Middle Bronze Age burials: archaeological excavation on Area B of the Colchester North development, Colchester, Essex, CO4 6AH

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1 Summary

An archaeological excavation was carried out on Area B of the Colchester North development, Colchester, Essex in advance of the construction of urban residential, commercial and community buildings and associated works.

Excavation revealed a small Middle Bronze Age cemetery consisting of one definite (F8) and two probable cremation burials (F10 and F12) in a small cluster to the south-southeast of two prehistoric ring-ditches. All three burials contained the disturbed remains of Ardleigh-style Deverel-Rimbury cremation urns, but only F8 included a small quantity of cremated human bone. This bone produced a 2-sigma calibrated radiocarbon date (at 95.4% confidence) of 1374 to 1125 BC. No dating evidence was recovered from the ring-ditches.

Three possible prehistoric features (two pits and a posthole), two post-medieval/ modern ditches/erosion hollows and two natural features/tree-throws were also excavated.

2 Introduction (Fig 1)

This is the archive report for an archaeological excavation carried out on 'Area B', a small parcel of land forming part of the larger Colchester North development (formerly the Northern Growth Area Urban Extension (NGAUE)), Colchester, Essex which was carried out 21st to 30th May 2018. The work was commissioned by Brad Davies of Mersea Homes Ltd in advance of the construction of urban residential, commercial and community buildings and associated works, and was carried out by Colchester Archaeological Trust (CAT).

As the site lies within an area highlighted by the Colchester Historic Environment Record (CHER) as having a high potential for archaeological deposits, an archaeological condition was recommended by the Colchester Borough Council Archaeological Advisor (CBCAA). This recommendation was for an archaeological excavation and was based on the guidance given in the *National Planning Policy Framework* (DCLG 2012).

All archaeological work was carried out in accordance with a *Brief for Archaeological Excavation*, detailing the required archaeological work, written by Jess Tipper (CBCAA 2016), and a written scheme of investigation (WSI) prepared by CAT in response to the brief and agreed with CBCAA (CAT 2016).

In addition to the brief and WSI, all fieldwork and reporting was done in accordance with English Heritage's *Management of Research Projects in the Historic Environment* (*MoRPHE*) (English Heritage 2006), and with *Standards for field archaeology in the East of England* (EAA **14** and **24**). This report mirrors standards and practices contained in the Institute for Archaeologists' *Standard and guidance for archaeological excavation* (CIfA 2014a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b).

3 Archaeological background

The following archaeological background draws on the Colchester Archaeological Trust report archive and the Colchester Historic Environment Record (CHER) accessed via the Colchester Heritage Explorer (www.colchesterheritage.co.uk).

The NGAUE has already been the subject of a Desk-Based Archaeological Assessment commissioned by Mersea Homes (CAT Report 583). The DBA listed a number of archaeological sites within the 110-hectare site (Fig 1 of the DBA report) and thirteen within the six areas due to be archaeologically investigated as part of the scheme (Areas 1-6).

Excavation Area B is located within Area 2 of the NGAUE site. The initial DBA revealed that Area 2 contained the cropmarks of old field boundaries (CAT Report 583, sites 30 and 31). In 2011 and in advance of the proposed development, an evaluation by geophysical survey, fieldwalking and trial-trenching was carried out over the whole NGAUE site (CAT Report 627) (see Fig 2 for the results of the Area 2 evaluation). The only significant archaeological remains identified in Area 2 were within evaluation trench T64, which was described as '...a prehistoric ditch which may be part of an Iron Age ring-ditch of the type commonly found surrounding timber structures. In other words, this may be an Iron Age house site' (CAT Report 627). Excavation Area B is located over this ring-ditch.

4 Aim

The aim of this this investigation was to excavate and record all archaeological horizons within 'Area B' due to be destroyed by the proposed development.

5 Results (Figs 3-4)

An area measuring 40m E/W by 45m N/S was machine excavated under the supervision of a CAT archaeologist. It was excavated through modern ploughsoil (L1, 0.29-0.38m thick) onto natural sand and gravels (L2).

Prehistoric

Two prehistoric ring-ditches were excavated. Ring-ditch A (F4) enclosed an area with an internal diameter of 5-5.5m. The ditch measured between 0.4-0.85m wide by 0.09-0.21m deep, and consisted of a single fill of medium to dark grey/brown sandy-silt with common stone. Being so shallow, it is likely that the ditch has been heavily truncated. The ditch is not a continuous ring, but included a single 0.6m wide gap/entrance on the eastern side of the feature. A single prehistoric flint flake and two pieces of burnt flint were excavated from the fill of the ditch, there was no other dating evidence. Another prehistoric flint flake and a piece of medieval pottery also recovered during surface cleaning.

Ring-ditch A was originally identified in Trench T64 of the 2011 evaluation of the development site (CAT Report 627, F31). A shattered flint flake was the only find recovered from this feature during the evaluation and identified as 'probably prehistoric'. *It should be noted that during current work a discrepancy with the data from 2011 survey of Trench T64 was identified. This meant that as plotted in CAT Report 627, the northern section of the ring-ditch (sx2) is out of alignment by approximately 2.5m.*

Ring-ditch A was cut by pit F7 which contained four fragments of burnt flint. The only feature identified within the ring-ditch was possible posthole F11. No dating evidence was recovered from this posthole but it did contain a piece of burnt flint. It is uncertain if the posthole is contemporary with the ring-ditch.

Immediately to the SSW of F4 was ring-ditch B (F9), enclosing an area with an internal diameter of 5.2-5.4m. The ditch measured between 0.6-0.8m wide by 0.15-0.2m deep, and consisted of a single fill of medium grey/brown/yellow/orange sandy-silt with rare charcoal flecks and common stone. This ditch is also extremely shallow and is likely to have been heavily truncated. Unlike ring-ditch A, this feature is formed of a continuous 'ring-ditch'. Only two finds were recovered from the ditch, both from sx1, and consisted of a sherd of Middle Bronze Age pottery and a sherd of medieval pottery. As the medieval pottery sherd is likely intrusive in this context, it calls into question the stratigraphic integrity of the Middle Bronze Age sherd, so unfortunately it cannot be completely relied on for accurate dating of the feature.

Photograph 1 Ring-ditch A (F4), looking west

Photograph 2 Ring-ditches A (F4, background) and B (F9, foreground), looking north

To the southeast of ring-ditch B was a small cluster of features: F6, F8, F10 and F12. F6 was a charcoal-rich pit containing a single piece of burnt flint. Pits F8, F10 and F12 all contained fragments of broken Middle Bronze Age urns, with F8 also producing a small quantity of cremated human bone. All three of these pits were very shallow (between 0.25-0.35m deep), with the broken urns indicating heavy truncation of the

features. The urn in pit F8 appears to have been placed inverted, as only the rim and upper body sherds had survived. Despite being disturbed, the cremated bone from this pit was concentrated below the urn fragments and it is likely they were originally contained within this vessel. Although no cremated human bone was recovered from F10 or F12, the presence of Middle Bronze Age urn fragments in these features means it is likely that they are also the remains of disturbed burial pits.

A sample of cremated human bone was sent for radiocarbon dating, which produced a 2-sigma calibrated date (at 95.4% confidence) of 1374 to 1125 BC.

Post-medieval/modern
Two features (F1 and F5) containing material of a post-medieval to modern date were excavated on the eastern side of the excavation area. They are either wide shallow ditches with a flat base, or erosion hollows/depressions. F1 measured approximately 3m wide by 0.2m deep with a slightly wider, bulbous terminal. F5 measured approximately 4m wide by 0.27m deep. Undated stony-spread or natural feature F3 had been cut by F1.

Other features
A single undated tree-throw/natural feature (F2) was also excavated, with another natural feature identified during the 2011 evaluation (CAT Report 627, F31).

6 Finds

by Stephen Benfield

Introduction
Finds of prehistoric date were recovered accompanying a cremation burial (F8), and from the fill of two pits (F10 and F12) and two ring-ditches (F4 and F9). The pottery, including parts of two large urns, can be dated to the Middle Bronze Age and a few worked flints are likely to be associated with this period, as are at least some of a small assemblage of heat altered (burnt) stones. There is also a small quantity of finds dating to the medieval and late medieval/post-medieval period. These include pottery and ceramic building material and are most notably are associated with F1.

Prehistoric (Figs 5-6)

Pottery
The prehistoric pottery consists almost entirely of sherds from thick walled, large vessels, with one sherd that represents a thinner-walled smaller pot. There are significant parts of two Middle Bronze Age (MBA) urns, with rim sherds representing at least one and probably two others. Almost all of the remaining body sherds are clearly parts of these or similar urn vessels. The fabric of all of the urns is grog-tempered and apart from some colour differences appears very similar. There are also rare inclusions of quartz sand and small stones but these are incidental to the fabric. This corresponds to Fabric M (Brown 1999, 76).

A large portion of the upper part of a decorated MBA urn of 'Ardleigh-type' (Fig 5.1a) was recovered from cremation burial F8. A large section of the rim and upper body were able to be reconstructed and overall approximately 35% of the upper body circumference is present. This section of the rim may indicate the approximate surviving section of the pot as, while there are a number of body sherds extra to the assembled pieces, there are only one or two small rim sherds extra and much of the rim is clearly missing. Of the remaining (loose) body sherds the majority have some decoration suggesting they probably also come from the upper half of the vessel, although this need not not necessarily be the case. There are no base sherds present. Taken together, this could suggests that the urn (assuming it was buried as a complete

pot and has remained *in situ*) was originally placed in an inverted position in the ground, the lower part having since been ploughed away. An inverted placement is not uncommon for these urns and at Brightlingsea (Essex) of thirty-four urned cremation burials, sixteen had been made with the pot in an inverted position (Clarke & Lavender 2008, 10). The decoration consists primarily of finger-tip impressions, although there are also a few random nail impressions on one area and small rows of fingernail impressions are present on three non-joining sherds (Fig 5.1b). It is noticeable that many of the finger-made impressions are quite small in comparison with impressions on some other illustrated urns. Although there would probably have been some shrinkage during firing (which would apply to any pottery vessel), this could indicate they have been made by a small hand, possibly a woman or child or both. The upper part of the pot appears have a design of panels of finger-tip impressions. Parallels for this design can be seen on a number of pots from Ardleigh and White Colne, Essex (Brown 1999, fig 57 no. 22, fig 58 no. 27, fig 68 no. 113 & fig 72 no. 133). Almost all of the sherds recovered from F8 are clearly part of this one pot. However, a single rim sherd appears to be certainly from another urn as there are significant differences both in the appearance of the fabric, which is much darker, and in the decoration (Fig 5.2). Two other sherds appear to be possibly part of the rim from a third pot as they have deeply impressed finger-tip decoration on the rim top and just below the rim (Fig 5.3).

Fig 5.1 F8 (18) 'Ardleigh-type' MBA urn, large section of the rim and upper part of body present as broken sherds (Fig 5.1a), decorated on rim top with spaced finger-tip impressions, continuous band of spaced finger-tip impressions just below rim and decorated on upper body with individual finger-tip impressions suggesting panel-like areas of vertical rows with extra dot rows, some finger-wipe marks (both angled and horizontal) on interior. Approximately 35% estimated vessel equivalent (EVE) of rim present and able to be joined with upper body. Area of fingernail impressions on sherd almost certainly part of same vessel (Fig 5.1b-d). Fabric M. Surviving portion of pot (163 sherds weighing 1746g) made up of: joining sherds (26 sherds, 1230g), 3 other non joining rim sherds (36 g), other sherds almost without doubt part of pot 5.1 (134 sherds, 480g)

Fig 5.2 F8 (18) Rim sherd from MBA urn, band of close set finger-tip impressions just below rim, single fingernail impression on surviving piece of rim top. Fabric M

Fig 5.3 F8 (18) Rim sherds with bold. large finger impressions, possibly part of a third large urn. Fabric M

A portion of the body of another large MBA urn was recovered from pit F12 (Fig 5.4). No rim sherds are present. There are few joins and the sherd edges are abraded, but all of the sherds are, or appear to be part of one pot. The vessel is decorated with an applied cordon with close set finger-tipping around it. Although this is seems likely to be the extent of the decoration on the body, occasionally this may be more elaborated with applied clay strips imitating handles attached to it in the area between the cordon and the rim (Brown 1999, fig 58 no. 33 & fig 73 no. 138). The missing rim may also have been decorated. While common at both Ardleigh and Brightlingsea, and dominating the vessels at Chitts Hill, Colchester (Crummy, 1977), relatively plain pots with this type of applied, decorated cordon (often located relatively high on the body) can be widely paralleled among Deveral-Rimbury pottery, unlike the more profusely decorated vessels of 'Ardleigh-type'.

Of note is one small grog-tempered sherd from this feature which appears to be the only sherd likely to be from a smaller, relatively thin-walled pot which, apart from the large urns, also feature among 'Ardleigh-type' assemblages.

Fig 5.4 F12 (24) MBA Deverel-Rimbury-style urn, two large non-joining sherds and several other body sherds, one of the large sherds has an applied cordon decorated with close set finger-tip impressions, sherds otherwise are plain. Fabric M.

A small quantity of MBA sherds from one or more pottery urns was recovered from pit F10 and this pottery was the only find from this feature. In total there are 17 sherds weighing 125g. In contrast to the parts of the two urns recovered (above) these include

two sherds from the base edge of one pot and there is another wall sherd from close to the base that has some well spaced finger-tip decoration on it.

The prehistoric pottery consists entirely of part vessels and sherds from at least three pots of Bronze Age Deverel-Rimbury tradition (Gibson 2002,104-107). The pot (Fig 5.1) accompanying the single cremation encountered on the site is typical of the Ardleigh-style of of the Deverel-Rimbury tradition. This is a distinctive regional variant centred within north Essex and south Suffolk (Brown 1999, 78). The other part pot (Fig 5.4) is not so distinct from the broad Deverel-Rimbury tradition, having a single applied cordon enhanced by finger-tip decoration around the upper body, but is not untypical of assemblages of urns from Ardleigh-style cemeteries. A smaller, thinner walled pot also appears to have been present.

Typically the urns are broadly dated to the late 2nd millennium, *c* 1500-1000 BC. Radiocarbon (C14) dates on burials from a cemetery with Ardleigh-style urns at Brightlingsea gave calibrated ranges at 95% confidence of between 2199-1529 BC to 1510-1214 BC, but with most of the range of four dates falling between *c* 1600-1300 BC (Clarke & Lavender 2008, table 1 & 57). Dates on charcoal recovered from un-urned cremations from the cemetery at the Ardleigh site itself fall within a similar date range (Brown 1996, table 1).

Overall, all of the pottery recovered is or appears consistent with an assemblage relating to Middle Bronze Age funerary practice typical of north Essex and south Suffolk.

Flint

Three flints were recovered. Two come from ring-ditch F4 (find nos. 9 & 16) and one from a ditch/erosion hollow F5 (find no. 4). The flints from the ring-ditch are both rather unprepossessing. One (9) is a thick flake, almost a flint piece, with extensive cortex and one earlier flake removal. The other (16) is a small squat flake with cortex on the striking platform and edge damage, probably use wear, concentrated on one end. The flake from F5 is residual in that context, but is more interesting and is probably a damaged tool. It has abrupt retouch and some edge damage/use wear around much of the edge, so much so that the extensive and often abrupt retouch suggests this can be classified as a damaged scraper.

None of the three flints are typologically closely-datable other than as later prehistoric (Neolithic-Bronze Age); although the relatively crude working of the pieces from F4 would not be out of place in a Late Bronze Age assemblage.

