

ARCHAEOLOGICAL EXCAVATION

**PLOT N, CHELMSFORD BUSINESS PARK, SPRINGFIELD
CHELMSFORD, ESSEX**

NGR: TL 73400 08200

**A POST-EXCAVATION ASSESSMENT AND
UPDATED PROJECT DESIGN REPORT**

**ASE Project No: 8010
Site Code: SPAN13**

ASE Report No: 2013330



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OASIS ID: 166633

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Abstract

This report presents the results of the archaeological excavation carried out by Archaeology South-East at Plot N, Chelmsford Business Park, Springfield, Chelmsford between the 31st July and 29th August 2013. The work was commissioned by CHP Limited in advance of commercial development. The site was located immediately west of Springfield Lyons excavation site where remains of Neolithic, Late Bronze Age, Early Saxon and Late Saxon date were all investigated between 1981 and 1991 (Tyler and Major 2005). Further such remains have also been found in advance of previous phases of the business park development.

The earliest recorded Plot N remains are represented by a single Early Bronze Age pit, pre-dating the construction of the nearby Late Bronze Age circular enclosed settlement. Two later ditches forming part of a field system, probably contemporary with this settlement, were investigated along with a pit that contained a crushed, though near-complete, pottery vessel. Four ditches denoting remnants of a probable Roman field system were also identified.

The main focus of the excavation was the investigation of the western side of the Early Saxon cemetery. Twenty three cremation burials were excavated along with a further two possible cremation burials. No inhumation burials were identified and the majority of the cremations were heavily truncated. Other than single cinerary urns, few grave or pyre goods were recovered from the cremation fills. However, a quantity of Early Saxon glass beads and a copper alloy brooch were recovered as surface finds. Three other cemetery-related features were also identified.

A single boundary ditch was encountered that may have formed a distinct western limit to the Late Saxon manorial settlement. The boundary was respected by a collection of undated small pits and post-holes that may be associated with Late Saxon fence lines or small buildings. No medieval or post-medieval remains were encountered, though the route of a previously recorded substantial WW2 anti-tank ditch was traced across the whole site.

The report is written and structured so as to conform to the standards required of post-excavation analysis work as set out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008). Interim analysis of the stratigraphic, finds and environmental material has indicated a provisional chronology, and assessed the potential of the site archive to address the original research agenda, as well as assessing the significance of those findings. This has highlighted what further analysis work is required in order to enable suitable dissemination of the findings in a final publication.

It is proposed that the results of the archaeological excavation of this site are of sufficient significance and importance to warrant the production of an academic article for inclusion the county journal, Essex Archaeology & History.

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1.0 INTRODUCTION

1.1 Site Location

1.1. The Chelmsford Business Park is a complex of office and industrial units located along the south side of the B1137, some 3km north-east of Chelmsford town centre. Plot N is located toward the southern edge of the business park complex, accessed off Springfield Lyons Approach (NGR TL 73400820; Fig.1). It forms part of a larger area of rough ground, comprising grass and scrub, bounded by the current extent of the business park to the north (i.e. recently-developed Plot L), further industrial units to the west, and by the Chelmer Village residential development to the south. Immediately to the east and southeast of Plot N are the remains of the Springfield Lyons multi-period archaeological excavation site with its circular ditched enclosure partly surrounded by spoilheaps.

1.2 Topography and Geology

1.2.1 Plot N is a roughly L-shaped area of c.1.66ha. As a whole, its surface is fairly flat and even, falling gently to the southeast from c.38.5m AOD to c.35.5m AOD. A number of mature trees are present - a relic of the site formerly being within the historic gardens/parkland of Springfield Lyons house - some of these will be retained. More recently, the site has been used for the storage of spoil from earthmoving carried out elsewhere within the business park development and during the historic Springfield Lyons excavations. This material has now largely been cleared.

1.2.2 The site occupies an area on the western side of the Chelmer Valley with the River Chelmer lying some 600m to the south-east. The British Geological Survey (Sheet 241) indicates that the geology consists of Bagshot Beds over Claygate Beds which in turn lie over London Clay (British Geological Survey 1985). The surface geology where previously exposed consists of orange clay and gravel.

1.3 Scope of the Project

1.3.1 Outline planning consent for the development of various plots, including Plot N, was granted by Chelmsford Borough Council (CBC) some years ago. As various plots have been brought forward for development the ECC Historic Environment Management team (now ECC Place Services), as advisors to Chelmsford Borough Council, has required archaeological investigation to be carried out in advance of development. More recently, a planning application was submitted to Chelmsford City Council in January 2013 for the construction of a three storey office building and single storey stores facility with parking and ancillary areas at Plot N (13/00105/FUL).

1.3.2 As the site is judged to lie in an area of high archaeological potential, ECC Place Services, in their capacity as archaeological advisors on planning matters to Chelmsford City Council, recommended that a full archaeological condition be attached to any grant of planning consent. This recommendation is in accordance with guidance contained in the National Planning Policy Framework (DCLG 2012) and with previous advice given for the Business Park as a whole. The development was subsequently granted planning consent in April 2013 with the attached condition (9) stating that:

No development shall take place within the site until the applicant has secured the implementation of a programme of archaeological work in

accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Local Planning Authority.

Reason:

To ensure that adequate archaeological records can be made in respect of the site in accordance with Policy DC21 of the Adopted Core Strategy and Development Control Policies Development Plan Document.

- 1.3.3 The nature and scale of archaeological works required for Plot N were determined by the ECC Place Services monitoring officer (Alison Bennett) and set out in a *Design Brief for Archaeological Excavation* (ECC Place Services 2013), requiring the area excavation of the development site.
- 1.3.4 In accordance with this Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) were commissioned by CHP Limited to undertake the necessary archaeological works. The methodology for the excavation was set out in a Written Scheme of Investigation (WSI), prepared by ASE (2013) in response to the design brief and approved by ECC Place Services.
- 1.3.5 The fieldwork was undertaken by ASE archaeologists between the 31st July and the 29th August 2013.

1.4 Archaeological methodology

- 1.4.1 Machine removal of topsoil/overburden was undertaken using 360° tracked mechanical excavators fitted with flat-bladed buckets under the supervision of an experienced archaeologist.
- 1.4.2 Prior to the commencement of the archaeological work a square lorry turning area had been stripped of a small amount of topsoil (leaving the archaeological horizon intact) and a hardcore surface had been laid. At the commencement of the archaeological fieldwork overburden, consisting of topsoil and a small amount of underlying subsoil, was removed from the access road leading to this area revealing the archaeological horizon beneath. One feature was recorded prior to the construction of the temporary road surface.
- 1.4.3 Topsoil was then removed from a large swathe of land in the south of the site and to the immediate east and west of the turning area and was stock-piled nearby for removal from site by lorry. One hundred and twenty loads of stock-piled topsoil were removed. To the east of the turning area the strip was down to the top of the archaeological horizon but to the south and west a small amount of topsoil/subsoil was left in-situ masking any potential archaeological remains beneath.
- 1.4.4 Additional machining was then undertaken by two further machines. The area in the south of the site was re-stripped to the correct depth (Fig.5) and topsoil was removed from the western edge of the site. In this western area the archaeological horizon was sealed by a layer of subsoil. As there was no construction need to fully strip this part of the site and previous trenching had largely been blank, it was agreed, after consultation with the ECC Place Services monitoring officer, that a trial strip would be excavated to the correct depth through this area which could then be enlarged if significant

archaeological remains were encountered. This strip was machined later in the project and no remains of significance were present.

- 1.4.5 The east of the site was removed of overburden (topsoil and a little subsoil) to the top of the archaeological horizon. In the southeast, and lowest part of the site, the subsoil was noticeably deeper being in excess of 0.5m deep. Two large mounds of earth at the eastern edge and southeast of the site were moved by dumper to a new stock-pile in an area checked and free of archaeological remains to the south of the turning square.
- 1.4.6 A stockpile mound at the eastern edge of the site area was around 20m in width and essentially covered the part most likely to contain cemetery remains. Once the mound had been cleared the underlying topsoil was then carefully removed down to the top of the subsoil. This was inspected and any archaeological remains were investigated. A small depth (0.05-0.10m) of subsoil was then removed to reveal the main concentration of cremation burials. Once these had been fully excavated the ground was lowered again to check for the presence of any further remains.
- 1.4.7 Prior to fieldwork completion, the hardcore was stripped from the square turning area and from the vicinity of the site cabin, the only places not previously archaeologically examined, and the overburden lowered to check for any further archaeological remains.
- 1.4.8 The machine clearance was not undertaken in the order proposed in the WSI mainly due to inclement weather at the start of fieldwork, which meant that it was not archaeologically advisable to use the intended six-wheeled heavy duty dumper to move the earth mounds and redundant topsoil about the site. In practice much of the Phase 2 area was stripped, at least of topsoil, in advance of much of Phase 1, though ultimately all of the 0.46ha Phase 1 area was fully exposed.
- 1.4.9 All excavated deposits and features were recorded according to current professional standards using standard ASE context record sheets.
- 1.4.10 Individual feature plans and section drawings were created by hand, at appropriate scales, and located in relation to the national grid. The site was located using differential GPS and planned with the assistance of a Total Station Theodolite. A full digital photographic record of all features was maintained.
- 1.4.11 All finds recovered from excavated deposits were collected and retained for processing, analysis and reporting. In addition, the cemetery area was metal detected for artefact recovery and to check for the possibility of otherwise undetected burials.
- 1.4.12 The fills of the cremation vessels were 100% sampled in order to retrieve burnt bone, artefacts and environmental evidence. Wherever possible the pottery vessel was removed from the ground with its fill intact. Additional bulk soil samples were collected in accordance with current English Heritage guidelines (English Heritage 2011) from other suitable, non-cemetery related, contexts that had potential to provide environmental evidence such as small fish bones, carbonised seeds, etc.

- 1.4.11 The archaeological work was carried out in accordance with the Institute for Archaeologists' standards, Code of Conduct and by-laws (IfA 2008 and 2010) and the *ALGAO Standards for Field Archaeology in the East of England* (Gurney 2003). Archaeology South-East is a registered archaeological organisation with the Institute for Archaeologists.

1.5 Organisation of the Report

- 1.5.1 This post-excavation assessment (PXA) and updated project design (UPD) has been prepared in accordance with the guidelines laid out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008).
- 1.5.2 The report seeks to place the results from the site within the local archaeological and historical setting; to quantify and summarise the results; specify their significance and potential, including any capacity to address the original research aims, listing any new research criteria; and to lay out what further analysis work is required to enable their final dissemination, and what form the latter should take.
- 1.5.3 Chapters 1-3 of this report cover introduction, project and archaeological background and the original research aims. The archaeological results are set out in chronological order in chapter 4 and are followed by finds and environmental evidence in material order in chapter 5. Chapter 6 details the significance and potential of the results and chapter 7 the additional work required to bring the project to publication. Small tables are included in the text and larger tables are attached as appendices. Figures 1-4 are site illustrations and figures 5-15 are photographic plates.

2.0 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 2.1 The following archaeological background makes use the Essex Historic Environment Record (EHER) held at County Hall and the content of various reports on the results of work previously undertaken in the vicinity. Figure 1 shows the significant investigated areas alluded to in the following text.
- 2.1.1 The site lies 3km north-east of Chelmsford's Roman and medieval town centre, but it is only located c.150m south-east of the line of the Roman London-Colchester road (B1137). Scattered Iron Age and Roman finds and features have been recorded in the vicinity both during the original excavations (Tyler and Major 2005) and during related and later trenching.
- 2.1.2 Most pertinently, Plot N is located immediately west and northwest of the nationally important site at Springfield Lyons, where excavations carried out 1981-1991 recorded a fragment of the western side of a probable Neolithic causewayed enclosure in the easternmost part of the site (Buckley 1991), a Late Bronze Age settlement within a circular enclosure (Buckley and Hedges 1987; Brown and Medlycott 2013), an Early Saxon cremation and inhumation cemetery and a Late Saxon manorial settlement site (Tyler and Major 2005). A northwest projection from the main excavation site showed that the Saxon cremation cemetery and settlement remains clearly extended beyond the western limit of the excavated area.

- 2.1.3 The excavated Late Saxon manorial centre is identified as the original site of Cuton Hall, a manor recorded in the Domesday Book of 1086; although changes in manorial holdings after the Norman Conquest resulted in Cuton Hall moving to a new site nearer the Chelmer. Springfield Lyons is not mentioned at all in Domesday, and the earliest record of it dates to 1339 (Tyler and Major 2005, 200). Documentary sources and cartographic evidence suggests that the vicinity was in agricultural use during the medieval and post-Medieval periods. Further discussion of the later history of the site can be found in Tyler and Major 2005 (p.200-2), while consideration of the prehistoric monuments in the wider Chelmer Valley landscape is given in Brown 2001.
- 2.1.4 Supplementary trenching (Trenches HA to HS) was undertaken across the surrounding vicinity of the excavation site in 1991, much of it targeted to pick up continuations of specific features or to identify limits of settlement and cemetery activity. Trenching to the east of the excavation site identified further parts of the Neolithic Causewayed enclosure (Buckley 1992) and Saxon and later ditches. Trenching to the north and west was largely devoid of archaeological remains, but Trench HA, an extension onto the northwesterly projection from the 1981-91 site, contained a small number of Early Saxon cremation burials demonstrating the westward continuation of the cemetery.
- 2.1.5 A geophysical survey feasibility survey was carried out by Oxford Archaeotechnics in 1992 in the southeast corner of the Chelmer Business Park site (Johnson 1992). A magnetometer survey was primarily undertaken to detect a further part of the Neolithic causewayed enclosure. However, results proved to be inconclusive and that part of the site judged to be unsuitable for geophysical survey due to past disturbance, modern iron contamination and to poor contrast between feature fills and the natural deposit.
- 2.1.6 Since the 1981-91 Springfield Lyons excavations, archaeological investigations undertaken in its vicinity have recorded further remains dating from the Neolithic to the medieval periods. A trial-trenching evaluation to the east of the Chelmer Business Park recorded Neolithic flint artefacts, evidence of dispersed Late Bronze Age settlement activity, and Romano-British field boundary ditches dated to the 1st–2nd century (Bennett (ed) 1998, 203; 2000, 221-2; Manning and Moore 2003). Another trial-trenching evaluation to the south of the Springfield Lyons enclosure, adjacent to Chelmer Village Way, recorded further evidence of landscape development, with Romano-British field boundary ditches apparently continuing in use into the 14th century (OAU 2006).
- 2.1.7 The 2006 trial-trench evaluation of Business Park Plots G and H (Pocock 2006), and of Plots C, M and N (Robertson 2006), revealed a generally low presence/survival of archaeological remains and a moderate incidence of post-medieval and modern disturbance. Plots C, G and H were located some distance north of Plot L. A ditch found in Plot G/H Trench 4, and subsequently investigated in a larger excavation area, was judged to be Late Bronze Age and to be part of a field system to the east of the enclosed settlement.
Two probable slight prehistoric ditches and a substantial WW2 anti-tank ditch were recorded in trenches within Plot N; however, only part of this plot

was evaluated due to the presence of dense undergrowth. Plot M is now that part of the business park recently developed as Plot L. No archaeological remains were found in the four trenches excavated within its western half, but significant disturbance and truncation from modern activities was noted. It appears that the Early Saxon cemetery did not extend this far northwest into Plot L.

- 2.1.8 A total of 22 Early Saxon cremation burials, albeit generally highly truncated and disturbed, were found within the more southerly Plot L car park extension excavation area excavated in 2012 (Ennis 2013). These comprised simple urned interments of burnt human remains within shallow pits, demonstrating similar character and distribution to those previously found in this northwestern part of the cemetery. The ceramic vessels, some decorated, provide a late 5th to 6th century date. Only a single burial contained a pyre/grave good - a fragmentary piece of copper alloy binding strip. In addition to Saxon period burials, ditches delineating part of an enclosure system of posited Late Bronze Age date along with apparently associated pits, and presumably relating to land-use in the immediate vicinity of the enclosed settlement, were found just beyond the cemetery activity.
- 2.1.9 Plot K, a 0.75ha area immediately east of Plot L, was subject to open area excavation in 2011, prior to its development. Archaeological remains were confined to the eastern half of the site. Three newly-discovered pits were excavated on the line of the Neolithic causewayed enclosure boundary, along with the northern end of a pit that had been part-excavated during previous trenching in 1991. A small shallow pit of Neolithic date was located within the enclosure interior itself. A pronounced gap between the causeway pits towards the north-east corner of Plot K may indicate the position of an entranceway into the enclosure. Located within the arc of the Neolithic enclosure were the remains of the eastern half of a possible small roundhouse of Late Bronze Age date. Located c.70m north-east of the enclosed Late Bronze Age settlement, this is the only contemporary structure so far found outside of it.
- 2.1.10 Four north-south aligned field boundary ditches were also recorded. Two ditches were of probable Later Saxon date. One is possibly the southward continuation of a ditch found prior to the development of Plots G and H, approximately 110m to the north. This ditch had previously been tentatively identified as being of Late Bronze Age origin, but is now judged more likely to be of Late Saxon or later date. The remaining two ditches dated to the post-medieval period. One contained artefacts of 18th/19th century date and had two large oak trees growing upon or along it and may have been an earlier ditch backfilled during the creation of the gardens and parkland of Springfield Lyons House.
- 2.1.11 The western side of Plot K, adjacent to Plot L, had been previously stripped of topsoil for use as a construction compound during a previous phase of Business Park development and consequently was found to be rutted and truncated. No archaeological remains were identified here.

3.0 ORIGINAL RESEARCH AIMS

- 3.1 The aims of the excavation were set out in the design brief for the project prepared by ECC Place Services (2013). The general aim of the investigation was to determine the presence of archaeological remains of all dates and periods within Plot N and to preserve them by record prior to their destruction by construction works.
- 3.2 The specific aims of the investigation were to:
- Identify and record any Bronze Age settlement remains outside the Springfield Lyons enclosure and to investigate any ditch/field systems potentially associated with it
 - Identify and record the westerly spread of Early Saxon cremation burials and to define the nature and extent of the Early Saxon cemetery
 - Identify and record any other remains contemporary with the early Saxon cemetery or relating to the later Saxon settlement
- 3.3 Research objectives for the project were to be formulated with reference to *Research and Archaeology: a Framework for the Eastern Counties, 2. research agenda and strategy* (Brown and Glazebrook 2000) and with the revised research framework, *Research and Archaeology Revisited, a revised framework for the East of England* (Medlycott 2011).

