Archaeological Evaluation Report

Late Iron Age and Medieval Remains in the Haulage Road 2b at Beaulieu, Chelmsford

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Late Iron Age and Medieval Remains in the Haulage Road 2b at Beaulieu, Chelmsford

Archaeological Evaluation

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Summary

An archaeological evaluation was carried out on an area designated as Phase 2b Access Road, at Beaulieu, Chelmsford. The fieldwork took place between 19/8/14 and 27/8/14. A total of 19 trenches were excavated across six fields.

At the western end of the evaluation Late Iron Age remains were uncovered, in the form of a buried soil. These remains may represent land use on the settlement fringe, to the south-east. A medieval ditch was encountered, possibly relating to a small settlement. Post-medieval activity was encountered across the evaluated area in the form of furrows, and towards the southern edge with a ditch and posthole.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 Between the 19th and 27th August 2014 Oxford Archaeology East carried out an archaeological evaluation on Haulage Road 2c, Chelmsford (TL 7230 1014) in advance of a construction of a new neighbourhood planned for North-East Chelmsford, known as Beaulieu. Chelmsford City Council has resolved to grant outline planning permission (ref: 09/01314/EIA) for a new neighbourhood at Beaulieu of up to 3,600 new homes and up to 62,300m² of mixed use development including new schools, leisure and community facilities, employment areas, new highways and associated ancillary development, including full details in respect of roundabout access from Essex Regiment Way and a priority junction from White Hart Lane.

1.1.2 An archaeological evaluation was conducted on land to the north of White Hart Lane, at Beaulieu, Chelmsford (see fig. 1 for location). The evaluation was undertaken in advance of Haulage Road 2b, and comprised of 19 trenches.

1.1.3 This archaeological evaluation was undertaken in accordance with the Archaeological Investigation and Mitigation Strategy (URS 2013) prepared for the Beaulieu scheme in consultation with Richard Havis of the Historic Environment Branch, ECC (Planning Application 09/01314/EIA), and supplemented by a Method Statement prepared by OA East.

1.1.4 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government March 2012). The results will enable decisions to be made by ECC HEM, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.

1.1.5 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

1.2.1 Beaulieu (the Site) is located approximately 4km to the north-east of Chelmsford, Essex (centred on TL 7230 1014; figure 1). The Site encompasses an area of high ground surrounded on three sides by river valleys. To the west and south is the River Chelmer, and to the east is Boreham Brook. North of the Site the ground rises towards the village of Terling. From the southern part of the Site there are views south towards the Chelmer Valley and Danbury Hill.

1.2.2 The superficial geology consists of boulder clay of the Lowestoft Till formation underlain by London Clays. To the south of the area lay a mixture of head deposits, and sand and gravels (British Geological Survey).

1.3 Archaeological and historical background

1.3.1 The following is based upon Stocks-Morgan (2014b).

Neolithic

1.3.2 Early settlement in Essex concentrated to the north-east, along the River Crouch at Lawford and Lemarsh (Hedges 1984). In the area of Beaulieu specifically, possible

domestic settlement has been recorded *c.*1km to the north-west at Court Road with Neolithic pottery contained within the fills of several pits (SMR 6142).

Bronze Age

1.3.3 Settlement continued to be concentrated along the river valleys of the Chelmer and Crouch into the Bronze Age, but with changes to the landscape: field systems began enclosing swathes of land, such as those at Great Wakering (Kemble 2001). It has been suggested that the continuation of the use of these field systems through the Early Iron Age has formed the basis for the modern landscape in the Chelmer Valley (Drury and Rodwell 1980).

1.3.4 Evidence of Bronze Age activity in the area has been recorded by aerial photography – cropmarks to the south of Belstead Hall have been interpreted as part of a Bronze Age settlement (SMR 16888) – whilst excavations at Springfield Lyons, 2.5km to the south-west, have revealed domestic dwellings. The recovery of artefacts from areas near the Site – such as New Hall School to the south-east, and Pratt's Farm to the north – suggest occupation in the vicinity of the development area.

Iron Age

1.3.5 Iron Age settlement patterns became more nucleated within the farming landscape, and is evinced in the vicinity of the development area: to the south of Belstead Hall a large enclosure with associated pits and smaller ditches was uncovered (Drury 1978; SMR 17438).

1.3.6 Into the Later Iron Age, the occupation of estuarine sites – which became more complex in their nature through time – was supplemented by an expansion onto the heavier clay soils. Archaeologically, this can be seen in the higher population density and sustained occupation visible at sites such as Little Waltham (Drury 1980).

1.3.7 By the end of the Iron Age, the structuring and high status nature of portions of the population, visible at sites such as Gosbecks *oppidum*, would have relied upon the surrounding farming communities to supply agricultural commodities (Crummy 1997).

Roman

1.3.8 Occupation of the area around Beaulieu during the Roman period would have been located 5km to the south-west, with a small market town that grew up around the *mansio* at Moulsham Street, to the south of the River Can (Essex CC 2003). Produce for this town would have been supplied by the surrounding agricultural hinterland; a landscape that would have comprised a mixture of large farms and villa complexes, such as those at Great Holts Farm and Bulls Farm Lodge, and smaller domestic sites. Evidence for these have been recorded during evaluation work at Greater Beaulieu alongside the recovery of evidence for pottery making and domestic areas.

Anglo-Saxon

1.3.9 Changes in the landscape took place in the immediate post-Roman period, with the Roman town at Chelmsford being abandoned, and swathes of the surrounding landscape being left to revert to rough pasture and woodland (Hunter 2003). This desertion of the area is suggested by the absence of Anglo-Saxon remains in the application site, although this is more likely to reflect the poor archaeological visibility of Anglo-Saxon settlement sites. This latter case is supported through the records held in the EHER: documentary records for late Saxon manors, with Belestedam (Belstead Hall) recorded in the Domesday survey of AD1086 (Reaney 1935).

Medieval

1.3.10 The medieval town of Chelmsford was founded at the end of the 12th century by the Bishop of London. Its site was located to the north of the abandoned Roman settlement at Moulsham (Essex CC 2003), and was within a rural hinterland landscape that consisted of scattered farmsteads and manors.