Medieval and post-medieval

Finds of medieval and late medieval/post-medieval date are represented by a few small sherds of medieval pottery and ceramic building material consisting of broken pieces of peg-tiles and a piece from a brick. The medieval pottery fabrics recorded (Table 1) refer to the Colchester post-Roman fabric series (*CAR* **7**).

Fabric	Fabric description
13T	Transitional (early medieval) sandy ware
20	Medieval sandy greyware (general) – *elsewhere medieval coarseware*
21	Medieval sandy orangewares (general)

Table 1 Medieval pottery fabrics

A quantity of finds of medieval and late medieval/post-medieval date were recovered from ditch/erosion hollow F1. These included two small sherds of coarse medieval pottery (Fabric 20 & Fabric 21) broadly dating to *c* 13th to 14th century and 13th to 15th century respectively as well as pieces of peg-tile and a piece of brick with a grey glaze.

The peg-tile is unlikely to date to before the 14th century and the brick is of a type broadly dated to the period *c* 15th-17th/early 18th century (Ryan 1996, 95). A small piece of corroded iron, possibly part of a nail, was also recovered.

Finds of medieval and late medieval/post-medieval date were also recovered from ditch/erosion hollow F5, consisting of a medieval pottery sherd (Fabric 20) and peg-tile pieces. A corroded, broken link from an iron chain was also recovered from this feature.

Single, very small coarseware sherds of probable medieval date were also recovered from both ring-ditches. A sherd recorded as Fabric 20 was recovered during archaeological cleaning over the surface of F4 (23) and another, recorded as Fabric 13T dating to the *c* late 12th to 13th century, came from the excavation of sx1 of F9.

Other finds

Heat-affected (burnt) stone

One or a few pieces of discoloured (reddened) and calcified (burnt) flint were recovered from several features and there is one piece of heat-altered sandstone/quartzite. In total there are 11 pieces of flint weighing 158g, the single sandstone/quartzite piece, consisting of a half of a large rounded stone, weighing 242g.

Three of the heat-affected flints and the sandstone/quartzite stone were recovered with the cremation burial F8 suggesting they may have been exposed to heat at the pyre site and were gathered up with the cremated remains. Other pieces (including a burnt calcified piece) come from ring-ditch F4. A small group of four heat-affected and discoloured flints was recovered from pit F7, but were the only finds from this feature. A feature described as a charcoal-rich pit (F6) produced only a single piece which was heat-affected and discoloured rather than heavily burnt and calcified, and a single similarly discoloured piece was recovered from post-hole F11.

Overall there is some association of heat-affected and burnt (calcified) stones with prehistoric features (F4, F8).

7 Cremated human bone

by Julie Curl

Methodology

Two bags of burnt bone were submitted for recording and analysis. The contents were dry-sieved through a stack of 10, 5, and 1mm sized mesh to ensure maximum recovery and assess the degree of fragmentation. Fragments measuring over 5-9mm were manually separated for analysis, those below 5mm were scanned, but not fully sorted and examined in greater depth for this report. Greatest lengths were measured for the largest fragments in the assemblage.

Quantification, provenance and preservation

A single cremation, amounting to 209 elements, totalling 16g, was recovered from disturbed burial pit F8, and was recovered with a combination of hand-collection and processing the associated soil, with the remains examined as a whole for the report. The burnt bone was discovered with a Middle Bronze Age urn. Two prehistoric (but otherwise undated) ring-ditches have been identified in the vicinity.

Preservation is quite poor, with few bone fragments over 10mm in length surviving, and no large fragments. The greatest quantities in terms of both fragment count and weights are the 5-9mm and the 2-4mm ranges. The bone is likely to be of human origin given its recovery from an urn.

>10mm	Wt	5-9mm	Wt	2-4mm	Wt	<1mm	Wt
26	4	87	7	46	4	<50	<1g

Table 2 Quantification of the cremated material by fragment size count and weight.

Analysis results and discussion

Size of Cremation

The size of a cremation depends on the individual (age, sex, body mass, bone density), maintenance of the pyre, the extent of bone recovery from the pyre site and during excavation, as well as on the rate of bone preservation (McKinley, 1993).

The weight for the cremation at 16g in this assemblage is well below the low weight in the weight range in comparison to average archaeological cremations (range: 57 – 3000g) (McKinley, 2000) and considerably less than the lowest weight in comparison to a modern cremation (1000 – 3600g) (McKinley, 2000).

Average weights for cremations compared to the F8 cremation					
Cremations	**Low weight**	**Low to medium weight**	**Medium weight**	**Medium to high weight**	**High weight**
Average Archaeological	57g	Up to 750g	Up to 1500g	Up to 2250g	Up to 3000g
Average Modern	1000g	Up to 1400g	Up to 1800g	Up to 2700g	Up to 3600
F8 cremation compared to archaeological material	16g				
F8 cremation compared to modern material	16g				

Table 3 Quantification comparisons between average archaeological, modern and the F8 cremation.

Cremations in containers are normally larger than cremations in pits and finely crushed cremations tend to be smaller due to poor preservation. The F8 cremation at 16g is very small compared to both modern and average archaeological cremations, despite the presence of an urn, but this is likely to be the result of later disturbance/truncation of the burial pit.

Fragmentation

The fragmentation of bone resulting from the cremation process may be increased by funerary practices such as raking and tending of the pyre, collection of bone at the pyre site, deliberate crushing prior to burial, as well as a result of post-depositional processes, excavation and processing (McKinley, 1989).

The maximum size in this cremation was 22mm, the next greatest length is 16mm, with most fragments (in terms of count and weight) in the 5-9mm size range. Some cremations produce fragments of around 70-100mm or more. Little bone was recorded as 1mm or less, where often there is considerable numbers of small fragments. The overall small range of sizes and lack of larger fragments and smaller fragments might suggest heavy raking of the cremation while burning. The lack of very large fragments and numerous smaller pieces is less common in urned cremations and might suggest poor soil preservation, poor collection prior to placing in the urn or over raking of remains.

In terms of fragment count, 12% of the fragments measured over 10mm in size, which is a greater degree of fragmentation than the average for an archaeological cremation.

The overall degree of bone fragmentation is more than that generally seen in archaeological cremations where an average of 50% of bone fragments are over 10mm in size (McKinley, 1994). Around 42% of the bone measured between 5 and 9mm and approximately 23% was recorded at 2-4mm, in terms of fragment count 23% was less than 1mm in size.

Colour
The colour of cremated bone depends on a range of factors including the maximum temperature reached, the length of the cremation process, the type and amount of fuel, the quantity of oxygen, the amount of body fat as well as on the degree of uniformity of exposure to the heat across the body. A correlation has been found between the temperature attained and colour changes. Cremated bone can exhibit a large range of heat-induced colour variation from normal coloured (unburnt), to black (charred: c.300°C), through hues of blue and grey (incompletely incinerated: up to c.600°) to fully oxidised white (> c.600°C) (McKinley, 2004).

Approximately 95% of the bone was fully oxidised, much of the bone was not fully cremated. Several fragments of blue-grey bone were recorded. The variation in colour might suggest that the cremation was not raked and tended sufficiently to ensure fully burning of all of the remains.

Surface changes
Surface changes such as warping, cracking and fissuring are characteristics of cremated bone and are produced during the process of dehydration undergone by bone exposed to heat. The pattern of heat-induced bone changes in colour and texture can be exploited to infer the technological aspects of the ritual, the condition of the body at the time when the cremation process took place and the nature of post-depositional disturbance (Shipman et al.1984).

Approximately 50% of the bone in this assemblage showed warping, twisting, cracking and fissures, with fragments that were burnt at higher temperature and fully oxidised.

Elements and species identified
Two fragments of human skull were seen and one probable phalange fragment was recorded. Most fragments were too heavily fragmented and damaged to identify to element.

Age, sex and pathologies
No elements were seen that would allow estimation of age, sex or stature.

No pathologies were observed on any of the bone. The lack of larger fragments would possibly affect this.

Additional finds
No animal bone or additional finds were identified.

Conclusions
The date of the cremated bone is Middle Bronze Age and cremations are common from this period. However, many cremations are from urns at this time, which can substantially increase the quantity and quality of a cremation and lead to a greater number of larger fragments and generally better preservation. Some Bronze Age cremated material was recovered from a site at Brightlingsea in Essex (Curl, 2017) which produced considerably larger amounts of bone in each urned cremation and cremations without vessels were almost destroyed. At Brightlingsea the larger fragments were approximately 110mm. The largest size fragment from Walton-On-The-Naze (Curl, 2018) is 35mm in length, with fragmentation at this site thought to contribute to the heavy fragmentation and small size of the assemblage. The remains

from F8 represent a very small cremated assemblage, but this is likely the result of later disturbance/truncation of the burial pit.

8 Environmental assessment and charcoal analysis

by Lisa Gray MSc MA ACIfA Archaeobotanist

8.1 Environmental assessment

Introduction – aims and objectives

Six samples were presented for assessment. These were taken from two prehistoric ring ditches and pits. Two of the pits contained Middle Bronze Age urns with F8 containing cremated bone (see Table 4).

The report will assess the significance and potential of the plant macro-remains in the samples, consider their use in providing information about diet, craft, medicine, crop-husbandry, feature function and environment.

Sample	Finds number	Feature number	Feature type	Date	Bulk sample size (L)
<1>	10	F4	Ring-ditch A	Prehistoric	40
<2>	8	F6	Charcoal-rich pit	?Prehistoric	10
<3>	19	F8	Cremation burial	Middle Bronze Age	40
<4>	21	F8	Cremation burial	Middle Bronze Age	40
<5>	12	F9 sx 1	Ring-ditch B	Ring-ditch B	40
<6>	25	F12	Pit	Middle Bronze Age	40

Table 4 Sample details

Sampling and processing methods

Samples were taken and processed by Colchester Archaeological Trust. 210 litres of soil were sampled, and all samples were completely processed using a Siraf-type flotation device. Flot was collected in a 300 micron mesh sieve then dried.

Once with the author the flots were scanned under a low powered stereo-microscope with a magnification range of 10 to 40x. The whole flots were examined. The abundance, diversity and state of preservation of eco- and artefacts in each sample were recorded. A magnet was passed across each flot to record the presence or absence of magnetised material or hammerscale.

Identifications were made using uncharred reference material (author's own and the Northern European Seed Reference Collection at the Institute of Archaeology, University College London) and reference manuals (such as Beijerinck 1947; Cappers *et al.* 2006; Charles 1984; Fuller 2007; Jacomet 2006). Nomenclature for plants is taken from Stace (Stace 2010). Latin names are given once and the common names used thereafter. Low numbers of non-charcoal charred plant macro-remains were counted. Uncharred plant remains, fauna and magnetic fragments were given estimated levels of abundance unless, in the case of seeds, numbers are very low in which case they were counted.

At this stage numbers given are estimates but where only one item is present that has been noted. Identifiable charred wood >4mm in diameter has been described as that. Charred wood <4mm diameter are described as 'flecks'. Samples this size are easier to break to reveal the cross-sections and diagnostic features necessary for identification and are less likely to be blown or unintentionally moved around the site (Asouti 2006, 31; Smart and Hoffman, 1988, 178-179). Fragments smaller than this and larger then

2mmØ were scanned incase any fragments of twig or roundwood survived.

Results

The plant remains (Table 5)

Charcoal flecks were present in each sample. Identifiable charcoal was found in features F4, F6, F8 and F12. One fragment of charred tuber resembling that of onion couch/false oat grass (*Arrhenatherum elatius* (L.) P. Beauv. Ex J.& C.Presl.) was found in feature 9 sx1 (ring-ditch B, sample <5>).

Uncharred plant remains were present in features F4, F6, F8, F9 and F12. These were seeds of ruderals and may be dried waterlogged seeds or modern. Most were testas of fat hen (*Chenopodium album* L.) (samples <1>, <2>, <4>, <5>, <6>). Ring-ditch B (F9 sx 1, sample <5>) contained low numbers of knotgrass (*Polygonum aviculare* L.), blackberry/raspberry (*Rubus fruticosus/idaeus*) and wild cabbage/mustard (*Brassica/ Sinapis* sp.). Pit F12 (sample <6>) contained low numbers of wild cabbage/mustard seeds, fat hen and hedge/lady's bedstraw (*Galium verum/mollugo*). The hedge/lady's bedstraw did contained internal tissue so may be modern. Ring-ditch A (F4, sample <1>) also contained a possible modern hedge/lady's bedstraw seed.

Sample	Bulk sample size (L)	Flot volume (ml)	Charred			Uncharred			
			Tuber fragment?	Charcoal >4mmØ	Charcoal <4mmØ	Seed			Root/rhizome fragments
			a	a	a	a	d	p	a
<1>	40	10	-	1	2	2	1	3	2
<2>	10	50	-	2	3	1	1	3	1
<3>	40	Hand-picked charcoal	-	2	2	-	-	-	-
<4>	40	-	-	3	2	2	1	3	1
<5>	40	10	1	-	2	2	1	3	3
<6>	40	6	-	1	2	1	1	3	-

Table 5 The plant remains

Key to Table 5:
a = abundance [1 = occasional 1-10; 2 = moderate 11-100; and 3 = abundant >100];
d = diversity [1 = low 1-4 taxa types; 2 = moderate 5-10; 3 = high];
p = preservation [1 = poor (family level only), 2 = moderate (genus), 3 = good (species identification possible)]

Fauna

No faunal remains were found in these flots.

Inorganic remains

No artefactual inorganic remains were found in any of the flots.

Discussion

Biases in recovery, residuality, contamination

Nothing with regards biases in recovery, residuality or contamination was highlighted for any of these samples at the time of writing.

Evidence for bioturbation and possibly intrusivity was present only in the form of un-charred root/rhizome fragments in most of the samples.

Quality and type of preservation
The plant remains in these samples were preserved by charring and anaerobically rather than by waterlogging as the uncharred seeds that are present are types with robust endocarps that can survive changing levels of waterlogging and aeration of the soil.

Charring of plant macrofossils occurs when plant material is heated under '…reducing conditions…' where oxygen is largely excluded (Boardman and Jones 1990, 2) leaving a carbon skeleton resistant to biological and chemical decay (Campbell *et al.* 2011,17). These conditions can occur in a charcoal clamp, the centre of a bonfire or pit or in an oven or when a building burns down with the roof excluding the oxygen from the fire (Reynolds, 1979, 57).

Potential of these samples to provide useful information
Further analysis of the charcoal may reveal information about fuel use in the cremation pyres and identification of suitable taxa may provide items for radiocarbon dating.

The onion couch/false oat fragment in found in feature 9 sx1 (ring-ditch B, sample <5>) is a find common on Bronze Age pyre debris (see Greig 1991, Moffett 1991, Murphy 1983, Robinson 1988) and have been interpreted as kindling (Murphy 1983, 127) with the rhizomes present due to the whole plant being uprooted (Robinson 1988, 102) before joining the pyre. Another interpretation of these finds is that they were used to create fire-breaks when pyres were built on long grassland (Stevens 2008, 459).

Significance of the samples and recommendations for further work
Samples <1>, <2>, <3>, <4> and <6> contained fragments of identifiable charcoal. If these are identified they may provide useful information about fuel use and provide taxa suitable for radiocarbon dating. The fragments of onion couch/false oat grass was the only one seen in any of the samples and has been counted. Aside from the charcoal identification, no the work is recommended on these samples.