4.0 ARCHAEOLOGICAL RESULTS

4.1 Introduction

- 4.1.1 The archaeological record from the site has been collated and checked. Features have been dated on finds and stratigraphic evidence and a simple phase plan drawn up. Group numbers (Gp **) have been allocated to linear features in order that the numerous excavated segments and context numbers that constitute these features, are discussed as single entities. In keeping with previous work on site, sub-group numbers have not been allocated to individual burial contexts (contra to current ASE practise).
- 4.1.2 Individual context numbers are referred to thus [***] throughout the report. Environmental samples are listed within triangular brackets <*>, registered finds thus: RF<*> and references to drawn sections within this report are referred to thus (*.*). A list of recorded features is included as Appendix 1.

4.2 Summary

- 4.2.1 The archaeological remains are discussed under provisional date-phased headings determined primarily through assessment of the dateable artefacts, predominantly the pottery, and secondarily through the creation of relative chronologies where stratigraphic relationships exist. The results of the fieldwork can be summarised as follows:
- 4.2.2 *Prehistoric*
No remains of Neolithic date were identified. The earliest excavated feature was a single pit dated to the Early Bronze Age. The pit predates the Late Bronze Age circular enclosed settlement. Two ditches forming part of a late Bronze Age field system were investigated along with an isolated discrete deposit and a pit containing a crushed near-complete pottery vessel. These

remains are almost certainly associated with the near-by Late Bronze Age enclosed settlement. A further three undated pits containing fire-cracked flint and baked clay are also likely to be of prehistoric, though undetermined, date.

4.2.3 *Roman*

Three ditches and a pit of Roman date were identified along with a fourth linear feature that continued into the northeast corner of Plot N from the original excavation area. Two of the ditches were broadly parallel and may form the limits of a trackway.

4.2.4 *Early Saxon*

The western extent of the Early Saxon cemetery was revealed and a total of 23 cremation burials were excavated, along with two further possible cremation burials. No inhumation burials were identified and it is unlikely that they extended west of the main excavation area. The majority of the burials were heavily truncated with only seven containing 40% or more of their cinerary urn. From the cremated bone it was possible to identify the graves of at least 10 adults and two infant burials. It was not possible to determine the sex of any individuals. Consistent with the previous Plot L excavation only a few grave goods were recovered from the cremation fills. Indeed, the majority of the registered finds consisted of glass beads and a copper alloy brooch that were recovered as surface finds. Two pits and a post-hole that also contained Early Saxon pottery are likely to be cemetery-related features.

4.2.5 *Late Saxon*

Late Saxon remains consisted of a single field boundary ditch and a collection of essentially undated small pits and post-holes that may, with further analysis, be demonstrated to form part of timber fence lines or small buildings associated with the Late Saxon settlement. All of these potential post-holes were located east of the boundary ditch suggesting that this represented the western limit of the occupation area. Documentary sources indicate that the settlement moved to a site nearer the river Chelmer after the Norman conquest (2.1.3). No remains of medieval date were identified to dispute this.

4.2.6 *Post-medieval and Modern*

No post-medieval remains were identified. Two modern post-holes and a number of other clearly recent disturbances were noted. A large WW2 anti-tank ditch was traced across the full width of the excavation area. Three iron rails were present in the ditch backfill that were probably part of the dismantled wartime obstacle. The route of a modern (1990s) service trench, previously observed in Plots K and L, was also noted to cross the site.

4.2.7 The site archive is currently held at the offices of ASE and will be deposited at Chelmsford Museum in due course. The contents of the primary site archive is quantified in Table 1, below.

Type	Description	Quantity
Context sheets	Individual context sheets	163
Drawing sheets	A2 Multi-context Plan/Section sheets	6
Photos	Digital images	95
Enviro. sample sheets	Individual sample sheets	28
Context register	Context register sheets	5
Enviro. sample register	Environmental sample register sheets	2
Photographic register	Photograph register sheets	2
Drawing register	Section register sheets	6
Small finds register	Small finds register sheets	1
Finds assemblage	Boxes	6

Table 1. Site archive quantification table

4.3 General

- 4.3.1 The removed overburden was similar to that encountered in the Plot L car park site, with approximately 0.30-0.35m of dark greyish brown topsoil overlying in general 0.10-0.20m of lighter brown gravelly clay silt subsoil. However, in some places in the centre of the site subsoil was virtually non-existent and was at its deepest, in excess of 0.5m, in the southeast corner of the site.
- 4.3.2 The underlying natural deposits were generally patchy and consisted of silty clay and gravel that varied in colour from light brown to bright orange.
- 4.3.3 Feature clarity, particularly regarding the detection of the tops of cremation burials within the subsoil, was generally poor. Clarity against the underlying undisturbed natural deposit was fair to good.
- 4.3.4 All archaeological remains had clearly been truncated and disturbed, presumably due to later (post-medieval and modern?) cultivation and/or gardening. The cremation burials provide the clearest indication of the depth and general extent of horizontal truncation, only the lower halves (or less) of their constituent urns generally surviving. It is possible that some small and shallow features will have been removed completely. Animal and vegetal disturbance was low, though in addition to the WW2 tank trap the site was crossed by a 1990s service trench. A large hole had also recently been dug adjacent to one of the spoil heaps to create a jump obstacle by dirt bike riders using the site. While the tank trap may have removed a few cremation burials, the more recent intrusions were outside the cemetery area and had minimally disturbed other archaeological remains on this site.
- 4.3.5 A range of cut features comprising ditches, pits, post-holes and cremation burials was encountered across the site (Fig.2). Their complexity, both in terms of their structure/taphonomy and intercut relationships, was minimal. Feature distribution was dominated by the clustering of cremation burials at the eastern edge of the site. Beyond this, features were widely dispersed and, other than the ditches, show little sign of meaningful patterning.
- 4.3.6 The encountered remains ranged in date from prehistoric to modern, though no features earlier than Bronze Age, or of the Iron Age or Medieval periods, have been identified. The recorded remains are described and discussed by broad period, below.

4.4 Early Bronze Age

4.4.1 The earliest pottery was recovered from isolated oval pit [374] in the east of the site. This pit was 2.16m long by 0.26m deep and filled with light orangey grey sandy silt [375]. Twenty seven sherds of Early Bronze Age pottery were recovered.

4.5 Late Bronze Age

4.5.1 A near-complete pottery vessel [373] of Late Bronze Age date was recovered from shallow, truncated pit [377] in the centre of the site. The pottery vessel may have originally been deposited whole but was subsequently compressed and fragmented. The pit was 0.06m deep and contained, in addition to the pottery, a small amount of grey-brown silty clay backfill [376].

4.5.2 East/west aligned ditch [250] (Gp 1), 0.88m in width, was recorded for about 9m in the northern part of the site. The ditch was revealed during machine stripping for the temporary site access track at the commencement of the fieldwork. As this feature was a continuation of Late Bronze Age ditch [181/190] excavated in Plot L (Ennis 2013), and due to the urgent need to lay the temporary access track, the ditch was recorded in plan only.

4.5.3 In the centre of the site was a roughly north/south aligned ditch (Gp 2) that was observed intermittently for some 50m (Figure 6). The ditch was not observed beyond the modern service trench in the south of the site and appeared to peter-out, or was perhaps truncated, to the north. This feature was investigated in four segments [270], [273], [277] and [281]. It appeared slightly irregular in plan and varied in width from 0.52m to 0.82m and in depth from 0.15m to 0.26m. The only find was a single sherd of Late Bronze Age pottery recovered from fill [272] in excavated segment [273]. This ditch ran more-or-less perpendicular to the Gp 1 ditch. Though, as no clear northern terminal or continuation to it could be detected, their direct association with one another could not be established.

4.5.4 Layer [372] was a small discreet deposit of dark grey-brown to black silty clay that was truncated by modern disturbance on its southeast side. The deposit contained charcoal, baked clay and a few sherds of Late Bronze Age pottery and was 100% sampled (<27>) for environmental analysis. One small sherd of Roman pottery was recovered from the sample which may be intrusive. Analysis of the sample has identified charred crop remains including grains of wheat and barley (see 5.12.12).

4.6 Roman

4.6.1 In the centre of the site was a roughly north/south aligned boundary ditch (Gp 3) that was intermittently observed for a length of 79m. The ditch was investigated in three segments [252], [268] and [279] and was up to 1.30m wide and 0.30m deep. It contained a small amount of animal bone, baked clay and Roman pottery. To the south the ditch continued beyond the edge of the site and to the north it became obscured by root disturbance and truncation from the former tennis court.

4.6.2 In the southwest corner of the site were two roughly parallel ditches (Gps 4 and 5) aligned WNW/SSE. The more northerly ditch (Gp 4) was in excess of 38m long and was investigated in two segments [254] and [264]. It was up to 0.76m wide and 0.28m deep and contained a few pieces of Roman roof

tile (tegula). The second ditch (Gp 5) was over 30m long and was investigated in three segments [260], [262] and [413]. This ditch was shallower and more poorly defined. It was up to 0.50m wide and 0.09m deep and only contained a few fragments of baked clay. The projected intersection between these features and the Gp 3 ditch lay beyond the southern limit of the excavation and so their stratigraphic relationship was not determined.

4.6.3 A small fragment of east/west linear feature [393] was exposed in the northeast corner of the site. This ditch was over 1.1m wide, 0.3m deep, and visible in plan only for some 5m, it being truncated to the north and west by the WW2 tank trap. No finds were recovered from its root disturbed silty sand fill [392]. The feature continued eastwards into the 1981-91 excavation (Tyler and Major 2005, Fig. 3) where it is described as a shallow ditch of Roman date (Tyler and Major 2005, 2).

4.6.4 Pit [275], in the south of the site, was filled with a dark charcoal-flecked fill [274] that contained only a single tiny sherd of Roman (probably 1st-2nd century) pottery. This irregular shaped pit was 1.35m long by 0.30m deep. Environmental soil sample <1> taken from the fill was rich in oak charcoal and contained a single charred grain of possible barley.

4.7 Early Saxon

4.7.1 Cremation burials:

A total of 23 cremation burials ([283], [287], [293], [296], [298], [301], [305], [308], [311], [314], [321], [324], [329], [332], [337], [342], [347], [355], [359], [363], [366], [370], [379]) were identified and excavated. Most of these consisted of a small pit containing a single ceramic vessel into which burnt human remains had been placed. The one exception was burial [379] where the burnt human remains had apparently been placed directly into a pit without a ceramic vessel. In addition, two recovered groups of surface finds (contexts [288] and [315]) are also likely to mark the locations of two more burial features, presumably largely removed by later truncation activity.

4.7.2 The cremation pits were generally poorly defined, particularly where they were cut into the surrounding silty gravel and/or where the burial was heavily truncated. Identified pit cuts were all roughly circular in plan and varied in depth from 0.02m to 0.22m, with the majority being less than 0.12m deep. Diameters were generally in the range 0.2m to 0.35m with the largest, for burial [314], being 0.6m. In all cases the depth and diameter of the pit depended greatly on the degree of truncation. In several instances there was no discernable cut and in some heavily truncated examples just the slightest of bowl-shaped depressions beneath the vessel could be discerned. Many of the deeper pit cuts appeared to be large enough only to accommodate the vessel.

4.7.3 All of the burials had been truncated in antiquity to a greater or lesser degree, presumably by post-cemetery cultivation. Also, a small amount of material was inevitably lost from the top of a burial and vessel when it was initially exposed by machine. Most of the burials, particularly in the east of the site, were sealed beneath a thin layer of subsoil which, as it sealed already truncated burials, must have been the base of a former plough soil. The survival of the burial remains beneath this soil was directly related to the

depth of the pit. In general the cremation vessels that were buried the deepest survived the best.

- 4.7.4 The interred vessels were generally disturbed and fragmentary (Figs. 7-12). Most survived only as basal and lower body sherds up to an estimated 30% completeness. Only seven vessels (in burials [287], [298], [314], [337], [342], [355], [364]) were 40% or more complete, with the best surviving examples being vessel [313] (c.85%) in burial [314] (Fig.9) and vessel [350] (c.75%) in burial [355]. The pottery fabrics were soft and crumbly and in general quite fragile. A small proportion of the vessels (15%) were decorated with a range of incised lines, bosses and stamps. Vessel [313] had been repaired with a lead plug and vessel [350] was unusual in that it had been buried on its side.
- 4.7.5 The vessel fills, which contained small fragments and flecks of white burnt bone, were all 100% sampled and removed for off-site processing. In several instances the near-complete vessel and its contents were removed as one for later dismantling and analysis. The fills were mostly described as greyish brown silty clays with few having a noticeable charcoal content. Unsurprisingly, the greatest quantity of burnt bone (1097.3g) was recovered from the largest and best preserved ceramic vessel [313] found in burial [314]. Grave goods were scarce. A bone bead (RF<18>) was recovered from the fill [312] of burial [314], copper alloy tweezers (RF<16>) and a wire ring were recovered from the fill [349] of burial [355] and copper alloy fragments (RF<15>) were recovered from fill [290] of burial [293].
- 4.7.6 In five burials ([287], [298], [342], [355] and [370]) a definite backfill surrounding the vessel was identified. These greyish brown sandy silty clay fills were poorly defined and similar in colour and consistency to the surrounding natural deposits. No finds were retrieved other than burnt bone from fill [351] in burial [355] which was consequently fully sampled <22>. This burnt bone was clearly displaced from the vessel which had been buried on its side.
- 4.7.7 It is probable that surface finds [288] were also grave goods divorced, probably through truncation, from their burial pit. The finds consisted of thirteen burnt glass beads (RF<2-14>), a copper alloy cruciform brooch (RF<1>) and one sherd of Early Saxon pottery all lying together in a small pile (Figure 13). No evidence of a surrounding cut was found despite thorough hand-investigation and subsequent controlled lowering of the immediate area by machine. It remains possible that this was rather a 'placed deposit' of pyre debris / goods.
The other surface finds, [315], consisted of 71 sherds of Early Saxon pottery all located in close proximity to each other. The sherds represented the truncated and very fragmented remains of a cremation urn. No fill was present and the cut was also no longer discernable.
- 4.7.8 No instances of intercutting burials were recorded, suggesting the former presence of above-ground markers and the deliberate avoidance of earlier graves. The spacing between individual burials was variable, though generally increasing to the southwest. Collectively, these Plot N burials formed a distinct cluster confined to the eastern end of the site (Figs.2 and 3). Together with those in Plot L, they constitute the western edge of the Early Saxon cemetery and their westward decreasing density fits well with its

overall patterning. Whether significant or not, it is noted that the majority of the graves were located to the east of a later Saxon ditch (see below).

4.7.9 Other cemetery features:

In addition, three non-cremation grave features contained small amounts of probable Early Saxon pottery. A single sherd of pottery and three iron nails were recovered from irregular tear-shaped pit [333]. This pit was 1.9m long by 0.14m deep and was filled with dark grey brown sandy silt [334]. To the south, shallow, sub-circular post-hole 388 contained two abraded sherds of pottery and a single sherd was recovered from a poorly-defined possible sub-circular pit [398].

Both located amongst the cremation graves, these features are conjectured to be contemporary with the cemetery, though could instead be later and may have contained re-deposited material deriving from one or more disturbed graves.

4.8 Late Saxon

4.8.1 A narrow north/south aligned boundary ditch (Gp 6) crossed eastern end of the site, running through the western margin of the cremation cemetery though not truncating any graves themselves (Fig.3). This ditch was recorded for a length of 39m and was investigated in four segments ([318], [325], [360] and [401]) where it was established to be c.0.60m wide and up to 0.24m deep. No finds were recovered from its single fill. The ditch continued beyond the southern limit of Plot N where it had been previously recorded during the 1981-1991 excavations and had been dated to the Late Saxon period. The ditch was relatively well-defined and, as its northward continuation was not identified in Plot L, it presumably terminated immediately to the north of the site in the c.3m gap between Plots L and N.

4.9 Undated features

4.9.1 Twelve small pits and post-holes ([338], [343], [380], [382], [384], [387], [390], [395], [396], [398], [410], [408]) and one localised deposit of charcoal rich silt ([316]) were excavated in the eastern part of the site. Most of the features were oval or sub-circular in plan and varied in length/diameter from 0.30m to 78m and in depth from 0.07m to 0.33m. Fills consisted of orange brown to greyish brown sandy silt. No finds were recovered from any of these. Deposit 316 consisted of a small patch of charcoal rich silt that was 100% sampled (<11>) in case it was cemetery-related. No evidence to confirm this was found during its subsequent analysis.

4.9.2 Significantly, all of these undated features were located to the west of the Late Saxon boundary ditch (Group 6) and it is reasonable to assume that they some or all may be of a contemporary date. Numerous small pits and post-holes were recorded in the adjacent 1981-91 excavation (Tyler and Major 2005, Fig. 3), some of which could be construed to form small buildings and fence-lines. It is possible that some or all of these features are further parts of this Late Saxon manorial settlement phase. However, no meaningful patterning or continuation of alignments between the two sites can be readily discerned.

4.9.3 Three undated pits contained numerous pieces of fire-cracked flint but exhibited no evidence of *in-situ* burning. One of these pits, [352], was located in the southeast corner of the site. This was oval in plan with a sloping base and contained a charcoal-rich upper fill [354], from which

environmental soil sample <20> was taken, and a lighter grey lower fill [353] similar to the surrounding natural. The other two pits, [256] and [258], were located in the southwest corner of the site; both were poorly defined. Pit [256] was sub-rectangular in plan with a sloping base which was deepest (0.19m) in the west. Finds comprised fragments of baked clay and a residual worked flint blade of possible Mesolithic / Early Neolithic date. Pit [258] was an irregular bowl-shaped feature up to 0.13m in depth that also contained baked clay (daub).

