Interim assessment report on Stage 2 archaeological excavations, Alienated Land S2 cross-over, Area S2 (north) Site K, Berechurch Dyke, Colchester Garrison, Colchester, Essex September-October 2012

report by CAT
in association with RPS
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1 Summary

An excavation on the line of the Berechurch Dyke located the dyke ditch over its full width. Part of the dyke bank, or an area of natural sand beneath the former bank, was located on the western edge of the excavation. A line of post-holes on the western side may represent part of a timber revetment fronting the dyke bank, although a date for the post-holes later than the dyke cannot be excluded. There is some evidence that a large post-medieval ditch or hollow-way may have followed the line of the dyke ditch here.

2 Introduction (Fig 1)

2.1 This is the assessment and preliminary analysis report on the archaeological excavation of a part of the Berechurch Dyke located on Taylor Wimpey's Alienated Land Area S2 cross-over, adjacent to the eastern side of the redevelopment Area S2 (the site of the former Roman Way Barracks) and designated as 'Area S2 (north) Site K' (Fig 1).

2.2 The work was undertaken in advance of construction of a new access road and associated services across part of the Berechurch Dyke and is an extension of the archaeological excavations carried out in Area S2 (north) (CAT Report 620).

2.3 The report has been compiled to analysis level, and no further assessment work is anticipated. However, this report will be incorporated within the wider publication of the Alienated Land project. In particular, the preliminary analysis (as given below) will be amended as necessary and incorporated into the wider-ranging analysis and publication report due for completion in 2014, in line with the project-wide research themes as defined in *Research design for archaeological evaluations, excavations and watching briefs on Alienated Land, new garrison, Colchester* (RPS 2004).

2.4 The approximate centre of the excavation area (Site K) is TL 9972 2207.

2.5 An overall archaeological strategy has been provided for the project by RPS (RPS 2004). This provides an outline framework for the archaeological mitigation of the development impact on the Alienated Land.

2.6 The archaeological work was carried out by the Colchester Archaeological Trust (CAT) on behalf of Taylor Wimpey in association with RPS Planning, between the 27th September and 2nd October 2012. The excavation site code (Site K) continues the series of letter codes allocated to sites on Area S2 (north) (CAT Report 620). The post-excavation work was carried out during November and December 2012.

2.7 All archaeological work was carried out in accordance with a Written Scheme of Investigation (WSI) written by RPS Planning (RPS 2007), and agreed with Colchester Borough Council's Archaeological Officer (CBCAO). It should be noted that design changes by Taylor Wimpey since the compilation of the WSI meant that a deep stormwater trench was no longer required to cross the Berechurch Dyke. Therefore, the depth of archaeological work was reduced (from levels stated in the WSI) in line with the less intrusive construction impact of road construction and drainage ducting. This change of approach was agreed with the CBCAO.

In addition to the Archaeological Strategy (RPS 2004), all fieldwork and reporting was done in accordance with the Colchester Archaeological Trust's *Policies and procedures* (CAT 1999), Colchester Borough Council's *Guidelines on standards and practices for archaeological fieldwork in the Borough of Colchester* (CIMS 2002) and *Guidelines on the preparation and transfer of archaeological archives to*

Colchester Museums (CIMS 2003), the Institute for Archaeologists' *Standard and guidance for archaeological excavation* (IfA 2008a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (IfA 2008b). The guidance contained in the documents *Management of archaeological projects* (MAP 2), and *Research and archaeology: a framework for the Eastern Counties 1. Resource assessment* (EAA **3**), *Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy* (EAA **8**), and *Standards for field archaeology in the East of England* (EAA **14**) was also followed.

3 Archaeological background (Fig 2)

3.1 The archaeological and historical setting of the Garrison redevelopment area has already been comprehensively explored in an earlier report (CAT Report 97) and in the Written Scheme of Investigation for the excavation (*Written Scheme of Investigation (WSI) for Stage 2 archaeological excavations Area S2 (north), Colchester Garrison*, RPS 2007). Therefore, only a brief summary of the history of the Berechurch Dyke itself will be provided here.

3.2 The site is located across part of the Berechurch Dyke. This is one of a number of extensive, large, linear ditches and banks (ramparts) at Camulodunum (Colchester) constructed in the Late Iron Age and early Roman period (*CAR* **11**, figs 7.8-7.10). The purpose and sequence of construction of the system of dykes is not fully understood. While they clearly define and partly enclose large areas of land associated with the Late Iron Age *oppidum* and later Roman *colonia*, one main function of the dyke system is probably as defensive obstacles controlling approach and movement.

3.3 The Berechurch Dyke is located on the east side of Camulodunum facing east - that is, with the ditch on the eastern side of the bank - and it is the only known earthwork of this type on this side of Camulodunum (*CAR* **11**, fig 7.10).

3.4 Although not well dated, the Berechurch Dyke is considered to have been constructed towards the end of the Late Iron Age period at Camulodunum, in the early-mid 1st century AD or, because of its straight alignment, possibly in the early Roman period (*CAR* **11**, 175). However, the dating of this dyke is to be revised following the significant recent discovery of a new sector of the dyke, dated to the Late Iron Age, at the Hyderabad Barracks site (Area A1, Site J; CAT Report 628 (forthcoming); see below).

3.5 Previous archaeological investigation of the Berechurch Dyke is summarised in *CAR* **11** (24-6) and in the catalogue of excavations in the same volume (*CAR* **11**, catalogue nos 78 & 85, fig 6.1). The two previous investigations established the existence of the dyke bank and the position of the ditch. They examined the upper part of the ditch fill but did not penetrate to the base of the ditch.

3.6 In 2004, to establish the position of the ditch of the Berechurch Dyke as part of the GAL evaluation for Area S, three trial-trenches (S1, S2, S3) were opened across the line of its projected course (Fig 2; CAT Report 273, fig 2). The upper part of a large feature (SF1), corresponding to the dyke ditch, was identified and located in all three trial-trenches.

3.7 A large ditch or hollow-way (SF2), dated as post-medieval, was also located in two of these trenches (S1, S2) immediately to the west of the Berechurch Dyke, and was examined again in two further trenches (S4, S5) which were designed to recover dating material from it (Fig 2; CAT Report 273, 5-6).

