Colchester Garrison PFI Project

Stage 2 Archaeological Excavation

Assessment Report

Part One: text and figures

March 2004

on behalf of
RMPA and MoD

CAT project code: 03/7f
Museum accession code: 2003.210
NGR: TL 996 244

Colchester Archaeological Trust
12 Lexden Road,
Colchester,
Essex CO3 3NF
tel.: (01206) 541051
tel/fax: (01206) 500124
email: archaeologists@colchester-arch-trust.co.uk

CAT/RPS Report 270
March 2004

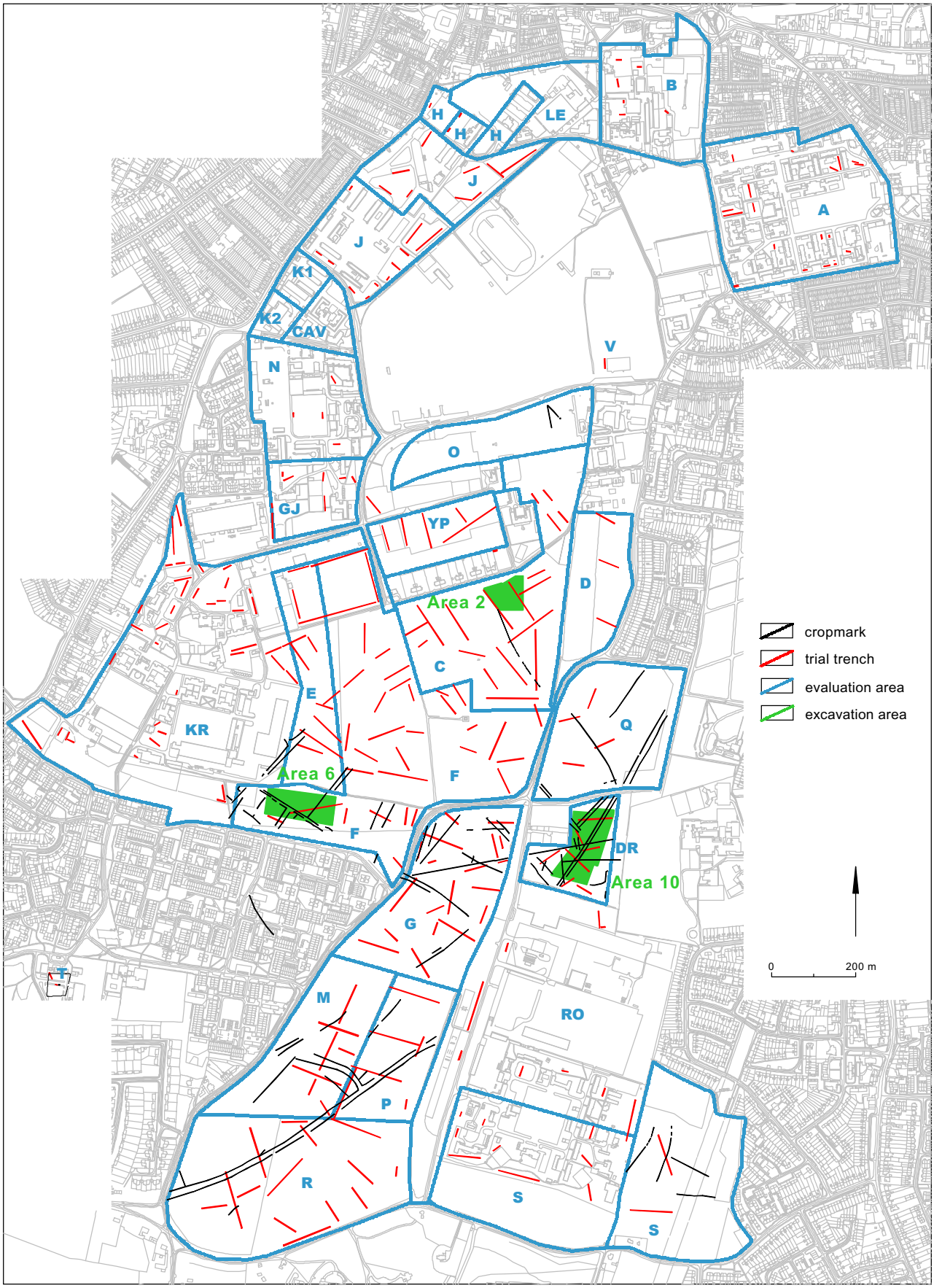

Fig 1 Colchester Garrison showing location of Areas 2, 6 and 10.

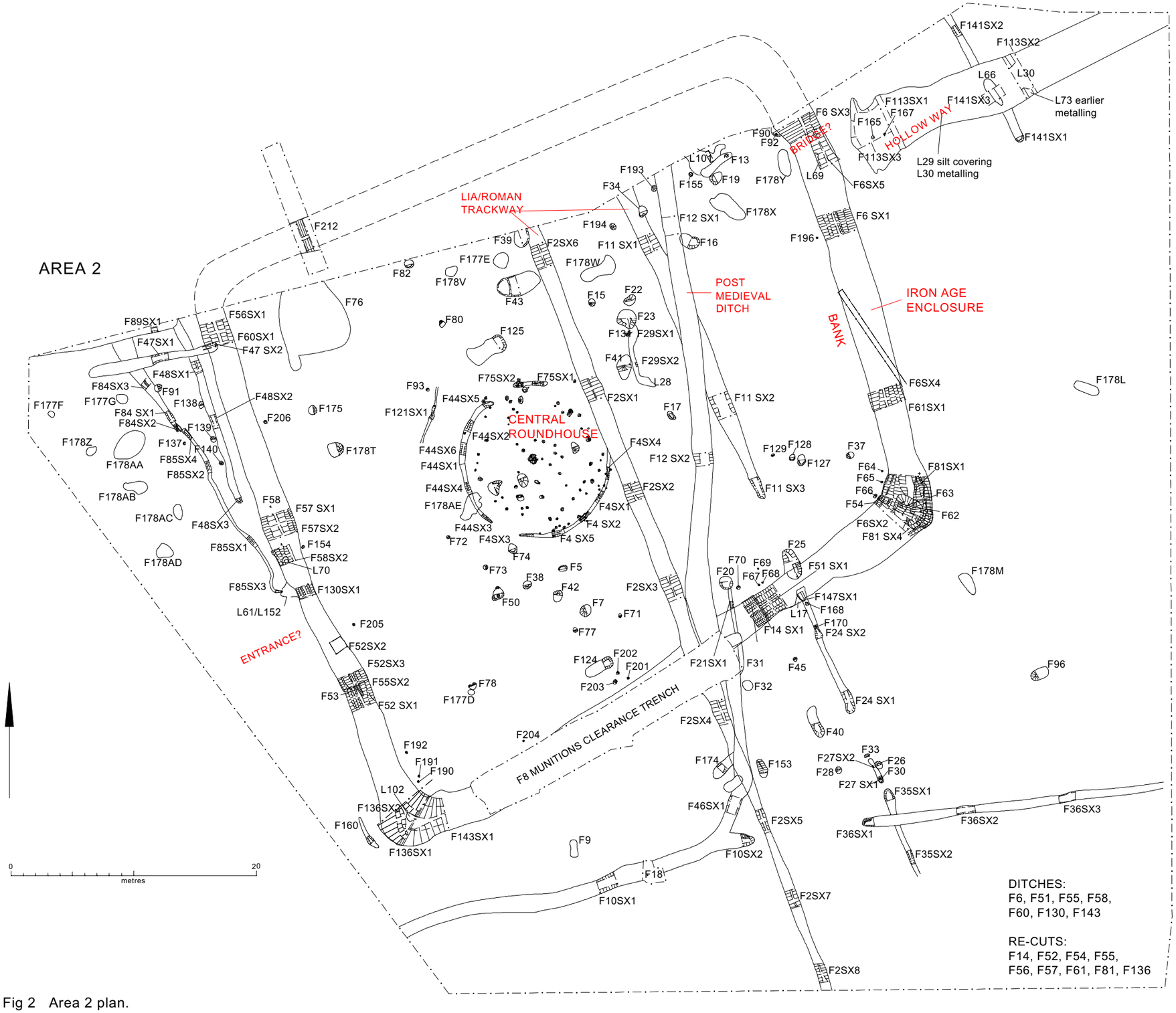

Fig 2 Area 2 plan.

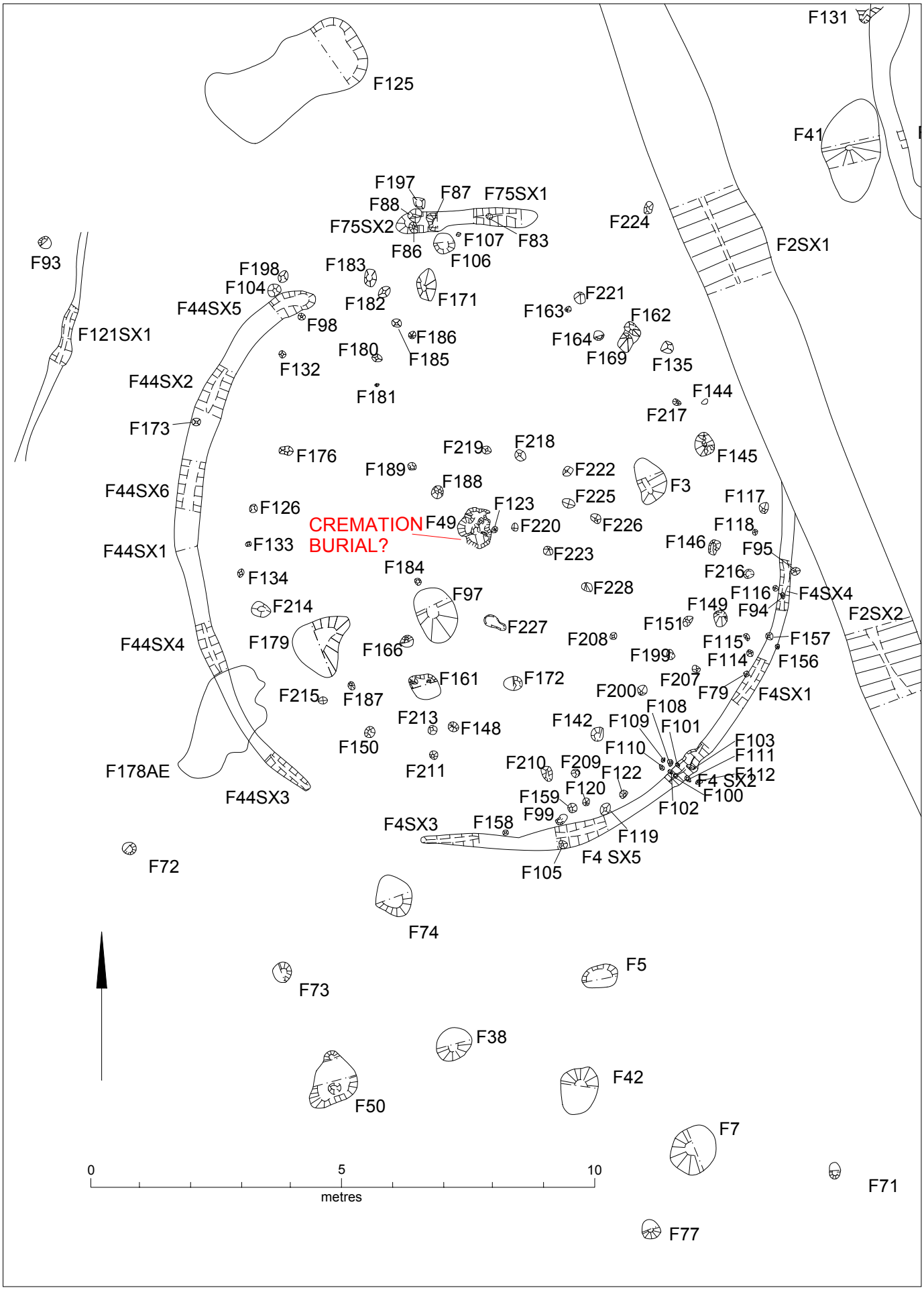

Fig 3 Detail of Area 2 round-house.

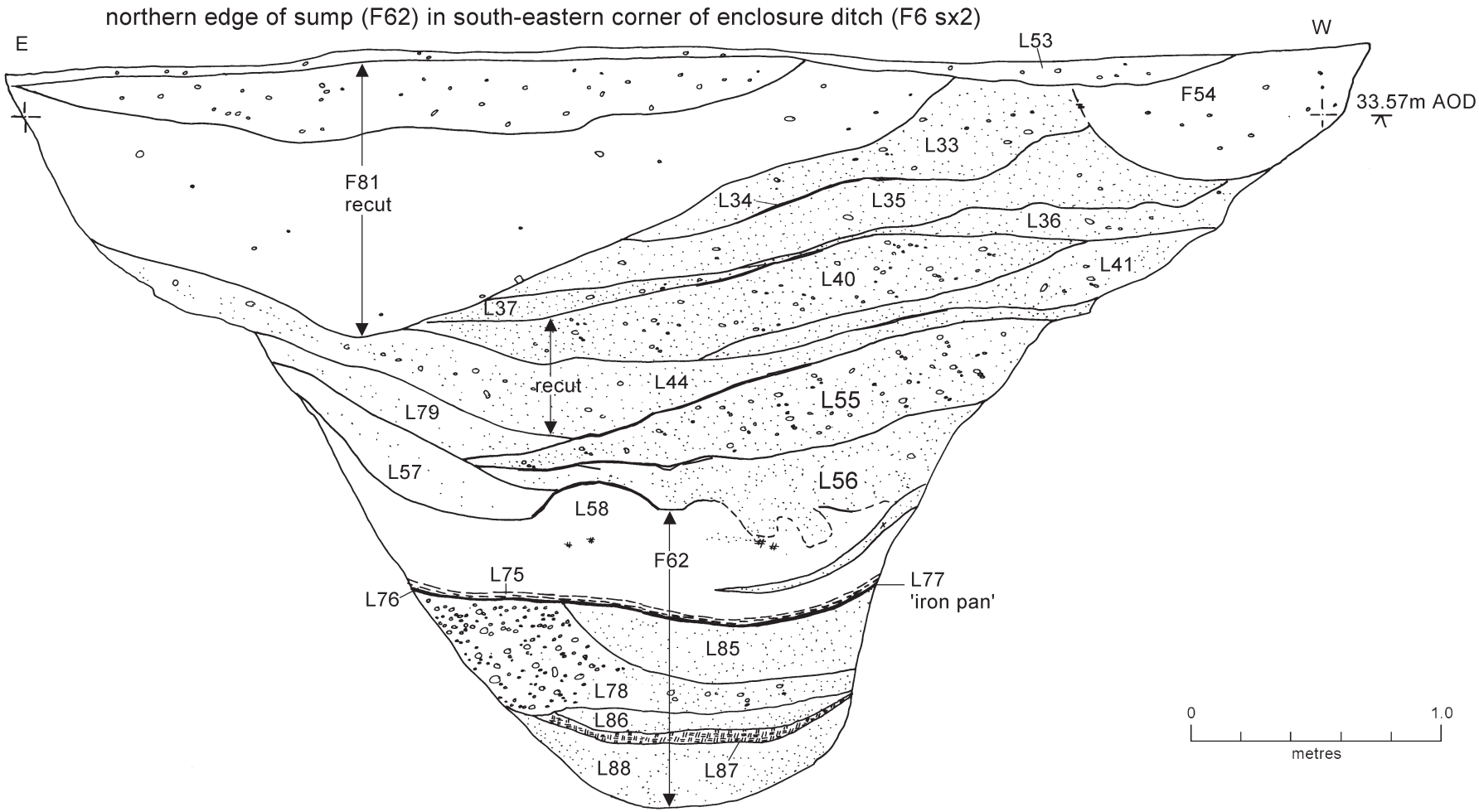

Fig 4 Area 2 sections: sheet 1.

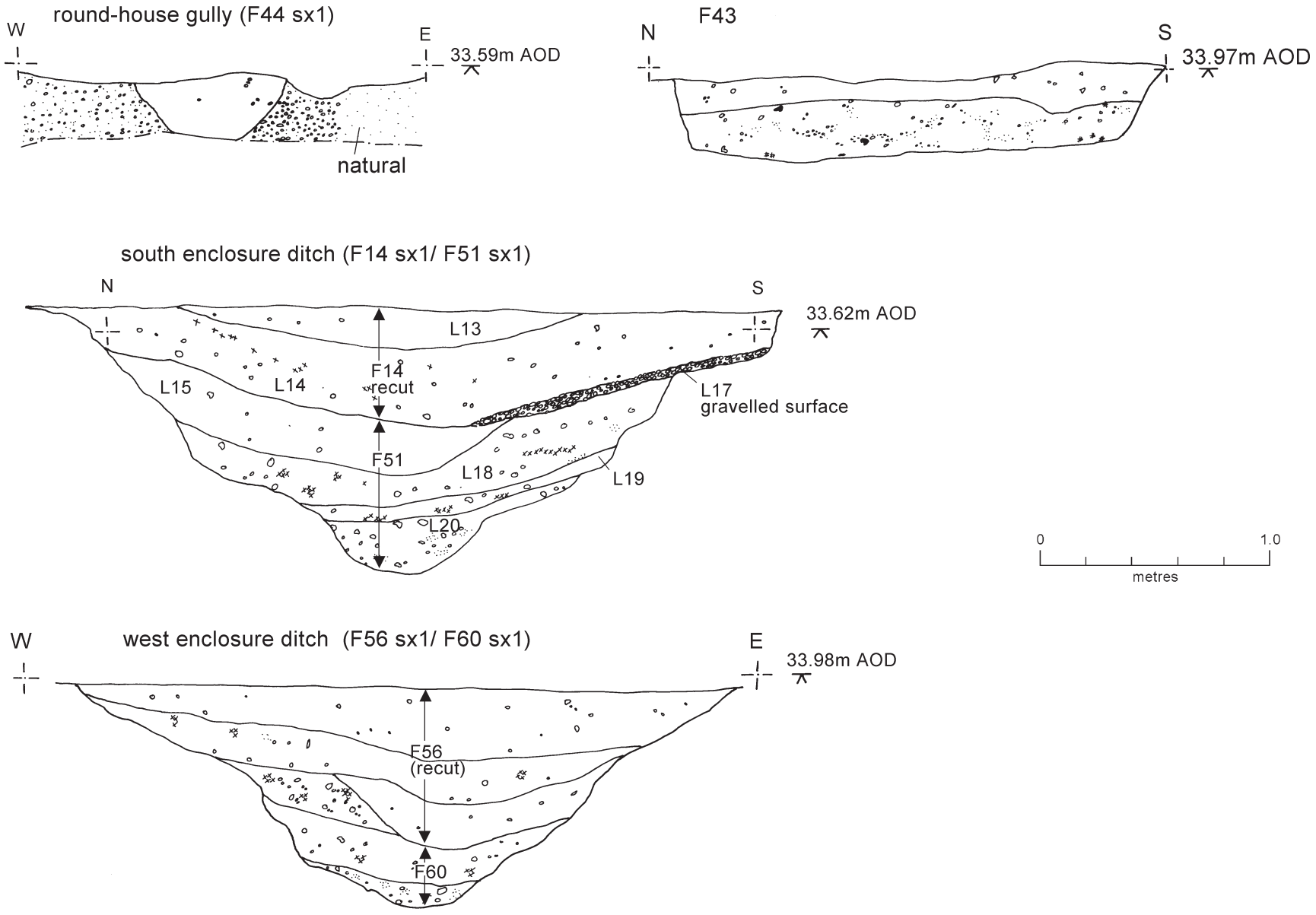

Fig 5 Area 2 sections: sheet 2.

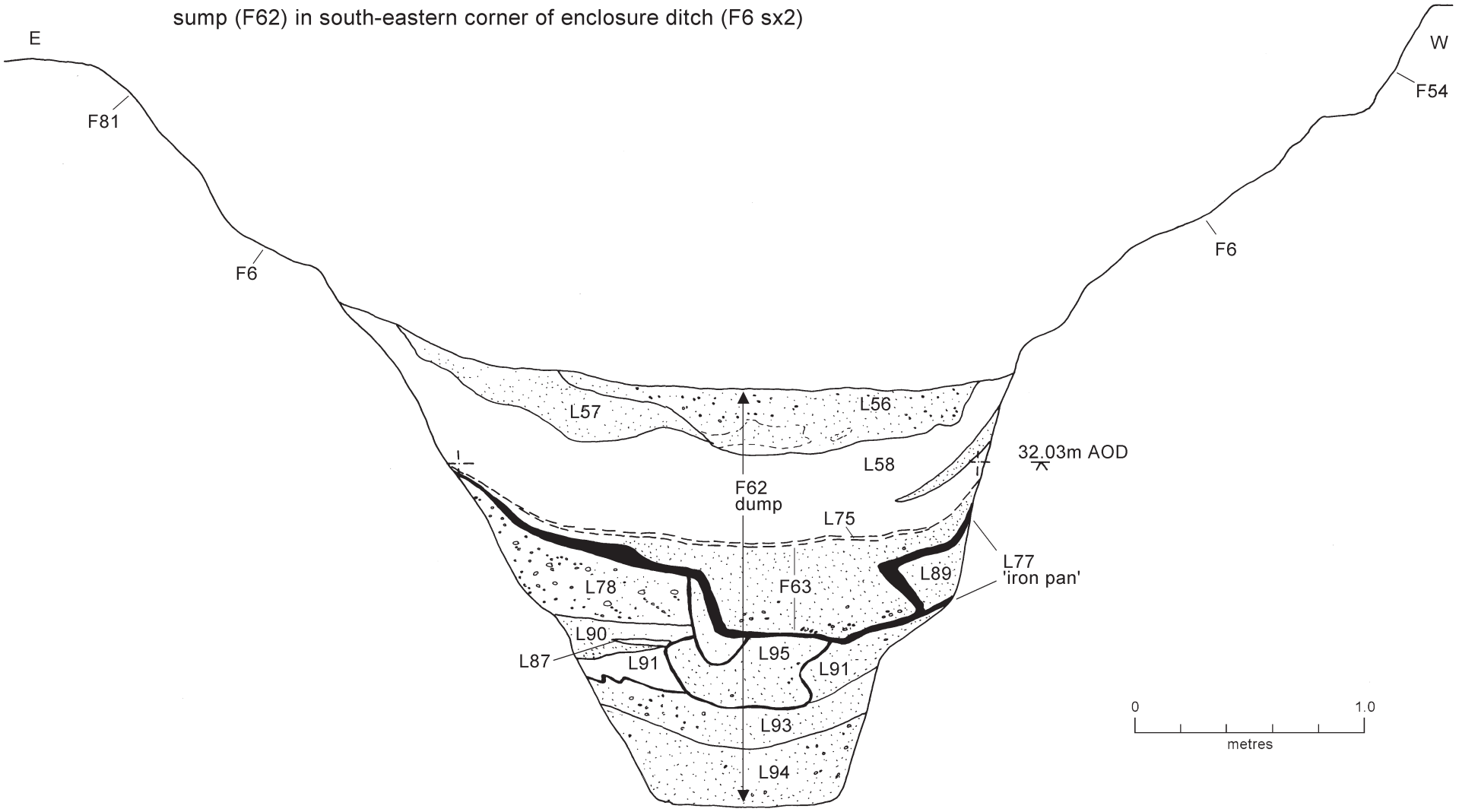

Fig 6 Area 2 sections: sheet 3.

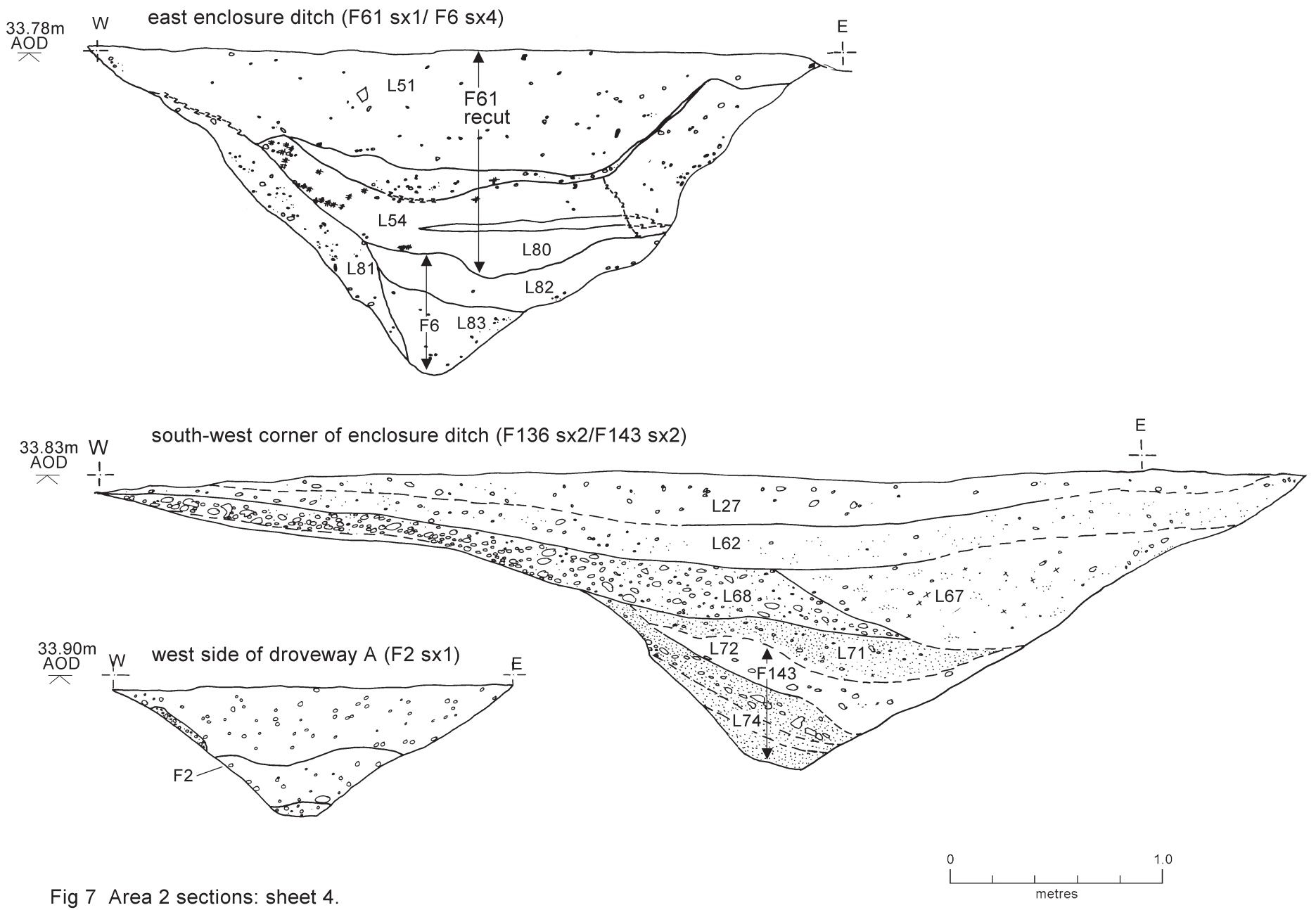

Fig 7 Area 2 sections: sheet 4.

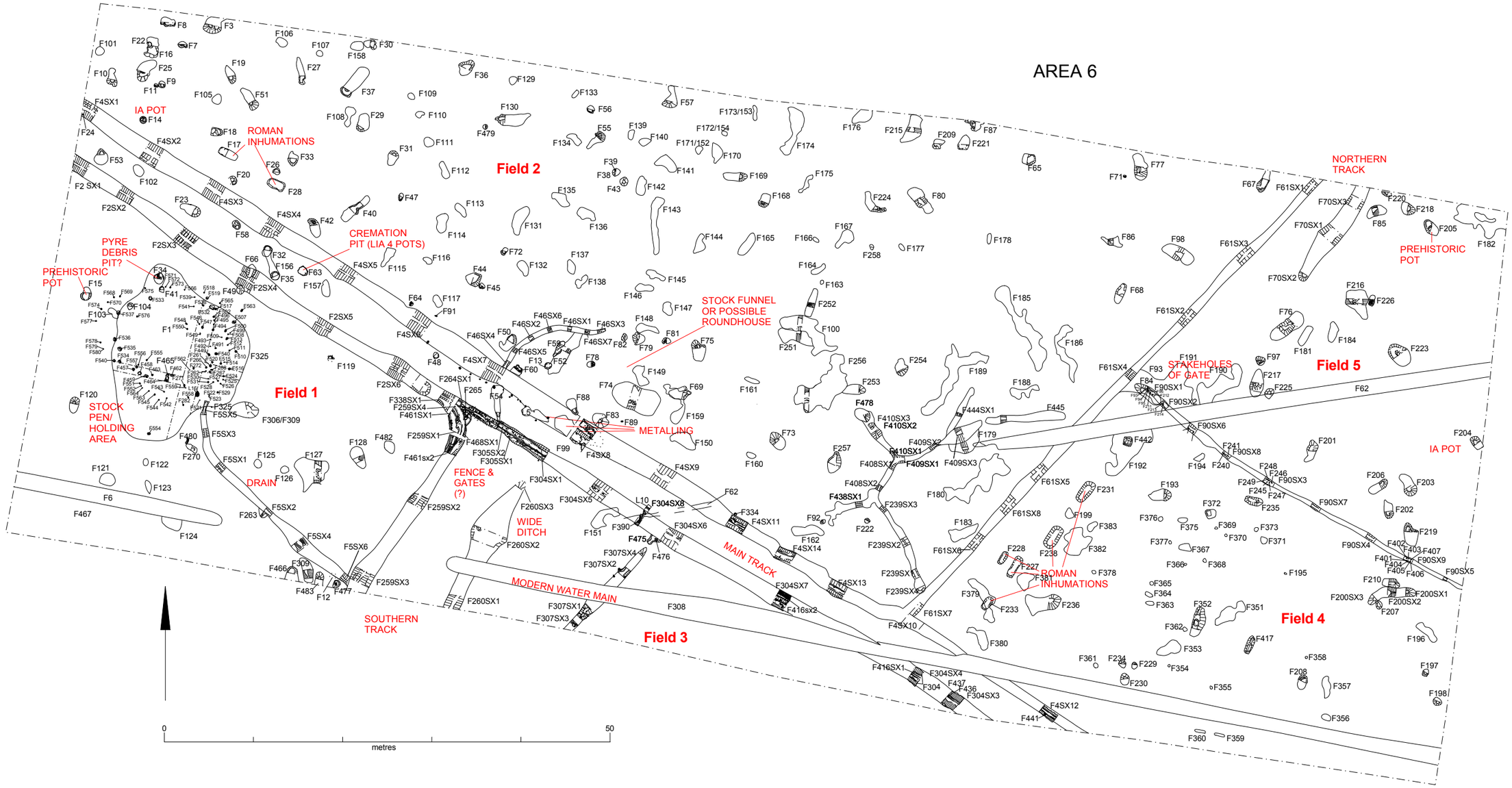

Fig 8 Area 6 plan.

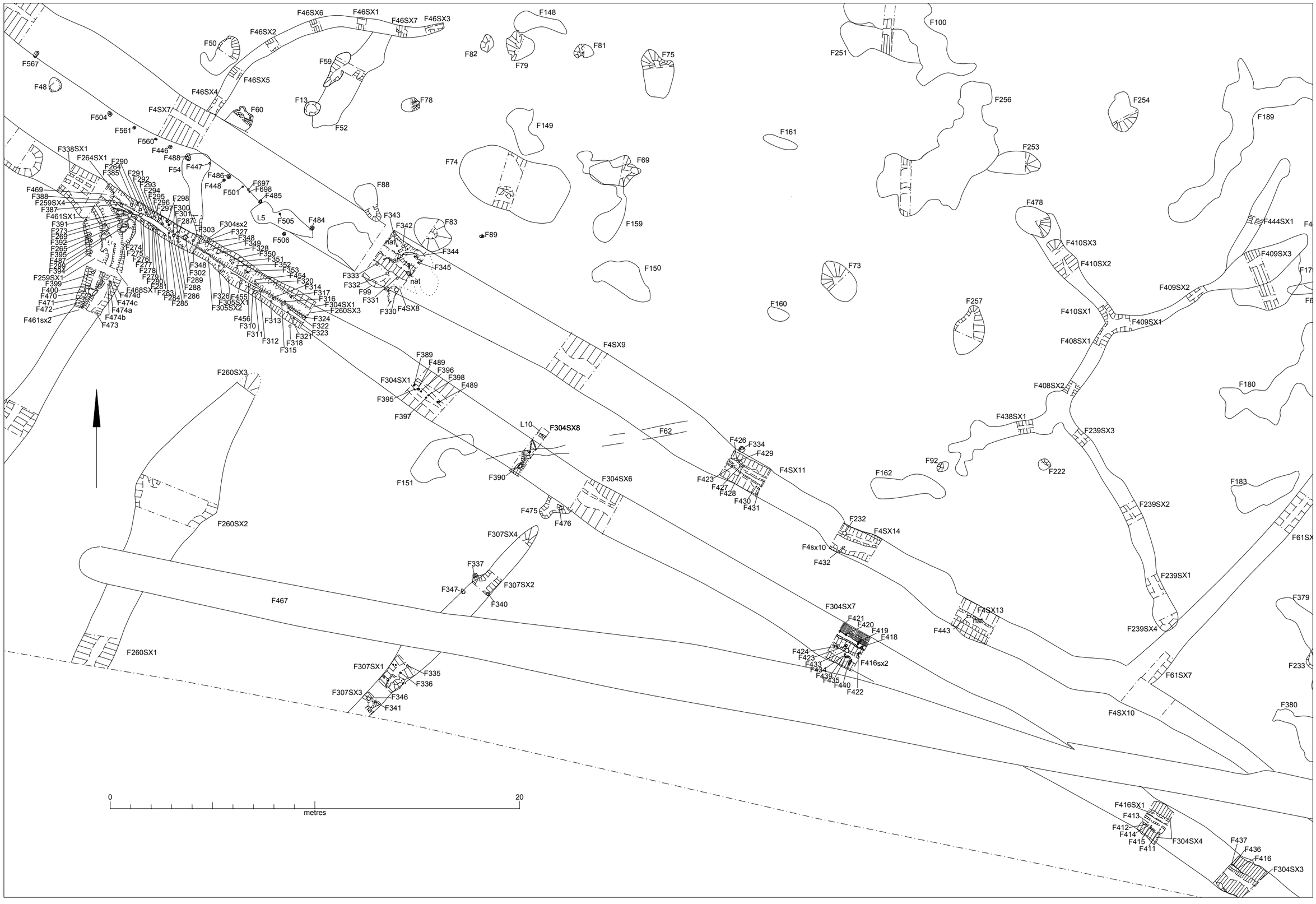

Fig 9 Area 6: detail of post-holes in ditches.

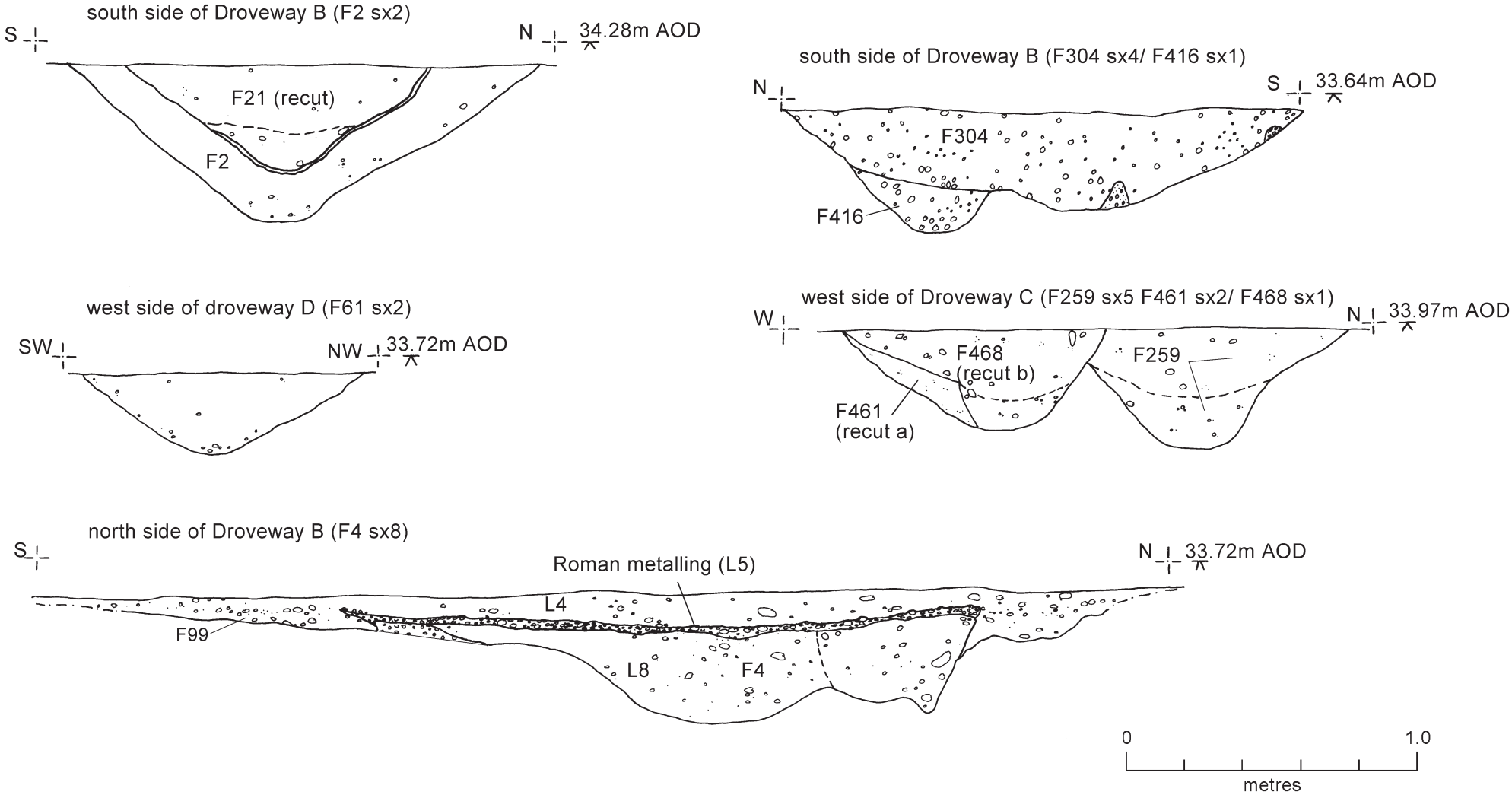

Fig 10 Area 6 sections.