4.10 Modern

4.10.1 Two well-defined post-holes, [402] and 404], were investigated in the re-machined north/south strip in the west of the site. Both contained dark brown silt identical to the topsoil and are believed to be of modern origin. A third feature [407] in the north of the strip, also of modern date, was subsequently identified as backfill associated with a former trial trench (T8).

4.10.2 Three Iron rails were recovered protruding from the backfill of the WW2 tank trap. The rails did not appear to be in-situ but were probably part of a wartime obstacle that was pushed into the ditch after the war when the ditch was backfilled.

4.11 Trial Trench features

4.11.1 Feature 110 in former trial trench T1 had been interpreted as a shallow prehistoric ditch (Robertson 2006) but when fully exposed was revealed to be a sub-rectangular pit extending only just beyond the confines of the original trench.

4.11.2 Trial trench 3 had previously identified the eastwards continuation of the WW2 tank trap and a possible adjacent bank. Open area excavation showed the bank to actually be the backfill of 1980's trial trench HU which had not been located in the correct position on plan.

4.11.3 Trial trench 8 had identified a possible Bronze Age ditch [804] aligned roughly north/south. However, the subsoil was not subsequently removed in this part of the site during the Plot N strip and the presumed southwards continuation of this ditch was not therefore observed.

5.0 FINDS AND ENVIRONMENTAL ASSESSMENT

5.1 Introduction

5.1.1 A medium-sized assemblage of finds was recovered during the excavation. Finds were all washed and dried or air dried as appropriate and were subsequently quantified by count and weight and bagged by material and context. All finds have been packed and stored following IFA guidelines (2008).

5.2 Flintwork by Karine Le Hégarat

5.2.1 The Plot N archaeological work produced five pieces of struck flint weighing 25g and 42 fragments of burnt unworked flint (532g). The pieces of struck flint display moderate post-depositional edge damage. Two artefacts were broken. Two flakes from possible Late Bronze Age ditch (Gp 2) fills [276] and [269] and a third from layer [372] are not chronologically diagnostic.

However, the blade fragment found unstratified and the retouched blade from pit fill [257] are characteristic of the Mesolithic / Early Neolithic.

5.3 Prehistoric and Roman Pottery by Anna Doherty

5.3.1 Prehistoric and Roman pottery was only recovered from a few contexts; however, at least three discrete periods seem to be represented.

5.3.2 The earliest pottery comprises 27 sherds, weighing 264g, which belong to the Early Bronze Age Biconical Urn tradition. The sherds, all found in fill [375] of pit [374], may be of a single vessel, although several examples have more pronounced oxidisation on the exterior surfaces and could be from a different vessel of very similar type. The fabric contains moderate rounded inclusions of grog, measuring c.1.5-2.5mm, which are of very similar composition to the background clay matrix. The matrix itself is fairly dense and contains moderate quantities of coarse quartz sand (c.0.3-0.4mm) but lacks any finer grained quartz. Although the sherds are relatively large and unabraded, they probably represent less than 10% of an entire vessel and all come from the rim/shoulder of a plain Biconical Urn. A single post-firing perforation was noted in the vessel wall on one of the sherds.

5.3.3 A heavily-fragmented but near-complete vessel of Late Bronze Age date was also found in fill [373] of pit [377] (192 sherds, weighing 1.73kg). The fabric of the vessel is coarse and ill-sorted with moderate flint inclusions mostly of 0.2-4mm in very sandy matrix with ill-sorted but relatively coarse quartz sand ranging from silt-sized to 0.4mm. The form is a shouldered jar with an upright neck. The fairly plain nature of this form together with the coarseness of this fabric, and its relatively thick-walls would be consistent with a date in the plain ware phase of the post Deverel-Rimbury tradition (c.1150-800BC). However, some light but crudely executed fingernail impressions were noted on the shoulder. It is therefore difficult to date this vessel very precisely within the Late Bronze Age as, although decoration became a more common feature in the later part of the Late Bronze Age (c.800-600BC), some decorated vessels may be encountered in earlier assemblages. Two other contexts, [272] and [372], also produced a few comparable, if slightly finer, flint-tempered bodysherds which are most likely of Late Bronze Age date. The environmental sample collected from layer [372] also produced a single Roman grey ware bodysherd, suggesting that the prehistoric pottery in this deposit might be residual.

5.3.4 Undiagnostic Roman grey ware sherds were recovered from three other contexts: pit fill [274], ditch fill [267] and pit fill [357]. A partial rim sherd from a necked jar or beaker found in context [274] looks more likely to belong to the 1st or 2nd century than to the later Roman period; however the sherd is too small to be certain of the overall profile of the vessel. In addition, 30+ crumb-sized sherds, probably all deriving from one sherd of friable Roman pottery, were recovered from the sampled fill [312] (<12>) of Early Saxon cremation urn [313] in burial [314].

5.4 Early Saxon Pottery by Sue Tyler

5.4.1 *Introduction*

The Plot N excavation produced 12.5 Kg of pottery representing the remains of thirty Early Saxon vessels, all most likely used as cremation vessels. These pots represent a further addition to the corpus of cremation urns

recovered from previously excavated areas of this substantial Early Saxon cemetery (Tyler and Major 2005; Tyler in Ennis 2013).

5.4.2 *Fabrics*

The identification follows the *Fabric Series* used in previous analyses of pottery from the adjacent 1981-91 site at Springfield Lyons (Tyler and Major 2005, 120-1) and Plot L, Chelmsford Business Park (Tyler in Ennis 2013). The identified fabrics are tabulated below (Table 2).

Fabric	Description
1a	Quartz-sand tempered within a clay matrix containing few inclusions. Well sorted, dense rounded to sub-angular small to medium particles. Hard medium to well fired.
1b	As 1a but with varying quantities of mica and felspar.
1c	As 1a but with sparse to common iron oxide.
2	An assortment of sandy fabrics whose quartz-sand particles are generally larger and more angular than 1a.
3a	Organic temper within a clay matrix containing few inclusions
3b	Organic temper with common iron oxide within the clay matrix.
4	Tempered with quantities of organic matter and small to medium well-sorted dense quartz-sand (in varying proportions) within a clay matrix.

Table 2. Early Saxon pottery fabric identification

5.4.3 *Vessel forms*

Most of the Plot N vessels (85%) survive only as bases and lower bodies, with only a single example having a complete profile from base to rim (vessel [315]), showing it to be a globular jar with upright rim. This renders any analysis of their comparative forms incomplete and indeed for vessels where less than 50% of the pot survives the general term 'pot' has been used (or 'urn' where it is likely that the vessel was produced specifically for use as a container for cremated remains). Where the pot or urn has a tall 'shouldered profile' it is termed a jar; this is the most common vessel form within the Plot N assemblage (eight examples). Further sub-divisions can be made into: biconical / carinated jar (e.g. vessel [313]), globular jar (e.g. vessel [292]); sub-globular jar (e.g. vessel [286]). A pot with a more squat profile is termed a bowl; however there are no definite examples of bowls within the Plot N assemblage (although some of the bases and lower bodies may be derived from bowls). It seems reasonable to suppose that bowls were mainly used (although not exclusively) as inhumation accessory vessels, their shape being more suited to containing a small food offering than the comparative bulk of cremated remains.

5.4.4 *Decoration*

Only 15% of the vessels are decorated (three in the assemblage). Although this appears to be slightly less than from previous excavated cemetery groups (e.g. 25% of cremation urns from Plot L were decorated), it could be explained by the absence of most of the upper bodies of the urns (where the decoration would have most commonly been). This is demonstrated by vessel [328], where the base and lower body survive and a single body sherd has an incised curving line indicative of a decorative scheme. This pot could have been decorated with an intricate pattern, perhaps involving

bosses and stamps, but it has fallen victim to truncation and so we can only speculate.

5.4.5 The two highly decorated examples (vessels [313] and [320]) exhibit a range of decorative techniques; some used together to form a scheme typical of late fifth to mid-6th century cremation urns. In this group it includes incised concentric necklines (vessel [313]); incised vertical lines, usually grouped in sets of twos or threes and sometimes demarcating a panel of infill stamps or used to emphasise a boss (vessels [313], [320] and [328]); hollow bosses (vessel [320]); applied solid bosses (vessel [313]), rows of more random infill utilising stamps (vessel [320]).

5.4.6 *Discussion of individual vessels*

It is not unreasonable to suppose that some highly decorated, well-made vessels were produced specifically for use as cremation urns and possible candidates are discussed in more detail below.

Vessel [313]

This vessel has the most complete decorative scheme: decorated with a series of shallow long bosses (pushed out rather than applied). Panels of vertical decoration (both on and in between the bosses), each panel demarcated by incised vertical lines. Infill decoration comprises short diagonal lines (chevrons) and segmented crescent stamps (Briscoe's type G 2aii Segmented crescent).

The form of the pot is biconical, carinated at its girth. This combined with the decoration fabric, executed in a well-sorted sandy fabric (in this case well-fired and hard), suggests a date of manufacture sometime during the period AD 450 to 550. The segmented crescent stamp is a fairly common form probably belonging to the early 6th century.

Interestingly, this vessel has a repair to its lower body in the form of a lead plug. In addition to occurring in previously excavated cremation urns at this cemetery (Cremation 2502, Tyler and Major 2005, Fig.51), repairs of this sort have been noted in Cemetery II at Mucking, Thurrock (Clark 2009, 595). The repair to Cremation 2502 at Springfield Lyons comprised a sizeable lead plug with the imprint of a coarse tabby weave fabric on its inner surface (most likely a woollen cloth), presumably used to push the plug into position. Interestingly repairs seem to have been made to pots manufactured in coarse fabrics with no decoration as often as they were made to much finer, highly decorated vessels. It could be argued that the act of repairing such a range of vessels supports the theory that all pottery vessels were highly valued at this time as their production represented a sizeable investment in time (coil production being far more laborious than wheel-thrown wares). For a fuller discussion of the possible implications of the use of lead plugs in post-firing perforations in cremation vessels see Perry 2012.

Vessel [320]

This vessel, pedestal footed jar, is decorated with bosses, incised lines and stamps and has a pedestal foot. c.30% of vessel is present (base and lower body sherds). Decorated with a series of shallow long bosses (pushed out rather than applied) Panels of vertical decoration (both on and in between the bosses), each panel demarcated by incised vertical lines. Infill decoration comprises short diagonal lines (chevrons) and segmented crescent stamps (Briscoe's type G 2aii Segmented crescent).

The use of stamps in addition to bosses and incised lines suggests a date of manufacture within the first half of the 6th century. The fabric is Fabric 4, demonstrating that highly decorated vessels were produced in fabrics with some organic temper and not exclusively in hard-firing, finer sandy wares (fabrics 1a to 1c).

5.4.7 *Surface treatment*

A number of pots have evidence of smoothing but only one example has traces of external burnishing (vessel [313]); the most highly decorated urn in the assemblage and the only one with a repair. This supports the supposition that vessel 313 was an exceptional vessel within the assemblage, possibly representing a high status burial.

5.4.8 *Residues and sooting*

Residues, both internal and external sooting, are occasionally found in Early Saxon cremation assemblages, usually on plain vessels. It is thought that such vessels were first used in the domestic sphere and subsequently utilised as cremation urns. Examples have been identified within the cremation urn assemblage from Cemetery II at Mucking (Hirst and Clark 2009, Part ii, 603-4). One pot from Plot N ([286]) has clearly identifiable sooting on both its inner and outer surfaces. Residue tests at Mucking proved inconclusive in identifying the residues present (probably because the residues were carbonised beyond recognition).

5.4.9 *Dating*

The date range for the Plot N vessels mirrors that from the earlier excavations (a late 5th to late 6th century date range). The vessels can be dated by form, decoration and fabric and find close parallels with the Mucking cemetery forms and fabrics. Myres's dating of carinated and biconical pots has been shown to be too narrow (being produced for a longer period during the 6th century than he suggested). However, given its form, fabric and decoration, it is still probable that vessel [313] belongs to the period AD 450 to 550. The rest of the assemblage fits into a 6th century context; however with a high percentage of incomplete, plain vessels more precise dating is problematic.

5.5 **Ceramic Building Material** by Trista Clifford

5.5.1 Ceramic building material weighing 532g was recovered from three separate contexts. The material was examined by eye and using x20 magnification microscope. Both ditch fills [253] and [406] contained highly abraded small flakes of less than 2g each, the origin of which is uncertain. Ditch fill [255] contained four conjoining pieces from a Roman tegula in a fine sand tempered fabric with sparse coarse pale quartz and flint inclusions. The tegula is abraded with a pitted upper surface; the lower surface exhibits wear polish and the flange appears to have been removed indicating reuse of the tile, possibly as flooring.

5.6 **Geological Material** by Luke Barber

5.6.1 The excavation recovered a single piece of stone, from layer [372]. This consists of a fragment from a dull grey-purple quartzite cobble (181g). Apart from having been slightly burnt post-breakage, there are no other signs of human modification to its original water-worn surface.

5.7 Bulk Metalwork by Trista Clifford

5.7.1 Three nail fragments were recovered from two separate contexts. The assemblage is in poor condition. A small, clenched nail with a slightly domed head was identified from the x-ray of metalwork from cremation fill [312] sample <12>. A similar iron rivet came from Cremation 6638 of the published excavation (Tyler and Major 2005, 39). Two iron nail fragments with square sections from pit fill [334] have missing heads but appear to be of a general purpose rather than structural type.

5.8 Fired Clay by Trista Clifford

5.8.1 A total of 162 fragments of fired clay, weighing 740g, were recovered from eight separate contexts. The assemblage includes both hand collected fragments and material retrieved from soil sample <27> (layer [372]). The fragments were examined with the naked eye for diagnostic characteristics indicating form and/or function. Fabrics were identified with the aid of x10 magnification microscope and the assemblage recorded on pro-forma archive sheets and an excel spreadsheet. A single fabric was evident (F1): moderate fine to medium sand temper with sparse coarser quartz and flint inclusions and very sparse iron rich inclusions up to 7mm.

5.8.2 The mean fragment weight (MFW) of the assemblage was low (4.6g) reflecting the high degree of abrasion observed. The assemblage was largely made up of amorphous lumps with no diagnostic features. Fragments with one flat surface were recovered from layer [372] and pit fill [357]. A number of pieces from undated pit fill [259] have a somewhat pinched appearance and one piece from this context exhibits a probable wattle impression of 6.27mm diameter. These fragments may represent daub.

5.9 Registered Finds by Trista Clifford

5.9.1 A small assemblage of 18 Registered Finds was recovered from cremation and probable cremation deposits (Table 3) consisting predominantly of dress accessories from a single context ([288]). Finds have been assessed for conservation requirements and have been x-rayed and/or conserved as required.

RF	Context	Object	Material	Period	Wt (g)
1	288	BROO	COPP	AS	50
2	288	BEAD	GLAS	AS	
3	288	BEAD	GLAS	AS	<2
4	288	BEAD	GLAS	AS	<1
5	288	BEAD	GLAS	AS	<1
6	288	BEAD	GLAS	AS	<2
7	288	BEAD	GLAS	AS	<1
8	288	BEAD	GLAS	AS	<2
9	288	BEAD	GLAS	AS	<2
10	288	BEAD	GLAS	AS	2
11	288	BEAD	GLAS	AS	<2
12	288	BEAD	GLAS	AS	<2
13	288	BEAD	GLAS	AS	<2
14	288	BEAD	GLAS	AS	<2

15	290 <5>	UNK	COPP	AS	<2
16	349 <21>	TWEE	COPP	AS	2
17	312 <12>	?VESS	LEAD	AS	40
18	312 <12>	BEAD	BONE	AS	<2
19	334	?PIN	IRON	UNK	14
20	331	?TOOL	IRON	AS	24
21	312 <12>	PEND	COPP	AS	
22	312 <12>	CLEA	IRON	AS	

Table 3. Overview of the Registered Finds

5.9.2 *Beads*

A total of 14 beads were recovered. Possible cremation [288] contained 13 glass beads. The remaining bone bead was recovered from cremation fill [312]. Glass beads were recorded on pro forma archive sheets and an excel spread sheet using the methodology employed at Mucking (Hirst 2000) and incorporating the typology suggested by Brugmann (2004) where appropriate.

An overview of the glass beads is shown in Appendix 3. Seven polychrome and six monochrome beads were recovered. The most numerous are the translucent blue annular (Brugmanns 'Blue' type) which have a date range of mid 5th - mid 6th century. One of these was fragmentary and two others have a bubbled, abraded surface. The glass beads varied in size from 8mm x 5mm to 15mm x 7mm (full details in archive).

The conservators commented that all of the beads from [288] showed evidence of reheating after manufacture, with deformed shapes and surface bubbles and in some cases heat fractures. This would be consistent with burning on a cremation pre site.

A single large 'black' annular bead, RF<6>, is in fact a very dark green colour. Several burials excavated during previous phases of excavation of this cemetery contained similar beads (2780, 4988, 4899, 6044, 6533), together with small blue annular beads, and have a similar date range.

The pale yellow green lobed bead (RF<3>) is of a rare type thought to be related to the early Germanic bead fashion (Brugmann 2004, 34). Similar beads have been found at Andover, Eastbourne (Clifford in prep) and Northampton (Brugmann 2004, Fig 102). A blue green example of similar form came from Grave 4988 (Tyler 2005).

RF<10> is a large globular bead with translucent dark blue ground and marvered red, yellow and white crumb decoration. Guido (1999) suggests a largely continental distribution although Mucking cemetery also produced beads of this type (Hirst 2009). Several variants of the same pattern - double crossing wave with a single row of spots - are also present. Opaque white with pale blue wave and spot (RF<9> and <13>) are paralleled by an example from Grave 6033 (Tyler 2005), whilst parallels for two others (RF<8> and <11>) have yet to be found. RF<13> shows distortion and breakage possibly due to being heated/ burnt. It is not clear if the distortion was caused by post-manufacture heating or whether the bead is a waster which has been used despite its appearance. Further cleaning and investigation may answer this question.