4 Aims and strategy

4.1 Introduction (Fig 3)

The aims of the excavation and watching-brief were primarily to locate, record and date any archaeological deposits and features associated with the Berechurch Dyke which were threatened by the construction of the new road and services. The location, nature and date of any other significant archaeological deposits and features were also to be recorded.

4.2 It was not possible to open the whole of Site K at the same time, as a north-south 1.5 m-wide baulk had to be left unexcavated due to the presence of an electricity cable (Fig 3). As a result, two separate excavation areas (Site K (east) and Site K (west)) were opened up on either side of the line of this baulk and the topsoil removed down to the level of the surviving archaeology by machine. The total area of Site K was 75.5 square metres. The excavated area of Site K (east) was 35.4 square metres and of Site K (west) was 30.6 square metres.

5 Results of the excavation (Figs 3-4; Plates 1-2)

5.1 The dyke ditch and associated features

One of the two excavation areas of Site K - Site K (east) - was located over the dyke ditch. The other, Site K (west), was located to the west of the ditch over the area of the former dyke bank (Fig 3).

5.1.1 The dyke ditch (Site K (east))

The topsoil (KL1) and buried ploughsoil (KL2, which is re-worked cover loam) together varied between 400 mm and 600 mm in thickness. Removal of these layers exposed the upper surviving fill (KL3) of the dyke ditch across all of the site area. An east-west trench, 0.5 m wide, was hand-excavated into this fill at right-angles to the line of the dyke. The upper fill (KL3) consisted of an orange-brown silty sand up to approximately 0.5 m in thickness. A small quantity of finds was recovered from this layer (KL3(2)), of which the latest-dated pottery and CBM is medieval and medieval to post-medieval in date. There are also a few abraded sherds of Roman date which are residual in this context.

This layer sealed a medium orange-grey silty sand (KL4) which extended across the whole width of the dyke ditch. Only about 100 mm of this fill could be excavated. A single sherd of medieval/early post-medieval Colchester ware pottery was recovered and two (joining) abraded flint-tempered prehistoric sherds of probable Neolithic or Bronze Age date (KL4(3)).

The excavation exposed both sides of the ditch of the dyke. At this point, the angle of the slope of the ditch sides may suggest that the base of the ditch is probably at about 2.1 m-2.4 m below the present ground-level, indicating that, overall, the surviving fill in the ditch is about 1.5 m-1.6 m deep. However, the analogous dyke sector from the Hyderabad Barracks site (Area A1, Site J) suggests that the upper angle of slope may not be representative of the degree of slope further down its profile (CAT Report 628 (forthcoming)). At the Hyderabad Barracks site, the dyke sloped at a similar angle before dramatically steepening to form a deeper U-shaped profile, with a full depth of 2.45 m to 2.6 m more similar to that of the Sheepen Dyke.

5.1.2 The area of the dyke bank (Site K (west))

The most significant features in the area to the west of the ditch (Site K (west)) were a line of five pits or post-holes located just to the west of the ditch (Plate 1) and a sharp rise in the natural, indicating the possible remnant of the bank (Plate 2).

The post-holes (KF4-KF8) formed a line parallel with the dyke. As exposed during the excavation, they were approximately 1.8 m-1.9 m from the western surviving edge of the ditch but, if the western ditch edge were projected up to the modern ground-level, then this distance would be reduced to approximately 600 mm-700 mm. The fill of all these features consisted of a homogeneous medium grey-brown silt or sandy silt.

Plate 1: post-holes KF4-KF8, view south.

Although there is no evidence from the post-hole fills of posts having decayed within them, the size and alignment of these features indicates that they were post-holes. Their dimensions are set out in Table 1 (below). It should be noted that the post-hole widths were measured from the profile drawings. As the post-holes narrowed toward the base, the measurements were taken approximately one-third of the way up. While there was some variation in depth, the alignment and similar size of these features show that they relate to each other and were contemporary. The diameters of the surviving parts of the post-holes indicate that the posts were probably between 100 mm and 300 mm in diameter. Finds were recovered from the fill of one (KF4). These consist of three very small, abraded sherds (probably from the same vessel) which appear to be in a hand-made sandy fabric and are probably of Middle Iron Age or Late Iron Age date (*c* 4th century-1st century BC).

Table 1: dimensions of post-holes and spacing (KF4-KF8) on Site K (west).

Feature	diameter in mm	depth in mm	distance in m to next post-hole (centre-centre)
KF4	300	550	KF4-KF7, 0.73 m
KF7	300	340	KF7-KF5, 0.98 m
KF5	350	250	KF5-KF6, 1.25 m
KF6	220	210	KF6-KF8, 1.36 m
KF8	150	320	

The section at the southern end of the area (Site K (west)) showed a deposit of orange natural sand (KL5) in the south-western corner rising up (from a point just west of the service cut KF3) to the level of the base of the modern road make-up by which it had been truncated at a depth of 240 mm (Fig 4, Sx 2). This sand deposit appears to be natural. However, the cover loam in adjacent areas was found to a depth of approximately 600 mm. Therefore, this deposit of sand (which is higher than would otherwise be expected) possibly includes the lower part of the dyke bank or is an area of natural which has been protected from cultivation because of the presence of the bank here. The edge of the sand is not the rising western side of the cut for the dyke ditch (KF2), as the surviving western edge is located approximately 3.4 m further east. For the two to be the edge of the same ditch would require an extensive flat step within the ditch here.

Plate 2: In section to right, natural sand KL5 protected by former dyke bank?

