An archaeological evaluation and subsequent watching brief at the Chelmsford park and ride site, A414 Maldon Road, Sandon, Essex September-November 2005

report prepared by Ben Holloway

on behalf of Equity Estates

CAT project ref.: 05/4a HEM site code: SDPR05 NGR TL 746 056 (centre)

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1 Summary

Seventeen evaluation trenches were excavated at the Chelmsford park and ride site, Maldon Road, Sandon, Essex. The significant archaeological features consisted of Late Bronze Age/Early Iron Age pits, post-/stake holes and ditches, concentrated in the northern part of the evaluation area.

In addition to the pits and ditches, there was a single unurned and undated cremation burial in the north-east corner of the site (adjacent contexts suggest that this is also likely to be Late Bronze Age/Early Iron Age in date).

Subsequent monitoring of groundworks during building produced similar settlement evidence.

2 Introduction

- 2.1 This is the archive report on an archaeological evaluation by trial-trenching and a subsequent watching brief carried out by the Colchester Archaeological Trust (CAT) at the Chelmsford park and ride site, Maldon Road, Sandon, Essex, at NGR TL 746 056 (centre), on behalf of Equity Estates (Fig 1). The evaluation was carried out between the 13th and 23rd of September 2005, and the watching brief between the 11th October and 14th November.
- 2.2 Seventeen evaluation trenches were excavated under archaeological supervision, with a mechanical excavator using a toothless ditching bucket (Fig 2). The trenches were excavated by layer, and any archaeological features observed were investigated and recorded before the next layer was removed.

The watching brief involved the monitoring of the site as it was soil-stripped to the required level and also the monitoring of any intrusive groundworks (section 8). This relates to Phase 1 of the development, ie the construction of 600 parking spaces plus bus stands (Fig 6). Phase 2 involves the expansion of the scheme into the northern part of the evaluated area; additional archaeological implications will be dealt with at a later date.

- **2.3** All fieldwork was done in accordance with a specification agreed with the Essex County Council Historic Environment Management team officer.
- 2.4 This report mirrors standards and practices contained in the Institute of Field Archaeologists' Standard and guidance for an archaeological field evaluation (IFA 1999a), Standard and guidance for an archaeological watching brief (IFA 1999b) and Standard and guidance for the collection, documentation, conservation and research of archaeological materials (IFA 2001). Other sources used are Management of archaeological projects (MAP 2), and Research and archaeology: a framework for the Eastern Counties 1. Resource assessment (EAA 3), Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy (EAA 8), and Standards for field archaeology in the East of England (EAA 14).

3 Archaeological background

Sandon lies in the Chelmer valley, east of the Roman and modern town of Chelmsford. The evaluation site is on the top of a slight slope to the south of the River Chelmer. The local landscape contains archaeological sites of many periods, particularly Neolithic and Bronze Age. To the north of the evaluation site, at Springfield Lyons, a significant cropmark complex includes enclosures, trackways, ring-ditches, pits and field boundaries (EHER nos 5770, 5754, 8895, and 19891). A recent paper (Brown 2001) has drawn attention to the importance of the Springfield Lyons enclosure and its effect on the Neolithic and Bronze Age landscape, which includes the area of the present site and the Great Baddow enclosure at Manor Farm (Brown & Lavender 1994).

4 Aim

The aim of the evaluation was to determine the location, depth, character, extent, date, significance and quality of any surviving archaeological remains. Using this work, an informed decision can be made on any future necessary archaeological processes.

5 The evaluation trenches

5.1 Figure 2 shows the location of the seventeen evaluation trenches (Trenches or T1-T17); six trenches in the southern part of the site, six in the middle, and five in the northern part. The trenches were dug using a 360° mechanical excavator with a toothless ditching bucket; they were all 1.8m wide and measured between 18m and 75m in length. All were excavated by machine to the first archaeological layers, where any features were investigated by hand.

5.2 Southern part of site (T1-T6) Trench 1

T1 measured 50m x 1.8m and was located in an area of waste ground. The trench was excavated through topsoil (Layer or L1). L1 topsoil was 150-200mm deep, and sealed what appeared to be a deposit of dumped clay material (L2). L2 clay was 200mm deep, and sealed a 100mm-thick remnant topsoil (L3). This may give an approximate depth for original ground-level prior to the build-up of modern dump material (all identified features were sealed by L3). No identifiable subsoil was present in T1; the topsoil remnant L3 directly sealed natural geological levels. In the case of T1, this was a very fine particle London clay. No significant archaeological features were observed. Recorded features were all modern, and consisted of two land drains (F1 and F3), a modern trench (F2) backfilled with builders' waste and rubble, and a modern ditch (F4).