Lastly, two short cylinders both in opaque white glass with marvered blue/blue-green trails along the edges (RF<2>) and pink and red eye spots (RF<12>) have close parallels again within Grave 4988 (Tyler 2005). However, the examples within that grave have the colours of applied decoration reversed. They are similar to type H4 at Mill Hill (Brugmann 2001, 60) and type P25 at Mucking (Hirst 2009) dated to the 6th century or before.

A single disc shaped bone bead, RF<18> was recovered from cremation fill [312] environmental sample <12>. Around 50% of the object remains and it has been subjected to high temperatures. Some saw marks are visible on the surface of the bead (Fig.14). It has been suggested that bone beads may have been used as sword beads (Down and Welch 1990).

5.9.3 *Brooch*

Part of a single copper alloy cruciform brooch (RF<1>) of Åberg's Group I was recovered from possible cremation [288]. The brooch fragment measures 34mm x 62mm and weighs 50g. It is in a poor state of preservation and covered in adherent soil, having lost all three of the applied fully rounded knobs. One knob survives unattached. The foot and catch plate are also missing. The side knobs were possibly attached via an iron wire which can be seen on the reverse of the object within the adherent soil. It is not clear whether the square head plate or bow is decorated; further cleaning and conservation will reveal this. This brooch appears to be a very close parallel for those from Grave 4988 (Tyler 2005, 112).

5.9.4 *Perforated disc*

A perforated disc, RF<21>, was identified from the x-ray of metalwork from cremation fill [312]. The disc appears to be non-ferrous and could be a coin; both are fairly frequent finds within early Saxon grave contexts. Further investigation of this object is required to confirm the identification.

5.9.5 *Tweezers*

A small fragmentary set of undecorated copper alloy tweezers, RF<16>, was recovered from cremation fill [349] sample <21> together with (and probably originally attached to) a copper alloy wire ring (Fig.15). The tweezers measured 36mm x 6mm and the ring had a diameter of 19.5mm. Cremation 8576 contained a similar pair of tweezers which are relatively common finds within Anglo Saxon cremations.

5.9.6 *Lead repair*

Cremation fill [312] sample <12> contained a roughly circular piece of lead (RF<17>) measuring 41mm x 37mm and weighing 40g; a repair of vessel 313 (see 5.4.6)

5.9.7 *Objects of uncertain function:*

Four amorphous fragments of heat affected iron (RF<22>) were also recovered from cremation fill [312] sample <12>, one of which appears from the x-ray to be a cleat. Small fragments of copper alloy were recovered from cremation fill [290] sample <5>. They do not appear diagnostic of form or function. Additionally, ditch fill [334] contained two iron rod fragments of circular section (RF<19>) which may be part or parts of a larger object such as a pin, and a possible awl was recovered from cremation fill [331]

(RF<20>). These have been identified from the x-ray alone and merit further study in due course.

5.10 Animal Bone by Gemma Ayton

5.10.1 A very small assemblage of animal bone comprising eight fragments from two contexts ([267] and [327]) was recovered during the excavations. Ditch fill [267] contains a single fragment of hand-collected bone identified as a shaft fragment from a cattle metacarpal. The remaining specimens derive from sample <15>, context [327], the fill from an Anglo-Saxon cremation vessel, and have been identified as large mammal ribs. There is no evidence of butchery, gnawing or pathology on the bones. All, including those from sample <15>, are unburnt.

5.11 Cremated Bone by Elissa Menzel

5.11.1 *Introduction*

Burnt human bone weighing a total of 4063g was recovered from 23 Early Saxon cremation burials - [284], [287], [293], [298], [296], [301], [305], [308], [311], [314], [321], [324], [329], [332], [337], [342], [348], [355], [359], [364], [367], [370], [379]. Twenty-two of these burials contained a pottery vessel from which varying amounts of cremated human bone were recovered. In burial [355] burnt human bone was instead recovered from the pit backfill ([351]) as well as from the fill ([349]) of the vessel. Burial [379] contained cremated human bone but no pottery vessel.

The results of analysis are tabulated in Appendix 4. Further details are housed in the archive.

5.11.2 *Methods*

Recording and analysis of the bone followed the procedures outlined by McKinley (2004). Age estimations were carried out with reference to Bass (1987), Buikstra and Ubelaker (1994), and Schuer and Black (2000). Fragmentation of cremated bone can make age estimation difficult thus age estimates were separated in to four categories: infant (I), juvenile (J), adult (A), and older adult (OA.) Sex was estimated from the sexually dimorphic traits of the skeleton (Buikstra and Ubelaker 1994). Due to truncation the cremation deposits were processed as environmental samples, with sieve fractions of <4mm, 4-8mm, and >8mm presented for analysis.

5.11.5 *Results*

The weight of the individual cremated bone assemblages varies significantly from <1 gram ([306]) to 1097.3 grams ([312]). The depths of the cremation pits vary between 0.02m and 0.20m and it is likely that the evident severe truncation of many of the burial vessels will have also adversely affected the quantity of bone recovered from each. Seventeen of the vessel fills were severely truncated ([282], [290], [294], [299], [303], [306], [309], [319], [322], [327], [330], [335], [346], [358], [362], [365], [368]) with less than half of the associated vessel being recovered, while five of the vessel fills ([285], [291], [312], [340], [349]) were only moderately truncated.

5.11.6 Although a majority of the burials were truncated this does not appear to have significantly affected bone fragmentation as all but two of the cremation burial fills ([306], [358]) have bone present from fractions greater than 8mm. Fourteen of the fills contain fragments more than 30mm ([285], [290], [291], [294], [312], [322], [327], [330], [335], [340], [346], [349], [368], [378]), with a maximum fragment size of 86.85mm ([312].) The largest cremated bone

assemblage is from the least truncated vessel fill [312] (1097.3g.) This is the only assemblage within the range of expected weight of cremated bone produced by an adult (McKinley 1993). The evidence of relatively shallow burials and severe truncation is comparable to the cremation burials previously recorded at Springfield Lyons (Mays 2005).

5.11.7 *Demographic and pathological data*

All of the burials appeared to contain the remains of single individuals. Age estimation was possible for 62.5% of the burials, with adults making up the largest category present at 45.8% (10 examples). Two individuals (fills [309], [351]) were identified as infants and one individual (fill [312]) was identified as an older adult. The presence of an un-erupted canine tooth crown enabled the individual in burial fill [309] to be more precisely aged, at birth-6 months (White and Folkens 2005, 366). Fill [312] contained the remains of an older adult as evidenced by alveolar reabsorption of the left mandibular first and second molar (and possibly third molar) as well as evidence of degenerative joint disease in the vertebral column. There were no individuals confidently identified as juvenile; however, four individuals were possible juveniles (fills [290], [291], [362], [365]), based on skull and long bone fragments from the 8-20mm fraction. The use of age categories rather than discrete age ranges can create an overlap in age estimation, limiting demographic data. The assemblages did not contain any sexually dimorphic fragments and the only pathological lesions were those found on remains in fill [312].

5.11.8 *Pyre technology and cremation ritual*

The majority of bone fragments were white in colour with the occasional bluish colour on the interior of the compact bone. This colouring is indicative of an efficient cremation process with pyre temperatures reaching a minimum of 800°C (Holden et al 1995a and b).

5.11.9 With the exception of fill [306], all burials contained fragments identifiable to skeletal area. The upper limb was the most abundantly represented area forming between 5.2 and 100% of the assemblages. The least represented elements are from the axial skeleton, forming between <1 and 20.8% of the identified assemblages. However, it was noted that many of the burials contained unidentifiable fragments of trabecular bone, found largely in the axial skeleton, so the underrepresentation may be due to fragmentation rather than preservation. Smaller elements of the skeleton, for example tooth roots (fills [291], [309], [322], [340], [378]) and small bones of the hands and feet (fill [312]) were occasionally found suggesting that the burial rite may have preferred en-masse collection from the pyre site rather than a hand-picked selection process (McKinley 2006).

5.11.10 Three of the assemblages contained bone with iron staining (fills [312], [349], [365]) and one with copper alloy staining (fill [368]), likely the result from close proximity to an adjacent object. A small quantity of burnt animal bone (16g) was found in fill [327] (see 5.10) and artefacts were recovered from three of the burials ([290], [349], [312]) and one disturbed surface context [288].

5.12 Environmental Samples by Dawn Elise Mooney & Karine Le Hégarat5.12.1 *Introduction*

Twenty-eight bulk soil samples were taken during excavation work at the site to recover environmental remains such as wood charcoal, charred plant macrofossils, fauna and mollusca as well as to assist the recovery of finds and cremated bone. Samples ranged in volume from 0.1 litres to 30 litres and comprised 100% of the excavated contexts. Samples <2> to <10>, <12> to <19> and <21> to <26> were taken from the fills of cremation urns, while sample <28> was taken from an un-urned cremation pit. Samples <1> and <20> were recovered from pit fills, Sample <27> was recovered from a layer, and sample <11> was taken from a charcoal-rich deposit [316].

5.12.2 *Methods*

Samples were processed in a flotation tank and the residues and flots were retained on 500µm meshes and air dried. The residues were passed through graded sieves of 8, 4 and 2mm and each fraction sorted for environmental and artefact remains (Appendix 5). The flots were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 6). For samples containing a sufficient quantity of charred wood remains, ten charcoal fragments recovered from the residue of each sample were fractured along three planes (transverse, radial and tangential) according to standardised procedures (Gale & Cutler 2000). Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications of up to 400x to facilitate identification of the woody taxa present. Preliminary identifications of macrobotanical remains and charcoal were made through comparison with reference atlases (Cappers *et al.* 2006, Jacomet 2006, Hather 2000, Schoch *et al.* 2004). Taxonomic identifications of charcoal are recorded in Appendix 5, and nomenclature used follows Stace (1997).

5.12.3 *Results*Urned cremation burial fills

<2> [282], <3> [285], <4> [291], <5> [290], <6> [294], <7> [299], <8> [303], <9> [306], <10> [309], <12> [312], <13> [319], <14> [322], <15> [327], <16> [330], <17> [335], <18> [340], <19> [346], <21> [349], <22> [351], <23> [358], <24> [368], <25> [362], <26> [365]

Charred macroplant remains were present in only five of the 22 assessed samples. They were mostly recorded as single specimen. Samples <6 and 18> contained a single grain of possible barley (cf. *Hordeum* sp) each. Grains which were too poorly preserved to be identified (Cerealia) were recorded in samples <4 and 14>. Weed seeds were also uncommon. A single seed of bedstraw (*Galium* sp.) was present in sample <14> and a single possible stinking chamomile (cf *Anthemis cotula*) was noted in sample <4>. In addition a single possible charred plant remains (CPR) was present in sample <3>.

5.12.4 The residues of these samples contained varying quantities of burnt bone (see 5.11) along with pottery, copper alloy, iron and lead objects, fire-cracked flint, magnetised material, and a bone bead in sample <12>. Samples <3>, <4>, <12>, <14>, <16>, <17>, <21>, <22>, <24> and <25> contained small quantities of charcoal.

5.12.5 Un-urned cremation burial fill

<28> [378]

Charred macroplants in sample <28> included a single small-sized grass (Poaceae) caryopsis and an unidentified seed. Small quantities of charcoal were recovered from the residue, along with small amounts of fire-cracked flint and magnetised material.

5.12.6 Pit fills

<1> [274], <20> [354]

Charred macroplants were absent in sample <20>, and sample <1> contained only a single charred grain of possible barley (cf. *Hordeum* sp.). A large assemblage of charcoal recovered from sample <1> was dominated by oak (*Quercus* sp.) charcoal. The smaller assemblage from sample <20> was also dominated by oak, with ash (*Fraxinus excelsior*) also present. The residues contained large quantities of fire-cracked flint, especially in sample <20>, along with pottery, magnetised material and unidentified burnt and vitrified material.

5.12.7 Layer

<27> [372]

Sample <27> from layer [372] produced the richest assemblage of charred crops (between 80 and 120 items). A large proportion of the charred crop remains were poorly preserved. They were either abraded, either fragmented or highly distorted. Grains of wheat (*Triticum* sp.) and barley (*Hordeum* sp.) were present amongst the assemblage of identifiable grains. Overall these were small-sized. Chaff was absent and weed seeds were limited to less than ten grass (Poaceae) caryopsis. The small assemblage of wood charcoal fragments was dominated by oak, with a single fragment of spindle (*Euonymus europaeus*) roundwood also present. The residue contained a small amount of fire-cracked flint, pottery and fired clay.

5.12.8 'Charcoal-rich' deposit

<11> [316]

The residue of this sample contained a small assemblage of wood charcoal, which was dominated by oak, along with a small quantity of pottery fragments. No charred macroplant remains were present in this sample.

5.12.9 Discussion

Samples retrieved from the cremations contained very few charred macroplant remains. In total less than ten charred grains and two charred weed seeds were found. Several grains were poorly preserved, but three grains were characteristic of barley (cf. *Hordeum* sp.). The earlier excavations at Springfield Lyons also produced small assemblages of charred macroplants. Nonetheless, a wider range of cereals were found, and the excavation of cremation pits provided limited evidence for the use of free-threshing wheat, spelt, possible emmer, oat and rye (Murphy 2005, 149). The lack of macroplants may be due the high temperatures reached on funeral pyres. The plants recovered from Plot N may have been used as tinder to ignite kindling for the pyres. They could also have been used as bedding for the corpses. They may represent offerings or be associated to other ritual practices. Whitelock in Murphy (2003, 149) relates to pagan Saxon practices involving the burning of grains after a death. Finally, they may simply represent background material unrelated to the burial practices.

- 5.12.10 A larger assemblage of charred crop remains was found in layer [372] <27>. The assemblage provides evidence for the use of wheat and barley. Nonetheless, no chaff was evident in the sample, and given the poor preservation of the material no identification to species level could be provided. The absence of chaff and the very small amount of charred weed seeds in this sample suggest that the material represents an assemblage of cleaned grains. They are likely to derive from background scatters of food preparation waste.
- 5.12.11 The charcoal assemblage from the site indicates that wood for use as fuel was procured from oak- and ash-dominated deciduous woodland. The presence of spindle tree charcoal suggests that woodland margin or hedgerow environments may also have been exploited for fuel procurement, although the small size of this single fragment indicates that its presence is more likely to result from use as kindling. The provenance of the samples containing significant charcoal assemblages from pit fills and deposits, rather than from primary burning contexts, means that the charcoal is likely to comprise material from an amalgam of different burning events. As such the interpretive value of the assemblage is limited. Although both oak and ash are known to be used in the construction of cremation pyres, they are also both excellent fuel woods (Taylor 1981) and cannot necessarily be considered as deriving from the burial ritual. No charred wood remains from Springfield Lyons (Tyler & Major 2005) or Chelmsford Business Park Plot L (Ennis 2013) have previously been analysed, and as such no comparative data from the area is available.

6.0 SIGNIFICANCE & POTENTIAL OF RESULTS

6.1 Realisation of the original research aims

- 6.1.1 The general aim of the excavation was to determine the presence of archaeological remains of all dates and periods and to preserve them by record. This was successfully achieved with archaeological remains of Bronze Age, Roman, Saxon and WW2 date all being identified and recorded.
- 6.1.2 The investigation had three specific aims:
- Aim 1: to Identify and record any Bronze Age settlement remains outside the Springfield Lyons enclosure and to investigate any ditch/field systems potentially associated with it
 - Aim 2: to Identify and record the westerly spread of Early Saxon cremation burials and to define the nature and extent of the Early Saxon cemetery
 - Aim 3: to Identify and record any other remains contemporary with the early Saxon cemetery or relating to the later Saxon settlement
- 6.1.3 Although only a small quantity of Bronze Age remains were encountered, both predating and contemporary with the previously excavated Late Bronze Age enclosed settlement, these results are consistent with those of other investigations to the east. The low density of remains supports the view that the immediate vicinity of the enclosed settlement was not extensively utilised or occupied. The Bronze Age ditch remains indicate that an enclosure system of large fields surrounded it. However, the function of this enclosed

landscape is not clear although plant macrofossil material from probable LBA deposit [372] <27> may provide some insights. Despite being near the findspot of Bronze Age sword moulds found in the settlement enclosure ditch, no such evidence of manufacture of any kind was encountered in Plot L.

- 6.1.4 In conjunction with the Plot L results, the full western extent of the Early Saxon cemetery has been established and a total of 23-25 cremation burial remains recovered from which to ascertain the date and nature of this activity. Initial study suggests that these further burials are consistent in their character with the rest of the cremation cemetery. No inhumation burials were identified.
- 6.1.5 One pit and two possible post-holes that may be contemporary with the Early Saxon cemetery were also recorded. Although no cemetery-related pits containing placed deposits such as horse heads were encountered, the bead assemblage in feature [288] could perhaps represent another kind of placed deposit rather than a cremation burial per se.
- 6.1.6 A number of undated small pits and post-holes, seemingly unrelated to the cemetery, may be contemporary with, and part of, the later Saxon manorial settlement. All were located to the east of the Late Saxon ditch G6 that may have marked the western limit of the settlement and some could constitute further parts of the remains of post-built structures found nearby within the 1981-91 excavation area.

6.2 Significance and potential of the individual datasets

6.2.1 *Stratigraphic Sequence:*

Clearly, the Early Saxon cemetery with its cremation burials and associated features, is of primary significance and has greatest potential to contribute new information to further the understanding and interpretation of the site.

The western extent of the cemetery has been defined and the 23-25 cremation burials provide further data on its overall character and chronology. These extra burials, along with the 22 previously excavated in Plot L (Ennis 2013), add another 47 to the total of 143 from the original 1981-91 excavations (Tyler and Major 2005). Other than the possibility of a few sporadic outlying burials still being present in unexcavated cemetery peripheries, the excavation of Plot N can be regarded as completing the excavation of the entire Early Saxon cemetery – a rare achievement of British archaeology and one that makes this regionally, if not nationally, important. Publication of this enlarged and important dataset is therefore highly desirable, with additional analysis, comparison and interpretation undertaken to place these 47 additional burials in their wider cemetery context and the completed cemetery within its context of national Anglo-Saxon cemetery studies.

