frequency	Weight (g)
Peg tile	Medieval	95	4522
Ridge tile (plain)	Medieval	4	313
Crested ridge tile/louvre	L13th-15th C	6	449
Brick	Modern	11	3387
Land Drain	Modern	7	140
Daub	?Medieval	26	72
Total		*149*	*8883*

Table 14. Quantification of CBM

The peg tile does not preserve any extant dimensions, beyond a thickness of 12-14mm that might indicate whether it conformed to dated statutes, but other technological traits appear consistent with production relatively early in the period of its use; potentially in the mid 13th century, and certainly by the beginning of (and into) the 14th century (Drury 1981, 131). The peg tile is frequently warped with a slight lip on the upper edge, a sanded base and relatively crude, sub-circular tapering peg holes (12-15mm diameter). Equally fragmentary but more diagnostic are fragments of ridge tile, notably those of crested examples or louvers, while the plain fragments may be derived from the body of these tiles. The ridge tiles are 15mm thick, with a 20mm wide crest rising from the apex (height unclear). The upper surface and crest are covered with a green lead glaze while the crest and adjacent tile surface has been impressed with stamped decoration. Each stamp is square (14mm wide) and is filled with a grid (5x5 squares). The production of ridge tile commenced in Britain in the 13th century, with crested roof tiles developing in the late 13th century and continuing in production through the 15th century, possibly into the early 16th century. These were supplemented by louvers (or ventilators) that could also form part of roofs, as air vents or smoke-vents, which appear to date between the mid 13th and early 15th centuries, and are often associated with monasteries, such as the Austin Friars, Leicester, as well as buildings at Great Easton, Hadleigh and Rayleigh Park (Allin 1981, 63). The use of stamped decoration remains anomalous, and appears very small for an item such as roof tile, therefore perhaps was associated with a louver-type fixture or finial designed to be visible from a closer distance.

The assemblage also includes a total of 26 fragments (72g) of daub, typically preserved as highly fragmented and abraded ‘crumbs’, probably adversely affected by soil conditions. The daub is sun-dried and pale to mid orange in colour, with inclusions of common rounded chalk (1-7mm). No extant surfaces or structural features were preserved, but the association of the daub with medieval CBM in Ditches F2019, F2055, F2087, Pits F2036 and F2045 suggests it was a contemporary component of structures that incorporated peg and ridge tile.

In addition to the medieval CBM, fragments of modern (20th century) extruded brick were contained in Pits F1031, F1034 and Ditch F2043 while fragments of modern land drain were present in Gully F1005.

9.4 The small finds

Nicholas J. Cooper, with conservation and x-radiography by Graham Morgan and Heidi Addison, University of Leicester Archaeological Services

Introduction

A total of 33 iron objects and one of copper alloy (recorded under 16 small find numbers) were recovered during the evaluation and excavation phases, from a range of contexts dating to the 12th to 15th century. All objects were x-rayed and this has allowed identification and accurate measurement. The catalogue is arranged by functional category.

Tools

Handle?

1) [1007] 1008 Fill of Ditch, Trench 6. A long iron rod of 7mm square section, tapering and angled to a flat length of 4mm width by 2mm thickness. Broken length 285mm. This is possibly part of a long implement handle.

Knives

2) [1027] (1028) Fill of Pit, Trench 6. Small iron knife with centrally-placed whittle-tang. The tip of the blade is missing. Length 73mm (48mm blade). Back of blade rises before sloping down to the tip, thus belonging to Winchester Type A (Goodall 1990, 842, fig. 253 Type A).
3) [2087] (2089) B, Middle fill of Ditch. Incomplete whittle-tang knife blade in three fragments, with remains of a lead hilt band at the junction of the blade and tang which would have reinforced the, since decayed, wooden handle. Tang set centrally between cutting edge and back of the blade. Length: 205mm (165mm blade), width of blade: 28mm. This knife also appears to belong to Winchester Type A with the back rising slightly before angling down to the tip, with a straight or slightly curving cutting edge (Goodall 1990, 842, fig. 253 Type A). It is unusual for the hilt band to survive still attached to the tang after the handled has decayed; an iron example was found on a knife from London (Cowgill *et al*. 1987, 86, fig.58.55). It is unlikely that the knife was originally manufactured with a lead hilt band and it probably represents a later repair.

Equine Equipment

Horseshoe

4) [1009] (1010) Fill of Pit, Trench 6. Fragment from branch of iron horseshoe with two square nail holes preserved; tapering to a squared off terminal at the heel. Width of holes 7mm. This is the type of horseshoe which appears before the middle of the 14th century characterised by a different form of nail hole and nail, to those used during the second half of the 13th and early 14th century (Clark 1986 fig.8).

'Fiddle key' and other horseshoe nails

Four examples of horseshoe nails were identified; three of fiddle key type, for horseshoes with rectangular countersunk nail holes used during the Norman period and up to the mid-13th century, and one with a rectangular head, flush with shaft and with expanding 'ears' at the base, designed to sit in the countersunk holes used in horseshoes of transitional type, made between the second half of the 13th and early 14th century (Clark 1986, fig.7a).

5) [1027] (1028) Fill of Pit, Trench 6. Head and upper shaft of fiddle key type. Width of head 10mm.
6) [2087] (2089) B, Middle fill of Ditch. Complete but twisted nail of fiddle key type with semi-circular head flush with the shaft (Clark 1986, fig.5a). Nail is double-clenched; bent half way down and with tip bent over again when hammered back into the wall of the hoof (Clark 1986, fig.5b). Length: 30mm. Width of head 9mm.
7) [2059] (2060) Fill of quarry pit. Head and upper shaft of nail of fiddle key type. Width of head: 10mm.
8) [1027] (1028) Fill of Pit, Trench 6. Head and most of shaft of nail with rectangular 'eared' head. Length: 32mm, width of head: 9mm.

Fastenings and Fittings

Nails

All of the remaining identifiable iron objects were carpentry nails, a small number of which were complete. All were typical handmade carpentry nails with flat circular heads and tapering square-sectioned shafts, the complete examples being around 50mm in length; equivalent to the modern two-inch nail. The nails are detailed in context number order below.

9) [1009] (1010) Fill of Pit, Trench 6. One complete but bent nail (52mm) and two shaft fragments
10) [1027] (1028) Fill of Pit, Trench 6. Five near-complete nails with lengths of 35mm and 38mm, and three other shaft fragments.
11) [1027] (1033) Fill of Pit, Trench 5. Five nails including three with heads of up to 40mm in length. One other long shaft fragment (102mm) possibly not from a nail.
12) [1036]/ [1039] (1042) Slumping fill of Pit, Trench 7. Nail shaft (48mm).
13) [2036] (2037) B, Fill of large Pit. Nail shaft (58mm).
14) [2036] (2038) A, Fill of large Pit. Nail shaft fragment.
15) [2094] (2095) Fill of Ditch. Nail (35mm).
16) [2103] (2107) A, Fill of Pit. Two nail shafts (45mm).
17) [2110] (2112) Fill of quarry pit. Complete nail (52mm) and one shaft tip.
18) [2125] (2128) Fill of Pit. Nail shaft (48mm).

Miscellaneous Fitting

19) (2007), Occupational layer. Fragment of hollow rectangular copper alloy casing. Broken and open at both ends. Broken length 40mm, internal width 20mm, internal height: 5mm. Not recognisable as medieval in date and possibly a modern intrusion.

Sheet Fragments

Two amorphous fragments of iron sheet (25mm square) came from [2110] (2112).

Overview

This is a small assemblage consisting entirely of iron objects (if the copper alloy object is intrusive) relating to transport or agriculture (horseshoes and shoeing nails), and crafts or possibly household activity (knives and implement handle), with evidence for timber structural debris (nails). There is a complete lack of any dress fittings in copper alloy, indicative of residential occupation but in an assemblage of this size this is not necessarily surprising.

9.5 The Animal Bone

Dr Julia E.M. Cussans

Introduction

A small but interesting assemblage is presented which derives from a total of 34 contexts, the majority of which are pit and ditch fills. The majority of the assemblage is dated to the medieval period but material from three undated contexts is also included. No post medieval contexts yielded bone.

Method

The entire animal bone assemblage was scanned one context or context segment at a time and the results recorded on a bone scan pro-forma. The pro-forma took into account observations on bone condition including general preservation, colour, abrasion, fresh breaks and gnawing. Mammal bones were quantified by specific taxa where possible or where this was not possible by size category, where large indicates cattle or horse sized, medium is sheep/ goat, pig or large dog sized and small mammal is cat or hare sized. The presence of bird, fish and other small fauna could also be noted. Bone identifications were made using the in house reference collection at Archaeological Solutions and with the aid of reference manuals (e.g. Schmid 1972, Pales & Lambert 1971 a & b, Pales & Garcia 1981 a & b, Hillson 1992). For the identified mammal taxa the particular elements present were noted, as was the presence of butchery, ageable mandibles and teeth, ageable epiphyses, measurable bones and those displaying pathologies. Where present these features were described in detail. Bone fusion data were not assigned to specific ages due to differences in maturation between modern and ancient populations but were rather assigned to fusion groups (early, intermediate, late, final) following O'Connor (1989) to allow relative age to be assessed. Further to this, notes were made on any particular points of interest. Once recorded the data from the scan were entered into an MS Excel spreadsheet along with context descriptions, spot dates and phasing to assist with data processing and analysis.

Results

Taphonomy

Overall the assemblage was fairly well preserved with the majority of contexts being rated as having ok or good preservation. One context was rated as having excellent preservation and two were rated as having poor preservation. Abrasion and fresh breaks were not particularly common, although the fallow deer bones from L2008 were particularly abraded and some of the poorest preserved bones. Canid gnawed bones were present in just less than half of the contexts and indicated the likelihood of the presence of dogs at the site, although no dog bones were present. No burnt bones were present.

Species present

The assemblage was dominated by domestic mammal taxa but a significant quantity of wild mammal bone was also present. A small quantity of bird bone was also present, none of which were identifiable to species. Mammal taxa present in order of abundance by number of identified specimens (NISP) were pig, cattle, fallow deer, equid, sheep/goat and roe deer (Table 15). Each of the taxa is discussed in detail below.