Trench 2

T2 measured 62m x 1.8m, and had the same sequence of layers and deposits as T1. Similarly, no significant archaeological features were observed. The recorded features were either modern or natural, and consisted of a natural glacial channel (F5), two modern land drains (F6 and F8), and a modern linear feature (F7).

Trench 3

T3 measured 18m x 1.8m. It was excavated through the same topsoil (L1) as T1 and T2, although the clay dump L2 was less apparent, being only between 50mm and 100mm thick. The remnant topsoil L3 was also less apparent, again being between 50mm and 100mm thick. As in T1 and T2, no significant archaeological features were observed. The material recorded here was all modern and consisted of two modern land drains (F9 and F10), a modern pit filled with builders' waste and rubble (F11), and building foundations (F12). These are likely to be associated with the farm-house that previously occupied the south-east corner of the site.

Trench 4

T4 measured 18m x 1.8m and was excavated through the same layers as those described in the previous trenches. The amount of new topsoil L1 and the imported clay dump material L2 had also increased to the levels seen in T1 and T2. No significant archaeological features were identified. Recorded features consisted of modern material, a modern rubbish-pit (F13), a land drain (F14), and (at the extreme east of the trench) the outer wall of a backfilled swimming-pool (F15).

Trench 5

T5 was 25m x 1.8m. It was located in a hollow. The difference to the surrounding ground-levels suggests that, at some point in the modern period, there has been substantial earth-moving in this particular location. T5 was excavated through topsoil (L1) directly onto geological clays (L4). No archaeological or modern features were recorded.

Trench 6

T6 measured 75m x 1.8m. As has been recorded in all the trenches dug at the southern end of the site, there was comprehensive modern disturbance in T6. The trench was excavated though the same material as was encountered in T1: topsoil (L1), redeposited clay (L2), remnant topsoil (L3), and geological material (L4), although in the eastern half of T6 there was a large dumped deposit of modern builders' waste and rubble. As in all of the other five trenches at the southern end, no significant archaeological material was observed. The recorded features consisted of a modern land drain (F16) and a backfilled modern cellar or well (F17).

5.3 Middle part of site (T7-T12, in arable field) Trench 7

T7 was located on the eastern edge of this part of the site. It measured 50m x 1.8m, and was excavated through arable topsoil (L7) to a depth of 250mm, and then through a subsoil (L8) to a depth of 200mm. The subsoil sealed natural geological material (a gravel and clay matrix L9). No archaeological features were identified.

Trench 8

T8 measured 50m x 1.8m, and, as with T7, it was excavated through the topsoil (L7) to a depth of 200mm and through the subsoil (L8) to a depth of 150mm. No archaeological features were identified.

Trench 9

T9 was located on the eastern edge of this part of the site, measuring 50m x 1.8m. As with T7 and T8, the trench was located in a field under cultivation. The trench was excavated through the topsoil (L7) to a depth of 250mm then through subsoil (L8). No significant archaeological features were identified. The recorded features were natural and modern, and they consisted of two linear features (F49 and F50) and a tree bowl (F51).

Trench 10

T10 measured $25m \times 1.8m$. As in the other trenches in the middle part of the site, the trench was excavated through the arable topsoil (L7) and the subsoil (L8). No archaeological material was recorded in T10.

Trench 11

T11 measured 25m x 1.8m. As in the other trenches in the middle part of the site, the trench was excavated through the arable topsoil (L7) and the subsoil (L8). No archaeological material was recorded in this trench.

Trench 12

T12 measured 75m x 1.8m. The trench was excavated through 250mm of arable topsoil (L7) then through 350mm of subsoil to the geological layers. A greater depth of subsoil was present in T12 than in the other trenches in the middle part of the site. This may be a result of the ridge cresting to the north, and silt and cover loam being washed to the south collecting at this point. No significant archaeological material was identified. The recorded features were either modern or natural, and consisted of three linear features (F44, F46, F48) and two pit or tree-bowl features (F45 and F47).