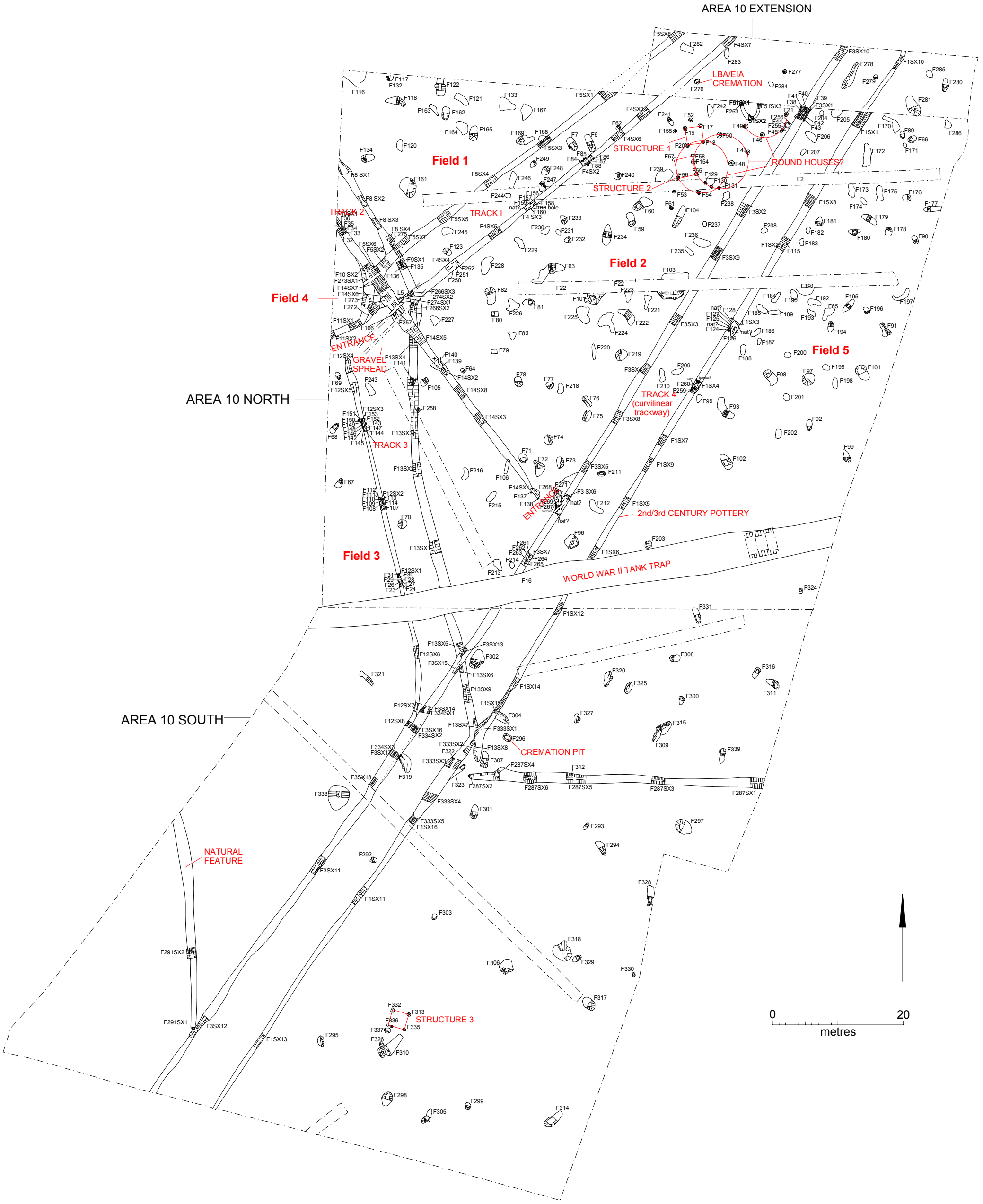

Fig 11 Area 10 plan.

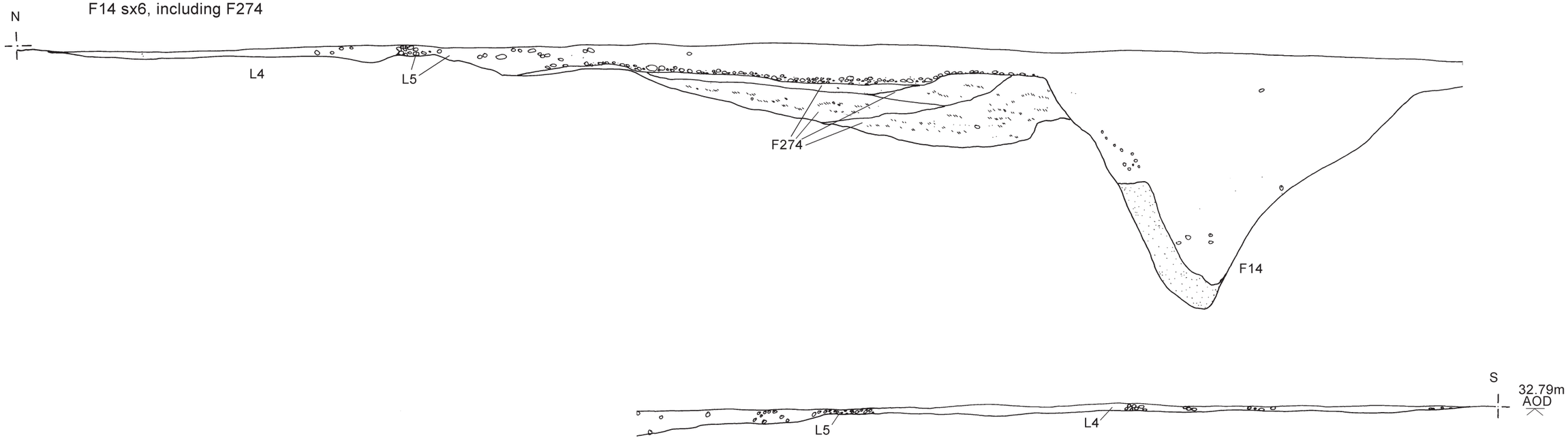

Fig 12 Area 10 sections.

Contents

Figures

Appendices

S Summary

S.1 Project summary

This is an Assessment Report on excavations carried out by Colchester Archaeological Trust in association with RPS Planning and Environment on behalf of RMPA and the MoD in 2003 on Areas 2, 6 and 10 ahead of the New Garrison, Colchester Garrison.

S.2 Previous archaeological work and this project

Previous stages of archaeological work consisted of background study (Desk-Based Assessment), fieldwalking survey, geophysical survey, and Stage 1 Trail Trenching undertaken in 2002. The excavations described here are Stage 2 of the ongoing archaeological project.

S.3 Summary of location and areas excavated

The excavation areas (Fig 1) were: Area 2 (5,250m^2 south of Ypres Road), Area 6 (10,175m^2 north of Earlswood Way), and Area 10 (14,000m^2 south and east of the Driving School of Berechurch Road.

S.4 Area 2

The area 2 remains included an impressive Middle Iron Age enclosure with an internal round house. A pottery vessel at the centre of the round house was certainly a placed deposit, if not actually a burial. A hollow way track led to the enclosure from the east. The enclosure was put out of use before a ditched droveway was constructed through it by the early Roman period.

S.5 Area 6

Area 6 was dominated by trackways and field boundaries associated with the oppidum field layout. Fringe activities from the adjacent Kirkee & McMunn villa site (including burials) spilled out into this area.

S.6 Area 10

Area 10 contained Iron Age cremation burials and structures, and Late Iron Age/Roman trackways and field boundaries.

S.7 Finds summary

Finds were plentiful without being abundant. The most important groups were the Iron Age pottery (especially where associated with the Area 2 enclosure), later Iron Age and Roman pottery, Roman small finds (including dated brooches and nails from the burials), and prehistoric flints. There were also a group of Roman tile, and smaller collections of animal and human (cremated) bone, and post-medieval glass.

S.8 Pre-oppidum activity

Pre-oppidum activity was dominated by the Area 2 enclosure and its associated round house. There may also have been an isolated round houses within Area 6 and Area 10 although the these are somewhat dubious. There was no clear sign of field division in this period.

S.9 The excavations in the context of the oppidum

The excavations were all within the oppidum territory as defined by the Dyke system. In that respect, they have a direct bearing on the internal organisation of the oppidum and its landscape. Clear evidence for co-axial ditched landscape in place at least by the 1st century AD within Area 6 was supplemented by the results from Areas 2 and 10.

S.10 The excavations in the context of the hinterland of the Roman town

The excavation areas were all well to the south of the Roman town, but in its hinterland. The Roman town dwellers undoubtedly interacted with the farmers whose lands have been sampled in Areas 2, 6 and 10 in the sense that they would have traded with them for farm produce. Whether the land owners were the town dwellers themselves is difficult to judge. The Roman pottery and small finds from the excavation were probably bought or traded in the Roman town and its markets.

S.11 The excavations in the context of the military defences

A single military feature was exposed and excavated comprising a previously known WWII tank trap crossing Area 10.

1 Introduction

1.1 This report has been prepared by Colchester Archaeological Trust in association with RPS Planning Transport and Environment on behalf of RMPA and the MoD.

1.2 This document presents the main interim results of Stage 2 archaeological excavations undertaken to mitigate the archaeological effects of the construction phase of the new garrison at Colchester.

1.3 The Strategy supporting the work reported here is fully laid out in *Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester* (RPS 2003).

1.4 The Colchester Garrison PFI site is located *c.* 1km to the south of the modern town centre (Figure 1) and is centred on National Grid Reference TL 996 244.

1.5 The Colchester Garrison occupies an extensive area on the eastern flank of a plateau capped with Pleistocene gravels, sands and clay/silt. The site overlooks the River Colne to the north and the Roman River to the south. These rivers meet to the south east of the site, before entering the Blackwater Estuary.

1.6 There has been a military garrison along the northern fringes of the site, adjoining the historic urban Colchester, since the late 18th century, although the current extent of the property is mainly the result of land acquisitions in the 19th and 20th centuries. Prior to the construction and expansion of the Garrison, with the exception of the restricted area of historic suburb, the property had been largely rural in character, with agriculture the dominant form of historic land-use. The southern half of the site continues to be farmed.

1.7 Virtually the entire Garrison site forms part of a historic landscape dominated by the major Late Iron Age defended settlement (oppidum) of *Camulodunum.* A small dry valley, currently the route followed by Circular Road South, dissects the site. This valley drains eastward into the River Colne and is presently partly filled by the Bourne Lakes.

1.8 The area north of this valley adjoins the Roman legionary fortress and town of *Colonia Victricensis*

1.9 The area to the north of the valley also includes the remains of the medieval St John's Abbey (Scheduled Ancient Monument). This part of the Garrison includes elements of Colchester's Romano-British and medieval suburb.

1.10 To the south of the valley the land use was rural until the 19th and 20th century expansion of Colchester Garrison.

1.11 A short section of the Berechurch Dyke, the eastern defences of the Late Iron Age/early Romano-British *oppidum*, is included in this area.

1.12 Extensive crop marks indicate the presence of Late Iron Age or Romano-British fields and droveways.

1.13 previous investigations have also identified the remains of rural Romano-British buildings within the Kirkee and McMunn Barracks

1.14 Prior to the commencement of the 2003 excavation described here, a total of 29 archaeological investigations and 85 watching briefs had been carried out by Colchester Archaeological Trust at or within 300m of the Garrison site since 1965 (CAT 2000, Appendix 1 and 2).

1.15 The 2002 stage 2 evaluations involved the excavation of approximately 12 km of trenching. As a consequence the historic context of the Garrison site is well documented.

1.16 This assessment report has been structured in accordance with guidance published by English Heritage (Olivier 1996). It includes sections on methodology, results, finds, and recommendations for further work.

1.17 The project was managed for and for CAT by Carl Crossan (assisted by D Shimmin, B Holloway, C Lister and M Ripley) and by R Masefield and K Whittaker for RPS Planning Transport and Environment, who were present as Project Consultants and as Principal Contractor under CDM regulations

S Summary

S.1 Project summary

This is an Assessment Report on excavations carried out by Colchester Archaeological Trust in association with RPS Planning and Environment on behalf of RMPA and the MoD in 2003 on Areas 2, 6 and 10 ahead of the New Garrison, Colchester Garrison.

S.2 Previous archaeological work and this project

Previous stages of archaeological work consisted of background study (Desk-Based Assessment), fieldwalking survey, geophysical survey, and Stage 1 Trail Trenching undertaken in 2002. The excavations described here are Stage 2 of the ongoing archaeological project.

S.3 Summary of location and areas excavated

The excavation areas (Fig 1) were: Area 2 (5,250m^2 south of Ypres Road), Area 6 (10,175m^2 north of Earlswood Way), and Area 10 (14,000m^2 south and east of the Driving School of Berechurch Road.

S.4 Area 2

The area 2 remains included an impressive Middle Iron Age enclosure with an internal round house. A pottery vessel at the centre of the round house was certainly a placed deposit, if not actually a burial. A hollow way track led to the enclosure from the east. The enclosure was put out of use before a ditched droveway was constructed through it by the early Roman period.

S.5 Area 6

Area 6 was dominated by trackways and field boundaries associated with the oppidum field layout. Fringe activities from the adjacent Kirkee & McMunn villa site (including burials) spilled out into this area.

S.6 Area 10

Area 10 contained Iron Age cremation burials and structures, and Late Iron Age/Roman trackways and field boundaries.

S.7 Finds summary

Finds were plentiful without being abundant. The most important groups were the Iron Age pottery (especially where associated with the Area 2 enclosure), later Iron Age and Roman pottery, Roman small finds (including dated brooches and nails from the burials), and prehistoric flints. There were also a group of Roman tile, and smaller collections of animal and human (cremated) bone, and post-medieval glass.

S.8 Pre-oppidum activity

Pre-oppidum activity was dominated by the Area 2 enclosure and its associated round house. There may also have been an isolated round houses within Area 6 and Area 10 although the these are somewhat dubious. There was no clear sign of field division in this period.

S.9 The excavations in the context of the oppidum

The excavations were all within the oppidum territory as defined by the Dyke system. In that respect, they have a direct bearing on the internal organisation of the oppidum and its landscape. Clear evidence for co-axial ditched landscape in place at least by the 1st century AD within Area 6 was supplemented by the results from Areas 2 and 10.

S.10 The excavations in the context of the hinterland of the Roman town

The excavation areas were all well to the south of the Roman town, but in its hinterland. The Roman town dwellers undoubtedly interacted with the farmers whose lands have been sampled in Areas 2, 6 and 10 in the sense that they would have traded with them for farm produce. Whether the land owners were the town dwellers themselves is difficult to judge. The Roman pottery and small finds from the excavation were probably bought or traded in the Roman town and its markets.

S.11 The excavations in the context of the military defences

A single military feature was exposed and excavated comprising a previously known WWII tank trap crossing Area 10.

1 Introduction

1.1 This report has been prepared by Colchester Archaeological Trust in association with RPS Planning Transport and Environment on behalf of RMPA and the MoD.

1.2 This document presents the main interim results of Stage 2 archaeological excavations undertaken to mitigate the archaeological effects of the construction phase of the new garrison at Colchester.

1.3 The Strategy supporting the work reported here is fully laid out in *Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester* (RPS 2003).

1.4 The Colchester Garrison PFI site is located *c.* 1km to the south of the modern town centre (Figure 1) and is centred on National Grid Reference TL 996 244.

1.5 The Colchester Garrison occupies an extensive area on the eastern flank of a plateau capped with Pleistocene gravels, sands and clay/silt. The site overlooks the River Colne to the north and the Roman River to the south. These rivers meet to the south east of the site, before entering the Blackwater Estuary.

1.6 There has been a military garrison along the northern fringes of the site, adjoining the historic urban Colchester, since the late 18th century, although the current extent of the property is mainly the result of land acquisitions in the 19th and 20th centuries. Prior to the construction and expansion of the Garrison, with the exception of the restricted area of historic suburb, the property had been largely rural in character, with agriculture the dominant form of historic land-use. The southern half of the site continues to be farmed.

1.7 Virtually the entire Garrison site forms part of a historic landscape dominated by the major Late Iron Age defended settlement (oppidum) of *Camulodunum.* A small dry valley, currently the route followed by Circular Road South, dissects the site. This valley drains eastward into the River Colne and is presently partly filled by the Bourne Lakes.

1.8 The area north of this valley adjoins the Roman legionary fortress and town of *Colonia Victricensis*

1.9 The area to the north of the valley also includes the remains of the medieval St John's Abbey (Scheduled Ancient Monument). This part of the Garrison includes elements of Colchester's Romano-British and medieval suburb.

1.10 To the south of the valley the land use was rural until the 19th and 20th century expansion of Colchester Garrison.

1.11 A short section of the Berechurch Dyke, the eastern defences of the Late Iron Age/early Romano-British *oppidum*, is included in this area.

1.12 Extensive crop marks indicate the presence of Late Iron Age or Romano-British fields and droveways.

1.13 previous investigations have also identified the remains of rural Romano-British buildings within the Kirkee and McMunn Barracks

1.14 Prior to the commencement of the 2003 excavation described here, a total of 29 archaeological investigations and 85 watching briefs had been carried out by Colchester Archaeological Trust at or within 300m of the Garrison site since 1965 (CAT 2000, Appendix 1 and 2).

1.15 The 2002 stage 2 evaluations involved the excavation of approximately 12 km of trenching. As a consequence the historic context of the Garrison site is well documented.

1.16 This assessment report has been structured in accordance with guidance published by English Heritage (Olivier 1996). It includes sections on methodology, results, finds, and recommendations for further work.

1.17 The project was managed for and for CAT by Carl Crossan (assisted by D Shimmin, B Holloway, C Lister and M Ripley) and by R Masefield and K Whittaker for RPS Planning Transport and Environment, who were present as Project Consultants and as Principal Contractor under CDM regulations

2 Archaeological strategy and previous archaeological work

2.1 The archaeological excavations assessed here are part of a continuing strategy to mitigate the impact of development on the archaeological resource in the area of the Colchester New Garrison. This strategy has been agreed with Colchester Borough Council and English Heritage (RPS 2002 *Colchester Garrison PFI Archaeological Project Strategy Proposal* 29 April 2002; revised on 27 June 2002). The Archaeological Project Strategy Proposal was based on guidance set out in DoE Planning Policy Guidance Note 16 *Archaeology and Planning*, 1990 and followed Colchester Borough Council's *Guidelines on the standards and practice for archaeological fieldwork in the Borough of Colchester* (1999) and the Institute of Field Archaeologists *Standards and guidance for archaeological field evaluation* (1994, revised 1999).

2.2 A staged programme of site investigations was undertaken for each of the areas within the proposed development (Table 1). This included a Desk-based Assessment, Magnetometer and Fieldwalking Survey, and Trial trenching, as described below. All reports from these stages are listed in Table 1 (below).

2.3 **The desk-based assessment** (DBA) considered the entire site and adjoining areas. The assessment reviewed the extent, date, character, condition, interpretation, importance and quality of the surviving archaeological features or deposits that may be threatened by development. The information presented in the DBA included the results of aerial photographic survey and numerous recent field evaluations, watching briefs and excavations carried out by Colchester Archaeological Trust (CAT).

2.4 **Magnetometer survey**. Detailed methodology for this stage is described in CAT 2002 Colchester Garrison redevelopment: method statement and risk assessments for archaeological fieldwalking survey, geophysical survey, and evaluation trenching. The geophysical survey was conducted by Bactec International within all available green fields, and also included trial surveys in a number of soft and hardstanding areas in the built-up areas. These tests demonstrated the limited potential for geophysical survey in areas affected by previous development.

2.4.1 The geophysical survey located the position of buried ferrous objects, which may be discarded munitions, and identified the location of possible buried archaeological features. The ferrous items could include archaeological artefacts.

2.4.2 The geophysical data was carefully considered in drafting proposals for trial trenching. Trial trenches were positioned to check possible archaeological features and potentially significant artefact distributions, and to validate and extend the non-intrusive geophysics and fieldwalking survey results.

2.4.3 Because there is a significant Health and Safety risk associated with unexploded munitions, archaeological trenches were located to avoid ferrous items. Instead trench positions targeted possible archaeological features.

2.4.4 The ferrous items which were avoided by the trench positions were later removed ahead of Stage 2 archaeological investigations by munitions removal specialists Bactec International., who also provided EOD Engineer Support throughout Stage 2 archaeological investigations.

2.5 **Fieldwalking survey**. Detailed methodology for this stage is described in CAT 2002 Colchester Garrison redevelopment: method statement and risk assessments for archaeological fieldwalking survey, geophysical survey, and evaluation trenching. The fieldwalking was conducted within all available arable fields.

2.5.1 The fieldwalking survey provided a quantified record of the distribution of artefacts exposed within the topsoil following ploughing. Basic statistical tests were used to identify concentrations which might indicate areas of archaeological potential.

2.5.2 The fieldwalking data was carefully considered in drafting proposals for trial trenching. Trial trenches were positioned to check possible archaeological features and potentially significant artefact distributions.

2.6 **Trial trenching**. A detailed methodology is described in CAT 2002 (Colchester Garrison redevelopment: method statement and risk assessments for archaeological fieldwalking

survey, geophysical survey, and evaluation trenching). Trial trenching work was designed in two phases:

2.6.1 Stage 1(a) trial trenching comprised a total 12kmx1.8m of trial trenching. This has determined the extent and nature of archaeological remains on the New Garrison, in support of both the full and outline planning applications, and has characterised the archaeology at the Urban Village locations for which outline consent was sought. The New Garrison evaluation comprised a 3% sample of total new build footprint area (including: buildings and roads, but excluding hard standings, parade grounds and service trenches) covering both the Green Field and the Built Areas. Trenches in the existing Built Area contributed to the 3% sample, but were limited by various constraints. As a result the distribution of trenches was weighted in favour of the Green Field, where the potential survival of archaeological remains is greater. A 2% sample (subject to localised site constraints and limitations) of total potential area of impact due to construction of sports fields, construction compounds car parks and storage areas covering both the Green Field and Built Areas. This sample size reflected the lower impact risk posed by temporary works and landscaping.

2.6.2 Stage 1(b) archaeological evaluations will consider detailed proposals for the Urban Village when the operational Garrison has been relocated and existing buildings demolished or refurbished. This work will be dealt with through imposition of the appropriate model planning condition (paragraph 30, PPG16) on the developer/s of the Urban Village site.

2.6.3 The full results of the Stage 1(a) investigations are reported in five Colchester Archaeological Trust technical papers (see Table 1).

Organization	**Date**	**Title**
Colchester Archaeological Trust	2000	An archaeological desk-based assessment of the Colchester Garrison PFI site (CAT Report 97)
Colchester Archaeological Trust	May 2002	An Archaeological Evaluation by Fieldwalking and Geophysical Survey at Colchester Garrison PFI site, Colchester, Essex (CAT Report 184)
Colchester Archaeological Trust	July 2002	An Archaeological evaluation by trial trenching on Area C at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 197)
Colchester Archaeological Trust	July 2002	An Archaeological evaluation by trial trenching on Areas E and F at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 203)
Colchester Archaeological Trust	August 2002	An Archaeological evaluation by trial trenching on Area KR at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 205)
Colchester Archaeological Trust	August 2002	An archaeological evaluation by trial-trenching in Areas A, B, D, GJ, H, J, N, V and YP of the Colchester Garrison PFI site, June-July 2002 (CAT Report 206)
Colchester Archaeological Trust	September 2002	An archaeological evaluation by trial-trenching on Areas DR, G, M, P, Q, R, RO, S, and T at Colchester Garrison PFI site Colchester, Essex: May-September 2002 (CAT Report 207)

Table 1 Evaluation survey technical reports

3 Archaeological background

Introduction

3.1 The archaeological background of the Colchester Garrison area prior to the Garrison PFI Project comprehensively discussed in the Desk-based assessment (above section 2.3: CAT Report 97).

3.2 The surveys described in section 2 (above) have added to that picture, and have revealed the following, detailed sequence and pattern of archaeological remains.

Neolithic period

3.3 Evidence for early prehistoric activity at the Garrison site is notably sparse and there is a very low incidence of the ubiquitous flint tools and flakes associated with Mesolithic, Neolithic and early Bronze Age activities. An isolated pit found in Area M produced a low incidence of possibly Neolithic pottery and several soft hammer flint flakes of probable Neolithic date.

Late Bronze Age/Iron Age settlement and field boundaries

3.4 Evidence for Late Bronze Age/ early Iron Age activity, both in terms of landscape divisions and settlement areas, is at a low level demonstrated by occasional pits and residual pottery and flint recovered from later features. Areas of higher concentrations of Late Bronze Age/ early Iron Age pottery, indicative of associated settlement were encountered within Area R. Area E produced several flint tempered sherds including a fragment of a large straight sided jar of early Iron Age date within a surviving subsoil remnant of the period.

3.5 Middle Iron Age landscape boundary, field system and isolated pits

3.5.1 Middle Iron Age features and finds were found sparsely across the site with isolated pits identified within Area C and Area E. Middle Iron Age pottery has also been found residually within Area F. Area C produced a large north-south orientated ditch (CF703), 2.84m in width and 1.3m in depth, running for 13.11m obliquely through the trench. The ditch produced an assemblage of Middle Iron Age pottery in addition to burnt flint. The relatively substantial form of the ditch suggests that it may have formed a landscape boundary rather than a simple field division. The finds within this feature and from a single nearby pit hint at the possibility of associated settlement.

3.5.2 Middle Iron Age pottery in fresh condition was recovered from a gully or ditch and post hole within Area R trench 1, close to an east-west orientated cropmark with which the gully may be affiliated. A further similar sherd of Iron Age pottery was recovered from within a ditch within Trench 11, again close to the line of a linear cropmark feature. The cropmarks within Area R (west) are of particular interest since at least two phases of landscape are represented by a major north east/ south west orientated trackway cutting through or cut by a north south/ east west orientated coaxial field system. The pre Late Iron Age pottery within linear features similarly aligned to the field system indicate the possibility that this north-south/ east-west field system is of pre-oppidum date whilst the major curvilinear trackway is considered likely to be associated with the oppidum. Area RO Trench 8 included an intersection of the main trackway with potentially earlier field ditches. Further north-south and east-west orientated, but undated features within Area M and Area C may also relate to a pre-oppidum landscape of potential Middle Iron Age date.

3.5.3 The Middle Iron Age features contained relatively low grade inorganic fills although ditch CF703 contained a charcoal rich sediment potentially derived from hearth clearance.

3.6 Late Iron Age/Early Romano-British curvilinear droveways

3.6.1 The major landscape feature to be examined during the trenching exercise comprised a double ditched trackway, identified by aerial photography and geophysical survey running from south-west to north-east through Areas R, P, ROM, DR1 and Q. The track was dissected by 10 evaluation trenches but despite this few finds were present within the excavated segments. Small sherds of probable Iron Age pottery were recovered from four ditch segments and it appeared likely that this feature is contemporary with the Late Iron

Age oppidum as a line of communication through its eastern area. A connecting track was confirmed by trenching within Areas M and P. The main trackway was 7m in width within Area DR with the individual ditches c.2m in width and 0.5m in depth. The width of the track within Area R was 12.2m with ditches here 2m in width and 0.6m in depth. The auxiliary track within Area M was 12.2m wide with flanking ditches 1.2m in width. Several undated ditches within Areas RO, M and P are orientated perpendicular to the main trackway and may represent contemporary field boundaries.

3.6.2 Any metalling or rutting between the flanking ditches of these trackways and evidence for banks has been removed by ploughing which has also reduced the original depth of the ditches. The ditches were filled with low grade homogenous sandy silt deposits.

3.7 Probable Late Iron Age/Roman rectilinear enclosure

3.7.1 A sub-rectangular enclosure with a central possible pit was noted as a cropmark within the area of the Musket Club (Area T). The previously plotted cropmark was identified on an oblique aerial photograph and was re-rectified for the purposes of the evaluation. Evaluation Trench T1 was positioned to intersect the defining ditch of the feature within an area of tarmac car-park adjacent to the Musket Club. The feature was not found to be preserved within the trench although its original position may be indicated by a wide dip within the underlying terrace gravels. All remnants of previous topsoils, ploughsoils and subsoils above the gravel had been grubbed out, presumably during the car park construction in the 1970's and it is considered likely that the soft fill of the enclosure ditch was also removed at this time. The ground level was 'made up' with redeposited gravel, which filled the hollow within Trench T1. Trench 2 within the enclosure was situated south of the tarmac car-park and was less disturbed. A re-deposited ploughsoil level was found to seal the natural gravel into which an undated ditch was cut. The ploughsoil layer contained a Romano-British pottery sherd. The crop-mark enclosure is paralleled by numerous rectilinear settlement enclosures within southern Britain of Late Iron Age or Romano-British date. The presence of a central pit-like feature probably indicates that the site was utilised as a mortuary enclosure as found locally at Stanway and dated to the Late Iron Age.

3.7.2 The condition of the enclosure may vary. The evaluated area of tarmac car-park adjacent to the Musket Club suggests that the enclosure ditch may have been removed. However, the tarmac parking area is not extensive and car-parking areas to the south which were constructed in the 1990's and surfaced with herringbone pattern brick may have caused lower levels of disturbance. This may be suggested by Trench T2, immediately adjacent to the brick car-park, which was found to be less disturbed. It is therefore probable that the major features of the enclosure comprising its defining ditch and internal pit may have at least partially survived modern removal. A small area excavation will be conducted following demolition of existing structures and hardstanding at the Musket Club in 2004. The scope of this investigation has been agreed with CBC and the results will be provided within a separate report.

3.8 Berechurch Dyke

3.8.1 Defensive linear dyke on the east edge of Roman Barracks known as Berechurch Dyke. Although some parts of the Berechurch Dyke, where the earthwork bank survives extant, are designated as a Scheduled Ancient Monument, the length that passes through the Garrison is thought to consist only of the silted ditch (the earthwork bank is no longer extant within the Garrison) and is not Scheduled. The dyke is currently thought to demark the eastern extent of the oppidum. The condition of the feature within the proposal site is not known although the associated bank is not preserved within the development proposal area. The buried ditch is to be retained.

3.9 Late Iron Age/Roman farm and coaxial field system

3.9.1 Field divisions on a north-east/ south west and north-west/ south east alignment within Areas C, DR, F and G appear to be directly associated with a previously known early Romano-British settlement at Kirkee McMunn Barracks. Whilst similar in form to the earlier prehistoric fields, the scale is far greater and is best regarded as a type described by English Heritage (1988b) as Coaxial Field System. The farm buildings included significant occupation finds material within coaxial ditches on the same alignment as those within the Areas C, DR, F

and G, and a Romano-British hypocaust (under-floor heating system) pit containing box flue and Romano-British tile categories (Shimmin 1998) indicative of a small villa-type farmstead. Romano-British trackway ditches within Trench 16 of Area C were spaced 6m apart. A parallel early Romano-British ditch appears to form a component of this landscape. Further fragments of Romano-British landscape represented by coaxial ditches in Area C. Area YP to the north west of Area C produced two ditches potentially associated with the Late Iron Age or Romano-British landscape. The dating evidence within these ditches was however limited to Romano-British tile.

3.9.2 The elements of the Late Iron Age/ early Romano-British landscape are particularly clearly defined within areas adjacent to Kirkee McMunn barracks. Two north-east/south-west orientated trackways dissect evaluation Areas E and F. The ditches of the eastern track were excavated in Area F. These trackways are approximately 12m in width. A linked north west/ south east orientated track was recorded within Area F, where the ditches were approximately 4m apart. This track is demonstrated by geophysical survey and as cropmarks and clearly extends to the south east where it was investigated in Area G (Ditch segments GF1201/2, GF1302-5, and GF1401/2). A further north-east/ south-west orientated track connected with this trackway within Area F as a routeway leading to the south-west. The track was excavated within Trench F28 as FF2801/2 and was 9m in width. Further ditches within Areas E and F included EF103, EF303 and EF1102 whilst probable elements of this landscape within the northern area of Area G included north east/ south-west orientated ditch GF1003/6 within Trench G10, and north-west/ south-east orientated ditches GF904/6 and GF902/5 within Trench G9. Fragments of amphora of the Late Iron Age period were found within pit FF2803 within Trench F28, adjacent one of the trackways. The dating for this landscape is based upon pottery including 'grog tempered wares' typical of the Late Iron Age in combination with early Romano-British pottery and tile. These finds were typically found to be concentrated within ditches adjacent to Kirkee McMunn Barracks. Furthermore Romano-British tile finds from these trackway ditches included box-flue tile which almost certainly derived from the Romano-British hypocaust within Kirkee McMunn Barracks.

3.9.3 Less well defined evidence of contemporary fields within Areas M, P, and R (ditches MF102/4, MF305/8, MF309, P104 and R203/5) suggest that this area was also farmed during the oppidum period. However the variable alignments of these features may indicate a less structured landscape character than was laid out immediately adjacent to the Kirkee McMunn settlement.

3.9.4 The Romano-British building investigated in 1994 has subsequently been covered by Garrison buildings that are to be retained and the major archaeological feature of this phase is not at significant risk. The investigations by Colchester Archaeological Trust (Shimmin 1998) suggest that remains of this farm survive beneath the existing buildings, but these will have already been partly truncated during construction. However, the far more extensive gridded field systems do survive. As with the major curvilinear trackway any metalling or wheel rutting between the Late Iron Age/ early Romano-British oppidum period features has been lost to ploughing, as have the originally associated banks. Plough truncation has reduced the depth of all of the field and trackway ditches. The features are filled with low grade, homogenous sandy silts typical of landscape as oppose to settlement features.

3.9.5 The Stage 1a evaluation for the Urban Village outline planning application element provided evidence for Romano-British suburban activities, including cemeteries and pre- and post-Dissolution activities associated with St John's Abbey. These elements were found to be located to the north of the New Garrison site and as such are not considered further here.

3.10 World War I and II training and defence

3.10.1 There are three World War II concrete and brick pillboxes and a single concrete gun emplacement within the proposal site. These are located at the southern extent of Area F adjacent to Berechurch Road and on the edges of fields G and P respectively. The line of a World War II tank trap ditch is recorded running from east to west through Areas DR and G and was detected by both aerial photography and geophysical survey. In addition to these a

number of military features were encountered during the trial trenching. These comprised both linear trenches, sometimes revetted and horseshoe shaped ditches whose upcast was presumably intended to protect military positions. These features were concentrated within Area F (east) which is identified as a focal area for military training during World War I. Military bunkers were identified within Roman Barracks (ROF301 and 403/4/8). An undisturbed air raid shelter was located within Area J Trench J9. The intact below ground chamber was viewed following the removal of an iron air vent pipe at ground level.

3.10.2 The pill boxes are still extant and are in moderate condition. The tank trap within Areas DR and G is infilled but still survives as a negative feature. There are no surface traces of this feature. The military trenches within Areas C and F were plough truncated and therefore no earthwork remnants survive and the overall depth of the features is reduced. Revetment was occasionally found in the form of corrugated iron panels but had in most cases been removed. The condition of these features is poor. Small bunkers within Roman Barracks were recently infilled and one feature was still extant. These features survive in moderate to good condition due to a lack of horizontal truncation.

4 Aims and Objectives

4.1 The **research potential** of the above archaeological remains has been fully explored in *Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester* (RPS 2003).

4.2 **The Overarching Research Aim** for the New Garrison Archaeological Project was: *To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period. The central theme of the New Garrison archaeological project is the development of the landscape to include the following;*

1. the evidence for early agricultural clearances in the Neolithic period,
2. the potential establishment of planned and 'owned landscapes' by the late Bronze Age,
3. the creation of the oppidum in the late Iron Age and
4. the effect of the establishment of the Roman town on the agricultural hinterland.

4.3 The 'written schemes of investigation' (WSIs) for the three areas described here (RPS/CAT 2003) stressed a number of the key project aims and primary objectives.

4.3.1 Of particular importance for **Area 2** was Aim 3; '*what was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there any indications of landscape division and settlement which might allude to the origins of the oppidum?*'. The primary objective for Area 2 was to investigate a substantial north/south orientated ditch which had been identified and dated to the Middle Iron Age during the 2002 evaluation (CAT Report 197, Howard Brooks 2002), and Area 2 was located to facilitate this investigation. The site was located centrally with respect to the imminent New Garrison development.

4.3.2 The primary objective for **Area 6** was to investigate an apparent co-axial layout of interconnecting trackways shown by aerial photographs as cropmarks and to a lesser degree by geophysical survey in 2002. Trial trenching in 2002 (CAT Report 203, Howard Brooks 2002) confirmed the existence of the ditches and provided limited evidence for a Late Iron Age or Roman date for the landscape. Area 6 was a former arable field (north of Earlswood Way and south-east of Kirkee-McMunn Barracks) which will form part of the New Garrison construction compound, following which it will be landscaped for use as sports pitches.

4.3.3 The primary objective for **Area 10** was to investigate the major curvilinear trackway which has been identified by aerial photography as cropmarks and to a lesser degree by geophysical survey in 2002. The location will form part of the eastern area of the New Garrison.

5 Methodology

5.1 The areas of impact on archaeological landscape features were identified by the Stage 1 archaeological trial trenching. These consisted of Area 2 (5,250m^2 south of Ypres Road), Area 6 (10,175m^2 north of Earlswood Way), and Area 10 (14,000m^2 south and east of the Driving School of Berechurch Road.

5.2 **Methodology** as follows:

Removal of Topsoil and Overburden.