1.3.11 On the north-east edge of Chelmsford lay the manor of *Nova Aula*, New Hall, on the site of the current New Hall School. It was first mentioned by name in documents of AD1301, when the land was owned by the canons of Waltham Abbey, when it was used as the summer residence of the Abbott.

1.3.12 The first deer park surrounding New Hall was created during the medieval period with the manor at its centre (Tuckwell 2006). Under Henry VII, New Hall was granted to Thomas Boteler, Earl of Ormond, who, in all likelihood, rebuilt or remodelled the original medieval hall in the latest architectural style; and was visited by Henry VIII in 1510 and 1515, shortly before Thomas Boteler's death. Subsequently, the property passed into the Boleyn family through Boteler's daughter's marriage to Sir Thomas Boleyn – from whom Henry VIII acquired the hall in 1516, and changed its name to the 'Palace of Beaulieu'. Shortly after 1518 he rebuilt Boteler's medieval hall on a quadrangular plan with a gatehouse in the south range, great hall in the east range, and chapel in the west range. Mary Tudor took residency at New Hall intermittently between 1532 and her ascendancy to the crown in 1553.

1.3.13 Evidence for a further moated manor is recorded at Belstead, and was occupied throughout the medieval period. By 1325 it was called Belestede; in 1354 it was recorded as Belestede Hall; and by 1504 it was known as Belested Hall. The name is thought to derive from 'the site of the bell house' (Reaney 1935).

1.3.14 Analysis of aerial photographs and geophysical survey identified a number of features which, when investigated by trial trench evaluation, were found to comprise a possible enclosure ditch or moat. A cobbled surface (possibly representing a house platform or yard surface), pit and several further ditches were recorded within the enclosure. Pottery recovered from these features, during ECC FAU excavations of 2009, suggests an occupation date of the 12-13th century. These remains have been interpreted as a medieval farmstead or manor, possibly the precursor to the later manorial site at Belstead Hall *c.*160m to the north-east of site 7.

Post-Medieval

1.3.15 Until the deer park contracted in size, and the fields were enclosed for agriculture in the early 18th century, New Hall and its park dominated the landscape of the application area. As the deer park was reduced in size, the former medieval manors and lodges developed into farms to create an essentially agricultural landscape.

1.3.16 New Hall had been set within the largest deer park in Essex, once totalling 1,500 acres, since the medieval period, with the EHER recording that the enclosed area comprised of four separate parks surrounding the hall and its gardens – the Great or Old Park to the north of the hall; Red Deer Park to the east; Dukes Park (further east beyond the study area; EHER 47226); and the New or Little Park to the south and west. The application site is located within this latter area.

1.4 Previous Studies and Investigations

1.4.1 This section has been based upon Stocks-Morgan 2014b.

1.4.2 Previous non-intrusive and invasive archaeological surveys have been undertaken in the area surrounding the Site for environmental statements and to evaluate the land prior to the extraction of minerals. The results of these surveys are summarised below.

Geophysical Surveys

1.4.3 The potential for archaeological remains to remain buried on the Site was assessed through geophysical magnetic susceptibility and magnetometer surveys. Magnetic susceptibility identified six areas of high potential, ten areas ten areas of medium potential and seven areas of low potential (URS). Fifty percent of the Beaulieu scheme was surveyed through a magnetometer survey, and identified further detail to the magnetic susceptibility with individual features of: pits and ditches, field boundaries, buildings and structures, kilns or hearths and buried iron objects; giving six areas of medium potential and 19 of low potential (URS).

Trial Trench Evaluation, 2008

1.4.4 A targeted trial trench evaluation was carried out in June and August 2008 in order to confirm the presence/absence and significance of the archaeological remains that were identified at eight sites through an assessment of the desk-based studies and non-intrusive surveys (URS).

1.4.5 The trial trenching confirmed the presence of archaeological remains dating from the late prehistoric to post-medieval periods. Chronologically, this included an Iron Age ditch (Site 5); Late Iron Age and Early Romano-British settlement (Site 8); medieval rural settlement possibly indicative of a precursor to Belstead Hall (Site 7); a possible medieval/early post-medieval warrener's lodge associated with the former deer park (Site 10); early post-medieval moated enclosure (Site 11); Tudor fishpond and associated earthwork damn (Site 2); a brick making site comprising two scove or clamp kilns of possible Tudor date (Site 3) and evidence for associated quarrying activity (Site 4).

Beaulieu Minerals Trial Trench Evaluation

1.4.6 During September and October 2011 a trial trench evaluation was undertaken to inform and support the planning application for the Beaulieu Minerals Extraction Scheme. This evaluation identified that the area to the north-west of New Hall School contained a concentration of archaeological remains representing a rural settlement and possible metalworking activity dating from the Late Bronze Age to the end of the Roman period. Metal detecting of the plough soil revealed several early Roman coins and fragments of early Roman brooches within the main area of activity.

Beaulieu Mitigation Evaluation and Excavations, 2013

1.4.7 Archaeological trench evaluation in 2013 of the proposed Essex Regiment Way roundabout, White Hart Lane junction and connecting access road identified four locations of significant archaeological remains (Stocks-Morgan 2013a).

1.4.8 Part of a Middle Iron Age settlement were identified within the footprint of the proposed roundabout (Site 5). This comprised of a single roundhouse – surviving as the remains of an eaves-drip gully – several small pits and postholes that were probably associated with domestic activity contemporary with the building, and a surrounding large oval enclosure.

1.4.9 Area A1 contained a single east to west aligned field boundary ditch – possibly Late Iron Age in date – that attests to a wider agricultural landscape. On a north-west to

south-east alignment was a second ditch that was probably medieval in date (Stocks-Morgan 2013b).

1.4.10 Two High Medieval house platforms and their surrounding enclosures were identified in Site 11 and Zone D1. These are thought to be a medieval settlement associated with Belstead Manor estate (Stocks-Morgan 2013c).

Beaulieu Zone A Housing Evaluation and Excavations, 2014

1.4.11 Four areas of significant archaeological remains were identified on land to the south of Belstead Manor (Zone A Housing) (Stocks-Morgan 2014a).