	Medieval	**Undated**	**Total**
Cattle	10	2	12
Sheep/ goat	2	0	2
Pig	14	1	15
Horse	4	1	5
Fallow Deer	9	5*	14
Roe Deer	1	0	1
Large Mammal	53	6	59
Medium Mammal	85	4	89
Bird	2	0	2
Total	*180*	*19*	*199*

*Table 15. Quantification of animal remains by NISP, * indicates antler only.*

Cattle

The majority of cattle bones come from the fills of Pit F1027, with others sparsely spread across the assemblage. Bones present in the medieval contexts were a humerus, three scapulae, a pelvis, a metacarpal, a metatarsal, a second phalange, a zygomatic and a lower premolar. Further humerus and radius fragments came from the undated material. A small amount of ageable material was present. From medieval contexts the distal humerus was partly fused, the second phalange was fully fused and the metacarpal and the pelvis were also fused. The distal humerus is an early fusing bone, indicating that the animal represented by this bone died towards the end of the early fusion stage. The distal metacarpal is an intermediate fusing epiphysis indicating that this animal survived beyond the intermediate fusion stage. Other fused bones present are all early fusing and indicate animals dying beyond the early fusion stage. From the undated material there is an unfused distal humerus (early fusing) and an unfused distal radius (late fusing).

Several of the cattle elements were butchered with cuts and chops both present. Both distal humeri had horizontal cuts on their medial side above the articulation. One scapula had been chopped through underneath the articulation, a second one had been chopped through the articulation and had cuts around the neck of the scapula and a third also had cuts around the neck. The pelvis had a chop and associated cuts through the ilium. All of the above butchery marks are likely to be associated with carcass dismemberment into meat joints. Finally, the metacarpal had a horizontal cut on the lower shaft that is likely to be associated with skinning.

No pathological or measurable bones were present.

Sheep/ Goat

Sheep/ goat are very poorly represented compared to the other domesticates, with only two teeth present in the hand collected assemblage and one further molar positively identified in the sieved assemblage plus an incisor which may be sheep/goat or possibly fallow or roe deer. Very few other identifiable remains were present in the sieved assemblage. All of the sheep/goat teeth present were permanent molars and were in wear. No more specific age data were available and no butchery or pathology was noted.

Pig

As was the case with cattle, the majority of the pig bones come from Pit F1027. L1028 from this pit contained several articulating forelimb elements which were a distal humerus, a radius and a proximal ulna. A scapula and proximal humerus were also with this group and may have been part of the same limb; however, this could not be ascertained with any certainty. Other bones in this deposit were a maxilla fragment containing a first and second molar (M1 and M2) and a further skull fragment. From the other fill within this pit (L1033) came a mandible articulation, an incisor, a metapodial fragment and two calcanei. Pig bones from other contexts were very sparse; these were a mandible fragment containing a very worn tooth, an upper incisor and a tibia shaft, the latter of which came from undated pit fill L1053A.

Several ageable elements were present from Pit F1027. Unfused bones from the associated forelimb elements were proximal humerus, distal radius and proximal ulna, the distal humerus was partly fused and the proximal radius was fully fused. The unfused bones present all belong to the late fusion group and the proximal radius and the distal humerus belong to the early fusion group indicating that this animal (assuming that all the bones belong to a single individual) died towards the end of the early fusion stage when the proximal radius had finished fusing and the fusion of the distal humerus was nearing completion. A distal metapodial from L1033 was also unfused indicating an animal dying before reaching the intermediate fusion stage.

Only a single pig bone yielded any butchery marks; this was a tibia shaft with small horizontal cuts on the posterior shaft towards the proximal end.

Equid

A small quantity of equid remains were present, the majority of which were noted as being particularly small and probably belonged to a donkey or small pony. Elements present were a metapodial fragment, two tibia fragments (one proximal, one distal), a scapula and a humerus. The tibia fragments were the only elements not noted as being particularly small and the proximal tibia had a visible fusion line indicating that this animal was not fully mature at death; no other age data were available. Butchery evidence was noted on a single bone; the scapula had had its spine trimmed at the end nearest the articulation. No pathological or measurable bones were present.

Fallow Deer

The fallow deer assemblage is dominated by foot bones, the majority of which come from L2008, the fill of a complete pot. These are two metatarsals, a metacarpal, a mandible fragment and a phalanx fragment. Aside from the bones in this deposit, a small number of other post-cranial fragments were present. These were two metacarpal fragments, a metatarsal and a distal tibia. The metatarsal was unfused at the distal end, indicating an immature individual; the metapodials from L2008 were all fused. The mandible fragment from L2008 contained an M2 and an M3, both in wear. Following data from Moore *et al*. (1995) the M3 in fallow deer does not come into wear until *c*. 28 months and the third cusp of this tooth is not in wear until *c*. 35 months. As the third cusp of the M3 here is worn this would indicate an animal of at least 35 months. Two butchered elements were present, a metacarpal from L1040, with a diagonal cut on the anterior shaft just below the proximal articulation and the phalanx fragment from L2008, which was also cut; both of these cut marks are indicative of skinning.

One undated context (L2124) also contained a collection of fallow deer antler fragments. One of these was an unshed burr that had been chopped through to remove it from the skull.

Roe Deer

A single roe deer bone was recovered, this was a tibia shaft fragment which had been chopped through mid-shaft and parts of the bone surface had been ‘shaved’ towards the distal end.

Large and medium mammal

The majority of the assemblage is made up of bones that were only identified as large or medium mammal; the latter making up the large portion of these. It is also noteworthy that the largest assemblage of medium mammal bones came from Pit F1027, and most likely belonged to pig. The majority of bones identified as large or medium mammal were rib and long bone fragments. A number of ribs of both large and medium mammal were noted as being butchered; a hyoid fragment was also noted as butchered. A small number of vertebrae, including a butchered (chop through dorsal process), large mammal, thoracic vertebrae were also present. No pathologies were noted on any of these bones.

Summary and Discussion

This small assemblage shows the presence of several mammal taxa including both wild and domestic taxa. Cattle and pigs appear to have been utilised for meat. Equid bones appear to represent a mix of horse and smaller equid, either pony or donkey, but as no measurable bones were available no firm conclusions can be drawn. Grant (1984) notes horses as being particularly important in the medieval period as pack animals and says that they were not generally eaten. However, the butchery evidence here suggests that some use was made of the equid meat, or that the bones were processed in some way.

The lack of sheep/goat remains at the site is somewhat unusual (see Bedwin 1992, Wade 1996 or Hutton 2004 for example) for the medieval period, as during this time the wool trade formed a key part of the medieval economy (Ryder 1983, Grant 1984, Sykes 2006). Sheep were also one of the main meat producing animals throughout the medieval period (Sykes 2006). Therefore the lack of their bones in the assemblage here would seem to indicate one of two things, that either sheep/goat was neither produced nor consumed at the site or that their remains were disposed of elsewhere, both of these scenarios would be quite unusual. A third possibility is that their remains are for some reason underrepresented. However, given the relatively good preservation at the site, the good recovery of similarly sized pig and deer remains and the lack of sheep/goat representation in the sieved material it would appear that the almost complete absence of sheep/goat is real and not a factor of poor preservation or recovery.

The relatively high proportion of fallow deer bones present is also of interest. Examination of data on the occurrence of fallow deer at UK medieval sites from the Dama International fallow deer project (www.fallow-deer-project.net) indicates that sites with high numbers of fallow deer bones tended to be high status sites such as castles, ecclesiastical or manorial sites. Other rural and urban sites do contain occasional fallow deer bones but these are only present in very small numbers for example one or two bones per site. Fallow deer have long been associated with high status and from the Norman period onwards in Britain Sykes (2010, 58) notes fallow deer as ‘an icon of social position, their consumption and management in privatised parks forming elements of the package through which the elite sought to distinguish themselves from the lower classes’. It should be noted here, howeve,r that very little in the way of meat bearing elements is present and the elements that are present (foot and head bones) may represent the use or processing skins. It is likely, however, that the attractive pelt of the fallow deer was also a prized possession.

9.6 The Shell

Dr Julia E.M. Cussans

A small assemblage of marine shell was recovered. Almost all of the shell present belonged to native oyster (*Ostrea edulis*); a single clam shell (*Cerastoderma edule*) was also present. The preservation of the shells present was largely rated as ok on a five point scale from very poor through to excellent, a small number of contexts were rated as having poor preservation. Both upper and lower valves were present alongside a number of uncountable (no umbone present) fragments, these are quantified in Table 16. Two valves (one upper and one lower) were noted a having

opening notches (L1033, L1072); no other human or parasitic modifications were noted. The shells from L1072B and L2056A were noted as being partially mineralised and may well date to substantially earlier than the deposit. Overall the assemblage is probably indicative of minor oyster consumption at the site.

Feature	Context	Segment	Description	Spot Date	Lower	Upper	Frag.	NISP	MNI
1027	1028		Pit	13th-15th	1	2	3	6	2
1027	1033		Pit	13th-mid 14th	5	3	10	18	5
1036/1039	1042		Pit	mid 13th-14th			1	1	1
1064	1068		Ditch	13th-15th			3	3	1
1069	1072		Ditch	mid 12th-13th	1			1	1
1069	1072	B	Ditch	mid 12th-14th			1	1	1
2019	2020	B	Fill of ditch	12th-14th	1			1	1
2055	2056	A	Fill of short linear	13th-14th	1			1	1
2059	2062		fill of quarry pit	13th-14th	2	5	4	11	5
2019	2077		Fill of ditch	13th-15th			2	2	1
2087	2089	B	Middle fill of ditch	mid 12th-14th		1	1	2	1
2110	2112		Fill of quarry pit	13th-15th		3	3	6	3
2114	2115	A	Fill of Ditch	13th-15th		1		1	1
	2118	B	Fill of pit	13th-15th	1		1	2	1
2114	2119		Fill of pit	12th-14th		2		2	2
2120	2121		Fill of pit	12th-14th	1			1	1
	2128		Fill of pit	13th-15th		1	3	4	1
				Total	13	18	35	66	18

Table 16. Quantification of oyster shell by number of identified specimens and minimum number of individuals

9.7 The Environmental Samples

Dr John Summers

Introduction

During excavations at Dunmow Road, 28 bulk soil samples were taken and processed for environmental archaeological analysis. All sampled deposits date to the medieval period (Phase 1), with the potential to provide information regarding diet and economy during this time.