The cremation burial dataset has further potential for analysis of distribution and patterning (Fig.4). Most of the burials appear to lie within a westwards extension of Group 9 (late 5th-early 6th century), as defined in the 1981-91 cemetery excavation (Tyler 2005, 180) and which included the horse head burial. Consideration of detail supplied by the dating of cremation urns and the ageing of the skeletal remains might add definition to such study. It is suggested that the three outlying cremation burials ([284], [364] and [367])

appear to lie within a new separate distribution group (15), not previously apparent, and including the westernmost burials from Plot L and from original excavation extension trench HA. Certainly, there is sufficient age data (10 adults and 2 infants) to allow some comparison with earlier data and re-examination of cemetery grouping by age, and perhaps for inference of kinship.

While further study of the Plot N burials may be expected to generally enlarge, compliment and corroborate the previously published cemetery results, it is evident that they also have the potential to add some new insights and detail. Cremation urn [313], in burial [314], notable for its large size, early date and repair, may provide insights into the origins of the cemetery and also the source/curation/reuse of such vessels. It may also be indicative of the origin and/or status of the interred individual (notably an older adult). As previously mentioned (6.1.5), feature [288] containing the assemblage of burnt beads could perhaps be a placed deposit of pyre debris rather than a cremation burial and so merit some consideration of the possibility for commemorative or other events within the cemetery.

The burials and their constituent finds have some potential to address the nature of the mortuary practices which led to their creation. The variety of cremated bone recovered suggests that the burial rite may have involved en-masse collection of bone from the pre site rather than a hand-picked selection process. However, a general lack of identifiable pyre debris, and relatively minor quantities of charcoal, were recovered from the cremation deposits, which might contradict a non-selective collection of material for interment unless the process/rite included cleaning/washing. Consistent with the previous Plot L excavation, only a few grave goods were recovered from cremation fills. Whether this can be related to issues such as gender, wealth or status, or is simply a result of more recent truncation, is worthy of further research and discussion. Closer examination of metalwork items from burials might elucidate whether or not they are burnt and so whether they constitute pyre goods or grave goods.

The Late Saxon evidence from Plot N consists of a single field boundary and a collection of essentially undated small pits and post-holes that may, with further analysis, be identified to form parts of timber fence lines or small buildings continuing from the 1981-91 excavation area. The ditch is significant in that it seems to mark the western limit of the Late Saxon settlement area. This boundary compliments a north/south ditch bounding the east side of the settlement found in the 1981-91 excavation (Tyler and Major 2005, Fig. 68). This eastern ditch continued northwards into Plot K (Ennis 2012) where a second ditch on a parallel alignment was also recorded. As such, it may be possible to conclude that the full extent of the manorial building complex is known, though substantive new understanding of its form and function is unlikely from the recorded Plot N remains of this date.

The general lack of Late Bronze Age remains in Plots L and N, to the west of the defended circular enclosure, is of moderate significance in that this implies that the land in its immediate vicinity was not used for occupation, manufacturing/processing activities or even rubbish disposal, but more likely for agriculture. The presence of Late Bronze Age field boundary ditch remains within these plots, presumably demarcating fields, is consistent with this. The assemblage of charred crop remains from layer 372 may be

interpreted as indicating their arable cultivation. The land to the northwest of the settlement enclosure may have been used in a different way as the partial remains of a Late Bronze Age building were revealed in Plot K. Also in Plot K further evidence of the Neolithic causewayed enclosure, identified in 1981-91 (Brown and Medlycott 2013), was revealed. Four pits forming part of this archaeologically significant feature were investigated along with a further small pit which may have been an internal feature. An identified gap between the causeway pits towards the north-east corner of Plot K may indicate the position of an entranceway into the enclosure. This additional information usefully slightly extends the recorded extent of this enclosure, but the paucity of artefacts from its fills precludes further study that will contribute to an improved understanding of its form and function.

Plot N Roman remains, consisting of only three ditches and a pit, have least significance and potential for further study and interpretation of the site and its landscape. A fourth linear feature in the northeast corner of Plot N is a continuation from the original excavation area. Two of the ditches were broadly parallel and may demarcate a trackway, perhaps heading southwards to a crossing of the minor watercourse. A low density scatter of Roman remains and residual finds have been found across the whole site and reflect the site's position within the hinterland of the Roman settlement at Chelmsford and its location close to the London to Colchester road.

Lastly, this expanded dataset as increased potential for the consideration of the deliberate Saxon reuse of the prehistoric site. The recognition, reuse and appropriation of prehistoric monuments and earthworks by Anglo-Saxon communities is widely attested in the archaeological record and has been increasingly been interpreted in terms of the establishment, articulation and manipulation of geographic, political and religious identities (most recently, Semple 2013). The positioning of the cemetery, and perhaps the successor settlement, in relation to the Late Bronze Age enclosure remains would seem to be a clear example of such reuse and therefore worthy of exploration of the possible reasons for this.

6.2.2 *Flintwork:*

The Plot N worked flint assemblage is extremely limited in size. It represents isolated finds, and, as such, no further analytical work is required. The flint assemblage does not warrant inclusion in the publication report other than, perhaps, noting the correlation between the recovered flint flakes and Late Bronze Age deposits.

6.2.3 *Prehistoric and Roman Pottery:*

There is some potential for further research on the prehistoric pottery although the Roman assemblage is too small and undiagnostic to warrant inclusion in the publication report.

Stratified Early Bronze Age assemblages are fairly rare in Essex and the vessel from pit fill [375] is therefore of some significance and should be reported on, looking at parallels for fabric and form as well the use of perforation. Given that the vessel appears to have been well broken prior to deposition, but consists of large, fresh sherds, it may also be useful to consider the likely processes of deposition.

The deliberate burial of Late bronze Age vessel [373] may also be significant and has potential for further research. The fabric, form and decoration of

this vessel should be compared in detail with the assemblage from previous work on the site (Brown 2001) and other relevant regional assemblages to see whether the date range can be refined. Here, the context of deposition is again of some note, the vessel appearing to have been deposited almost in its entirety but broken prior to or during deposition. Again, further work should include a search for parallels for this pattern of deposition and a brief discussion on depositional practice.

6.2.4 *Early Saxon Pottery:*

The Plot N Early Saxon pottery assemblage is significant as it adds to the corpus of previously excavated burial vessels recovered from this site and not only has the potential to improve our knowledge of the date of the cemetery but also other aspects such as burial practices, status of individuals, regional practices, etc. Pottery from Plot N needs to be considered together with that from Plot L and the earlier published excavations at Springfield Lyons to give an overall date range for the cemetery and to identify whether or not the Plot N (and Plot L) assemblage is broadly contemporary with the rest. Linked to this, updated statistical analyses should be done for the entire cemetery (to determine the total number of cremations, number of double cremations, etc.) and for the entire Early Saxon pottery assemblage (to determine the number of decorated vessels, completeness of vessels, percentage of vessels in the identified fabric types etc.) An updated pottery fabric analysis for the whole cemetery would also be required.

6.2.5 *Ceramic Building Material:*

The tegula has potential for dating of gully [225], however the assemblage is of minimal significance to the site narrative beyond indicating Roman activity nearby. No further work is required on this material.

6.2.6 *Geological Material:*

The single piece of stone is not considered to hold any potential for analysis and no further work is proposed.

6.2.7 *Bulk metalwork:*

The metalwork assemblage is very small and as such has minimal significance for the site narrative. There is very little potential for further analysis and no further work is proposed on the nails other than to include the nail from cremation deposit [312] within the published gazetteer of burials.

6.2.8 *Fired Clay:*

The fired clay assemblage as a whole is small and in poor condition. No characteristics indicative of form or function were observed. The degree of abrasion indicates secondary deposition. The assemblage is of minimal significance to the site narrative and has no wider significance therefore holds no potential for further work. The assemblage is recommended for discard with the agreement of the curatorial archaeologist. Text for the publication narrative may be taken from the descriptive finds section in this report.

6.2.9 *Registered Finds:*

The Registered Finds are of significance in terms of the additional data provided on the Anglo Saxon cemetery and the assemblage has some

potential for further work. The assemblage is, not surprisingly, analogous to that of the larger cemetery. However the artefact group from context [288] is of significance due to its composition which bears striking similarity to that of Grave 4988 and it would be worth exploring the relationship, if any, between these two features. X-radiography and conservation of the metalwork will enable further detail to be gleaned from the objects themselves, and ascertain whether they have been subject to burning. Object identification may provide evidence to help determine issues such as the gender, status or occupation of the interred individuals.

6.2.10 *Animal Bone:*

The cremated animal bone from the fill ([327], <15>) of the cremation vessel in burial [329] is significant because it potentially provides evidence of food or food offerings being burnt on the funeral pyre. However, it is by no means unique and therefore no further work needs to be undertaken. Information from the existing animal bone report can be incorporated into the publication text and into the gazetteer of burials.

6.2.11 *Cremated Bone:*

This assemblage of burials is significant in terms of the additional data provided on the Early Anglo Saxon cemetery at Springfield Lyons. Further analysis should be done to combine the data sets from the 1981-1991 excavations, Plot L, and Plot N in order to generate a comprehensive demographic of the individuals buried in this cemetery. Creating a demographic profile of this community would provide a greater understanding of Anglo Saxon Essex and enable comparisons to be drawn between it and other Anglo Saxon cemeteries. These remains should be retained for future research on cremation ritual and practice, as well as demographic studies of Anglo Saxon cemeteries.

6.2.12 *Environmental material:*

The assemblage of charred macroplants has no potential to provide further significant information regarding the agricultural economy, local vegetation environment and ritual practices, and as such no further analysis is proposed for the macroplant remains. The small quantity of charcoal recovered and its provenance from contexts representing secondary deposition of burnt material severely limit the interpretive potential of this assemblage, and as such no further work is recommended on the charred wood remains. The results from this assessment should be incorporated into any dissemination of site results.

7.0 PUBLICATION PROJECT

7.1 Revised research agenda: Aims and Objectives

7.1.1 This section combines those original research aims that the site archive has the potential to address with any new research aims identified in the assessment process by stratigraphic, finds and environmental specialists to produce a set of revised research aims that will form the basis of any future research agenda. Original research aims (OR's) are referred to where there is any synthesis of subject matter to form a new set of revised research aims (RRA's) posed as questions below, in broadly chronological order.

- 7.1.2 RRA1: To analyse the remains of the Neolithic causewayed enclosure within Plot K and compare with the previously segments (Brown and Medlycott 2013) and update analysis/conclusions as necessary.
- 7.1.3 RRA2: To analyse and understand land use surrounding the Late Bronze Age settlement enclosure
- 7.1.4 RRA3: To catalogue, analyse and interpret the Early Saxon cremation burials and other associated remains from the Plot L and Plot N excavations.
- 7.1.5 RRA4: To place the results of RRA3 in the wider context of the Springfield Lyons cemetery through comparison with the previously excavated cemetery remains, study of distribution patterns and variations, and updated statistical analysis of the entire cemetery data.
- 7.1.6 RRA5: To understand land use across the entire site in the Later Saxon period in particular the definition of further components of the western part of the manorial settlement and zoning/demarcation between settlement and other activities.
- 7.1.7 RRA6: To consider the nature, reasons and possible intentions for the Anglo-Saxon reuse of the Prehistoric enclosure site(s).

7.2 Preliminary Publication Synopsis

- 7.2.1 It is proposed that the report on the results of the excavation is published as an article in a future volume of the county journal *Essex Archaeology and History*.
- 7.2.2 The article would seek to address site-specific research questions identified in this post-excavation assessment (7.1) and would be presented within a chronological framework.
- 7.2.3 ECC Place Services have requested that the publication should include the results of all three of the Chelmsford Business Park plots (K, L and N) excavated to date.
- 7.2.4 It is envisaged that this report would present a detailed chronological narrative of the site sequence, attempt to address the questions posed in the revised research agenda and would pursue the following suggested structure:
- Introduction
 - Natural geology, topography and environment
 - Neolithic causewayed enclosure
 - Early Bronze Age land use
 - Late Bronze Age features
 - Early Saxon cemetery
 - Later Saxon settlement
 - Gazetteer of burials and other Early Saxon features
 - Specialist sections (finds and environmental)
 - Discussion – to include land use in the prehistoric to Saxon periods and a review of understanding of the whole Early Saxon cemetery
 - Conclusions
 - Acknowledgements

- Bibliography

7.2.5 The publication article will reflect the assessed significance and potential of the various components of the project dataset (see 6.2). The Saxon cemetery and settlement will be the main focus, with the prehistoric aspects of the site secondary. Discussion of all pertinent aspects of the Plot K, L and N results will be compared and related to the published results of the 1981-91 excavation.

7.2.6 A provisional page count, for text, figures and tables/plates, is presented as Appendix 7.

7.3 Publication tasks

7.3.1 The various further analytical and reporting tasks required to bring the project results to publication are identified below, and summarised in Appendix 8 which includes proposed time allocation. A publication programme will be submitted to ECC Place Services on acceptance of this assessment and proposal.

While the proposed publication report will encompass Plots K, L and N, and the identified analytical and reporting tasks (below) make reference to all three, the stated time allocations specifically relate to the Plot N component only. Separate Plot K and L task lists, with their own appropriate time allocations, have been prepared for presentation to the relevant client / developer.

7.3.2 *Stratigraphic*

After completion of the specialist analysis, reporting and documentary research, an integrated period-driven narrative of the site sequence will be prepared. This will draw on specialist information in order to fully address the revised research aims. Tasks to include:

- Documentary research and review of previous work (0.5 day)
- Review/refinement of Plot L and N dating & phasing (0.5 day)
- Production of Introduction text; to include explanation that Plots K, L and N are adjacent to the Springfield Lyons multi-period site and that the Early Saxon burials are an extension to the mixed burial rite cemetery. Summary of all previous findings. Topography, geology, excavation methodology, etc. (0.25 days).
- Production of a Gazetteer of Early Saxon Burials and other cemetery-related features from Plots L and N; to incorporate details of each cremation pit and all its contents (2 days).
- Creation of an integrated site narrative, by period, that references pertinent specialist information (2 days).
- Selection of relevant phase and distribution plan figures, photographs and finds illustrations and liaison with illustrator during production (0.5 days).
- Integration of finds reports into overall publication text, and liaison with finds specialists (0.5 days).
- Writing of discussion and concluding text that will include land use by period, an overview of the cemetery as a whole and address any wider (regional) Early Saxon cemetery issues/parallels, etc (1 day).
- Compilation of bibliography, write acknowledgements (0.25 days).

7.3.3 *Prehistoric and Roman Pottery*

- Prepare short texts on the Early Bronze Age and Late Bronze Age vessels from fills [373] and [375] to be integrated into the main report (0.5 days).
- Undertake brief search for parallels for fabric, form and decoration and for deposition of fragmented but partially complete vessels in these periods (0.25 days).
- Prepare short Roman pottery and incorporate into stratigraphic text (0.25 days).
- 2 pottery illustrations of the vessels from [373] and [375] are required to accompany the text.

7.3.3 *Early Saxon Pottery*

- Produce a combined fabric series and statistical analysis of Plots L and N, with weights and percentages of each fabric type shown in table form. Comparison to be made with the fabrics present in the 1981/91 excavation assemblage. Are there any additions? Are there some not present? (0.5 days)
- Discussion of forms and fabrics from Plots L and N to include dating and comparanda from 1981/91 assemblage and other Essex cemeteries, e.g. Mucking, Rayleigh (0.5 days).
- Select pottery for illustration and advise illustrator, particularly regarding decorative schemes. Checking of drawings (0.5 days).
- Write discussion of how this assemblage adds to knowledge of the cemetery as a whole. Is the Plot L and N assemblage broadly contemporary with the previously excavated cemetery material? An updated presentation of burial practices across the whole cemetery, e.g. number of double burials (0.5 days).

7.3.4 *Registered Finds*

- Further parallels to be sought for a small number of objects, and identifications reviewed for those finds identified from x-ray once conservation has been completed (1 day).
- Conservation of selected items (fee)
- Prepare catalogue of the Registered Finds (0.5 days)
- Write short analysis report, placing the current assemblage within the context of the cemetery and its wider East Anglia context (2 days).
- Selection of items for illustration (up to 22 objects suitable)

7.3.5 *Cremated bone*

- Undertake demographic study of combined dataset from Plots L and N, and 1981-91 excavation if possible (1 day)
- Produce report (1 day)

7.3.6 *Other Misc. Finds*

- Integrate existing assessment level information into finds overview text and/or into stratigraphic narrative text where appropriate (0.5 days)
 - Animal bone
 - Fired clay
 - Worked flint
 - Roman tile

7.3.7 *Environmental material*

- Prepare report on basis of assessment results, to include reference to Plot L material and comparison with the 1981-91 excavations (1 day)

7.3.8 *Illustration*

- Digital production of plan figures to support background and site narrative texts (2 days)
- Digitising of 1981-91 excavation plans, especially the Saxon phases, and resolution of plan/location discrepancies between the 1981-91 excavation area and Plots L and N. (1.5 days)
- Formatting of photographic images for plates (0.5 day)
- Production of finds illustration (5 days)
 - Saxon pottery - 18 illustrations
 - Prehistoric/ Roman pottery - 2 illustrations
 - Registered Finds - max 22 illustrations (metalwork, beads, etc)

7.3.9 *Editing & production*

- Internal reading editing of first draft report by project manager (2 days)
- Internal alterations to text and figure illustrations and dispatch to EAH editor (2 days)
- Implementing EAH editor's text and figure amendments (1 day)
- Proof reading/correcting printer's proofs and return to EAH editor (0.5 days)

7.3.10 *Project Management*

- Co-ordination of work of all contributors (1.5 days)
- Liaison with *Essex Archaeology & History* editor (0.5 days)
- Expenses and consumables (postage, etc) (cost)
- EAH page print cost, approx. 50 pages (cost)

7.4 Artefacts and Archive Deposition

7.4.1 The site archive is currently held at the offices of ASE. Following completion of all post-excavation work, including any publication work, the collated project archive will be deposited in Chelmsford Museum.