A 360 degree tracked mechanical excavator utilising a toothless ditching bucket will remove the c.0.3m thick topsoil under permanent supervision of and to the satisfaction of a CAT archaeologist. The lower levels of topsoil will be removed in spits of no more than 0.15m to cleanly expose the surface of the natural subsoil. 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 supervised 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. The advice of a geoarchaeologist will be sought in the event that particularly interesting site formation processes are encountered. No potentially significant archaeological deposits will be removed prior to recording, sampling (if necessary) and adequate understanding of their character.

5.3 The WSIs define **Methodology common to Areas 2, 6 and 10,** as follows:

Surveying.

Following the site 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, deposits and structures. Each context will be excavated in sequence. Occasionally further use of the mechanical excavator may be required. The use of mechanical excavators will only be undertaken with agreement from the CBC Archaeologist. 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. Fast excavation techniques involving (for instance) picks, forks, or mattocks will not be used on complex stratigraphy.

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. There will be a 15% contingency (15% of the overall excavation project budget for Areas 2, 4, 6 and 10) in the event of unforeseen discoveries, for higher levels of sampling where the realization of the project aims would be enhanced, or in the event of unworkable weather conditions. Use of contingency sums is to be agreed with RPS and RMPA.

(i) Normally 50% of the fills of all pits and other discrete archaeological features will be excavated. Pits will be fully excavated if they are particularly rich in environmental or and/or artefactual evidence, should this contribute to the research aims. Variation to lower the sample level for pits will only be acceptable where the full sampling strategy has no potential to contribute to the research aims. A sample of tree throw holes/possible natural features (up to 5% of the total number) will be excavated sufficient to establish the nature of the features and to provide dating evidence.

(ii) 20% of the exposed lengths of ditches, including enclosure ditches, will be excavated, in segments of up to 2 metres in length. The segments will be placed to provide adequate coverage of the ditches and will include excavation of all terminals and intersections. A flexible approach will be adopted to the location of excavation samples such that areas of exposed ditch fill with higher artefact or ecofact content may be targeted. A lower excavation sample ratio of ditches will only be acceptable in the event that the research aims will not be further advanced by full 20% excavation. Any such reduction in sample ratio will be agreed with CBC and RPS.
(iii) 25% of ring gullies will include excavation of the terminals and sections at each side to the rear of the gully. Special regard will be given to significant stratigraphical relationships and concentrations of artefactual material.
(iv) In the event that stone structures are encountered, these will be excavated in sufficient detail to establish their construction sequence and sequence of repairs or extensions. All stratigraphic associations will be recorded. Should floor levels (which are not anticipated) be encountered, these will be fully excavated and environmentally sampled.
(v) Furnaces or kilns are not anticipated but should these be encountered they will be fully excavated (and bulk sampled) to determine their function and any sequence of repairs or replacements. Archaeomagnetic dating may be considered and is allowed for within the project budget.
(vi) Animal and human burials, including cremations, will be fully excavated. A license from the Home Office will be acquired in the event of the discovery of any human remains. The discovery of human remains will be reported to the local coroner. Other structured or placed deposits will be recorded and retained as "small finds".
(vii) Water will be used where appropriate to further archaeological investigation in respect of aiding the identification and definition of excavated features or deposits and to assist their recording thereof, particularly by photographic means.
(viii) 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) All 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) All 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. Colour transparencies (on 35mm film) will be used for all important contexts illustrating both the detail and context of the principal archaeological features and finds discovered. 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. The black and white negatives and contact prints will be filed, and the colour transparencies will be mounted using appropriate cases. 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.

Treatment of Samples
Industrial 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 Peter Murphy (EH 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 VF, and future sampling policy on other excavations areas will follow her advice. If any complex or outstanding deposits are encountered, then PM and/or VF will be asked onto site to advise.

In addition to retrieving environmental evidence (above), bulk sampling will be used to collect charcoal for C14 dating. This will help to date features such as field ditches where ceramic evidence is not forthcoming and is key to the research aims.

A strategy of pollen analysis has been agreed with Patricia Wiltshire. The aim will be to identify a number of deep contexts from which soil columns or bulk samples can be extracted for pollen analysis. Ditch CF703 is already identified as one such feature to be sampled by means of column samples. Over the length of the project this will enable an assessment to be made of the local environmental background, even if only at a basic level. Patricia Wiltshire's (or colleague) will visit each site and extract samples for analysis. Based on these test samples, the viability of further sampling on the site will be assessed by PW, and her advice will be followed. Clearly, if the test samples are unproductive, there will be no justification for further sampling.

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 bioarchaeologist and the Site Director:

(i) 50 litre bulk samples (or 100% of smaller contexts) of anthropogenic concentrations will be taken and of selected deposits where remains are not visible (but may nevertheless occur). These shall include well sealed deposits, floors, hearths etc.
(ii) Monoliths for pollen analysis will be taken as appropriate to answer specific research questions.
(iii) Bulk samples will be taken from 50% of all ring gully sections.
(iv) 50 litre bulk samples will be taken (if possible) from closely dated pits. These deposits will be sampled regardless of whether or not there are visible macrofossils or molluscs. In practice it is likely that large numbers of similar features and fills, many of which will be undated or poorly dated, will be encountered and it will be necessary to agree the most suitable method of bulk sampling in the field to avoid production of meaningless data. In order to accommodate such a discussion bulk sieving will be conducted in concert with the excavation from the initial stages and will provide early indications of the quality and consistency of the samples and the need to adjust the sampling strategy accordingly.
(v) Whole fill samples from post holes of definable structures will taken for assessment.
(vi) Kilns and furnaces will be sampled and dated by scientific methods (if appropriate) in line with the research objectives.
(vii) Cremations and other "special deposits" will be 100% sampled.
(viii) 100% recovery of animal bones will be undertaken from the soil samples. It is possible that 100 litre samples for bone may also be necessary in some circumstances.

General Methodology
All works will be undertaken by a team of professional archaeologists. The proposed team structure is given in the appendix (end of document).

All work will be according to CAT Policies and Procedures (2000), and will be informed by Management of Archaeological Projects (English Heritage 1991), and Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester (Colchester Borough Council1996, revised 1999).

Scans of the area by BacTec International revealed a service (presumed to be an electric cable) close to the north edge of the proposed excavation area (CAT report 184, figure 18). This cable will be located with a CAT scanner, and (if necessary) will be avoided by the excavation area.

If any human remains are exposed, RPS will be notified immediately and RPS will inform the MoD, RMPA and CBC. In practice, there is a distinction between the handling of isolated and demonstrably ancient cremation burials often encountered in field evaluation, and the discovery of recent burials

which are the proper business of the Coroner. A Home Office license for dealing with demonstrably ancient burials will be sought as a matter of course, and it is anticipated that these will be excavated or recovered by CAT in the normal way. In the unlikely event that recent burials are encountered, then RPS and the Client will inform the Police and/or coroner.

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.

For purposes of deposition of the archive, a museum accession code will be obtained through Colchester Museums. This will be used this as the site code. The Code of Conduct of the Institute of Field Archaeologists (IFA) will be followed. There are no proposals to fill the excavation area at the end of fieldwork.

5.4 Fieldwork was carried out at the following times:

- Area 2: 13th October to 7th November
- Area 10 south: 29th October - 17th November
- Area 10 north: 23rd September to 17th October
- Area 6: 11th August to 23rd September

6 Results

6.1 Area 2

Introduction

6.1.1 Mitigation Area 2 comprised an approximately rectangular area of 5,250 square metres within an open short grassed public access field to the south of Ypres Road (NGR TL 9945 2350). The excavation site is within project Area C. The site was located centrally with respect to the imminent New Garrison development and was situated on sands and gravels at a height of 35mOD.

6.1.2 The primary objective for Area 2 was to investigate a substantial north/south orientated ditch which had been identified and dated to the Middle Iron Age during the 2002 evaluation (CAT Report 197, Howard Brooks 2002). It was considered that the ditch represented a significant landscape boundary and that pottery and charcoal within the 1.3m deep ditch could allude to nearby settlement.

6.1.3 The 'written scheme of investigation' for the excavation (RPS/CAT 2003) stressed a number of the key project aims. Of particular importance for Area 2 was Aim 3; 'what was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there any indications of landscape division and settlement which might allude to the origins of the oppidum?'

In addition specific aims were provided as follows; '*The close dating of the Middle Iron Age sequence, and in particular the associated environmental data such as pollen and plant macrofossils, is of central importance for the research priority to provide data pertaining to the landscape character and use immediately prior to the construction of the oppidum. Ditch CF703 (the Middle Iron Age ditch) and the adjacent area have been specifically targeted by excavation due to high potential of this feature and possibly associated features, to provide well-stratified and relatively large uncontaminated pottery assemblages suitable for detailed analysis... The ditch is relatively deep and as such its lower levels have been protected. It may be possible to extract pollen for landscape reconstruction purposes. In addition a charcoal rich lens within the ditch segment excavated during the evaluation demonstrates moderate potential for bulk environmental sampling to provide both charcoal suitable for radiocarbon dating and macrofossils suitable for landscape characterisation including burnt grain. Any placed deposits which may be encountered of the period will be studied in terms of their possible ritual or symbolic roles in Iron Age society and will be closely dated wherever possible*.'

Results

6.1.4 **Neolithic and Bronze Age**

There were no certain features of Neolithic or Bronze Age date within the area, although a small quantity of worked and burnt flint and Late Bronze Age to Early Iron Age flint tempered pottery was recovered from the enclosure ditch. As with similar finds from Area 6 and Area 10 these hint at settlement and farming in the general vicinity.

6.1.5 **The Iron Age enclosure and associated features** (Fig 2)

Area 2 was dominated by a sub-rectangular single ditched enclosure (F6, F51, F55, F58, F60, F130, F143). Three sides were identified during the main excavation, while the northern side (F212) was located later by trial trench just to the north of the excavation area, in an area of trees flanking Ypres Road.

The enclosure measured 52.5m by 47.5m, giving an internal area of some 2495m^2 (0.249 ha). The exposed length of ditch had no gaps in it for an entrance. However there appears to have been an entrance into the enclosure on its east side represented by an east-west orientated trackway leading up to the north-eastern edge of the enclosure ditch from the east. The trackway was not defined by a pair of flanking ditches (as elsewhere in Areas 6 and 10 and indeed cutting through the enclosure in this area) but by a linear hollow (F113) some 22m plus in length entering the eastern baulk of the excavation, around 4-5m in width

and around 0.15 – 0.2m in depth where eroded directly into the underlying natural sands and gravels. This feature appears to be a hollow way created by a lengthy period of use by stock and possibly and cart traffic. Gravel was thrown down within the hollow way to consolidate the erosion (Layers 30, 73). The hollow way ended abruptly in a squared off end about a metre from the eastern ditch of the enclosure and clearly respected the ditch. Since there was no gap the ditch here, and no evidence that it had been backfilled to provide a causeway into the enclosure, it is possible that a bridge traversed the open ditch at the end of the hollow way. If so the narrow gap of undisturbed natural gravel between the west end of the hollow way and the ditch could be explained as the ground fast position of the eastern end of a wooden bridge.

There may also have been an **entrance point** over the western ditch. Here a small eroded hollow on the edge was consolidated with gravel (L61) at the point at which the ditch became considerably narrower and shallower. This suggests a point at which the ditch was traversed.

The **enclosure ditch** was most substantial on the eastern side of the enclosure at 2.8m in width and c.1.3m in depth. It was recut at least once (F61, F81) indicating that the site was used for many years (Fig 4). A drainage sump was excavated in the south east corner of the enclosure where the recut ditch was at its deepest (F62: Figs 4, 6). This deep feature contained an alluvial (waterlain) layer which was sampled for pollen and may therefore be of value for landscape characterisation (pollen report, Appendix 13). Gravelled layer 17 in the south enclosure ditch (Fig 5, F14/F51 section 1) suggests that the ditch had two phases, with gravel laid down to consolidate the ground over earlier ditch silts. A stony horizon (L68) in the south-western corner of the enclosure may also represent a consolidation phase (Fig 7, F136 section 2).

The interior of the enclosure was dominated by a c.12m circular structure defined by a **penannular gully** (F44: Fig 3). Such features are invariably interpreted as eaves drip gullies of roundhouses (designed to collect rainwater from the eaves of a pitched thatched roof: Fig 5, F44 section 1). Further evidence for the building, in the form of burnt daub with wattle impressions, was found within a Middle Iron Age pit to the north of the circular building (F43). A break in the eaves drip gully on the northern side of the circle could represent an entrance. This conclusion may be supported by possible post-holes for a potential porch (F171, F180, F182-3?, F185?). However part of the east-side of the gully was removed by later ditch and it is also possible there was as entrance on the eastern side. The shallow gully has produced a relatively small assemblage of Middle Iron Age pottery. A circular arrangement of post holes close to the eaves drip gully appears to represent the outer wall of the roundhouse whilst an inner ring of post holes, presumably housed roof supports. With the maximum extent of the thatched roof at c.12 diameter this was a relatively large and impressive structure.

The roundhouse, though relatively central, was situated notably closer to the southern and western side of the enclosure. This position is interesting since the roundhouse would have had a greater visual impact upon the visitor coming in through the eastern enclosure entrance, than if it had been central. This wish to impress prior to, and at the point of entry into the settlement, was also represented by the much more substantial and impressive nature of the enclosure ditch (and its presumed bank) on the eastern side of the enclosure than on the southern and western sides. Indeed the western side was notably less substantial at 0.5m - 0.75m deep and 1.3m - 2.3m wide (where it was hidden away behind the roundhouse). It is also interesting to note that domestic debris (in the form of discarded sherds of pottery) was dumped in greater quantities in the western ditch than the southern and eastern ditches.

Environmental sampling has revealed quantities of twigs, thorns, seeds and fruit stone fragments in the fill of the eastern ditch, leading to the conclusion that a hedge may have stood close by (presumably on the top of the inner bank). However, there was no equivalent hedge debris on the western side, so there may not necessarily have been a hedge there (report, Appendix 11).

A shallow pit containing the disturbed remnants of a placed pottery vessel was located in the centre of the roundhouse (F48). The pot has the appearance of a cremation burial, but no burnt bone was found in the sieved samples. Instead, two tiny crumbs of unburnt mammal bone were identified. Whether or not this pot originally contained cremated bone which has not survived the acid soils, its central position defines it as a ritual deposition which appears to have been significant to the owners of the roundhouse. It is possible the 'burial', or at least the placed pottery deposit itself, was intended to commemorate the construction of their building and if it was a burial to link it directly with their ancestors. . This type of offering has been postulated elsewhere for buried human remains and other placed depositions within roundhouses, as 'foundation deposits'. Alternatively the placed deposit may have been placed during the lifetime of the settlement. One point which will have to be considered in the full analysis is quite how this pot fits into the overall dating of the house - if there is no MIA pottery in the lower fills of the ditch but only in the upper fills, then this pot may be contemporary with the upper ditch fills and allow the possibility of an earlier phase of activity here before the deposition of the pot. Such a two phase scheme could fit in with the episode of gravel layers being laid within the main ditch.

The possible cremation vessel was of Middle Iron Age form and fabric although its association with a possible cremation is more typical of the Late Iron Age 'Belgic period' (P. Sealey pers comm.). The latest pottery from the upper fill of the latest phase of enclosure ditch includes Middle Iron Age fabrics and forms but also storage jar sherds with grog temper typical of the 1st century BC. With these factors in mind Sealey has provisionally postulated a 75-25BC date for the latest fill of the enclosure. The cremation vessel could also fall into this bracket, although it would be very unusual for a cremation to be within a Middle Iron Age style vessel rather than a wheel thrown 'Belgic' pot. The latter were in use in cremations from c.75BC, although Belgic pottery is not commonly found in domestic contexts before 50-25BC (Sealy pers comm.). A possible parallel for the use of a Middle Iron Age pot for a cremation comes from Mucking, near Thurrock in Essex where an 'omphalos jar' was found with cremated bone (Elsdon 1975). In summary, the use of cremation rite is typical of the Late Iron Age whilst the pottery forms and fabrics are predominantly of the earlier tradition thus, a transitional Middle to Late Iron Age settlement may be represented. Radiocarbon dating will be attempted to resolve this issue although it is unlikely to provide a tight enough date range. Detailed study of the pottery at full report stage may yield better data. Interestingly probable human cremated bone was also found within the upper levels of the southern enclosure ditch (ref report, Appendix 10).

Internal features of Middle Iron Age date were sparse within the enclosure, although a cluster of small pits and post-holes was identified south of the roundhouse[1].. The potential function of these features will be further examined at the analysis. Some of them do fall in a convincing arc (F50, F38, F42, F7) and maybe even a circle (if F78 is included Some of these posts may define 'two-posters' (usually interpreted as drying racks) of the type identified fir instance at Little Waltham (Drury 1971, 34).

A small group of post holes along the northern and eastern edge of the ditch (F71, F154, F190-2, F201-4, F206) are not convincing as a free-standing fence line, but they may be either the bottoms of posts rammed into the bank, or perhaps root holes connected with a hedge.

A narrow ditch alignment to the west of the enclosure appears to respect its alignment and may therefore be contemporary (F48). This gives part the western side of the western side of the enclosure a double ditch. The function of this outer second ditch is not currently understood although it is possible that it had a use associated with stock management. There is also a very slight ditch F84, whose purpose is not clear.

6.1.6 **The later Iron Age and Roman trackway and landscape**

Following abandonment of the enclosure, and presumably the levelling of its banks, a double ditched trackway/ droveway cut through the central eastern area of the enclosure

[1] F5, F7, F38, F42, F50, F73-4, F77.

and its ditches on a north-north-west/ south-south-east alignment (F2, F11, F12, F24, F27, F35). This alignment is identical to that of the eastern and western sides of the enclosure. This trackway was very similarly aligned to the Early Roman (and possibly Late Iron Age) system of double ditched tracks sample excavated in Areas 6 and 10. Ceramic finds were scarce in the excavated segments but included pottery of Late Iron Age to Early Roman date. A function associated with stock management is inferred, probably as part of the farmlands associated with the Late Iron Age to mid-Roman farmstead known to have been located in the south eastern corner of Kirkee & McMunn Barracks.

6.1.7 **The post-medieval landscape**
The final phase of activity was represented by field ditches forming a T-shaped junction of three fields. Feature 10 produced medieval or post-medieval pottery.

6.2 Area 6

Introduction

6.2.1 Area 6 comprises a rectangular area of 10,175 square metres within a former arable field to the north of Earlswood Way and to the south-east of Kirkee-McMunn Barracks. The location will form part of the New Garrison construction compound following which it will be landscaped for use as sports pitches.

6.2.2 The primary objective for Area 6 was to investigate an apparent co-axial layout of interconnecting trackways shown by aerial photographs as cropmarks (CAT Report 97 – Kate Orr 2000) and to a lesser degree by geophysical survey in 2002 (CAT Report 184, Howard Brooks 2002). Trial trenching in 2002 (CAT Report 203, Howard Brooks 2002) confirmed the existence of the ditches and provided limited evidence for a Late Iron Age or Roman date for the landscape. The excavation was located at Area 6 due to its close proximity to a hypocaust (under floor heating) pit of a Roman villa, located within the south east corner of Kirkee-McMunn Barracks. The probable small villa was discovered during a CAT watching brief in 1994 (*A Late Iron Age and Roman occupation site at Kirkee McMunn barracks, Colchester* D. Shimmin 1998). Late Iron Age and Roman ditches at the site were considered potentially contemporary with the similarly orientated ditches within Area 6, suggesting both comprised elements of a single planned farming landscape, possibly spanning the Late Iron Age/Roman transition. The status of the farmstead prior to and following the Claudian Conquest is of clear academic interest given little is currently known regarding the nature of the Oppidum landscape of Camulodunum prior to and during this period of considerable cultural change.

6.2.3 The '**written scheme of investigation'** for the excavation (RPS/CAT 2003) stressed a number of the key project aims. Of particular importance for Area 6 were Aims 4 and 5

- **Project Aim 4** – To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

- **Project Aim 5** - To clarify the form/function and duration of the trackways with respect to the oppidum and to establish which elements of the social landscape they connected.

Results

6.2.4 **Neolithic, Bronze Age, and earlier to middle Iron Age** (Fig 6)
No Neolithic finds or features were revealed. The earliest features may date to the Bronze Age and comprised a pit (F15) containing flint tempered ?early Bronze Age pottery at the west end of the site and ?late Bronze Age or Iron Age pottery from probable tree throw

holes elsewhere. A shallow and undated curvilinear feature in the central eastern area of the site (F46/F54) could represent either the remnants of an eaves drip gully around a prehistoric structure, or (probably more plausibly) a stock funnel. Two post holes (F13, F78) could be part of the same structure. Both contain Late Iron Age pottery, which could date the building. If the gully F46 were an eaves drip gully, it would surround an unusually large structure of 16m in diameter. While his may be larger than the average prehistoric round house, it is by no means the biggest even in Essex (structures of 16m diameter are known from Stansted Airport [Havis and Brooks forthcoming] and at Little Waltham [Drury 1971, 34, Fig 24]). The fact that the gully is only present on the north side could be due to the slope of the site, with the northern part being dug slightly deeper into the upslope side, and therefore surviving, whereas the presumably shallower downslope side has been ploughed out [2]. However the surviving depth of the gully renders this possibility unlikely. The alternative interpretation of this gully is that it formed a stock funnel linking into the north ditch of the main track. This would have been used to guide stock from Field 2 into the southern track, and to fields beyond. It would presumably have had an accompanying bank and hedge.

The curvilinear gully F46 and one of the post holes (F13) contain a fragments of an undated loom weight, and a further fragment comes from section 6 of ditch F4, 10 metres to the west. These finds may suggest an association with weaving at this location. A broader area of prehistoric activity is shown by the distribution of MIA pottery sherds, which are notably far more common over the south and west of area 6 than over the north and east. It would appear from the finds evidence that there was an area of prehistoric and probably MIA activity in the south-western part of Area 6. It is possible that the tentative connection with weaving was part of this activity. The lack of large volumes of finds and other features may be a reflection of the heavy plough damage on this site, rather than a genuine absence, whilst if there was a prehistoric occupation site here there would be no need to invoke ideas of manure scatter as a mechanism for the prehistoric sherds turning up (residually) in the fills of later features - they may simply be domestic debris (*pace* Paul Sealey, appendix 2).

A collection of burnt flints adjacent to the curvilinear feature is also indicative of some level of prehistoric activity here. Pre-Belgic period Iron Age pottery was similarly recovered from several tree throws, and several pits produced sufficient pottery to suggest the presence of nearby settlement.

A total of nine other struck flints were very thinly spread over the whole Area 6. This suggests intermittent visits by Mesolithic, Neolithic and Bronze Age folk who knapped flints for whatever activity they were carrying out, and than moved on. Whether their activities were conducted within an open and farmed landscape or a forested environment remains unclear. Only one of these is suggested as a late prehistoric (ie Iron Age) piece - this came from section 1 of ditch F5, located in the south-western corner of Area 6, where MIA activity is suspected (report, appendix 5).

6.2.5 **The late Iron Age and early Roman trackway and landscape** (Fig 8)

The late Iron Age and early Roman period are discussed together below with reference to the co-axial landscape. The excavation has confirmed the existence of the trackways. The 'main trackway' ditches run unbroken, north-west/ south-east, through the centre of the excavation (F2, F4). They contained a moderate quantity of pottery from Middle Iron Age, and through Late Iron Age to early Roman ($1^{st}/2^{nd}$ century date) according to assessment spot dating. The Iron Age pottery must all be residual, but leaves open the possibility that the ditches were originally (late?) Iron Age, and were later recut. The main track was joined by a 'southern trackway', of the same date range, defined by paired ditches (F259, F307), whilst a 'northern trackway' is defined in the north eastern area of the site (F61, F70). Only the western of the northern track's ditches (F61) continued southwards to connect with the main track. A further similarly dated north-west/south-east ditch connected with the northern trackway at its north-west end and ran to the eastern edge of the excavation (F90). These linear divisions form a single coherent landscape in existence from at least the 1st century

[2] the slope of the site down from west to east is demonstrated by the 70cm fall in the height of the base of ditch F2/F304

AD, and define the sides of enclosures or fields. For convenience these fields are numbered 1 to 5.

Field 1 in the south-west area of the excavation (see plan) was bordered by the main track and southern track (F259). The full extent of the field appears to be shown by the aerial photographs as a square plan field with an area of 4,500 square metres. The main feature within Field 1 was a wide silt filled hollow (F1) approximately 0.25 metres in depth. It is postulated that this hollow represents erosion by stock from continuous use of this area as a stock holding pen perhaps for feeding or milking. The possible association with stock was tested via samples taken for phosphate analysis (testing for relative concentrations representative of high or low concentrations of dung and urine) (report, Appendix 10). A moderate quantity of abraded early-mid Roman pottery has been recovered from slots through the spread and these also exposed a series of post holes of a possible structure (possibly a barn)[3]. It may be possible to suggest a building plan during the analysis stage. The silt-filled hollow was drained by a contemporary gully running down slope south-eastwards (F5), from its southern side and fed into the contemporary western ditch of the southern trackway (F259). A later phase of activity was represented by a hearth pit (F34) cut through the hollow's silts. The pit contained extremely well preserved charred remains of firewood and may also be of Roman date (report, Appendix 15).

Several fragments of Mayen lava querns and gritstone quern from F1 show that grinding of grain to produce flour was taking place nearby.

A group of hobnails from F467 in the extreme south-western corner of the site may hint at another grave which is not otherwise identified (groups of hobnails are most commonly found in graves).

Field 2 contained a large number of tree throw holes but few pits of the late Iron Age or Roman periods. A notable exception was the identification of a pair of **inhumation grave pits** adjacent a parallel to the main track, at the western end of the site (F17, F28). These rather shallow graves contained iron coffin nails, although no human bone had survived the acid gravel soils. Both graves contained moderate quantities of 2nd or possibly 3rd century Roman pottery sherds – whilst the eastern grave contained a complete pot as a grave good. The dating of the graves suggests that they were contemporary with the nearby Roman villa.

Interestingly, a **cremation burial group** (F63) was found close to these inhumations, but between the main trackway's ditches rather than on its northern side. The circular burial pit contained four complete pots arranged upright around one edge, an iron fitting possibly from a box, and a spread of cremated bone. The pots appear to be of late Iron Age rather than Roman date and hint at a tradition of burial at this location spanning the late Iron Age/ Roman transition and presumably derived from the pre-Roman phase of occupation at the Kirkee McMunn Barracks site. If so this implies that the Kirkee McMunn Roman villa was originally 'native' with its roots in the late Iron Age, rather than a Roman imposition on the landscape following the invasion (for example confiscation of land and allocation to veterans has been suggested for farmlands around the early Roman capital at Colchester). Another point of interest is the location of the cremation pit on the track suggesting that the trackway was not in existence at that time, or alternatively that the centre of the track was for some reason considered an appropriate location for the burial. The former explanation implies that the landscape was not divided by the trackway in the late Iron Age, although it is possible and perhaps likely (given that a number of residual late Iron Age sherds have been collected from the ditches) that Iron Age versions of the ditches had simply been removed by recutting. The excavated ditches show at least two phases of cutting but both phases appear to be Roman.

It seems clear that the tracks were primarily used as droves for the movement of stock throughout the field system and to pastures and markets beyond. Such stock management within the farm was highlighted in unusual detail at the point of connection of the southern

3 F261-2, F282, F449-50, F457-9, F462-5, F499-500, F502, F507-59, F562-6, F568-80

trackway with the main trackway. It has been suggested above that the curvilinear gully (F46) in Field 2 may have been an eaves drip gully belonging to a round house. An alternative suggestion is that it was connected with the northern ditch of the main track (F4) (a possibility neither confirmed or refuted by the stratigraphy since the gully was shallow at the point of connection with the droveway ditch and a relationship could not be discerned) and appeared to form an open ended enclosure opposite the connection with the southern track. Gravel metalling (L5) was evident both between the main tracks flanking ditches and above the silts of the northern of its ditches, at the point of connection with the southern drove and the curvilinear gully within Field 2. This metalling suggests an attempt to prevent soil erosion as stock crossed from Field 2. It is considered that curvilinear gully may represent a (presumably hedged) stock funnel into which animals could be driven from Field 2 onto the main track and then onto the southern track or into Field 3 (through a further post hole defined gate) as necessary. This crossing point of the main track is emphasized by the narrowing of the main tracks southern flanking ditch to a shallow gully (with two phases) facilitating the passage of stock over the drainage system. A series of stake and post holes in the base of the gully appear to define a fence and gateway across the entrance to the southern trackway. The structure appears likely to have been a wattle style hurdle with a central wooden gate (Fig 9).The use of a 'stock funnel' would be appropriate given that the entrance to the south drove was via the centre of the field rather than its corner. Gateways are more usually located in field corners so that stock can be easily funnelled into the entrance – thus where there is no other means to coral the stock a gully and hedge barrier such as this may represent, though possibly unknown in the archaeological literature, would be appropriate.

There was further evidence of gravel metalling of the main trackway in the form of a gravel layer (L7) slumped into the partially silted southern ditch, to the east of the crossing point, and a further patch between the ditches. This implies that the trackway was eroded into the subsoil as a hollow way and was either extensively metalled or was patched with metalling. The southern trackway's western ditch (F259) connected with the main trackways southern ditch (F2) via a recut curvilinear gully (F461). The gully widened and deepened to the south. The eastern flanking ditch wider and shallow than its counterpart. Both contained early Roman pottery and lava quern stones (from the Rhineland) implying an arable component to the local economy.

An isolated post hole or small pit (F14) containing Late Iron Age pottery and earlier residual sherds is apparently located against the field boundary. Though impossible to prove, this may be a 'placed deposit' of ritual significance.

Field 3, defined on two sides by the southern and main trackways, produced few features of note other than occasional tree throw holes. Field 4 was defined on three sides by the northern trackway's western ditch F61 (the ditch is not paired within Field 3), a perpendicular Roman field ditch forming the northern side of the field (F90) and the main trackway. Several burnt patches to the north of the main track's northern ditch within Field 4 (F229, F230, F234, F352) may represent small scale burning hearths (analysis failed to reveal any cremated bone, so these burnt patches were not cremation burials: report, Appendix 11).

Burials are certainly represented by a series of 5 inhumation burials of Roman date parallel with the western boundary of Field 4 (F227-8, F231, F233, F238). The graves comprise two particularly deep adult graves (F231, F238 - approximately a metre in depth), a further adult grave (F227) and two child-sized graves (F228, F233). Once again no bone material had survived. The coffins were represented by iron nails and in one case by the charred rectangular plank apparently forming the base of a coffin (F238). Initial appraisal of the wood fragments suggests that the wood types may be identifiable (report, Appendix 15). Nails of the lid and the base of the coffins were represented by nails on two levels within the grave fills. There were no grave goods within these examples and they were datable only by occasional sherds of Roman pottery in the grave fills.

The graves of this probable family group were much deeper and more carefully excavated than those in Field 2 to the west, possibly reflecting their status. There is also a suggestion from the spot dating that the Field 4 graves may predate the Roman inhumations on the south edge of Field 2. This needs to be confirmed by further analysis (pot report Appendix

5). These individuals were also likely to have been residents of the Kirkee McMunn farm. It is clear that that the burials in both locations are aligned with regard to boundary features (ditches and hedges) rather than to a ritual orientation (for example east/west for Christian graves).

The entrance between **Field 4** and **Field 5** appears to have been on the path of the northern trackway (defined by a double ditch) in Field 5. A gate structure may be represented by a interrupted row of stakeholes (F93-6, F211-4) in the base of the ditch (F90) between Fields 4 and 5 at that location. The western ditch of the northern track (F61) was relatively shallow and contained a number of amphora sherds of ?pre-Flavian date, and also several Roman tile fragments. The eastern ditch of the track/drove (F70) was wider and shallower and terminated within Field 5. Both ditches of the track continue to the north, as shown by aerial photographs.

Environmental sampling of ditch fills has shown an extremely low level of burnt debris and other organic material (sometimes only single seeds of grain were identified). This must be due to poor survival conditions. Such debris as has been detected may be due to wind-blow debris blown from elsewhere (closer to the Kirkee & McMunn villa?).

6.2.5 The post-Roman landscape

There were no landscape features of this period in Area 6.

6.3 Area 10 (south and north)

Introduction

6.3.1 The location will form part of the eastern area of the New Garrison.

6.3.2 Area 10 comprises a trapezoidal area of approximately 14,000m^2, within a former arable field to the east of Roman Way and to the north of Roman Barracks (Field DR1). The location will form part of the eastern area of the New Garrison. Area 10 was originally excavated in two parts (each of 7,000m^2) - Area 10 (south) and Area 10 (north). Both areas are combined in this report.

6.3.3 The primary objective for Area 10 was to investigate the major curvilinear trackway which has been identified by aerial photography as cropmarks (CAT Report 97, Kate Orr 2000) and to a lesser degree by geophysical survey in 2002 (CAT Report 184, Howard Brooks 2002). Trial trenching in 2002 (CAT Report 207, Howard Brooks 2002) confirmed the existence of the trackway ditches and provided limited evidence for a Late Iron Age or Roman date for the trackway. It was considered likely that the main trackway was contemporary with the oppidum as a line of communication through its eastern area (the trackway was traced via evaluation trenching through project fields Q, DR1, P, M and R in sequence from north to south). The trial trenching identified a second trackway to the west of the main track whilst several other ditches were thought to represent field boundaries of a co-axial field system apparently extending from the Roman settlement at Kirkee McMunn Barracks. The system of ditches within excavation Area 6 has been shown to date to the early Roman period (with hints of a Late Iron Age phase) and it was considered likely that the ditches in Area 10 north would be similarly dated.

Results

Neolithic, Bronze Age, and earlier to middle Iron Age

6.3.4 **Early prehistoric flints**

These are scattered within features and within the ploughsoil across the whole of Area 10. This probably indicates low-level activity in the Neolithic and Early Bronze Age although whether this was within an open or forested environment is unknown. However, there is also one mini-cluster of flints on the western edge of Area 10 north (ie, close to the intersection of the later *Tracks 1* and *2*) where, sixteen out of the total thirty-one flints from Area 10 were found within a 20-metre radius. One of these is identified by Hazel Martingell as a potential Iron Age flake. The cluster may represent an early prehistoric camp or other activity predating the EIA cremation F276. This is a point which will be pursued in full analysis stage, as it represents the only flint cluster from the current stage of the Colchester Garrison Project.

There were no certain features of Neolithic or Bronze Age date within the area, although a significant quantity of probably Middle Iron Age flint tempered pottery was recovered from later ditches. As with similar finds from Area 6, these strongly hint at settlement and farming nearby.

6.3.5 **Iron Age cremations**

Several features contained EIA or MIA pottery. These comprised cremation pits F276 and F296, and pit F212. Whereas pit F212 has no obvious function, the other two (F276, F296) contained cremated bone and are therefore likely to have been primarily cremation burials. Feature 276 was a shallow pit less than 1m in diameter, containing fragments of cremated human bone, and around 10 sherds of flint tempered pottery, apparently representing several vessels, deliberately placed vertically (on their edges) within the fill. This vertical arrangement of sherds could not be the result of casual discard and demonstrates an unusual form of ritual placed deposition probably associated with a cremation rite. Following on from the above observation, there is one query with F276. If, as Paul Sealey suggests (Appendix 4), the sherds in the burial have been specially selected, and if some are grog-tempered (according to initial spot dating), then could the EIA/MIA sherds be old objects ('curated'), which have been carefully placed in a later burial? This possibility will be explored at full analysis stage.

F276 contained unburnt animal bone (food offering in burial?) as well as cremated human bone, and a wide range of macrobotanical debris including pyre debris and hazelnut shells. The cremated bone in F276 was of an adult of unknown sex. The hazel nut shells will be radiocarbon dated.

Cremation pit F296 is of particular interest since it is likely to have been deliberately dug in the corner of a field defined by its perpendicular ditches F13 (in its earliest use) and F287. The location of the cremation therefore suggests that it was contemporary with the late Iron Age or early Roman field. Cremated bone in F296 could not be aged or sexed.

6.3.6 **Prehistoric Structures**

Interestingly, cremation F276 was located close to a **group of post holes or pits**, which group on the north edge of Area 10 north and the south edge of the (later) Area 10 extension [4]. Within this group, two 'four-poster' structures were identified early on in the excavation. These are labelled *Structure 1* and *Structure 2* on figure 11. Four-post structures are usually interpreted as either raised granaries, exposure burial platforms, or watch towers. However, one question which can be explored at full analysis stage is "*are there any more structures here*?". Several possible, although not wholly convincing patterns can be postulated in this group of features. There are two complete rings of posts (although their distribution is very uneven [5], an ellipse [6], and the two four-posters mentioned above [7]. None of these can really be contemporary, since the alignments share the same features. It must therefore be decided which structures are the more convincing. Either (but not both) of the two circles would make good prehistoric round houses of approximately 8.5 metres diameter (slightly smaller than the Area 2 round house at 12m). Against this interpretation is the fact that there are none of the usual porch structure posts. The two four-post structures are perhaps the most convincing

---

4 F17-21, F45-50, F52-58, F61, F129-131, F154-5, F255-6, F277, F284.

5 the first defined by F56, F18, F131, F48, F18, and the second by F55, F58, F50, F47, F131, F130, and F129)

6 defined by F149, F46, F45, F255, F21

7 defined by F17-20, and F55-58

explanation. They were identically aligned with sides consistently 2.5m in length, typical of the dimensions of standard Iron Age 4-post 'granaries' as excavated in considerable numbers within Iron Age hill forts such as Danebury. Although 4-post structures have not commonly been identified around Colchester, two were excavated at the CIS site at Stansted Airport (Havis and Brooks forthcoming), and also at Little Waltham. The Waltham examples were approximately 2.4m square, which compares well with the Area 10 examples. In addition, RPS have recently excavated three Iron Age sites with identical structures during the A41 Aston Clinton Bypass in Buckinghamshire (Masefield forthcoming). Nine of those examples appeared to date to the Early Iron Age whilst two were of Late Iron Age date. The interpretation of all 4-post structures as granaries is debatable (other possible uses include look out platforms or excarnation burial platforms) however the 4-post structure is certainly a typical of Iron Age sites in southern and eastern Britain. One of the structures within Area 10 produced several Iron Age (?Early Iron Age) sherds. The ellipse is perhaps the least convincing alignment, but it cannot be ruled out altogether because it could exist independently of the four-posters. More analysis at full publication stage (for instance of the relative presence or absence of contemporary site finds around the structures) will help to determine the exact structural type most suited to the other evidence.