5.4 Northern part of site (T13-T17, in arable field) (Figs 3-5) Trench 13

Located on the eastern edge of this part of the site, T13 measured 50m x 1.8m. It was excavated through the arable topsoil (L7) into subsoil (L8). A large number of archaeological features were concentrated at the northern end of the trench. These include six pits (F18, F22, F34, F36, F52, F53), three post-holes (F20, F21, F23), and two linear features (F19 and F35). A number of the pits contained prehistoric pottery sherds.

Trench 14

T14 was located in the middle of this part of the site. The trench measured 25m x 1.8m. It was excavated through the arable topsoil (L7) into the subsoil (L8). Five archaeological features were identified. These consist of small pits (F37, F38, F39, F40, F42); the pits contained burnt material and sherds of prehistoric pottery.

Trench 15

T15 was located in the middle of this part of the site. The trench dimensions were 25m x 1.8m. It was excavated through the arable topsoil (L7) on into subsoil (L8). No significant archaeological features were observed in the trench. The recorded linear feature was natural (F41), and appears to be a periglacial alluvial channel.

Trench 16

T16 was located on the eastern edge of this part of the site, and measured 50m x 1.8m. It was excavated through arable topsoil (L7) into subsoil (L8). Three archaeological features were recorded in T16. These consist of two pits (F31 and F32), one of which (F31) contained prehistoric pot sherds, and a cremation burial (F33). The burial was not in a ceramic urn, but instead had been placed directly into the ground with a large amount of burnt material (associated debris from the funeral pyre?).

Trench 17

T17 was located on the northernmost edge of the site. It measured 50m x 1.8m. The trench was excavated through the arable topsoil (L7) and on into the subsoil (L8). Eight archaeological features were recorded in T17. These consist of three pits (F25, F26, F29), two ditch features (F27 and F28), and three post-holes (F24, F30, F55). Prehistoric pottery was recovered from the fills of a number of the pit features in conjunction with burnt material.

6 Finds

The finds from the evaluation trenches consisted of pottery, lithics and burnt flints from the features concentrated in T13, T14, T16 and T17 in the northern part of the site. In addition to the pottery, a quantity of cremated bone was recovered from cremation burial F33. The complete finds list is shown below.

Finds list

Find	Context	Trench	Description	Weight
no				(g)
1	F18	T13	Prehistoric pot	12.0
2	F23	T13	Prehistoric pot	3.0
5	F31	T16	Prehistoric pot	81.0
6	F24	T17	Prehistoric pot	0.2
8	F34	T13	Prehistoric pot	60.0
8	F34	T13	Burnt flint	49.0
9	F37	T14	Prehistoric pot	36.0
9	F37	T14	Burnt flint	30.0
11	F39	T14	Burnt flint	13.0
12	F29	T17	Prehistoric pot	1.4
13	F38	T14	Prehistoric pot	29.0
13	F38	T14	Burnt stone	117.0
16	F38	T14	Flint flake	9.0
16	F42	T14	Prehistoric pot	4.0
16	F42	T14	Flint flake	2.0
16	F42	T14	Flint blade fragment	1.6
17	F52	T13	Prehistoric pot	6.0
17	F52	T13	Retouched flint flake	4.0
17	F52	T13	Metallurgic slag	282.0
18	F53	T13	Prehistoric pot	9.0
19	F33	T16	Cremated human bone	75.0

Prehistoric pottery

The prehistoric pottery was examined by Paul R Sealey who kindly provided comments.

A total of 38 sherds of prehistoric pottery at a total weight of 241.6g was recovered from the evaluation trenching. Two fabric types are present in the assemblage: fine and coarse ware. The pottery is all hand-made. The interior surface of some of the coarse ware sherds is uneven. This may be a result of unsmoothed coil joins. The assemblage is made up mainly of body sherds, with a single rim fragment showing undulating decoration; there is no evidence of additional decoration on the surface. The fabric of the pottery contains large amounts of crushed burnt flint which was used to temper the clay. The size of these inclusions varies between the coarse and fine ware. Larger material has been used in the temper of the coarse ware sherds, and slightly smaller crushed flint in the fine ware. In addition, there is very little sand in the fabric. There are also traces of fine mica visible on the surface and in the cross-sections. This is representative of local manufacture and is a common trait in prehistoric pottery produced in East Anglia. This type of heavily flint-tempered pottery with few sand inclusions is most common in the later Bronze Age and Early Iron Age periods, and this indicates a date for the deposits of c 1000 BC-400 BC (Gibson & Woods 1997).