8.2 Charcoal analysis
by Lisa Gray MSc MA ACIfA Archaeobotanist

Introduction – aims and objectives
During the archaeobotanical assessment (see above) five samples were found to contain charcoal fragments large enough for identification (see Table 6)

Sample	Finds no.	Feature number	Feature type	Date
1	10	F4	Ring-ditch A	Prehistoric
2	8	F6	Charcoal-rich pit	?Prehistoric
3	19	F8	Cremation burial	Middle Bronze Age
4	21	F8	Cremation burial	Middle Bronze Age
6	25	F12	Pit	Middle Bronze Age

Table 6 Sample details

Charcoal identification
Only fragments of charred wood larger than 4mm (sieve mesh aperture size) or roundwood or twigs larger than 2mm were selected for identification. The reason for this size selection was based on observations made by charcoal specialists that fragments larger than this size are easier to break to reveal the cross-sections necessary, meaning that more diagnostic features are likely to survive (Asouti 2006, 31; Smart and Hoffman, 1988, 178-179). When fragments have been broken to reveal anatomy they have been wrapped in foil to keep those fragments intact so they can be counted. Charcoal identifications were made using modern reference slides (author's own) and anatomical guides Gale and Cutler 2000, Hather 2000, InsideWood 2004, Schoch et al. 2004 and Wheeler 2011).

Results
Oak (*Quercus* sp.) stem/branch wood was the only taxa type in these samples and they were distributed as follows:
Sample 1 – 1 fragment
Sample 2 – 15 fragments
Sample 3 – 35 fragments
Sample 4 – 64 fragments
Sample 6 – 1 fragment
Oak wood cannot be differentiated based on their microscopic wood anatomy alone (Schoch *et al.* 2004).

Recommendations for radiocarbon dating
Unfortunately, oak trees tend to be regarded as too long-lived to provide accurate radiocarbon dates so no fragments can be recommended from these samples.

9 Radiocarbon dating

A sample of cremated human bone from F8 was sent to SUERC Scottish Universities Environmental Research Centre for radiocarbon dating.

The analysis produced a 2-sigma calibrated date (at 95.4% confidence) of 1374 to 1125 BC (SUERC-81584 (GU48804)) (see Appendix 3).

10 Discussion

Archaeological excavation of Area B revealed two prehistoric ring-ditches, a Middle Bronze Age cremation burial and two other possible burial pits containing fragments of Middle Bronze Age urns. In addition were another three possible prehistoric features (two pits and a posthole), two post-medieval/modern ditches or erosion hollows and two natural features/tree-throws.

Middle Bronze Age
When ring-ditch F4 was first recorded during the 2011 trail-trenching evaluation (CAT Report 627, T64 F31) it was identified as the location of a possible Iron Age roundhouse. Results from the current excavation can now dismiss this interpretation as unlikely, as no internal structural features (ie postholes) or evidence of domestic occupation was present. Unfortunately it is uncertain if posthole F11 is contemporary with ring-ditch F4 and if it is, what its presence might indicate. Excavation did, however, reveal a second ring-ditch side-by-side with the first. Both were of a similar size and shape, although one of the ring-ditches included a 0.6m wide break/entrance along the eastern side of the ditch. Unfortunately no good dating evidence was recovered from either, other than 'prehistoric' flint, two sherds of intrusive medieval pottery and a single sherd of Middle Bronze Age pottery found with one of the medieval sherds.

To the south-southeast of the two ring-ditches was a small cluster of pits. The pottery assemblage from pits F8, F10 and F12, along with the cremated human bone from F8, suggests at least one, but potentially three, Middle Bronze Age urned cremation burials typical of the 'Ardleigh-style' Deverel-Rimbury tradition. It is therefore likely that the ring-ditches were barrows, and together with pits F8, F10 and F12 formed a small Middle Bronze Age cemetery. Located on a ridge of high ground which falls away steeply to the north and rises slightly to the south before gently sloping away, the barrows may have formed a distinctive feature in the landscape (see contours on Fig 2).

A number of Middle Bronze Age barrow cemeteries have been excavated within 20km of the development site. Containing cremation urns in the 'Ardleigh-style', the burials

had either been buried within or clustered around barrows. These cemeteries are broadly defined by their: large ring-ditches with no internal burials; smaller ring-ditches often (though not always) with internal burials which have been inserted between the larger ring-ditches; flat burials in between the ring-ditches; and fairly large open spaces (Clarke and Lavender 2008, 59). Such cemeteries have been recorded at Ardleigh, Brightlingsea, St Osyth, Birch, Great Tey and Chitts Hill in Colchester (Brown 1999; Clarke & Lavender 2008; Germany 2007; Holloway and Spencer 2005; Brooks & Pooley 2018; Crummy 1977).

How do the features from Area B compare to these Middle Bronze Age cemeteries? At Ardleigh (Brown 1999) the ring-ditches ranged in diameter from 3-20m, at Brightlingsea 4-12m diameter and at St Osyth, Birch and Chitts Hill 3.8-8m diameter. At 5.5m diameter maximum, the two barrows from Area B therefore fit within the lower end of this size range.

As on Area B, few of the cemeteries produced burials within the ring-ditches. For example, only eight out of a total of 48 cremations were recovered from three ring-ditches at Brightlingsea, the rest being located in burial pits between the barrows (Clarke & Lavender 2008). The majority of burials from St Osyth, Birch and Chitts Hill were also excavated around the barrows. In these instances it has been suggested that the burials had been placed relatively high in the mound rather than underneath it, and have therefore been truncated and lost by activities like levelling and ploughing. Clarke & Lavender (2008, 59) suggest that between 250 and 500 burials might have been lost in this way at Brightlingsea. The exception to this trend is a large, 23m diameter, barrow from Great Tey which contained 14 burials all within the southern half of the barrow (Brooks & Pooley 2018).

It also might seem unusual that only two ring-ditches were identified on Area B, especially as cemeteries like Ardleigh, Brightlingsea and St Osyth contained over 27, 31 and 22 barrows respectively. However, the cemeteries at Birch and Chitts Hill were much smaller with only 7 and 3 barrows excavated, with the two from Area B perhaps representative of a smaller family cemetery. It is also worth noting that at some of the bigger cemeteries, like Ardleigh in particular, there are significant gaps between some of the ring-ditches (Brown 1999). This raises the possibility that there might be other ring-ditches on the development site that were not identified during the earlier evaluation phase (as ring-ditch B was not). The barrow at Great Tey does appear to be an isolated example with no other ring-ditches or burials identified within the excavation area, but the remains of a probable Bronze Age barrow approximately 350m to the west-southwest might suggest that other barrows are undiscovered in the immediate landscape (Brooks & Pooley 2018).

Middle Bronze Age urns of the Ardleigh-style are broadly dated to the late 2nd millennium, *c* 1500-1000 BC. Radiocarbon (C14) dates on burials with Ardleigh-style urns at Brightlingsea gave calibrated ranges falling between *c* 1600-1300 BC (Clarke & Lavender 2008, table 1 & 57). Dates on charcoal recovered from un-urned cremations from the cemetery at Ardleigh also fell within a similar date range (Brown 1996, table 1). Therefore the radiocarbon date produced from F8 (1374 to 1125 BC) would place this Middle Bronze Age burial group within the later part of this burial tradition.

Post-medieval/modern

Two post-medieval/modern ditches or erosion hollows were recorded along the eastern edge of the development site. Feature F1 appears to correspond to a cropmark previously identified on the development site (CAT Report 583). This cropmark was identified as a modern boundary ditch during the evaluation where is was recorded as F113 in T32 and F109 in T36 (CAT Report 627). The earliest OS maps show the boundary ditch in existence to the northeast of F1, but do not show it continuing this far to the south. It is possible that the original ditch continued further to the southwest and had silted-up before the OS maps were made. Feature F5 may possibly be an earlier

boundary feature, or something like an erosion hollow if domestic animals were grazed on the field in the past.

11 Acknowledgements

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13 Abbreviations and glossary

Bronze Age	period from *c* 2500 to 700 BC
CAT	Colchester Archaeological Trust
CBCAA	Colchester Borough Council Archaeological Advisor
CBM	ceramic building material, ie brick/tile
CHER	Colchester Historic Environment Record
CIfA	Chartered Institute for Archaeologists
context	specific location of finds on an archaeological site
feature (F)	an identifiable thing like a pit, a wall, a drain: can contain 'contexts'
Iron Age	period from 700 BC to Roman invasion of AD 43
layer (L)	distinct or distinguishable deposit (layer) of material
medieval	period from AD 1066 to *c* 1500
Middle Bronze Age	period from *c* 1500 to 1000 BC
modern	period from *c* AD 1800 to the present
natural	geological deposit undisturbed by human activity
NGR	National Grid Reference
OASIS	**O**nline **A**cces**S** to the **I**ndex of Archaeological Investigation**S**, http://oasis.ac.uk/pages/wiki/Main
post-medieval	period from *c* AD 1500 to *c* 1800
prehistoric	pre-Roman
residual	something out of its original context, eg a Roman coin in a modern pit
Roman	the period from AD 43 to *c* AD 410
section	(abbreviation sx or Sx) vertical slice through feature/s or layer/s
wsi	written scheme of investigation

14 Contents of archive

Finds: one box

Paper record

One A4 document wallet containing:
The report (CAT Report 1298)
CBCAA brief, CAT written scheme of investigation
Original site records (feature and layer sheets, finds record, plans/sections)
Site digital photos and log

D**igital record**

The report (CAT Report 1298)
CBCAA brief, CAT written scheme of investigation
Site digital photos and log
Graphics files
Survey data

15 Archive deposition

The paper and digital archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Roman Circus Walk, Colchester, Essex CO2 7GZ, but will be permanently deposited with Colchester Museum under accession code COLEM: 2016.78.

Distribution list:
Mark Davies, Mersea Homes Ltd
Jess Tipper, Colchester Borough Council Planning Services
Essex Historic Environment Record

Colchester Archaeological Trust
Roman Circus House,
Roman Circus Walk,
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tel.: 01206 501785
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Checked by: Philip Crummy
Date: 19.7.2018

Appendix 1 Context list

Context no.	**Finds no.**	**Context**	**Description**	**Date**
L1	-	Topsoil	Firm, dry, medium brown silty-clay with flecks of charcoal, brick and tile, >5% stone	Modern
L2	-	Natural	Firm, dry, medium brown sand, >20% gravel and >70% stone	Post-glacial
F1	1, 3	Ditch/ erosion hollow	Firm, dry medium brown sandy-silt with >4% brick and tile fleck inclusions, 10% stone	Post-medieval
F2	-	Tree-throw / natural feature	Soft, moist, medium grey/brown sandy-silt with rare charcoal flecks, 3% stone	Undated/ post-glacial
F3	-	?Natural	Firm/hard, medium grey/brown sandy-silt, >10% stone	Post-glacial
F4	9 10<1> 17	Ring-ditch A	Firm, medium-dark grey/brown/reddish sandy-silt with >17% stone	Prehistoric
F5	4	Ditch/ erosion hollow	Hard, dry medium yellow/orange/grey/brown sandy-silt with charcoal, brick and tile fleck inclusions, common stone	Post-medieval/ modern
F6	7 8<2>	Charcoal-rich pit	Loose, dry, medium/dark brown/black sand with charcoal flecks, 1% stone	?Prehistoric
F7	5	Pit	Soft, dry silty-sand, 1% stone	?Prehistoric
F8	18 19 <3> 20 21<4>	Cremation burial	Soft, moist, medium grey/brown sandy-silt with charcoal flecks	Middle Bronze Age, *c* 1500-1000 BC
F9	11 12<5>	Ring-ditch B	Loose/firm, dry, medium yellow/orange/grey/ brown sandy-silt with rare charcoal flecks, common gravel and stone	Prehistoric
F10	14	Burial pit	Soft/friable, dry, medium grey/brown sandy-silt	Middle Bronze Age, *c* 1500-1000 BC
F11	22	?Posthole	Soft, moist, light-medium grey/brown silty-sand with 2% stone	?Prehistoric
F12	15 24 25 <6>	Burial pit	Loose/soft, dry, light-medium orange/grey/brown silty-sand, 5% stone	Middle Bronze Age, *c* 1500-1000 BC

Finds numbers 2, 6 & 13 were all soil samples that were discarded after processing as there was no viable flot to send for assessment.

Appendix 2 Bulk finds catalogue

Key: BS = heat altered (burnt) stone

Context	Find no.	Find type	Pottery fabric	Description	No.	Wt/g	Finds Spot date
F1 sx1, ditch/ erosion hollow	1	CBM		Peg-tile, orange sandy fabric, one piece with part of round peg-hole	6	150	Medieval to post-medieval (*c* 14C+?)
		CBM		Small abraded piece of brick, brownish-orange sandy fabric, abraded	1	10	Late medieval to post-medieval
		Iron		Small corroded fragment of iron	1	6	-
		Pot	20	Small sandy coarseware sherd	1	2	Medieval, *c* 13-14C
		Stone		Sandstone – pale greenish hue, piece from a stone with naturally rounded surfaces (discarded)	1	42	Natural
F1 sx2, ditch/ erosion hollow	3	CBM		Piece of brick with grey glaze on surface, fabric fired pale grey	1	92	Post-medieval, *c* 15-17/E18C
		CBM		Peg-tile, orange sandy fabric, abraded	3	32	Medieval to post-medieval (*c* 14C+?)
		Pot	21	Abraded	1	8	Medieval, *c* 13/14-15C
F4, ring-ditch A	9	Flint		Thick cortical removal flake (secondary flake) cortex over much of piece although previous flake removal scar on dorsal area	1		?Prehistoric
F4, cleaning over ring-ditch A	16	Flint		Small squat flake, cortex on striking area, use wear/edge damage on one edge	1		?Prehistoric
	23	Pot	20	Very small slightly abraded sherd, sand-tempered, dark grey, moderately hard, probably medieval	1	2	?Medieval, *c* 13-14C
F4 sx7, ring-ditch A	17	BS		Flint, heat affected (discoloured) rather than burnt- calcified and crazed (discarded)	2	28	?Prehistoric
F5, ditch/ erosion hollow	4	CBM		Peg-tile, orange sandy fabric	10	162	Medieval to post-medieval (*c* 14C+?)
		Iron		Corroded chain link rounded ends, length 65mm (corrosion gap/break at one end).	1	48	Post-medieval/ modern
		Pot	M	Three abraded sherds	3	14	Middle Bronze Age
		Pot	20	Base edge sherd – not sooted (probably from a cooking pot or squat jug) sandy fabric, pale grey surfaces (Fabric 13T or 20)	1	58	Medieval, *c* 13-14C
		Flint		Flint flake, small area of cortex on dorsal face, earlier flaking scars, abrupt retouch and some edge damage/ use wear around much of edge – the extensive and often abrupt retouch suggests this can be classified as a damaged scraper	1		Prehistoric
F6, charcoal-rich pit	7	BS		Flint, heat affected (discoloured) rather than burnt- calcified and crazed (discarded)	1	14	?Prehistoric
F7, pit	5	BS		Flint, heat affected (discoloured) rather than burnt- calcified and crazed (discarded)	4	56	?Prehistoric
F8, cremation burial	18	BS		Sandstone/quartzite, half of a cobble, heat affected (discarded)	1	242	?Prehistoric
		BS		Flint, heat affected (discarded)	3	54	?Prehistoric
		Pot	M	Ardleigh-type urn, joining sherds from upper part of pot (pot 8.1) in two large sections (illustrated) – some finger-wipe marks angled and horizontal on interior. ***Decoration****: decorated on rim top with spaced finger-tip impressions; continuous band of spaced finger end impressions just below rim and decorated on upper body with individual finger-tip impressions of which the surviving portion suggests panel-like areas of vertical rows with extra dot rows (see Brown 1999 fig 57 no. 22, fig 58 no. 27, fig 68 no. 113 Ardleigh & fig 72 no. 133 from White Colne) – varying size might indicate*	26	1230	Middle Bronze Age (*c* 1500-1000 BC)