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APPENDIX 1: Feature List

Context	Feature type	Filled by	Comments	Prov date
250	Ditch	251	Group 1. Cont from Plot L	L. Bronze Age
252	Ditch	253	Group 3	Roman
254	Ditch	255	Group 4	Roman
256	Pit	257		undated
258	Pit	259		undated
260	Ditch	261	Group 5	Roman
262	Ditch	263	Group 5	Roman
264	Ditch	265, 266	Group 4	Roman
268	Ditch	267	Group 3	Roman
270	Ditch	269	Group 2	L. Bronze Age
271	Finds		Iron rails	WW2
273	Ditch	272	Group 2	L. Bronze Age
275	Pit	274		Rom 1st-2nd
277	Ditch	276	Group 2	L. Bronze Age
279	Ditch	278	Group 3	Roman
281	Ditch	280	Group 2	L. Bronze Age
284	Cremation pit	f282, v283		E. Saxon
287	Cremation pit	f285, v286, b302		E. Saxon
288	Surface finds		Beads, brooch, pot	E. Saxon
293	Cremation pit	v289, f290		E. Saxon
296	Cremation pit	f294, v295		E. Saxon
298	Cremation pit	f291, v292, b297		E. Saxon
301	Cremation pit	f299, v300		E. Saxon
305	Cremation pit	f303, v304		E. Saxon
308	Cremation pit	f306, v307		E. Saxon
311	Cremation pit	f309, v310		E. Saxon
314	Cremation pit	f312, v313		E. Saxon
315	Surface finds		Fragmented pottery	E. Saxon
316	Deposit		Shallow charcoal patch	undated
318	Ditch	317	Group 6	L. Saxon
321	Cremation pit	f319, v 320		E. Saxon
324	Cremation pit	f322, v323		E. Saxon
325	Ditch	326	Group 6	L. Saxon
329	Cremation pit	f327, v328		E. Saxon
332	Cremation pit	f330, v331		E. Saxon
333	Pit	334		E. Saxon?

Context	Feature type	Filled by	Comments	Prov date
337	Cremation pit	f335,v 336		E. Saxon
338	Pit	339		undated
342	Cremation pit	f340, v341, b345		E. Saxon
343	Pit	344		undated
348	Cremation pit	f346, v347		E. Saxon
352	Pit	353, 354		undated
355	Cremation pit	f349, v350, b351		E. Saxon
356	Pit	357		Roman
359	Cremation Pit	358		E. Saxon
360	Ditch/gully	361	Group 6	L. Saxon
364	Cremation pit	f362, v363		E. Saxon
367	Cremation pit	f365, v366		E. Saxon
370	Cremation pit	f368, v369, b371		E. Saxon
372	Deposit		Daub, charc., BA pot	prob LBA
374	Pit	375		E. Bronze Age
377	Pit	v373, b376	crushed BA. pot	L. Bronze Age
379	Cremation pit	378	Un-urned cremation	E. Saxon
380	Post-hole	381		undated
382	Pit	383		undated
384	Pit	385		undated
387	Pit	386		undated
388	Post-hole	389	Circular, c.0.32m diam. x 0.13m deep	E. Saxon?
390	Pit	391		undated
393	Ditch	392	Continued from orig. exc.	undated
395	Pit	394		undated
396	Pit	397		undated
398	Pit	399	Sub-circular, 0.63m x 0.57m x 0.15m deep	E. Saxon?
401	Ditch	400	Group 6	L. Saxon
402	Post-hole	403		Modern
404	Pit	405		Modern
407	Linear feature	406	in old evaluation trench	Modern
408	Post-hole	409		undated
410	Post-hole	411		Undated
413	Ditch	412	Group 5	Roman

Key

b = backfill of pit

f = fill of vessel

v = vessel

APPENDIX 2: Saxon pottery catalogue

Context / Feature	Description of pottery	Date
U/S pottery	Base sherd. Fabric 3a. Black-brown throughout. Wt. 11g. Base sherds (3). Fabric 1b. Outer and core orange-brown. Inner dark brown. Wt. 10g.	Early Saxon
Vessel 283 in burial 284	Base and lower body sherds of ?sub-globular pot. Highly fragmented, profile not reconstructable (c.15% of vessel present). Rim missing. Flat base. Fabric 4. Outer dark brown. Inner and core and core dark grey to black. Wt. 172g.	Early Saxon
Vessel 286 in burial 287	Base and lower body sherds of a sub-globular jar (c.50% of vessel present). Flat, rounded base. Fabric 4. Outer patchy dark orange-brown to dark grey. Inner and core dark grey. Some sooting on both inner and outer surfaces. Max. base diam. c. 120mm. Max base thickness 16mm. Wt. 754g.	Early Saxon
Pottery with Surface Finds 288	Base sherd in a similar fabric to 286. Fabric 4. Wt.20g.	Early Saxon
Vessel 289 in burial 293	Shouldered jar with footring base (c.30% of vessel present). Lower body sherds and base only. Base slightly concave with footring. Fabric 3a. Dark reddish-brown throughout. Max diam. of base: 80mm. Wt. 297g.	Early Saxon
Vessel 292 in burial 298	Lower body sherds and base of large globular jar (c.60% of vessel present). Base highly fragmented. Surviving profile suggests flat, rounded base. Fabric 3a. Outer smoothed. Dark grey/ brown throughout. Max. base diam. 110mm. Wt.1030 g.	Early Saxon
Vessel 295 in burial 296	Fragmented base. Fabric 4. Flat angular base. Dark grey throughout. Wt. 194g.	Early Saxon
Vessel 300 in burial 301	Base and lower body sherds. ?globular pot. Most of base disintegrated but appears to be slightly sagging. Fabric 4. Wt. 249g.	Early Saxon
Vessel 304 in burial 305	Base and lower body sherds. Fabric 4. Outer patchy orange brown to brown. Inner and core black-brown. Wt. 67g.	Early Saxon
Vessel 307 in burial 308	Base and lower body sherds. Flat base. Fabric 4. Outer orange brown. Inner and core black-brown. Wt. 78g.	Early Saxon
Vessel 310 in burial 311	Base and lower body sherds. Slightly sagging base. Fabric 4. Smoothed outer dark brown to reddish-brown inner and core black-brown. Thin-walled vessel (thickness at base 6mm). Max. base diam. 130mm. Wt. 252g.	Early Saxon
Vessel 313 in burial 314	Biconical, carinated bossed urn. Flat, angled base (c.85 % of vessel present). Rim missing. Decoration comprising concentric necklines (six) forming ribbing, underneath which are a series of applied solid long bosses, demarcated with an incised line either side of each boss. Bosses grouped in threes around the max. girth of pot (4 groups). Some incised lines intersect to form pendant triangles.	Early Saxon Late C5- early C6

Context / Feature	Description of pottery	Date
	Repair to pot (lower body but not base) in the form of a lead plug. Max diam of hole 14mm. Fabric 1c. Hard, well fired. Outer smoothed dark grey, traces of burnishing. Inner surface smoothed dark grey. Core reddish grey. Ht. 165mm (slightly compacted and rim missing) Max. girth 340mm. Max base diam. 140mm. Wt. 2679 g.	
Vessel 315 surface find	Base body and rim sherds of thick-walled jar. Rim upright, rounded. Base uneven, flat. Outer orange-brown. Core and inner brown-black. Max.wall thickness 11mm. Wt. 374g.	Early Saxon
Vessel 320 in burial 321	Pedestal-footed jar. Base and lower body sherds (c.30% of vessel present). Decorated with a series of shallow long bosses (pushed out rather than applied) Panels of vertical decoration (both on and in between the bosses), each panel demarcated by incised vertical lines. Infill decoration comprises short diagonal lines (chevrons) and segmented crescent stamps (Briscoe's type G 2aii Segmented crescent). Max. base diam. 93mm. Fabric 4. Black-brown throughout. Wt. 260g.	Early Saxon
Vessel 323 in burial 324	Base (very fragmented) and body sherds. Fabric 3b. Surfaces dark reddish-brown. Core dark grey. Wt.678g.	Early Saxon
Vessel 328 in burial 329	Base and lower body sherds. Flat base. One body sherd has two vertically incised lines indicating that the urn had a decorative scheme utilising incised lines (and possibly other elements). Fabric 1a. Outer and core dark brown. Inner orange brown. Wt. 434g.	Early Saxon
Vessel 331 in burial 332	Base and lower body sherds. Flat base. Fabric 2. Surfaces patchy orange-brown. Core orange to orange brown. Wt. 243g.	Early Saxon
Pottery 334 in pit 333	Base or body sherd. Fabric 1b. Orange-brown throughout. Wt. 3g.	Early Saxon
Vessel 336 in burial 337	Base and lower body of a large globular pot (c.40% of vessel present). Flat base. Fabric 2. Surfaces black-brown. Core black. Base diam.125mm. Thick walled, max. wall thickness.15mm Wt. 1050g.	Early Saxon
Vessel 341 in burial 342	Base and body sherds of a large globular pot (c.50% of vessel present). Flat base (fragmented). Fabric 4. Outer reddish-orange. Core black-brown. Max. diam of base 250mm.Wt. 989g	Early Saxon
Vessel 347 in burial 348	Base and body sherds from a medium sized jar. Fabric 1b. Outer surface reddish-orange to dark grey. Inner black-brown. Core dark grey Wt. 179g.	Early Saxon
Vessel 350 in burial 355	Pedestal-footed jar (c.75% of vessel present). Globular profile above footring base. Everted, rounded rim. Fabric 1c. Surfaces reddish brown, core black-brown. Max rim diam. 125mm. Max. base diam. 95mm. Wt. 504g .	Early Saxon

Context / Feature	Description of pottery	Date
Vessel 358 in burial 359	Sherds (5). Abraded. Fabric 1a. Wt. 2g.	Early Saxon
Vessel 363 in burial 364	Base and lower body sherds, globular jar (c.40% of vessel present). Slightly sagging base. Fabric 4. Dark reddish-brown throughout. Wt. 568g.	Early Saxon
Vessel 366 in burial 367	Base and lower body sherds Slightly sagging base. Fabric 4. Outer patchy orange to dark reddish-brown. Inner and core black-brown. Max. base diam. 140mm. Wt. 276g.	Early Saxon
Vessel 369 in burial 370	Large flat-based pot (c.30% of vessel present). Base flat, angled. Fabric 1c. Outer dark reddish-brown. Inner and core light reddish-brown. Max. base diam. 135mm. Wt. 1087g.	Early Saxon
Pottery in fill 389 (post-hole 388)	Body sherds, abraded (2). Fabric 4. Surfaces orange. Core grey. Wt. 2g.	Early Saxon
Pottery in fill 399 (pit 398)	Body sherd. Fabric 4. Black-brown throughout. Wt 3g.	Early Saxon

APPENDIX 3: Glass bead assemblage from context [288]

RF no	Material	Form	PGL Type	Size	Length	Colour 1	Colour 2	Colour 3	Colour 4	Brugmann Type	Date
4	MGL	Annular		Medium	Short	translucent blue				Blue	mid 5-mid 6th
5	MGL	Annular		Medium	Short	translucent blue				Blue	mid 5-mid 6th
6	MGL	Annular		Large	Short	semi translucent green black					5-6th?
7	MGL	Annular		Medium	Short	translucent blue				Blue	mid 5-mid 6th
14	MGL	?Annular				translucent blue				Blue	mid 5-mid 6th
3	MGL	Lobed		Large	Short	semi opaque pale yellow green				Ribbed	5-e 6th
10	PGL	Globular	Speckled/ crumb	Large	Short	semi translucent dark blue	opaque white	opaque red	opaque yellow	Mottled	5-6th
9	PGL	Globular	double crossing wave; single row spots	Large	Short	opaque white	transparent pale blue			Dot34 var	5-6th
13	PGL	Globular	double crossing wave; single row spots	Large	Short	opaque white	transparent pale blue			Dot34 var	5-6th
11	PGL	Globular	double crossing wave; single row spots	Medium	Standard	opaque red	opaque white	opaque olive green		Dot34/ Koch20?	6th
8	PGL	Globular	double crossing wave; single row spots	Large	Short	opaque olive green	opaque red	opaque yellow		?Koch20	5-6th?
2	PGL	Cylinder	line and eye spot	Medium	Standard	opaque white	blue green				5- e6th
12	PGL	Cylinder	line and eye spot	Medium	Standard	opaque white	transparent pale blue	opaque pale pink	opaque red		5-e 6th

APPENDIX 4: Cremated bone data

Context Number	Frag. size (mm)	Weight per skeletal element (grams)					% of whole assembl.	Total (grams)	Age	Sex
		Skull	Axial	Upper Limb	Lower Limb	Unid.				
282	0-4					6.4	10.5	61.1	n/a	n/a
	5-8			10.1	1	12.1	37.9			
	9-20	1.3		6.4	15.8	4.4	45.7			
	21-30			3.6			5.9			
	>30									
% of identifiable material		3.4		52.6	44					
285	0-4					9.2	3.2	289	A	n/a
	5-8	1.2	3		1.8	107	39.1			
	9-20	1.3	15.1	37.2	48.3	19.8	42.1			
	21-30									
	>30	2.4		4.2	38.5		15.6			
% of identifiable material		3.2	11.8	27	58					
290	0-4					3.8	4.8	79.1	? J	n/a
	5-8	6.6				30.4	46.7			
	9-20	12.3	0.3	10	0.5	4	34.3			
	21-30	1.2		5.4	3.1		12.3			
	>30			1.5			1.9			
% of identifiable material		49.1	0.8	41.3	8.8					
291	0-4					6.2	3.4	181.8	? J	n/a
	5-8	2.1			1.3	94.1	53.6			
	9-20	8.2	2	29.7	4.9	11.3	30.9			
	21-30			7.1	4.4		6.3			
	>30				10.5		5.8			
% of identifiable material		14.7	2.8	52.4	30.1					
294	0-4					5	6.6	76.2	A	n/a
	5-8	1.3	0.1			31.6	43.3			
	9-20	7.7	0.4	2.7	6.8	5.7	30.6			
	21-30	1.5		2.3	7.3		14.6			
	>30			3.8			4.9			
% of identifiable material		30.9	1.5	26	41.6					
299	0-4					1.9	9.8	19.3	A	n/a
	5-8	<1	<1			6.3	32.7			
	9-20	1.9				7.5	48.7			
	21-30					1.7	8.8			
	>30									
% of identifiable material		100								

Context Number	Frag. size (mm)	Weight per skeletal element (grams)					% of whole assembl.	Total (grams)	Age	Sex
		Skull	Axial	Upper Limb	Lower Limb	Unid.				
303	0-4					6.5	19	34.2	A	n/a
	5-8	8.7				6.8	45.3			
	9-20	6.1		4.3		1.8	35.7			
	21-30									
	>30									
% of identifiable material		77.5		22.5						
306	0-4					<1		<1	n/a	n/a
	5-8									
	9-20									
	21-30									
	>30									
% of identifiable material										
309	0-4	0.4				2.3	11	24.5	I (birth-6 months)	n/a
	5-8	5.6	0.5		<1	3	37.2			
	9-20	6.6		0.8	0.8	2.1	42			
	21-30				0.6	1.8	9.8			
	>30									
% of identifiable material		82.4	3.3	5.2	9.1					
312	0-4					7.5	0.7	1097.3	OA	n/a
	5-8	7.3	16.9	60.9	14.9	259	32.7			
	9-20	33.7	36.5	45.2	76	34.5	20.5			
	21-30	31.4	71.9	77.3	64.8	13.1	23.6			
	>30	28.4	36.5	21.6	154.3	5.6	22.5			
% of identifiable material		12.9	20.8	26.4	39.9					
319	0-4					2.1	28.8	7.3	n/a	n/a
	5-8	1.1				1.5	35.6			
	9-20				2	0.6	35.6			
	21-30									
	>30									
% of identifiable material		35.5			64.5					
322	0-4	1.1				4.5	3	187.9	A	n/a
	5-8	6.4	3.5	5.6		46.4	33			
	9-20	28.3	4.6	8.1	1.1	23.1	34.7			
	21-30	14.6		11.7	3.1		15.6			
	>30	7.1	3.8	14.9			13.7			
% of identifiable material		50.5	10.4	35.4	3.7					
327	0-4					4.1	1.3	315.3	A	n/a
	5-8	1.4	0.9	21.9	19.1	161.8	65.1			

Context Number	Frag. size (mm)	Weight per skeletal element (grams)					% of whole assembl.	Total (grams)	Age	Sex
		Skull	Axial	Upper Limb	Lower Limb	Unid.				
	9-20	3.5		30.1	26.8	9.4	22.1			
	21-30			16	17.8		10.7			
	>30				2.5		0.8			
% of identifiable material		3.5	0.6	48.6	47.3					
330	0-4					8	9.8	82.1	A	n/a
	5-8	3.7	<1	4.7	0.9	26.2	43.2			
	9-20	2.3	6	8.7	9.9	1.8	35			
	21-30				3.8		4.6			
	>30				6.1		7.4			
% of identifiable material		13	13	29	45					
335	0-4					9.3	3.7	255.3	n/a	n/a
	5-8	2.8		18.5	3.8	139.6	64.5			
	9-20	1.7	1.8	11.1	35	9.5	23.1			
	21-30			0.8	14.7		6.1			
	>30			2.3	4.4		2.6			
% of identifiable material		4.6	1.9	33.7	59.8					
340	0-4					5.6	1.4	392.6	A	n/a
	5-8	9.4	1.9	18.4	5.8	116.9	38.8			
	9-20	40.8	11.8	30.2	21.8	45.7	38.3			
	21-30	18	7.8	13.5	10.1		12.6			
	>30	10.9	3.1	14.7	6.2		8.9			
% of identifiable material		35.2	11	34.2	19.6					
346	0-4					2.9	26.6	10.9	n/a	n/a
	5-8	0.3	<1	1.6		0.8	24.8			
	9-20	0.4		2.1			22.9			
	21-30									
	>30			2.8			25.7			
% of identifiable material		9.7		90.3						
349	0-4					6.9	2.6	260.8	A	n/a
	5-8	12	2.7	28.9	2.7	60.6	41			
	9-20	25.7	12.4	58.8		9.8	40.9			
	21-30	4.6	6.2	14.8	6	1.2	12.6			
	>30			7.5			2.9			
% of identifiable material		23.2	11.7	60.3	4.8					
351	0-4					4.8	12.2	39.4	I	n/a
	5-8	2.3		4.4		14.1	52.8			
	9-20	1.9		10.6			31.7			
	21-30			1.3			3.3			