Lithics

In total, four lithics were recovered from the evaluation, from pits F38, F42 and F52. These consist of two secondary flakes, a tertiary flake with some evidence of retouch along its edges, and a broken blade. The lithics appear to be either damaged or wasters. The blade has broken as it was retouched, which would account for it being discarded. The flakes have hinge fractures, which indicate that they broke away abruptly from the core when they were struck. This would explain why they, like the blade, were discarded. The lithics all came from contexts which contained Late Bronze Age/Early Iron Age pottery, which would indicate a similar deposition date for the lithics themselves.

Burnt flint/stone

In total, 209g of burnt flint fragments and stone was recovered from the evaluation. Like the pottery and lithics, the material was deposited in pits and post-holes clustered at the northern end of the evaluation site.

Human bone

A single cremation burial was identified (F33). There was no associated urn, and the remains had been deposited in a discrete cut in a matrix of burnt charcoally material. A total weight of 75g of human bone was recovered from the fill of the burial. The fragments are generally small and mainly represent the long bones from the upper and lower body. There were, however, three fragments of skull, one of which shows that the cranial sutures had not fused by the time the body was cremated. As the cranial sutures do not fully fuse until the late teens, it would indicate that the remains deposited in the cremation are those of a juvenile.

7 Discussion and interpretation

A relatively small amount of archaeological material was identified during the evaluation. The trenches (T1-T6) in the southern part of the site (adjacent to the A414, the Maldon Road) produced no archaeological features. The area had been subject to extensive modern activity and disturbance. All the recorded features were modern, and associated with the 20th-century farmhouse building (F12) and related structures (ie the backfilled well F17 and the backfilled swimming-pool F15). In addition to these structural remains, there were modern rubbish-pits (F2, F13, F11), and a substantial amount of building debris which had been dumped across the western side of the southern part of the site. This is consistent with the type of material which was being dumped when the site was occupied by a builder's yard in the mid to late 20th century.

The trenches (T7-T12) in the middle part of the evaluation site also produced very little archaeological material. The features recorded here related to modern agricultural practices (F50, F46). This is no surprise since the middle and northern parts of the site were in an arable field. The other features identified in the middle part of the site were natural in origin. The linear F48 appears to be an alluvial channel. Pits F44, F45, F47, F49 and F51 appear too irregular to be man-made, and their leached-out fills (in conjunction with their irregular nature) suggest that they are tree bowls.

The remaining evaluation trenches (T13-T17), in the northern part of the site produced all the identified archaeological features and material. The archaeological material consisted of pits, post-holes and linear features spread across the northern end of the evaluation site but concentrated in the north-western corner in trenches T13, T14 and T17. The concentration of features is highest at the northern end of T13. Charcoal and sherds of Late Bronze Age/Early Iron Age pottery and burnt flint were recovered. The broken pottery and the flints suggest that the pits are more likely to have been domestic than ritual. Post-holes were present on the site, but the small scale of the excavated trenches means that it is impossible to say whether they are parts of buildings or fence lines. Linear features identified in T13 and T17 may be field boundaries, although (as with the post-holes) it is impossible to confirm this. Trench 16 contained two prehistoric pits, one of which (F31) produced sherds of Late Bronze Age/Early Iron Age pottery. A single cremation burial (F33) appears to be in a relatively isolated position away from the main focus of activity. The pit contained human bone in a matrix of charcoal. There was no evidence of a ringditch to suggest the presence of a barrow. Cremations are rarely deposited singly, but no additional features were identified in the trench. It is possible that further excavation of the site would expose more cremation burials.

The evaluation trenching proves little evidence for archaeological activity in the evaluation site south of T12 (Fig 2). Archaeological material is concentrated to the north of this trench. The finds and features identified are of Late Bronze Age/Early Iron Age date and suggest domestic, possibly settlement, activity in the north-west of the site. There is at least one cremation burial, situated to the east away from the settlement.

The area of the evaluation site is suitable for settlement, being at the top of a free-draining ridge above the River Chelmer. This is an area where there is evidence of considerable prehistoric activity, with two other areas of prehistoric settlement nearby, ie the Great Baddow enclosure at Manor Farm 1km to the west and the large enclosure complex at Springfield Lyons 3km to the north.