The intention of sampling was to gain an understanding of the cereal-based economy at the site during the medieval period. Results from samples taken during trial trenching (Summers 2015) demonstrated limited representation of carbonised cereal remains consistent with low-level deposition from background scatters of carbonised debris. No clear evidence of cereal processing and, by inference, cultivation was identified, indicating that such activities were not carried out in the vicinity of the excavated features during this time. Further sampling was undertaken during the excavation, targeting datable medieval deposits, to investigate this further and obtain a more detailed dataset to investigate the range of crops used in the vicinity of the site.

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 17.

Plant macrofossils

Carbonised plant macrofossils were recorded in 17 of the 28 bulk sample light fractions (61%), with cereal remains (grains or chaff) present in 15 samples (54%). The most frequently encountered cereal was wheat (*Triticum* sp.), remains of which were present in 50% of samples. All identifiable specimens were of a free-threshing type (*T. aestivum/ turgidum*) and bread wheat (*T. aesticum*) rachis was identified in L2122 (F2087). Barley, including hulled asymmetric grains (*Hordeum vulgare* var. *vulgare*) were present in 14.29% of samples, while oat (*Avena* sp.) was present in 3.57% (1 sample). These cereal crops are all typical of the period (e.g. Carruthers 2008; Ballantyne 2005; Moffett 2006).

Also recorded were seeds of pea/ bean (Fabaceae) in three samples (10.71%). Preservation was insufficient to determine whether peas or beans were present but the size of the specimens is indicative of cultivated taxa.

Densities of carbonised remains ranged from 0.025 items per litre in L2095 to 3.85 items per litre in L2122. The majority of deposits contained less than 0.5 items per litre of sediment. This concentration of remains is indicative of scattered carbonised debris which became incorporated into fills through natural processes rather than through direct deposition.

The material from L2122 was richer, although lower in density than would be expected for a discrete deposit of carbonised debris from a specific activity (e.g. drying or storage accident). The cereal remains were dominated by grains of free-threshing type wheat, with a small number of barley grains also present. Remains of free-threshing type wheat rachis, including bread wheat (*T. aestivum*), were also recovered. A ratio of free-threshing type wheat grains to rachis internodes, adjusted to include the relevant proportion of indeterminate grains and rachis, produced a result of 3.23:1. Unprocessed free-threshing hexaploid wheat can produce a ratio of 2-6:1, with up to six grains per rachis internode, depending on variety (e.g. van der Veen 1992, 82). Although it is difficult to be precise, the ratio calculated for the wheat remains in L2122 is consistent with un-threshed ears of bread wheat. This is supported by the number of seeds of non-cereal taxa, which produced a ratio for grains to weed seeds of 2.875:1. This is less than would be expected for a deposit of processing by-products and may also reflect un-processed ears of bread wheat. Two culm nodes were also present in the sample, which appear to support the interpretation. However, there is also the possibility that this sample represents the mixed remains from a range of sources, including crop processing by-products.

The non-cereal taxa in the assemblage included legumes (Poaceae), cleavers (*Galium aparine*), henbane (*Hyoscyamus niger*), stinking chamomile (*Anthemis cotula*) and wild grasses (Poaceae). These all occur as arable weeds. Henbane is more prevalent in nitrogen rich substrates, such as well fertilised fields, stinking chamomile is characteristic of heavy loam and clay soils and cleavers is generally more common in autumn sown cereals. These characteristics are typical of the growing conditions required by bread wheat and it is likely that they are associated with the wheat remains in the deposit. Heavy soils predominate in the area of the site and the cereals are likely to have been locally cultivated.

Charcoal

Charcoal remains were present in a number of samples and recorded as common in five. An assessment of vessel patterns identified oak (*Quercus* sp.) and indeterminate diffuse porous types. The number of fragments was insufficient to merit a detailed investigation of the charcoal remains.

Terrestrial molluscs

A small range of terrestrial molluscs, mostly characteristic of areas of ground litter (e.g. *Discus rotundatus*, *Oxychilus* sp., *Trichia hispida* group) were present but the assemblage was too small for detailed investigation. The aquatic species *Lymnaea*

truncatula in L2020A reflects standing water in the base of the ditch, most likely on a seasonal basis.

Contaminants

Modern rootlets were common to abundant in most samples. These could have caused some disturbance of small remains, such as carbonised seeds and cereal grains, within the deposits. In addition, the roots could have obscured some remains during sorting and identification, although every effort was made to disaggregate the root masses.

Conclusions

The samples from Dunmow Road show a low intensity of cereal use and processing, and of the deposition of carbonised remains during the medieval period. The crop taxa identified were dominated by free-threshing type wheat, most likely bread wheat, with small amounts of barley, oats and pulses also recovered.

The bulk of the material is likely to represent the scattered carbonised debris of daily activities. None of the deposits suggest the intensive use or processing of cereals in the vicinity of the excavated features. The identification of a single deposit of probable unprocessed bread wheat in L2122 indicates the presence of unmodified cereal crops on the site during the medieval period. Whether this crop was cultivated by the site's inhabitants or imported from agricultural sites elsewhere is difficult to determine on the basis of a single productive sample.

Sample number	Context	Feature	Description	Phase	Volume processed (litres)	Cereals			Non-cereal taxa		Hazelnut shell	Charcoal		Molluscs		Contaminants					Other remains
						Cereal grains	Cereal chaff	Notes	Seeds	Notes		Charcoal>2mm	Notes	Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules	
1	2010	2009	Fill of Pit	1	10	-	-	-	-	-	-	-	-	X	*Vallonia* sp.	XX	X	-	-	-	-
2	2012	2011	Fill of Posthole	1	10	-	-	-	-	-	-	-	-	X	*Oxychilus* sp.	XX	-	-	-	-	-
3	2008	-	Fill of Vessel (L2007)	1	30	X	-	FTW (2), NFI (3)	-	-	-	X	-	-	-	XXX	X	X	-	-	-
4	2046	2045	Fill of Pit	1	20	-	-	-	X	Large Fabaceae (1)	-	X	-	X	*Vallonia* sp.	XX	-	-	-	-	-
5	2007	-	Occupation Layer	1	10	-	-	-	-	-	-	X	-	-	-	XXX	-	X	-	-	-
6	2049A	2047	Fill of Pit	1	20	-	-	-	-	-	-	-	-	-	-	XX	-	-	-	-	-
7	2054	2019	Fill of Ditch	1	20	-	-	-	-	-	-	X	-	XX	*Cepea* sp., *Discus rotundatus*, *Vallonia* sp.	XX	X	X	-	-	-
8	2060	2059	Fill of Quarry Pit	1	40	XX	-	FTW (8), Trit (1), NFI (4)	X	Large Fabaceae (1), Medium Fabaceae (1)	-	X	-	-	-	XX	X	X	-	-	-
9	2037B	2036	Fill of Pit	1	40	X	-	FTW (2), NFI (2)	-	-	-	X	-	XX	*Oxychilus* sp., *Vallonia* sp.	XX	X	X	-	-	-
10	2038B	2036	Fill of Pit	1	20	X	-	FTW (2), NFI (1)	-	-	-	X	-	X	*Trichia hispida* group, *Vallonia* sp.	XX	X	X	-	-	-
11	2056	2055	Fill of Linear	1	10	-	-	-	-	-	-	X	-	X	*Vallonia* sp.	XX	X	-	-	-	-

12	2069	2065	Fill of Quarry Pit	1	40	XX	-	Hord (2), FTW (5), Trit (1), NFI (7)	X	*Vicia/ Lathyrus* sp. (1), Medium Fabaceae (2)	2	XX	*Quercus* sp., Diffuse porous	XX	*Discus rotundatus, Vallonia* sp.	XX	X	X	-	-	-
13	2070	2065	Fill of Quarry Pit	1	20	-	-	-	-	-	-	XX	*Quercus* sp.	-	-	XX	X	X	-	-	-
14	2020A	2019	Fill of Ditch	1	10	X	-	FTW (3), Oat (1), NFI (1)	-	-	-	X	-	XX	*Discus rotundatus, Lymnaea truncatula*	XX	X	X	-	-	-
15	2084	2083	Fill of Ditch	1	10	-	-	-	-	-	-	X	Diffuse porous	X	*Cepea* sp., *Oxychilus* sp.	XX	X	X	-	-	-
16	2095	2094	Fill of Ditch	1	40	X	-	FTW (1)	-	-	-	X	-	-	-	XXX	-	X	-	-	-
17	2101A	2099	Middle Fill of Ditch	1	20	-	-	-	X	Medium Fabaceae (1), Large Poaceae (1)	-	X	Diffuse porous	X	*Discus rotundatus, Trichia hispida* group	XX	X	-	-	-	-
18	2102A	2099	Upper Fill of Ditch	1	40	XX	-	HTB (1), Hord (2), FTW (7), Trit (1), NFI (7)	-	-	-	X	Diffuse porous	X	*Vallonia* sp.	XX	X	-	-	-	-
19	2111	2110	Fill of Quarry Pit	1	20	X	-	FTW (1)	-	-	-	X	-	XX	*Discus rotundatus, Oxychilus* sp., *Vallonia* sp.	XX	-	X	-	-	Amphibian bone (1)
20	2112	2110	Fill of Quarry Pit	1	20	-	-	-	-	-	-	-	-	X	*Oxychilus* sp.	XX	X	-	-	-	-
21	2105	2103	Fill of Pit	1	40	X	-	NFI (1)	X	Polygonaceae (1)	-	X	-	X	*Discus rotundatus, Trichia hispida* group	XX	X	X	-	-	-
22	2107A	2103	Fill of Pit	1	20	X	-	FTW (1)	-	-	-	-	-	X	*Vallonia* sp.	XX	X	X	-	-	-
23	2007	-	Occupation Layer	1	20	-	-	-	-	-	-	X	-	-	-	XX	-	-	-	-	-
24	2101B	2099	Middle Fill of Ditch	1	20	X	-	Hord (1), NFI (1)	-	-	-	X	Diffuse porous	-	-	XX	-	-	-	-	-
25	2117B	2116	Fill of Pit	1	10	X	-	FTW (2)	-	-	-	-	-	-	-	XX	-	-	-	-	-

26	2119	2114	Fill of Pit	1	20	X	-	FTW (1), NFI (1)	-	-	-	-	-	-	-	XX	-	-	-	-
27	2122	2087	Burnt Layer over Ditch	1	20	XX	XX	HB (1), Hord (1), FTW (18), Trit (4), NFI (22), BW rachis (3), FTW rachis (5), Trit rachis (1), Indet. Rachis (4), Culm node (2)	XX	Large Fabaceae (3), Medium Fabaceae (3), *Galium aparine* (1), *Hyoscyamus niger* (1), *Anthemis cotula* (7), Medium Poaceae (1)	-	XX	*Quercus* sp., Diffuse porous	-	-	XX	-	X	-	-	-
28	2128	2125	Fill of Pit	1	40	X	-	FTW (6), Trit (1), NFI (5)	X	*Anthemis cotula* (1)	-	XX	Diffuse porous	X	*Trichia hispida* group	XX	-	X	X	-	-

Table 17. Results from the investigation of bulk sample light fractions from Dunmow Road. Abbreviations: HB = hulled barley (Hordeum sp.); Hord = barley (Hordeum sp.); BW = bread wheat (Triticum aestivum); FTW = free-threshing type wheat (Triticum aestivum/ turgidum); Trit = wheat (Triticum sp.); Oat (Avena sp.); NFI = not formally identified (indeterminate cereal grain).