Context	Find no.	Find type	Pottery fabric	Description	No.	Wt/g	Finds Spot date
				use of different intensity with different fingers, most pushes are from left-right possibly more easily executed pushing away from the body to the left with the left hand – although this simple decoration could easily be achieved using either hand – a smaller number of impressions are pushed in a downward direction. ***Fabric**: slightly open, grog-tempered, oxidised surface margin (Fabric M).* ***Dating**: Brightlingsea C14 indicates a range c 1600-1200 BC (1600-1300 Clarke & Lavender 2008 – although one date is 2199-1510 at 95.4% probability (Clarke & Lavender 2008, Table 1, 18 – taken on charcoal from cremations).*			
		Pot	M	Three small rim sherds (not joining), most probably part of pot 8.1	3	36	
		Pot	M	Other sherds almost without doubt part of pot 8.1 all with decoration (average weight 18.7g)	28	524	
		Pot	M	Other sherds almost without doubt part of pot 8.1 plain – either laminated pieces or small sherds (average weight 6.4g)	35	226	
		Pot	M	Small sherds/fragments, almost without doubt part of pot 8.1 (average weight 1.8g)	96	180	
		Pot	M	Three decorated body sherds, almost certainly pot 8.1 which have some small decorative fingernail impressions	3	74	
		Pot	M	Rim sherd from a large urn, close set fingertip impressions just below rim top, single fingernail impression on rim top (pot 8.2).	1	34	
		Pot	M	Rim sherds from an urn/urns, two small sherds (not joining) deep finger end impressions (pot 8.3 – this is appears to be a separate pot to pots 8.1 & 8.2).	2	20	
	21 <>	Pot	M	Small sherds/fragments, abraded	33	88	Middle Bronze Age
F9 sx1, ring-ditch	11	Pot	M	Abraded, laminating/degraded sherd, appears to be pottery (rather than fired clay) as grog-tempered	1	24	Middle Bronze Age (*c* 1500-1000 BC)
		Pot	13T	Very small abraded sherd sand-tempered – moderately hard, probably medieval	1	2	?Medieval, *c* 12-13C
F10, ?burial pit	14	Pot	M	Sherds from part of base edge and wall base (decorated with occasional finger tip impression) of an urn, other laminated small sherds	17	125	Middle Bronze Age (*c* 1500-1000 BC)
F11, ?posthole	22	BS		Flint, heat affected (discoloured) rather than burnt- calcified and crazed (discarded)	1	6	?Prehistoric
F12, pit (cleaning over surface)	15	Pot	M	One sherd from an urn with heat crazing – fire or firing damage	9	74	Middle Bronze Age (*c* 1500-1000 BC)
		Pot	M	Single sherd appears to be from a thinner walled vessel(?) than the urn sherds	1	4	
F12, ?burial pit	24	Pot		Body sherds from a large urn, includes two large non-joining sherds, one with applied cordon decorated with close set finger-tip impressions – sherds otherwise plain (see *Brown 1999* pots fig 55 no. 5 fig 56 no. 18, also found with handle dec as in fig 58 no. 33; also fig 70 no 124 & 125 & fig 73 no. 138 from White Colne – also at Brightlingsea – several examples at the cemetery at Chitts Hill where overall body decoration may be more limited – Crummy 1977). Pot has oxidised brownish-orange surface and margin dark grey fabric and interior, pot cracked and flaking in places (localised) which suggests part of it has been exposed to a fire (fire or firing damage). *note: some thin/faint sooted residue internally.*	15	1256	Middle Bronze Age (*c* 1500-1000 BC)
	25	Pot	M	Small sherd, probably MBA	1	2	

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

10 September 2018

Laboratory Code	SUERC-81584 (GU48804)
Submitter	Laura Pooley Colchester Archaeological Trust Roman Circus House Roman Circus Walk Colchester Essex CO2 7GZ
Site Reference	COLEM:2016.78 NGAUE Area B
Context Reference	F8, finds no. 21
Material	Cremated bone : Human
$\delta^{13}C$ relative to VPDB	-22.6 ‰
Radiocarbon Age BP	2996 ± 28

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

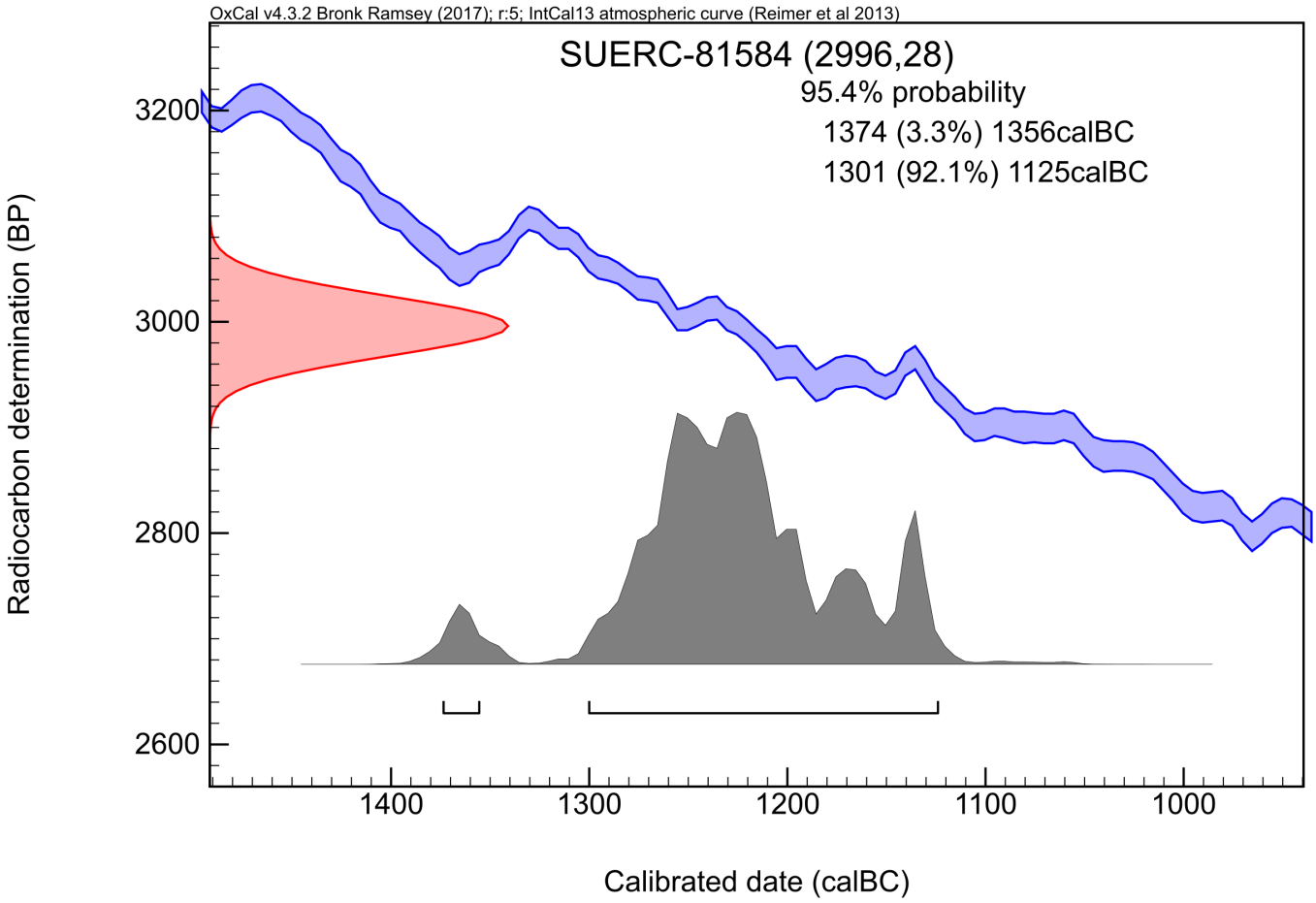
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

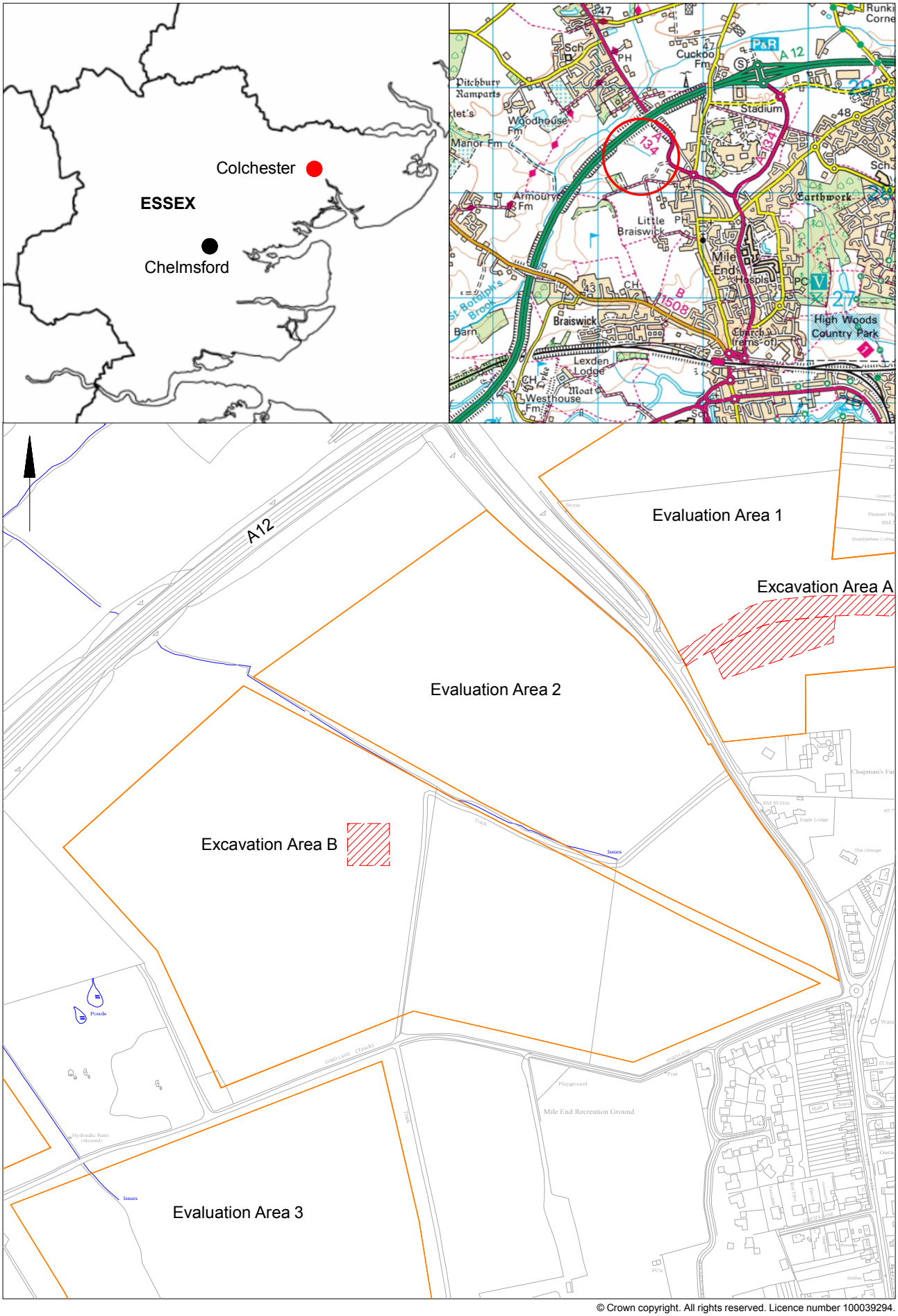


Fig 1 Site location.

0 100 m

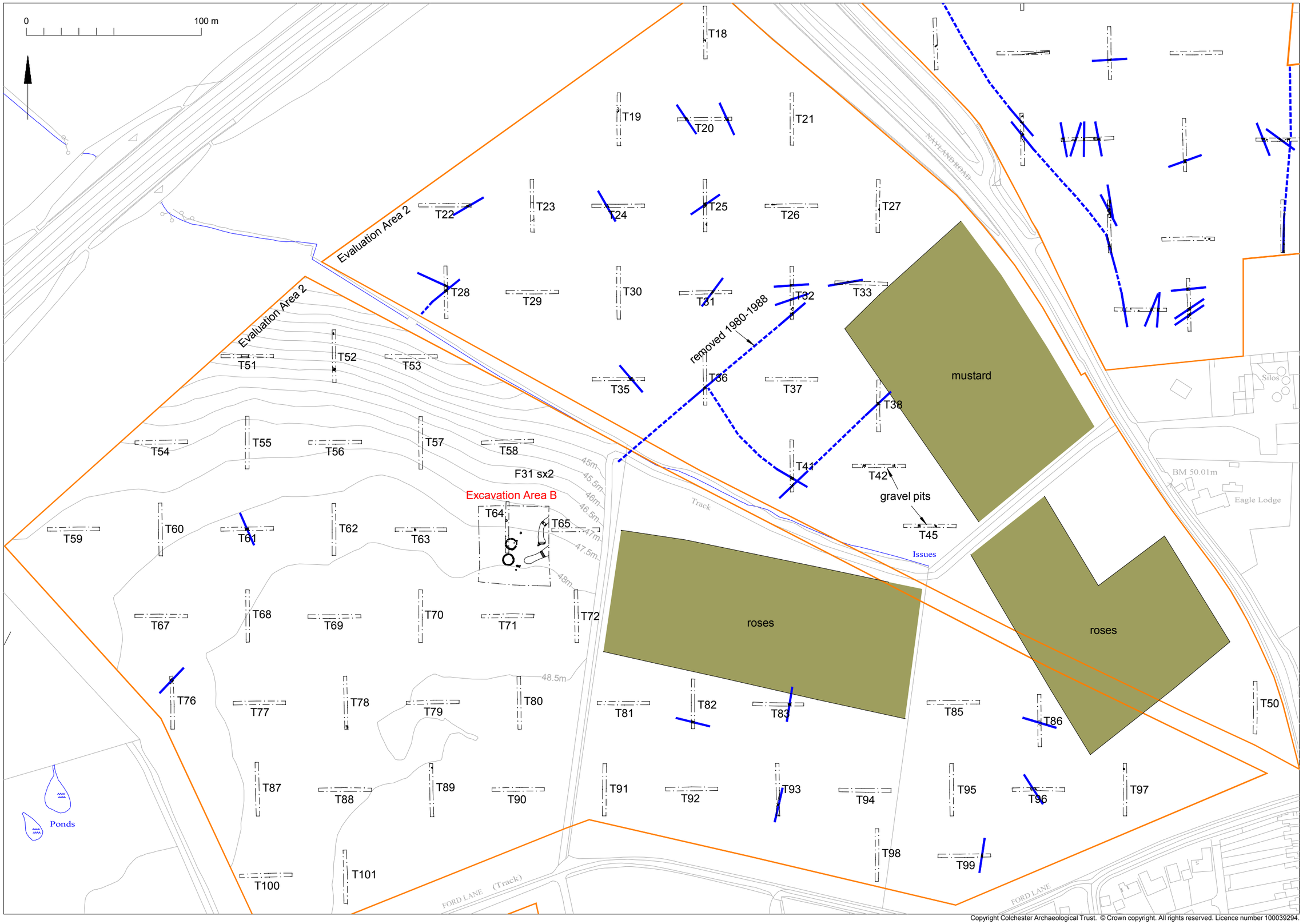


Fig 2 Excavation Area B shown in relation to the results from Evaluation Area 2 (ditch projections shown in blue).