1.4.12 A Middle Bronze Age boundary ditch, aligned north-east to south-west, was identified in Site 7; whilst an Early Iron Age open settlement comprising of ten pits containing a large assemblage of pottery and fired clay, and medieval animal husbandry remains were present in the excavation area. Sparse domestic activity is suggested from the five Late Iron Age pits that were revealed in areas A3 and A4 along the side of a brook to the south of Zone A. In contrast, Area A2 revealed the presence of a Late Iron Age/Early Roman enclosure ditch and later medieval ditch.

Beaulieu CPPLC PH3 and PD Land Sale Trench Evaluation, 2014

1.4.13 An archaeological evaluation in 2014 revealed six discrete charcoal-rich Early Iron Age pits to the north and north-west of the development area. To the south-east of the development area Late Iron Age settlement was evident through the remains of an enclosure, two parallel ditches, small gullies, and a possible roundhouse. The large assemblage of pottery recovered from the Late Iron Age enclosure ditch indicated continuing occupation when taking into account the residual Early Iron Age finds that were also recovered. Late medieval activity – consisting of a brick platform/surface and two pits containing compacted brick rubble – concentrated in the south-east of the site.

1.5 Acknowledgements

1.5.1 The author would like thank Iain Williamson of URS and Countryside Zest (Beaulieu Park) LLP who respectively commissioned and funded the archaeological work. The project was managed by Richard Mortimer. Thanks are also extended to Nick Cox and Patrick Moan who helped with the fieldwork. The project was monitored by Richard Havis of Essex County Council. The machining was undertaken by Harry Buchannan of Danbury Plant Hire..

2 Aims and Methodology

2.1 Aims

2.1.1 The objective of this evaluation was to determine, as far as reasonably possible, the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area in order to determine any further works.

2.2 Methodology

2.2.1 Nineteen trenches were excavated within the proposed route of the infrastructure haulage road of the proposed development area, and all archaeological remains were excavated where appropriate and possible.

2.2.2 Machine excavation was carried out under constant archaeological supervision with a tracked 15 ton machine using a toothless ditching bucket.

2.2.3 The site survey was carried out with a Leica GPS fitted with *Smartnet.*

2.2.4 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.2.5 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales, and colour and monochrome photographs were taken of all relevant features and deposits.

2.2.6 In total, two bulk samples were taken from this phase of evaluation. These were taken, considering the feature type and period, from deposits considered most appropriate for environmental sampling.

2.2.7 Site conditions were dry, with machine movement as far as possible to within the extent of the planned haulage road, and where not possible, to the edges of fields in order to cause minimal disturbance. This did not affect trench excavation. Trench 167 was moved *c.*5m to the north-east due to overhead telephone cables, and Trench 162 was moved 2m to the west to avoid a hedgerow.

3 RESULTS

3.1 Introduction

3.1.1 The trenches are presented below in numerical order (see figure 2 for trench locations), with an outline of the archaeological features within each trench. The general descriptions and full details of the trenches are given in Appendix A. The natural geology of the area consisted of mid orange glacial till, with any variations listed in Appendix A. A soft mid yellowish brown sandy clay subsoil layer (2089) was encountered, measuring between 0.02m and 0.2m thickness. This was overlain by topsoil (2088), consisting of a friable dark greyish brown silty clay, measuring between 0.2m and 0.4m thick.

3.2 Haulage Road

Trench 156

3.2.1 This trench contained only modern features which were not given separate numbers. Situated at the north-east end of the trench was a modern brick hardcore and brick area, measuring 1.75m in length, and aligned with the entrance to the field to the north-east. A modern culvert was located 5m from the north-east end of the trench, and ran north-west to south-east across the trench, and aligned with manhole covers and the location of an old pond.

Trenches 157 – 158

3.2.2 No archaeological features were recorded in these trenches.

Trench 159

3.2.3 A posthole (**2014**) lay at the north-east end of the trench. It was circular in shape with steep sides and a concave base, and was filled by a stoney fill (2013) containing post-medieval CBM. Located to the south of this posthole, was a linear ditch (**2016**) running north-west to south-east across the trench, with steep sides and v-shaped base. This was filled by a firm yellowish-brown sandy clay (2015). Further to the south were a further two possible ditches (**2018**, **2020**) that ran north-west to south-east; although **2018** is most likely to have been an ice-crack due to the sterility of the fill (2017), which was a firm greyish brown sandy clay, and **2020** may have been a furrow with its shape and dimension.

Trench 160

3.2.4 Located at the north-east end of the trench were two linear features (**2029**, **2031**) that were most likely to be natural depressions in the natural. The northernmost of these linear features (**2031**) had a gentle slope and concave base, filled by a plastic yellowish grey clay (2032), whilst the one to the south (**2029**) had a plastic orangey grey clay fill (2030). An ice crack/natural depression also existed a further 5m to the south.

Trench 161

3.2.5 The north-west end of this trench was dominated by the edge of a natural hollow (**2002**) that had gentle sides and a concave base, and was filled by a plastic greyish brown silty clay (2001) below a firm yellowish brown clayey silt (2000).

Trench 162

3.2.6 No archaeological features were recorded in this trench.

Trench 163

3.2.7 Eight metres from the east end of this trench existed a curvilinear feature (**2023**) with gentle sides and a concave base, filled by a soft brownish grey clayey silt (2022). A further 6.5m to the west, there was the terminus of a linear feature (**2026**) that had gentle sides and a concave base. This was filled by a soft yellowish grey clayey silt (2024) that overlay a possible slumping layer (2025) that was a plastic orange-brown silty clay.

Trench 164

3.2.8 A possible furrow or natural feature (**2027**) lay *c.*3.75m from the north end of this trench, with gentle sides and a concave base. It was filled by a firm greyish yellow silty clay (2028).

Trench 165

3.2.9 The north end of this trench contained a ditch (**2012**), running north-east to south-west, that had gentle sides and a concave base, and was filled by a firm greyish brown silty clay (2011). It contained medieval pottery.

Trench 166

3.2.10 No archaeological features were recorded in this trench, though the middle of the trench consisted of a natural hollow filled by the layer 2021, and contained Late Iron Age pottery.