10 DISCUSSION

10.1 Prehistoric occupation

The sparse residual prehistoric flint is suggestive of some limited activity in the area immediately surrounding the site. More extensive prehistoric activity was recorded to the north, during the development of Stansted Airport. It is possible that the small quantities of prehistoric flint present within the Dunmow Road site is representative of small-scale peripheral or outlying activity associated with this activity further to the north.

It is interesting to note that the prehistoric flintwork is made of the same black to dark grey raw material as the flint that has been identified as representing medieval utilisation of flint (Peachey Ch. 9.1). This suggests that both the prehistoric and the medieval populations of the area were accessing and utilising the same, or at least very similar, sources of flint. The presence and abundance of such high quality material in the East Anglian and south-eastern part of the British Isles is one of the key arguments against the assumption that the use and production of flint tools ceased in the later Bronze Age (see the work of Young and Humphrey (1999), Humphrey and Young (1999), Humphrey (2003 and 2004), Savile (1981), and Clarke (1939)).

10.2 The Earliest Medieval Features

Pit F2078 and the slightly later Pit F2065 were amongst the earliest features recorded. F2078 was a notably deep feature but F2065 was deeper and has been interpreted as a quarry pit. Throughout the span of medieval activity, the site appears to have been used for quarrying, mostly for the clay in the layer below the upper chalky material and not for the underlying sand.

The early stratigraphic position of F2065 indicates that the extraction of clay had begun in this area prior to the creation of the large east to west and north to south aligned boundary features. The function of the north-east to south-west aligned gullies which were stratigraphically later than F2065 but which preceded the boundaries remains uncertain. It appears unlikely that they had a structural function or represented boundaries.

10.3 The Medieval Boundaries and the Function of the Site

The establishment of ditches F2087=2019, F2092, F2094, F2052 and F2085 on north/south and east/west alignments effectively divided the site into small roadside plots of land. The rural economy of much of northern and central Essex during the medieval period was a mixture of farming, crafts and industry, or trading. The basic unit of production was the household (Poos 1991, 11). Usually, peasant houses in a medieval village were arranged with a smaller ‘toft’ fronting the street and a larger ‘croft’ at the rear (Gies and Gies 1991, 34) and the roadside position of these plots suggest that it is possible that they represent such holdings. However, there was no structural evidence indicative of the dwellings that would have occurred if this was the case and the spatial arrangement of the archaeological features within the stripped area, and the obscuration of a large part of this area by modern disturbance

make it impossible to determine if this was indeed the precise arrangement at this location.

Environmental sampling has identified cereal remains suggestive of the scattered waste from day to day domestic cereal consumption. This suggests occupation in the vicinity of the site and might support the notion that the boundaries recorded at the site were associated with domestic occupation, possibly arranged into 'toft and croft' type holdings.

Although there is insufficient stratigraphic evidence to determine the exact chronological relationship between the boundary ditches and the various large pits, interpreted as quarry pits, distributed around the site, it seems possible that the site was divided up into different areas, perhaps under different ownership or tenancy, in which this quarrying activity took place or that it was divided up in order to separate the quarrying from other activity; it is notable that no quarry pits were present in the area between north/south aligned ditches F2092 and F2094. The site lies approximately 800m to the east of a possible medieval tile kiln (EHER 4661). The fact that attempts appear to have been made to extract the natural clay from this area can be no coincidence in light of the presence of this apparent industrial site. Peachey (Ch. 9.3) notes that the medieval tile recovered from the site appears to have been produced using local clay and it is possible that it was clay extracted from this area, or nearby, and formed and fired at the tile kiln to the east.

It is possible that all of the quarry pits were contemporary with the stratigraphically early F2065 and that this kind of activity, and the tile kiln to east, occurred as a short-lived chapter associated with a particular event such as the construction or re-roofing of the nearby Thremhall Priory. The large north/south and east/west aligned boundaries may, therefore, represent rearrangement of the site following the cessation of this activity.

However, Muir (2004, 214) notes that any small medieval community with access to a supply of passable building stone would exploit it, no matter how poor its quality. It is possible that the same applied to clay. If it did, then the fairly easily accessible clay may have made a useful addition to the income of the local peasantry if it was sold/traded for use at the nearby tile kiln, or a may have had a more immediate function. Usually, medieval crofts were used for arable cultivation or for pastoral agriculture (Dyer 2000, 69) but in some locations, such as Ely and Isleham, Cambridgeshire, where several medieval crofts were used for clunch quarrying and lime-burning (Wareham & Wright 2002, 226 & 443), they could have an industrial function. It is possible, therefore, that some crofts in this area operated solely on the economic basis of clay extraction, although if this was the case, it would appear more likely that the entire areas would be pocked with quarry pits rather than the distribution pattern that has been observed.

F2055 was located to the south of Ditch F2087. The feature was ill-defined. It was an elongated, rectangular feature which tapered at either end, with steep sides and a depth of 1.10m. Its depth suggests that it is most likely to have been a quarry pit but these tended to be a more a more uniform rectangular shape in plan. Notably, this feature was aligned parallel to Ditch F2087 and its western end was in line with the terminus of F2087 (F2083) leading to the tentative suggestion that it was intended as

part of the boundary system. It could potentially represent a boundary ditch that was started but never completed.

10.4 Finds Assemblages and their Origins

At least superficially the finds assemblages recovered during excavation of this site appear to be consistent with small scale rural settlement of the type that might be considered consistent with the 'toft and croft' type habitation that has been suggested for the site. To some extent this may be accurate but some elements of the finds assemblages hint at other origins or processes through which artefactual material arrived at the site.

The small finds assemblage contains items that would appear to be associated with daily domestic life or with agricultural activity; items consistent with 'toft and croft' type habitation. Some of these items, particularly the horseshoes and horseshoe nails, while possibly directly associated with agricultural activity, may be associated with transport (Cooper Ch. 9.4). While transport, perhaps of goods for sale at market, may have been a concern of a medieval peasant household, the location of the site adjacent to a road of some antiquity (Dunmow Road follows the line of Roman Stane Street) suggests that it may have been directly associated in some way with traffic operating on this route.

The CBM assemblage contained crested ridge tiles or louvers, which are generally associated with high status structures and unlikely to have been used on buildings at a site such as this (Peachey Ch. 9.3). This material might have come from the nearby Thremhall Priory or from the tilekiln site to the west. This suggests that refuse deposits from elsewhere in the surrounding area may have been used for the infill of features at the current site. This may be further supported by elements of the animal bone assemblage; the presence of fallow deer bones is considered to be an indicator of high status activity (Cussans Ch. 9.5) and, although the elements represented might be associated with the utilisation of the carcass for products other than meat, appear to be contradictory to the suggestion that this was a site of low status domestic habitation. The suggestion that some elements, at least, of the CBM and animal bone assemblages may have been imported from other locations in the surrounding area and are not representative of waste generated at this precise location suggests that other elements of these same assemblages and other finds assemblages recovered from the site are not directly indicative of evidence at this particular location either.

The use of refuse deposits accumulated elsewhere in the vicinity to backfill features, especially quarry pits, appears to be a sensible expedient for both the infilling of such pits and the disposal of waste. If this material came from the nearby Thremhall Priory site or from the tilekiln site to the west, this would suggest direct links between them and the current site, possibly demonstrating that they were all under single ownership or formed part of the same estate.

10.5 The Medieval Landscape

In addition to the major elements of the medieval landscape that exist in the proximity of the site, such as Thremhall Priory and Hatfield Forest, and the possible

tile kiln at Start Hill 800m to the east, various other evidence of the medieval landscape is recorded in the vicinity of the site. This includes cropmarks representing medieval boundaries at Tilekiln Green, Great Hallingbury (EHER 46554), a pottery scatter recorded at Pantile Farm (EHER 6722), an enclosure ditch recorded at Duckend Farm (EHER 7294), pottery recovered during fieldwalking associated with the Stansted Project (EHER 14329), and a moated mill which may represent Thremhall Priory Mill (EHER 4663). In the slightly wider area, the Stansted Project has identified a variety of medieval settlement sites through fieldwalking and excavation. These have been interpreted as satellite settlements and farmsteads dependent on the Domesday manors of Colchester Hall and Bassingbourne Hall (Brooks and Havis 1991). This is suggestive of the dispersed rural settlement, generally occurring as hamlets and scattered farmsteads, that is characteristic of Essex (Hunter 1999, 95). Ward (1996, 130) has identified a period of settlement expansion and growth in north-western Essex, associated with a period of extensive assarting in the 12th and 13th centuries and a national rise in population. It is possible that the laying out of the main boundary system occurred as part of, or in response to, this period of settlement growth and expansion; ceramic dating evidence is broadly consistent with the later end of this period.

10.6 Post-Medieval/ Modern Features

During the post-medieval or modern period further ditches were dug perpendicular (F2039 and 2050), and parallel (F2043) to the road forming a field system, expanding the boundaries laid out in the medieval period. The site then appears to have remained agricultural until its recent use for waste disposal.