5.2 Other features (post-medieval to modern) (Fig 2)

Two other features (KF1, KF3) were recorded apart from the electricity cable. These were both also modern services. A north-south aligned modern service trench (KF3), recorded as a probable drain, extended along the entire length of Site K (west). A north-south aligned modern service trench (F4) containing a water-pipe was located on the eastern side of Site K (east) cut into the fill of the dyke ditch

There was some evidence of the large post-medieval ditch or hollow-way in Site S (SF2), the projected course of which should pass through the western side of Site K (Fig 2). This ditch was located in earlier trial-trenching along the line of the dyke in two sections to the north of Site K, ie in trench S1 and trench S2, and in one section located to the south, in trench S5 (CAT Report 273, 5-6). It is possible that the ditch follows the line of the Berechurch Dyke ditch here, although no cut for it was recognised in the section cut across the upper fill of the dyke ditch (KF2), and the ditch fill here appears dissimilar to that of the post-medieval ditch encountered previously. The post-medieval ditch was recorded as being over 2 m deep (below modern ground-level) in one of the earlier trial-trenches (trench S1; CAT Report 273, fig 4) and over 3 m deep in another (trench S2; CAT Report 273, fig 5). The lack of evidence for the ditch SF2 suggests that there was a break in this substantial ditch alignment at this location. However, it is possible that the edge of the natural sand deposit (KL5) on the western side of Site K (west) represents the western edge of the large post-medieval ditch (SF2) and that this feature is relatively shallow here.

6 Finds

6.1 Introduction

Only a small quantity of finds was recovered, from three features (KF1, KF2, KF5). The finds consist of pottery, ceramic building material (CBM), burnt stone and stone. The date range of the pottery spans the earlier prehistoric (Neolithic-Bronze Age), later prehistoric (Later Iron Age), and the Roman and medieval periods. The small quantity of burnt flint is not closely dated but is probably of prehistoric date. All of the finds are listed and described by context in Table 2 (below). The Roman pottery fabrics quoted refer to *CAR* **10** and the post-Roman pottery fabrics to *CAR* **7**.

Table 2: finds by context and finds number.

context	fill	finds no	context type	finds	finds spot-date
F1	L3	1	Modern service trench fill	**Stone** (1@ 856 g), probably about two-thirds of a sandstone/quartzite cobble, rounded smooth surfaces except for break, underside dished and smooth, possibly utilised but no traces of polishing, probably just a smooth glacial or river cobble	undated
F2	L3	2	Dyke ditch fill	**Pottery Roman** (2@7 g), very abraded, Fabric GX (Roman ,1st-4th century); **Post-Roman** (1@ 5 g), medieval grey ware (Fabric 20) (medieval, 13th-14th century) **CBM post-Roman** (2@ 107 g), peg-tile **Burnt stone** (3@ 111 g), all burnt flint (probably prehistoric)	medieval to post-medieval/ modern
F2	L4	3	Dyke ditch fill	**Pottery Prehistoric** (2@ 22 g), joining sherds, crushed burnt flint/quartz-tempered (Fabric HMF) with rare grog, abraded, thickish fabric (8 mm), oxidised surface, grey core, surface has small-spaced, roughly parallel grooves, some clearly resulting from drag of surface inclusions, not closely dated (Neolithic-Early Iron Age) but most probably Bronze Age; **Medieval** (1@ 8 g), Colchester ware (Fabric 21A), splash of clear glaze with traces of white slip/paint (13th-16th centuries)	medieval/ early post-medieval (13th-16th centuries)
F5		4	Post-hole fill	**Pottery Prehistoric** (3@1 g), (abraded) small pottery fragments, all from same pot, fine sand fabric with dark, diffuse (?organic) inclusions, possibly hand-made (Fabric HMS)	Middle-Late Iron Age(?)

6.2 Finds discussion

The finds from the upper surviving fill (KL3, KL4) of the dyke ditch (KF2) indicate that this fill was accumulating during or after the late medieval or early post-medieval periods. A similar finding has been made for the sector of Late Iron Age dyke in the recent excavations at the Hyderabad Barracks site (Area A1, Site J; Benfield in CAT Report 628 (forthcoming)). There is a single abraded, broken sherd of hand-made, flint/quartz-tempered pottery (Fabric HMF) with some rare inclusions of grog-temper. This is from the fill of the ditch (KL4(2)). The oxidised surface has some faint, roughly parallel, horizontal grooves, some of which are clearly the result of inclusions (temper) dragging across it, although others might possibly be decoration. The wall of the vessel is

quite thick at 8 mm and the curvature of the sherd indicates a vessel diameter of 200 mm or more. The sherd is not closely dated other than as Neolithic-Early Iron Age, although it can be noted that oxidised (red-brown) surfaces are a common feature of pottery vessels in Late Bronze Age assemblages (Sealey 2006, 83), and a Bronze Age date appears most likely.

A few very small sherds recovered from the fill from one post-hole feature (KF5(4)) appear to be a hand-made sand-tempered ware which indicates a probable Middle Iron Age or Late Iron Age date (*c* 4th-1st century BC).

7 Discussion (Fig 5)

The excavation has precisely located the ditch of the Berechurch Dyke and allowed a minimum estimate of the surviving depth of the ditch and the associated preserved fill deposits to be made at this point along its course. However, given the gently sloping upper profile of the Hyderabad Barracks sector of the dyke, which is considered to represent a northern sector of the same dyke alignment (*ibid*), this profile may steepen significantly lower down the profile to form a deeper, more defensible, U-shaped profile. The maximum surviving width of the ditch here is just under 6.0 m (approximately 5.8 m), and the projected surviving depth (based on the shallow angle of slope of the upper ditch sides) would be approximately 1.5-1.7 m (between 2.1 m and 2.4 m below the present ground-level). The demonstrated depth of the Hyderabad Barracks sector of the same dyke, between 2.45 m and 2.60 m, may be a more reliable indicator of depth. Furthermore, the projected depth shown on Figure 5 appears to be less than the projected depth base on another cutting made on the line of the dyke in 1984 (*CAR* **11**, fig 6.41). Finds from the upper fill indicate that the ditch was a partly open feature into the late medieval or early post-medieval periods.

Potentially, the most significant discovery of the excavation is the line of post-holes (KF4-KF8) close to the western side of the ditch which is the area occupied by the dyke bank (*CAR* **11**, catalogue no 78 & fig 6.41). The posts appear to be approximately aligned with the ditch and their position, just back from the projected upper edge of the western side of the ditch, indicates that they could have formed part of timber revetment in front of the ditch bank. Their linear arrangement over a distance of 4.5 m could have supported a revetment or fence, rather than belonging to part of another structure such as a tower.