Context Number	Frag. size (mm)	Weight per skeletal element (grams)					% of whole assembl.	Total (grams)	Age	Sex
		Skull	Axial	Upper Limb	Lower Limb	Unid.				
	>30									
<i>% of identifiable material</i>		20.5		79.5						
358	0-4					0.9	40.9	2.2	n/a	n/a
	5-8			0.9		0.4	59.1			
	9-20									
	21-30									
	>30									
<i>% of identifiable material</i>				100						
362	0-4					9.8	10.8	91.1	J/A ?	n/a
	5-8	7.1	0.5	20.5		21.5	54.4			
	9-20	4.4	0.6	22.6			30.3			
	21-30			4.1			4.5			
	>30									
<i>% of identifiable material</i>		19.3	1.8	78.9						
365	0-4					5.3	31	17.1	N/J ?	n/a
	5-8	1.5		1.6		1.7	28.1			
	9-20	2.6	1.5	1.5			32.7			
	21-30			1.4			8.2			
	>30									
<i>% of identifiable material</i>		40.6	14.8	44.6						
368	0-4					8.8	2	434.1	A	n/a
	5-8	19.2	5.9	36.3		101.2	37.5			
	9-20	46.6	15.9	47.2	25.1	14.7	34.4			
	21-30	29.3	12.4	15.9	16.5		17.1			
	>30	14.6	1.9	22.6			9			
<i>% of identifiable material</i>		35.5	11.7	39.4	13.4					
378	0-4					4.1	3.9	104.5	A	n/a
	5-8	4.4		13.2		22.8	38.7			
	9-20	10.2		20.1		8.9	37.5			
	21-30	5.1		10.1			14.5			
	>30	3.8		1.8			5.4			
<i>% of identifiable material</i>		34.2		65.8						

APPENDIX 5: Sample residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)

Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
1	274	P	30	30	****	102	***	80	<i>Quercus</i> sp. (10)							FCF ***/876g - Pot */4g - Magnetised material ***/<2g - Vitrified material */<2g
2	282	CR	3	3								***	44	***	12	Pot ***/26g - Magnetised material */<2g
3	285	CR	1	1	*	<2						****	328	****	16	FCF */26g - Pot ***/42g - Vitrified material ***/<2g
4	291	CR	4	4	*	<2						****	180	***	8	FCF */30g - Pot ***/54g - Magnetised material */<2g
5	290	CR	1	1								***	80	***	8	Pot **/28g - Cu alloy */<2g
6	294	CR	1	1								***	72	***	8	Pot ***/190g
7	300	CR	0.1	0.1								**	18	**	2	
8	303	CR	1	1								***	26	***	6	FCF */12g - Pot ***/62g
9	306	CR	0.1	0.1										*	<2	Pot **/28g

Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
10	309	CR	1	1								***	22	***	6	Pot **/62g
11	316	D	1	1	**	<2	***	2	<i>Quercus</i> sp. (10)							Pot */<2g
12	312	CR	10	10	*	<2	***	2				****	1108	****	50	FCF **/254g - Pot ***/606g - Fe */40g - Pb */40g - Magnetised material */<2g - Bone bead */<2g
13	319	CR	1	1								**	4	**	2	Pot ***/182g
14	322	CR	1	1	*	<2	**	<2				****	186	**	4	FCF */36g - Pot ***/46g; Magnetised material */<2g
15	327	CR	1	1								****	326	**	4	FCF */20g - Pot ***/58g
16	330	CR	1	1	*	<2						***	76	***	12	FCF */8g - Pot ***/42g
17	335	CR	3	3	*	<2						****	250	***	20	FCF */12g - Pot ***/86g - Flint */<2g
18	340	CR	0.5	0.5								****	392	**	6	Pot **/10g
19	346	CR	0.1	0.1								**	8	**	2	Pot **/2g

Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg inc, pot, cbm)
20	354	P	10	10	**	2	**	2	<i>Quercus</i> sp. (7), <i>Fraxinus excelsior</i> (3)							FCF ****/1530g - Burnt material ****/186g
21	349	CR	10	10			*	<2				****	258	**	6	Pot ***/42g - Cu alloy */<2g
22	351	CR	5	5	*	<2	*	<2				***	34	***	10	
23	358	CR	8	8	*	<2	**	<2				**	2	*	<2	FCF */78g - Pot */<2g
24	368	CR	1	1	*	<2	*	<2				****	428	***	20	Pot */8g - Magnetised material */<2g
25	362	CR	1	1	**	<2	**	<2				***	82	***	20	FCF */2g - Pot **/42g
26	365	CR	1	1								**	12	***	4	Pot */4g
27	372	P	2	2	**	4	**	5	<i>Quercus</i> sp. (9), <i>Euonymus europaeus</i> (1)	***	5					FCF **/144g - Pot */10g - Fired clay ***/84g
28	378	CR	8	8	*	<2	**	<2				****	102	***	40	FCF */66g - Magnetised material */<2g

Appendix 6: Sample flot quantification (* = 1-10, ** = 11-50, * = 51-250, **** = >250) and preservation**
 (+ = poor, ++ = moderate, +++ = good)

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation	Burnt bone
1	274	4	15	15	97	2	* <i>Rubus fruticosus</i> agg. / <i>idaeus</i> L.	*	*	*	*	cf. <i>Hordeum</i> sp. (1)	+							
2	282	<2	4	4	98	2			*	*										
3	285	<2	<2	<2	20	20	* <i>Chenopodium</i> sp.			*							*	CPR?	+	
4	291	<2	20	20	90	2	* <i>Sambucus nigra</i>	*	*	**	*	Cerealia (1)	+	*	cf. <i>Anthemis cotula</i> (1)	++				
5	290	<2	8	8	70	2				**										
6	294	<2	<2	<2	65	2			*	*	*	cf. <i>Hordeum</i> sp. (1)	+							
7	300	<2	<2	<2	50	2				*										
8	303	<2	<2	<2	75	25														
9	306	2	10	10	2	2		*	**	**										

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation	Burnt bone
10	309	<2	2	2	99	1				*										
11	316	26	50	50	3	2		**	**	***										
12	312	10	95	95	90	2		**	**	**										
13	319	<2	<2	<2	99	2														
14	322	<2	5	5	97	2	* <i>Chenopodium</i> sp., <i>Polygonum</i> / <i>Rumex</i> sp.			**										
15	327	<2	3	3	85	5			*	*	*	Cerealia (1)	+	*	<i>Galium</i> sp. (1)	++				
16	330	<2	<2	<2	99	1														
17	335	<2	8	8	90	2			*	**										* (2)
18	340	<2	10	10	96	2			*	*	*	cf. <i>Hordeum</i> sp. (1)	+							
19	346	<2	<2	<2	50	2				*										

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanical charred	Identifications	Preservation	Burnt bone
20	354	<2	2	2	98	1	* <i>Rubus fruticosus</i> agg. / <i>idaeus</i> L.		*	*										
21	349	<2	10	10	80	7		*	*	*										* (2)
22	351	8	18	18	15	5		**	**	**										
23	358	2	8	8	50	2	* <i>Urtica</i> sp.	*	***	**										
24	368	<2	<2	<2	98	1			*											
25	362	<2	5	5	99	1	* <i>Chenopodium</i> sp.													
26	365	<2	2	2	85	2			*	*										
27	372	6	20	20				*	**	***	**	<i>Triticum</i> sp., <i>Hordeum</i> sp., Cerealia	+ to ++	*	Poaceae	++				
28	378	<2	2	2	90	2				**				*	Poaceae, unid. seeds	++				

Appendix 7: Outline publication content and page count

EAH outline / page estimates

	Plot K			Plot L			Plot N		
	Text	Figs	Plate	Text	Figs	Plate	Text	Figs	Plate
Executive summary	0	0	0	0.25	0	0	0.25	0	0
Introduction / background									
Natural geology, topography & environment, planning, etc.	0.25	0.25	0	0.25	0.25	0	0.25	0.25	0
Site narrative									
Intro, methodology, truncation, etc	0.25	0.25	0	0.25	0.25	0	0.25	0.25	0
Early & Late Bronze Age and Roman	2	1	0.5	0.25	0.25	0	0.25	0.25	0
Early Saxon cemetery	0	0	0	2	0.5	0.5	2	0.5	0.5
Later Saxon settlement	0	0	0	0.5	0.25	0	0.5	0.25	0
Gazetteer of burials & other cemetery features	0	0	0	2.5	2	1	2.5	2.5	1
Finds & Environmental material									
Intro/overview	0.25	0	0	0.25	0	0	0.25	0	0
Worked & burnt flint	0.5	0.25	0.25	0	0	0	0	0	0
Prehistoric pottery	1	0.5	0.25	0.5	0.25	0	0.25	0	0
Saxon pottery	0	0	0	1.5	0.5	0.25	1.5	0.5	0.25
Registered finds	0	0	0	0.25	0.25	0.5	0.5	0.25	1
Cremated human bone	0	0	0	1	0	0.5	1	0	0.5
Misc finds									
Environmental material	0	0	0	0.5	0	0.5	0.5	0	0.5
Discussion	1	0.5	0	1.5	0.5	0	1.5	0.5	0
Conclusions	0.25	0	0	0.25	0	0	0.25	0	0
Acknowledgements	0	0	0	0.25	0	0	0.25	0	0
Bibliography	0.25	0	0	0.25	0	0	0.25	0	0
Totals:	6.25	2.75	1	12.25	5	3.25	12.25	5.25	3.75

Estimated total pages = Plot K 10
 Plot L 20.5
 Plot N 21.25
 Total pages: 51.5

Appendix 8: Publication Task List

Task No.	Task description	Plot K - days	Plot L - days	Plot N - days
Stratigraphic Analysis & Reporting				
1	Refinement and finalisation of phasing and dating for all site features/deposits	0.5	0.5	0.5
2	Compile gazetteer of burials and other cemetery-related features	0	2	2
3	Analysis of grave distribution	0	0.5	0.5
4	Write introduction and geology/topography background texts	0.25	0.25	0.25
5	Write site narrative description, using chronological framework	1	2	2
6	Documentary research for comparison with main excavation and other sites in Essex	0.25	0.25	0.5
7	Selection of figures (plans/sections) and photo plates to accompany narrative, and selection of finds for illustration	0.25	0.5	0.5
8	Incorporation and association of finds and environmental publication reports	0.25	0.5	0.5
9	Write discussion and conclusion texts	0.5	1	1
10	Collate bibliography, acknowledgements	0	0.25	0.25
	Sub-totals	3	7.75	7.5
Specialist Analysis & Reporting				
11	Worked & burnt flint	0.5	0.25	0
12	Prehistoric and Roman pottery	2	0.5	1
13	Saxon pottery	0	2	2
14	Registered finds	0.25	0.25	2
15	Cremated bone	0	2	2
16	Misc finds	0.25	0.25	0.5
17	Conservation (external service)	0	(cost)	(cost)
	Sub-totals	3	5.25	7.5
Environmental Analysis & Reporting				
18	Sorting & analysis of Plot L samples, inc. charcoal ID	0	4	1
19	Production of report	0	0.5	1
	Sub-totals	0	4.5	2
Illustration				
20	Plan and section figures, plus photo images	1	4	4
21	Finds illustrations, inc. Saxon pottery	0.5	5	5
	Sub-totals	1.5	9	9
Editing and Production				
22	Internal reading/editing of draft report	0.5	2	2
23	Internal alterations to text and figure illustrations	0.5	2	2
24	Implementing EAH editors amendments	0.25	1	1
25	Proof reading	0.25	0.5	0.5
	Sub-totals	1.5	5.5	5.5
Management & Miscellaneous				
26	Project Management (general admin & co-ord throughout)	0.5	2	2
27	Expenses & consumables	(cost)	(cost)	(cost)
28	EAH page print cost for approx. 50 pages	(cost)	(cost)	(cost)
	Sub-totals	0.5	2	2

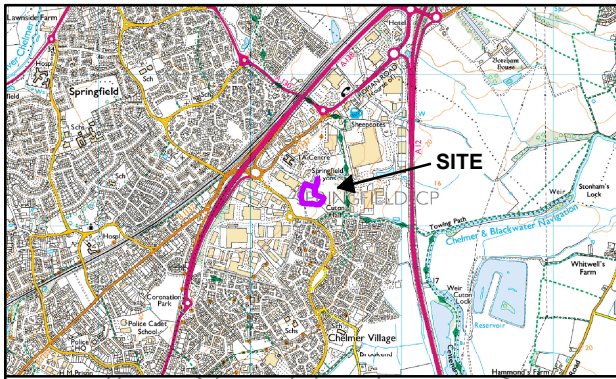
Appendix 9: HER Summary Sheet

Site name/Address: Plot N, Chelmsford Business Park, Springfield, Chelmsford, Essex	
Parish: Chelmsford	District: Chelmsford
NGR: TL 73400820	Site Code: SPAN13
Type of Work: Archaeological Evaluation	Site Director/Group: T. Ennis, ASE
Date of Work: 31 July - 29 August 2013	Size of Area Investigated: 1.66 ha
Location of Curating Museum: Chelmsford	Funding source: client
Further Seasons Anticipated?: Yes	Related HER Nos: 5788-5792
Final Report: EAH article	OASIS No: 166633
Periods Represented: Early Bronze Age, Late Bronze Age, Roman, Early Saxon, Late Saxon, Modern	
SUMMARY OF FIELDWORK RESULTS:	
<p>Archaeological excavation was carried out at Plot N, located immediately west of the 1981-91 Springfield Lyons multi-period site and south of Plot L excavated in 2012.</p> <p>The earliest recorded feature was a single Early Bronze Age pit. Two ditches formed part of a Late Bronze Age field system that were probably contemporary with settlement within the nearby circular enclosure. A pit of Late Bronze Age date contained a crushed and near-complete pottery vessel. Four ditches forming part of a tentative Roman field system were also identified.</p> <p>The main focus of the excavation was the investigation of the western side of the Springfield Lyons Early Saxon cemetery. Twenty three cremation burials (22 urned and one un-urned) were excavated along with two <i>possible</i> cremation burials. No inhumation burials were identified and the majority of the cremations were heavily truncated. Consistent with the previous Plot L excavation only a few grave goods were recovered from the cremation fills. Indeed, the majority of the registered finds consisted of glass beads and a copper alloy brooch that were recovered as surface finds. Three cemetery-related features were also identified. The 25 burials (including possibles), in conjunction with the 22 from Plot L, put the overall total of cremation burials in the Springfield Lyons cemetery up to 190.</p> <p>Late Saxon evidence consisted of a single field boundary ditch that may have formed a distinct western limit to the area of Late Saxon occupation. The boundary was respected by a collection of undated small pits and post-holes that may be associated with fence lines or small buildings of the Late Saxon manorial settlement.</p> <p>No medieval or post-medieval remains were encountered. The route of the large WW2 anti-tank ditch was traced across the whole site and three iron rails were recovered that may have formed part of a dismantled wartime obstacle.</p>	
Previous Summaries/Reports:	
<p>Ennis, T. 2012. <i>Plot K, Chelmsford Business Park, Springfield, Chelmsford, Essex. Archaeological Excavation</i>. ECC FAU.</p> <p>Ennis, T. 2013. <i>Plot L, Chelmsford Business Park, Springfield, Chelmsford, Essex. Archaeological Excavation</i>. ECC FAU</p> <p>Tyler, S. & Major, H. 2005 <i>The Early Anglo-Saxon Cemetery and Later Saxon Settlement at Springfield Lyons, Essex</i>. E. Anglian Archaeol. 111. Chelmsford: Essex County Council.</p>	
Author of Summary: T. Ennis	Date of Summary: January 2014