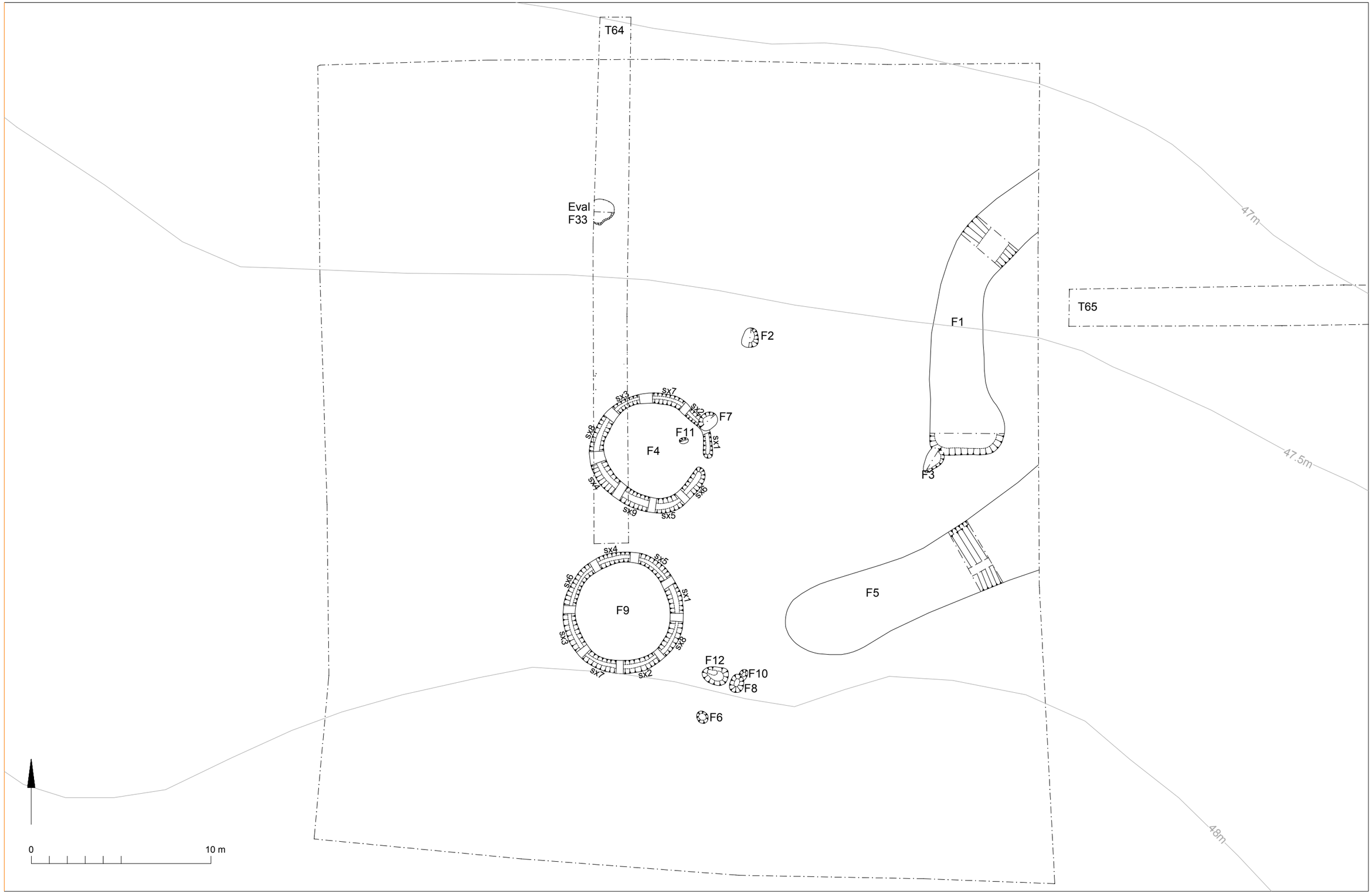


Fig 3 Results

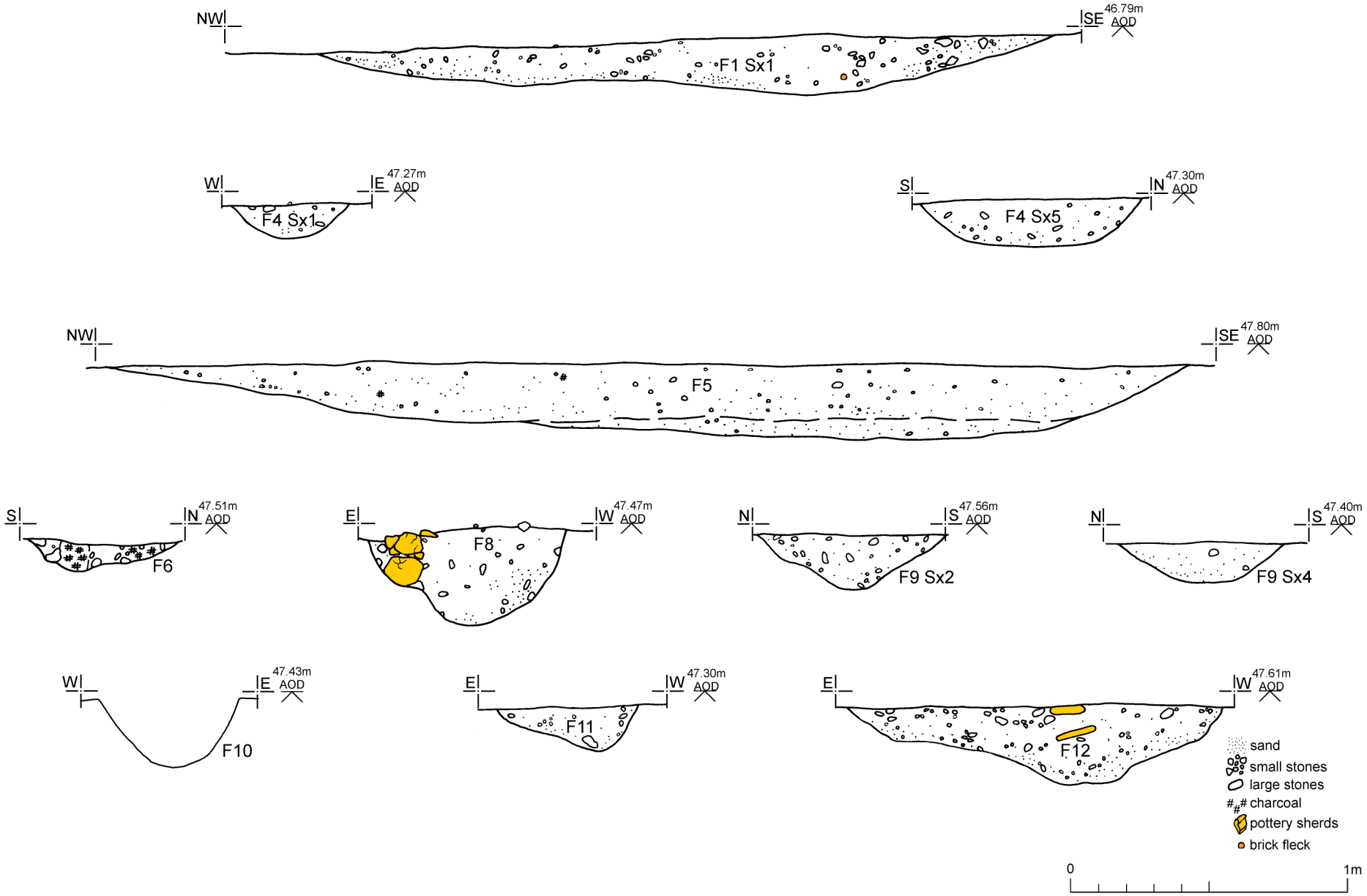


Fig 4 Feature sections.

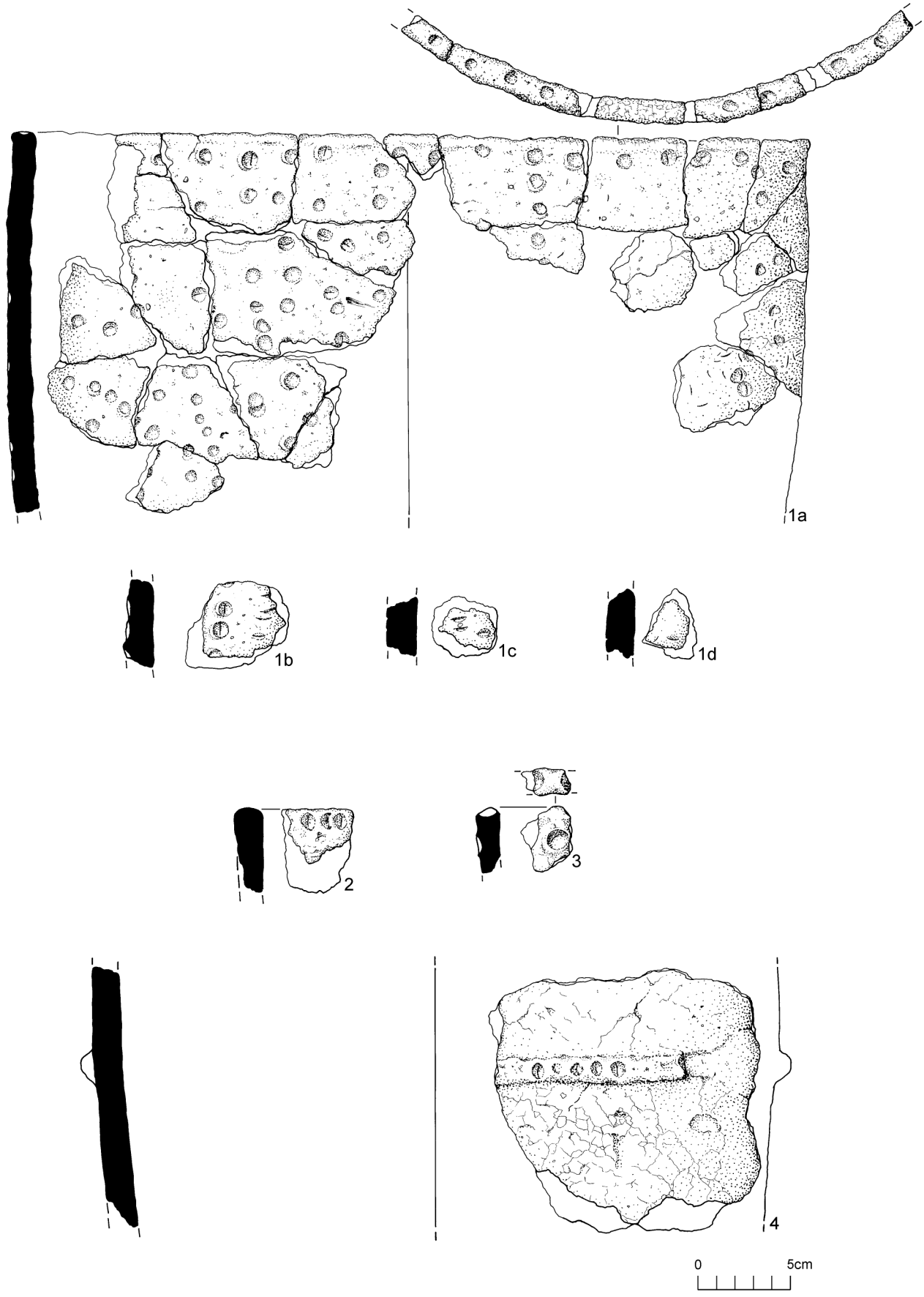


Fig 5 Middle Bronze Age pottery.

Essex Historic Environment Record/
Essex Archaeology and History

Summary sheet

Address: **Area B of the Colchester North development, land off Wildeve Avenue, Colchester, Essex, CO4 6AH**	
Parish: Colchester	***District:*** Colchester
NGR: TL 984 238 (centre)	***Site code:*** CAT project ref.: 16/07h CHER ref: ECC3831 OASIS ref: colchest3-323053
Type of work: Excavation	***Site director/group:*** Colchester Archaeological Trust
Date of work: 21st-30th May 2018	***Size of area investigated:*** 0.18 ha
Location of curating museum: Colchester museum accession code COLEM: 2016.78	**Funding source:** Developer
Further seasons anticipated? No	***Related CHER/SMR number:***
Final report: CAT Report 1298	
Periods represented: Prehistoric, Middle Bronze Age, post-medieval/modern	

Summary of fieldwork results:

An archaeological excavation was carried out on Area B of the Colchester North development, Colchester, Essex in advance of the construction of urban residential, commercial and community buildings and associated works.

Excavation revealed a small Middle Bronze Age cemetery consisting of one definite (F8) and two probable cremation burials (F10 and F12) in a small cluster to the south-southeast of two prehistoric ring-ditches. All three burials contained the disturbed remains of Ardleigh-style Deverel-Rimbury cremation urns, but only F8 included a small quantity of cremated human bone. This bone produced a 2-sigma calibrated radiocardon date (at 95.4% confidence) of 1374 to 1125 BC. No dating evidence was recovered from the ring-ditches.

Three possible prehistoric features (two pits and a posthole), two post-medieval/ modern ditches/erosion hollows and two natural features/tree-throws were also excavated.

Previous summaries/reports: CAT Reports 583 & 627	
CBC monitor: Jess Tipper	
Keywords: Middle Bronze Age, cremation burial, ring-ditch, Ardleigh-style Deverel-Rimbury urns	***Significance:*** **
Author of summary: Laura Pooley	***Date of summary:*** September 2018

Written Scheme of Investigation (WSI) for an archaeological excavation at Colchester Northern Growth Area Urban Extension (NGAUE), Mile End Road, Colchester, Essex, CO4 5FS

NGR: TL 985 283 (centre)

Planning reference: 121272

Client: Brad Davies, Mersea Homes Ltd

Curating Museum: Colchester

Museum accession code: COLEM: 2016.78
UAD Event number: Area 1/A – ECC3830; Area 2/B – ECC3831; Area 3/C – ECC3832; Area 5/D – ECC 3833; Area 6/E – ECC3834
CAT Project code: 16/07h
OASIS Project id: colchest3-257615

Site Manager: Mark Baister

CBC Monitor: Jess Tipper

This WSI written: 14.7.2016

COLCHESTER ARCHAEOLOGICAL TRUST,
Roman Circus House,
Roman Circus Walk
Colchester,
Essex, C02 7GZ
tel: 01206 501785
email: archaeologists@catuk.org

Site location and description

The 110-hectare NGAUE site lies to the north of Colchester and in the historic parishes of Mile End and Great Horkesley (Fig 1). Site centre is NGR TL 985 283.

Proposed work

The proposed work comprises residential dwellings, a neighbourhood centre including commercial, residential and community uses, education uses, strategic landscaping, green infrastructure and areas for outdoor sport facilities, access (in detail where specified) related infrastructure and other works and enabling works.

Archaeological background

The following archaeological background draws on the Colchester Archaeological Trust report archive, the Colchester Urban Archaeological Database (UAD) and the Essex Historic Environment Record (EHER) accessed via the Heritage Gateway:

The NGAUE has already been the subject of a Desk-Based Archaeological Assessment commissioned by Mersea Homes (CAT Report 583), which highlighted a number of archaeological sites within the NGAUE boundaries. The DBA listed a number of archaeological sites within the 110-hectare area (Fig 1 of the DBA report) and thirteen with Areas 1-6. The sites are discussed below by Project Area (numbers in blue refer to the archaeological site numbers given in CAT Report 583).