Well-preserved **round houses** might be expected to show more or less complete circles of regularly-spaced posts, a hearth, and a porch structure. Unfortunately, this is a typical heavily-ploughed Essex site where many of these features may have been ploughed away. An interesting suggestion is that *structure 2* was the porch of one round house. This is unlikely however since few round-house entrances are usually on the eastern side.

Post hole depth, fill type, finds (if any) will need to be examined at full report stage to determine the most appropriate interpretation of these features, given the two almost perfect circles of features in this area which must be regarded as potential round houses (these are marked on figure 118).

In interpreting these structures, we should bear in mind the distribution of the site finds. Though MIA potsherds are spread thinly over the whole of Area 10, there is a concentration in Area 10 (north) in the area of the structures and more generally in the northern end of Area 10 9. Taken at face value, these potsherds could represent domestic activity close to the structures. If so the sherds may not have derived from 'placed deposits' or via 'manure scatter' (pace Sealey). In other words, the overlap between the pottery spread and the group of post holes or small pits lends weight towards the 'granary' interpretation of the four-posters (granaries would normally be close to habitation sites), and also to the presence of round houses. A MIA - Roman loom weight fragment was found in ditch F4 section 2, only a few metres west of structure 2 and could also have been associated if the earlier end of its date range is correct.

A third four-post structure of apparent Iron Age date was excavated in the southern area of Area 10, south about 15m to the east of track 4 (*Structure 3*) [10]. Though this structure looks starkly isolated on plan, there are a few sherds of probably MIA pottery in one of its post holes (F313), in adjacent feature F326 and in ditch F1 sections 11 and 13. An interpretation of this structure as granary would be perhaps less appropriate than for *structures 1* and *2* (which are clearly in occupied areas) -perhaps this was an exposure platform? It may be significant that the 4-post structures were all close to trackways/field boundaries, locations similar to those where Roman burials have been identified in Area 6.

6.3.8 **The layout of tracks and field in Area 10**

Area 10 can be interpreted as an agricultural landscape within the early-mid Roman period and possibly earlier. The plan (Fig 11) shows several phases of agricultural ditches. A provisional attempt is made here to illustrate how this landscape may have developed over time, based on stratigraphical relationships.

---

[8] the first defined by F56, F20, F18, F48, F131, F54: the second by F55, F154, F58, F50, F47, F131, F130, F129.

[9] A10 (south) - 19 sherds (not cremation F296); A10 (north) - 60 sherds (not cremation F276); of which within 30m radius of structure 2 - 32 sherds.

[10] defined by post holes F313, F332, F335-6

Stephen Benfield of CAT has spot dated the pottery from Area 10. The material from the ditches shows a wide date range, from Middle Iron Age to Roman 2nd and 3rd centuries. In general, the MIA pottery is presumed to be always residual in the field ditches, and the LIA and Roman pottery contemporary with the creation and (multiple?) recutting of the ditches (this information is incorporated into the text below).

The provisional sequence provided should be subject to detailed assessment and analysis before a finalised site phasing can be produced. Three tracks defined by double ditches (*Tracks 1-3*) converge on a junction in the north-west part of the excavation area. *Track 1* (defined by ditches F4, F5) was orientated north-east/ south-west similarly but interestingly not identically aligned to the main curvilinear trackway (*Track 4*: defined by ditches F1, F3) which ran unbroken through Area 10, to the east of *Track 1*. *Track 2* (defined by ditches F8, F10) was perpendicular to *Track 1*, orientated north-west/ south-east whilst *Track 3* (defined by ditches F12, F13) ran north-north-west/ south-south-east apparently connecting with *Track 1* at an angle of approximately 135 degrees.

The form of the connection between *Tracks 1-3* strongly suggests that they were contemporary in their earliest arrangement. This conclusion is prompted by the curvilinear nature in plan of the connection points between the track ditches as they met at the junction. If the tracks were of originally of separate phases they would simply have crossed one another to form acute (right) angles. Although the archaeological phasing of the ditches is confused by numerous recutting episodes, where some of the ditches fell out of use and others continued as recuts, this basic landscape form as an earliest phase holds good. It is unclear whether *Track 4* (or an earlier version of its ditches) was contemporary with the laying out of *Tracks 1-3*. However, given the variation in alignment it is considered likely that its creation either pre or post-dated *Tracks 1-3*. The present dating evidence from *Track 4* shows that it post dated *Tracks 1-3* in its latest phase. However, this is not to say that it could not have been contemporary with them in an earlier phase (the evidence suggests *Track 4* was recut potentially removing much of an earlier phase).

6.3.9 **Fields**

If we assume that *Track 4* was once contemporary with *Tracks 1-3,* then a number of possible fields can be suggested. It is accepted that these 'fields' need not have represented open agricultural fields but this is the most likely scenario (pending further information on landscape character to be derived from pollen analysis of soil samples). The area enclosed by the northern ditches of *Tracks 1* and *2* is labelled **Field 1**. **Field 2** is postulated between *Tracks 1* and *4* whilst **Field 3** is postulated to the west of *Track 3* with an entrance way onto the field from *Track 3* at its northern end. The southern ditch of *Track 2* had a southern offshoot (F11), which rapidly swung westwards to enclose a possible field (**Field 4)**. An alternative interpretation is that **Field 4** is actually a curvilinear enclosure, lying mostly off-site. A further **Field 5** is postulated to the east of *Track 4*.

6.3.10 The **chronology of the ditch system** as indicated by stratigraphy alone is as follows.

Ditch fragment F9, the earliest form of *Track 2's* northern ditch, is clearly an early survival and produced MIA pottery (finds report, Appendix 2, 4). This ditch has two later versions indicating a long period of use. The earliest version of the southern ditch of *Track 2*, F272, where the ditch curves west to enclose 'Field 4', also produced prehistoric sherds with no Roman material. Close dating of the prehistoric pottery may provide an indication of whether a Late Iron Age phase (or earlier) is represented. It is assumed, given the manner of connection of ditches F9 and F272 with *Tracks 1-3* that all were contemporary at one time. However, *Track 1*, probably as a recut form, truncated ditch F9 of the earliest version of *Track 2*. The ditches of *Track 1* produced almost exclusively prehistoric pottery with the exception of one Roman 'greyware' sherd within the fill of ditch F5 (the northern of the two flanking ditches). This may suggest a Roman date for the latest use of ditch F5 and by implication of *Track 1*, although it may be significant that the southern ditch (F4) produced only prehistoric pottery thus suggesting the possibility that the Roman sherd was intrusive. The pottery finds from *Track 1* are therefore somewhat ambiguous and it the application of scientific dating in the form of

OSL may be the only means of confirming a prehistoric phase for this track. In this respect it is of note that ditch segment F272, of ditch F11, was recut (as F273) and that this recut included early Roman pottery in low density amongst a predominantly prehistoric assemblage.

6.3.11 At first glance it seems strange that ditch F9 effectively cut off the southern end of *Track 1* (in its presumed earlier phase) whilst ditch F5 of *Track 1* forms a boundary across the end of *Track 2.* However, it is considered that there must have been wooden bridges across these drainage ditches at the track/drove terminals to facilitate and perhaps control stock movement into a 'box junction' at the connection point of the droves. From here stock may have been divided/selected for movement elsewhere via another drove or have been herded into the adjacent fields. Such heavy use of this junction by stock may be demonstrated by the creation of a deeper 'hollow' at this location (which later required metalling as consolidation). A similar drove ended abruptly at a perpendicular enclosure ditch has been excavated at Gosbecks, and here use of a wooden bridge to cross the ditch was postulated (S. Benfield pers. comm.).

6.3.12 The southern ditch of *Track 1* (F4) appeared to curve into ditch F13 of *Track 3* to the south. The surviving phase (probably recut phase) of this ditch contained 'prehistoric', Late Iron Age and one or two early Roman sherds suggesting final silting in the early Roman period. This early Roman phase (possibly 1st century) was given further definition by the recutting of the north western end of ditch F9 of *Track 2* by ditch F8, since a diagnostic copper alloy rear-hook brooch was recovered from the fill (this has a date range of AD 40 to AD 60/65: report, Appendix 3). The brooch is a reliable dating item as it was found in good condition with its pin intact (ie had probably been buried in the ditch soon after it was lost or discarded). From this evidence it appears that *Tracks 1-3* were recut in the mid-late 1st century AD.

6.3.13 Ditch F14's south-eastern terminal end appeared to respect the western ditch of Track 4 (F3) with a gateway sized gap between the two features. This gateway was further illustrated by a later attempt to narrow the gap by means of a short curvilinear offshoot from ditch F3. Ditches F14 and F3 were perpendicular to one another and clearly formed elements of a landscape post dating the earlier tracks 1-3 (this combined earlier fields 1 and 2). The dating of curvilinear trackway 4 is clearly important. The western ditch F3 eight of its fill contexts produced only prehistoric pottery whilst six produced Roman pottery (including specifically early Roman sherds). Although there were no certain recuts noted it is probably significant that the eastern ditch of the track (F1) was observably recut in two of the excavated segments. Dating evidence from ditch F1 included prehistoric pottery solely from six contexts whilst Roman pottery was recovered in low density from seven of the ditch contexts. Two of the Roman sherds suggest a 2nd to mid 3rd century and later 2nd century date respectively – which accord well with the later 2nd century Samian pottery from perpendicular ditch F14. Again the frequency of prehistoric pottery and the recut nature of ditch F3 suggest the possibility of an extended period of use for Track 4, perhaps from a prehistoric origin. Alternatively the prehistoric pottery was entirely residual, derived from adjacent ploughsoil, and the recut version was an earlier Roman form.

6.3.14 The southernmost segment of the eastern ditch of track 3 was cut off by track 4 and therefore pre-date the western ditch of track 3. The implication is that the remainder of this ditch (ditch 13) continued in use but simply fed into the western ditch of track 4. The cut off segment of F13 surprisingly produced a Roman rim sherd of probable 1st/2nd century date suggesting that track 4 may date only to the early-mid Roman period. This former ditch terminal therefore related to the earlier landscape. The terminal was located a few metres south of the eastern ditch of track 4 where it appears to respect the earliest phase of a complimentary terminal for an east-west orientated ditch (F287). Ditch F287 ran east-west through the central section of Area 10 south. The earlier phase terminal appears to have formed an entranceway with the terminal of ditch F13 into a field encompassing the north east part of Area 10. Ditch F287 was later extended towards the eastern flanking ditch of track 4, again leaving an entranceway sized gap between the ditches. This extension shows that ditch F287 was in its latest phase part of the landscape bisected by track 4. A fragment of Roman tile and a Aucissa type brooch from the later phase of F287 demonstrate that the ditch was probably silting up in the mid-late 1st century AD, before the latest use of track 4. The Aucissa brooch is a type usually associated with the military in the Claudian/Neronian period (AD43-60) and demonstrates a very early Roman dating for the recut phase of ditch F287. It is certainly plausible that the earlier version of ditch F287 pre-dated the conquest based on this evidence. Interestingly the

brooch found in ditch F8 of Area 10 north (a Dolphin brooch) was similarly dated from AD50-60 and was also from the recut of an earlier trackway ditch (flanking track 2). Given the colonia status of Camulodunum it is tempting to in interpret the Aucissa brooch as having been lost by a veteran now working the land.

6.3.15 The abandonment of the trackway ditches was represented by the next phase, the construction of a gravel metalled layer (layer 5) over the silted ditch fills at the junction of tracks 1-3. This was designed to consolidate the apparently stock worn and seasonally wet area of the 'box junction'. Several fragments of possible Roman tile suggest a Roman date for the metalling. Although the ditches were silted and metalled over, the fact that the metalling was deemed necessary here suggests that the tracks/droves were still in use. It is plausible that their alignments remained defined by hedged banks or by hurdle style fences. The latter was in fact archaeologically represented by a series of stake holes along the length of gully F12, the western side of *Track 3* [11]. These stakeholes were not dug deeply enough into the base of the gully/ditch to have stood up unless the drainage feature had previously silted up. Therefore this later phase, associated with the silting of the trackways 1-3 and the metalling of the junction (and perhaps metalling of other areas of the droves – where gravel was preserved within local erosion holes) may be associated with flanking fences along the alignments of the silted ditches.

6.3.16 The final abandonment of use of *Tracks 1-3* may be evidenced by the disuse of the metalling represented by silting layer 4 above. Layer 4 produced pottery of possible early 2nd century date. Confirmation that the tracks were abandoned came in the form of ditch F14/10 cut on the line of the southern ditch of *Track 2* which cut away the earlier ditch but continued its line further south eastwards. The ditch cut through the metalled surface at the junction and severed the alignments of the tracks 1 and 3. The surviving version of this ditch seemingly had two earlier but shorter versions represented by a former recut terminal just to the south east of the former junction (F139 and F140). Ditch F14 was widest and deepest where it cut through the former junction and its base sloped down from both directions to form a sump at that location. The deeper ditch here either emphasised a persistent problem with drainage at the former junction, or was a statement of closure of the former routes. The lowest silts within the deep sump of F14 produced large and relatively unabraded sherds of Samian ware of a bowl form datable to the late 2nd century. This date was not contradicted by several other early Roman sherds from the ditch.

6.3.17 Environmental sampling of the largely early Roman ditch fills has shown that cereals were probably grown nearby, but there are insufficient examples for detailed analysis. A post hole associated with Structure 2 has yielded a wide variety of seeds and weeds (none of which are likely to have been in storage if this was a granary building). Early Iron Age cremation F276 had the richest group, including cereals, grassland herbs, and bedstraws. This suggests a mixed economy with arable and pasture close by.

Post-Roman landscape

6.3.18 There were no medieval or post medieval features of note within Area 10 (north). The known line of a 2nd World War tank trap, effectively the last line of defence to the south of Colchester, was investigated in the south-eastern corner of Area 10 (north). The tank trap runs from east-west and was four metres in width. A machine dug segment confirmed the expected steep sided and flat bottomed profile, with a full depth of about two metres.

[11] F23-4, F26-31, F107-112, F142-153

7 Discussion

Area 2

7.1 Prehistoric Land Use

Occasional struck flints suggest sporadic visits during the Neolithic period, and then perhaps again in the early Iron Age, but there is no evidence of permanent settlement at this time.

7.2 The Iron Age enclosure in a regional context

The earliest and major feature in Area 2 is the enclosure with the round house. This follows a tradition (dating from the Late Bronze Age in Essex) for placement of a large round house within a sub-square ditched enclosure (eg Lofts Farm adjacent to the Blackwater Estuary - (Brown 1988). The single circular structure can be paralleled by excavated and similarly dated (Middle to Late Iron Age) sub-rectangular enclosures in Essex under 0.25ha at Mucking (two enclosures), Stansted Airport (Brooks & Bedwin 1989), Ardleigh near Colchester and in Thurrock. A number of crop mark enclosures in Essex also appear to have contained single circular buildings. One of the sub-square Iron Age enclosures (the MIA enclosure 2) at Stanway may have been domestic in function, although there were no surviving remains of the associated round house (except for crescent of pits which may mark the position of a structure in the south-western corner of the site). A further local Late Iron Age enclosure with a round house has been excavated recently at Abbotstone (*The Colchester Archaeologist* 15, 4-6).

7.3 **Status, use and duration of use**

It appears likely that the settlement represented at the New Garrison site was of moderately high status due to the labour expended on its wide and deep ditches and the large size of the roundhouse. There was also a clear interest in the creating at least the illusion of status, via a more impressive ditch (and bank with possible hedge) on the eastern side where the main approach to the enclosure appears to have been located. The lack of macrobotanical debris in the enclosure ditches may indicate that the site was kept clean, as befits a high-status site.

Identification and excavation of the enclosure is of high value to the project research aims since its original construction in the later Middle Iron Age appears to pre-date the oppidum, the earliest phases of the dykes were in place by circa 25 BC, or possibly slightly earlier (Hawkes & Crummy 1995, 175). As such the existence of this site is of value because it demonstrates that the pre-oppidum landscape was open and exhibited a settlement pattern including moderately high status settlements. The duration of the settlement will be drawn out by detailed post-excavation study although there were clearly at least two phases of the enclosure ditch and a period of use long enough to create a hollow way leading to the site. The position in this sequence of the central ?burial will be of great interest.

7.4 Abandonment

It is not known why the settlement was abandoned, or precisely when. The absence of any Roman material must imply that it was out of use by the late Iron Age (at the latest). Its disuse was emphasised by the construction of a trackway cutting neatly through it. It may be that this was a deliberate act by 'new management' to underline that the enclosure and its uses were now defunct, or it may simply be a change of use (rather in the way that the Area 6 weaving shed (which implies sheep pasture?) was put out of use by the trackways (which imply a change to a new farming regime). Alternatively there may have been a period of time between the disuse of the enclosure and the digging of the trackway (cutting through the enclosure simply by coincidence).

In either event it is unlikely to be coincidental that the Late Iron Age to Roman trackway, and therefore field system, follows the same alignment as the earlier enclosure. The inference is that the alignment, or at least skeleton elements, of the landscape within this area of the oppidum, were in place well before the Roman conquest.

Area 6

7.5 Prehistoric land use

Prehistoric flints widely and thinly spread across the area suggest intermittent visits by Neolithic people, with a very slight bias towards the western side of the area. However, there is no sign of permanent occupation at this time. The first activity is represented by a group of probably Middle Iron Age sherds which are mainly residual in later ditches, but one in a ?contemporary tree-throw pit. A gully containing parts of loom weights may possibly mark the position of a structure (round house) marked by only two surviving post holes although a function as a 'stock funnel' associated with the droveway (with which it appeared to connect) seems more likely. If the weights provide a link with weaving, then a pastoral economy is suggested, possibly in an open landscape (since there is no evidence of field boundaries at this time).

Poor survival of environmental material means there is virtually no evidence on which to reconstruct the local prehistoric environment and its vegetation. The gully contained no pottery or macrobotanical remains at all, only a few flecks of charcoal, a factor which may be at odds with an interpretation as a residence.

7.6 Late Iron Age burial, associated settlement, landscape form relative to the oppidum

A late Iron Age burial at the west edge of the area may mark a new beginning for the landscape. It would seem logical to suggest this burial was deliberately placed next to the newly-constructed northern ditch of the trackway which possibly pre-dated the southern ditch and therefore the track itself (further finds study may help to determine this). If so, it may be an 'initial deposit' marking out a new boundary. One important point about the position of the burial is that it was immediately south of the ditch. The upcast bank would have covered the burial (or the burial would have had to of cut through the bank) if the bank was located on the south side of the ditch. It is therefore assumed that the bank and presumably an associated hedge, to provide stock control were located on the northern side of the ditch, a factor which was almost certainly the case when the ditch defined one side of the droveway[12].

The only known political event which may have led to such an alteration of the previous landscape was of course the initiation of the oppidum in the last few decades BC. There seems a compelling logic, therefore, in associating the two events.

7.7 The dating evidence for the co-axial landscape relative to the Roman villa

The excavation has provided firm evidence for the dating of the later phase of the co-axial landscape to the early-mid Roman period. Whether there was an earlier late Iron Age ditch system cut away by the Roman version is unclear at this stage, but the MIA pottery in the ditch fills and the positioning of a LIA burial up against the northern ditch of the east-west track strongly suggests elements of the co-axial ditch system is dated to the LIA. The Roman inhumation burials aligned with the field boundaries and trackways in fields 2 and 4 are a welcome addition to the understanding of the use of the landscape by the occupants of the Kirkee McMunn farmstead and suggest an affinity with the land, as might be expected with agricultural communities. The shared alignments of ditches at the contemporary Kirkee McMunn Roman villa clearly indicates that they were elements of a coherent planned landscape which included, or was based on the farm.

7.8 The use of the rural landscape for stock and arable management.

The excavation has also provided subtle windows into the manner in which stock were controlled within the field system including a possible 'stock funnel', gateway structure, the droveways and a possible stock holding, feeding and/or milking area. These are landscape elements often ignored in the past in favour of a settlement specific approach to archaeology. Excavations such as this have become a priority in recent times. The importance of stock has been demonstrated but relative proportions of pastoral and arable farming may be further informed by a series of pollen samples taken from the ditches. Initial results encourage the belief that some of these samples may be fruitful.

---

[12] Francis Pryor's reconstructed droveway at Flag Fen has its ditches on the inside, with banks outside.

However, there were less promising environmental results from the sieved samples relating to this period beyond the general point that a few single cereal grains suggest some arable element to the economy.

The use of the landscape following the mid-Roman period is less certain, since there are no ditches post dating that period. One possibility is that the area later reverted to woodland although less archaeologically visible framing landscapes are possible (see below). The analysis stages of the project, when full pollen and phosphate data are available, will focus on such issues of landscape use over time.

7.9 Farm building

A cluster of post and stake holes in the south-western part of the area (associated with a possible stock holding area) may be the remains of a structure - presumably either a set of fences/pens or a structure such as a barn. Contemporary finds are all of the Roman period.

7.10 Roman burials

Seven inhumation burials were laid out within the farmed landscape in the Roman period -two in Field 2 in the earlier Roman period, and five in Field 4 in the 2nd or 3rd century. It is clear that that the burials in both locations are aligned with regard to boundary features (ditches and hedges) rather than to a ritual orientation (for example east/west for Christian graves).

Two of the field 4 graves were particularly deep (and therefore presumably adult burials), the others were shallower (and presumably for children). No bone material had survived, but sufficient iron nails and (in one case) a charred rectangular plank suggest coffin burial. The species of the wood fragments may be identifiable by further analysis. There were no grave goods, and they were datable only by occasional sherds of Roman pottery in the grave fills. These individuals were likely to have been residents of the Kirkee McMunn farm

7.11 Subsequent land use - post-Roman

There is no direct evidence in the form of ditches or environmental evidence for the later use of the land in post-Roman times. However it may be that drainage ditches were not required in the late-Roman and post-Roman period due to the well drained nature of the terrace gravel plateau. In addition the banks provided by the digging of the ditches would probably have supported hedges that continued in use in later times as a perfectly adequate boundary. Indirect evidence for this may come from the medieval or post-medieval ditches of Area 2 which are on the same general alignment as the LIA to early Roman droveway in that area.

Area 10

7.12 Prehistoric land use - burials and specialist activity area

Scatters of flints suggest intermittent visits during the Neolithic period, but there is no sign of permanent settlement at that time. However, there is a distinct clustering of flints on the western edge of the area, suggesting a focus for prehistoric activity there.

Building on that picture, MIA sherds are found in relatively high concentrations in the northern area of the site (partly coinciding with a flint scatter pattern). Two further elements of the landscape come into focus. The first is burial ritual, and the second is the identification of 4-posters and other possible structures. There are two EIA or MIA cremation burials, showing that burial and ritual were an important focus at that time. One of the burials had a rich suite of environmental evidence including possible pyre debris, and abundant hazel-nut shells, and cereal grains indicating nearby arable activity.

Possibly associated with those burials is a group of pits and post holes which may define a number of contemporary structures. Whereas some of these may be four-posters, possibly involved with the ritual functioning of the site. There may be other structural elements here, possibly in the form of round houses. The major question here is whether the small number of features and pottery finds represent settlement or a satellite activity associated with ritual or farming within the wider Iron Age landscape. The absence of pits suitable for storage and the general paucity of finds may suggest that the activity area is indeed peripheral to settlement.

7.13 Iron Age activity area peripheral to the northern activity area

Further south than the potential structures discussed above, a third four-poster has been identified. There is very little other associated material around this structure, and an interpretation of a platform for exposing the dead or as a structure associated with grain storage/as a hay storage platform, is attractive. The two cremations, and the structures will contribute to our understanding of activities away from settlements.

7.14 Late Iron Age landscape form relative to the oppidum

Several periods of use are apparent in the layout of the trackways. Full analysis will draw out some of the finer points of this trackway and field system, but several points are already clear. There is no really strong case that any of the ditched tracks predate the oppidum, but ceramic evidence suggests a LIA or early Roman origin for Tracks 1-3, which may coincide with the original layout and use of the oppidum.

7.15 The dating evidence for the duration/sequence of Roman landscape development

The excavation has provided further firm evidence for the dating of the later phase of the co-axial landscape to the early-mid Roman period, according to metalwork and ceramics, whilst there are hints of a prehistoric origin. The junctions of the tracks appears to have been important locations within the agricultural landscape. It is suggested that tracks 1-3 worked as a planned system in their early use, since although clearly recut in a complex fashion, the tracks once curved to meet one another as a unitary drainage system. Stock would have been driven from the south, north-west and north-east to the 'box junction' point which presumably was used for stock sorting before the animals were released into the adjacent fields or continued to be driven along another drove. The emphasis on the point at the head of the three tracks is emphasised by its heavy wear, which required metalling in the early Roman period.

Track 4 was also in use in early Roman period according to ceramic evidence, although it is still not certain whether it followed the course of an Iron Age trackway. The results compliment those of Area 10 north and Areas 1 and 10 to provide a detailed sequence of landscape development from the oppidum period and well into the Roman period.

7.16 The use of the rural landscape for stock/arable management

At this provisional stage the use of multiple drove tracks across the landscape suggests a heavy emphasis on livestock farming. As in Area 6, important information regarding the means of managing the controlled movement of livestock has been identified. However, Area 10 north has revealed far greater detail on the chronological development of this landscape from at least the mid 1st century AD (but probably earlier) up until the late 2nd/ early 3rd century AD.

The complexity of the junction suggests longevity of the associated field system. This evidence is important for landscape development studies because at such locations the fragments of earliest phases of ditches are most likely to survive later recutting. It is suggested that tracks 1-3 worked as a planned system in their early use, since although clearly recut in a complex fashion, the tracks once curved to meet one another as a unitary drainage system. The earliest phases contain only prehistoric pottery and could therefore pre-date the Claudian conquest. This would be an important conclusion since it would suggest continuity of landscape from the Late Iron Age oppidum period well into the Roman period.

There is clear evidence, in particular the metalling for the maintenance of the tracks into the 2nd century AD, by which time they were heavily worn and prone to poor drainage, making their use difficult. On the basis of the limited dating evidence, it appears that this arrangement of droves 1-3 was replaced by the linear Track 4 at least in its latest form in the late 2nd/3rd century. As with Area 6 there are no features certainly later than the 3rd century. This may suggest landscape re-organisation in the later Roman period although elements of the track system may have gone out of use beyond the period of observable evidence provided by silted ditches (see Area 6 above). It is hoped that scientific dating methods may resolve the problem of refining the phasing whilst environmental studies of the soil samples may help establish the nature of the local landscape and economy.

7.17 Subsequent landscape use - post-Roman.

There is no archaeological evidence for post-Roman land use in Area 10 other than the construction of the WWII tank trap. However the same factors of archaeological invisibility of later landscapes applied to Area 6 above, apply for Area 10.

8 Summary of finds and Environmental Analysis

8.1 The small finds - assessment summary

by Nina Crummy

Summary

This is a summary of a full report (in Appendix 3, below). The assemblage consists of a minimum of 131 objects ranging in date from Iron Age to modern. Stone and iron are the largest material groups present. The functional categories represented are very limited.

Condition

The majority of the metal items are in fair condition. Most of the stone and ceramic items are very weathered and abraded, a condition typical of objects from a ploughed rural site.

The assemblage

The assemblage can be divided by material thus:

copper-alloy (?silver) coins & tokens	6
other copper-alloy	19
lead	2
iron (small finds)	17
iron (bulk)	63
ceramic	6
stone	17
natural accretion (not a small find)	1
Total	131

Broken down by date, which for undiagnostic objects is based on the provisional phasing, and excluding the iron nails, the assemblage can be presented thus:

	Coins	***Cu-al***	***Lead***	***Iron***	***Ceramic***	***Stone***
Middle Iron Age	-	1	-	-	1	-
MIA/LIA	-	-	-	1	-	-
Late Iron Age	-	-	-	-	1	-
LIA/Roman transition	-	-	-	1	3	14
Roman (& ?Roman)	-	6	1	8	1	-
post-medieval and modern	6	12	-	4	-	1
undiagnostic & unstratified	-	-	1	3	-	2

The nails, where the head and sufficient of the shank remains, are all of Manning's Type 1b, with round, more or less flat head. They are show below by context date and Roman context type; numbers in the table represent the minimum number present (*ie* number of bags):

Several fragments of copper-alloy wire, a piece of sheet iron, some nail shank fragments (three from one context/bag), loom weight fragments and a spindlewhorl come from Iron Age contexts. Also of either late Iron Age or early Roman date are fragments of what may be a brooch spring from Area 6, F304. Beehive-shaped Puddingstone quern stones are also an artefact type that originated in the Late Iron Age, though the majority come from Roman contexts and production appears to have continued into the 2nd century. The single small fragment from Area 6 is therefore most likely to be of Roman date.

A Rearhook (Dolphin) brooch came from ditch F8 in Area 10. The brooch was complete when buried, though the spring and pin are now separate. The bow has been partly snapped and twisted at the lower end, deliberate damage which suggests that this brooch is a selective placement, though it came from the upper fill. The brooch type dates to c AD 40-60/5 and is of native British manufacture. An Aucissa brooch from ditch F287 in Area 10 is a contemporary imported type, used by the Roman military, and dates to c AD 43-60/5. The majority of the remaining Roman items are quern stones and nails. Fragments of German Mayen lava flat querns were found in a number of

ditch sections. Two fragments of Millstone grit flat querns, from quarries in the Pennines, were also recovered.

Recommendations

1) To facilitate identification and illustration and allow the Summary Catalogue to be refined (see 2 below) and a detailed catalogue of and report material to be prepared (see 3 and 4 below) all the ironwork should be X-rayed (80 objects) and the copper-alloy items should be cleaned and stabilised (25 objects).
2) The summary catalogue should be refined after the metalwork has been cleaned/X-rayed to form a final archive catalogue.
3) A detailed catalogue of the Iron Age and Roman material should be prepared.
4) The catalogue should form the basis for a publication-standard report that concentrates on setting the objects in the context of the land-use of the area during the Iron Age and Roman periods. Where appropriate, similar items from within the eastern region should be cited as parallels. The assemblage is too small for meaningful statistical analysis by either date or function, but its general character should be compared to those from sites of similar date and similar use from the immediate area and from the region in general.

8.2 The earlier prehistoric pottery - assessment summary

by Paul Sealey

Introduction

This is a summary (by HB) of a full report in Appendix 4 below.
The pottery discussed in this evaluation is all the prehistoric pottery from the garrison excavations that pre-dates the introduction of the grog-tempered and wheel-thrown pottery of late Iron Age type known as Aylesford-Swarling or Belgic ware. For convenience it is called 'pre-Belgic' here.

Quantity and Condition of the Material Recovered

Some 8 kilos of pre-Belgic pottery was excavated. It was distributed unevenly between the three areas excavated. More than half – 4.5kg – came from the enclosure in Area 2. Two kilos came from Area 6, and 1.5kg from Area 10.

A Characterisation of the Pottery Recovered

The great majority of the pre-Belgic pottery from the garrison is middle Iron Age sand-tempered ware. It is hand-made and plain, with virtually no decoration at all.

Aspects of Chronology

There are enough sherds with diagnostic typological features from Area 2 for one to be sure that the pre-Belgic pottery there is exclusively middle Iron Age. In Essex middle Iron Age pottery was current from *c.*300-75/50 BC (Sealey forthcoming). Where typological features are lacking, study of the fabrics present can help resolve problems of identification and chronology. Apart from the sand-tempered pottery, the only other significant tempering present at the garrison is flint or flint-with-sand.

Area 2

Area 2 produced 4.5kg of pre-Belgic pottery. Most of it is sand-tempered with little in the way of flint or flint-with-sand temper. Typologically the pre-Belgic pottery is unmistakably and exclusively middle Iron Age. The most important single source of pottery was the enclosure ditch. Small quantities of middle Iron Age pottery were present elsewhere on the site, in the central round house and (as a residual element) in the droveway that sliced across the enclosure in the late Iron Age. An important middle Iron Age vessel was retrieved from the centre of the round house. Although it is now incomplete, it may have been placed complete, possibly as a cremation.

Area 6 was 10,175m² in extent and produced 2kg of pre-Belgic pottery. Most is sand-tempered, with only a few sherds tempered with fine or coarse flint (with or without sand). The few sherds with diagnostic typological features are middle Iron Age and there is no reason to think that any of the pottery is earlier. A few groups were residual in the fills of Roman inhumation graves. Most of the pottery came from the ditches of droveways or from field boundaries, with some from a stock pen and stock funnel.

Area 10
The only assemblage of garrison pottery certainly earlier than middle Iron Age came from a cremation at the north of the zone, F276. It included a large flint-tempered base sherd with no rough-casting on the base. Rough-cast bases are a typical feature of late Bronze Age pottery (Rigby 1988,103) and their absence here suggests the garrison group is Iron Age.

Research Potential of the Garrison Pre-Belgic Pottery
Despite its initially unpromising aspect, the pre-Belgic pottery from the garrison is important, and can make a significant contribution to knowledge.

8.3 Later prehistoric and Roman pottery - assessment summary

by Stephen Benfield (CAT)

This is a summary (by HB) of a full report (Appendix 5, below). This assessment covers the Late Iron Age (LIA) pottery (essentially grog tempered wares) and all Roman wares. There is approximately 34 kg of LIA and Roman pottery from the three sites. This is composed of: Area 2:0.09 kg: Area 6:12.53 kg: Area 10: 21.1 kg.
Most of the pottery is medium to small abraded sherds from pit and ditch fills, which includes some fine ware and imports such as samian and amphora.

Work to date:
The pottery from each context has been rapidly spot dated by find numbered bag, fabrics and forms noted as well as aspects such as degree of abrasion. An impression of assemblage composition and sherd size have also been noted. Weights of pottery have only been recorded as total assemblage weight for each area. Four pots from a cremation group have been sketch drawn prior to the removal of their contents.

Proposed further work:
It is proposed that most of the LIA - Roman pottery can be processed as a whole. However it should be noted that specialist contributions or consultation may be required on particular categories of pottery or in special circumstances, the most obvious of these categories of pottery being samian ware. Of pottery which will require further specialist input or comment there is a preliminary identification of a Dressel 1 amphora sherd from Area 6 (Dr. P. Sealey pers. com.). This vessel this will require further specialist comment, and all other amphorae sherds should also be at least visually reviewed by a specialist.

Recording and quantification:
Overall quantification should be based on fabric groups. The Roman pottery can and should be quantified using the Colchester fabric series devised by Symonds & Wade (1999) . There is no detailed local fabric series for LIA pottery and quantification by fabric will have to be based on perceived meaningful fabric differences in the assemblage itself, though most will probably be divided/subsumed into various categories of Grog Tempered Ware (GTW).
The quantification of the pottery should consist of sherd count and weight for each fabric, and degree of abrasion to sherds.
Any identifiable pottery forms should be recorded as far as possible using the Camulodunum form type series (Hawkes & Hull 1947 & Hull 1958 & 1967) which covers LIA and Roman pottery providing a firm core for recording of pottery forms. For the Roman pottery any additional forms, variants, or more specific form details can be compared for the Roman pottery with the illustrated material in CAR 10.

Discussion
This is the first large scale excavation project which covers extensive areas of Camulodunum beyond the known focal sites of the Roman town itself, Sheepen, Gosbecks and Stanway complexes. Given the overall aspect of the assemblages it is anticipated that the primary input of the LIA/Roman pottery to the report will be one of dating which will enable further discussion by the excavators in relation to development of the landscape in the LIA, the LIA – Roman transition and

Roman period. However as group of assemblages from the wider area of the Camulodunum complex the pottery itself is of intrinsic interest in relation to previous assemblages from the known focal sites. The report (as far as the nature of the assemblages will allow) should contain a written discussion covering aspects of the range of pottery types and chronological aspects for each of the areas to enable comparison both between the excavation areas, and with other assemblages from the major sites listed above. For the excavation areas themselves assemblage size, composition and condition could suggest process by which the assemblages were formed on each area, for example on site or near-by settlement rubbish, and/or ceramic detritus in field manure scatters.

8.4 Ceramic building materials - assessment summary

by Ernest Black

The material has been examined and catalogued by Ernest Black. This is a summary of a full listing in Appendix 6 (below) [HB].

Discussion (EB)

Most of the fragments of tile produced from all three areas were unidentifiable: in many cases this was because the fragments consisted of mere chips or scraps of tile. Identifiable fragments were also small with only 17 fragments from all three areas having a dimension greater than 100 mm. The number of identifiable fragments from each area was: Area 2, 5 fragments (three brick, two tegula); Area 6, 77 fragments (44 brick, 25 tegula, seven imbrex, one box-tile); Area 10, 7 fragments (five brick, two tegula). It seems likely that Area 6 was closer to the source of the tiles than Area 2 or Area 10. The nearest known potential source for the tiles is the possible bath-house at Kirkee McMunn Barracks and this in fact lies nearer to Area 6 than to the other two Areas. The box-tile fragment from Area 6 may support this though it is too small to provide a match with the material from the bath-house. Of the brick fragments 41 had a thickness of 36 mm or less; eight fell between 36 and 44 mm; only two had a thickness greater than 44 mm. Aspects of chronology can be commented on when context dating is available.

8.5 Prehistoric flintwork - assessment summary

by Hazel Martingell

Introduction

This is a summary (by HB) of a full report by Hazel Martingell in Appendix 7, below.

Discussion

The 76 pieces of worked flint from areas 2, 6 and 10 were of significant interest. Thirty seven percent were diagnostic of the two types of late prehistoric and in particular Iron Age lithic technology:

Some of the flakes were of the 'salami' type' That means that, first, a suitable block of flint was selected, from which flakes were struck in sequence, one from behind the other. This usually leaves the cortex (the outer skin of the flint nodule) around the edge of the flake, apart from the sharp edge or retouched area. There is no core preparation with this technique.