11 CONCLUSIONS

Archaeological excavation at this site has demonstrated that it was utilised during the medieval period for the extraction of clay and that it was divided up into separate plots through the excavation of boundary ditches. It is possible that this represents a ‘toft and croft’ type arrangement or possibly just a series of roadside enclosures. Finds evidence is suggestive of domestic habitation but no evidence for domestic structures was recorded and at least of some this artefactual material may represent refuse deposits generated away from the site and transported to the site for the purposes of backfilling the open quarry pits and/or boundary features. Proximity and logic suggest that the site may have been associated with the nearby Thremhall Priory and so elements of the finds assemblage that appear to be of high status may have derived from there.

The recorded archaeology does not give a completely clear picture of the character of the activity that is represents. The site does, however, contribute to the corpus of information regarding medieval activity in this part of Essex. Work by Thomas (2006) has demonstrated how a synthesis of small-scale developer-funded archaeological interventions can contribute to the development of a more complete picture of the character and extent of medieval settlements. Similar work has been conducted as part of the CORS project in Cambridgeshire (Lewis 2007). A similar approach in this area, incorporating the results of this excavation and other work in the surrounding, a project which goes beyond the scope of this document, has the potential to provide

further information into the way the landscape was utilised and developed by, and in association with, major landowning institutions such as the nearby Thremhall Priory; this, in turn, has the potential to contribute information relating to the research subjects identified by Medlycott (2011) for the medieval period in the wider region.

DEPOSITION OF THE ARCHIVE

Archive records, with inventory, will be deposited at Saffron Walden 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

Feature	Context	Seg.	Trench	Description	Spot Date	Pot Qty	Pottery (g)	CBM (g)	A.Bone (g)	Other Material	Other Qty	Other (g)
1011	1012		6	Fill of Pit	13th-15th	4	9					
1021	1022		5	Fill of Ditch	mid 12th-14th							
1025	1026		6	Fill of Pit	13th-14th	15	58	4	13			
1027	1028		6	Fill of Pit	13th-15th	208	1457	1825	542	Str.Flint Fe.Frags O.Shell	1	3 48 24
1031	1032		5	Fill of Pit				1766				
1027	1033		6	Fill of Pit	13th-mid 14th	53	292	1571	285	Shell Fe.Frags F.Clay	5	76 24 16
1034	1035		5	Fill of Pit				1179				
1036	1037		7	Fill of Pit	mid 12th-14th	2	42			F.Clay Sn.Shell		16 <1
1039	1040		7	Fill of Ditch	13th-14th	27	114		34	Sn.Shell		<1
	1041		7	Fill of Ditch					101			
1036 + 1039	1042		7	Slumping Fill of Pit	mid 13th-14th	19	78			F.Clay Fe.Frags O.Shell		2 10 3
1043	1044		7	Fill of Pit	mid 12th-14th	12	87		1	F.Clay		13
1047	1048		7	Fill of Pit	mid 12th-14th	1	18					
1051	1053	A	11	Fill of Pit					92			
1027	1056		11	Fill of Pit	13th-early 14th	7	32	140	6			
1061	1062		10	Main Fill of Ditch	11th-13th	2	24		27			
1064	1066		10	Fill of Ditch				46				

	1067		10	Fill of Ditch	13th-15th	1	3					
	1068		10	Fill of Ditch	13th-15th	7	23	57	5	Shell		9
1069	1070		10	Fill of Ditch	mid 12th-14th	10	136					
	1071		10	Fill of Ditch	mid 12th-14th	6	22					
	1072	 B	10	Fill of Ditch	mid 12th-13th mid 12th-14th	30 12	192 152			Shell Slag F.Clay O.Shell		14 12 2 8
1073	1074		10	Fill of Ditch	mid 12th-14th	2	10					
1075	1076		11	Fill of Ditch	mid 12th-14th	1	6					
1077	1078		11	Fill of Large Pit	mid 12th-14th	8	30					
U/S	U/S			Unstratified	mid 12th-14th	6	13			Str.Flint	4	97
	2070			Fill of quarry pit	12th-14th	6	92		1			
2019	2077			Fill of ditch	13th-15th	8	54		2	Snail Shell O.Shell		1<g 8
2078	2079			Fill of pit	12th-14th	2	4			Str.Flint	1	27
	2080			Fill of pit	12th-14th	2	7					
2087	2088	A E		Base fill of ditch	12th-14th 12th-14th	1 6	9 20					
	2089	B D E		Middle fill of ditch	mid 12th-14th mid 12th-14th 13th-15th	24 5 7	155 41 63	4 401 132	 6 41	Fe.Frag **SF1 - Fe Blade**	1 5	3 158
	2089	C						37	118	Snail Shell		1
2055	2091	A		Fill of short linear	prehistoric	1	<1g					
2094	2095			Fill of ditch	13th-14th	26	204			Fe.Frag	1	3
2099	2100	A		Bottom fill of ditch	13th-14th	15	99		6			
	2101	A		Middle fill of ditch	13th-4th	11	34					

		B			mid 12th-14th	7	70		3			
	2102	A		Upper fill of ditch	mid 12th-14th	16	200		141			
		B			13th-15th	10	52			Fired Clay		13
2103	2105	A		Fill of pit	12th-14th	75	633					
	2107	A		Fill of pit	mid 12th-14th	74	456			Fe.Frag	1	9
		B			mid12th-14th	66	227					
		C			mid12th-14th	7	71					
2110	2111			Fill of quarry pit	13th-15th	23	123	365	142			
	2112			Fill of quarry pit	13th-15th	88	737	361	29	Shell	8	36
										Fe.Frag	4	17
	2113			Fill of quarry pit	13th-15th	5	177					
2114	2115	A		Fill of Ditch	13th-15th	7	37					
	2115	B		Fill of Ditch	12th-14th	35	243			Shell	1	13
2116	2117	B		Fill of pit	late 12th-14th	7	23			Charcoal	1	1
	2118	B		Fill of pit	13th-15th	29	223			Shell	1	14
2114	2119			Fill of pit	12th-14th	11	115			Shell	2	16
2120	2121			Fill of pit	12th-14th	10	71			Shell	1	23
2123	2124			Fill of pit					199			
2125	2126			Fill of pit	late 12th-15th	10	84		43			
	2128			Fill of pit	13th-15th	61	371		83	Fe.Frag Shell	1 4	8 22
	US			unstratified						Shell Fe,Frag	5 1	17 3
					mid 12th-14th	23	83		6			

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Fig. 1 Site location plan

Scale 1:25,000 at A4

Land South of Dunmow road, Gt Hallingbury, Essex (P6409)

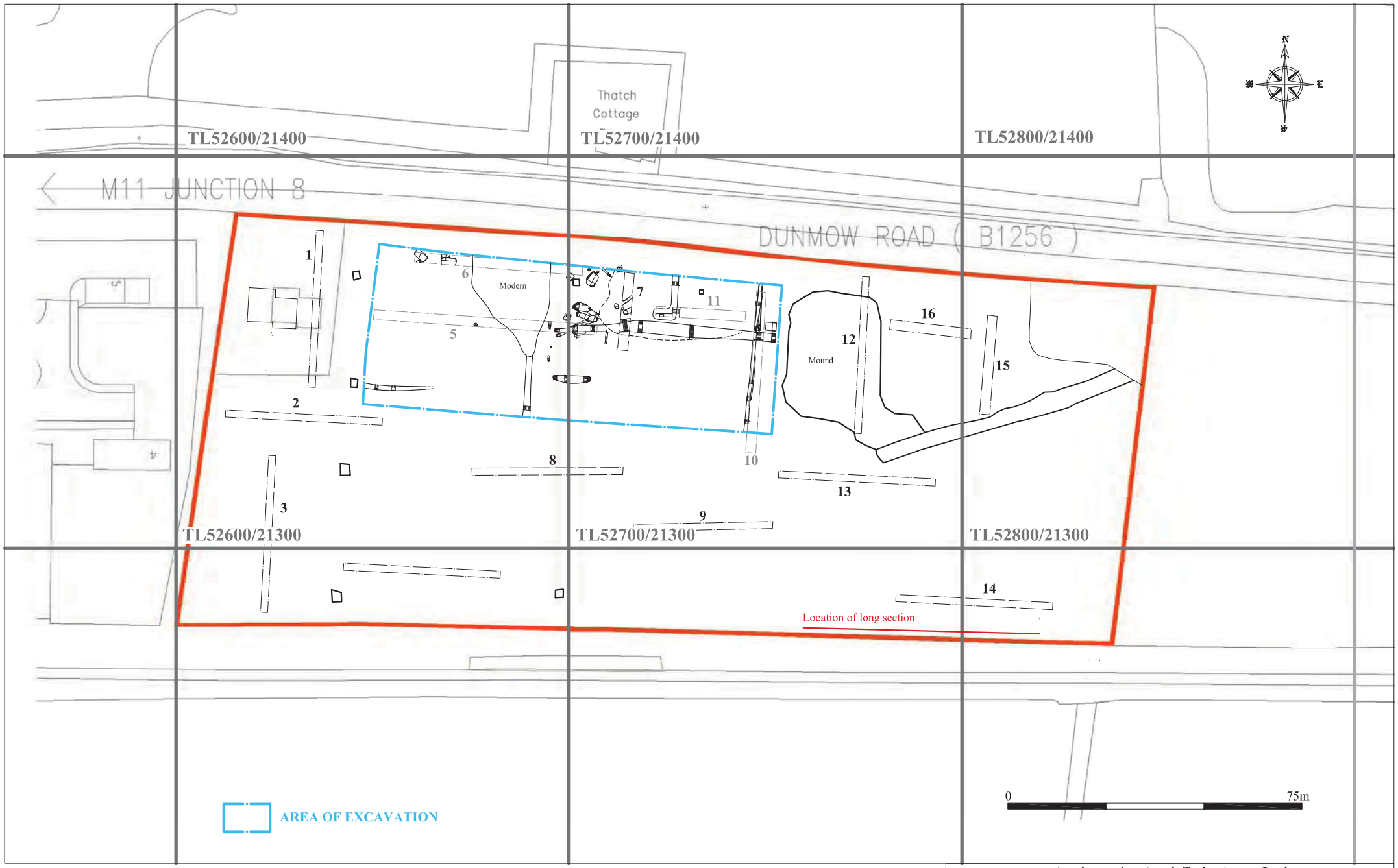

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Fig. 2 Detailed site location plan