8 Further fieldwork: watching brief 11th October-14th November 2005

In addition to the evaluation carried out by CAT between the 13th and 23rd of September 2005, a watching brief was carried out during initial contractors' groundworks in the following few months. This involved the monitoring of the site as it was soil-stripped to the required level and also the monitoring of any intrusive groundworks (Fig 6). Only the central area of the site was subject to a watching brief, because the evaluation of the southern part of the site showed that it had been subject to massive disturbance during the modern period and no archaeological features were identified. The northern part of the site (identified as archaeologically sensitive by evaluation) was to be left free of development. The archaeological implications will be dealt with in the report on the archaeological work undertaken during Phase 2 of the park and ride project development process.

The area was stripped using a towed scraper, a bulldozer and a 360° mechanical excavator. Once the site had been reduced to the appropriate construction level, it was compacted using a toothed vibrating roller.

Several visits were made to the site to observe progress of these works between the 11th October and the 14th November 2005. During the course of each visit, the site was walked looking for loose unstratified finds and to locate, identify and record any archaeological features that had been uncovered by the machine strip. No additional features of archaeological interest were identified as part of the soil stripping although archaeological material was recovered. This consisted of 19 sherds of prehistoric pottery weighing 74g, and a single lithic weighing 1g. All finds were unstratified and were likely to have been residual in either the modern ploughsoil or subsoil.

The pottery recovered from the watching brief area is consistent with the material recovered during the initial evaluation work, and consisted of hand-made body sherds with sand and crushed flint temper. Both fine ware and coarse ware vessels are represented. As with the material from the evaluation, the pot sherds have traces of fine mica visible in the cross-section and on the surface, indicating local production. This type of pottery is commonest in the later Bronze Age and Early Iron Age (*c* 1000 BC-400 BC).

The lithic recovered during the watching brief is a thumbnail scraper. As with the other lithics from the evaluation, the object is likely to have been deposited at the same time as the pottery, indicating a later Bronze Age date.

Although no additional archaeological features were identified during the watching brief, the unstratified material recovered suggests domestic rather than ritual activity, and as such is consistent with the later Bronze Age/Early Iron Age activity first observed in the north part of the site during the initial evaluation work. The evidence from the watching brief is consistent with the settlement evidence recorded during the evaluation, ie of a small settlement overlooking the Chelmer valley within an area of wider prehistoric settlement and activity.

9 Acknowledgements

The Colchester Archaeological Trust would like to thank Equity Estates for commissioning and funding the work. The project was monitored by Pat Connell, Essex County Council Historic Environment Management Group officer. The site work was supervised by Ben Holloway and carried out by Nicky Garland, Brian Hurrell and Emma Sanford.

10	D	ΔfΔ	ron	CES

Brown, N	2001	'The Bronze Age enclosure at Springfield Lyons in its landscape context', in <i>Essex Archaeology and History</i> , 32 , 92-101
Brown, N, & Lavender, N J	1994	'Later Bronze Age sites at Great Baddow and settlement in the Chelmer valley, Essex, 1500 to 500 BC', in <i>Essex Archaeology and History</i> , 25 , 3-13
EAA 3	1997	Research and archaeology: a framework for the Eastern Counties 1. Resource assessment, East Anglian Archaeology, Occasional Papers, 3, ed by J Glazebrook
EAA 8	2000	Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy, East Anglian Archaeology, Occasional Papers, 8, ed by N Brown & J Glazebrook
EAA 14	2003	Standards for field archaeology in the East of England, East Anglian Archaeology, Occasional Papers, 14 , ed by D Gurney
Gibson, A, & Woods, A	1997	Prehistoric pottery for the archaeologist
IFA	1999a	Standard and guidance for an archaeological field evaluation
IFA	1999b	Standard and guidance for an archaeological watching brief
IFA	2001	Standard and guidance for the collection, documentation, conservation and research of archaeological materials
MAP 2	1991	Management of archaeological projects, 2nd edition (English Heritage)

11 Glossary

Bronze Age period from c 2500 BC to c 700 BC

context either a feature, layer or a complex of layers/features

feature an identifiable thing like a pit, a wall, a drain, a floor; can contain

'contexts'

Iron Age the period from *c* 700 BC to AD 43 layer distinct or distinguishable deposit of soil

modern period from the 19th century onwards to the present geological deposit undisturbed by human activity

NGR National Grid Reference

prehistoric the period before written records, ie till AD 43 in Britain

12 Archive deposition

The paper and digital archive is held by the Colchester Archaeological Trust at 12 Lexden Road, Colchester, Essex CO3 3NF, but it will be permanently deposited with Chelmsford Museum under accession code CHMER 2005:127.