The surviving depth of the post-holes varies between 0.21 m and 0.55 m. This indicates an original range in depth of approximately 0.70-1.15 m (based on the removal of the modern soil sealing them of approximately 0.5 m-0.6 m depth), suggesting an original depth of about 0.80 m-1.0 m. This depth would indicate a possible above-ground height of between 2.5 m and 4.0 m (Watson 2005, 44). If it does represent a revetment, then the spacing between the posts would have required an infilling, which was, presumably - in the absence of local stone - of branches, wooden boards or wattles. The only dating evidence associated with the post-holes certainly allows an early dating. This consists of a few very small pottery sherds (probably from one pot) from post-hole KF5 which are dated from the Middle to the Late Iron Age period (approximately 4th-1st century BC). Though very slight as a dating indication, the later end of the range coincides with the earliest probable date of the Hyderabad Barracks sector of the dyke (Benfield in CAT Report 628 (forthcoming)).

A post from a probable revetment fronting the bank of the Lexden Dyke, with the charred or decayed remains of the timber post *in situ*,

was discovered in a section dug across it at Lexden Park in 1932 (*CAR* **11**, 37, figs 2.17 and 2.19). The post had been set in a post-hole at the front of the bank. A post revetment or timber reinforcement for the front of the bank (rampart) has also been postulated for the front of the same dyke at Bluebottle Grove (excavated in 1987), partly based on the results of the earlier 1932 excavation (*CAR* **11**, 157-9, fig 6.4). It can be noted that a slot located at the rear of the bank at Lexden Park may represent a low revetment along the tail of the bank there. The possible presence of a revetment fronting the Berechurch Dyke could suggest, through this possible similarity in construction technique, that it relates to the Lexden Dyke which is currently considered to date to the late 1st century BC (*CAR* **11**, 174, fig 7.7). But this is very tenuous, as little is known about the details of construction for most of the dykes, certainly over significant lengths. However, because of the straight alignment of the Berechurch Dyke, and of Gryme's Dyke, which had a Claudian coin sealed beneath its bank (*CAR* **11**, 112), one interpretation is that the Berechurch Dyke is early Roman (*CAR* **11**, 174). However, as noted above, this interpretation has been questioned following the discovery and full excavation (to its base) of the Hyderabad Barracks sector of the same dyke. This sector is located 1km to the north-north-east of what was formerly the most northerly known extent of the Berechurch Dyke (on the southern side of Colchester Cemetery). The lower fills of the dyke at the Hyderabad Barracks site are securely dated by pottery evidence to the Late Iron Age (Benfield in CAT Report 628 (forthcoming)).

There are some problems, however, with the interpretation of the post-holes as the remains of a continuous revetted front to the dyke bank. Although they clearly relate to each other, they are unevenly spaced and only five post settings are present. There are no indications of further posts to the south or to the north of the group. At the south of the alignment, there is a distance of 2.75 m to the edge of the excavation. Based on the greatest distance between any of the neighbouring posts in the alignment (1.36 m), it would be expected that there would be at least two posts between the last (most southern) in the row (KF8) and the southern edge of the site. Although not so great, the distance between the most northern post (KF4) and the northern edge of the site is 1.63 m, so that at least one post would also be expected here. As each of the post-holes survives to a significant depth (the shallowest being 210 mm), this suggests that, while other post-holes forming part of the alignment could have been removed entirely, this is not inherently likely. This could indicate that these post-holes are associated with the dyke, but relating to specific requirements, ie only a small part of the dyke might have needed stabilisation or repair. The course of the dyke has affected the alignment of landscape features here since the Late Iron Age, a fact neatly illustrated by the alignment of all the modern services encountered during our excavations here, and the post-holes could be medieval or even modern.

One feature which is possibly connected with the dyke bank is the natural sand (KL5); this was observed in the south-western corner of the excavation and extending along the western edge of the site (Site K (west)). The sand rose up on a relatively steep gradient from just west of modern service trench KF3, and the top was truncated by the formation base of the modern road. This rising slope indicates that, although it may have been eroded back from the area closer to the dyke ditch, this area has probably been protected from disturbance and cultivation, presumably by the presence of the dyke bank. There is no clear sign of a buried soil within the sand and it is very unlikely to be entirely natural. However, it would appear that the topsoil was probably stripped from beneath the area of the bank on some of the dykes, or parts of them, before it was constructed. A section was dug in 1984

through a surviving part of the Berechurch Dyke bank, 320 m south of Berechurch Hall Road. This section showed cover loam directly beneath the sand and gravel of the bank (*CAR* **11**, fig 6.41), so that the original topsoil could have been stripped from this area. The same appears to be the case below the bank (rampart) of the Lexden Dyke at Bluebottle Grove (*CAR* **11**, fig 6.40). This suggests that some of the natural sand (KL5) might be part of the original bank. Alternatively, the edge of the sand here could represent the western side of the post-medieval ditch or hollow-way (SF2) crossing this area and following the line of the dyke ditch here. The use of the line of a dyke ditch for a later trackway is recorded on a length of Gryme's Dyke (*CAR* **11**, fig 6.5).

8 Acknowledgements

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The project was managed by B Holloway, and the site work was carried out by N Rayner and P Skippins, with digital survey carried out by C Lister.

The project was monitored for Colchester Borough Council by Martin Winter (Archaeology Officer) and for RPS by Robert Masefield.