Trenches 167 – 170

3.2.11 No archaeological features were recorded in these trenches.

Trench 184

3.2.12 An undated curvilinear ditch terminus (**2008**), with steep sides and a concave base, was at the west end of the trench. It was filled by a firm blueish grey clay (2007). To the east was a north-south aligned linear furrow (**2010**) with gentle sides and a concave base, and was filled by a plastic yellowish brown silty clay fill (2009). Moving further to the east of the furrow was a tree bowl.

Trench 185

3.2.13 This trench consisted of an undated linear ditch terminus (2006) at the south end, with gentle sides and a concave base and filled by a soft greyish brown clayey silt fill (2005). To the north was an undated linear ditch (**2004**) with gentle sides and a concave base that was filled by a firm yellowish brown silty clay fill (2003).

Trenches 186 – 187

3.2.14 No archaeological features were recorded in these trenches.

3.3 Finds Summary

3.3.1 An assemblage consisting of 0.195kg of pottery was recovered from two contexts. The pottery form context 2011 ates to the medieval period and the pottery form context 2021 is Late Iron Age in date.

3.3.2 Other finds recovered include 165g of ceramic building material and 1g undiagnostic baked clay.

4 Discussion and Conclusions

4.1 Introduction

4.1.1 The evaluation revealed features of Late Iron Age and post-medieval date, alongside numerous undated features and ice cracks. The discussion is here presented chronologically, concentrating on the datable features, in order to set the findings within their wider landscape setting.

4.2 Late Iron Age

4.2.1 The earliest phase of the area covered by the haulage road dates to the Late Iron Age, and is concentrated in the central arm of the route. These remains comprise a shallow hollow (2021) in trench 166. The ditch contained a small amount of pot sherds, dating to the 1st century AD, and was indicative of an enclosure ditch, perhaps on the outskirts of the settlement area that previous fieldwork has suggested lay towards the south-east. The hollow contained a large sherd of Late Iron Age pot that suggests the hollow had not filled in prior to the Iron Age.

4.3 Medieval

4.3.1 In the central arm of the haulage road a medieval ditch was encountered aligned east to west in trench 165. The ditch fill was dark and rich in charcoal, which suggests that it lay near to settlement.

4.4 Post-Medieval

4.4.1 Until the Post-Medieval period there is an absence of further features identified within the haulage road evaluation area. A series of furrows run across the field covered by the trenches on the eastern side of the haulage road area – 2010, 2020, 2027 and continuing across the field to become 2029. These contained no finds to give accurate dates, but the profiles were suggestive of furrows.

4.4.2 A posthole (2014) lay at the northern end of trench 159, and contained a small sherd of post-medieval pottery. Its position, off to the side of the entrance of the field, may suggest that it was part of a fence line. Ditch 2016, just to the south of posthole 2014, contained CBM, and may have formed part of a field-system related to the posthole.

4.4.3 Trench 156, in the garden of a house, revealed modern hardcore by the gated entrance to the field, and a culvert linking manhole covers to the site of an old pond.

4.5 Undated

4.5.1 The majority of the features that were uncovered contained nothing from which to date them. These included a hollow (2002) in trench 161, at the east end of the area covered; three linear feature termini, that may have been ditches or ice cracks (2006 in trench 185, 2008 in trench 184, and 2026 in trench 163), and a further two ditches (2004 in trench 185, and 2023 in trench 163). These were all spread across the evaluation area, with only ditch 2023 aligning with an ice crack that was in trench 160. These combine with the natural ice cracks that were examined (2018 in trench 159, and 2029 and 2031 in trench 160) to demonstrate the extent of geological activity in the area.

4.6 Significance

4.6.1 This evaluation has identified one area around trench 165 and 166 which has archaeological remains. These include evidence for Late Iron Age activity: the sparsity of the features that have been identified is suggestive of this area of evaluation being on the fringes of the Late Iron Age settlement identified in work ahead of site 8 to the south-east, and related to the agricultural fringe of the settlement.

4.6.2 Within the same area medieval remains were encountered, comprising a ditch. This ditch due to the nature of the fill suggests possible settlement in the vicinity and may relate to a small isolated settlement, to the north of Belstead manor.

4.6.3 The post-medieval features are present within the southern part of the haulage road and are indicative of later use as an agricultural hinterland to supply a nearby settlement, possibly Belstead manor.

4.7 Recommendations

4.7.1 Recommendations for any future work based upon this report will be agreed in consultation with the ECC HEM.

Appendix A. Trench Descriptions and Context Inventory

Trench 156						
General description					**Orientation**	NE-SW
Trench contained a modern hardcore layer (at the north end) and a modern culvert (across the middle of the trench), alongside tree disturbance (at the south end). Consists of soil and subsoil overlying a natural of orange clay.					**Avg. depth (m)**	0.33
					Width (m)	2
					Length (m)	30
Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2088	Layer	-	0.21	Topsoil	-	-
2089	Layer	-	0.12	Subsoil	-	-

Trench 157						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of orange clay. Elements of ploughscar disturbance existed (running east to west) alongside tree root disturbance (at the south end).					**Avg. depth (m)**	0.36
					Width (m)	2
					Length (m)	30
Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2088	Layer	-	0.19	Topsoil	-	-
2089	Layer	-	0.17	Subsoil	-	-

Trench 158						
General description					**Orientation**	E-W
Trench devoid of archaeology. A field drain ran north-east to south-west across the middle of the trench, with an ice crack *c.*5m to the west. Consists of soil and subsoil overlying a natural of orange clay.					**Avg. depth (m)**	0.38
					Width (m)	2
					Length (m)	30
Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2088	Layer	-	0.25	Topsoil	-	-
2089	Layer	-	0.13	Subsoil	-	-

Trench 159						
General description					**Orientation**	NE-SW
Trench contained a post medieval posthole (at the north end), with a post medieval linear ditch 3m to the south. A further 4m south there existed two linear natural features - either depressions in the natural, or ice cracks. Consists of soil and subsoil overlying a natural of orange clay.					**Avg. depth (m)**	0.42
					Width (m)	2
					Length (m)	30
Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**