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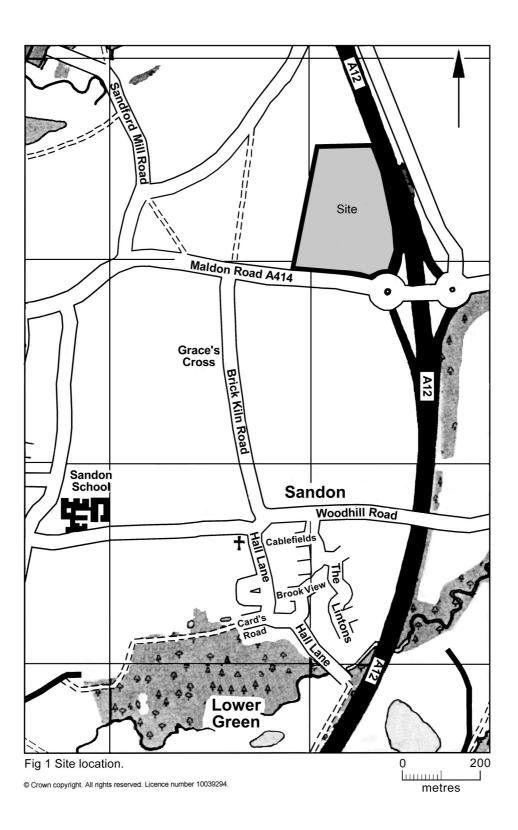
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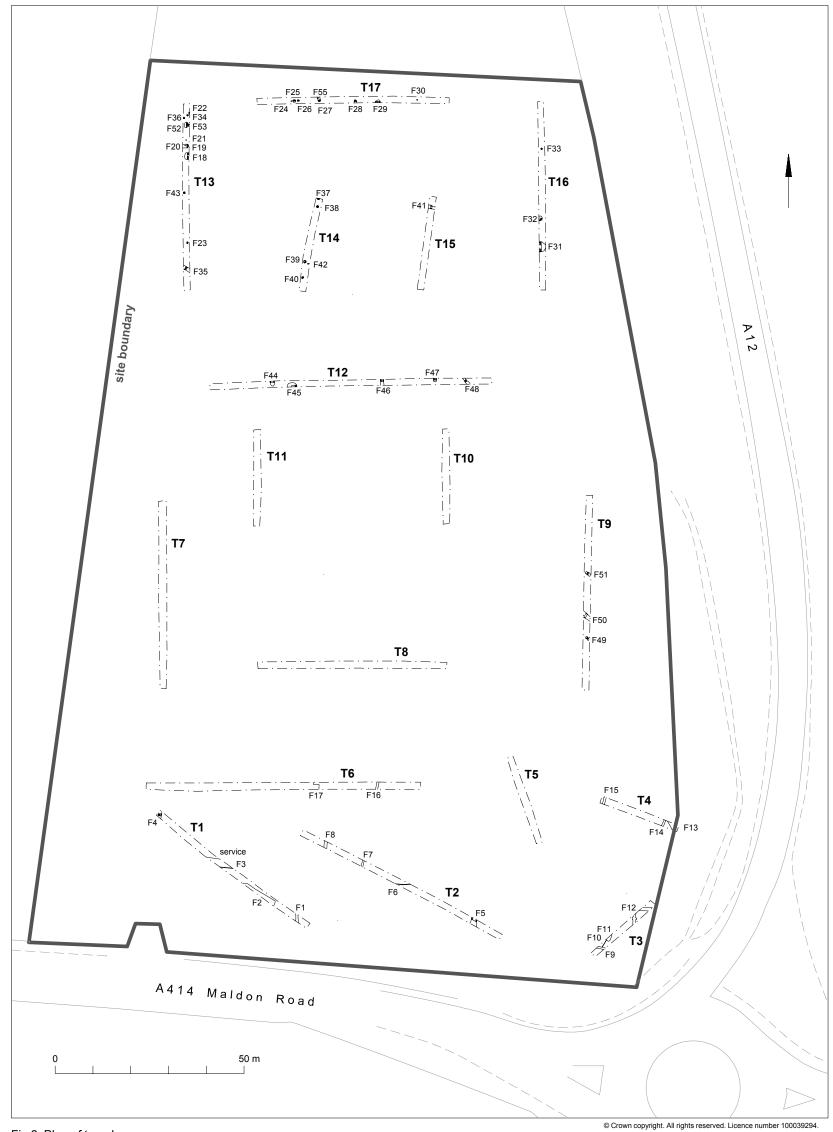


Fig 2 Plan of trenches.