9 References

Note: all CAT fieldwork reports are now published online in .pdf format, at http://cat.essex.ac.uk

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CAR **10**	1999	*Colchester Archaeological Report* **10**: *Roman pottery from excavations in Colchester, 1971-86*, by R P Symonds and S Wade, ed by P Bidwell and A Croom
CAR **11**	1995	*Colchester Archaeological Report* **11**: *Camulodunum 2*, by C F C Hawkes & P Crummy
CAT	1999	*Policies and procedures*
CAT Report 97		An archaeological desk-based assessment of the Colchester Garrison PFI site, CAT archive report, by K Orr, 2000
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CAT Report 628	forth-coming	Archaeological evaluation and excavation at Colchester Garrison Area A1 (former Meeanee and Hyderabad Barracks), Mersea Road, Colchester, Essex, October-December 2010, January-March 2011, CAT archive report, by H Brooks, B Holloway and R Masefield
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CIMS	2002	*Guidelines on standards and practices for archaeological fieldwork in the Borough of Colchester*
CIMS	2003	*Guidelines on the preparation and transfer of archaeological archives to Colchester Museums*
EAA **3**	1997	*Research and archaeology: a framework for the Eastern Counties 1. Resource assessment*, East Anglian Archaeology, Occasional Papers, **3**, ed by J

		Glazebrook
EAA **8**	2000	*Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy*, East Anglian Archaeology, Occasional Papers, **8**, ed by N Brown and J Glazebrook
EAA **14**	2003	*Standards for field archaeology in the East of England*, East Anglian Archaeology, Occasional Papers, **14**, ed by D Gurney
IfA	2008a	*Standard and guidance for archaeological excavation*
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10 Abbreviations and glossary

AOD	above Ordnance Datum
c	*circa* (approximately)
CAT	Colchester Archaeological Trust
CBC	Colchester Borough Council
CBCAO	Colchester Borough Council Archaeology Officer
CBM	Ceramic Building Materials, predominantly tiles or bricks
CIMS	Colchester and Ipswich Museums
context	specific location of finds on an archaeological site
dyke	substantial, long, linear earthwork consisting of an earth bank fronted by a ditch (Late Iron Age and early Roman)
EHER	Essex Historic Environment Record, held by ECC
feature	an identifiable thing like a pit, a wall; can contain 'contexts'
fill	the soil filling up a feature such as a pit or ditch
IfA	Institute for Archaeologists
Iron Age	period immediately before the Romans, *c* 700 BC to AD 43
Late Iron Age	*c* 100/75 BC to AD 43
Late Neolithic	later part of the Neolithic period (*c* 3,200-2,000 BC)
medieval	period from AD 1066 to 1500 (secular) or 1550 (religious)
Middle Iron Age	*c* 400 to 100 BC
modern	dating from Victorian period onwards
natural	geological deposit undisturbed by human activity
Neolithic	period covering the introduction of farming before this introduction of metals (*c* 4,000-2,000 BC)
NGR	National Grid Reference
post-hole	hole dug to receive a post setting
post-medieval	period from early 16th century to 18th century
prehistoric	Stone Age, Bronze Age or Iron Age (prior to Roman period)
Roman	the period from AD 43 to around *c* AD 410
RPS	RPS Planning (project consultants)

11 Archive deposition

The paper and digital archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Off Circular Road North, Colchester, Essex CO2 7GZ, but it will be permanently deposited with Colchester and Ipswich Museums, under accession code COLEM 2012.67.

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PC/0CATReps/reports672/report 672HB.doc

12 Appendix 1: contents of archive

1 x A4 wallet containing:

1 Introduction
1.1 Copy of the excavation brief issued by CBCAO
1.2 Copy of the WSI produced by RPS
1.3 Risk assessment

2 Site archive
2.1 Site digital photographic record on CD
2.2 Digital photo. index
2.3 Digital photo. log
2.4 Attendance register
2.5 Original site records
2.6 1 x A3 (plastic) & 1 x A4 (paper) sheets of section drawings

3 Research archive
3.1 Copy of excavation report (CAT Report 672)
3.2 Finds reports and data

Finds
One bag, containing 6 individual bags of finds

Fig 2 Location of Site K in relation to Area S2, showing trenches S1, S2, S3, S4, S5.