Area 1

Site 9: The most important site in Area 1 is Martin Pechey's 1973 excavation (EHER 11845-7) during which he uncovered pits and ditches related to local production of medieval pottery. The kiln sites were not found, but the presence of 'wasters' from pottery production implies that the kilns should not be too far away. It should be noted that the map on the online EHER website shows this kiln site in the wrong place (in the field east of the A134, instead of under the A134).

Site 26 and 42: There are two surface scatters of medieval pottery within 300m of the Petchey site (26, 42). These may have been connected with pottery making, or they may simply be an indicator of local medieval occupation.

Site 32: Another site in A1 is an undated cropmark (probably an old field boundary).

Area 2

Sites 30 (EHER 11945) and 31: A2 contains the cropmarks of old field boundaries.

Area 3

Sites 23 and 24: Sites in A3 consist of two field names: 'Kiln field', a reference to brick or tile manufacture close to this site (23), and 'Cole-earth field', a name which may indicate some light industrial activity, or perhaps refers to the dark colour of archaeological debris on a field surface (24).

Area 4

Site 43: Apart from site 9 in A1, the other potential kiln site is 43 (EHER 12042). This is a record of a circular burnt make associated with medieval pottery. Again, this sounds like a medieval kiln site.

Site 15: The Chapman and André map of 1777 shows Cesterwald woods (15) encompassing A4 and also a broad belt of land stretching away to the south-west (bordered by the A12 on its western side and by the Bergholt Road on its southern side).

Areas 5 and 6

Site 19-21: The only sites in A5 and A6 are field names connected with the post-medieval brick and tile industry, or with small-scale mineral extraction (19-21).

Beyond NGAUE and Project Areas 1-6

A further 31 archaeological sites or listed buildings occur outside the six Project Areas. The most important of these are the late Iron Age or early Roman Moat Farm Dyke (part of the

defences of Camulodunum: site 1: EHER 11627); the ruined site of St Michael's church, Mile End (site 13: EHER 11671); and a group of Roman burials near the Asda Store (site 37: EHER 11799). There is also a registered garden at Severalls Hospital immediately to the east of the NGAUE (site 2).

The north-western corner of NGAUE coincides with an area of ancient woodland known as Cesterwald (site 15, mentioned above in relation to A4), and the Mile End Heath occupied a large block of land immediately east of NGAUE (site 17). These wooded and heath areas (now disappeared) define this area as essentially rural in the past. With the exception of the Roman cemeteries near the Asda store, recent evaluations have generally produced little of archaeological significance. It may be that the early Roman ditches found west of the General Hospital (site 10: EHER 19923) mark the northernmost extent of Roman-period activity in this area. With the exception of activity connected with a few medieval pottery kilns on the fringes of the heath or woodland, this area seems to have remained essentially rural until the post-medieval period.

2011 Evaluation (CAT Report 627)
In 2011 and in advance of proposed development, an evaluation by geophysical survey, fieldwalking and trial-trenching was carried out on the NGAUE site. For ease of discussion, NGAUE was split into Project Areas 1-6 (A1- A6).

The fieldwalking survey (FWS) was carried out on all available ploughed areas (49.8ha, in A1-A4). Finds were generally quite thinly spread, but there were three significant groups: an extended scatter of medieval pottery on the fields to the east of the 1973 excavation site (A1, FWS boxes B85, B86/B96, TL 9885 2850); a scatter on the field south of the 1973 excavation site (A2, FWS boxes B72/B73, TL 9875 2818); and one of Roman brick/tile (A3, FWS box D48, TL 9845 2775).

The geophysical survey (GS) was carried out by Dr Tim Dennis on a 4.5ha area around the 1973 excavation site (A1, and A2), and on a 1.44ha area on the potential kiln site close to the A12 (A4). This survey located a number of anomalies, but none of them were of the strength and intensity likely to be a kiln site.

The trial-trenching evaluation (TTE) covered 64ha in A1-A6, and consisted of 237 trenches. It had two aims: to test some of concentrations of fieldwalking finds and geophysical survey anomalies, and to provide a broad evaluation coverage of NGAUE.

The trenching of the GS anomalies (A1/A2, A4)
This was generally inconclusive and no kiln sites were found.

The trenching of significant FWS scatters
The trenching of the significant scatter of medieval pottery in A1 did not reveal a kiln site, but did identify areas of burning and gravel surface which are likely to be associated with the kilns (T242, T244: TL 9885 2850). The southern end of the same scatter produced only low quantities of medieval pottery: T248, T249. Trenching of the significant scatter in A2 did not produce any significant results. Trenching of the significant FWS scatter of Roman brick/tile in A3 (FWS box D48, T159: NGR TL 9845 2775) revealed rows of post-medieval bricks set in clay, burnt debris and layers of broken tiles. Given that this field is named 'Kiln Field', and that (retrospectively) the trench position coincides with an area of burnt ground identifiable on Google Earth, the finds in T159 are best explained as part of a structure adjacent to a post-medieval kiln. The size of the patch of burnt ground on Google Earth is approximately 40m across. The presence of Roman tile on the field surface is unexplained, unless it had been deliberately incorporated into the structure of the post-medieval kiln.

Trenching results on other parts of NGAUE
Significant trenching results in other parts of NGAUE were as follows: In A2, T64 exposed a prehistoric ditch which may be part of an Iron Age ring-ditch of the type commonly found surrounding timber structures. In other words, this may be an Iron Age house site. In A5, T196 revealed a pit containing fragments from sixteen smashed Roman pots mixed in with cremated human bone. This may have been a Roman cremation burial, but the number of

separate pots involved makes a more general 'ritual' interpretation attractive. It is unlikely that this was an isolated feature, and other Roman burial/ritual activity may be located nearby. In A6, T237 exposed a ditch which contained over 1kg of Late Iron Age or early Roman pottery. This must come from a local (but unknown) Roman site, which may be close to T237.

2014 Evaluation (CAT Report 786)
Some areas of NGAUE land were unavailable for evaluation in 2011. Consequently, there was a continuing requirement for a Stage 2 evaluation to complete the coverage of the development area. This was carried out in 2014 by means of thirty-four trial-trenches on the proposed sites of sports pitches and ponds along the northern site edge (along the southern edge of the A12 corridor) and on land close to Cants Rose Fields, off Nayland Road. Very little of archaeological significance was found. There were only twelve archaeological features, mainly post-medieval and later field ditches and pits. The very small amount of medieval material (one feature, three sherds) shows that the medieval kilns which must be located somewhere close to this site were certainly not west of Nayland Road.

Planning background

The application was made to Colchester Borough Council in July 2012 (application No 121272) proposing residential dwellings, a neighbourhood centre including commercial, residential and community uses, education uses, strategic landscaping, green infrastructure and areas for outdoor sport facilities, access (in detail where specified) related infrastructure and other works and enabling works.

As the site lies within an area highlighted by the EHER / UAD as having a high potential for archaeological deposits, an archaeological condition was recommended by the Colchester Borough Council Archaeological Advisor (CBCAA). The recommended archaeological condition is based on the guidance given in the *National Planning Policy Framework* (DCLG 2012).

Requirement for work

The required archaeological work is for archaeological excavation. Details are given in a Project Brief written by CBCAA (CBC 2016).

Seven archaeological excavations will take place within NGAUE Areas 1-3 and 5-6 to target sites of interest revealed during the 2011 evaluation (Figs 2-6). Excavation requirements for each area are listed in Table 1 below. For consistency and to remove any chance of confusion, each excavation area will be assigned a lettered area code (Areas A-E, see Table 1). This letter will be used to prefix all on-site contexts and all post-excavation reporting.

NGAUE Area	Excavation Area	Excavation requirement
Area 1 (between Boxted Road, Nayland Road and A12)	**Area A, Fig 2**	**Area A1**: linear excavation (3,780m^2) to the south of the road line (Area A2) focussing on the possible medieval kiln sites. **Area A2**: strip and map of road line at construction stage (3,200m^2) to complete excavation of possible medieval kiln sites.
Area 2 (Cants Rose Fields/ Fords Lane/ A12)	**Area B, Fig 3**	40m x 40m excavation centring on the prehistoric ring-ditch
Area 3 (north of Braiswick Lane, south of Fords Lane)	**Area C, Fig 4**	50m x 50m excavation centring on the post-medieval kiln
Area 4 (extreme W side of site, W of Chesterwell Woods)		**there is no excavation requirement in Area 4**

NGAUE Area	Excavation Area	Excavation requirement
Area 5 (W of Mile End Road, E of golf course)	**Area D, Fig 5**	90m x 30m excavation encompassing the Roman ritual/burial pit and possible enclosure
Area 6 (North of Braiswick Road)	**Area E, Fig 6**	80m x 20m excavation centring on the LIA/early Roman ditch

Table 1 Excavation requirements

If unexpected remains are encountered the CBCAA will be informed immediately. If significant and unanticipated archaeological remains, for example burials, are encountered close to the edge of a stripped excavation area, the area may need to be expanded to ensure the full extent of the archaeological site within the development area is investigated (and to be confident there are no adjacent remains). Amendments to this brief, and the WSI, may be required to ensure adequate provision for archaeological recording.

General methodology

All work carried out by CAT will be in accordance with:

- professional standards of the Chartered Institute for Archaeologists, including its *Code of Conduct* (CIfA 2014a-c)
- Standards and Frameworks published by East Anglian Archaeology (Gurney 2003, Medlycott 2011)
- required standards of fieldwork in Colchester Borough (CM 2008a, b)
- relevant Health & Safety guidelines and requirements (CAT 2014)
- the Project Brief issued by CBCAA (CBC 2016)

Professional CAT field archaeologists will undertake all specified archaeological work, for which they will be suitably experienced and qualified.

Notification of the supervisor/project manager's name and the start date for the project will be provided to CBCAA one week before start of work.

Unless it is the responsibility of other site contractors, CAT will study mains service locations and avoid damage to these.

A project or site code has been sought from the curating museum, as appropriate to the project. This code will be used to identify the finds bags and boxes, and the project archive when it is deposited at the curating museum.

Staffing

Supervisor in charge of day-to-day site work: Mark Baister

The number of field staff for this project is estimated in Table 2 below.

NGAUE Area	Excavation Area	Excavation requirement	Staffing
Area 1	**Area A**	**Area A1**: linear excavation (3,780m^2) to the south of the road line (Area A2) focussing on the possible medieval kiln sites. **Area A2**: strip and map of road line at construction stage (3,200m^2) to complete excavation of possible medieval kiln sites.	**Area A1**: Supervisor plus 5 archaeologists for 20 days (120 man days) **Area A2**: Supervisor plus 5 archaeologists for 16 days (96 man days)
Area 2	**Area B**	40m x 40m excavation centring on the prehistoric ring-ditch	Supervisor plus 4 archaeologists for 5 days (25 man days)

NGAUE Area	Excavation Area	Excavation requirement	Staffing
Area 3	**Area C**	50m x 50m excavation centring on the post-medieval kiln	Supervisor plus 5 archaeologists for 9 days (54 man days)
Area 5	**Area D**	90m x 30m excavation encompassing the Roman ritual/burial pit and possible enclosure	Supervisor plus 5 archaeologists for 9 days (54 man days)
Area 6	**Area E**	80m x 20m excavation centring on the LIA/early Roman ditch	Supervisor plus 5 archaeologists for 6 days (36 man days)

Table 2 Staffing

Excavation methodology

All topsoil removal and ground reduction will be done with a toothless bucket under the supervision of an archaeologist.

If archaeological features or deposits are uncovered, time will be allowed for these to be excavated by hand, planned and recorded. This includes a 50% sample of discrete features (pits, etc), 10% of linear features in minimum 1m sections where practicable (ditches, etc) and 100% sample of kilns, structural features and burials.

Fast hand-excavation techniques involving (for instance) picks, forks and mattocks will not be used on complex stratigraphy.

A metal detector will be used to examine the site, spoil heaps, and the finds recovered.

Individual records of excavated contexts, layers, features or deposits will be entered on pro-forma record sheets. Registers will be compiled of finds, small finds and soil samples.

All features and layers or other significant deposits will be planned using a Total Station, and their profiles or sections recorded. The normal scale will be for site plans at 1:20 and sections at 1:10, unless circumstances indicate that other scales would be appropriate.

Samples will be taken if palaeo-environmental and/or geoarchaeological remains are encountered (see below).

Site surveying

All features and layers or other significant deposits will be planned, and their profiles or sections recorded. Normal scale for archaeological site plans and sections is 1:20 and 1:10 respectively, unless circumstances indicate that other scales would be more appropriate.

The site grid will be tied into the National Grid. Corners of excavation areas and trenches will be located by NGR coordinates.

Environmental sampling policy

The number and range of samples collected will be adequate to determine the potential of the site, with particular focus on palaeoenvironmental remains including both biological remains (e.g. plants, small vertebrates) and small sized artefacts (e.g. smithing debris), and to provide information for sampling strategies on any future excavation. Samples will be collected for potential micromorphical and other pedological sedimentological analysis. Environmental bulk samples will be 40 litres in size (assuming context is large enough)

Sampling strategies will address questions of:

- the range of preservation types (charred, mineral-replaced, waterlogged), and their quality

- concentrations of macro-remains
- and differences in remains from undated and dated features
- variation between different feature types and areas of site

CAT has an arrangement with Val Fryer (Loddon) whereby any potentially rich environmental layers or features will be appropriately sampled as a matter of course. Val Fryer will do any processing and reporting.

Should any complex, or otherwise outstanding deposits be encountered, VF will be asked onto site to advise. Waterlogged 'organic' features will always be sampled. In all cases, the advice of VF and/or the Historic England Regional Advisor in Archaeological Science (East of England) on sampling strategies for complex or waterlogged deposits will be followed, including the taking of monolith samples.

Human remains

CAT follows the policy of leaving human remains *in situ* unless there is a clear indication that the remains are in danger of being compromised as a result of their exposure. If circumstances indicated it were prudent or necessary to remove remains from the site during the evaluation, the following criteria would be applied; if it is clear from their position, context, depth, or other factors that the remains are ancient, then normal procedure is to apply to the Department of Justice for a licence to remove them. In that case, conditions laid down by the license will be followed. If it seems that the remains are not ancient, then the coroner, the client, and CBCAA will be informed, and any advice and/or instruction from the coroner will be followed.

Photographic record

Will include both general and feature-specific photographs, the latter with scale and north arrow. A photo register giving context number, details, and direction of shot will be prepared on site, and included in the site archive.

Finds

All significant finds will be retained.

All finds, where appropriate, will be washed and marked with site code and context number.

Stephen Benfield (CAT) normally writes our finds reports. Some categories of finds are automatically referred to other CAT specialists:

animal bones (small groups): Pip Parmenter
flints: Adam Wightman

or to outside specialists:

small finds, metalwork, coins, etc: Pip Parmenter
animal bones (large groups) and human remains: Julie Curl (*Sylvanus*)
environmental processing and reporting: Val Fryer (Loddon)
conservation of finds: staff at Colchester Museum

Other specialists whose opinion can be sought on large or complex groups include:

Roman brick/tile: Ernest Black
Roman glass: Hilary Cool
Prehistoric pottery: Paul Sealey
Other: EH Regional Adviser in Archaeological Science (East of England).

All finds of potential treasure will be removed to a safe place, and the coroner informed immediately, in accordance with the rules of the Treasure Act 1996. The definition of treasure is given in pages 3-5 of the Code of Practice of the above act. This refers primarily to gold or silver objects.