2013	Fill	0.2	0.07	Fill of posthole 2014	CBM	Post medieval
2014	Cut	0.2	0.07	Cut of posthole	-	Post medieval
2015	Fill	0.45	0.13	Fill of ditch 2016	-	-
2016	Cut	0.45	0.13	Cut of ditch	-	-
2017	Fill	0.85	0.11	Fill of possible ditch 2018	-	-
2018	Cut	0.85	0.11	Cut of possible ditch	-	-
2019	Fill	1.17	0.2	Fill of possible ditch 2020	-	-
2020	Cut	1.17	0.2	Cut of possible ditch	-	-
2088	Layer	-	0.27	Topsoil	-	-
2089	Layer	-	0.16	Subsoil	-	-

Trench 160

General description	**Orientation**	NNE-SSW
Trench consisted of a possible ditch or gulley running south-west to north-east (at the north end), a possible ditch running north-west to south-east (across the middle of the trench), and an ice crack (at the south end). Subsoil was only at the south end of the trench. Consists of soil and subsoil overlying a natural of orange clay.	**Avg. depth (m)**	0.37
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2029	Cut	0.48	0.07	Cut of linear feature	-	-
2030	Fill	0.48	0.07	Fill of linear feature 2029	-	-
2031	Cut	0.51	0.11	Cut of possible ditch	-	-
2032	Fill	0.51	0.11	Fill of possible ditch 2031	-	-
2088	Layer	-	0.33	Topsoil	-	-
2089	Layer	-	0.14	Subsoil	-	-

Trench 161

General description	**Orientation**	ESE-WSW
Trench contained an undated possible ditch or hollow (at the west end). Consists of soil and subsoil overlying a natural of silty sand.	**Avg. depth (m)**	0.42
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2000	Fill	>3.5	0.26	Fill of ditch/hollow 2002	-	-
2001	Fill	-	0.09	Fill of ditch/hollow 2002	-	-
2002	Cut	>3.5	0.33	Cut of ditch/hollow	-	-
2088	Layer	-	0.33	Topsoil	-	-
2089	Layer	-	0.1	Subsoil	-	-

Trench 162

General description	**Orientation**	ENE-WSW

Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of orange clay.	**Avg. depth (m)**	0.41
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2088	Layer	-	0.29	Topsoil	-	-
2089	Layer	-	0.12	Subsoil	-	-

Trench 163

General description	**Orientation**	E-W
Trench contained an undated linear feature (towards the east end) and an undated possible ditch terminus (towards the west end). These were probably natural features. Consists of soil and subsoil overlying a natural of orange clay.	**Avg. depth (m)**	0.4
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2022	Fill	0.68	0.22	Fill of possible ditch 2023	-	-
2023	Cut	0.68	0.22	Cut of possible ditch	-	-
2024	Fill	0.57	0.23	Fill of possible ditch terminus 2026	-	-
2025	Fill	-	0.22	Fill of possible ditch terminus 2026	-	-
2026	Cut	0.65	0.23	Cut of possible ditch terminus	-	-
2088	Layer	-	0.29	Topsoil	-	-
2089	Layer	-	0.12	Subsoil	-	-

Trench 164

General description	**Orientation**	NE-SW
Trench contained a possible furrow running east-west (towards the north end of the trench). Consists of soil and subsoil overlying a natural of orange clay.	**Avg. depth (m)**	0.37
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2027	Cut	1.1	0.1	Cut of furrow	-	-
2028	Fill	1.1	0.1	Fill of furrow 2027	-	-
2088	Layer	-	0.3	Topsoil	-	-
2089	Layer	-	0.07	Subsoil	-	-

Trench 165

General description	**Orientation**	N-S
Trench contained one ditch (at the north end) aligned north-east to	**Avg. depth (m)**	0.35

south-west. Consists of soil and subsoil overlying a natural of orange clay. The subsoil was not present at the north end of the trench.	**Width (m)**	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2011	Fill	1.25	0.29	Fill of ditch 2012	Pottery	medieval
2012	Cut	1.25	0.29	Cut of ditch	-	medieval
2088	Layer	-	0.25	Topsoil	-	-
2089	Layer	-	0.15	Subsoil	-	-

Trench 166

General description	**Orientation**	N-S
Near the middle of the trench was a shallow depression in the natural that was filled by a firm yellowish brown silty clay (2021), and that contained occasional Late Iron Age pottery sherds and charcoal. Consists of soil and subsoil overlying a natural of clay.	**Avg. depth (m)**	0.41
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2021	Layer	4.15	0.08	Spread of material collecting in a natural hollow	Pottery	Late Iron Age
2088	Layer	-	0.22	Topsoil	-	-
2089	Layer	-	0.19	Subsoil	-	-

Trench 167

General description	**Orientation**	N-S
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of clay.	**Avg. depth (m)**	0.44
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2088	Layer	-	0.27	Topsoil	-	-
2089	Layer	-	0.16	Subsoil	-	-

Trench 168

General description	**Orientation**	E-W
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of clay.	**Avg. depth (m)**	0.44
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2088	Layer	-	0.29	Topsoil	-	-

2089	Layer	-	0.15	Subsoil	-	-

Trench 169

General description	Orientation	N-S
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of clay.	Avg. depth (m)	0.43
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2088	Layer	-	0.25	Topsoil	-	-
2089	Layer	-	0.18	Subsoil	-	-

Trench 170

General description	Orientation	E-W
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of orange clay. The subsoil was absent at the east end of the trench.	Avg. depth (m)	0.3
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2088	Layer	-	0.29	Topsoil	-	-
2089	Layer	-	0.03	Subsoil	-	-

Trench 184

General description	Orientation	E-W
Archaeologically, the trench contained a furrow near the middle of the trench and a ditch terminus towards the west end. There was also a tree bowl around the centre of the trench. Consists of soil and subsoil overlying a natural of clay.	Avg. depth (m)	0.46
	Width (m)	2
	Length (m)	30

Contexts

Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
2007	Fill	0.35	0.26	Fill of ditch terminus 2008	-	-
2008	Cut	0.35	0.26	Cut of ditch terminus	-	-
2009	Fill	0.7	0.1	Fill of furrow 2010	-	-
2010	Cut	0.7	0.1	Cut of furrow	-	-
2088	Layer	-	0.25	Topsoil	-	-
2089	Layer	-	0.20	Subsoil	-	-