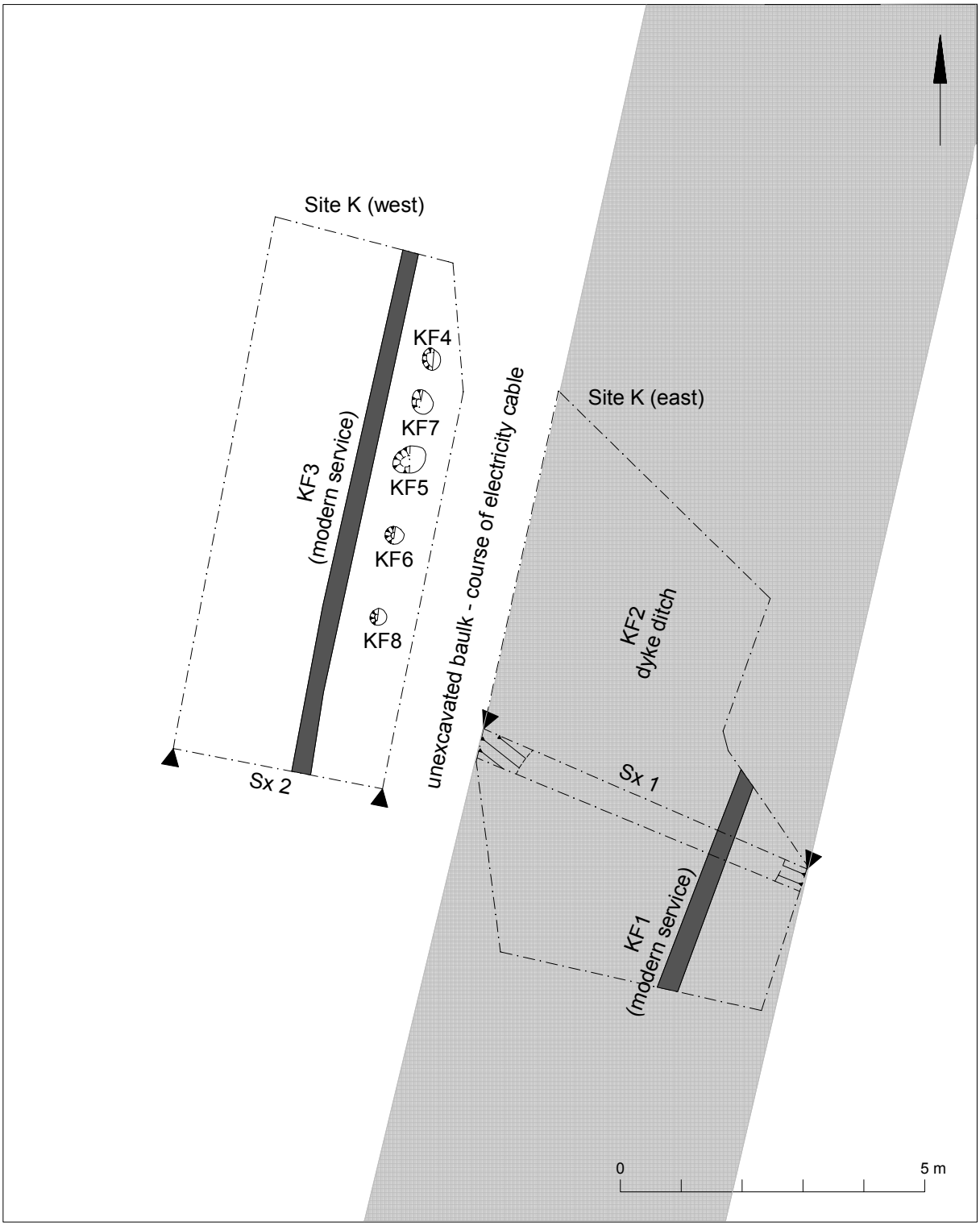

Fig 3 Plan of Site K, showing excavated areas Site K (west) and Site K (east), with dyke ditch toned pale grey.

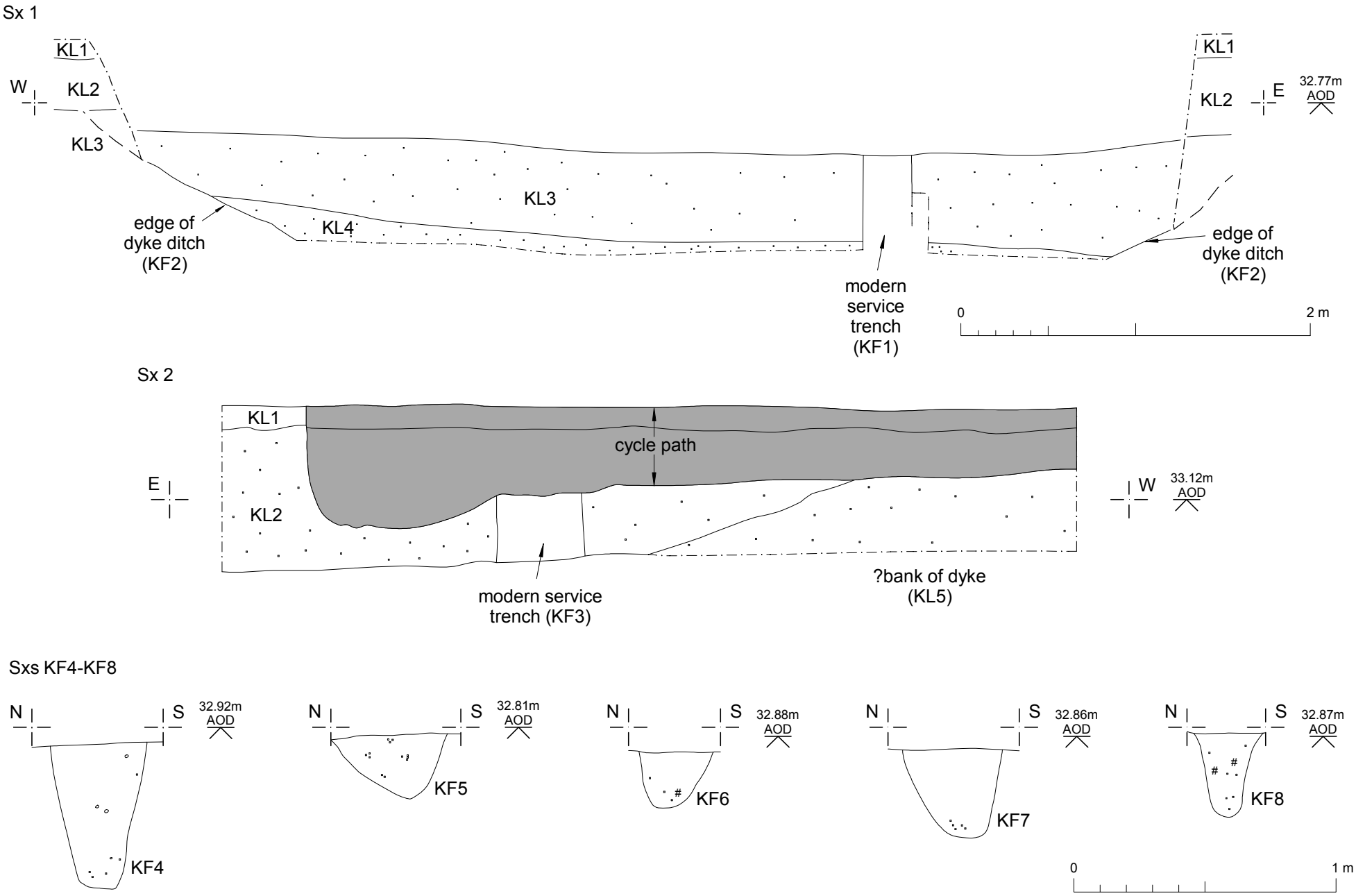

Fig 4 Sections.