Requirements for conservation and storage of finds will be agreed with the appropriate museum prior to the start of work, and confirmed to CBCAA.

Post-excavation assessment

Once fieldwork has finished the need for a post-excavation assessment will be discussed and agreed with CBCAA.

If a post-excavation assessment is required by CBCAA, it will be normally be submitted within 2 months of the end of fieldwork, or as quickly as is reasonably practicable and at a time agreed with CBCAA. It will be a clear and concise assessment of the archaeological value and significance of the results, and will identify the research potential in the context of the Regional Research Framework. It will include an Updated Project Design, with a timetable, for analysis, dissemination and archive deposition.

Where archaeological results do not warrant a post-excavation assessment, preparation of the normal site report will begin.

Results

Notification will be given to CBCAA when the fieldwork has been completed.

An appropriate archive will be prepared to minimum acceptable standards outlined in *Management of Research Projects in the Historic Environment* (English Heritage 2006).

The report will be submitted within 6 months of the end of fieldwork, with a copy supplied to CBCAA as a PDF.

The report will contain:

- The aims and methods adopted in the course of the archaeological project.
- Location plan of the excavation areas, at least two corners of each area will be given 10 figure grid references.
- Section drawings of significant features including at least one which shows depth of deposits from present ground level with Ordnance Datum, vertical and horizontal scale (if this can be safely done).
- Archaeological methodology and detailed results including a suitable conclusion and discussion and results referring to Regional Research Frameworks (Medlycott 2011).
- All specialist reports or assessments
- A concise non-technical summary of the project results.

An EHER summary sheet will also be completed within four weeks and supplied to CBCAA.

Results will be published, to at least a summary level (i.e. round-up in *Essex Archaeology & History*) in the year following the archaeological field work. An allowance will be made in the project costs for the report to be published in an adequately peer reviewed journal or monograph series

Archive deposition

It is a policy of Colchester Borough Council that the integrity of the site archive be maintained (i.e. all finds and records should be properly curated by a single organisation), with the archive available for public consultation. To achieve this desired aim it is assumed that the full archive will be deposited in Colchester Museums *unless otherwise agreed in advance*. (A full *copy* of the archive shall in any case be deposited).

By accepting this WSI, the client agrees to deposit the archive, including all artefacts, at Colchester & Ipswich Museum.

The requirements for archive storage will be agreed with the curating museum.

If the finds are to remain with the landowner, a full copy of the archive will be housed with the curating museum.

The archive will be deposited with Colchester & Ipswich Museum within 3 months of the completion of the final publication report, with a summary of the contents of the archive supplied to CBCAA.

Monitoring

CBCAA will be responsible for monitoring progress and standards throughout the project, and will be kept regularly informed during fieldwork, post-excavation and publication stages.

Notification of the start of work will be given to CBCAA one week in advance of its commencement.

Any variations in this WSI will be agreed with CBCAA prior to them being carried out.

CBCAA will be notified when the fieldwork is complete.

The involvement of CBCAA shall be acknowledged in any report or publication generated by this project.

References

CAT	2014	*Health & Safety Policy*
CAT Report 583	2011	*An archaeological desk-based assessment of the NGAUE site, Colchester, Essex.*
CAT Report 627	2012	*An archaeological evaluation by fieldwalking, geophysical survey and trial-trenching at the Northern Growth Area Urban Extension (NGAUE), Colchester, Essex.*
CAT Report 786	2014	*Stage 2 archaeological evaluation at Colchester North, Colchester, Essex: August-September 2014*
CBC	2016	*Brief for Archaeological Excavation at North Colchester Urban Ext, Mile End Road, Colchester,* by J Tipper
CIfA	2014a	*Standard and Guidance for an archaeological excavation*
CIfA	2014b	*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*
CIfA	2014c	*Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
DCLG	2012	*National Planning Policy Framework*
English Heritage	2006	*Management of Research Projects in the Historic Environment (MoRPHE)*
Gurney, D	2003	*Standards for field archaeology in the East of England.* East Anglian Archaeology Occasional Papers 14 (EAA **14**).
Medlycott, M	2011	*Research and archaeology revisited: A revised framework for the East of England*. East Anglian Archaeology Occasional Papers 24 (EAA **24**)

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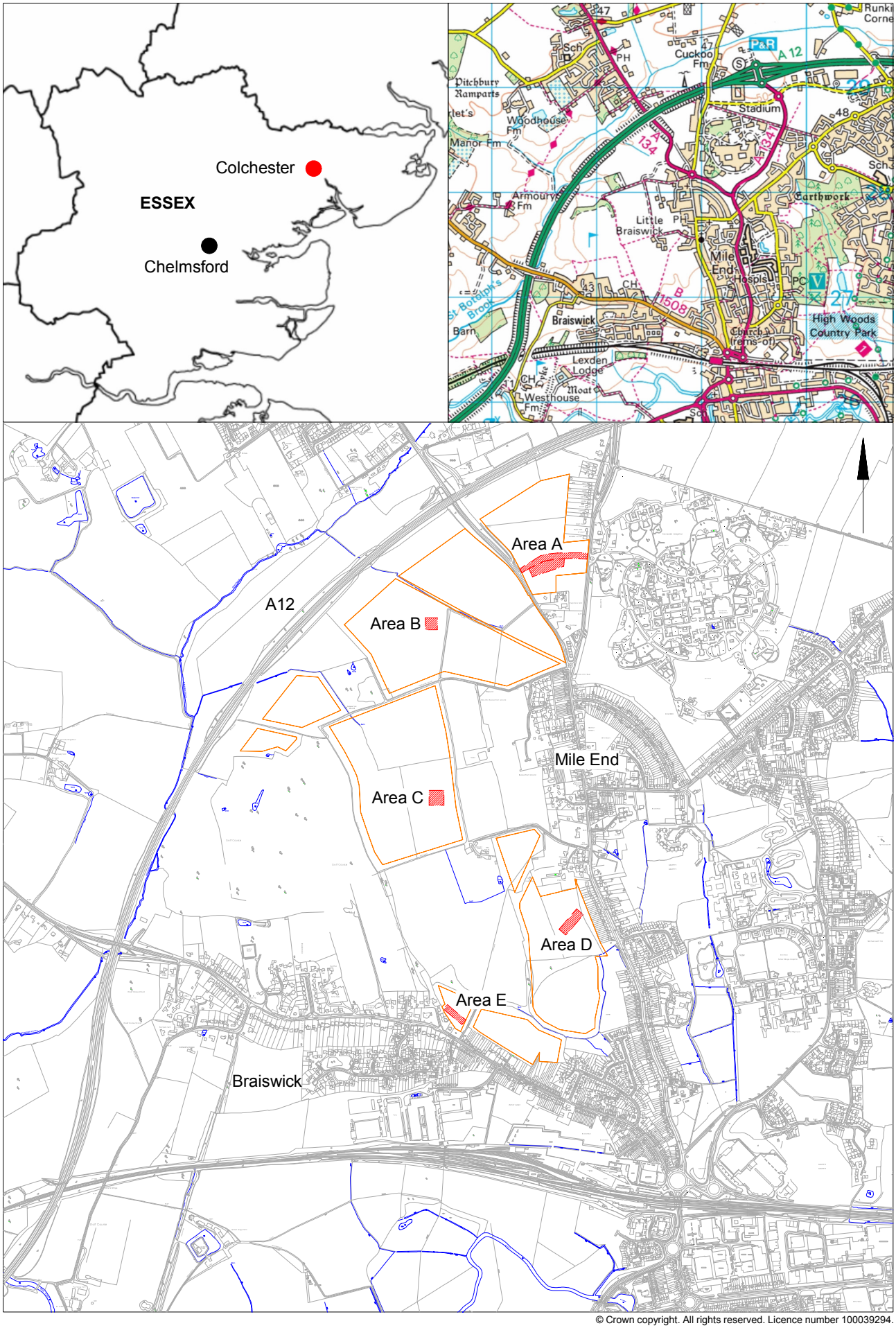

Fig 1 Site location.

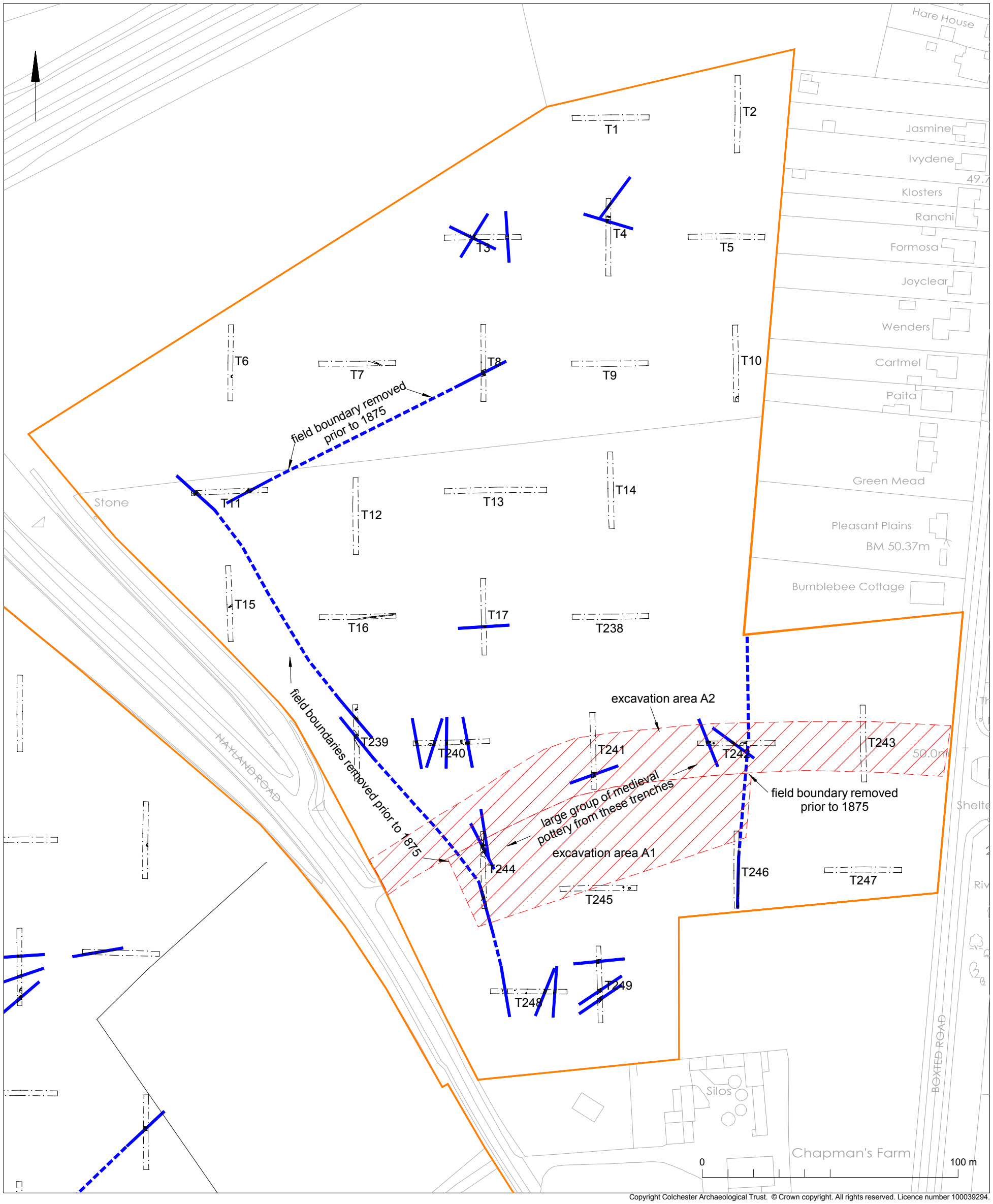

Fig 2 Area A: location of excavation areas A1 and A2, with interpretation.

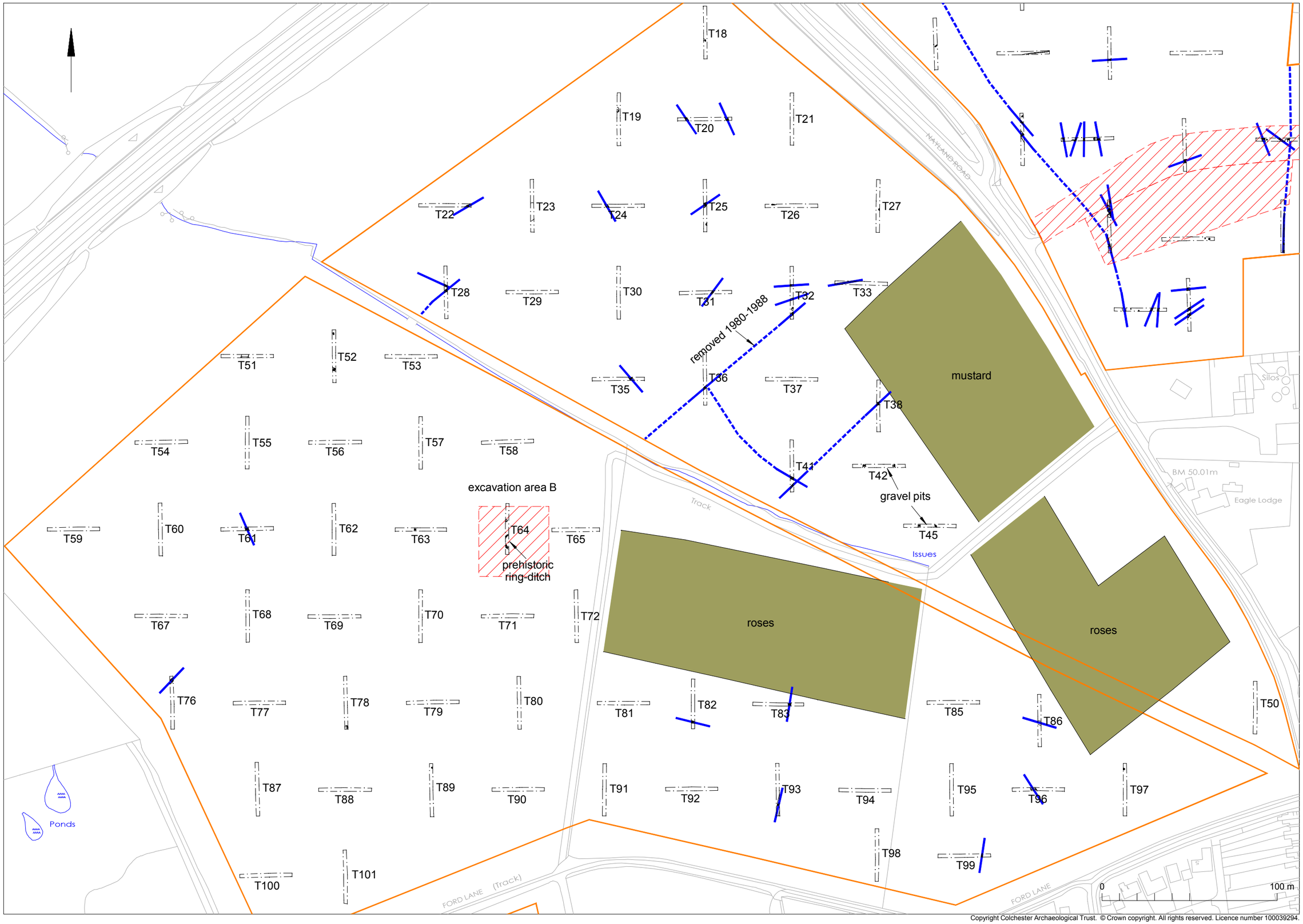

Fig 3 Area B: location of excavation area B, with interpretation.