Trench 185

General description	Orientation	NE-SW
The middle of the trench contained an undated linear ditch, and towards the south-west end a ditch terminus. Consists of soil and subsoil overlying a natural of clay.	Avg. depth (m)	0.41
	Width (m)	2
	Length (m)	30

Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2003	Fill	1	0.26	Fill of ditch 2004	-	-
2004	Cut	1	0.26	Cut of ditch	-	-
2005	Fill	0.55	0.14	Fill of ditch terminus 2006	-	-
2006	Cut	0.55	0.14	Cut of ditch terminus	-	-
2088	Layer	-	0.28	Topsoil	-	-
2089	Layer	-	0.13	Subsoil	-	-

Trench 186		
General description	**Orientation**	E-W
Trench devoid of archaeology, but did have a tree bowl towards the west end. Consists of soil and subsoil overlying a natural of silty clay.	**Avg. depth (m)**	0.36
	Width (m)	2
	Length (m)	30

Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2088	Layer	-	0.23	Topsoil	-	-
2089	Layer	-	0.13	Subsoil	-	-

Trench 187		
General description	**Orientation**	ENE-WSW
Trench devoid of archaeology. Consists of soil and subsoil overlying a natural of clay.	**Avg. depth (m)**	0.4
	Width (m)	2
	Length (m)	30

Contexts						
Context no	**Type**	**Width (m)**	**Depth (m)**	**Comment**	**Finds**	**Date**
2088	Layer	-	0.27	Topsoil	-	-
2089	Layer	-	0.12	Subsoil	-	-

Appendix B. Finds Reports

B.1 Pottery

Trench	Context	Cut	Feature	Spot date	Weight (g)
165	2011	2012	ditch	Medieval	14
166	2021	-	layer	Iron Age	55

B.2 Ceramic Building Material

Trench	Context	Cut	Feature	comments	Weight (g)
159	2013	2012	posthole	Brick	1
159	2015	2016	ditch	Tile	162

B.3 Baked Clay

Trench	Context	Cut	Feature	Weight (g)
165	2011	2012	ditch	1

APPENDIX C. ENVIRO REPORT

C.1 Environmental samples

By Rachel Fosberry

Introduction

C.1.1 Two bulk samples were taken from features within the evaluated areas of the Haulage Road, Beaulieu, Essex in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations. The samples were taken from fill 2011 of medieval ditch **2012** and fill 2013 of undated post hole **2014**.

Methodology

C.1.2 The total volume (up to 10 litres) of each bulk sample was processed by water flotation (using a modified Siraff three-tank system) for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve. Both flot and residues were allowed to air dry. A magnet was dragged through each residue fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and a complete list of the recorded remains are presented in Table 1. Identification of plant remains is with reference to the *Digital Seed Atlas of the Netherlands* and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Carbonized seeds and grains, by the process of burning and burial, become blackened and often distort and fragment leading to difficulty in identification. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.3 For the purpose of this initial assessment, items such as cereal grains have been scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50 specimens

Items that cannot be easily quantified such as charcoal have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.1.4 Sample 300, fill 2011 of medieval ditch **2012** contain plant remains in the form of charcoal and cereal grains and small legumes that have been preserved by carbonisation (charring). The cereals have been identified as free-threshing wheat (*Triticum aestivum sensu-lato*.) which is likely to have been a variety grown for bread flour. The small legumes are vetches (*Vicia* sp.) that may have been a weed of the wheat crop or could have been cultivated for fodder. They are leguminous plants that have soil-enriching properties and may even have been used in crop-rotation.

C.1.5 Sample 301, fill 2013 of post hole **2014** produced a flot that was almost entirely comprised of fragments of winged insects that are modern in date. Sparse charcoal fragments are the only archaeobotanical remains present.

Sample No.	Context No.	Cut No.	Feature Type	Sample Size (L)	Flot Volume (ml)	Preservation	Cereals	Charcoal <2mm	Charcoal > 2mm	Flot comments
300	2011	2012	ditch	10	20	Charred	##	++	++	Compact wheat grains and vetches
301	2013	2014	Post hole	2	50	Charred	#	+		Sparse charcoal, modern insects

Table 1: *Environmental samples from Haulage Road, Beaulieu*

Discussion

C.1.1 The plant remains recovered from ditch **2012** indicates that there is preservation of charred food remains that are consistent with occupation of the site during the medieval period. There is good potential for the recovery of further remains if future excavations take place.

Appendix D. Bibliography

R.T.J. Cappers, R.M. Bekker and J.E.A. Jans,	2006	Digital Seed Atlas of the Netherlands Groningen Archaeological Studies 4, Barkhuis Publishing, Eelde, The Netherlands. www.seedatlas.nl
Crummy, P.,	1997	*City of Victory: the story of Colchester - Britain's first Roman town* (Colchester: Colchester Archaeological Trust)
Drury, P.J.,	1978	*Excavations at Little Waltham, 1970-71*, CBA Research Report 26
Drury, P.J.,	1980	'The early and middle phases of the Iron Age in Essex', in Buckley, B.G., (ed.), *The Archaeology of Essex to AD 1500*, CBA Research Report 34
Drury, P.J. and Rodwell, W.,	1986	'Settlement in the Later Iron Age and Roman periods', in Buckley, B.G., (ed.), *The Archaeology of Essex to AD 1500*, CBA Research Report 34
Hedges, J.,	1984	'The Neolithic in Essex', in Buckley, B.G., (ed.), *The Archaeology of Essex to AD 1500*, CBA Research Report 34
Hunter, J.,	2003	*Field systems in Essex* (Essex Society for Archaeology and History, Colchester)
Jacomet, S.	2006	Identification of cereal remains from archaeological sites. (2nd edition, 2006) IPNA, Universität Basel / Published by the IPAS, Basel University.
Kemble, J.,	2001	*Prehistoric and Roman Essex* (Stroud: Tempus)
Reaney, P.H.,	1935	*Place names of Essex* (Cambridge)
Stace, C.	1997	*New Flora of the British Isles*. Second edition. Cambridge University Press
Stocks-Morgan, H.,	2013a	*Iron Age and Medieval Remains on land at Phase 1, Beaulieu, Chelmsford. Beaulieu Development Phase 1A*, Oxford Archaeology East Rep. No. 1473 (unpublished)
Stocks-Morgan, H.,	2013b	I*ron Age Remains at Site 5 and Area A1, Phase 1, Beaulieu, Chelmsford*, Oxford Archaeology East Rep. No. 1541 (unpublished)
Stocks-Morgan, H.,	2013c	*Medieval Remains at Beaulieu (Zone D) Chelmsford*, Oxford Archaeology East Rep. No. 1544 (unpublished)
Stocks-Morgan, H.,	2014a	*Early Iron Age and Medieval Remains at Zone A Housing, Beaulieu, Chelmsford*, Oxford Archaeology East Rep. No. 1591 (unpublished)
Stocks-Morgan, H.,	2014b	*Late Iron Age and Medieval Remains on Land at CPPLC PH3 and PD Land Sale, Beaulieu, Chelmsford*, Oxford Archaeology East Rep. No. 1629 (unpublished)