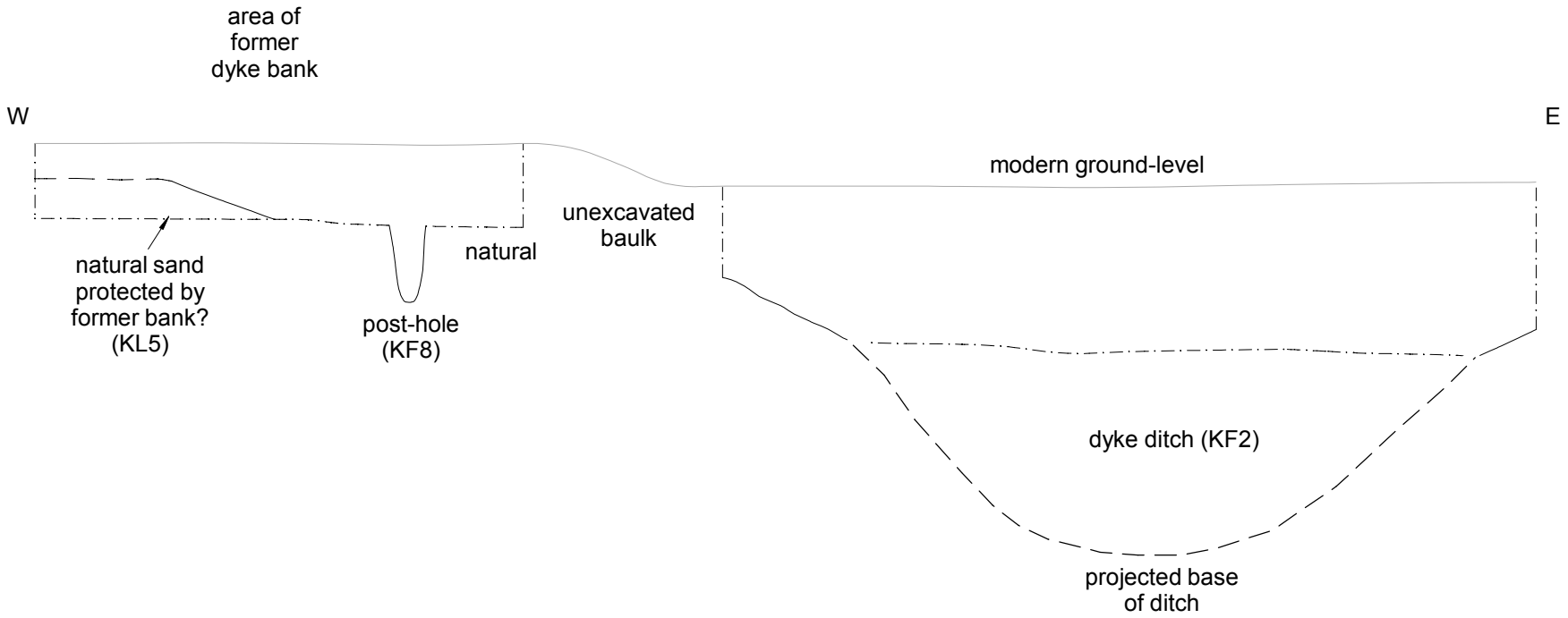

Fig 5 Simplified constructed profile across the Berechurch Dyke at Site K (east), based on ditch profile of dyke sector at Hyderabad Barracks site (Area A1, Site J).

Garrison Alienated Land Area S1/S2(north) link (Berechurch dyke crossing)

Method statement

Excavation

Machining: The machining of Site K (49m2) will be conducted by MDS Civil engineering supervised and directed by the archaeological contractor Colchester Archaeological Trust. An archaeologist will observe the machining and advise when a toothless bucket should be used and at which point the appropriate level has been reached. Significant archaeological deposits will not be removed by machine unless sanctioned by the CBC Archaeological Officer. In circumstances where vertical stratigraphy is found or where archaeology is vulnerable the machining will be monitored by a senior member of staff. Care will be taken to ensure that machines used do not rut, compact or otherwise damage buried or exposed archaeological features and deposits ahead of recording. No potentially significant archaeological deposits will be removed prior to recording and sampling (if necessary) to provide an adequate understanding of their character.

Surveying: Following the overburden stripping temporary bench marks will be surveyed with respect to an Ordnance Survey datum and all features and deposits will be recorded relative to their OD height. The TBM's will be shown on the site location plans.

The exposed surface of the natural will be hand cleaned sufficiently to define any archaeological features present. This process will facilitate accurate planning and allow for metal detected finds to be correctly assigned following an initial scan of the site.

Complex areas (areas of intercutting features, surviving layers, where features are complex in form or where surface finds may plotted) will be planned by hand, usually at a scale 1:20. These plans will located via total station, scanned, vectorised and imported via CAT's CAD programme on the OS grid-based plan. Less complex areas of the site (where features are absent or rare and of simple form) will be planned using a total station with the data input directly onto CAD and the OS tiles. There will be no site grid on the ground. All site plans will show OS grid points and spot levels and will be fully indexed and related to adjacent plans. It is not anticipated that single context recording will be appropriate. However, should particularly complex sequences of deposits or features be encountered, then single context recording will be undertaken. A uniform site plan will be produced showing all site features.

Sampling Strategy

Archaeological excavation will be by hand and will respect the stratigraphy of archaeological layers, features and deposits. Each context will be excavated in sequence. Occasionally further use of the mechanical excavator may be required. Such techniques are only appropriate for the removal of homogenous low-grade deposits that may give a "window" into underlying levels. They will not be used on complex stratigraphy and the deposits to be removed must have been properly recorded first.

The following sampling strategy will be adopted to ascertain the nature, depth, date and state of preservation of archaeological features as well as the stratigraphical relationships of these deposits and features to one another.

(i) Once the investigation area has been opened and the surface cleaned, and the extent of the Berechurch dyke defined an east west aligned section will be cut approximately 1.2m in width to be excavated by hand to a depth of 1-1.2m. Once recorded a machine will then be used to widen the excavation, stepping the edge to allow for the section to be deepened a further 1-1.2m. This process of excavation, recording and widening will continue until the base of the dyke ditch is reached. One face of the stepped excavation will be battered to an angle of 45 degrees to allow safe working whilst the section is recorded.

(ii) Metal detectors will be used to scan for metallic finds on spoil heaps, vacated areas, areas of modern disturbance and during the excavation of key archaeological features or deposits.

Recording

The following procedures will always be initiated:

(i) Features will be planned either by means of a total station or hand drawn plans where appropriate.

(ii) Sections: all sectioned and excavated archaeological features will be drawn at a scale of 1:20 or 1:10, or at a smaller scale (if appropriate). All sections will be levelled to ordnance datum.