Appendix 10: OASIS Form

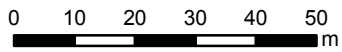
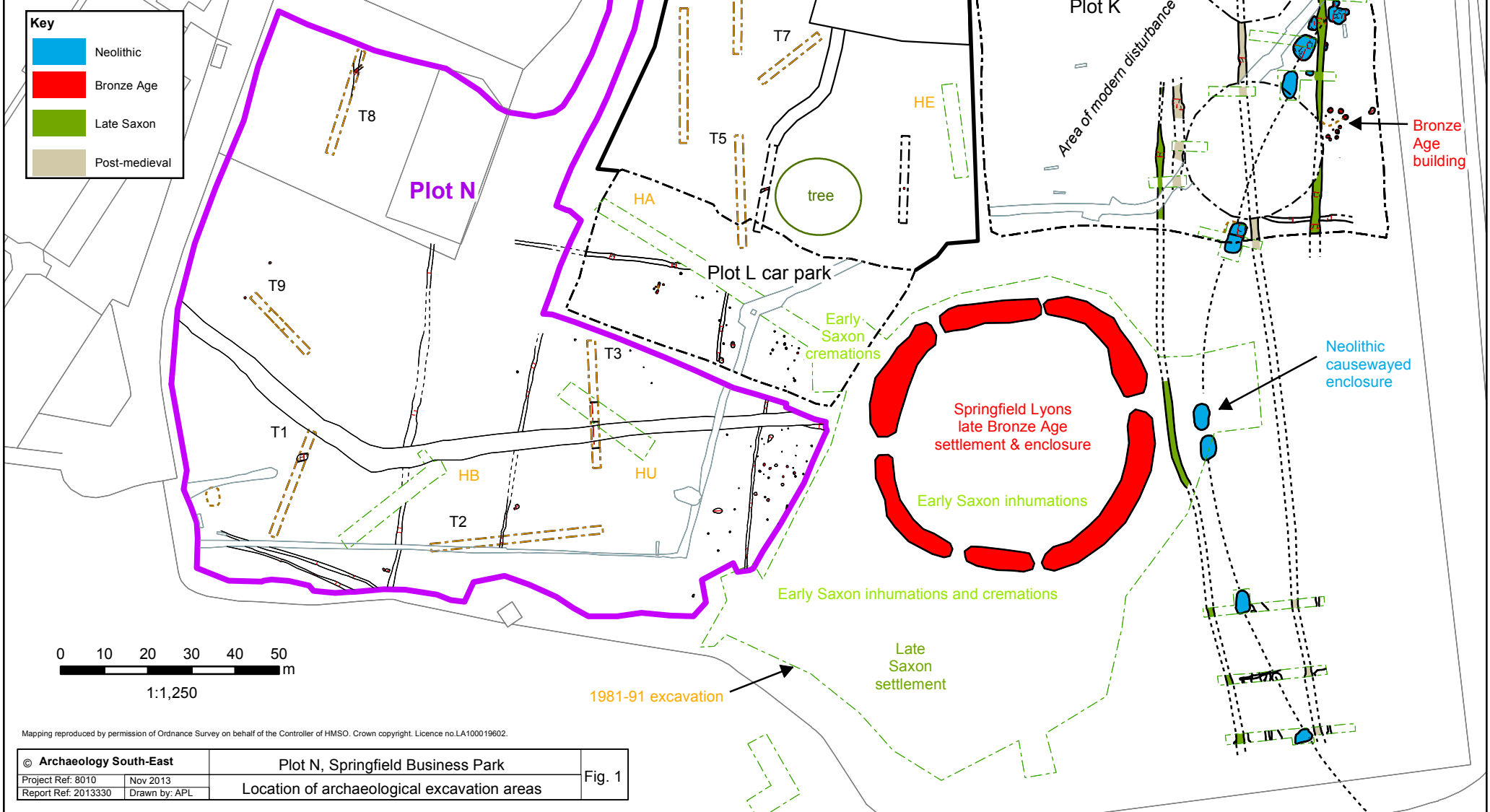
Archaeol6-166633	
Project details	
Project name	Plot N, Chelmsford Business Park
Short description of the project	<p>Archaeological excavation at Plot N revealed the western side of the Springfield Lyons Early Saxon cemetery. Twenty three cremation burials were excavated along with a further two possible cremation burials. Twenty two of the burials contained a burial urn. No inhumation burials were identified and the majority of the cremations were heavily truncated. Only a few grave goods were recovered from the cremation fills. The majority of the registered finds consisted of glass beads and a copper alloy brooch that were recovered as surface finds. Three other cemetery related features were identified.</p> <p>Also investigated was a pit dated to the Early Bronze Age. This pre-dated the construction of the nearby Late Bronze Age circular enclosure and its associated settlement. Two ditches forming part of a field system, probably contemporary with this settlement, were investigated along with a pit that contained a crushed near-complete pottery vessel. Four ditches forming part of a probable Roman field system were also identified along with a single Late Saxon field boundary ditch. No medieval or post-medieval remains were encountered. The route of the large WW2 anti-tank ditch was traced across the whole site and three Iron rails were observed that may have formed part of a dismantled wartime obstacle.</p>
Project dates	Start: 31-07-2013 End: 29-08-2013
Previous/future work	Yes / Yes
Project code	SPAN13 - Sitecode
Type of project	Recording project
Monument type	CREMATION BURIALS Early Medieval
Monument type	PITS Bronze Age
Monument type	DITCHES Late Bronze Age
Monument type	DITCH Early Medieval
Significant Finds	POTTERY Bronze Age
Significant Finds	POTTERY Early Medieval
Investigation type	"Full excavation"
Prompt	Direction from Local Planning Authority - PPS
Project location	
Country	England
Site location	ESSEX CHELMSFORD SPRINGFIELD Plot N, Chelmsford Business Park
Study area	1.66 Hectares
Site coordinates	TL 734 082 51 0 51 44 42 N 000 30 43 E Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Essex County Council Place Services

Project design originator	ASE
Project director/manager	Adrian Scruby
Project supervisor	Trevor Ennis
Type of sponsor	Client
Project archives	
Physical Archive recipient	Chelmsford Museum
Physical Archive ID	SPAN13
Physical Contents	"Animal Bones","Ceramics","Glass","Human Bones","Metal","Worked bone","Worked stone/lithics"
Digital Archive recipient	Chelmsford Museum
Digital Archive ID	SPAN13
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Worked bone","Worked stone/lithics"
Digital Media available	"Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	Chelmsford Museum
Paper Archive ID	SPAN13
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Worked bone","Worked stone/lithics"
Paper Media available	"Context sheet","Drawing","Photograph","Plan","Report","Section","Survey "
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Plot N, Chelmsford Business Park: Post-Excavation Assessment and Updated Project Design Report
Author(s)/Editor(s)	Ennis, T.
Other bibliographic details	ASE Report 2013330
Date	2014
Issuer or publisher	Archaeology South-East
Place of issue	Braintree
Description	Blue spine, approx. 40 pages
Entered by	Trevor Ennis (t.ennis@ucl.ac.uk)
Entered on	10 January 2014



Key

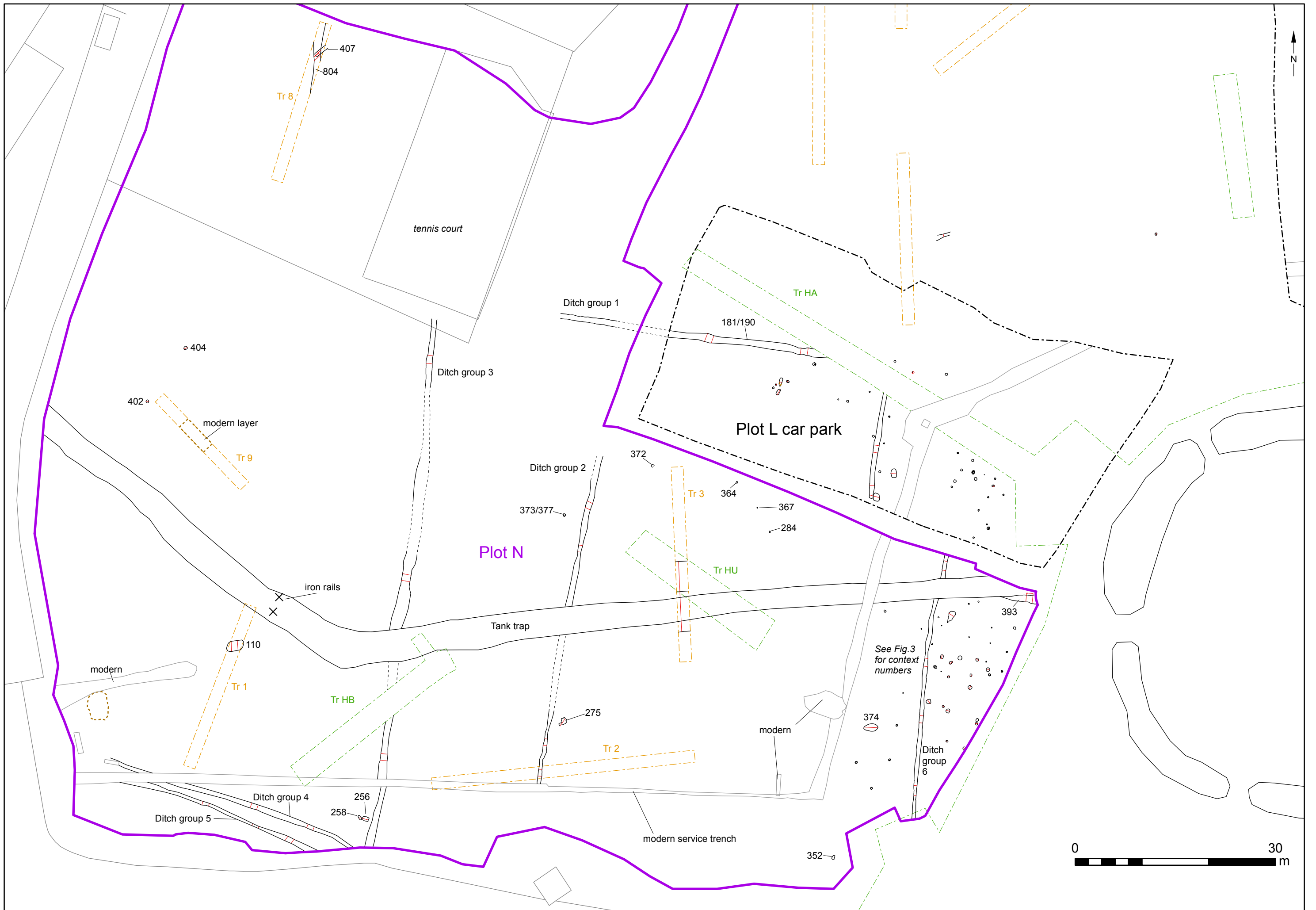
■	Neolithic
■	Bronze Age
■	Late Saxon
■	Post-medieval



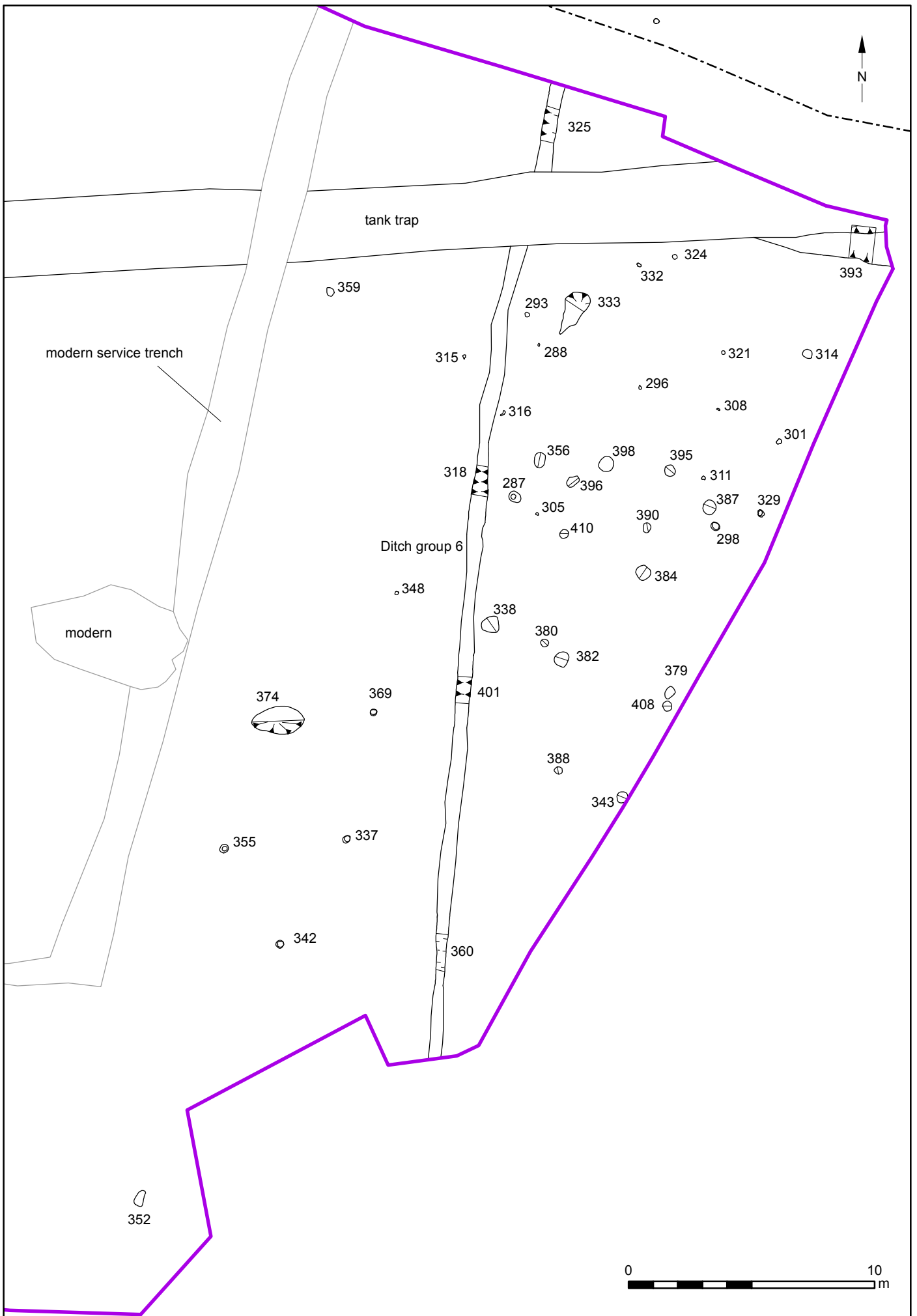
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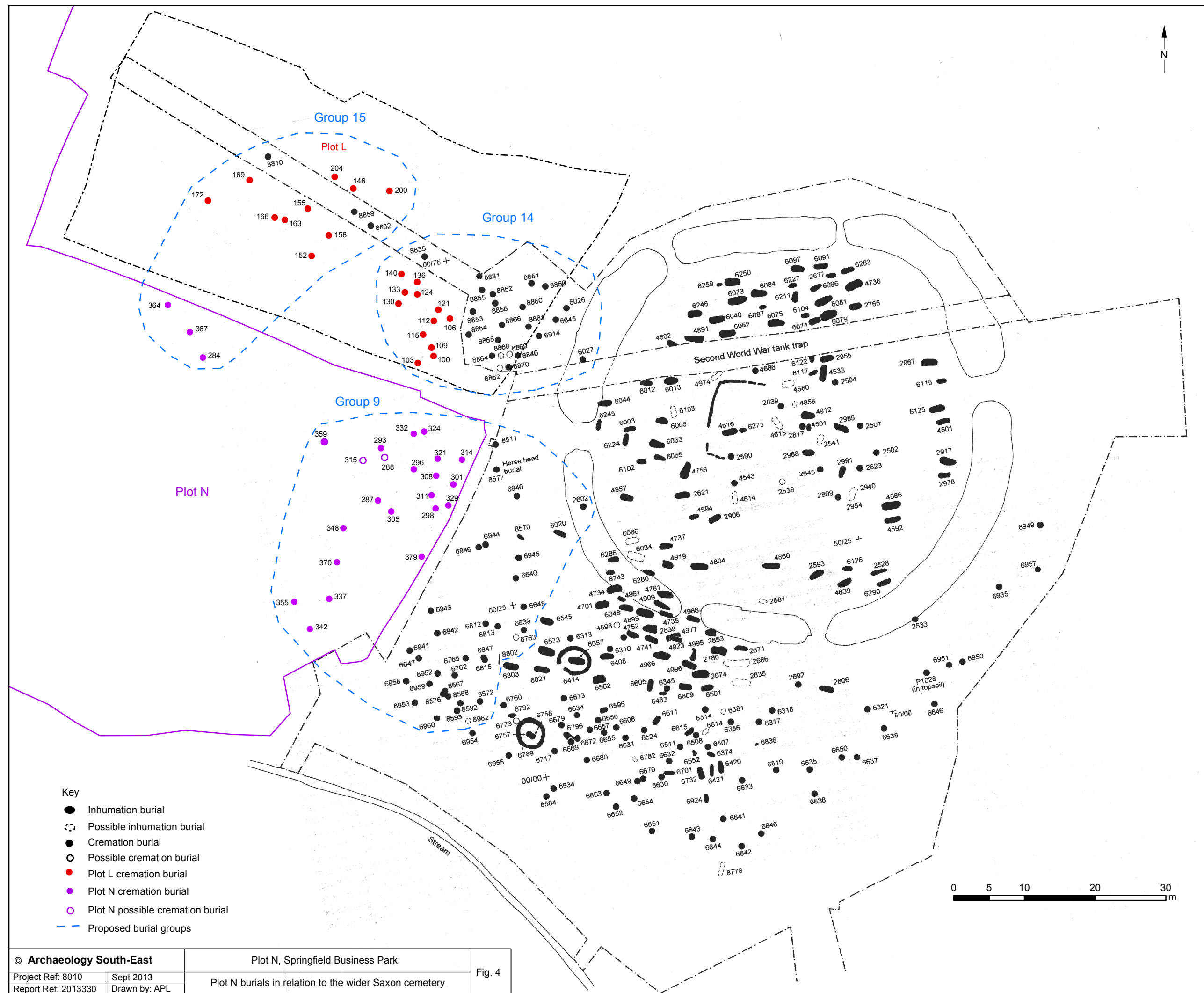
© Archaeology South-East		Plot N, Springfield Business Park	Fig. 1
Project Ref: 8010	Nov 2013	Location of archaeological excavation areas	
Report Ref: 2013330	Drawn by: APL		



© Archaeology South-East		Plot N, Springfield Business Park	Fig. 2
Project Ref: 8010	Sept 2013	Plan of site and excavated features	
Report Ref: 2013330	Drawn by: APL		



© Archaeology South-East		Plot N, Springfield Business Park	Fig. 3
Project Ref: 8010	Sept 2013	Excavated features in the east of the site	
Report Ref: 2013330	Drawn by: APL		



- Key**
- Inhumation burial
 - Possible inhumation burial
 - Cremation burial
 - Possible cremation burial
 - Plot L cremation burial
 - Plot N cremation burial
 - Plot N possible cremation burial
 - - - Proposed burial groups





Figure 5: Site re-stripping, looking northeast



Figure 6: Ditch Group 2, looking south (0.5m scale)



Figure 7: Cremation burial [293] (0.25m scale)



Figure 8: Cremation burial [332] (0.25m scale)



Figure 9: Cremation burial 314 under excavation



Figure 10: Detail of vessel [313] in burial [314] (0.25m scale)



Figure 11: Cremation burial [324] (0.25m scale)



Figure 12: Vessel 286 from burial 287 (0.05m scale)



Figure 13: Surface finds [288] *in situ* (0.25m scale)



Figure 14: Bone bead fragment from cremation burial [314]



Figure 15: Copper-alloy tweezers and ring in burial [355]

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