Scale 1:1250 at A4

Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

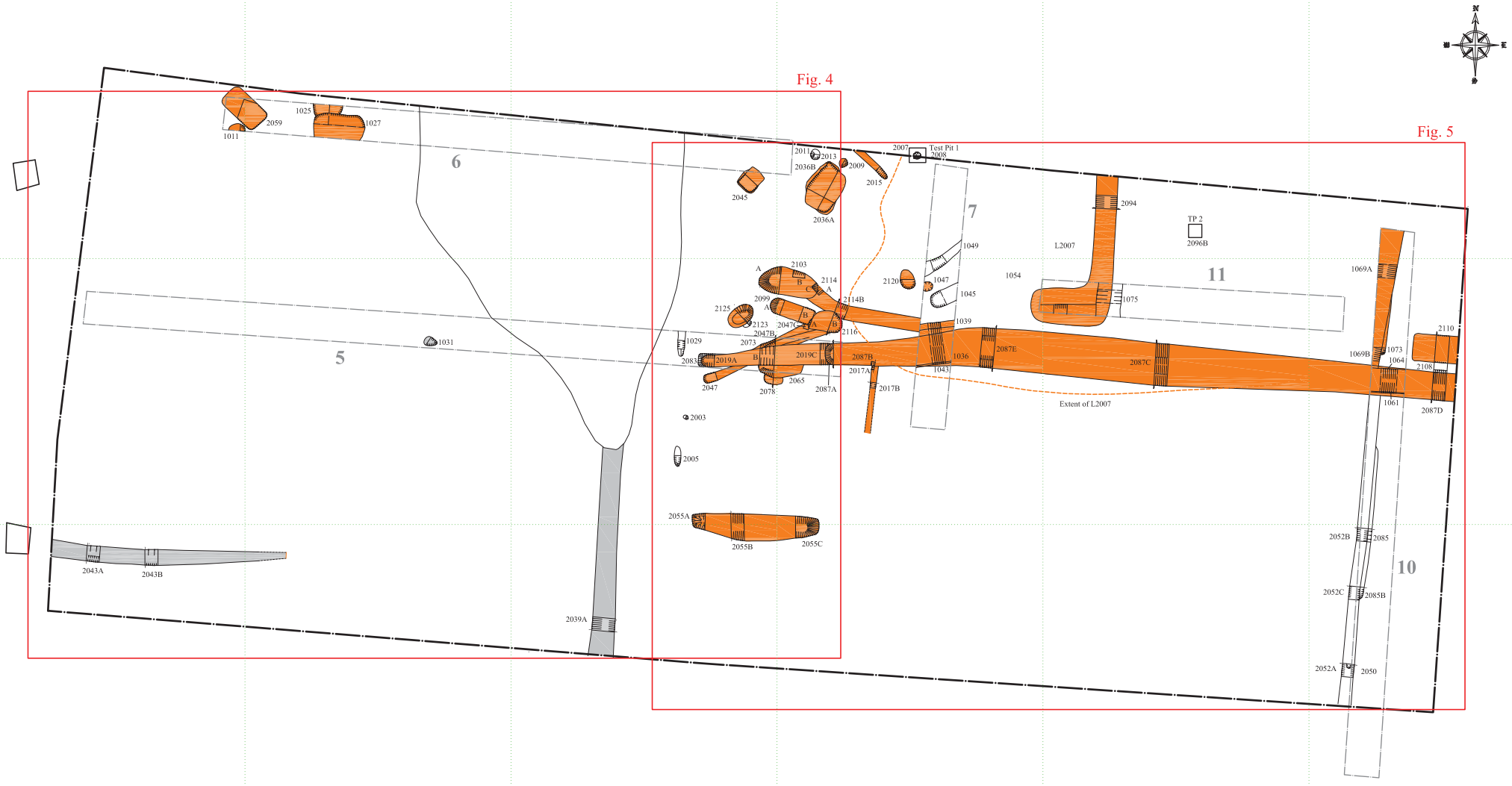

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Fig. 3 All features plan with phasing