(iii) Archaeological features, layers or deposits will be allocated unique context numbers prior to any hand excavation including contexts for which there is no archaeological interpretation or definition. All archaeological features, layers or deposits will be recorded on pro-forma context sheets detailing: character, contextual relationships, a detailed description, associated finds, interpretation and cross referencing to the drawn, photographic and finds records. On-site matrices will be compiled during the excavation such that the results of the written stratigraphical records may be fully analysed and phased.

(iv) An adequate photographic record of the investigation will be made of all archaeological features and deposits. Standard record shots of contexts will be taken on a digital camera. The record will include working and promotional shots to illustrate more generally the nature of the archaeological operations. All photographic records will include information detailing: site code; date; context(s); section number; a north arrow and a scale. All photographs will be listed and indexed on context record sheets.

(v) A record of the full extent in plan of all archaeological features, deposits or layers encountered will be produced. The detailed hand drawn plans will be related to the site, and O.S. national grid and be drawn at an appropriate scale, generally 1:20. Where necessary e.g. when recording an inhumation, additional plans at 1:10 scale, or where appropriate 1:20 will be drawn. The O.D. height of all principal strata and features will be calculated and indicated on the appropriate plans and sections.

(vi) A record or index will be maintained of all site drawings and these will form part of the project archive. All site drawings will contain the following information: site name; site number and code; scale; plan or section number; orientation, date and compiler.

Environmental Samples

Industrial or residues will be recorded and sampled in accordance with the Society of Museum Archaeologists (SMA, 1993) guidelines. The presence of such residues will always be recorded and quantified fully, even where comprehensive retention is considered to be inappropriate. Large technological residues will be collected by hand. Separate samples (c.10ml) will be collected where appropriate for identification of hammer scale and spherical droplets. The advice provided in the English Heritage/ Metallurgy Society document Archaeometallurgy in archaeological projects, will be referred to. Structural remains will be similarly recorded in accord with the SMA guidelines.

The environmental sampling policy is as follows. CAT is advised by Helen Chapel (English Heritage Regional Advisor in Archaeological Science). In consultation with Val Fryer, CAT will bulk sample any potentially rich environmental layers or features in addition to all reliably dated deposits. These will be assessed by Val Fryer, and future sampling policy on other excavations areas will follow her advice. If any complex or outstanding deposits are encountered, then Helen Chapel and/or Val Fryer will be asked onto site to advise. Pollen is not expected to survive within these soils, but should deep deposits with pollen preservation potential be encountered column samples will be retrieved for laboratory analysis.

In addition to retrieving environmental evidence (above), bulk sampling will be used to collect charcoal for potential C14 dating.

The procedures set in 'A guide to sampling deposits for environmental analysis' (Murphy and Wiltshire 1994) and 'Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation' (English Heritage Centre for Archaeology Guidelines 2002) will be consulted. The following procedures will be followed unless otherwise amended following consultations between RPS, the English Heritage Advisor in Archaeological Science, the bio-archaeologist and the Site Director.

(i) 30 litre bulk samples of anthropogenic concentrations will be taken and of selected deposits where remains are not visible (but may nevertheless occur). These samples shall include well sealed deposits.

(ii) Monoliths for pollen analysis may be taken as appropriate to answer specific research questions.

(iii). 100% recovery of animal bones will be undertaken from the soil samples.

General Methodology

All works will be undertaken by a team of professional archaeologists. The proposed team structure is given in the Appendix 1.

All work will be according to CAT Policies and Procedures (2008), and will be informed by Management of Research Projects in the Historic Environment MoRPHE (English Heritage 2006), *Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester* (Colchester Borough Council 2008) and *Guidelines on the preparation and transfer of archaeological archives to Colchester and Ipswich museums* (2008) Other guidelines followed are those published in EAA **3**, EAA **8**, EAA **14** and EAA **24**.

All finds of potential treasure will be removed to a safe place, and the coroner informed immediately, in accordance with the rules of the Treasure Act 1996. The

definition of treasure is given in pages 3-5 of the Code of Practice of the above act. This refers primarily to gold or silver objects. This procedure was required previously for silver items from Areas C2, J1 East and A1.

For purposes of deposition of the archive, a museum accession code will be obtained through Colchester and Ipswich Museum. This will be used this as the site code.

The relevant document of the Institute for Archaeologists (IfA) will be followed, i.e. *Standard and guidance for archaeological excavation (2008a)*, including its 'Code of Conduct'.

Following completion of the manual excavation and recording the trenches will be backfilled to ground level. It is not proposed to reinstate the hard surfaces.

Essex Historic Environment Record/
Essex Archaeology and History

Summary sheet

Site address: Alienated Land S2 cross-over, Area S2 (north) Site K, Berechurch Dyke, Colchester Garrison, Colchester, Essex	
Parish: Colchester	***District:*** Colchester
NGR: TL 9972 2207 (c)	***Site codes:*** CAT - 10/9c Museum accession - COLEM 2010.67
Type of work: Excavation	***Site director/group:*** Colchester Archaeological Trust
Date of work: 27th September-2nd October 2012	***Size of area investigated:*** Site K = 75.5 m sq excavated areas: Site K (east), 35.4 sq. m Site K (west), 30.6 sq m
Location of finds/curating museum: Colchester and Ipswich Museums	***Funding source:*** Developer
Further seasons anticipated? No	***Related UAD nos:*** -
Final report: CAT Report 672 and summary in *EAH*	
Periods represented: (Neolithic) Iron Age-early Roman, medieval to post-medieval, modern	
Summary of fieldwork results: *An excavation on the line of the Berechurch Dyke located the dyke ditch over its full width. Part of the dyke bank, or an area of natural sand beneath the former bank, was located on the western edge of the excavation. A line of post-holes on the western side may represent part of a timber revetment fronting the dyke bank, although a date for the post-holes later than the dyke cannot be excluded. There is some evidence that a large post-medieval ditch or hollow-way may have followed the line of the dyke ditch here.*	
Previous summaries/reports: CAT Report 273 (evaluation report); CAT/RPS Report 620 (Alienated Land Area S2 (north))	
Key words: dyke, Iron Age, revetment, bank, ditch, post-holes, medieval, post-medieval, hollow-way	***Significance:*** **
Author of summary: Stephen Benfield	***Date of summary:*** January 2013