Alternatively, a block of flint with one flat surface is chosen and used as the core. From this core, thick butted tapering flakes are struck from the flat surface (i.e. the platform). There is minimal core preparation with this technique, but sometimes the flake platform edge shows some preparation. (Find 78).

Most of the remaining pieces could be waste from these processes. Only 9% of the remaining flints cannot be associated with the Iron Age. One was a gunflint, which was probably made within the last 200 years. the other six are blades which are most likely to be early Neolithic in date.

Conclusion

It is extremely interesting that the flint artefacts appear to reflect the Iron Age occupation of the landscape. The six blades could suggest minimal agricultural use in the early Neolithic, or possibly they were retrieved and reused in the Iron Age.

8.6 Post-Roman glass - assessment summary

by Howard Brooks

A small group of post-medieval glass is described in a fuller report in Appendix 8 below. This material is not of significance within the research priorities of this project.

8.7 Faunal remains - assessment summary

by Julie Curl

This is a summary (by HB) of a full report in Appendix 9 below.

Summary

A total of 1.034kg of faunal remains, consisting of over 90 fragments, was recovered from three areas during excavations at the Colchester Garrisons. Remains of equid[13], cattle and sheep/goat were identified, although most of the bone was in very poor condition.

Methodology

All of the bone was examined, primarily to determine species present, types of bones and any butchering that has occurred. Ages of the animals were estimated where possible from the fusion of the bones and the wear on the teeth. Bone was quantified by counting the total number of pieces in each context, the number of measurable and countable bones following guidelines supplied by English Heritage (Davis 1992) and the number of bones identified for each species. Bone was also weighed for each context. All of the information was recorded on the faunal remains recording sheets and the information input into an Excel database for analysis. A table giving a summary of the information is included with this report.

Results and conclusions

Overall, the bone in this assemblage was in very poor condition, with no complete elements present. Bone was recovered from three areas, 2, 6 and 10 and included bone from features including Iron-Age pits, Roman ditch fills to modern trench fills, some animal bone was found with human cremated remains. No further work is recommended.

[13] horse

8.8 Cremated human bone - assessment summary

by Sue Anderson (Suffolk C.C. Archaeological Unit).

Introduction

This is a summary (by HB) of a full report in Appendix 10, below. All Garrison bone was scanned by this writer first, then all non-human (faunal) were passed to Julie Curl. Groups of bone from one definite and two possible cremation deposits were assessed.

Area 2

No human cremated bone was present in the sample from the central cremation (F49).

Area 6 F63 (109)

This was the most complete of the three cremation burials, and was buried with four Roman pots. A total of 145 fragments weighing 44g was collected (2 skull 1g; 13 upper limb 18g; 9 lower limb 9g; 121 unidentified 16g). The individual was an adult, but there were no diagnostic criteria to assess either age or sex. No pathological changes were seen.

Area 10 F276 (175, 177, 178, 185, 187, 188)

This feature was identified as a possible disturbed Iron Age cremation burial. The six contexts all produced less than 1g of bone, and a total of 13 unidentified fragments. This was a mature adult. Sex was not identifiable.

Area 10 F296 (208)

This feature may also be a disturbed Iron Age cremation. Only seven small fragments of burnt bone were recovered (<1g), of which one was a tooth fragment (upper mesial incisor or canine?) and the rest were unidentified. Age and sex were not determined.

Further work

No further work is required on the assemblage seen by SA. However, the sieved samples (Val Fryer, appendix 11) have produced some burnt bone (cremated human bone?), which will be examined and reported on at the full analysis stage. Bone has been identified by in the following contexts:

F14 Area 2 south enclosure ditch
F63 Area 6 cremation
F276 Area 10 cremation

8.9 Environmental evidence - assessment summary

by Val Fryer

Introduction

This is a summary (by HB) of a full report in Appendix 11 below. One hundred and six samples were submitted for assessment.

Plant macrofossils

The majority of assemblages were very small and plant macrofossils were generally extremely rare. However, cereal grains/chaff, seeds of common weeds and wetland plants and tree/shrub macrofossils were recorded at a low density in approximately fifty three samples. Preservation was generally poor, with many of the grains and seeds being puffed and distorted (possibly due to high temperatures during combustion) or fragmented.

Conclusions and recommendations for further work

In summary, with few exceptions, the assemblages from all three excavated areas are small (<0.1 litres), containing very few macrofossils apart from charcoal. Only rarely is sufficient material present to enable tentative interpretation of the features recorded during excavation.

As is to be expected, much of the material recovered from Area 2 is probably derived from domestic detritus, although the round house itself appears to have been kept very clean. Rubbish was probably dumped in the nearby western enclosure ditch. The enclosure may have been hedged on at least two sides, and the ditches possibly held standing water, although possibly only during the wettest seasons. The track way ditches in Areas 6 and 10 appear to contain little other than wind-blown detritus, although a small quantity of refuse may have been deposited close to a gateway to the main track in Area 6. A post-hole within four-post Structure 2 in Area 10 produced an assemblage similar to that from a nearby cremation, although at present it is difficult to link the two features and this similarity may simply be due to a shared source of material, namely the local flora.
Of the samples studied, only two (samples 64 and 133) contain quantifiably viable assemblages (i.e. 100+ specimens). Further analysis of these two samples should be undertaken to provide detailed evidence for the local environments of these features and to provide a baseline contribution for future work in this area.

8.10 Phosphate analysis - assessment summary

This assessment has been carried out by Phil Clogg of the University of Durham. Initial indications are that the results may be promising in certain cases. A full report is awaited.

8.11 Pollen analysis - assessment summary

by John Daniell (University of Gloucestershire)

Introduction

Samples for pollen analysis were collected on site by the author. Sub-samples of at least 10ml were taken from the sample monoliths. From these any pollen was concentrated using standard methods as described in Faegri and Iversen (1989) and Moore et al. (1991).

Report

Unfortunately, there was very little in any of the sub-samples, with the exception of charcoal and a few pollen grains. The provenance of the isolated pollen grains is not certain, and nothing can really be inferred from them. The data is presented in tabulated form below. Five processed surface samples have been passed to Pat Wiltshire. It is recommended that these should be examined in full.

8.12 OSL dating - assessment summary

by Jean-Luc Schwenninger

Measurements have been taken on all five samples collected by the author. The results of the neutron activation analyses (NAA) to calculate the age estimates, are awaited. The luminescence measurements on samples OSL1, 2 and 3 are rather scattered and I suspect that this may be due to partial bleaching, where the sediment has not been properly reset by exposure to light and some grains may have retained a small 'geological' signal. For this reason the OSL age estimates of theses samples are likely to be unreliable.

There is little that can be done in such cases except to try and date single grains with a single-grain laser machine and thereby isolate the geological signal from that associated with the archaeological phase. This type of analysis is very time consuming and costly, and is not worthwhile for the project budget.

However, the author will conduct the work free of charge due to its experimental nature in terms of dating ditch fills. He is keen to do the work because he still feels that he can get a reliable date. At the earliest, this will be conducted around the end of March, beginning of April. In addition the author has processed and measured the extra samples OSL4 & OSL5 and is confident that dates can be obtained from those samples. The measurements look promising although they are probably a bit too high to be Roman.

8.13 Charcoal - assessment summary

by Anne-Maria Bojko (Colchester Museums)

Thirteen samples were received for identification (Area 2, 5 samples, Area 6, 5, Area 10, 3). Six can probably be identified - the best samples being from Area 2 feature 6 and Area 10 F34.

Recommendations

Full identification should be done on the favourable samples.

9.0 Assessment of Results and Recommendations for further work

9.1 The following assessment is a necessary component of an archaeological investigation as defined in Management of Archaeological Projects (English Heritage 1991) in order to identify the potential of the data to contribute to archaeological knowledge.

9.2 Aims of the assessment can be defined as follows:

- to highlight those elements which require further work,
- to assess the potential of each category of the data to contribute to the research themes,
- to review the research themes themselves and to identify new research aims arising from the assessment.

9.3 The following research themes and project aims are addressed here:

Overarching Research Aim: To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period.

Project Aim 1. What was the nature of small scale agricultural Neolithic and early-middle Bronze Age activities within the site, and in particular can ritual and/or settlement areas be identified?

Project Aim 2. What was the nature of later Bronze Age/ early Iron Age activities and in particular is there evidence of the emergence of more permanent settlements and field systems within the proposal site?

Project Aim 3. What was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there indications of landscape division and settlement which might allude to the origins of the communities responsible for the later construction of the oppidum?

Project Aim 4 – To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

Project Aim 5 - To clarify the form/function and duration of the trackways with respect to the oppidum and to establish which elements of the social landscape they connected.

Project Aim 6 – To place Berechurch Dyke within a detailed chronology of the layout of other internal oppida features such as the curvilinear trackways and the co-axial track/ field systems.

Project Aim 7 - To establish whether there are any surviving remains of the rectilinear enclosure at the Musket Club or associated external features within the proposal site footprint, and to characterise the function of the enclosure within the oppidum complex.

Project Aim 8 – To clarify the date, form and function of the co-axial field system, to establish the nature of its development within the oppidum and/or the Roman town's hinterland and to establish the evidence for association with the probable villa at Kirkee McMunn Barracks.

Project Aim 9 – What was the nature of Saxon and medieval landscape within the development site and what was the relationship of the landscape to Saxon and medieval Colchester.

Project Aim 10 – To record and contextualise any modern military features within the New Garrison site for which there are insufficient current records.

9.4 Overarching Research Aim

To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period.

The excavation has **moderate to good** potential for addressing this aim. Within this broad aim, the following headings are discussed:

Agricultural clearances - Neolithic period onwards.
It was hoped the pollen sampling would throw useful light on the extent of tree clearance, especially in the Neolithic period. However no earlier prehistoric (Neolithic to earlier Bronze Age period) features and thus there is no pollen data available for these periods. Soil columns were extracted from a number of late Iron Age to early Roman ditches in Areas 2, 6 and 10, but results have been disappointing. Some pollen was identified in the Area 2 MIA enclosure ditch, and also in both ditches of the main trackway within Area 6. These small samples may shed some light on contemporary (ie MIA or Roman) vegetation, but the results will not have a broader significance.

Bronze Age planned and 'owned landscapes'
There are no site features of this period, nor any ceramic finds (except any which may emerge after detailed study of the earlier prehistoric pottery). Even the flintwork is more characteristic of the Neolithic and Iron Age than of the Bronze Age. It appears that this part of Colchester was not enclosed into fields or owned at this period although it is probable that LBA ceramics found during the evaluation stage within the adjacent Urban Village proposal area may relate to the settlement evidence which is virtually absent from the New Garrison site.

The pre-oppidum phase - the Early and Middle Iron Age
It is in this period that the first signs of activity become clear. Two cremation burials in Area 10 may show that the land was being claimed in a ritual act associating ancestral remains with a landscape which may have been cleared at this time for if it had not already been cleared. There is no clear sign of field ditched or tracks at this period. Instead, a possible structure possibly connected with weaving occupied an apparently unenclosed (pastoral?) landscape in Area 6, and a high-status enclosure with round house was constructed in Area 2 presumably as the home farm or estate centre of the surrounding agricultural landscape. Environmental samples from the cremations show cereal grains, and grassland weeds - a reflection of the emergence of a mixed farming economy.

Creation of the oppidum
The creation of the oppidum is evident in the creation of the trackways and fields seen in all three excavation areas. Ceramic evidence from the ditch fills makes it reasonably clear that the ditches were cut in the Late Iron Age or early Roman period, which makes them contemporary with the creation of the oppidum (ie the first of the defensive dykes, and the origin of settlement at Gosbecks Farm).

The effect of the establishment of the Roman town on the agricultural hinterland
This is among the least tangible of the project aims, since the Roman town is some way to the north. There is no doubt that the farmers and settlers working the land in Areas 2, 6 and 10 would have sold or exchanged their produce with the townsfolk. Whether the townsfolk were among the land owners is impossible to say, but is a reasonable possibility. In terms of the possibility that the tracks observed in Areas 2,6 and 10 were laid out immediately following the conquest, the evidence is ambiguous. Whilst most of the ditches contained early Roman pottery, which could be consistent with such an initiation, they also contained quantities of LIA pottery potentially derived from earlier phases of the ditches. The Area 10 ditch recuts (of earlier undated ditches) which contained mid 1st century AD brooches, suggests that the earlier ditches may have been cut in the LIA.

Forest clearance, managed woodland,
Forest clearance, the relative levels of arable and pasture, and the seasonal use of the wider landscape for wildwood resources is a topic which would have been illuminated by the pollen analysis and the phosphate sampling. In the absence of any positive data from these sources, all that can be said is that the environmental data from the Area 10 cremation showed grassland herbs and cereal grains, so it is clear that there must have been both grassy areas and arable close to

Area 10 in the Iron Age. Also, the central part of Area 6 seems to be in open country, which is presumably pasture (also in the MIA or LIA).

Assessment of local patterns of settlement interdependence, including shared and exclusive resource areas and symbolic places.
The cremation burials (as markers of territory and claims on land with the protection of ancestors) are potentially included in this category of symbolic places, both in Area 10 where possible burial platforms of the Iron Age in the northern area were possibly placed with regard to an earlier EIA cremation. The LIA and Roman burials within Area 6 may have been placed next to field boundaries in a symbolic relationship to their controlled landscape.

With regard to shared resources, lack of pollen data means we are unable to identify any natural resource areas with any degree of certainty. The very existence of enclosed land with ancestral burials presumably implies that the settlers here regarded their land as private, and not a resource to be shared with neighbours.

Structural and spatial information of the size and location of fields and tracks
The location of the principal tracks, as plotted initially from air photographs, geophysical survey, trial trenching and now excavation is now firmly established. The use of air photographs as well as excavated evidence shows that Field 1 in Area 6 appears to be a square plan field with an area of 4,500 square metres. The planned co-axial landscape of Area 6 is contrasted slightly by the more organic nature of the development of the trackway defined landscape of Area 10.

Palaeo-environmental studies and an 'agrarian sociology'
This aspect of the landscape and the link between the roles of livestock, use of cereals and of raw materials are considered to depend to a large extent on pollen sampling (to establish vegetational history) and phosphate sampling (to establish stock areas). Both these methodologies have been disappointing. However the trackway system is a good indication of the importance of livestock to the landscape's occupants and aspects of the social importance of livestock in terms of status and wealth will be investigated during the analysis. The use of stock is also demonstrated by the wear to the trackways, particularly at junctions and by the hollow way at the entrance to the MIA enclosure. Whilst gateway structures, fences, the stock funnel in Area 6 and the heavily eroded depression - possibly within a barn or coral also in Area 6, provide further indications of their presence.

The role of plant remains
The identification of the role of plant remains in the provision of fodder for stock, fuel, thatch, and bedding, in addition to the basic role of crops as provision of staple food for human consumption is a theme dependent largely on the results of pollen sampling and environmental sampling. On the whole, the results of pollen sampling have been disappointing, and will not contribute materially to this theme. The evidence from the environmental sampling is better, but still patchy. Samples of various bedstraws came from the Area 10 cremation, showing that at one local resource is being gathered for a specific reason. Otherwise, there is evidence for cereal production in these areas, but on such a small scale that arable cannot be proven to have been the dominant farming regime.

The role and proximity of both 'wild' woodland for the provision of building resources and managed woodland such as coppice for hurdle making is a topic which would have been illuminated by the pollen and environmental sampling. However, neither source has proved to be fruitful in this regard.

Non-settlement related landscape components
This category of features might include trackways, quarries, salt working sites, temporary camps, waterhole/well sites and shrines. At the Garrison site, the trackways fall into this category. Trackways were found crossing all three of the excavation area. The function of the trackways was to move stock between various parts of the farmed landscape at appropriate times (for instance, to bring stock through cultivated zones so that they can be folded on fields to manure the ground and break up the ground with their hooves to assist with the fertility and cultivation of the same field at the appropriate time in the agricultural cycle. The presence of trackways does have some implications - there is no need to construct trackways if one wished to keep a flock of sheep on open pasture where they can roam freely. The three 4-posters and the pit/ post-hole group in Area 10 seem to be relatively isolated and could represent shrine sites away from settlement foci.

Symbolic interpretations of the landscape suggested by burial sites

The cremation burials in Area 10 were made at the beginning of the period of land division and are used symbolically to lay claim to territory. Similarly, a cremation on the north edge of the potentially later main track in Area 6 seems to mark the new field boundary in the same way.

9.5 Project Aim 1

What was the nature of small scale agricultural Neolithic and early-middle Bronze Age activities within the site, and in particular can ritual and/or settlement areas be identified?

Introduction

The excavation has **poor** potential for answering this project aim. Evidence for Neolithic, and Bronze Age activity at the Garrison is very limited

Background to Project Aim 1

The current state of understanding of settlement of the period suggests shifting agricultural practices with short term or even seasonal settlement cycles. Wild plant and cereals may have been of equal importance, although the main economic resource appears to have been domesticated stock. The most common expressions of Neolithic activity are flint artefact scatters within modern ploughsoils, in most cases suggesting that shallow features or Neolithic land surfaces have been ploughed out. The extensive fieldwalking programme at Colchester Garrison PFI produced no such scatters, although this may in part relate to a lack of local raw material and consequently local flint-working. The next most common category of Neolithic site are scatters of small pits, usually on high ground and often implying seasonal use of the location. Numerous isolated and groups of pits are commonly encountered in plateau locations in Southern Britain and Essex (Brown and Murphy 1997, p12; Healy 1992, Brown 1988a) (similar to the location of a probable Neolithic feature within area M). The evaluation provided no evidence for Neolithic ritual landscape features such as cursus monuments (Hedges and Buckley 1981) or long barrows which are rarely found in East Anglia (Ashbee 1970).

The large pit uncovered at evaluation stage (feature MF105) within the northern area of field M is indicative of limited Neolithic settlement activity on the higher elevations overlooking the adjoining river valleys. Interestingly the pit is much larger than those normally found at Neolithic occupation sites. The unusual size is more typical of a waterhole or well which would be unusual for the period (for example no such Neolithic features were encountered during the wide area landscape excavations at Perry Oaks Heathrow, in contrast to wells and waterholes of the following periods (Framework Archaeology 2000). The elucidation of this feature will be a priority of the Stage 2 excavations should detailed design of the sports pitches indicate that there will be an construction impact. Artefacts within the large pit were sparse, typically for a 'landscape feature' but further excavation if required would have potential to provide ceramics and further flintwork which may more reliably date it. Further pottery may be characteristic of particular traditions, for example early Neolithic Grimston pottery occurs widely within the region (Brown and Murphy 1997 p.14). Bulk environmental sampling, provision of a monolith sample for pollen extraction and recovery of charcoal for radiocarbon dating will be priorities should this feature be impacted. A wider area around the pit would also be examined to establish whether the feature is isolated.

A lack of alluvial sediments and of peat in particular at the New Garrison site combined with the low grade inorganic nature of the single probable Neolithic deposit to date may unfortunately preclude detailed environmental study. Such studies can characterise the scale of Neolithic forest clearance and therefore of the intensity and nature of local human activity. The paucity of residual flintwork of late Neolithic and early Bronze Age and a lack of such dated features from both the evaluation and excavations may demonstrate very low levels of activity at the New Garrison site at these times and perhaps forested conditions. There are no firm indications of Middle Bronze Age settlement areas within the New Garrison area. It is possible that this area was peripheral to settlement at this time. It is interesting to note that settlement of this date is implied elsewhere in the vicinity, such as at Sheepen, by Deverel Rimbury cremations (Crummy pers comm). Was the New Garrison site still largely forested prior to the later Bronze Age?

Project aim 1 discussion

There were no site features of this period. The only finds were loose flints which indicate some level of Neolithic activity here without any evidence for permanent settlement. The flint evidence also suggests very little activity in the Bronze Age. There is some evidence for a concentration of flints in Area 10, which may hint at some prehistoric (non-settlement) focus of activity.

Scale of contribution to project aim

There is **moderate to low** potential for further analysis of the site evidence to contribute to archaeological knowledge. The main consideration will be in terms of an accurate plot of the flints with a consideration of the Area 10 flint cluster and any chronological distinctions between it and other flint finds from the project.

9.6 Project Aim 2

What was the nature of later Bronze Age/ early Iron Age activities and in particular is there evidence of the emergence of more permanent settlements and field systems within the proposal site?

Introduction
The excavation has **moderate** potential for addressing the aim (at least in part). There is no specific evidence of late Bronze Age activity at the New Garrison, but several cremation burials may belong to the early Iron Age

Background to Project Aim 2.
The evaluation project has not provided firm evidence for agricultural intensification during the Middle Bronze Age period but there are indications that by the late Bronze Age/ early Iron Age settlements and fields had been established. The evidence for these activities was mainly derived from areas within the proposed Urban Village area, including residual pottery finds within the southern area of Roman Barracks (area S) and a field boundary and pit to the north of Roman Barracks (within area Q). However a ring gully and pit of the period within the southern area of the New Garrison site (area R) may suggest a further settlement site. This area is not subject to intrusive development. Further pits containing pottery of the period were identified within the eastern portion of area M and western extent of area P. Such features within localised areas of the New Garrison site suggest the presence of a minor Late Bronze Age/Early Iron Age unenclosed settlement attached to small scale field systems, probably of a form defined by English Heritage as Regular Aggregate Field Systems (English Heritage 1988a). Artefact assemblages suggest limited survival of a restricted range of material culture typical of the period. These remains are of local significance, complementing existing knowledge of late prehistoric settlement form, distribution and agricultural practices.

These archaeological remains are further evidence for the widespread and diverse forms of Late Bronze Age/Early Iron Age settlement known throughout south Essex (Brown and Murphy 1997, p18), particularly on gravel terraces. English Heritage (1988) has estimated that between 750 and 1000 regular aggregate field systems are recorded in the literature, a figure which will have expanded dramatically in the intervening years as aerial photography and investigations have revealed new discoveries. They are found throughout Britain, associated with many settlements and enclosures of Bronze Age and Iron Age date, while the majority of Romano-British farmsteads and villas are accompanied by similar groups of regular fields.

The laying out of extensive, long lived field systems and settlements implies the concept of land ownership and is a characteristic of the later Bronze Age in southern and eastern England. Settlements of this period are regionally much more extensively known than those of the preceding early-middle Bronze Age (Brown 1996) and will provide the basis for comparisons with New Garrison evidence. These include striking circular ditched enclosures such as Mucking North Ring/ South Ring and Springfield Lyons and other ditched enclosures such as at Lofts Farm (Brown 1988a), all potentially of relatively high status. More commonly found unenclosed sites comprise wide scatters of pits and post holes such as at Moor Hall, Harlow (Robertson 1975) and North Shoebury (Wymer and Brown 1995). These usually occur on the lighter terrace gravels and brickearths but have now also been identified on the heavy clays such as the Boulder Clay of western Essex (eg Stansted) probably indicating high levels of competition for the more easily worked soils by this time. Further evidence for agricultural intensification at this time is derived from environmental studies and is particularly suggestive of the primary importance of pastoralism (Murphy 1996). Brown (1996. 33) with regard to priorities for future work in the period in Essex notes that fieldwork in the county has concentrated on enclosed sites, and the location and extensive controlled excavation of open settlements is required. Whilst the late Bronze Age/early Iron Age remains at the New Garrison site appear to be very fragmentary they may contribute to this priority.

Recent work by Yates (1999) on the late Bronze Age/early Iron Age evidence for the Thames Valley was mainly based on the results of extensive evaluations. Yates was able to suggest that zones of intensive field systems were associated with concentrations of votive metalwork in the adjacent River Thames. Associated major settlements potentially acted as re-distribution centres involved in trade. These settlement areas were commonly abandoned in the early Iron Age, potentially due to climatic deterioration, a situation mirrored at many other locations in southern and eastern England. It is interesting to note that the extensive evaluation at Colchester Garrison has produced relatively poor survival of late Bronze Age/early Iron Age field systems/ settlement. It may be argued, based on this evidence, that this area was peripheral to the type of territory Yates has suggested for the Thames region. It is possible that a major late Bronze Age settlement site at Sheepen (CAR 11. 131-6) was the dominant settlement in the region. The current impression of low levels of activity at this time at Colchester Garrison will be tested by the excavations and watching brief. Particular attention will be paid to the chronology of settlement and field system remains and for the evidence for continuity/ discontinuity of the these elements from the late Bronze Age/early Iron Age into the middle Iron Age period. A high priority will be given to the provision of well dated, preferably radiocarbon dated, environmental evidence.

Project aim 2 discussion
The latter end of the period under discussion coincides with the earliest site evidence from the excavations. The cremation burial F276 from the northern edge of Area 10 is considered to be an Early Iron Age feature. (This will need to be confirmed by further study of the pre-Belgic pottery from this project and at least one radiocarbon date will be taken from the abundant hazel nut shells as corroboration). Assuming no radical diversion from the initial findings, then the Early Iron Age is the earliest period for which there is firm site evidence. The placing of the burial (assuming it is not simply the disposal of a body), may indicate a use of family (ie ancestor's) burials to mark or lay claim to a piece of ground, in the hope that ancestral spirits may protect the land from misfortune, and define it as the property of one group. There is another Iron Age burial from Area 10 (F296), which is currently undated. A radiocarbon date will be taken to confirm the date of this feature if suitable charcoal is present. The environmental remains associated with the cremations suggest open, mixed farming conditions locally.

Scale of contribution to project aim
There is **good** potential for further analysis of the ceramics from this period, in the hope of clarifying the dating of the cremation, and identifying any other ceramic elements (whether burial or not) which may relate to this theme. Further environmental study may provide further useful information.

9.7 Project Aim 3

What was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there indications of landscape division and settlement which might allude to the origins of the communities responsible for the later construction of the oppidum?

Introduction
The excavation has **good** potential in addressing this aim. The enclosure with round house in Area 2 is a high status site with important implications for the area.

Lower levels of activity are suggested by scatters of contemporary pottery (mostly residual in later ditch fills) which may indicate areas of domestic activity in the vicinity (especially areas 6 and 10) and indeed the manuring of contemporary fields within these areas.

There is no evidence for field boundaries or other land divisions at this period

Background to Project Aim 3. Relatively few Middle Iron Age features were found during the course of the extensive trial trenching exercise. Those features were generally representative of small-scale landscape divisions and consequently contained relatively low-grade inorganic fills. The exception was the relatively substantial ditch CF703 within evaluation area C which contained a charcoal rich sediment potentially derived from hearth clearance. Truncation by modern ploughing is

presumed to have had a relatively limited impact upon the survival of the large ditch but will have substantially reduced the depth of less robust pits and ditches which are more typical of the period. No coins of the 200-100 BC period were recovered from the evaluation despite intensive metal-detecting reinforcing the predominantly rural or potentially partially still forested character of the New Garrison site.

The chronological sub-division between the Late Bronze/Early Iron Age and the Middle Iron Age sites at the Garrison is based on very limited artefact assemblages and should be regarded at tentative. The nature of the archaeological transition between the earlier and later Iron Age (c.500 to 200BC) requires particular attention. In most regards the Middle Iron Age remains are consistent in scale and character with the preceding Late Bronze Age/Early Iron Age unenclosed settlement attached to small-scale field systems. The shift in location to Area C might suggest modest landscape re-organisation. The enclosure ditch in Area C implies the presence of moderate-high status MIA settlements which pre-date the construction of the oppidum. These features have potential to complement existing knowledge of late prehistoric settlement form, distribution and agricultural practices, but also give some insight to the relatively sparse occupation of the pre-oppidum landscape.

Middle Iron Age field systems are rarely studied in detail in Essex, a factor highlighted by a lack of focus upon landscape features of the period within the '*The Archaeology of Essex - Proceedings of the Writtle Conference'* (Sealey P in Bedwin O. eds 1996) *and Research and Archaeology: A Framework for the Eastern Counties* (Glazebrook (eds) 1997). The scope of the New Garrison excavations are intended to specifically address the issues of landscape form and change and will compliment recent wide area excavations at Stansted and Heathrow airports. At these sites the landscape scale approach has produced invaluable data regarding the development of the landscape from the Neolithic to the present day.

Sealey (in Bedwin (eds) 1996. p50) notes that at least 175 round houses are known from Essex (110 of which were found in at Mucking) and although not all are of Middle Iron Age date there appears to have been a substantial population growth at this time. The majority of settlements of the period are likely to have been no more than hamlet sized, as at Wendens Ambo in Essex (Hodder 1982, 4-10, 24-9, 64; Halstead 1982b, 61-2; Halstead et al. 1978; 1982), Asheldham Camp (Bedwin 1991) and the defended site at the Airport Catering Site (ACS) at Stansted (Brooks 1987, 45-6; 1989a; 1989b, 6-7; 1993, 47-50; Brooks and Bedwin 1989, 8-11; Brooks and Wall 1994, 22, fig.5.5). Larger 'village sized' settlements have also been found such as Period II Little Waltham (Drury 1978). The ACS Stansted site was occupied from c.75 BC to c.25 BC, the period immediately prior to and during the construction of the oppidum. These and other Essex sites with well-stratified Middle Iron Age ceramics, may provide the basis for establishment of a relative chronological sequence for Colchester Garrison pottery assemblage. The provision of radiocarbon dates from secure archaeological contexts from the enclosure ditch is a priority of the excavations in order to provide tighter dating than may be achieved from ceramics alone. Given the poor survival of bone and lack of organic deposits the best source of material radiocarbon dating is charcoal.

The close dating of the Middle Iron Age sequence, and in particular the associated environmental data such as pollen and plant macrofossils, is of central importance for the research priority to provide data pertaining to the landscape character and use immediately prior to the construction of the oppida. Ditch CF703 and the adjacent area has been specifically targeted by excavation due to the high potential of this feature and possibly associated features, to provide well-stratified and relatively large uncontaminated pottery assemblages suitable for detailed analysis. The sand-tempered pottery from the feature is typical of Middle Iron Age material in Essex (Drury 1978). At present the pottery suggests a date at least a century prior to the construction of the dykes of Camulodunum. The ditch is relatively deep and as such its lower levels have been protected. It may be possible to extract pollen from the samples for landscape reconstruction purposes. In addition charcoal rich lenses within the recut ditch demonstrates moderate potential to provide suitable charcoal material for a series of radiocarbon dates. The macrofossils also include material in low densities which may be suitable for landscape characterisation, including burnt grain. The placed deposit from the centre of the roundhouse will be studied in terms of its possible ritual or symbolic role in Iron Age society and will be closely dated if possible.

At present, it is hard to place the start of Camulodunum much before c 25 BC, although the recent excavations of Stanway and Abbotstone have produced some grounds for pushing this date back

into the first half of the first century BC. The study of the earliest material within the Garrison site is of especial value in relation to the question of whether or not Colchester had been a major regional focus before the emergence of Camulodunum. There was certainly a major settlement in the late Bronze Age at Sheepen (*CAR* **11**, 131-6), and there many records of Deverel Rimbury cremations in the area suggesting significant Middle Bronze Age activity. But the gaps in the record are longer than the periods of major occupation, the Middle Iron Age being an important case in point. Of course, we should not expect continuity of settlement from the Neolithic onwards, but it may prove to be the case that the geographically location of Colchester is such that it always suited major settlement.

Project aim 3 discussion
In this section, the following headings are identified:

Area 2 Site features: enclosure ditch
The principal landscape feature of the pre-oppidum Iron Age is the enclosure ditch in area 2. With its ditch (which is deeper and more imposing on the side from which visitors would approach the site) and accompanying hedge and bank, this is as much a statement of social position as a functional enclosure.

Area 2 Site features: round house
The enclosure contains a round house approximately 12 metres in diameter, as defined by an eaves-drip gully and arcs of post holes for the timber uprights. The house is situated towards the back of the enclosure, possibly in a deliberate attempt to make it look more imposing to the visitor catching sight of it through the site entrance.

Area 2 Site features: other post holes, stake holes etc
Other post holes and pits are present within the enclosure. These will need further analysis to establish whether any other structural units can be identified. Small stake holes on the inner edge of the ditch may be root holes from the hedge postulated by the environmental material (thorns and twigs) in the ditch fill.

Area 2 Site features: cremation burial?
One of the most intriguing site features is the placed pot at the centre of the round house. This looks like a cremation vessel, but no cremated bone was found in it (only two scraps of mammal bone). Was it merely a symbolic gesture? How does this MIA vessel fit in with the site chronology (does it relate to an episode during the life of the building, or at its beginning)?

Area 2 Site features: gravel surfaces
Gravel deposits in the ditch fills suggest several phases of activity. Gravel would normally be laid down to consolidate soft ground. These various phases should tie in with recuts of the ditch, and should relate to some episode in the life of Area 2 enclosure which may have broader implications for the project area.

Area 2 Earlier prehistoric pottery
The study of the earlier middle IA pottery from Area 2 is vital to this project aim. It needs to be established when the enclosure was dug, over what period if time it silted up, and where (chronologically) the cremation fits into the sequence. The ceramic data will be key in this regard. It is suggested that radiocarbon dates are taken from appropriate charcoal concentrations within the ditch (provided species are fast grown) to provide independent dating evidence.

Area 2 Ceramic Building material
There were fragments of daub from Iron Age pit close to the round house. Are these fragments of wall daub?

Area 2 Environmental Evidence;
The soil column from the sump cut into the south-eastern corner of the ditch to extract pollen data unfortunately failed to provide positive results.

Other areas

There are also a number of potential structures, including three probable 4-post structures and possible, though dubious roundhouses in Area 10, which need further analysis. Spreads of MIA pottery especially in Area 10 need further analysis - they may indicate areas of activity in this period.

Prehistoric flints
Some of the struck flints may be of Iron Age date. More analysis is required with regard to their precise location

Scale of contribution to project aim
There is **good** potential for further finds and structural analysis to forward our understanding of this project aim particularly with regard to the settlement enclosure. There is also good potential for full study and quantification of the earlier prehistoric pottery, the plotting and further spatial analysis of the flints, the study of the ceramic debris possibly associated with the round house, and full use of any data forthcoming from pollen and phosphate sampling an ongoing radiocarbon and OSL dating.

9.8 Project Aims 4 and 5

To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

To clarify the form/function and duration of the trackways with respect to the oppidum and to establish which elements of the social landscape they connected.

Introduction
These two aims overlap, and are considered together here. There is **moderate** potential for the excavations to address these aims. Tracks and field boundaries define the spatial organisation of the oppidum. There is no relevant coin data.

Background to Project aims 4 and 5
The two centuries before the Claudian conquest saw dramatic changes in south eastern Britain with the comparatively rapid enhancement of strong trading links with the adjacent continent probably associated with the Romanization of Gaul. The period saw the abandonment of hill forts and establishment of lowland oppida and the rise of so called Belgic influence including the use of cremation rites and coinage, the introduction of the potters wheel and the acquisition of exotic goods derived from the Mediterranean. The nature of the transition from the late Iron Age period to the early Roman period has been allocated a high priority in recent years, indeed 'Briton into Roman c.300BC-AD 200' was a major theme of *Exploring Our Past* (English Heritage 1991, 36). More recently a series of priorities have been forwarded for the period in *Understanding the British Iron Age* (Haselgrove *et al*. 2001 28-31). These include the following general points, which will be considered through the duration of this project:

More precise *chronologies* are required to understand the rate, scale and cause of economic and social changes during the later Iron Age.

The increased abundance of material on many later Iron Age sites needs quantification and explanation.

The cause and consequences of settlement expansion in different parts of Britain after c. 300BC requires further research.

Contemporary changes in the organisation, intensity and scale of agricultural and craft production require detailed local investigation and inter-regional comparison.

New models need to be developed to explain the archaeological changes in southern and eastern England during the last two centuries of the period.

South Eastern Britain has been regarded as a core zone of major transition in the period from c.150 BC including the emergence of oppida in the first century BC, as at Colchester. Territorial Oppida are large

sprawling riverine sites with extensive dyke defences over many hectares and are perceived to have been chieftains strongholds with diverse functions including manufacturing and redistribution of goods (Cunliffe 1995). The scale of such defences (Camulodunum covers some 31 square km) implies centralisation or coercive leadership. It has been suggested (eg Cunliffe 1995) that oppida were developed in direct response to Caesar's incursions of 55-54BC as 'economic ports of trade'. It is of interest with regard to the prominence of the oppidum of Camulodunum that Caesar had established alliances with the Trinovantes. Cunliffe has suggested that these links could explain the reorientation of trade from southern to eastern Britain around this time as the pro-Roman tribes of Britain were given a virtual monopoly of trade from Roman Gaul.

Haselgrove *et al* (2001 30) note that the roles of territorial oppidum are still poorly understood. For example: how did they relate to the general trend of settlement expansion in the later Iron Age? What role did they play in changes in the distribution, imagery and form of coinage? and how did they relate to the development of 'kingdoms' in the South East?

Such questions have been hampered by a general lack of detailed archaeological investigation within oppida, although the Colchester oppidum offers some exceptions to this general rule with important work undertaken at Sheepen and Gosbecks. Excavations at Sheepen have demonstrated trade with Gaul and metalworking evidence including the probable location of a mint, whilst at Gosbecks probable religious complex has been identified. The Gosbecks site is likely to have been a particularly important focal centre. A further site at Lexden has produced a very wealthy burial indicative of the tribal aristocracy. The remains identified at the Garrison site offer comparative data from an area of the oppidum utilised for agricultural production.

Coinage at Colchester reflects the significant change of political leadership as the Trinovantes were subjugated by the Catuvellauni before about AD5-10. The vast majority of Iron Age coins are recovered by metal-detectorists from poorly provenanced locations. The present investigation offered a rare opportunity to extract late Iron Age coins from archaeological features within the oppidum. However, no Iron Age coins were recovered from the Stage 1 evaluation of the New Garrison, despite intensive and extensive metal-detecting as a requirement of the both archaeological and munitions surveys or from the Stage 2 excavations. This negative evidence contributes to the understanding of zones of activity within the oppidum and reinforces the current agricultural interpretation of this area of the oppidum. Collis (1981 53-54) on the question of context of coins asked 'do they derive from urban, religious, high class or low-class farms- and what was their context on major sites-high status areas, trading areas, streets, or industrial zones?' Whilst, regarding metal content; does the abundance of bronze coins to the virtual exclusion of gold coins on high status sites, (a pattern found previously at Colchester and Heybridge (Atkinson in prep.), and indeed on oppida across central and western Europe) support Collis's suggestion that bronze coins were not circulating as freely on lower status sites, where occasional gold coins are sometimes found (Collis 1981 54). The lack of Iron Age coins, particularly from Area 6 which was certainly adjacent to LIA occupation may therefore be in favour of its interpretation as a relatively modest status farm.