Scale 1:300 at A3

Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

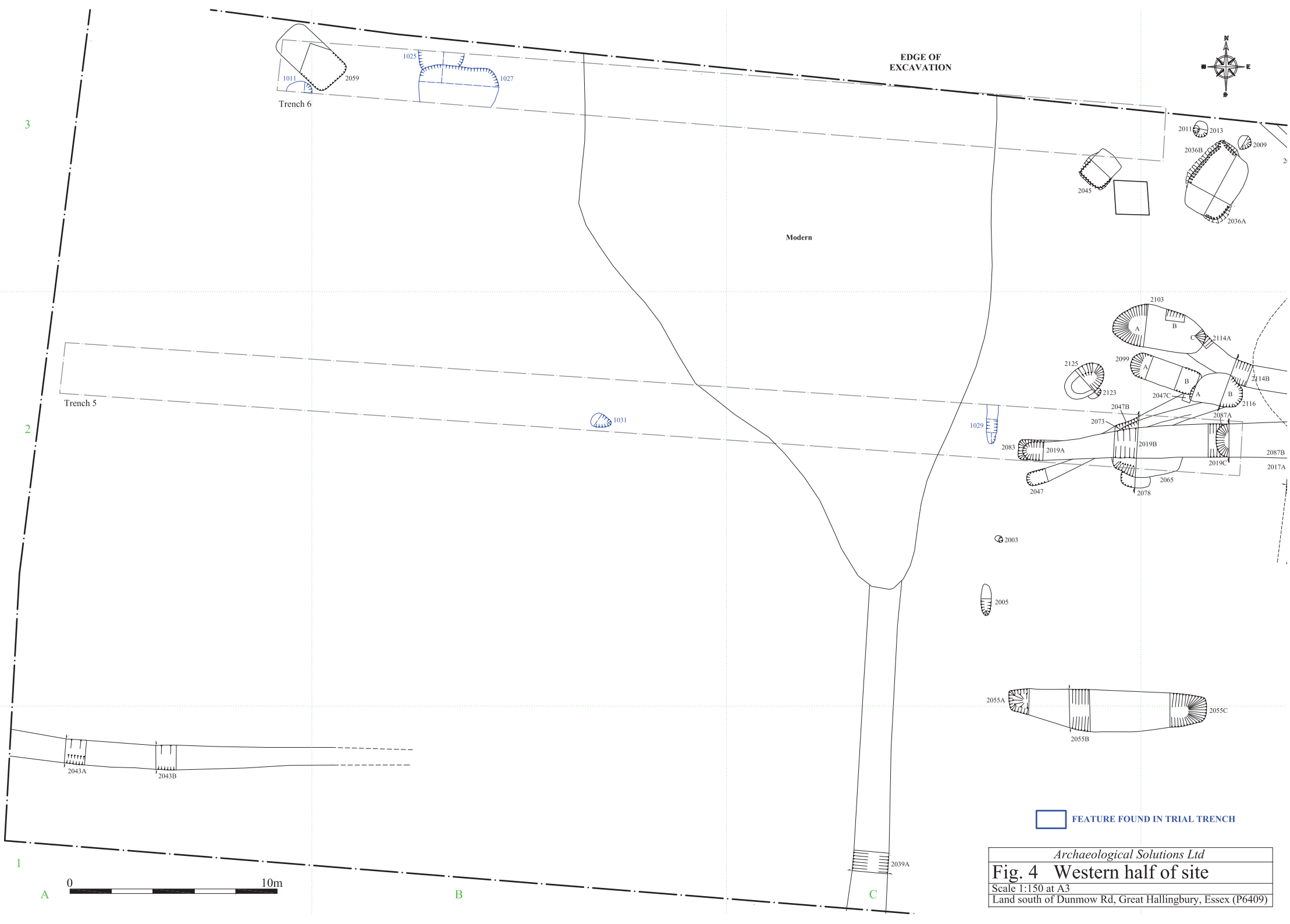

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Fig. 4 Western half of site

Scale 1:150 at A3

Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

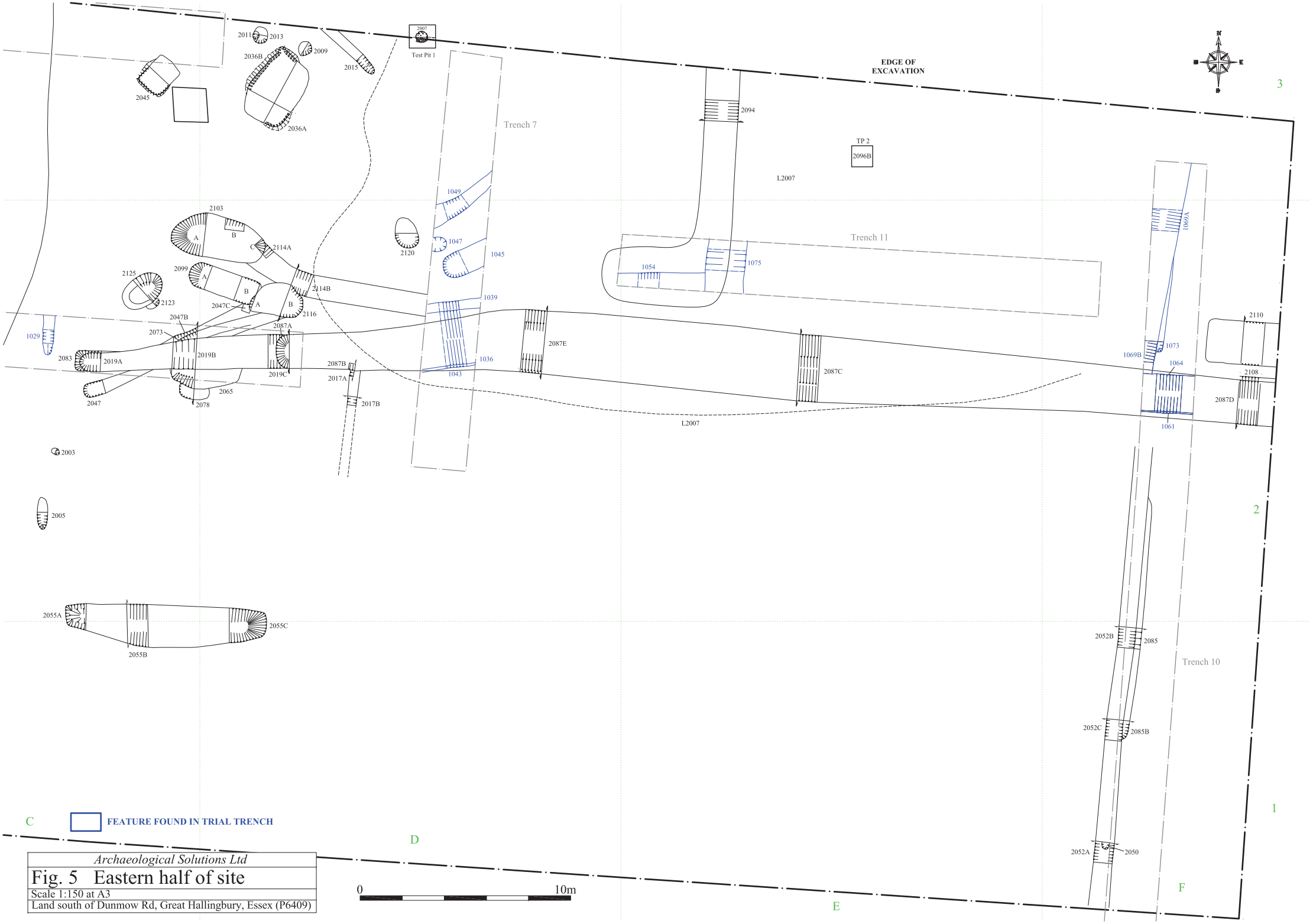

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Fig. 5 Eastern half of site

Scale 1:150 at A3

Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

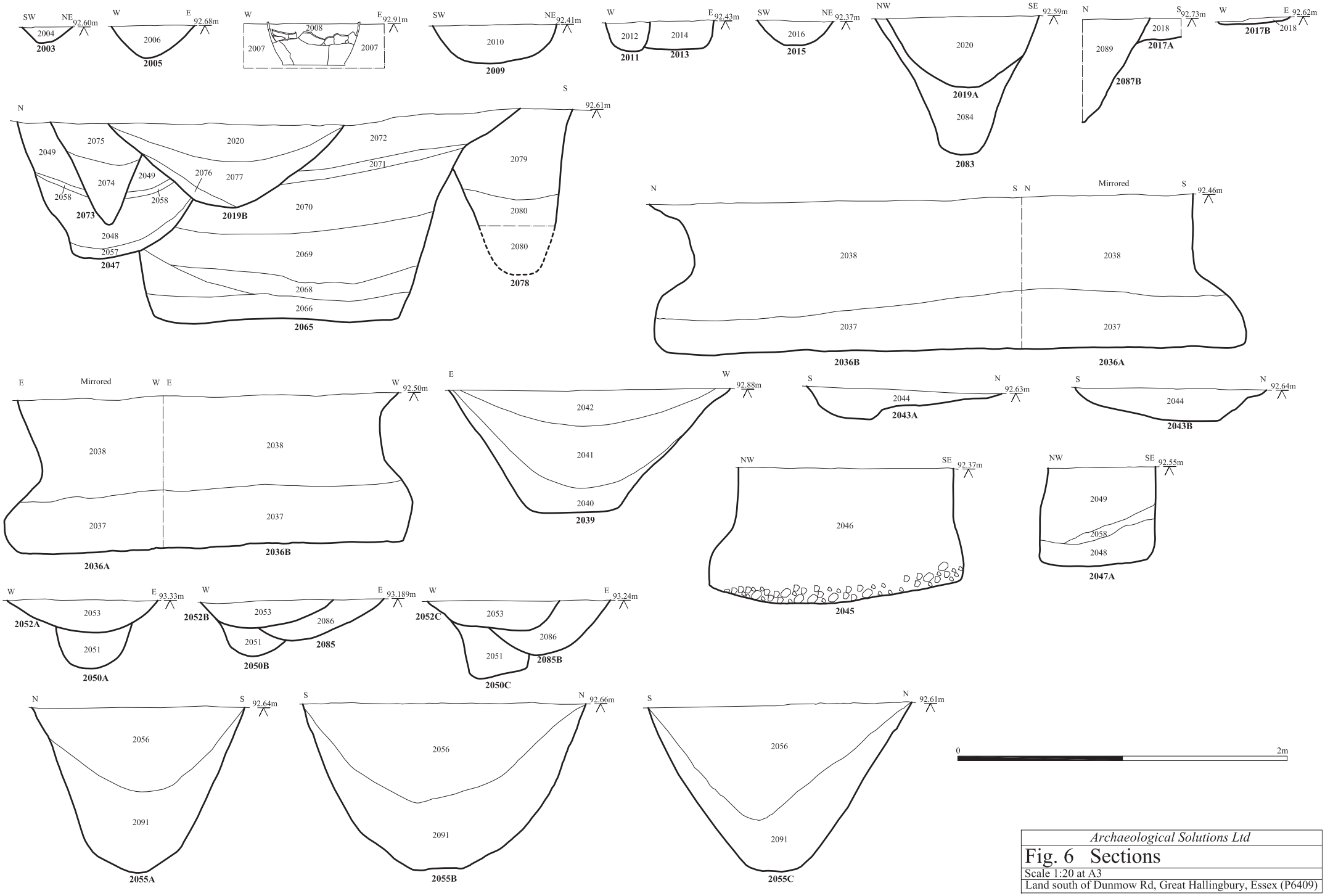

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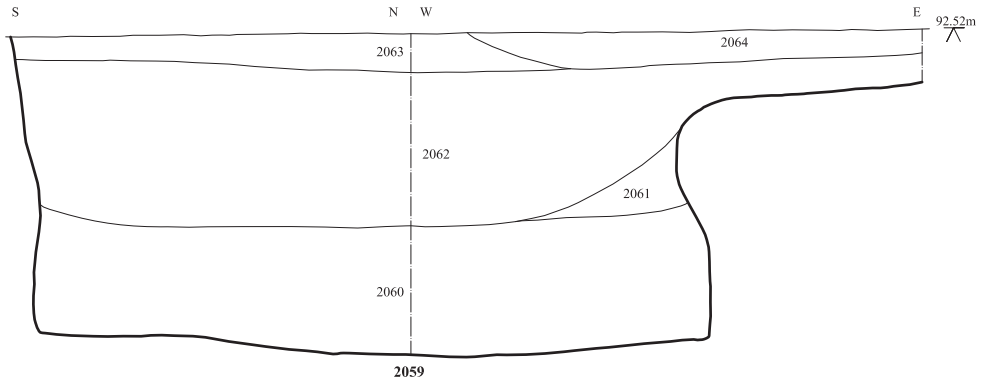
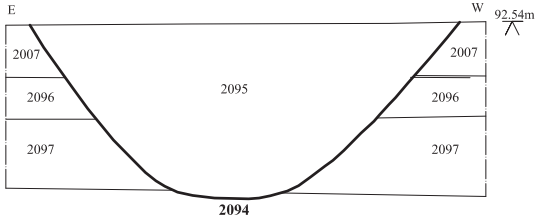
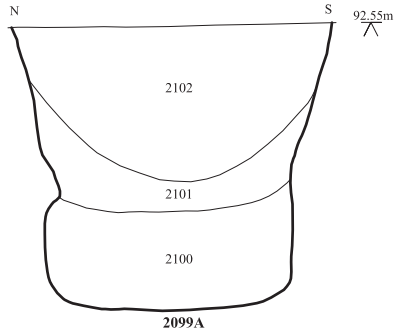
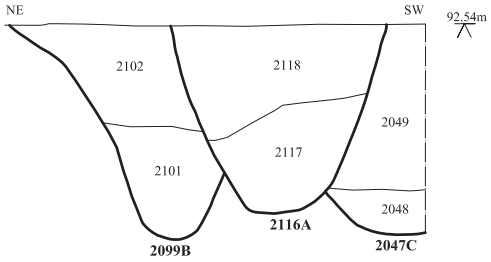
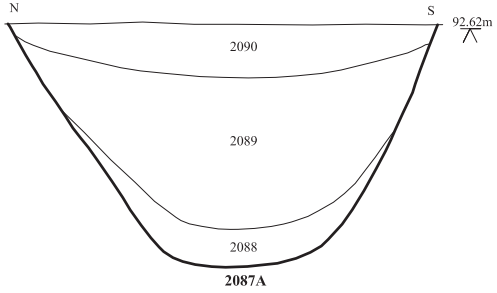
Fig. 6 Sections
Scale 1:20 at A3
Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