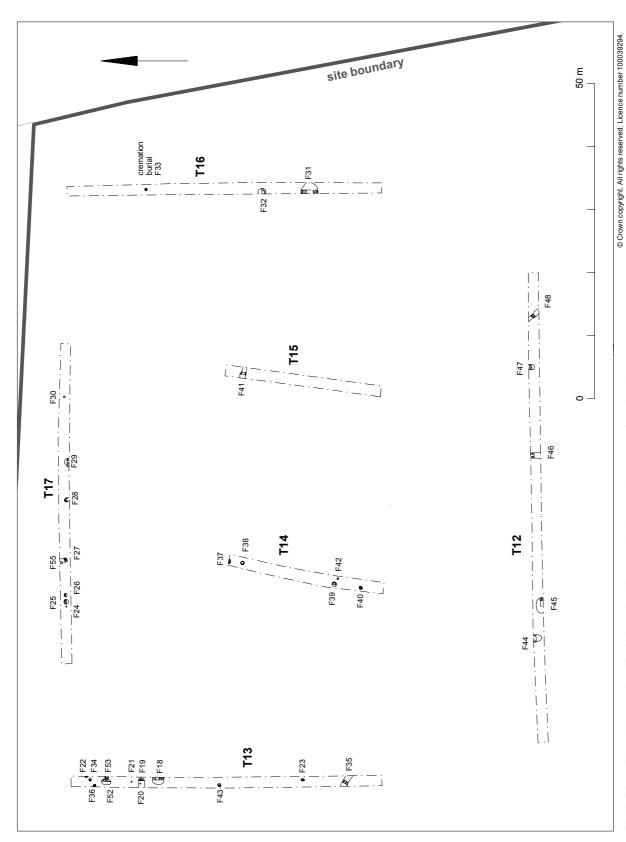


Fig 3 Plan of Late Bronze Age/Early Iron Age features in the northern part of evaluation area.

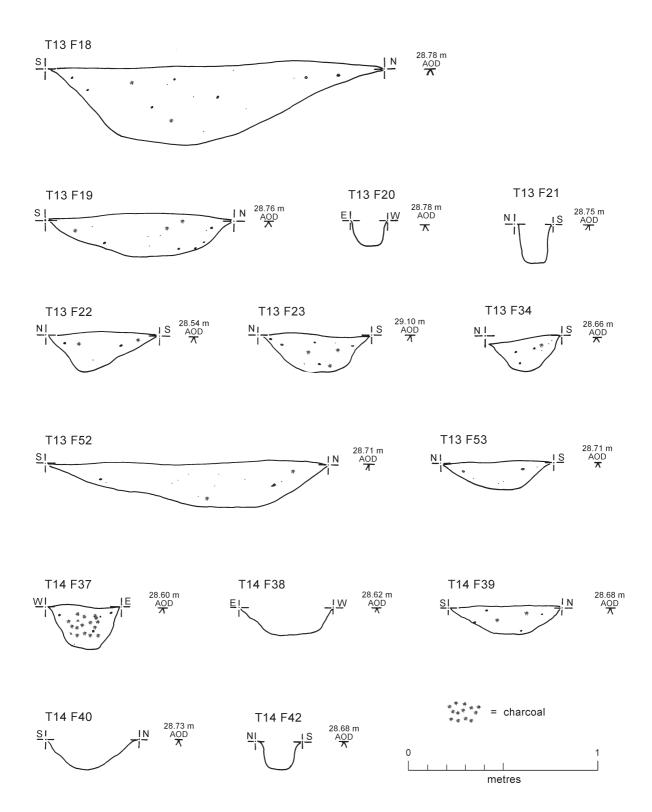


Fig 4 Sections.