Tuckwell, T.,	2006	*New Hall and its School* (Kings Lynn)
URS,	2013	*Beaulieu Park, Chelmsford, Essex: Archaeological Investigation and Mitigation Strategy* (Unpublished Archaeological Design)
Zohary, D., Hopf, M	2000	Identification of cereal remains from archaeological sites. (2nd edition, 2006) IPNA, Universität Basel / Published by the IPAS, Basel University.

Map consulted

British Geological Survey,	1993	Sheet 241, England and Wales 1:50,000

Electronic source

Essex CC,	2003	*Unlocking Essex's Past from Heritage Conservation at Essex County Council*. Available: http://unlockingessex.essexcc.gov.uk/uep/content_page.asp?content_page_id=111&content_parents=48,94. Accessed 2 September 2014

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APPENDIX E. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordarc3-190885		
Project Name	Evaluation at Beaulieu, Chelmsford for Haulage Road 2b		
Project Dates (fieldwork) Start	19-08-2014	Finish	27-08-2014
Previous Work (by OA East)	Yes	Future Work	Yes

Project Reference Codes

Site Code	SPBP14	Planning App. No.	09/01314/EIA
HER No.	SPBP14	Related HER/OASIS No.	SPBP14

Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPG15
Development Type	Extensive Green Field Commercial Development

Please select all techniques used:

☐ Aerial Photography - interpretation	☐ Grab-Sampling	☐ Remote Operated Vehicle Survey
☐ Aerial Photography - new	☐ Gravity-Core	☒ Sample Trenches
☐ Annotated Sketch	☐ Laser Scanning	☐ Survey/Recording Of Fabric/Structure
☐ Augering	☐ Measured Survey	☐ Targeted Trenches
☐ Dendrochronological Survey	☐ Metal Detectors	☐ Test Pits
☐ Documentary Search	☐ Phosphate Survey	☐ Topographic Survey
☐ Environmental Sampling	☐ Photogrammetric Survey	☐ Vibro-core
☐ Fieldwalking	☐ Photographic Survey	☐ Visual Inspection (Initial Site Visit)
☐ Geophysical Survey	☐ Rectified Photography	

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Ditch	Iron Age -800 to 43	Pottery	Iron Age -800 to 43
Hollow	Uncertain	Pottery	Iron Age -800 to 43
	Select period...		Select period...

Project Location

County	Essex	Site Address (including postcode if possible)	
District	Chelmsford	Land off White Hart Lane, Chelmsford CM2 6TD	
Parish	Springfield		
HER	Essex HE		
Study Area	1140m²	National Grid Reference	TL 7230 1014

Project Originators

Organisation	OA EAST
Project Brief Originator	Richard Havis (ECC HER)
Project Design Originator	Iain Williamson (URS)
Project Manager	RIchard Mortimer (OA EAST)
Supervisor	Robin Webb (OA EAST)

Project Archives

Physical Archive	Digital Archive	Paper Archive
Essex HE	Oxford Archaeology East	Essex HE
SPBP14	SPBP14	SPBP14

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☐	☐	☐
Ceramics	☒	☐	☐
Environmental	☐	☐	☐
Glass	☐	☐	☐
Human Bones	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☐	☐	☐
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☐	☐	☐
None	☐	☐	☐
Other	☐	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☒ GIS	☒ Context Sheet
☐ Geophysics	☐ Correspondence
☒ Images	☐ Diary
☐ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☐ Spreadsheets	☐ Map
☒ Survey	☐ Matrices
☐ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☐ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