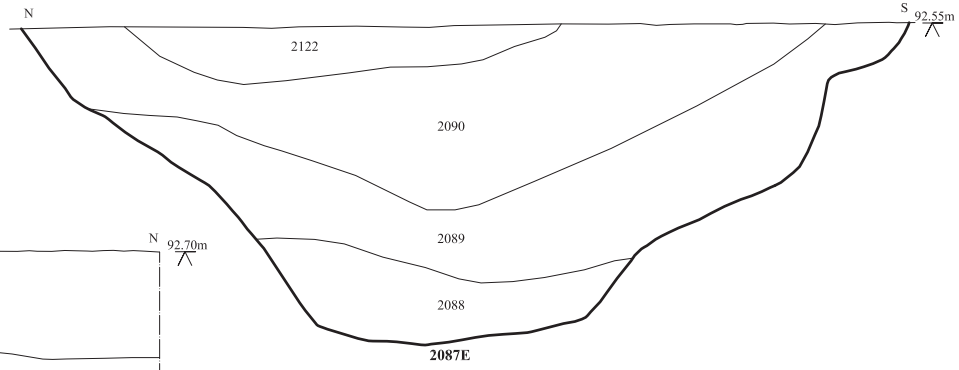


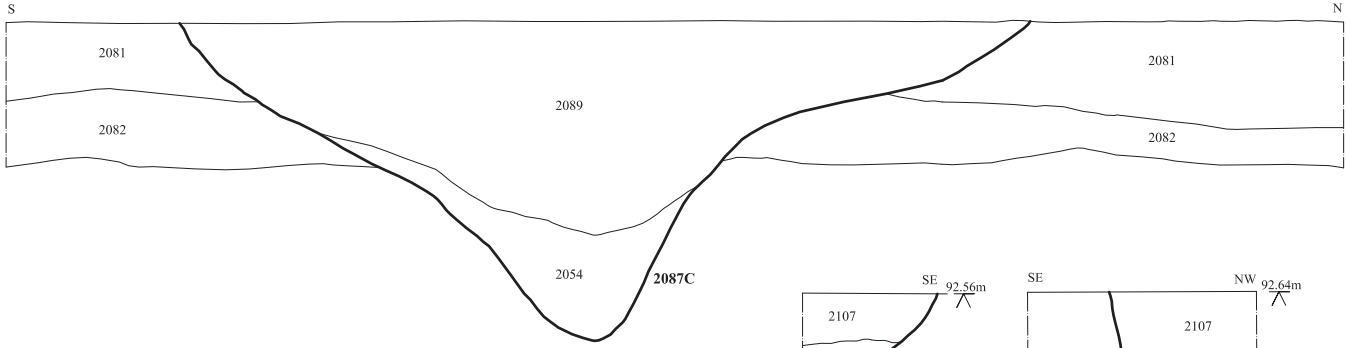


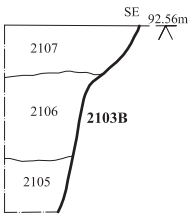


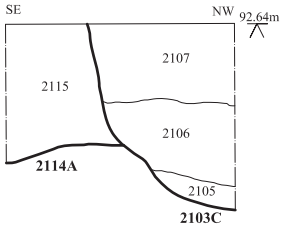


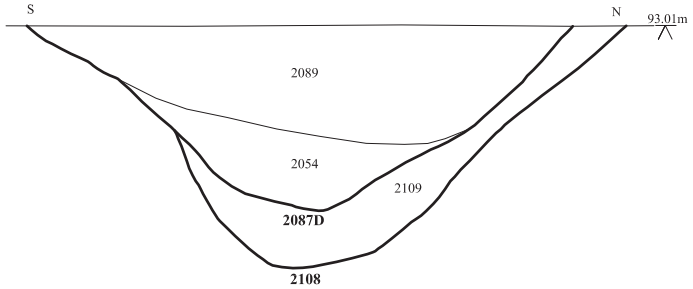












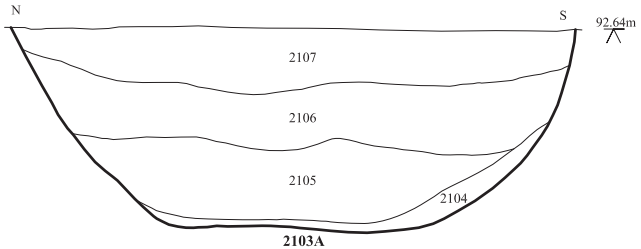


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Fig. 7 Sections
Scale 1:20 at A3
Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

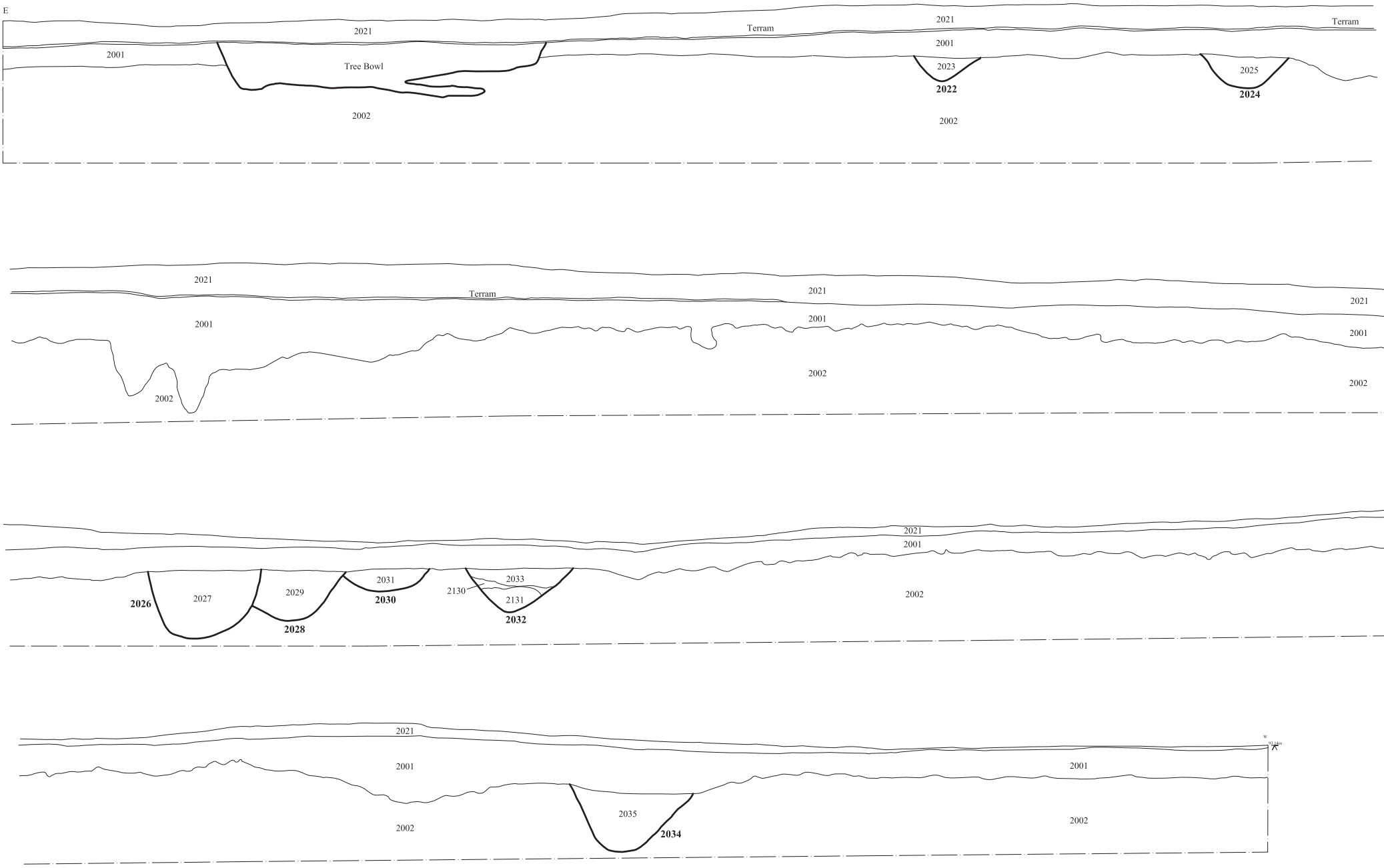

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Fig. 8 Section of trench edge
Scale 1:40 at A3
Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)

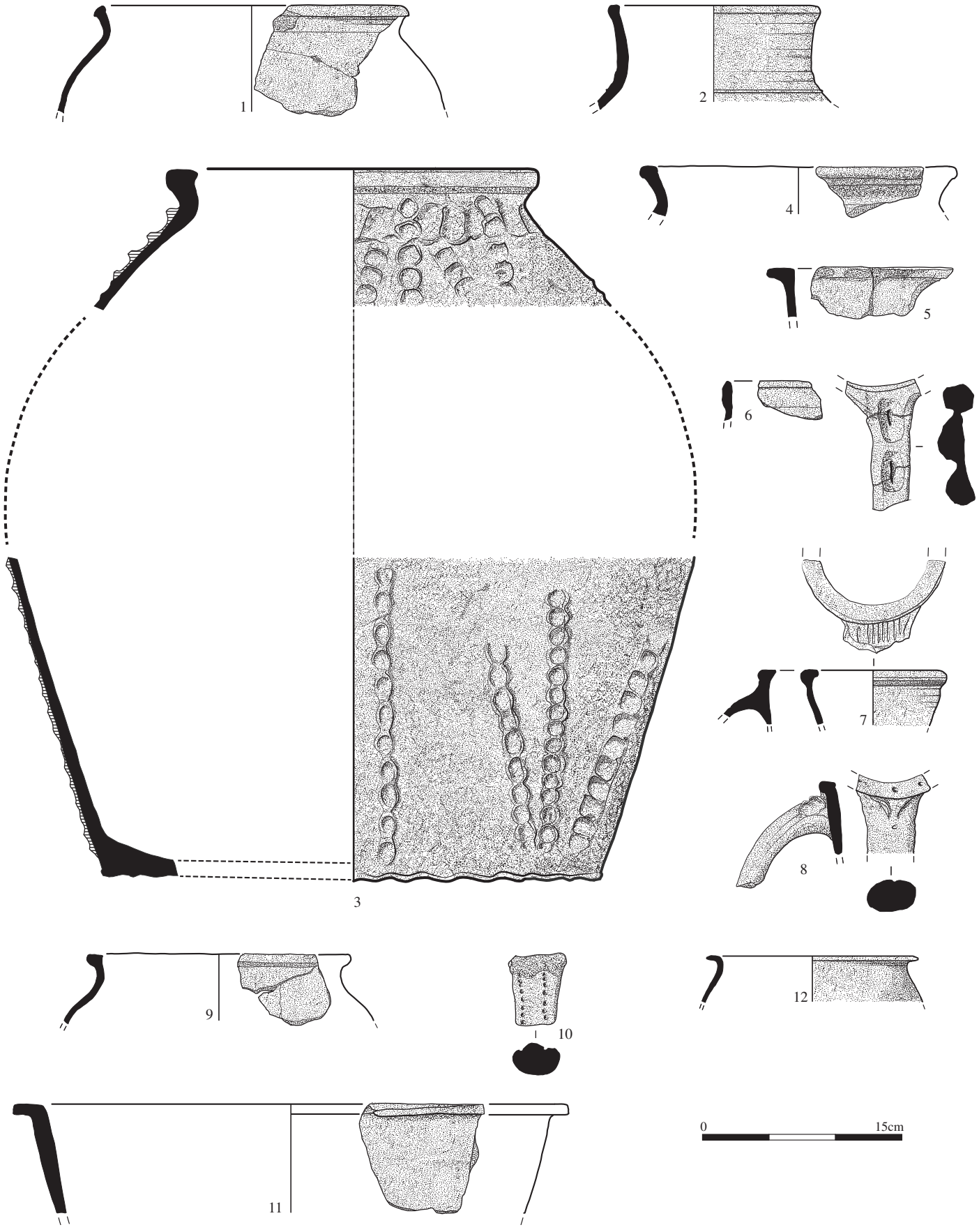

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Fig. 9 Pottery illustrations

Scale 1:4 at A4

Land south of Dunmow Rd, Great Hallingbury, Essex (P6409)