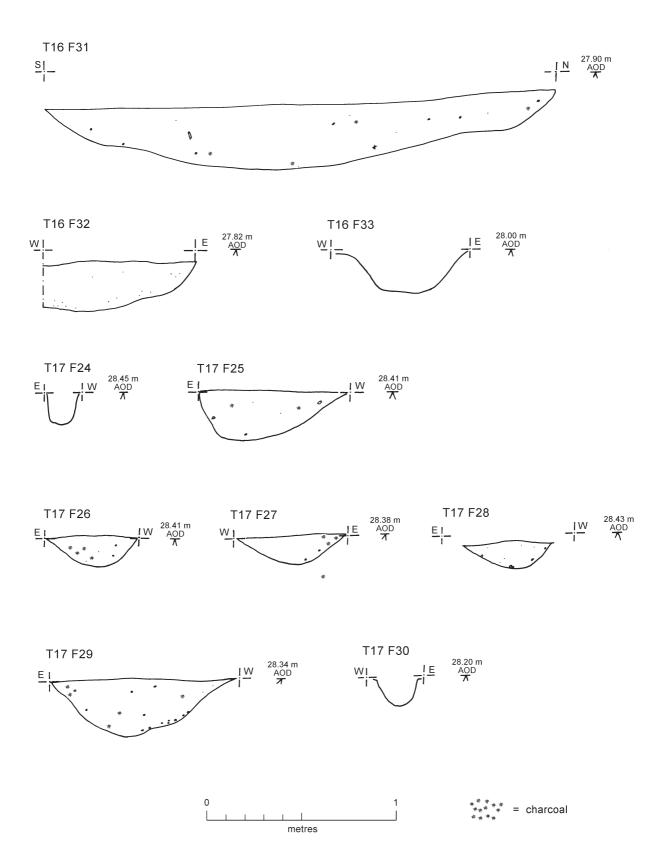


Fig 5 Sections.

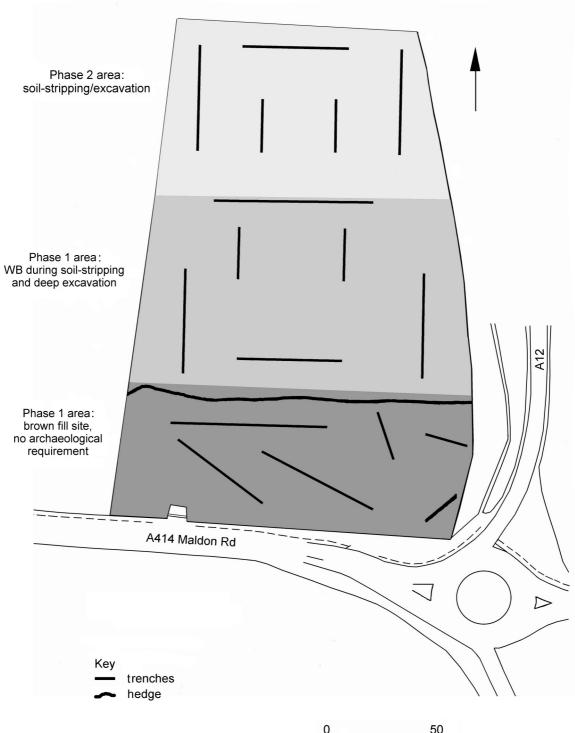
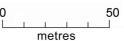


Fig 6 The part of the site monitored during soil-stripping and deep excavation.



Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Site address: Chelmsford park and ride site, A414 Maldon Road, Sandon, Essex			
Parish: Sandon	District: Chelmsford		
NGR: TL 746 056 (centre)	Site code: HEM SDPR05 CM CHMER 2005:127		
Type of work: Evaluation and watching brief	Site director/group: Colchester Archaeological Trust		
Date of work: September-November 2005	Size of area investigated: Site is 0.36ha. Trench area 1,305m ²		
Location of finds/curating museum: Chelmsford Museum	Funding source: Developer		
Further seasons anticipated? Yes	Related EHER nos: 5770, 57454, 8895, 19891		

Final report: CAT Report 343 and summary in *EAH*

Periods represented: Late Bronze/Early Iron Age, modern

Summary of fieldwork results:

Seventeen evaluation trenches were excavated at the Chelmsford park and ride site, Maldon Road, Sandon, Essex. The significant archaeological features consisted of Late Bronze Age/Early Iron Age pits, post-/stake holes and ditches, concentrated in the northern part of the evaluation area

In addition to the pits and ditches, there was a single unurned and undated cremation burial in the north-east corner of the site (adjacent contexts suggest that this is also likely to be Late Bronze Age/Early Iron Age in date).

Subsequent monitoring of groundworks during building produced similar settlement evidence.

Previous summaries/reports:	None		
Author of summary: Ben Holl	oway	Date of summary:	October 2005