The excavation areas were designed to further characterise the forms of activities taking place within the New Garrison site in the late Iron Age and period of late Iron Age occupation represented.

Notwithstanding the limited dating evidence, the **curvilinear trackways** appear to be one of a number of features at the Garrison which demonstrate the intensification of land use which is characteristic of the later Iron Age and the subsequent early Romano-British period. At Colchester this process also involved the initial construction of the oppidum earthworks to the west of the Garrison Site at Gosbecks and Sheepen. The precise relationship between the appearance of the trackway and the construction of Berechurch Dyke, immediately to the east, is unclear. It is probable that the trackway pre-dates Berechurch Dyke, which may have been a late addition to the earthwork defences, constructed by the Romano-British (P Crummy pers com).

The trackway enabled local communities achieve greater mobility across the farmed landscape in the lea of Camulodunum's western defences, which was subsequently protected with an eastern defensive earthwork. The trackway was therefore a significant part of the local oppidum infrastructure and demonstrates a departure, in terms of scale, form and organisation, from the relatively small-scale structure of the preceding Iron Age landscape. Unmetalled double ditched trackways are known from both enclosed and unenclosed Late Iron Age/early Romano-British rural

landscapes throughout southern Britain. Numerous examples occur locally within the oppidum, revealed by cropmarks and geophysical surveys at Sheepen and Gosbecks.

An aim of the project was to determine the extent to which the trackways within the garrison site belonged to one system and also to determine its period of evolution and use. These are particularly important issues because the trackways within the Garrison site are almost certainly a small part of a much bigger network of trackways covering the whole of the oppidum and probably beyond. The trackways at Gosbecks represent a focal point for this system - probably the main one since they converge there on a single large enclosure (our so-called 'farmstead enclosure'). Dating evidence for the trackways at Gosbecks is slim because of limited excavations, but work in 1995-6 (CAT Archive Report 138 by S Benfield) did not provide evidence for use before the late Augustan period (Section 9). The date the field systems associated with the trackways also requires clarification.

Project aims 4 and 5 discussion
The spatial organisation of the interior of the oppidum has been defined by the excavation of crucial components of the landscape which demonstrate that the original layout of tracks and fields probably dates to the time when the oppidum was formed circa 25 BC (or shortly before). These tracks and field boundaries relate to the movement and control of stock, and the partitioning of the landscape into discrete parcels of land which in turn probably relate to variety of agricultural practices. Environmental data points to a mixed economy with areas of arable and pasture in the (early?) Iron Age. The structural sequence in Area 6 may indicate that open areas of pasture dominated the original, pre-oppidum MIA landscape, after which new tracks and field boundaries created along with the oppidum display a greater element of stock control, and presumably the movement of stock across a landscape with both arable and pasture.

The trackways are to be seen primarily as a means of moving animals within the farmscape and also to the richer river floodplain summer pastures beyond, but of course they also conveyed people from A to B. If the trackways were in use the LIA they are likely to have provided a route system between the principal settlement at Gosbecks and its outliers.

The excavations thus provided evidence for a single system of co-axial double-ditched droveway tracks within Area 6. The evidence for Area 2 comprising a single droveway fits well with the pattern observed in Area 6 and by the aerial photographic evidence for tracks adjacent to these areas. Only in Area 10 was there evidence for a more complex series of land division, although even here all of the phases could have been contemporary with the field-systems of Areas 2 and 6 at one time or another. In terms of dating evidence there it is just possible that the trackways came into use as a consequence of Roman rule at Colchester, however the evidence of very early Roman brooches in recut ditches suggests the strong likelihood of a LIA origin.

Scale of contribution to project aim
Further analysis has **moderate** potential to further this aim, particularly in regard to the full analysis of all pottery and small find assemblages to extract as much dating evidence as possible to date the creation, recutting, adaptation, and abandonment of the track and field system which underpins so much of the research into the oppidum. Further bibliographical research will be undertaken, particularly with respect to Francis Pryor's important work on stock management within the wider region.

9.9 Project Aim 6

To place Berechurch Dyke within a detailed chronology of the layout of other internal oppidum features, such as the curvilinear trackways and the co-axial track/ field systems.

Background to Project Aim 6
Berechurch Dyke is a major feature of the Late Iron Age early Romano-British landscape, forming Camulodunum's eastern defences. The dyke appears to have been intended to define the eastern extent of the oppidum and partially runs through the proposal site but will not be impacted upon. Crummy (pers com.) suggests Berechurch Dyke might be a late addition to the defences, possibly constructed by the Romans shortly after the conquest. The surviving remains of Berechurch Dyke

are of national importance, not simply because oppida are an important monument class, but also because it highlights a potentially significant aspect of a historic narrative which is specific to Camulodunum and the founding of *Colonia Victricensis*. The oppidum at Camulodunum is one of six monuments found in southern Britain, which are described by English Heritage as Territorial Oppida (English Heritage 1989c). Berechurch Dyke is, therefore, a defining component of a rare monument class. The dyke will not be impacted by the proposal.

Project aim 6 discussion
The Berechurch Dyke was not impacted by the current excavations. In Crummy's (1995) scheme, this dyke was probably not built until after the Roman conquest of AD 43. This being the case, the context for the Berechurch Dyke is not the initial laying out of the oppidum fields and ditches, but later in their history when the trackways were being recut and redefined.

Scale of contribution to project aim
There is **moderate** potential for further analysis to address this aim, in the sense that further study of the pottery and the associated chronology of the sites will make clearer the background against which the Berechurch Dyke is set.

9.10 Project Aim 7

To establish whether there are any surviving remains of the rectilinear enclosure at the Musket Club or associated external features within the proposal site footprint, and to characterise the function of the enclosure within the oppidum complex.

Background to project aim 7

Rectilinear mortuary enclosures of Late Iron Age date are known at a number of locations in Colchester, including Stanway and Lexden. At Stanway five enclosures are associated with a small farmstead and date from the second century BC, with the latest constructed c AD 40 Crummy 1997, p26). It is presumed that the enclosures contain the remains of important members of the Iron Age community residing within the oppidum, together with evidence of the ceremonies and rituals associated with burial and commemoration. The status of any individual that might be buried at the Musket Club enclosure is not known, but if the central burial pit survives, these remains may be of regional significance. This form of burial rite is not common, but is regionally associated with oppida in southern England, including sites along the Chilterns, such as St Albans.

Project aim 7 discussion - not applicable at this stage - separate report following fieldwork

9.11 Project Aim 8

To clarify the date, form and function of the co-axial field system, to establish the nature of its development within the oppidum and/or the Roman town's hinterland and to establish the evidence for association with the probable villa at Kirkee McMunn Barracks.

Introduction
The excavations have **good** potential to address this aim. The co-axial field system has been shown to be of probable late Iron Age creation which is probably contemporary with if not necessarily the creation of the oppidum, its subsequent use. The villa at Kirkee and McMunn may also have had pre-Roman origins, but is firmly linked into the oppidum field layout and its later (Roman) developments.

Background
The Roman conquest of Claudius inevitably had a significant effect on the settlement pattern of Britain and it is unlikely to be coincidental that a large number of late Iron Age sites were abandoned at around this time. This need not always have been as a result of land confiscation or conflict as

relocation of sites may equally have been stimulated by a need to more to suitable locations to take advantage of the new Roman roads/ market centres. Despite this apparent disruption in many cases there appears to have been continuity of occupation at sites from before to well after the invasion. It is clear from historical sources that some land was indeed confiscated from the Iron Age inhabitants of Camulodunum and its surrounding farmlands, for reallocation to citizens of Rome. The following questions may be contributed to by the proposal site and responses are provided.

What was the immediate and longer term effect of the establishment of the Roman fortress and subsequently of the colonia on the infrastructure of the Iron Age oppidum? There appears to be very little tangible effect on the layout of the landscape, although as previously noted it could be argued that strictly the latest pottery from the earliest *surviving* ditches (earlier phases having been potentially cleaned out) was early Roman in most cases. Perhaps most tangible evidence that earlier ditches were present on these lines comes from the LIA cremation adjacent to one of the main droveway ditches in Area 6. The fact that it was situated between the ditches of droveway in use in the early Roman period is taken as an indication that only the northern ditch (which is next to the cremation) was present in the LIA.

Field systems within the proposal site thus date to the late Iron Age and Roman periods. It is clear from the excavations at Sheepen, to the north-east, that the site continued in use into the Roman period. Was there continuity of occupation of settlements within the proposal site from the late Iron Age to the early Roman period and if so how did the form and obligations of these settlements alter? The evidence from burials of both LIA and Roman date adjacent to the LIA to Roman farm at Kirkee McMunn provides evidence for continuity. This aspect will require further research. With detailed comparison between the landscape archaeological remains of Area 6 and the occupation site.

What effect did the establishment of the legionary fortress of legion XX Valeria have on lands within the oppidum and is there any evidence to support the notion that the agricultural land within the proposal site was used to supply the military garrison with produce? There is no direct evidence that the land was used to supply the military garrison – although there is no doubt that the local market provided by it would have been attractive as a potential market, to the landowners here.

Woodland clearance on a large scale is also conceivable. A study of the fortress at Inchtuthill (Crummy pers comm) has emphasized the very large quantities of timber and wood of various sorts needed to construct fortresses such as the one built at Colchester in the AD 40s. The subsequent town at Colchester would also have placed similar great pressure on the woodlands in north-east Essex - and again when it was rebuilt following the Boudican fire. It would thus not be surprising to find a marked reduction in woodland within the oppidum *c* AD 43-70. What evidence is there for woodland clearance at the New Garrison site during this period? A large number of tree throw holes at the sites could represent LIA and Roman clearance but these cannot be closely dated and could equally belong to earlier and/or later periods.

Legion XX withdrew from Colchester to campaign to the west in AD48 following which the colony town (*Colonia Victricensis*) was established. In response to the devastating effect on the early colony during the Boudican revolt 43 hectares were walled in the period AD65-80. One of the seeds of revolt was confiscation of native lands and it is probable that some colonists resided in villas outside the walled town. A single probable villa is currently known from the proposal site (located at Kirkee and McMunn Barracks). Although the backfilling of the hypocaust appears at present to date to the 2nd and 3rd centuries, there is evidence for an earlier foundation to the farmstead site given the evaluation and excavation findings of Roman tile from early Roman ditches adjacent to the site.

Were such farms established by Roman colonists within the proposal site area of the oppidum following confiscations from the native landowners? The identification of a military brooch, perhaps placed as an offering in the period around AD43-60/5 when the style was in fashion is intriguing. We will however, probably never know whether this was deposited by a veteran working the land (whether directly or indirectly through farm employees or slaves) or by a local worker who acquired the brooch from the adjacent military community.

With respect to the structure at Kirkee and McMunn Barracks, further research should include provision of additional information regarding its earliest possible foundation and it status/economic role. If the Kirkee McMunn villa can be shown to have been established in the conquest period what was the farms relationship to the colony and its inhabitants?'

The Romano-British farm is located within the immediate hinterland of the Romano-British town and is the most prominent rural settlement in the eastern area of the oppidum. The presence of both Late Iron Age and Romano-British pottery suggest that the site may have been occupied for a period which spanned the construction of the oppidum and the founding of the Romano-British town. The presence of Late Iron Age pottery suggests the Romano-British farm buildings may have replaced earlier Iron Age buildings. Again the relationship between the construction of the Roman-style buildings and the construction of Berechurch Dyke is unclear, but both may be closely related to a process of intensified exploitation of the rural hinterland following the founding of the Roman town. Therefore, whilst the building is a typical example of a common and unassuming category of Romano-British farm/villa, its historic context presents an issue of regional significance. The associated fields and trackways survive relatively well, and are delineated by ditches. These fields may demonstrate that most of the Garrison site was open farmland throughout the later Late Iron Age and Romano-British periods. The possible shift from a regular gridded or coaxial pattern of fields to a less formal structure as you move away from the farm buildings may reveal a relatively complex pattern of landscape reorganisation in the early Romano-British period. Generally the field systems complement existing knowledge of land division and agricultural practices, but also give some insight to the extent of open farmland within the oppidum defences.

Project aim 8 discussion
The form and function of the co-axial landscape has been defined by the excavation of crucial components of the landscape which demonstrate that the original layout of tracks and fields probably dates to the time when the oppidum was formed circa 25 BC (or shortly before or shortly after). These tracks and field boundaries relate to the movement and control of stock, and the partitioning of the landscape into discrete parcels of land which in turn probably relate to variety of agricultural practices. Environmental data points to a mixed economy with areas of arable and pasture in the (early?) Iron Age. The structural sequence in Area 6 may indicate that open areas of pasture dominated the original, pre-oppidum MIA landscape, after which new tracks and field boundaries created along with the oppidum display a greater element of stock control, and presumably the movement of stock across a landscape with both arable and pasture.

The trackways are to be seen primarily as a means of moving animals, but of course they also conveyed people from A to B. It would appear that an area of discrete Late Iron Age settlement may have existed close to Area 6 at the same location as the Roman farm which is distinct from the principal settlement focus at Gosbecks Farm. The trackways are therefore a route system between the principal settlement and its outliers.

The villa at Kirkee & McMunn barracks had pre-Roman origins, to judge by the quantity of pre-Roman material found in the western side of Area 6 (which is close to the villa site).

It is also clear that the villa was not a ‘stand-alone’ building. The burial of presumed villa inhabitants along the field edges was a deliberate act of claiming or defining fields (territory) by use of family (ancestral) burials. Even at a more mundane level, the spread of Roman period debris (pottery tile, small finds) out into the fields (Area 10) shows that the villa operated within the context of its own fields (naturally).

Scale of contribution to project aim
Further analysis has **moderate** potential to further this aim, particularly in regard to the full analysis of all pottery and small find assemblages to extract as much dating evidence as possible for the track and field system associated with the villa, and of the activities carried out here, as evidenced by the small finds.

9.12 Project Aim 9

What was the nature of Saxon and medieval landscape within the development site and what was the relationship of the landscape to Saxon and medieval Colchester?.

Introduction
The excavation has poor potential to address this aim. Very little dated evidence for the use of the New Garrison site landscape following the Roman period was recovered.

Area 2
A single ditch F12 is dated to the post-Roman period due to its stratigraphical relationship with the Roman period ditch F11. Its continuation F10 contained a single sherd dated to the medieval or the post-medieval period. This shows that one area of the New Garrison site was sub-divided by ditched fields in the medieval or post-medieval period.

Areas 6, 10
No data

Overall discussion
In sufficient data was collected by the excavation to warrant a detailed discussion.

Scale of contribution to project aim
There is **poor** potential for further analysis of the existing data.

9.13 Project Aim 10

To record and contextualise any modern military features within the New Garrison site for which there are insufficient current records.

Introduction
The excavation has **poor-moderate** potential to address this aim, due to the very small amount of data available.

Project aim 10 discussion
A single feature of this period was the tank trap F16 crossing the centre of Area 10. Apart from barbed wire, there were no finds from this feature.

Scale of contribution to project aim
There is **poor-moderate** potential for further analysis of the data beyond assessment stage. The tank trap will be illustrated and placed within its WWII defence of Britain context via documentary research for the analysis and publication.

9.14 Summary of requirements for further work

The various specialists have detailed their recommendations for further work in their own reports (above). This is a summary, with additional recommendations by CAT.

Small finds

1) To facilitate identification and illustration and allow the Summary Catalogue to be refined (see 2 below) and a detailed catalogue of and report material to be prepared (see 3 and 4 below) all the ironwork should be X-rayed (80 objects) and the copper-alloy items should be cleaned and stabilised (25 objects).
2) The summary catalogue should be refined after the metalwork has been cleaned/X-rayed to form a final archive catalogue.
3) A detailed catalogue of the Iron Age and Roman material should be prepared.
4) The catalogue should form the basis for a publication-standard report that concentrates on setting the objects in the context of the land-use of the area during the Iron Age and Roman periods. Where appropriate, similar items from within the eastern region should be cited as parallels. The assemblage is too small for meaningful statistical analysis by either date or function, but its general character should be compared to those from sites of similar date and similar use from the immediate area and from the region in general.

Pre-Belgic pottery

Research Potential of the Garrison Pre-Belgic Pottery

Despite its initially unpromising aspect, the pre-Belgic pottery from the garrison is important, and can make a significant contribution to knowledge.

The middle Iron Age pottery provides coherent dating evidence for the Area 2 enclosure and round house. Middle Iron Age pottery was in use in Essex for some 250 years, c.300-75/50 BC. In Area 2 the presence of a cremation in a hand-made middle Iron Age pot and the association of middle and late Iron Age pottery in the upper ditch fills suggests the life of the enclosure and its house lasted until the 1st century BC.

Dating the droveway ditches and field boundary gullies in Areas 6 and 10 is more difficult because they do not themselves cut dated features. What the dateable material in their fills tells us is when the ditches went out of use and became silted up with soil wash. Bearing in mind that the fields were manured with midden debris (see below), the agricultural use of the landscape may be suggested by assessing the date of the earliest definite pottery in the ditch fills. In every case the earliest dateable pottery in these ditch fills is middle Iron Age and shows that the prehistoric landscape under investigation at the garrison was under cultivation in the middle Iron Age in its inception.

Judging by the preponderance of sand-tempered ware in the middle Iron Age pottery from the garrison, there is every possibility cultivated land was created later, rather than earlier in the middle Iron Age.

Colchester garrison is the first time this phenomenon has been recognised in Essex, and the project will attempt to work out the implications. This will involve addressing problems of taphonomy. Already the demonstration that broken pottery on settlement sites was moved to nearby farmland helps explain why more pre-Belgic pottery was not found on the Stanway and Abbotstone settlements at Colchester.

Quantified analysis of the Areas 6 and 10 pre-Belgic pottery will provide a benchmark for abraded sherd material that ended up in field systems as manure. Hitherto data on this topic is not available in Essex, or indeed East Anglia.

The garrison pottery is ideally suited for an exercise in taphonomy because of the striking differences between the Area 2 settlement and the fields and droveways of Areas 6 and 10. Comparison of the average sherd weights from Area 2, on the one hand, and Areas 6 and 10 on the other, will enable the manuring model for the post-breakage movement of pottery to be quantified and defined.

Material for Illustration
The Area 2 material includes about eight rims and two bases that merit illustration. There are about five rims or bases from Area 6 that could usefully be illustrated. None of the pottery from Area 10 needs illustrating. Published at quarter scale, the entire garrison pre-Belgic pottery will amount to about one A4 page.

Late Iron Age and Roman pottery

It is proposed that most of the LIA - Roman pottery can be processed as a whole. However it should be noted that specialist contributions or consultation may be required on:

- samian ware
- amphora sherds

Recording and quantification:
Overall quantification should be based on fabric groups. The Roman pottery can and should be quantified using the Colchester fabric series devised by Symonds & Wade (1999) . There is no detailed local fabric series for LIA pottery and quantification by fabric will have to be based on perceived meaningful fabric differences in the assemblage itself, though most will probably be divided/subsumed into various categories of Grog Tempered Ware (GTW). The quantification of the pottery should consist of sherd count and weight for each fabric, and degree of abrasion to sherds.
Any identifiable pottery forms should be recorded as far as possible using the Camulodunum form type series (Hawkes & Hull 1947 & Hull 1958 & 1967) which covers LIA and Roman pottery providing a firm core for recording of pottery forms. For the Roman pottery any additional forms, variants, or more specific form details can be compared for the Roman pottery with the illustrated material in CAR 10.

Roman tile

Some further consideration should be given to the distribution of various tile types when full context phasing is available. Questions to be answered include:

- is there any patterning within the tile debris which reflects the proximity of the Roman villa (and its hypocaust)?
- does the tile distribution suggest the location(s) of other Roman structure(s) not previously recognised?

One piece needs to be drawn.

Prehistoric flints

Flints need to be plotted to define the relationship between flint distribution and various periods of settlement (especially Iron Age).

Pollen analysis

Pat Wiltshire to proceed with analysis of samples sent to her by John Daniell. Though slim, this may be vital evidence for the vegetational history of the area

OSL dating

Despite problems over the timing of results emerging from these tests, they should be carried forward in the hope that they may refine or support ceramic dating for various principal landscape features.

Phosphate samples

Despite problems over the timing of results emerging from these tests, they should be carried forward in the hope that they may refine or support other evidence for stock control areas.

Charcoal analysis
Analysis should be carried out on all identifiable Roman or earlier wood samples.

Macrobotanical sampling
Full analysis should be conducted on the remains from the prehistoric cremations from Area 10.This should provide an environmental context for environs of these features.

Radiocarbon Dating
It is proposed that prehistoric elements of the project are subject to appropriate radiocarbon dating. It is important that charcoal selected for dating is from a secure context and is demonstrably associated with that context. Charcoal or other organic remains deposited with pyre material provides one source and therefore charcoal and hazel nut shells from the Area 10 cremation 276 will be dated. The other Area 10 cremation will be radiocarbon dated if suitable charcoal of a fast grown wood species is present. The hearth clearance deposits or charcoal dumps within the Area 2enclosure ditch are also suitable for dating so long as the wood is fast grown and a series of samples may be submitted from these to aid dating of the enclosure. A further date will be sought from the hearth cutting Roman deposits in Area 6 and from possible cremations in Area 6 if suitable material exists.

Cremated human bone
All bone recovered from sieved samples should be examined in order to determine whether or not it is human bone.

No further work recommended
Faunal Remains
Post-Roman glass

Structural analysis
There is very considerable scope, after receipt of the specialist input (above) for detailed and thorough exposition of the site chronology and phasing, and detailed discussion of the principal themes as outlined in the *Project Aims*. This assemblage of finds and site data offers an opportunity for a detailed description of part of one of the country's most important Iron Age and Roman sites. Full costing for this work should be allowed in any funding proposals.

Reporting and Publication
The results of the recommended work will be fully reported within the analysis report which will also form the basis of the publication text. The final report will be published within the CAT in house journal.

Provision has been made for the completion of all recommended elements, including all specialist reports, conservation, cleaning and ultimate storage of finds, and appropriate publication and archiving.

10 Acknowledgements

CAT and RPS are grateful to the following:

The project was commissioned by RMPA Services on behalf of the MoD. Special thanks to Ruari Maybank (RMPA Services) and Colonel Mike Foster (MoD). The project was monitored by Martin Winter for Colchester Borough Council.

Thanks to W S Atkins for establishing the site grid, and to Bactec International Ltd for all their assistance on site and for the munitions briefings for CAT staff.

Thanks to the farmers for access to the fields. Fieldwork was directed by Carl Crossan, assisted by Don Shimmin, Ben Holloway and Nigel Rayner, and was carried out by CAT team members.

Principal site planner was Chris Lister, assisted mainly by Emma Spurgeon. HB is grateful to Don Shimmin, Rob Masefield, Emma Spurgeon, and Pauline Skippins for assistance with post-excavation analysis. All digital plans were originated by Maureen McDonald.

11 References and Bibliography

Ashbee, P	1970	The Earthen Long Barrow in Britain
BCM	1999	Procedures for deposit of archaeological archives
Bedwin, OR	1991	Asheldham Camp an early Iron Age hill fort: the 1985 excavations. Essex Archaeol. Hist., 22, 13-37
Bedwin, OR (ed)	1996	The Archaeology of Essex- Proceedings of the Writtle Conference. Essex County Council Planning
Benfield S, Black E, Crummy N, Fryer V, and Wade A	2000	Archaeological excavations at the Garrison sports pitch, Circular Road North, Colchester, Essex (Abbey Field) CAT unpublished report 138.
Black A	2002	Geophysical Survey Report: The Benedictine Abbey of St John, unpublished report
Bradley R	1990	The Passage of Arms. Cambridge Univ Press
Bradley R	1996	in Bedwin O.(eds) 1996 The Archaeology of Essex- Proceedings of the Writtle Conference. Essex County Council Planning
Brooks H	1987	The Stansted project; a report on the first years' work *Essex J.*
Brooks H	1989b	The Stansted project; a report on the second and third years' work *Essex J.*
Brooks H	1989a	'The Stansted Temple', *Current Archaeol.* 10, 322-5
Brooks H and Wall W	1994	The Stansted Project: Bashing the boulder clay in north west Essex. In M Parker-Pearson & R.T.Schadla-Hall (eds) Looking at the Land. Archaeological Landscapes in eastern England: Recent work and future directions, 20-3. Leicester
Brooks, H, and Bedwin OR	1989	Archaeology at the Airport: the Stansted Archaeological Project 1985-89 Chelmsford.
Brooks, H, and Havis, R	forthcoming	*Excavations at Stansted Airport*. East Anglian Archaeology
Brown and Murphy	1997	in Glazebrook J. Research Archaeology: A Framework for the Eastern Counties, 1.resource assessment. East Anglian Archaeology Occ Paper No.3
Brown N	1988a	A late Bronze Age enclosure at Lofts Farm Essex. Proc. Prehist. Soc. 54. 249-302
Brown N.	1996	in Bedwin O, (eds) The Archaeology of Essex- Proceedings of the Writtle Conference. Essex County Council Planning
Brown, N. R	1988	'A late Bronze Age enclosure at Lofts Farm, Essex' Proc. Prehist. Soc., 54, 249-302
Brown, N. R	1998	'Prehistoric pottery'. In S. P. Wallis & M. Waughman Archaeology and the Landscape in the Lower Blackwater Valley (East Anglian Archaeology Report No.82), 132-41. Chelmsford
Bryant 1997		in Glazebrook J.(eds) Research Archaeology: A Framework for the Eastern Counties, 1.resource assessment. East Anglian Archaeology Occ Paper No.3
CAT	2000	An archaeological desk-based assessment of the Colchester Garrison PFI site (CAT Report 97). Author: Kate Orr
CAT	2000	An archaeological desk-based assessment of the Colchester Garrison PFI site (CAT Report 97) Author: Howard Brooks
CAT	May 2002	An Archaeological Evaluation by Fieldwalking and Geophysical Survey at Colchester Garrison PFI site, Colchester, Essex (CAT Report 184). Author: Howard Brooks
CAT	May 2002	An Archaeological Evaluation by Fieldwalking and Geophysical Survey at Colchester Garrison PFI site, Colchester, Essex (CAT Report 184) Author: Howard Brooks
CAT	July 2002	An Archaeological evaluation by trial trenching on Area C at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 197) Author: Howard Brooks

CAT	July 2002	An Archaeological evaluation by trial trenching on Areas E and F at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 203)
CAT	August 2002	An Archaeological evaluation by trial trenching on Area KR at Colchester Garrison PFI Site, Colchester, Essex (CAT Report 205) Author: Howard Brooks
CAT	August 2002	An archaeological evaluation by trial-trenching in Areas A, B, D, GJ, H, J, N, V and YP of the Colchester Garrison PFI site, June-July 2002 (CAT Report 206) Author: Howard Brooks
CAT	Septem ber 2002	An archaeological evaluation by trial-trenching on Areas DR, G, M, P, Q, R, RO, S, and T at Colchester Garrison PFI site Colchester, Essex: May-September 2002 (CAT Report 207) Author: Howard Brooks
Collis J	1981	Coinage, oppida, and the rise of Belgic power: a reply. In Cunliffe (eds) 1981.
Crummy P	1975	Not Only a Matter of Time. Colchester Excavation Committee.
Crummy P	1988	'Colchester' (in) G. Webster (eds) Fortress into City. The Consolidation of Roman Britain, First Century AD.
Crummy P	1997	City of Victory: the story of Colchester – Britain's first Roman town Colchester Archaeological Trust
Crummy, N, Crummy P and Crossan C,	1993	Excavations of Roman and Later Cemeteries, Churches and Monastic Sites in Colchester, 1971-88.
Cunliffe B,	1995	Iron Age Britain. English Heritage
Cunliffe B, (ed)	1981	Coinage and society in Britain and Gaul: some current problems. CBA
Cunliffe, B. W.	1995	Danebury: An Iron Age Hillfort in Hampshire. Vol.6. A Hillfort Community in Perspective (Council for British Archaeology Research Report No.102) York
Davis, S	1992	A rapid method for recording information about mammal bones from archaeological sites. English Heritage AML report 71/92
De Jersey P	1996	Celtic Coinage in Britain. Shire Archaeology
De la Bedoyere G	1992	Roman Towns in Britain, English Heritage
DoE	1990	Planning Policy Guidance: Archaeology and Planning (PPG 16).
Drury, PJ	1978	*Excavations at Little Waltham, 1970-71*, Council for British Archaeology Research Report **26**
Elsdon, S. M.	1975	Stamped Iron Age Pottery (British Archaeological Reports No.10) Oxford
English Heritage	1988a	Regular Aggregate Field Systems, unpublished Monument Class Description Report
English Heritage	1988b	Coaxial Field Systems, unpublished Monument Class Description report
English Heritage	1989a	Farmsteads (Romano-British), unpublished Monument Class Description Report
English Heritage	1989b	Monasteries for men (Post-Conquest), unpublished Monument Class Description Report
English Heritage	1989c	Territorial Oppida unpublished Monument Class Description Report.
English Heritage	1991	Management of Archaeological Projects
English Heritage	1991	Exploring Our Past .36
Faegri, K, and Iversen, J	1989	Textbook of Pollen Analysis. John Wiley & Sons, Chichester.
Fitzpatrick, AP	1984	The deposition of La Tène Iron Age Metalwork in Watery Contexts in Southern England, in Cunliffe and miles (eds) 1984 178-190
Fowler, PJ	1981	'Later prehistory'. In S. Piggott (ed.) The Agrarian History of England and Wales. Vol.1.1. Prehistory, 63-298. Cambridge
Framework Archaeology	2000	Perry Oaks Sludge Works, Western Perimeter Road, Heathrow, London. Project Design, Update Note 2
Grieg, J	1992	An Iron Age hedgerow flora from Alcester, Warwickshire. *Ancient Monuments Laboratory Report* **11/92**, English Heritage, London.
Grieg, J	1994	A possible hedgerow flora of Iron Age date from Alcester, Warwickshire. *Circaea*, **11** (for 1993), 7 – 16
Glazebrook, J (ed)	1997	Research Archaeology: A Framework for the Eastern Counties, 1.resource assessment. East Anglian Archaeology Occ Paper No.3
Halstead P	1982b	The Economy. In Hodder I.A. Wendens Ambo. The Excavations of an Iron Age and Romano-British Settlement (The Archaeology of the M11. Vol.2) London
Halstead P.	1978	Behavioural archaeology and refuse patterns: a case study. Norwegian Archaeol. Rev.,11, 118-31
Halstead P. et al	1982	'Within site patterning: Iron Age'. In Hodder I.A. *Wendens Ambo. The Excavations of an Iron Age and Romano-British Settlement* (The Archaeology of the M11. Vol.2) London
Haselgrove C, Armit I, Champion, T, Creighton J, Gwilt A, Hill, J.D., Hunter F., and Woodward. A	2001	*Understanding the British Iron Age: An Agenda for Action*. Prehistoric Society
Hawkes C.F.C. and Hull, MR	1947	*Camulodunum, first report on the excavations at Colchester 1930-39*, Report of the Research Committee of the Society of Antiquaries of London, **14**
Hawkes, C. F. C. & Crummy, P.	1995	*Camulodunum 2* (Colchester Archaeological Report No.11) Colchester

J.		
Healy F	1988	Fenland Research Priorities: Neolithic and Bronze Age- A Shopping List. Fenland Research **7**. 3-5
Hedges J.D. and Buckley D.G	1981	Springfield Cursus and the Cursus Problem. Essex County Council Occ Paper No.**1**
Hillson, S	1996	*Teeth.* Cambridge Manuals in Archaeology. Cambridge University Press
Hodder I.A.	1982	Wendens Ambo. The Excavations of an Iron Age and Romano-British Settlement (The Archaeology of the M11. Vol.2) London
Hull, M R	1958	Roman Colchester, Report of the Research Committee of the Society of Antiquaries of London, **20**
Hull, M R	1963	The Roman potters kilns of Colchester, Report of the Research Committee of the Society of Antiquaries of London, **21**
Humphrey, J, and Young, R	2003	'Flint Use in Later Bronze Age & Iron Age England? Some criteria for future research', 79-87 in Maloney and Shott 2003.
Hunn, J.	1995	The Romano-British Landscape of the Chiltern Dipslope: A Study of Settlement around Verulamium (in Chiltern Archaeology – Holgate (eds) 1995 pp 76-91).
IFA,	1997	Standard and Guidance for Archaeological Excavations.
Maloney, N, and Shott, MJ (eds)	2003	*Lithic Analysis at the Millennium* (Institute of Archaeology)
Martingell, HE	1990	'The East Anglian Peculiar? The "Squat" Flake'. *Lithics* **11**, 40-43.
Martingell, HE	2003	'Later Prehistoric and Historic Use of Flint', 91-97, in Maloney and Shott 2003.
Moore, P.D., Webb, J.A., and Collinson, M.E.,	1991	Pollen Analysis, Blackwell, London.
Murphy	1996	in Bedwin O.R. (eds) The Archaeology of Essex- Proceedings of the Writtle Conference. Essex County Council Planning
Nash, D. E. M.	1984	'The basis of contact between Britain and Gaul in the late pre-Roman Iron Age'. In S. Macready & F. H. Thompson (eds) Cross-channel Trade between Gaul and Britain in the Pre-Roman Iron Age (Society of Antiquaries of London Occasional Paper, New Series No.4), 92-107. London
Olivier, A	1996	Frameworks for our past. A review of research frameworks, strategies and perceptions. London: English Heritage.
Rigby, V. A	1988	'The late prehistoric, Roman and later wares'. In I. H. Longworth, A. B. Ellison & V. A. Rigby Excavations at Grimes Graves, Norfolk, 1972-1976. Fascicule 2. The Neolithic, Bronze Age and Later Pottery, 100-10. London
Robertson, IG	1975	The Archaeology of the M11 Motorway in Essex, 1970-75. Essex J.10, 68-91
Salway, P,	1993	The Oxford Illustrated History of Roman Britain. Oxford University Press.
Sealey, PR	1985	*Amphoras from the 1970 Excavations at Colchester Sheepen* (British Archaeological Reports, British Series No.**142**) Oxford.
Sealey, PR	1996	in Bedwin O, (eds) The Archaeology of Essex- Proceedings of the Writtle Conference. Essex County Council Planning
Sealey, PR	forthcoming	'The early and middle Iron Age pottery'. In P. Crummy Excavations at Bellhouse Pit, Stanway, Colchester, 1987-96
Shimmin, D	1998	A Late Iron Age and Roman occupation site at Kirkee McMunn barracks, Colchester Essex, Essex Archaeology and History, vol 29, pp 260-269
Stace, C.,	1997	*New Flora of the British Isles*. Second edition. Cambridge University Press.
Symonds, R, and Wade, S	1999	Roman pottery from excavations in Colchester, 1971-85. Colchester Archaeological Report 10.
Taylor, C C	1975	Fields in the English Landscape London
Todd M, (ed)	1989	*Research on Roman Britain 1960-89*. Britannia Monograph Series No. 11
Tomber, R. S. & Dore, J. N	1998	*The National Roman Fabric Reference Collection* (Museum of London Archaeology Service Monograph No.2) London
Williams, D. F	1986	'The amphorae', in Foster, JAA *The Lexden Tumulus* (British Archaeological Reports, British Series No.156), 124-32. Oxford
Wymer J and Brown N.	1995	*Excavations at North Shoebury: settlement and economy in south-east Essex 1500BC to AD 1500*, E. Anglian Archaeology **75**
Yates DT	1999	'Bronze Age Field Systems in the Thames Valley'. *Oxford Journal of Archaeology* **18 (2)**, 157-170.
Young, R, and Humphrey, J	1999	'Flint use in England after the Bronze Age: Time for a Re-evaluation?', *Proceedings of the Prehistoric Society* **65**, 231-242.