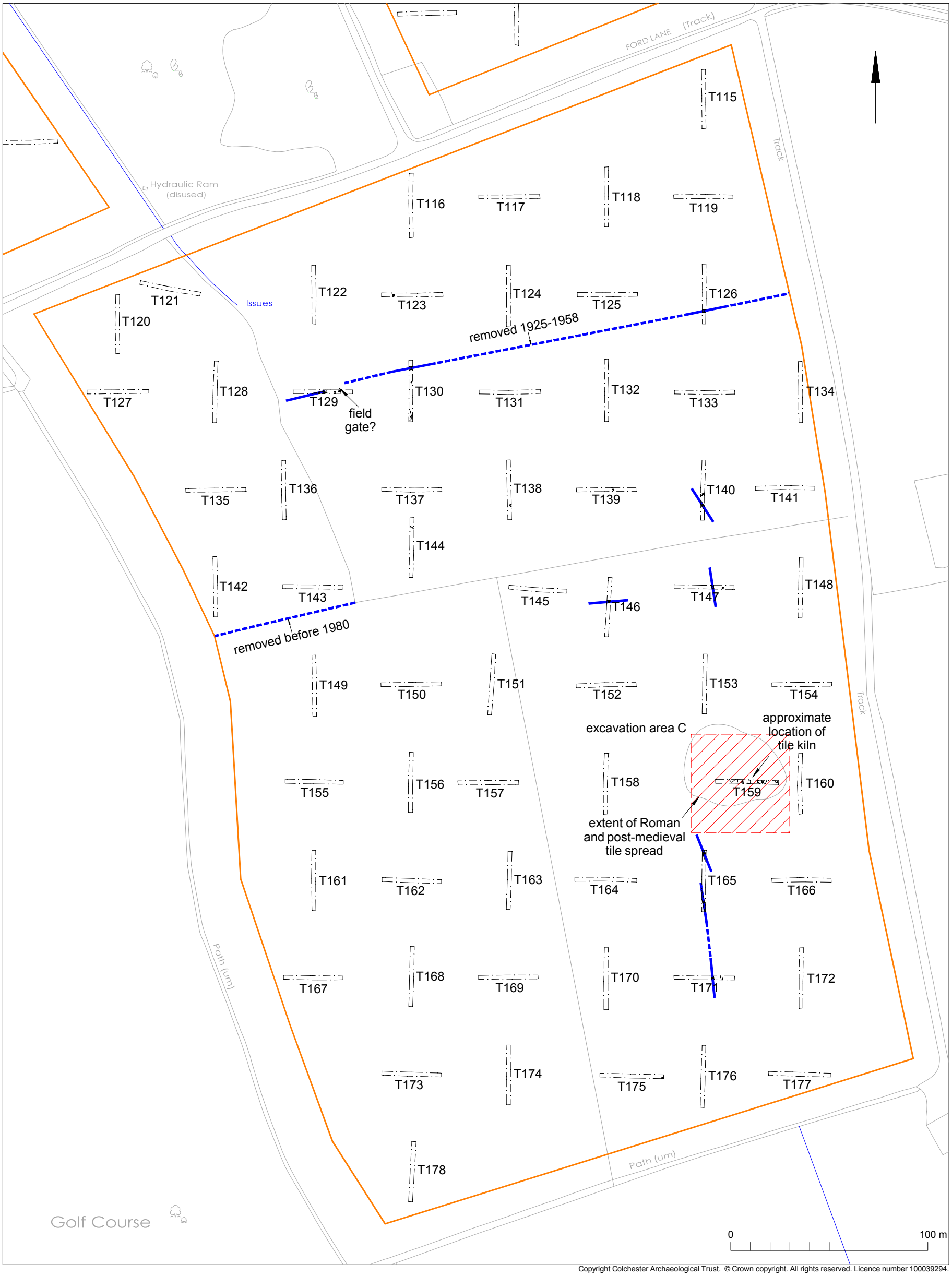

Fig 4 Area C: location of excavation area C, with interpretation.

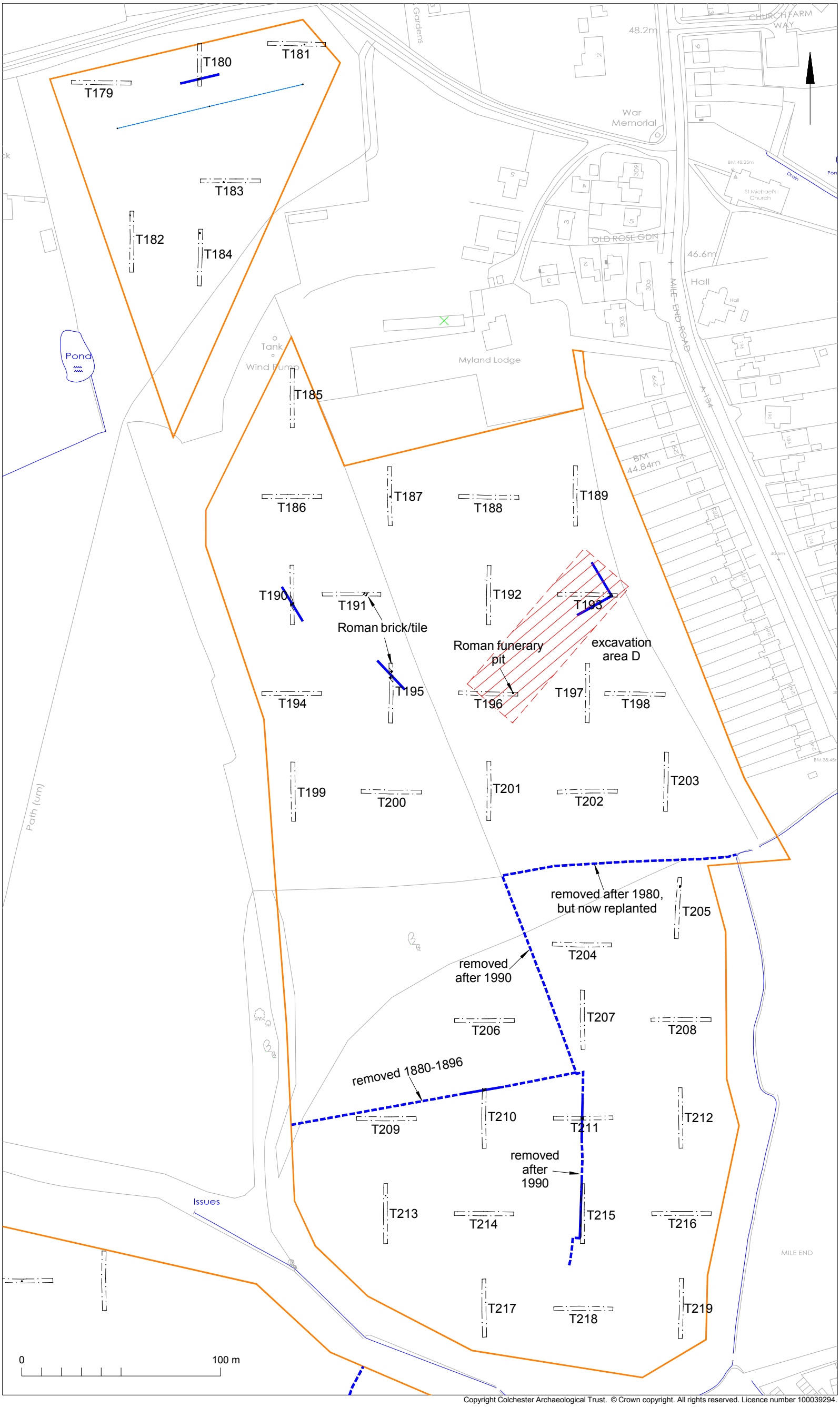

Fig 5 Area D: location of excavation area D, with interpretation.

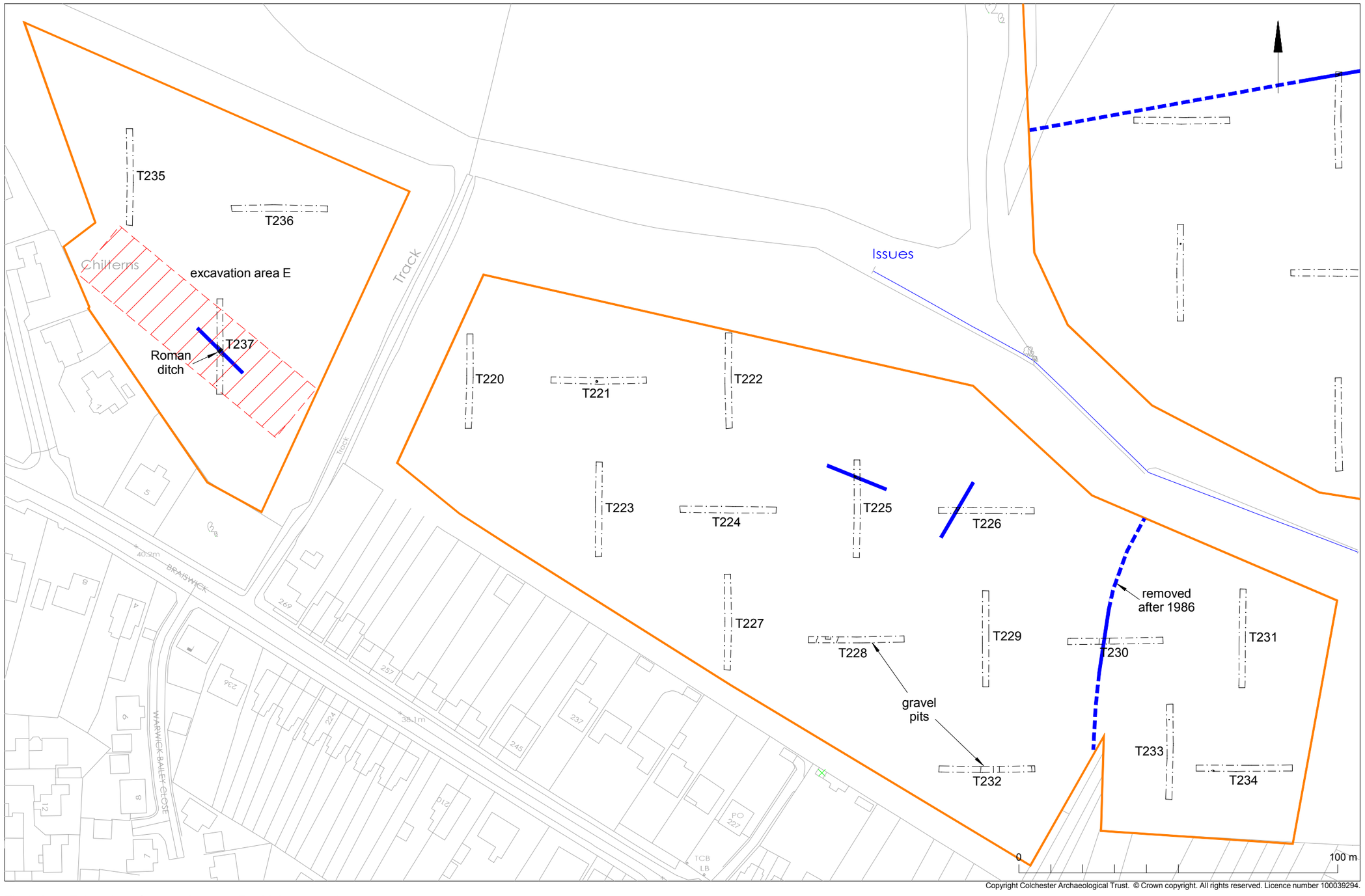

Fig 6 Area E: location of excavation area E, with interpretation.

OASIS DATA COLLECTION FORM: England

OASIS ID: colchest3-323053

Project details

Project name	Archaeological excavation on Area B of the Colchester North development, Colchester, Essex, CO4 6AH
Short description of the project	An archaeological excavation was carried out on Area B of the Colchester North development, Colchester, Essex in advance of the construction of urban residential, commercial and community buildings and associated works. Excavation revealed a small Middle Bronze Age cemetery consisting of one definite (F8) and two probable cremation burials (F10 and F12) in a small cluster to the south-southeast of two prehistoric ring-ditches. All three burials contained the disturbed remains of Ardleigh-style Deverel-Rimbury cremation urns, but only F8 included a small quantity of cremated human bone. This bone produced a 2-sigma calibrated radiocardon date (at 95.4% confidence) of 1374 to 1125 BC. No dating evidence was recovered from the ring-ditches. Three possible prehistoric features (two pits and a posthole), two post-medieval/ modern ditches/erosion hollows and two natural features/tree-throws were also excavated.
Project dates	Start: 21-05-2018 End: 30-05-2018
Previous/future work	Yes / No
Any associated project reference codes	16/07h - Contracting Unit No.
Any associated project reference codes	121272 - Planning Application No.
Any associated project reference codes	ECC3831 - HER event no.
Any associated project reference codes	COLEM: 2016.78 - Museum accession ID
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 4 - Character Undetermined
Monument type	RING-DITCH Late Prehistoric
Monument type	CREMATION BURIAL Middle Bronze Age
Monument type	BURIAL PITS Middle Bronze Age
Monument type	PIT Late Prehistoric
Monument type	POSTHOLE Late Prehistoric
Monument type	DITCH/EROSION HOLLOW Post Medieval
Monument type	DITCH/EROSION HOLLOW Modern
Significant Finds	POTTERY Middle Bronze Age
Significant Finds	POTTERY Medieval
Significant Finds	BURNT STONE Late Prehistoric
Significant Finds	FLINT Late Prehistoric
Significant Finds	CERAMIC BUILDING MATERIAL Medieval
Significant Finds	CERAMIC BUILDING MATERIAL Post Medieval
Investigation type	"'Open-area excavation'"
Prompt	Planning condition

Project location

Country	England
Site location	ESSEX COLCHESTER COLCHESTER Area B Colchester North
Postcode	CO4 6AH
Study area	0.18 Hectares
Site coordinates	TL 984 238 51.876894941397 0.882672443327 51 52 36 N 000 52 57 E Point
Height OD / Depth	Min: 46.73m Max: 47.6m

Project creators

Name of Organisation	Colchester Archaeological Trust
Project brief originator	CBC Archaeological Officer
Project design originator	Laura Pooley
Project	Chris Lister

director/manager	
Project supervisor	Nigel Rayner
Type of sponsor/funding body	Developer

Project archives

Physical Archive recipient	Colchester Museum
Physical Archive ID	COLEM: 2016.78
Physical Contents	"Ceramics","Human Bones","Worked stone/lithics"
Digital Archive recipient	Colchester Museum
Digital Archive ID	COLEM: 2016.78
Digital Contents	"Stratigraphic","Survey","other"
Digital Media available	"Images raster / digital photography","Images vector","Text"
Paper Archive recipient	Colchester Museum
Paper Archive ID	COLEM: 2016.78
Paper Contents	"other"
Paper Media available	"Context sheet","Miscellaneous Material","Photograph","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Middle Bronze Age burials: archaeological excavation on Area B of the Colchester North development, Colchester, Essex, CO4 6AH: May 2018
Author(s)/Editor(s)	Pooley, L.
Other bibliographic details	CAT Report 1298
Date	2018
Issuer or publisher	Colchester Archaeological Trust
Place of issue or publication	Colchester
Description	A4 ring-bound loose leaf
URL	http://cat.essex.ac.uk/all-reports.html

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