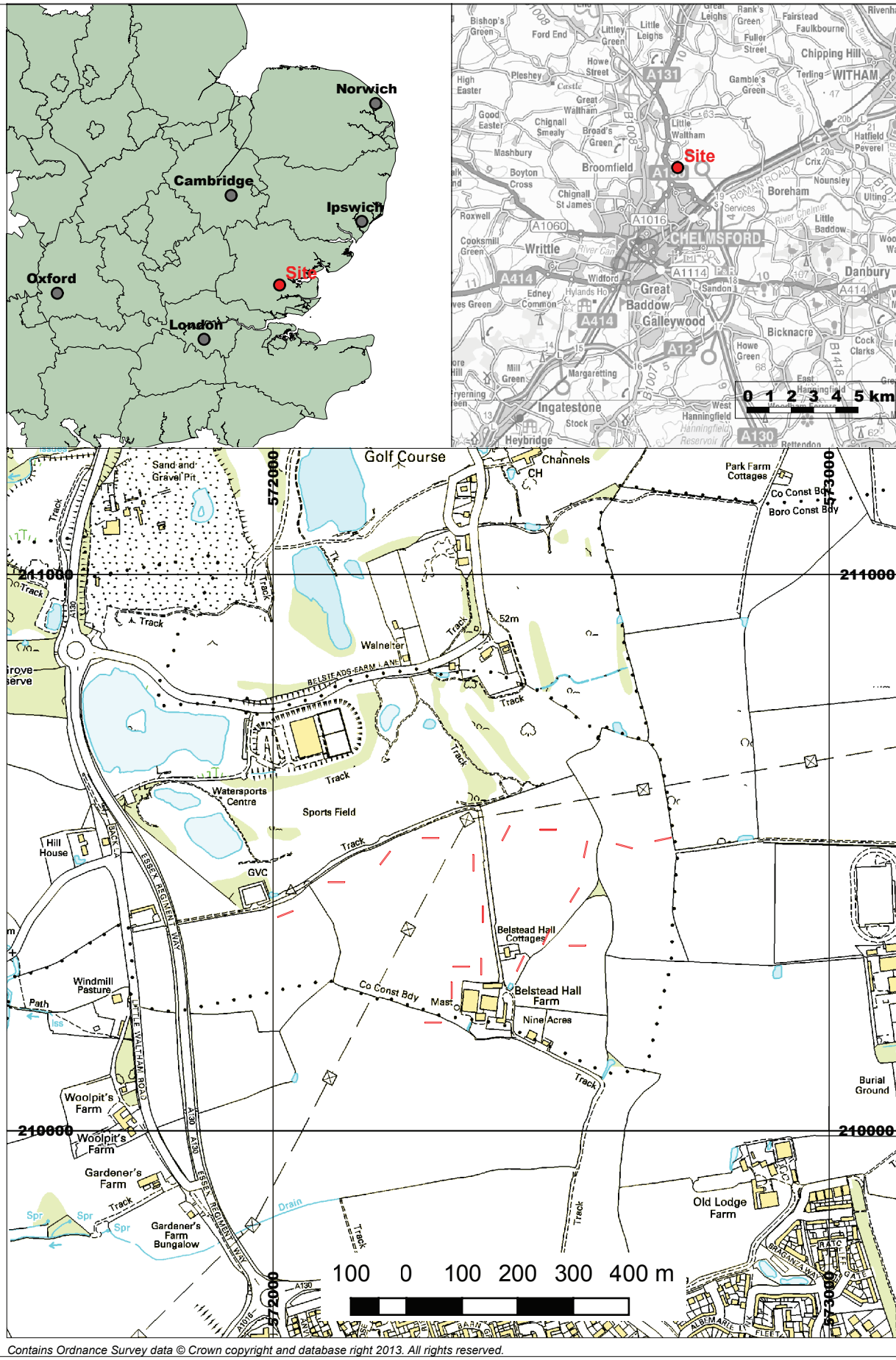

Figure 1: Site location showing archaeological trenches (red) . Scale 1:10000

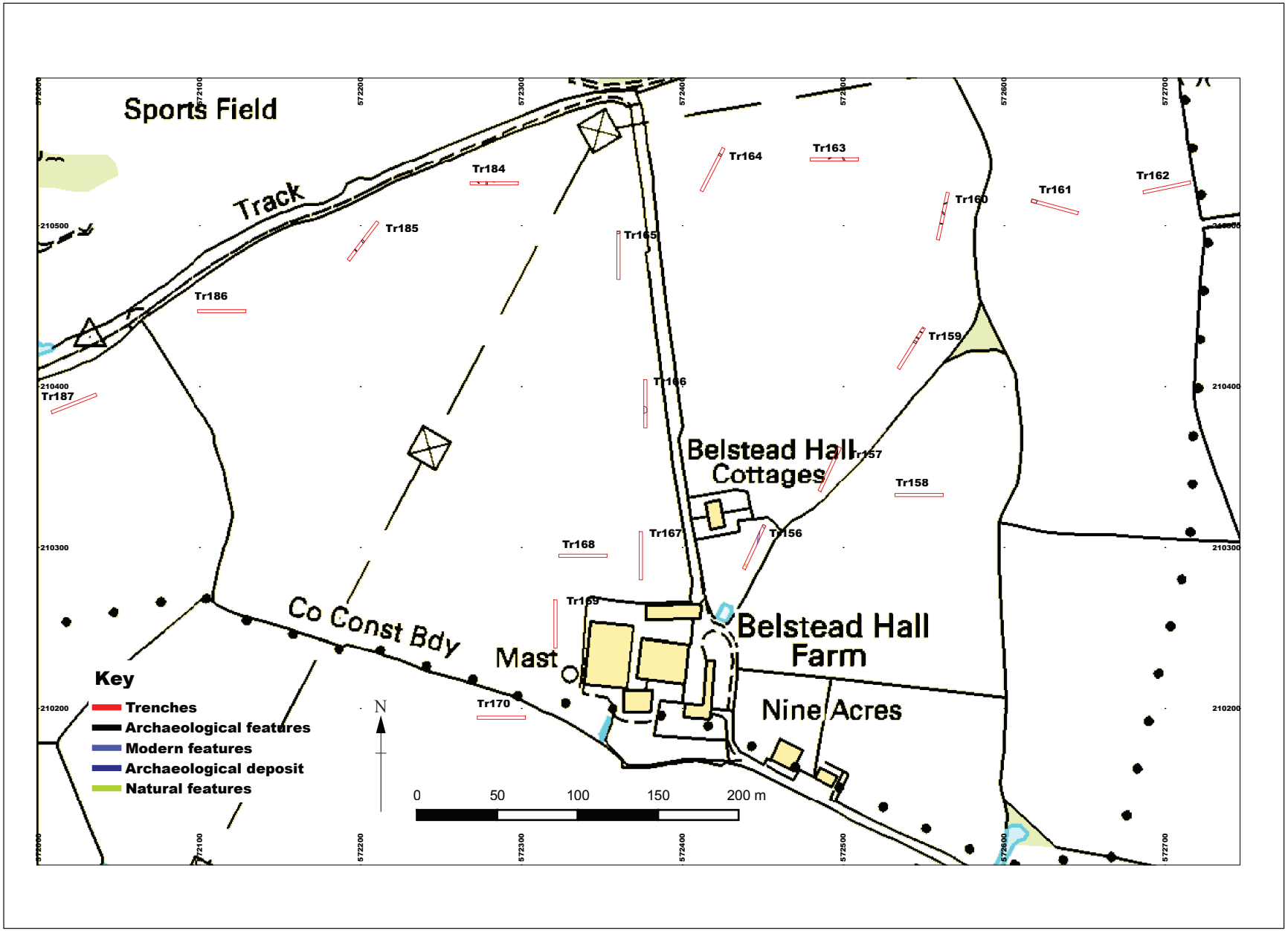

Figure 2: Trench layout with archaeological features