Distribution list:

MoD
RMPA Services
SRML

RPS
CAT

Colchester Archaeological Trust
12 Lexden Road, Colchester,
Essex CO3 3NF

tel.: (01206) 541051
tel/fax: (01206) 500124
email: archaeologists@colchester-arch-trust.co.uk

report date 31 March 2004, amended 8 Aril 2004, 16 April 2004

Colchester Garrison PFI Project

Stage 2 Archaeological Excavation

Assessment Report

Part Two: appendices

March 2004

on behalf of
RMPA and MoD

CAT project code: 03/7f
Museum accession code: 2003.210
NGR: TL 996 244

Colchester Archaeological Trust
12 Lexden Road,
Colchester,
Essex CO3 3NF
tel.: (01206) 541051
tel/fax: (01206) 500124
email: archaeologists@colchester-arch-trust.co.uk

CAT/RPS Report 270
March 2004

Appendices

Appendix 1 Feature and layer lists (by area)

Area 2 features

Feature no	Description	Phase	Comments
F001	pit	undated	machined away
F002	ditch	Roman	W side of Droveway A
F003	pit	natural	within round house
F004	gully	MIA	SE side of round house
F005	pit	undated	?MIA
F006	ditch	MIA	E enclosure ditch
F007	pit	MIA	
F008	trench	mod	Bactec trench
F009	pit	mod	unexcavated
F010	ditch	post-med/mod	
F011	ditch	Roman	E side of Droveway A
F012	ditch	post-med/mod	
F013	pit?	?natural	
F014	ditch recut	MIA	recut of S enclosure ditch (F51)
F015	post hole	undated	
F016	pit	mod	
F017	small pit	undated	
F018	trench	mod	
F019	pit	?natural	
F020	pit	mod	
F021	slot	mod	
F022	pit	natural	
F023	pit	Roman	
F024	ditch	Roman	E side of Droveway A
F025	pit	?Roman	E side of Droveway A
F026	pit	undated	
F027	gully	Roman	E side of Droveway A
F028	pit	undated	
F029	gully	Roman	extended into F23
F030	post hole	Roman	F27 Sx1
F031	pit	mod	
F032	pit	mod	
F033	post hole?	Roman	N end of F27
F034	pit	mod	
F035	ditch	Roman	E side of Droveway A
F036	ditch	post-med/mod	
F037	pit	mod	
F038	pit	undated	?MIA
F039	pit	?post-Roman	cut F2
F040	pit	natural	
F041	pit	natural	
F042	pit	undated	?MIA
F043	pit	MIA	
F044	gully	MIA	W side of round house
F045	small pit	undated	
F046	ditch	post-med/mod	
F047	gully	mod	
F048	ditch	?MIA	
F049	pit	MIA	centre of round house; inverted pot & ?SQ of cremated bone
F050	pit	undated	?MIA
F051	ditch	MIA	S enclosure ditch
F052	ditch	MIA	recut of W enclosure ditch (F55)
F053	gully	MIA	bottom of F52
F054	recut?	MIA	?recut in SE corner of enclosure ditch (F6 Sx2)
F055	ditch	MIA	W enclosure ditch (S end)
F056	ditch recut	MIA	recut of W enclosure ditch (F60)

Feature no	Description	Phase	Comments
F057	ditch	MIA	recut of W enclosure ditch (F58)
F058	ditch	MIA	W enclosure ditch (middle)
F059	ditch recut?	MIA	?recut in SE corner of enclosure ditch (F6 Sx2)
F060	ditch	MIA	W enclosure ditch (N end)
F061	ditch recut?	MIA	?recut of E enclosure ditch (F6 Sx4)
F062	pit/sump	MIA	SE corner of enclosure ditch (F6 Sx2)
F063	pit/void	MIA	SE corner of enclosure ditch (F6 Sx2)
F064	post hole?	?MIA	immed inside enclosure ditch (F6 Sx2)
F065	post hole?	?MIA	immed inside enclosure ditch (F6 Sx2)
F066	post hole?	?MIA	immed inside enclosure ditch (F6 Sx2)
F067	post hole	?MIA	immed inside S enclosure ditch (F14/F51)
F068	post hole?	?MIA	immed inside S enclosure ditch (F14/F51)
F069	post hole?	?MIA	immed inside S enclosure ditch (F14/F51)
F070	post hole	?MIA	immed inside S enclosure ditch (F14/F51)
F071	post hole?	undated	?MIA
F072	post hole?	?MIA	
F073	small pit	?MIA	
F074	pit	?MIA	
F075	gully	MIA	N side of round house
F076	large pit	mod	
F077	small pit	undated	?MIA
F078	small pit	?MIA	
F079	stake hole	MIA	round house
F080	post hole?	?MIA	
F081	re-cut?	MIA	?recut in SE corner of enclosure ditch (F6 Sx2)
F082	pit	?MIA	
F083	stake hole	MIA	F75
F084	ditch	?MIA	
F085	gully	MIA	extended into W enclosure ditch
F086	stake hole?	MIA	F75 Sx2
F087	post hole?	MIA	F75 Sx2
F088	post hole?	MIA	F75 Sx2
F089	ditch?	mod	
F090	pit	MIA	
F091	pit	undated	
F092	post hole	MIA	
F093	post hole?	?MIA	
F094	stake hole?	?MIA	round house
F095	stake hole?	?MIA	round house
F096	pit	undated	
F097	pit	?Roman	round house
F098	stake hole?	?MIA	round house
F099	stake hole?	?MIA	round house
F100	stake hole?	?MIA	round house
F101	stake hole?	?MIA	round house
F102	stake hole?	?MIA	round house
F103	stake hole?	?MIA	round house
F104	post hole	MIA	immed N of F44 Sx5
F105	stake hole?	?MIA	round house
F106	small pit	?MIA	round house
F107	stake hole?	?MIA	round house
F108	stake hole?	?MIA	round house
F109	stake hole?	?MIA	round house
F110	stake hole?	?MIA	round house
F111	stake hole?	?MIA	round house
F112	stake hole?	?MIA	immed outside round house
F113	hollow way	MIA	
F114	stake hole?	?MIA	round house
F115	stake hole?	?MIA	round house
F116	stake hole?	MIA	round house
F117	stake hole?	?MIA	round house
F118	stake hole?	?MIA	round house
F119	post hole?	MIA	round house
F120	stake hole	MIA	round house
F121	slot	undated	
F122	post hole	MIA	round house
F123	post hole?	MIA	round house
F124	pit	natural	
F125	pit	natural	

Feature no	Description	Phase	Comments
F126	post hole?	MIA	round house
F127	pit	mod	
F128	shallow pit	mod	
F129	small pit	mod	
F130	ditch	MIA	W enclosure ditch (middle)
F131	natural feature?	natural	
F132	stake hole?	?MIA	round house
F133	stake hole?	?MIA	round house
F134	stake hole?	?MIA	round house
F135	post hole?	?MIA	round house
F136	ditch recut	MIA	recut in SW corner of enclosure ditch (F143)
F137	small pit	undated	
F138	small pit	undated	
F139	small pit	undated	
F140	small pit	undated	
F141	ditch	MIA	cut by F113
F142	post hole	MIA	round house
F143	ditch	MIA	SW corner of enclosure ditch
F144	stake hole	MIA	round house
F145	post hole	MIA	round house
F146	post hole?	?MIA	round house
F147	shallow ditch	Roman	E side of Droveway A
F148	post hole	MIA	round house
F149	post hole	MIA	round house
F150	post hole	MIA	round house
F151	post hole	MIA	round house
F152	shallow pit	MIA	S end of F85
F153	pit?	?natural	
F154	post hole	?MIA	immed inside enclosure ditch (F57/8 Sx2)
F155	small pit	undated	
F156	post hole	MIA	round house
F157	post hole?	MIA	round house
F158	stake hole?	MIA	round house
F159	stake hole	MIA	round house
F160	gully	undated	
F161	pit	?MIA	round house
F162	post pit	MIA	round house
F163	stake hole	MIA	round house
F164	post hole?	?MIA	round house
F165	small pit	?MIA	F113 Sx3
F166	post hole?	?MIA	round house
F167	post hole?	?MIA	F113 Sx3
F168	post hole	Roman	F147 Sx1
F169	post hole	MIA	round house
F170	post hole	Roman	F24 Sx2
F171	pit	?MIA	round house
F172	post hole?	?MIA	round house
F173	stake hole?	MIA	F44 Sx2/6
F174	pit	natural	
F175	pit	natural	
F176	post hole?	MIA	round house
F177	modern features	mod	remaining unexcavated modern features
F178	natural feature	natural	remaining unexcavated natural features
F179	pit	natural	round house
F180	post hole?	?MIA	round house
F181	stake hole	?MIA	round house
F182	post hole	MIA	round house
F183	post hole?	?MIA	round house
F184	post hole	MIA	round house
F185	post hole	MIA	round house
F186	post hole	MIA	round house
F187	stake hole	MIA	round house
F188	post hole	MIA	round house
F189	stake hole?	MIA	round house
F190	post hole	?MIA	immed inside enclosure ditch (F136/F143)
F191	post hole	?MIA	immed inside enclosure ditch (F136/F143)
F192	post hole	?MIA	immed inside enclosure ditch (F136/F143)
F193	small pit	?natural	
F194	small pit	?natural	
F195	features within roundhouse	?MIA	remaining unlabelled ?features within

Feature no	Description	Phase	Comments
			round house
F196	post hole	?MIA	immed inside E enclosure ditch (F6 Sx1)
F197	post hole?	?MIA	immed N of F75
F198	post hole	MIA	immed N of F44 Sx5
F199	post hole	MIA	round house
F200	post hole	MIA	round house
F201	post hole?	?MIA	immed inside S enclosure ditch
F202	post hole	?MIA	immed inside S enclosure ditch
F203	post hole	?MIA	immed inside S enclosure ditch
F204	post hole?	?MIA	immed inside S enclosure ditch
F205	post hole?	?MIA	immed inside W enclosure ditch
F206	post hole?	?MIA	immed inside W enclosure ditch
F207	post hole?	?MIA	round house
F208	post hole	MIA	round house
F209	post hole	MIA	round house
F210	post hole?	?MIA	round house
F211	post hole	MIA	round house
F212	ditch	MIA	N enclosure ditch
F213	post hole?	?MIA	round house
F214	post hole	MIA	round house
F215	post hole?	MIA	round house
F216	post hole?	MIA	round house
F217	post hole?	?MIA	round house
F218	post hole	MIA	round house
F219	post hole	MIA	round house
F220	shallow post hole?	?MIA	round house
F221	post hole	MIA	round house
F222	post hole	MIA	round house
F223	post hole	MIA	round house
F224	post hole?	?MIA	
F225	post hole	MIA	round house
F226	post hole	MIA	round house
F227	post pit?	?MIA	round house
F228	post hole	MIA	round house

Area 6

Feature no	Description	Phase	Comments
F001	large pit	Roman	C2nd-C3rd pot in backfill
F002	ditch	ERoman	S side of droveway B
F003	pit	?natural	
F004	ditch	ERoman	N side of droveway B
F005	ditch	Roman	
F006	service trench	mod	
F007	pit	natural	
F008	pit	natural	
F009	small pit	natural	
F010	pit	?natural	
F011	small pit	undated	
F012	shallow pit	?Roman	
F013	pit	?LIA	
F014	pit	?MIA/LIA	
F015	pit	prehistoric	
F016	pit	natural	
F017	burial	Roman	C2nd-C3rd+
F018	pit	?natural	
F019	pit	?natural	
F020	pit	?prehistoric	
F021	ditch recut	Roman	recut of F2; S side of droveway B
F022	pit	?Roman	
F023	pit	natural	
F024	post hole	Roman	F4 Sx1
F025	pit	natural	
F026	pit?	natural	
F027	pit	natural	
F028	grave	Roman	C2nd-C3rd+
F029	pit	natural	
F030	pit	natural	
F031	pit	natural	
F032	pit	natural	

Feature no	Description	Phase	Comments
F033	pit	natural	
F034	pit	?post-Roman	cut F1
F035	pit	natural	
F036	pit	natural	
F037	pit	natural	
F038	shallow pit	undated	
F039	stake hole?	undated	F38
F040	pit	natural	
F041	pit	?post-Roman	cut F1
F042	pit	natural	
F043	shallow pit?	undated	
F044	pit	natural	
F045	pit	?natural	
F046	gully	?LIA/Roman	
F047	shallow pit	undated	
F048	pit	undated	
F049	pit	natural	
F050	pit	natural	
F051	pit	natural	
F052	pit	natural	
F053	pit	natural	
F054	gully?	?natural	
F055	pit	natural	
F056	pit	natural	
F057	pit	?natural	
F058	pit	natural	
F059	pit	?LIA/Roman	
F060	pit	natural	
F061	ditch	Roman	W side of droveway D
F062	evaluation trench	mod	
F063	cremation burial	LIA/ERoman	droveway B
F064	small pit	undated	
F065	pit	?Roman	
F066	pit	natural	
F067	linear feature (ditch)?	undated	
F068	pit	?natural	
F069	pit	natural	
F070	linear feature (ditch)?	Roman	E side of droveway D
F071	post hole	undated	
F072	pit	natural	
F073	pit	natural	
F074	large shallow pit	?LIA/Roman	
F075	pit	natural	
F076	linear feature (ditch)	?Roman	
F077	linear feature natural	natural	
F078	shallow pit	?LIA	
F079	pit	?LIA	
F080	pit	undated	
F081	shallow pit	?natural	
F082	pit	natural	
F083	pit	?natural	
F084	pit	?natural	
F085	pit	?natural	
F086	pit	natural	
F087	pit	?natural	
F088	pit	?natural	
F089	small pit	?natural	
F090	linear feature (ditch)	Roman	
F091	small pit	undated	
F092	small pit	undated	
F093	stake hole	Roman	F90 Sx1
F094	stake hole	Roman	F90 Sx1
F095	stake hole	Roman	F90 Sx1
F096	stake hole	Roman	F90 Sx1
F097	pit	natural	
F098	pit	undated	
F099	scoop	Roman	droveway B, immed S of F4 Sx8
F100	pit	natural	
F101	natural feature?	natural	
F102	natural feature?	natural	
F103	natural feature?	natural	

Feature no	Description	Phase	Comments
F104	small pit	?post-Roman	
F105	natural feature?	natural	
F106	natural feature?	natural	
F107	natural feature?	natural	
F108	natural feature?	natural	
F109	natural feature?	natural	
F110	natural feature?	natural	
F111	natural feature?	natural	
F112	natural feature?	natural	
F113	natural feature?	natural	
F114	natural feature?	natural	
F115	natural feature?	natural	
F116	natural feature?	natural	
F117	natural feature?	natural	
F118	natural feature?	natural	
F119	pit	?LIA/ERoman	
F120	pit (natural feature?		
F121	natural feature?		
F122	mod?	?mod	
F123	mod feature?	?mod	
F124	mod pit	mod	
F125-150	natural features?	natural	
F151	mod pit	mod	
F152	natural features?	natural	=F171
F153	natural feature?	natural	=F173
F154	natural feature?	natural	=F172
F155-170	natural features?	natural	?=F225
F171	natural feature?	natural	=F152
F172	natural feature?	natural	=F154
F173	natural feature?	natural	=F153
F174-186	natural features?	natural	
F187	unidentified feature		?not a feature
F188	natural feature?	natural	
F189	natural feature	natural	
F190-199	natural features	natural	
F200	linear feature (ditch)	?Roman	
F201	pit natural?	?natural	
F202	pit natural?	?natural	
F203	pit	?natural	
F204	pit	?MIA	
F205	pit natural?	?natural	
F206	pit natural?	?natural	
F207	pit	Roman	
F208	pit natural?	natural	
F209	pit natural?	natural	
F210	pit	?Roman	
F211	stake hole	Roman	F90 Sx1
F213	stake hole	Roman	F90 Sx2
F214	stake hole	Roman	F90 Sx2
F215	pit natural?	?natural	
F216	pit natural?	?natural	
F217	pit natural?	natural	
F218	pit	?natural	
F219	pit natural?	natural	
F220	natural feature	natural	
F221	natural feature	natural	
F222	small pit/hearth?	?prehistoric	
F223	natural feature	?natural	
F224	natural feature	natural	
F225	pit natural?	?natural	?=F155
F226	pit natural?	natural	
F227	grave	Roman	
F228	grave	Roman	
F229	small pit	undated	
F230	pit/hearth	undated	
F231	grave	Roman	
F232	post hole	Roman	F4 Sx10
F233	grave	Roman	
F234	pit	?Roman	
F235	natural feature	natural	
F236	pit natural?	?natural	

Feature no	Description	Phase	Comments
F237	natural feature	natural	
F238	grave	Roman	
F239	gully (natural feature)?	?prehistoric	
F240	stake hole	Roman	F90 Sx8
F241	stake hole	Roman	F90 Sx8
F242	stake hole	Roman	F90 Sx6
F243	stake hole	Roman	F90 Sx6
F244	stake hole	Roman	F90 Sx6
F245	stake hole	Roman	F90 Sx3
F246	stake hole	Roman	F90 Sx3
F247	stake hole	Roman	F90 Sx3
F248	stake hole	Roman	F90 Sx3
F249	stake hole	Roman	F90 Sx3
F250	not used		
F251	pit	natural	
F252	pit	?natural	
F253	pit	?natural	
F254	pit	?natural	
F255	not a feature		
F256	pit	natural	
F257	pit	natural	
F258	small pit	?natural	
F259	ditch	Roman	W side of droveway C
F260	ditch	Roman	E side of droveway C
F261	post hole ?	Roman	F1 Sx2
F262	stake hole	Roman	F1 Sx2
F263	pit	?natural	
F264	gully/slot	ERoman	S side of droveway B
F265	pit	?natural	
F266	post hole	Roman	F1 Sx2
F267	post hole	Roman	F1 Sx2
F268	post hole	Roman	F1 Sx2
F269	slot	Roman	S side of droveway B
F270	pit	?natural	
F271	post hole	Roman	F1 Sx1
F272	post hole	Roman	F1 Sx1
F273-281	stake holes	Roman	F269 Sx1
F282	stake hole	Roman	F1 Sx1
F283-289	stake hole	Roman	F269 Sx1
F290-302	post hole	Roman	F264 Sx1
F304	ditch	Roman	S side of droveway B
F305	slot	Roman	S side of droveway B
F306	pit	Roman	
F307	ditch	Roman	
F308	service trench	mod	
F309	large pit	?Roman	
F310	stake hole	Roman	F305 Sx1
F311	post hole	Roman	F305 Sx1
F312-317	stake holes	Roman	F305 Sx1
F318	stake hole	Roman	immed S of F305 Sx1
F319	post hole	Roman	N end of F260
F320-322	stake holes	Roman	F304 Sx1
F323-324	stake holes	Roman	F305 Sx1
F325	stake hole	Roman	S edge of F1
F326-328	stake holes	Roman	F305 Sx2
F329	pit	natural	
F330	post hole	Roman	S edge of F4 Sx8
F331	large stake hole	Roman	immed S of F4 Sx8
F332	large stake hole	Roman	immed S of F4 Sx8
F333	stake hole	Roman	immed S of F4 Sx8
F334	small pit	LIA/Roman	
F335-337	post holes	Roman	F307 Sx1
F338	drain	Roman	recut of F2; S side of droveway B
F339	post hole?	Roman	F338 Sx1
F340	post hole	Roman	F307 Sx2
F341	post hole	Roman	F307 Sx3
F342-345	stake holes	Roman	F4 Sx8
F346	post hole	Roman	F307 Sx3
F347	post hole	Roman	F307 Sx2
F348	stake hole	Roman	F304 Sx2
F349	stake hole	Roman	F304 Sx2

Feature no	Description	Phase	Comments
F350	stake hole	Roman	F304 Sx2
F351	natural feature	natural	
F352	pit	LIA/Roman	
F353-358	natural feature	natural	
F359	machine ruts	mod	
F360	machine ruts	mod	
F361	natural feature?	?natural	
F362	natural feature	natural	
F363	natural feature	natural	
F364-366	natural/machine disturbances	?mod	
F367	natural feature	natural	
F368	natural/machine disturbance	?mod	
F369-373	natural features	natural	
F374	natural pit?	?natural	
F375	natural feature	natural	
F376	disturbance? pit? silt patch?	?mod	
F377	disturbance? pit? natural?	?mod	
F378-382	natural features	natural	
F383	pit? disturbance	?mod	
F384	stake hole	Roman	F304 Sx5
F385	stake hole	Roman	F264 Sx2
F386	stake hole	Roman	F264/F269
F387	stake hole	Roman	F269 Sx2/F264
F388	stake hole	Roman	F269 Sx2/F264
F389	stake hole	Roman	F304 Sx5
F390	post hole	Roman	F304 Sx8
F391	stake hole	Roman	F269
F392	stake hole	Roman	F461 Sx1
F393	stake hole	Roman	F461 Sx1
F394	stake hole	Roman	F461 Sx1
F395	stake hole	Roman	F460 (F304 Sx5)
F396	stake hole	Roman	F460 (F304 Sx5)
F397	stake hole	Roman	F460 (F304 Sx5)
F398	stake hole	Roman	F460/F304 Sx5
F399	stake hole	Roman	F461 Sx2
F400	stake hole	Roman	F461 Sx2
F401-407	stake holes	Roman	F90 Sx9
F408	linear feature	?prehistoric	
F409	linear feature	?prehistoric	
F410	linear feature	?prehistoric	
F411-415	stake holes	Roman	F304 Sx4
F416	gully	Roman	S side of droveway B; early phase of F304 (Sxs3/4/7)
F417	linear feature	natural	
F418-421	stake holes	Roman	F416 Sx2
F422	stake hole	Roman	F304 Sx7
F423	stake hole	Roman	F304 Sx7
F424	stake hole	Roman	F304 Sx7
F425-431	post holes	Roman	F4 Sx11
F432	stake hole	Roman	F4 Sx10
F433-435	post holes	Roman	F304 Sx7
F436	stake hole	Roman	F416 Sx3
F437	stake hole	Roman	F416 Sx3
F438	linear feature	?prehistoric	
F439	stake hole	Roman	F304 Sx7
F440	animal burrow	undated	F304 Sx7
F441	post hole?	Roman	F4 Sx12
F442	pit?	undated	
F443	post hole?	Roman	F4 Sx13
F444	linear feature	?prehistoric	
F445	linear feature	?prehistoric	
F446	post hole	Roman	immed S of F4 Sx7
F447	post hole	Roman	S of F4
F448	post hole	Roman	S of F4
F449	post hole	Roman	F1
F450	post hole	Roman	F1
F451-454	stake holes	Roman	F304 Sx1/2

Feature no	Description	Phase	Comments
F455-456	stake holes	Roman	F305 Sx1/2
F457-459	post holes	Roman	F1 Sx3
F460	ditch	Roman	recut of F304; S side of droveway B
F461	ditch	Roman	recut of F259; W side of droveway C
F462	pit	Roman	F1 Sx3
F463	post hole	Roman	F1 Sx3
F464	post hole	Roman	F1 Sx3
F465	slot?	Roman	F1 Sx3
F466	pit	natural	
F467	pit	Roman	?C2nd-C3rd
F468	ditch	Roman	recut of F259/F461; W side of droveway C
F469	ditch terminal ?	Roman	?E end of F2; S side of droveway B
F470	stake hole	Roman	F461 Sx2
F471	stake hole	Roman	F461 Sx2
F472	stake hole	Roman	F461 Sx2
F473	stake hole	Roman	F259 Sx5
F474	4 stake holes	Roman	F259 Sx5
F475	shallow pit/ditch	Roman	immed S of F304 Sx6/F460
F476	post hole	Roman	F475
F477	post hole(s)	Roman	2 post-pipes
F478	pit	?natural	
F479	small pit	natural	
F480	pit?	Roman	
F481	stake hole	Roman	F467
F482	pit	natural	
F483	pit	?natural	
F484	post hole	Roman	S of F4
F485	post hole	Roman	S of F4
F486	post hole	Roman	S of F4
F487	pit	natural	
F488	post hole	Roman	S of F4
F489	stake hole	Roman	F304 Sx5/F460
F490	group of stake holes	Roman	F467
F491	post hole	Roman	F1
F492	stake hole	Roman	F1
F493	stake hole?	Roman	F1
F494	post hole	Roman	F1
F495	post hole	Roman	F1
F496	post hole	Roman	F1
F497	stake hole	Roman	S of F4
F498	stake hole	Roman	S of F4
F499	stake hole	Roman	F1
F500	post hole	Roman	F1
F501	stake hole	Roman	S of F4
F502	post hole	Roman	F1
F503	trench	mod	Bactec trench; cut F1
F504	post hole?	Roman	S of F4
F505	stake hole	Roman	S of F4
F506	post hole	Roman	S of F4
F507	post hole	Roman	F1
F508	stake hole	Roman	F1
F509	stake hole	Roman	F1
F510	post hole	Roman	F1
F511	stake hole	Roman	F1
F512	stake hole	Roman	F1
F513	post hole?	Roman	F1
F514	stake hole	Roman	F1
F515	stake hole	Roman	F1
F516	post hole?	Roman	F1
F517	post hole	Roman	F1
F518	stake hole	Roman	immed N of F1
F519	small pit	Roman	immed N of F1
F520	post hole	Roman	F1
F521	stake hole?	Roman	F1
F522	stake hole	Roman	F1
F523	stake hole	Roman	F1
F524	stake hole	Roman	F1
F525	stake hole	Roman	F1
F526	stake hole	Roman	F1
F527	stake hole	Roman	F1

Feature no	Description	Phase	Comments
F528	stake hole	Roman	F1
F529	stake hole	Roman	F1
F530	stake hole	Roman	F1
F531	stake hole?	Roman	F1
F532	pit	?Roman	immed N of F1
F533	pit	?Roman	F1
F534	pit	?Roman	F1
F535	pit	?natural	F1
F536	pit	natural	F1
F537	pit	natural	F1
F538-553	stake/post holes	Roman	F1
F554	post hole	Roman	immed S of F1
F555-559	stake/post holes	Roman	F1
F560	stake hole	Roman	immed S of F4 Sx7
F561	stake hole	Roman	immed S of F4
F562	stake hole?	Roman	F1
F563	pit	Roman	immed NE of F1
F564	stake hole	Roman	F1
F565	stake hole	Roman	immed N of F1
F566	stake hole	Roman	N edge of F1
F567	post hole?	Roman	immed S of F4
F568-580	stake holes	Roman	F1
F212	stake hole	Roman	F90 Sx1
F303	stake hole	Roman	F264 Sx1/F304 Sx2

Area 10 features

Feature no.	Description	provisional phase	comments
F001	linear feature/ditch	?LBA/EIA	found in DR1 runs SW-NE, cut at sw end by water main
F002	linear feature-DR1	Mod/2002	trial trench runs NE
F003	linear feature -ditch	?LIA/Rom	found in DR1 runs NE-SW
F004	linear feature/ditch	?	runs NE-SW found in DR1
F005	linear feature/ditch	?	runs NE-SW parallel to F004 found in DR1
F006	oblong feature ?grave	?	runs NW-SE to west side of F004
F007	oblong feature ?grave	?	runs NW-SE between F004+ F005
F008	linear feature/ditch	?	runs NW-SE cut by F005 at southern end
F009	linear feature/ditch	?	runs NW-SE between F005 at west end and F004 east end, ?continuation F008
F010	linear feature/ditch	?LBA/EIA	runs NW-SE into F005 at southern end
F011	linear feature/ditch	?	runs from West, curving to ne
F012	linear feature/ditch	?	runs North-SE, cut by tank trap F016
F013	linear feature/ditch	?	runs N-S found in DR2, curves to se at southern end
F014	linear feature/ditch	?	runs NW-SE
F015	linear feature-DR2	Mod/2002	trial trench runs NW-SE cuts across F013
F016	linear feature/tank trap	Mod	runs e-w across south of site and cuts across F012 at southern end
F017	post hole	?	?related to F018,F019,F020
F018	post hole	as F17	?part of 4 post structure
F019	post hole	as F17	?part of 4 post structure
F020	post hole	as F17	?part of 4 post structure
F021	post hole	as F17	1m West of F003 sx1
F022	linear feature/water main	Mod	
F023-031	stake holes	?	within F012 (ditch) relationship to stake holes F024-F031
F032-037	stake holes	?	in base of F010 sx1 ?relationship to F033-F037
F038-043	stake holes	?	within F003 sx1 ?relationship with F039-F043
F044	post hole	?	West edge of F003 sx1
F045-049	post holes	?	West edge of F003 sx1
F050	pit	?	West of F017 + F018
F051	curvilinear feature	?	feature is adjacent to F046-049
F052	post hole	?	?assoc with F017-F020
F053	post hole	?	? assoc with F054-F056, cut by eval trench DR1(F002)
F054-058	post hole	?	? assoc with F054-F058
F059	oblong feature/grave?	?	South of eval trench Dr1 ?related to F060
F060	oblong feature/grave?	?	South of eval trench Dr1 ?related to F059
F061	post hole	?	?related to F053 + F056
F062	post hole/pit	?	West of F004
F063	curvilinear feature	?	North of water main F022
F064	pit	?	East of F014
F065	pit	?	?natural

Feature no.	Description	provisional phase	comments
F066	pit	?	NE corner of area 10
F067-078	?natural features	?	
F079	test pit?	Mod	
F080	test pit?	Mod	
F081-083	natural features?	?natural	
F084-088	stake holes	?	?related to F085-F088 within ditch F004 sx 2
F089	pit	?	North edge of area 10
F090	natural feature?	?natural	
F091	pit	?	East edge of area 10
F092	pit	?	
F093	linear feature	?	centre of area 10
F094	pit	?	SE corner of area 10
F095	pit	?	centre of area 10
F096	?pit	?	between F001 & F003
F097	pit	?	East side of area 10
F098-099	?pits/tree pulls	?natural	
F100	pit	?	East edge of area 10
F101	pit	?	cut by water main F22
F102	pit	?	North of tank trap
F103	pit	?	cut by water main F22
F104	pit	?	North of area 10 south of DR1
F105	pit	?	at junction of F013 +F014
F106	linear feature	Mod	? military
F107-114	stake holes	?LIA/Rom	within ditch section F012 sx 2
F115	post hole	LIA	within F015 sx 2
F116	pit/tree pull	?	
F117	pit	?	NW edge of area 10
F118	pit? tree pull	?	
F119	not used	?	
F120	pit	?	NW corner of area 10
F121	pit/oblong feature	?	aligned nw-se
F122	pit/oblong feature	?	aligned n-s
F123	pit	?	between F004+ F005
F124-128	post/stake holes	?	within F015 sx 3
F129	post hole	?Mod/2002 evaluation	within eval trench DR1 –equiv to DRF106
F130	post hole	?Mod/2002 eval	within DR1 –equiv DRF104
F131	post hole	?Mod/2002 eval	within DR1 –equiv DRF106
F132	pit	?	cut by pit F117
F133	pit	?	East of F005
F134	pit	?	East of F085 sx 1
F135	ditch recut	?LIA/Rom	within ditch F009 sx1
F136	ditch recut	?LIA/Rom	within ditch F009 sx 1
F137	post hole	?LIA/Rom	along side F014 ?gateway post hole
F138	stake hole	?	next to butt end of F014
F139	ditch terminal	?	within ditch F014 sx 2
F140	ditch terminal	?	within ditch F014 sx 2
F141	ditch terminal	?	within ditch F013 sx 3
F142	post hole	?	West side of F012 sx 3
F143	post hole	?	East side of F012 sx 3
F144	stake hole	?	in base of F012 sx 3
F145-153	post/stake holes	?	in base of F012sx 3
F154	post hole	?	South of F058 (S/H)
F155	post hole	?	North end of area 10
F156-160	stake holes	?	within F004 sx 3
F161-165	natural features?	?natural	
F166	ditch	Rom	?assoc with ditch F013, ? contemporary with F014 sx 4, feature cuts metalled surface L005.
F167-249	natural features?	?natural	
F250-252	stake holes	?	within F004 sx 4
F253	post hole	?	within F051 sx 1
F254	ditch recut	?	within and sealed by F014 sx 4 & F146 ? assoc with F141earliest cut for ditch
F255	stake hole	?	?related to stakeholes in ditch sx F003 sx1
F256	stake hole	?	West of F003 sx 1, ?assoc with s/h within F003
F257	ditch recut	Rom	within ditch F014 sx 4
F258	pit?	?	cut by ditch feature F013 sx 3
F259	stake hole	?	within ditch F015 sx 4
F260	stakehole	?	within ditch F015 sx 4
F261	stakehole	?	within ditch F35 sx 7

Feature no.	Description	provisional phase	comments
F262-265	stakeholes	?	within F003 sx 7. form part of ?line/hurdle
F266	linear feature	?	sealed by L005 metalled surface & cut by Rom ditch F014 ?assoc with drove ditch F004
F267	stakehole	?	within F217 ?assoc with F138
F268	stakehole	?	within F217 ?assoc with F138
F269	stakehole	?	within F217 ?assoc with F138
F270-271	natural features	natural	
F272	linear feature/ditch	?	South of F014 sx 6, sealed by L005 metalled surface, cut by Rom ditch F014 ?assoc with F011 which appears to split into 2 ditches F272
F273	linear feature/ditch	?	appears to run into drove ditch F011 and is then cut by F014 and sealed by L005 ?assoc with F005
F274	linear feature/ditch	?	cut by ditch F014 ?assoc with drove ditch F004
F275	pit	?	within ditch fill F085 sx 4
F276	pit/?disturbed cremation	IA	East of F004
F277	post hole	?	
F278-286	natural features?	?natural	
F287	field boundary ditch	Rom	East-West aligned across centre of site
F288	evaluation trench	Mod/2002	equiv to DR14
F289	evaluation trench	Mod/2002	equiv to DR13
F290	evaluation trench	Mod/2002	equiv to DR16
F291	linear feature/ditch	Rom	?cuts or is cut by F003, N-S alignment from W edge of site
F292-295	natural features?	?natural	
F296	pit/?disturbed cremation	?LIA/Rom	East of F1
F297-298	natural features?	?natural	
F299	pit	?	South-east side of area 10
F300	natural feature?	?natural	
F301	pit? natural	?	
F302	pit	?	North end of area 10
F303	pit	?	centre of area 10 south
F304-311	natural features?	natural	
F312	post hole	?	within ditch F287 sx 5
F313	pit	?	North of F310, south end of area 10
F314-321	natural features?	natural	
F322	post hole	?	within ditch F001 sx 16
F323	linear feature	?	East edge of F15 sx 16
F324	pit		ne corner of area10
F325	natural feature	natural	
F326	pit	?	North of F310
F327-331	natural features?	natural	
F332	post hole?		?part of 4 post structure with F313 south end of area 10 S
F333	ditch recut	?LIA/Rom	within F001-opposite cut F013
F334	ditch recut	?LIA/Rom	within F003
F335	post hole	?	?part of 4 post structure with F313, F332? S end of area 10
F336	post hole	?	?part of 4 post structure with F313, F332? S end of area 10
F337	pit		North of pit F326
F338	pit?		South of eval trench DR4 and F288
F339	natural feature	natural	

Layers lists

Area 2 layers

Layer no	Description	Revised phase	Comments
L001	turf/topsoil	mod	
L002	ploughsoil	post-med	
L003	subsoil	post-Roman	
L004	natural	natural	
L005	ditch backfill	?MIA	F6 Sx1 ?sinkage
L006	ditch backfill	MIA	F6 Sx1 ?recut
L007	ditch fill	MIA	F6 Sx1 ?recut
L008	ditch fill	MIA	F6 Sx1 ?recut
L009	ditch fill	MIA	F6 Sx1
L010	ditch fill	MIA	F6 Sx1
L011	ditch fill	MIA	F6 Sx2 ?recut (F59)
L012	ditch fill	MIA	F6 Sx2 ?recut (F59)
L013	upper ditch fill	MIA	F14 Sx1/Sx3
L014	ditch fill	MIA	F14 Sx1/Sx3
L015	ditch fill	MIA	F51 Sx1
L016	charcoal/cremated bone deposit	MIA	F14 Sx1/Sx3
L017	gravelled surface	MIA	F14 Sxs1-3
L018	ditch fill	MIA	F51 Sx1
L019	ditch fill	MIA	F51 Sx1
L020	primary ditch fill	MIA	F51 Sx1
L021	primary ditch fill	MIA	F6 Sx1
L022	ditch fill	?MIA	F6 Sx3/Sx5 ?sinkage
L023	ditch fill	MIA	F6 Sx3/Sx5 ?recut
L024	ditch fill	MIA	F6 Sx3/Sx5 ?recut
L025	ditch fill	MIA	F6 Sx3/Sx5
L026	ditch fill	MIA	F6 Sx3/Sx5 primary fill
L027	ditch fill	MIA	F136 Sx1/Sx2
L028	?gravelled surface	Roman	Droveway A
L029	?dump	MIA	upper fill of F113
L030	gravel make-up	MIA	F113
L031	ditch fill	MIA	F52 Sx1/Sx3
L032	ditch fill	MIA	F6 Sx2 ?recut (F59)
L033	ditch fill	MIA	F6 Sx2 ?recut
L034	ditch fill	MIA	F6 Sx2 ?recut
L035	ditch fill	MIA	F6 Sx2 ?recut
L036	ditch fill	MIA	F6 Sx2 ?recut
L037	ditch fill	MIA	F6 Sx2 ?recut
L038	ditch fill	MIA	F6 Sx2 ?recut (F59)
L039	ditch fill	MIA	F6 Sx2 ?recut (F59)
L040	ditch fill	MIA	F6 Sx2 ?recut
L041	ditch fill	MIA	F6 Sx2 ?recut
L042	ditch fill	MIA	F57 Sx1
L043	ditch fill	MIA	F6 Sx2 ?recut (F59)
L044	ditch fill	MIA	F6 Sx2 ?recut
L045	ditch fill	MIA	F6 Sx2
L046	ditch fill	MIA	F6 Sx2
L047	ditch fill	MIA	F6 Sx2
L048	ditch fill	MIA	F6 Sx2 primary fill
L049	ditch fill	MIA	F58 Sx1/Sx2
L050	no. not used		
L051	ditch fill	MIA	F6 Sx4 ?recut (F61 Sx1)
L052	ditch fill	MIA	F6 Sx4 ?recut (F61 Sx1)
L053	settled deposit	?MIA	F6 Sx2 ?sinkage
L054	ditch fill	MIA	F6 Sx4 ?recut (F61 Sx1)
L055	pit fill	MIA	?F62 (F6 Sx2)
L056	pit fill	MIA	F62 (F6 Sx2)
L057	pit fill	MIA	F62 (F6 Sx2)
L058	pit fill	MIA	F62 (F6 Sx2)
L059	pit fill	MIA	F62 (F6 Sx2)
L060	pit fill	MIA	F62 (F6 Sx2)
L061	gravelled surface	MIA	F152
L062	ditch fill	MIA	F136 Sx1/Sx2
L063	ditch fill	MIA	F136 Sx1/Sx2
L064	ditch fill	MIA	F143 Sx1
L065	ditch fill	MIA	F143 Sx1 primary fill

Layer no	Description	Revised phase	Comments
L066	dump	MIA	F141
L067	ditch fill	MIA	F136 Sx1/Sx2
L068	ditch fill	MIA	?F136 Sx1/Sx2
L069	?gravelled surface	MIA	F6 Sx5
L070	?gravelled surface	MIA	F57 Sx2
L071	ditch fill	MIA	F143 Sx1/Sx2
L072	ditch fill	MIA	F143 Sx1/Sx2
L073	gravel make-up	MIA	F113 Sx2
L074	ditch fill	MIA	F143 Sx1/Sx2 primary fill
L075	pit fill	MIA	F62 (F6 Sx2)
L076	pit fill	MIA	F63 (F6 Sx2)
L077	sump fill	MIA	F63 (F6 Sx2)
L078	sump fill	MIA	F62 (F6 Sx2)
L079	pit fill	MIA	F62 (F6 Sx2)
L080	ditch fill	MIA	F6 Sx4 ?recut (F61 Sx1)
L081	ditch fill	MIA	F6 Sx4
L082	ditch fill	MIA	F6 Sx4
L083	ditch fill	MIA	F6 Sx4 primary fill
L084	no. not used		
L085	sump fill	MIA	F62 Sx2
L086	sump fill	MIA	F62 Sx2
L087	sump fill	MIA	F62 Sx2/Sx3
L088	sump fill	MIA	F62 Sx2
L089	sump fill	MIA	F62 Sx3
L090	sump fill	MIA	F62 Sx3
L091	sump fill	MIA	F62 Sx3
L092	sump fill	MIA	F62 Sx3
L093	sump fill	MIA	F62 Sx3
L094	sump fill	MIA	F62 Sx3
L095	sump fill	MIA	F62 Sx3
L096-100	not used		
L101	?gravelled surface	?MIA	
L102	ditch fill	MIA	F143 Sx2

Area 10 layers

Layer no.	Description	Revised phase	Comments
L001	topsoil/ploughsoil	modern	
L002	subsoil	post-medieval	
L003	natural	-	
L004	silt wash seals metalling L005	Roman	
L005	ditch metalled surface upper fill of F009	Roman	

Area 6 layers

Layer no.	Description	Revised phase	Comments
L001	ploughsoil	mod	
L002	subsoil	post-Roman	
L003	natural	natural	
L004	base of ploughsoil/subsoil	?Roman	fills F99 & top of F4 Sx8
L005	metalled surface	Roman	sinkage in F4 Sx8; N side of droveway B
L006	?base of ploughsoil/subsoil	?Roman	sinkage in east end of F2
L007	gravelled surface	Roman	sinkage in east end of F2; S side of droveway B
L008	backfill/make-up	Roman	backfill of F4 Sx8
L009	not used		
L010	dump/subsoil	?Roman	droveway B; S of F4 Sx9
L011	?remains of metalled surface	?Roman	in upper fill of F304 Sx3; S side of droveway B
L012	?remains of gravelled surface base of subsoil/ploughsoil	?Roman	N of F1
L013	?disturbed subsoil	Roman	S of F4 Sx8
L014	?gravelled surface	?Roman	W end of droveway B
L015	?gravelled surface	Roman	S side of F4 Sx11, droveway B
L016	?gravelled surface	Roman	SE corner of F1

Appendix 2 Finds dating tables

Area 2

feature	sx	Roman pottery	other pottery	spot date
02	2	1 sherd HZ storage jar, 1 sherd Dressel 20 AJ		Rom 1st-2nd/early 3rd
10	1		1 sherd fabric 13 or 40	Med/Post-Med
06/L023	3		MIA pottery	MIA
06/L22	5		MIA pottery	MIA
06/L51	4		MIA pottery	MIA
06/L54	4		MIA pottery	MIA
06/L81	4		MIA pottery	MIA
06/L82	4		MIA pottery	MIA
06/L52	2		MIA pottery	MIA
06/L32	2		MIA pottery	MIA
06/L79	2		MIA pottery	MIA
14/L13	3		MIA pottery	MIA
14/L14	1		MIA pottery	MIA
136/L27	2		MIA pottery	MIA
136/L62	2		MIA pottery	MIA
136/L63	2		MIA pottery	MIA
136/L71	2		MIA pottery	MIA
136/L68	2		MIA pottery	MIA
136/L62	1		MIA pottery	MIA
52/53/55	1		MIA pottery	MIA
52/L31	3		MIA pottery	MIA
57/58/L42	1		MIA pottery	MIA
57/58/L49	1		MIA pottery	MIA
56/60	1		MIA pottery	MIA

Area 6

RT = Roman tile

find	sx	feature	Roman pottery	other pottery	other finds	spot date
001		001	Q Rom Samian ? Dr 18/31 or 31 (2nd), Cam 37(e 2nd-m/l 3rd, storage jar, g/w & mortaria		Q RT frags	Rom early 2nd-mid 3rd
007		001	Rom storage jar, amphora, g/w base		1 flue tile frag, 4 RT	Rom 1-2/3
012		001	SQ Rom Cam 218/219			Rom 1st-e 2nd
216	2	001	SQ Rom, ? BB2 (KX) bowl & ? CZ Cam 391 rim frag		VSQ RT	Rom Early 2nd-early 3rd
224	2	001	SQ Rom lge storage jar & oth g/w			Rom 1-2/3
003		002	2 sherds Rom g/w			Rom 1-2nd
004		002		1 Prehistoric sand temp		Rom
005		002		Prehistoric x2 sand temp		Prehistoric
014		002	Rom storage jar x 2 sherds			
017	1	002	SQ Rom mostly 1 pot ? Butt beaker	Prehistoric x 1 sand temp		Rom ? Pre-Flav
025	2	002			1 FE slag lump	
028	1	002	1 Sherd Rom, 3 LIA/Rom combed storage jar			Early Rom
029	1	002	2 sherds platter/bowl			Early Rom
054	3	002	sherd E Rom	1 Prehistoric flint temp sherd & 1 other		Rom 1st-2
095		002			1 RT frag	Rom
097	5	002	VSQ Rom	Prehistoric 1	Fe obj, 1 RT	Rom 1st-e 2nd
097	5	002			1 frag green glass	? Mod
097	5	002	SQ Early Rom g/w			Early Rom
103	5	002	VSQ LIA/Rom & Rom		2 RT, 1 fired	Early Rom

find	sx	feature	Roman pottery	other pottery	other finds	spot date
					clay	
121	6	002	VSQ Rom	Prehistoric 1 ? LIA	? Fe lump	Rom ? 1st-2nd
130	6	002	SQ LIA/ Rom			LIA/Rom
013		004	SQ Dressel 20 rim			Late 1st-2nd
018	1	004	1 sherd Cam 258			Pre-conquest-Claudian
034	2	004		1 indeterminate ? Prehistoric	1 RT frag	Rom
034	2	004	1 sherd LIA/Rom			LIA/E Rom
049		004	1 Cam 501, 2 sherds Rom g/w		1 RT frag	Rom later 2nd-earlier 3rd
049	4	004			SQ RT frags	Rom
075	3	004	1 Rom g/w			Rom
077	3	004		medieval bowl rim		medieval
096	6	004	VSQ Rom, g/w & large storage jar	Prehistoric x 1	RT frags	Early Rom
131		004		Prehistoric LIA grog temp		LIA
132		004	1 ? Dr 18 prob SG			Rom 1st
133	7	004		LIA/Rom x 1	1 Fe frag ? nail	? LIA
144	7	004			1 RT frag	
147	7	004	? Cam 193			Rom ? Pre-Flav
185	10	004	VSQ Rom, Cam 108 (1-e2)	Prehistoric 3 flint, 1 grog, 1 sand temp	1 fired clay	Rom 1-e2
202	7	004			1 RT	
306	9	004	VSQ LIA/early Rom grog temp & sand temp			? LIA
306	9	004	1 Cam 37A, 1 g/w		1 RT imbrex frag	Rom early 2nd-early 3rd
313	11	004	1 LIA/? Early Rom grog temp			?LIA
318	9	004			1 RT	Rom
010		005	SQ Rom g/w		1 RT	Rom ? early Rom
211	1	005	VSQ Rom, 1 amphora sherd, 1 g/w		1 fired clay ? storage jar	Early Rom
218		005	SQ Rom DJ sherds			Rom 1-2/3
225	1	005	Rom x 2 large storage jar frags LIA/Rom		1 RT frag 1 ? fired clay 1 Fe nail	Rom
227		005	1 Samian footring sherd, 2 Rom g/w		2 Rt frags Tegula	Rom 1-2
228		005	Lge storage jar		1 fired clay	Rom 1-2/3
233	3	005	2 sherds storage jar			Rom 1-2/3
016		013		SQ LIA Cam 229		LIA
081		013		Q Prehistoric sand temp incl bead rim jar, jar& bowl 1 grog temp		Prehistoric ? LIA
083		013			Q fired clay	
090		013			SQ triangular loom weight fired clay frags	LIA
091		013	SQ sherds LIA/early Rom	Prehistoric 4 sherds sand temp, LIA Cam 229,Cam 223	VSQ charcoal frags, VSQ fired clay	LIA/Early Rom
022		014		Prehistoric base sherds sand temp		Prehistoric
035		014		Prehistoric x 2 sand temp	1 fired clay	Prehistoric
036		014		Prehistoric sand temp x1		Prehistoric
037		014		SQ Prehistoric sand temp ? bowl ? LIA		? LIA
037		014		Q Prehistoric sand temp incl rim		Prehistoric
027		017	Cam 268 most of one pot poss assoc with grave		1 RT frag	Rom early 2nd-late 3rd/early 4th
031		017	Q Rom g/w jar base & body poss assoc with grave			Rom
072		017	1 LIA/Early Rom grog temp	1? LIA sand temp		Early Rom
038		028	1 Cam 392 approx 50% pot, base, body & rim ? grave pot. SQ Rom g/w		VSQ RT	Rom later 2nd-mid 3rd
042		028	Lower half of Rom g/w jar (not excavated from soil block), heavily sand temp, assoc with grave.			Rom

find	sx	feature	Roman pottery	other pottery	other finds	spot date
057		028	LIA/Rom		2 RT frags Teg	Rom ? early Rom
082		046			1 fired clay ? loom weight	
089	3	046			1 fired clay daub lump	
187	8	061	VSQ Rom Dressel 20, large storage jar early fabric, mortaria		Q RT Teg & flanges	Rom 1-2/3 ? Pre-Flav
098	1	061	Dressel 20, 1 ? Gaulish amphora			Rom 1-2/3
099	2	061	Dressel 20		1 RT & 1 ? soft fired RT	Rom 1-2/3
111	3	061	2 sherds Lge storage jar ? early fabric			Rom ? Pre-Flav
117	4	061	2 sherd LIA/Rom		VSQ RT	Early Rom
169		061		2 Prehistoric sherds	1 RT	Rom
172	6	061	Dressel 20 rim (Late 1st – 2nd), ? Haltern 70 (1st-e2nd), g/w sherd	Prehistoric 1 sand & 1 flint temp.	burnt flint 1 RT	Rom 2nd
105		063		Whole pot with mod common grog assoc with cremation no direct Cam equiv hw related to Thompson D2-5 or E2-2		LIA
106		063		Whole pot sparse fine grog temp Cam 221 assoc with cremation		LIA/Rom early-mid 1st
107		063		Whole pot with sparse-mod grog assoc with cremation no direct Cam equiv hw related to Thompson D2-5 or E2-2		LIA
108		063		Whole pot with sparse – mod grog temp assoc with cremation, no direct Cam equiv hw related to Thompson D2-5 or E2-2		LIA
114	1	076	1 Rom			Rom
115		078		1 sherd grog temp LIA		LIA
119		079		1 sherd grog temp LIA		
124	1	090		SQ abraded frags Prehistoric pot	VSQ fired clay	Indeterminate Pre-Rom
134	3	090		Prehistoric x 3 flint temp		Prehistoric
135	2	090		LIA/early Rom 1 sherd	SQ fired clay	LIA/early Rom
150	4	090		Prehistoric x 1 fine flint temp & 2 sand temp	1 burnt flint	Prehistoric ? LIA
154	6	090		Prehistoric/ LIA x 2	VSQ burnt flint, 1fired clay frag	? LIA
156	7	090		Prehistoric x 3 flint temp,	1 fired clay ? large storage jar frag	? LIA/Rom
157	7	090		Prehistoric flint temp		Prehistoric
160	1	090		1 Prehistoric chaff temp	SQ fired clay	Pre-Rom
167	8	090		Prehistoric x 2		Prehistoric
137		099			1 RT frag	Rom
148	7	148			1 fired clay	
152	2	200	? frag Dressel 20			Rom 1-2/3
170		227	VSQ Rom g/w	Prehistoric x3 flint temp (LIA)		Rom
181		227	LIA/Rom x 1 ? DJ			LIA/Rom
184		227		Prehistoric sand temp x 1		Prehistoric
182		231		1 sand temp & 1 grog temp rim	1 charcoal, 1 burnt flint	Prehistoric LIA
186		231			1 RT frag	Rom
199		231	1 Rom g/w			Rom ? earlier Rom
196		233		Prehistoric flint temp sherd	SQ burnt flint	Prehistoric
146		253		Prehistoric sand temp		Prehistoric
214		259	1 storage jar		2 burnt flints	Rom
221	1	259		Prehistoric 1 thick sand temp, 1 ?LIA/Rom		Prehistoric
232	2	259	1 storage jar sherd	Prehistoric 1 abraded flint temp. sherd		LIA/early Rom
237	7	259	SQ Early Rom			Rom 1st-e2

find	sx	feature	Roman pottery	other pottery	other finds	spot date
238	3	259	VSQ Rom ,1 amphora, 2 storage jar 2 g/w			Rom 1-2/3
244	3	259	2 sherds Rom g/w			Rom
217	1	260	1 g/w			Early Rom
239	2	260	1 Samian? SG, 1 amphora chip	indeterminate pot/fired clay		Rom
246	2	260	VSQ LIA?Rom			Early Rom
301	3	260	3 frags LIA/ Rom & Rom	Prehistoric x 1 flint temp		Early Rom
173	1	264	Q plain g/w sherds			LIA/Rom ? e Rom
174	1	264	Q ? LIA- Early Rom			Early Rom
180	1	264	1 Samian ? DR 36 ? SG , 1 g/w	1 flint temp Prehistoric		Rom ? 1st
213	1	264	SQ LIA/ Rom & Rom			Rom ? Early Rom
220	1	264	? Rom 1 frag DJ sherd			? Rom
241	1	304	Cam 273 early fabric			Rom ? Pre-Flav
242	1	304	1 g/w	Prehistoric x 2 LIA grog temp	3 burnt flint, 1 fired clay	Rom
302	1	304	SQ Rom g/w	Prehistoric x 1 flint temp, 5 grog /sand temp	1 FE nail	Rom 1-2
307 308	2 2	304 304	SQ DJ	1 Prehistoric flint temp		Rom 1st-2/3 Prehistoric
305	1	305	1 LIA/Rom			LIA/Rom

Area 10

find no	sx	feature	layer	comments	date
001	5	1		SQ Prehistoric, some flint temper. 6 Sherds from 1 pot, Rom cam40B (WA)	Rom early 2nd – mid to late 3rd
002	1	10		1 flake tile. 1 piece burnt flint. VSQ sherds prehistoric flint tempered pot	Roman+
003	1	10		4 Sherds, all 1 pot ? flagon base (DJ) Rom	Rom 1st-2nd/3rd
004	1	5		2 sherds prehistoric flint/sand temper, 1 fragment daub/?CBM	?prehistoric
005	1	4		3 sherds prehistoric, some flint temper	prehistoric
006	1	3		SQ Prehistoric pot, predominantly flint tempered. 2 Daub frags, flint tapered.	Prehistoric
007	1	1		VSQ Prehistoric pot, some flint tempered. Small graded	Prehistoric
008	1	14		1 Sherd flint tempered prehistoric	prehistoric.
009	1	14		1 sherd prehistoric flint temper	Prehistoric
011	1	8		2 burnt flint. 1 sherd flint/sand temper prehistoric pot	prehistoric
012	2	3		1 Sherd late iron age grog tempered. 1 Sherd Roman grey ware, same pot as Find No 15	Roman
013	2	1		VSQ burnt flint. 1 frag daub/pot	?
014	1	13		Flint, 2 sherds sand tempered prehistoric pot	prehistoric
14	1	1		1 frag flint tempered, 1 frag sand tempered	LBA/IA
015	2	3		Basic roman grey ware jar and sherd of burnt flint	Rom
017	1	3		1 Sherd prehistoric sand tempered pot	Prehistoric
018	2	14		1 sherd prehistoric	prehistoric
019	2	14		1 sherd prehistoric sand tempered pot. 2 v.small sherds unidentified	prehistoric ?later.
020	1	13		2 sherds flint? and sand tempered prehistoric pot	Prehistoric
021	3	14		1 sherd flint tempered prehistoric. 1 Frag fired clay, badly degraded	prob prehistoric
022	1	11		2 Sherds prehistoric, sand tempered. 1 piece CBM ?Rom tile. 1 burnt flint	Roman +
026	2	4		1 animal bone, 1 piece ? briquetage	Late prehistoric / Rom

find no	sx	feature	layer	comments	date
027	2	3		Same pot as finds 15 and 12, 2 sherds Rom grey ware. VSQ prehistoric ? flint tempered	Roman
029	2	1		2 burnt flints, 1 sherd prehistoric. 1 Sherd ? prehistoric sand tempered.	Probably prehistoric
031	2	5		VSQ prehistoric, flint/sand temper	prehistoric
033	1	11		VSQ prehistoric pot, flint/sand tempered. 1 sherd probable prehistoric	prob prehistoric
034	2	1		2 sherds prehistoric, some flint temper	Prehistoric
035	3	1		1 fragment Rom tegula. 1 sherd med, fabric 30, C.13th	C.13th Century
036		55		1 frag, prehistoric pot	prehistoric
037	1	13		2 burnt flint. fragments of charcoal VSQ fragments prehistoric pot, flint/sand tempered	prehistoric
042	3	14		1 sherd prehistoric flint/sand temper	prehistoric
043	2	13		1 fag CBM, 1 frag probable prehistoric pot	Roman+
044	3	3		2 Shreds (1 rim), 1 LIA/ Roman grey ware, 1 storage jar (HZ) rim	LIA/ Rom probably early Rom.
045		57		2 frags prehistoric, sand tempered pot	Prehistoric
046	3	4		VSQ Flint tempered prehistoric. Frags of daub/pot	Prehistoric
051	2	5		VSQ prehistoric flint/sand tempered pot	prehistoric
053	1	9		1 sherd prehistoric some flint temper.	Prehistoric
054			4	1 Sherd, prehistoric fine flint temper	Prehistoric
055	2	1		1 sherd (V. small) Sand tempered probably prehistoric	? Prehistoric
056	3	5		1 sherd Roman grey ware	Roman
058	3	13		1 Sherd prehistoric VSQ fine grog tempered LIA/Rom	LIA/Rom
059		141		2 Sherds, prob. prehistoric, sand and flint tempered.	? Prehistoric
060	4	14		VSQ Sandy grey ware ?BB2 (GB)	Roman ?early 2nd+
062	4	4		VSQ prehistoric pot sand/flint tempered	prehistoric
063	1?	16		1 piece tile thin, ?peg tile or thin Roman	? Post Roman
064	3	5		Prehistoric 3 sherds flint. Tempered pot	Prehistoric
065		52		1 flint tempered sherd	?LBA
067	3	13		SQ predominantly late prehistoric, mostly flint tempered. 1 sherd LIA/early Roman some grog temper, 1 frag fired clay, 1 frag probably peg tile, 2 frags coal.	Post Rom probably post med.
068		166		1 sherd dressel-20,	1st-2nd/3rd
069	4	166/14		VSQ Grey ware, BB2 cam37b, 1 frag CBM	Roman, early 2nd+ ? late 2nd+
071	4	5		VSQ prehistoric pot, fine flint temper	Prehistoric
072		44?		1 sherd flint tempered prehistoric	prehistoric
073		257		1 sherd Samian (BA) DR.18/31 or 31	Roman, early 2nd to early 3rd ? late 2nd to early 3rd.
073		257		1 Burnt flint. 1 frag Rom tile. 1 small sherd mod 19th/20th century	Mod-19th/20th century
075			4	1 sherd Roman ? BB2 (GB) abraded	Roman ? early 2nd C+
083	5	3		1 sherd prehistoric flint temper 1 sherd sand and some fine grog temper	Prehistoric
084	5	5		VSQ Roman Grey ware,	Early Roman
085	3	3		Prehistoric sherd, flint tempered	Prehistoric
086		254?		VSQ frags prehistoric pot and daub/pot	prob prehistoric
087			5	3 pieces daub, 1 piece ?CBM	probably Roman+
088			4	Prehistoric 1 piece CBM, 1 sherd flint tempered	Roman +
089		57		1 sherd thick flint tempered	prehistoric
89		57		1 sherd flint tempered	?LBA
097		163		2 sherds roman grey ware	Roman
108	6	14		VSQ prehistoric flint tempered pot.	prehistoric
109			4	1 piece burnt flint, 2 frags prob Rom tile, 2 sherds prehistoric pot. 1 pre-Rom sherd sand tempered	probably roman
110	2	10		1 sherd prehistoric pot flint temper	prehistoric
112			4	1 Sherd (broken) prehistoric, flint tempered.1 Sherd Roman Amphora ? Dressel-20	Roman, 1st – early 3rd.

find no	sx	feature	layer	comments	date
113	5	14		1 sherd prehistoric flint/sand tempered	prehistoric
114	7	1		1 sherd flint tempered prehistoric pot	prehistoric
115	5	1		2 sherds prehistoric flint tempered	prehistoric
116	6	1		VSQ flint tempered prehistoric. 1 sherd ?grog/sand tempered pot. 1 Sherd Roman BB2. 1 sherd samian, v. abraded	Roman, early 2nd+
117	6	3		VSQ Roman greyware ?cam266 jar, VSQ prehistoric sand/flint tempered	Rom ?early Rom
118			4	4 sherds sand and flint tempered, 1 sherd sand tempered	LBA/IA
119	6	14		VSQ prehistoric flint/sand tempered	prehistoric
120	2	10		1 sherd prehistoric sand tempered	prehistoric
121	7	3		1 burnt flint, VSQ sand tempered prehistoric pot	Prehistoric
124	5	14		2 pieces burnt flint. 1 sherd flint tempered prehistoric	prehistoric
127	3	14		Roman flat tile frag	Roman
130		139		1 sherd prehistoric flint tempered	prehistoric
131	6	14		VSQ flint tempered prehistoric pot. 1 sherd grog tempered ?LIA. 1 sherd Rom grey ware, ? earlier Rom	? earlier roman
133			4	VSQ prehistoric some flint temper VSQ Roman grey ware	Roman
134	8	1		1 sherd grog tempered LIA 4 sherds samian DR.31 bowl	Rom Later 2nd Century
135	7	3		2 sherds flint tempered prehistoric	prehistoric
137	6	14		1 quarter Rom samian bowl DR.31 later 2nd C. 1 piece Rom tile. 1 burnt flint	Roman later 2nd Century
139	2	8		1 sherd indeterminate ?Rom. 2 frags fired clay/dub	?Rom
140	7	14		1 sherd flint tempered prehistoric 1 sherd Rom grey ware 4 sherds Rom amphora ?dressel20, 1 burnt flint	Roman 1st-early 3rd century
146	9	3		1 sherd flint tempered prehistoric. frag ?CBM	?Roman or later
147	6	5		1 piece charcoal. 1 frag daub/pot	indeterminate
152		272		VSQ flint tempered prehistoric	prehistoric
154	8	14		VSQ prehistoric sand/ flint temper pot	prehistoric
155	9	1		VSQ prehistoric flint and sand temper 1 fag daub, frags charcoal 1 sherd Rom grey ware	Roman
157	9	3		1 sherd, flint tempered prehistoric	prehistoric
158	1	273		VSQ flint/sand tempered prehistoric pot. 1 sherd Rom grey ware ?early Rom, 1 frag CBM	?Early Roman
162	9	3		1 sherd flint tempered prehistoric pot	prehistoric
163	4	13		VSQ ?prehistoric sherds. 1 sherd greyware ?early roman	?early roman
164			5	SQ frags abraded CBM	?Roman
170	8	1		2 sherds flint and sand tempered	LBA/IA
172		272		sherd, sand and flint temper	LBA/IA
174		276		SQ moderately large sand temp sherds , 1 sparse flint temp, 2 ? LIA/ROM sherds. 1 burnt flint frag	? LIA/ROM
179		276		SQ sand temper ? IA sherds, 1 sherd grog temper ? LIA, 1 sherd fine sand temper	? IA-LIA
183	10	3		1 frag sand temper pot	Prehistoric
184		276		1 sherd sand temper pot	?MIA
186		276		3 sherds sand temp hand made - Prehistoric, 1 grog temp sherd, prob (LIA)	? LIA
189		276		1 burnt stone, 2 sherds Prehistoric sand/grog temp, 2 sherds sand temp pot	? LIA
190		U/S		1 sand temper sherd with sparse flint	LBA/LIA
192		292		1 sherd sand temp some flint frags , Prehistoric	? IA
192		212		1 sherd Prehistoric grog/flint tempered	?LBA/IA
193	11	3		Most of one vessel - Cam 231/231/ 280-281. 1sherd Prehistoric sand temp (IA), 1 sherd flint temp (LBA/IA)	Rom 1st – 2nd or mid/late 2nd -4th
196	11	1		1 poss burnt flint, 1 frag flint temper	?IA

find no	sx	feature	layer	comments	date
				Prehistoric pot, 1 sherd sand temper pot	
197		3		1 tiny flint chip/flake, 1 sherd sand temper Prehistoric pot	Prehistoric
198	11	3		2 burnt flints	
199	6	12		1 small frag sand temper pot	Prehistoric
200	1	287		2 sherds of sand temper pot,	?IA
201	1	287		1 frag sand temp Prehistoric sherd	? IA
202		296		SQ charcoal frags	
204		13		1 sherd sand temper	Prehistoric
205	13	1		2 sherd of pot with sand temper ? IA,	? IA
207		296		SQ ? heated concreted sand, 1 sherd sand temper	Prehistoric ? IA
209	4	287		1 sherd Prehistoric sand temp (IA), 1 RT	Rom
211	15	3		1 burnt flint	
213		13		SQ RT, SQ Dressel 20 amphora, 1 Rom g/w base	Rom prob 1st-early 3rd
214	16	3		1 RT	Rom
216		301		3 sherds ? Prehistoric sand temp. (very wet & dirty)	? IA
217	5	287		1 Prehistoric sherd with sparse flint temp	? LBA/LIA
219	15	1		2 sand temp, 1 ? LIA sherd	? LIA
220		296		SQ fired clay frags?	
221		313		1 very small sherd sand temper pot	Prehistoric
223	17	3		1 small sherd of pot with sand & sparse flint temper	LBA?IA
228	6	287		2 sherds HZ sparse grog temper, SQ sand temp Prehistoric (? IA)	LIA/Rom ? early Rom
231		316		1 sherd daub or Prehistoric pot	? Prehistoric
232	16	1		1 prob RT	prob Rom
233	9	13		1 Rom g/w rim ? Cam 266/Cam 231, 1 fired clay lump	Rom ? early Rom
236		318		SQ quartz sand temp Prehistoric (? LIA), Q ? heated stone, 2 Rt frags	Rom
237	18	1		1 sand temper Prehistoric sherd ? IA, 1 ? frag from large pot or fired clay poss some grog temper	? LIA
237	18	3		1 sand tempered sherd, 1 frag pot/daub	?MIA
238		326		1 sherd of pot with sparse grog & sand temper	? LIA
240	5	287		1 very small sherd sand temper pot	Prehistoric
241	18	3		1 sherd Prehistoric sand temper	? IA
242		339		1 sherd Prehistoric mod flint temp	LBA/ EIA
372		1		Fragments fired clay, tile? VSQ Roman grey ware	Rom ? Early Roman
427	3	1		1 sherd roman grey ware	Roman
525		80		clay pipe, coal, peg tile mod glass	Mod

Appendix 3

Assessment of small finds & bulk ironwork

by Nina Crummy

Summary
The assemblage consists of a minimum of 131 objects ranging in date from Iron Age to modern. Some bags contain more than one object (*eg* loom weights, nails and hobnails), but they are here treated as one item. Stone and iron are the largest material groups present. The functional categories represented are very limited.

Condition
The majority of the metal items are in fair condition. The copper-alloy and lead finds and some of those of iron are packed in crystal boxes and cushioned by acid-free tissue. The remaining iron objects are packed in sealed polythene bags. Both bags and boxes are stored in airtight Stewart boxes with silica gel.

Most of the stone and ceramic items are very weathered and abraded, a condition typical of objects from a ploughed rural site. They are packed in sealed polythene bags and stored in a museum-standard cardboard box. An exception is a large fragment of worked limestone that is crated individually.

Some ceramic and iron objects found among the bulk finds during post-excavation processing do not have a small finds number.

The assemblage
The summary catalogue (below) lists the assemblage in a series of tables by material, with coins separated out from the other copper-alloy objects. The tables give the small find number and site context numbers in the first three columns, followed by spot-identifications, recommendations for conservation and/or X-radiography and illustration where appropriate. Spot-identifications and illustration requirements may be amended after conservation and X-radiography have taken place.

The assemblage can be divided by material thus:

copper-alloy (?silver) coins & tokens	6
other copper-alloy	19
lead	2
iron (small finds)	17
iron (bulk)	63
ceramic	6
stone	17
natural accretion (not a small find)	1
Total	131

Some bags contain more than one object; the minimum number is give here. The majority of the pieces are iron nails or miscellaneous fittings that cannot be closely dated, but there are also many objects of Late Iron Age or Roman date, quern stones in particular, and several post-medieval or modern items.

Broken down by date, which for undiagnostic objects is based on the provisional phasing, and excluding the iron nails, the assemblage can be presented thus:

	Coins	***Cu-al***	***Lead***	***Iron***	***Ceramic***	***Stone***
Middle Iron Age	-	1	-	-	1	-
MIA/LIA	-	-	-	1	-	-
Late Iron Age	-	-	-	-	1	-
LIA/Roman transition	-	-	-	1	3	14
Roman (& ?Roman)	-	6	1	8	1	-
post-medieval and modern	6	12	-	4	-	1
undiagnostic & unstratified	-	-	1	3	-	2

The nails, where the head and sufficient of the shank remains, are all of Manning's Type 1b, with round, more or less flat head. They are show below by context date and Roman context type; numbers in the table represent the minimum number present (*ie* number of bags):

	Area 2	**Area 6**	**Area 10**
Iron Age	-	-	1
LIA/Roman transition	-	1	-
Roman - burials	-	41	-
Roman - other contexts	-	14	-
post-medieval/modern	-	1	-
unstratified	1	3	1

Several fragments of copper-alloy wire, a piece of sheet iron, some nail shank fragments (three from one context/bag), loom weight fragments and a spindlewhorl come from Iron Age contexts. The metalwork cannot be more closely identified and dated at this stage of the post-excavation analysis, but the wire may be all that remains of a brooch pin. The spindlewhorl is Late Iron Age. Fragments of triangular loom weights found in early Roman or transitional contexts may also be Iron Age. Loom weights of this form were used on a warp-weighted loom; they originated in the Middle Iron Age and continued in use throughout the Late Iron Age and for the first few decades after the Roman invasion. They cannot therefore be precisely dated as individual items.

Also of either late Iron Age or early Roman date are fragments of what may be a brooch spring from Area 6, F304. Beehive-shaped Puddingstone quern stones are also an artefact type that originated in the Late Iron Age, though the majority come from Roman contexts and production appears to have continued into the 2nd century. The single small fragment from Area 6 is therefore most likely to be of Roman date.

A Rearhook (Dolphin) brooch came from ditch F8 in Area 10. The brooch was complete when buried, though the spring and pin are now separate. The bow has been partly snapped and twisted at the lower end, deliberate damage which suggests that this brooch is a selective placement, though it came from the upper fill. The brooch type dates to *c* AD 40-60/5 and is of native British manufacture. The rearhook spring technology is almost certainly of Icenian origin, though the distribution of the type is very wide.

An Aucissa brooch from ditch F287 in Area 10 is a contemporary imported type, used by the Roman military, and dates to *c* AD 43-60/5. Though all parts of the brooch are present, and the pin is fixed in the open position, it is broken across the bow. If the break occurred after deposition as the brooch corroded, then this may be a casual loss rather than a deliberate deposit, but if the brooch was deliberately broken it may be a selective placement, though again it came from the upper fill.

The majority of the remaining Roman items are quern stones and nails. Fragments of German Mayen lava flat querns were found in a number of ditch sections. All the pieces were small and weathered and some had disintegrated. One may have been reused as a rubbing stone. Querns made from this stone were imported from AD 43; there is some evidence that the trade declined in the later Roman period. Two fragments of Millstone grit flat querns, from quarries in the Pennines, were also recovered. The start date of production of these querns dates to at least the early 2nd century (and may be earlier), though the majority of examples found in Essex come from late Roman contexts.

A large proportion of the nails, all of Manning's Type 1b, come from Roman burials and most of those are from two coffins. There are no noticeable concentrations among those from other features; several come from the fill of the early Roman ditches on Area 6 (F2, F4) but are from different sections.

The metalwork has yet to be fully identified after conservation work and X-radiography, and the functional categories so far represented on all three areas are very limited. Omitting post-Roman material, Area 2 has produced evidence of weaving, in the form of loom weight fragments, in the Middle Iron Age period; Area 6 has also produced evidence of weaving, but on this area the loom weights may be of Late Iron Age or early Roman date; and Area 10 has produced an Iron Age spindlewhorl from thread-making, a further loom weight fragment, again probably Late Iron Age or early Roman, and Roman dress accessories (two brooches and some hobnails).

All the coins and tokens are of post-medieval date, with the latest being a George VI 3d dated to 1940. All are unstratified. Of the other post-Roman finds at least one is a military button and a fragment of barbed wire has been dated on stratigraphic evidence to World War II.

Recommendations

1) To facilitate identification and illustration and allow the Summary Catalogue to be refined (see 2 below) and a detailed catalogue of and report material to be prepared (see 3 and 4 below) all the ironwork should be X-rayed (80 objects) and the copper-alloy items should be cleaned and stabilised (25 objects).

2) The summary catalogue should be refined after the metalwork has been cleaned/X-rayed to form a final archive catalogue.*

3) A detailed catalogue of the Iron Age and Roman material should be prepared.*

4) The catalogue should form the basis for a publication-standard report that concentrates on setting the objects in the context of the land-use of the area during the Iron Age and Roman periods. Where appropriate, similar items from within the eastern region should be cited as parallels. The assemblage is too small for meaningful statistical analysis by either date or function, but its general character should be compared to those from sites of similar date and similar use from the immediate area and from the region in general.*

Summary Catalogue

Coins

SF	Find	Feature or Layer	Metal	Identification	Date	Treat
100	2 (172)	u/s	cu-al	George VI, 3d bit	1940	y
53	10 (104)	u/s	cu-al	coin or button	post-medieval?	y
122	Q1	u/s, metal-detected	cu-al	token	post-medieval	y
123	Q2	u/s, metal-detected	cu-al	coin or token	post-medieval	y
124	Q3	u/s, metal-detected	cu-al	token	post-medieval	y
126	Q5	u/s, metal-detected	ag?	token, or military fitting	modern	y

Copper-alloy

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	Treat	Draw
95	2 (134)	F2 sx 8	ditch	Roman	fragment o-sx thick wire, ?shank	18	-	y	-
96	2 (82)	F81 sx 2	?recut	Middle Iron Age	7 fragments o-sx thick wire, ?shank	18	-	y	-
101	2 (173)	u/s	-	-	collar-stud	1	modern	y	-
102	2 (174)	u/s	-	-	button, military	1/13	modern	y	-
64	6 (437)	F1	Pit	Roman	butterfly-shaped fitting	18	-	y	?
24	6 (284)	F304 sx 5	Ditch	Roman	2 narrow strip fragments, one with marginal mouldings; coil fragments (?brooch spring)	18	Late Iron Age/Roman?	y	y
22	6 (344)	F304 sx 5	Ditch	Roman	small fragments sheet	18	-	-	-
88	6 (549)	u/s	-	-	buckle fragment	1	post-medieval/ modern	y	-
30	10 (10)	F8 sx 1	Ditch	Iron Age-Roman	Rearhook brooch, pin & spring separate	1	*c* 40-60/5	y	y
117	10 (224)	F287 sx 6	Ditch	Iron Age-Roman	Aucissa brooch	1	43-60/5	y	y
49	10 (100)	u/s	-	-	4-hole button	1	late post-medieval/modern	y	-
50	10	u/s	-	-	button with integral loop,	1/13	modern	y	-

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	Treat	Draw
	(101)				military?				
51	10 (102)	u/s	-	-	4-hole button	1	late post-medieval/modern	y	-
52	10 (103)	u/s	-	-	button with integral loop	1	late post-medieval/modern	y	-
54	10 (105)	u/s	-	-	convex top from composite button	1	late post-medieval/modern	y	-
55	10 (106)	u/s	-	-	cuff- or collar-stud	1	modern	y	-
71	10 (142)	u/s	-	-	stud with integral loop, military	1/13	modern	y	-
48	10 (99)	u/s	-	-	button, military	1/13	modern	y	-
125	Q4	u/s, metal-detected	-	-	spoon or vessel handle	4	late post-medieval/modern	y	-

Lead

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	Treat	Draw
60	6 (443)	F259	posthole?	Roman	disc, irregularly plano-convex; ?post-base	18	Roman?	y	?
47	10 (98)	u/s	-	-	sheet fragment	18	-	y	-

Iron

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	X-ray	Draw
82	2 (6)	F2 sx 1	ditch	Roman	10 fragments sheet	18	-	y	?
106	2 (178)	u/s	-	-	tanged knife	10	late post-medieval/modern?	y	-
105	2 (177)	u/s	-	-	U-shaped fitting	11	-	y	?
104	2 (176)	u/s	-	-	fitting fragment	11	-	y	?
103	2 (175)	u/s	-	-	curved fitting	11	modern?	y	-

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	X-ray	Draw
13	6 (223)	F1 sx 2	pit	Roman	disc or ring	18	-	y	-
26	6 (358)	F1 sx 3	pit	Roman	strip?	18	-	y	?
20	6 (335)	F1 sx3	pit	Roman	narrow strip fragment	18	-	y	?
63	6 (444)	F4	ditch (metal-detected from upper fill)	early Roman	sphere + white-metal flecks (possibly iron pyrites nodule)	18	-	y	-
61	6 (441)	F5	ditch	Roman	fragment	18	-	y	-
62	6 (501)	F62	evaluation trench	Modern	?tool fragment	10?	-	y	?
7	6 (126)	F63	cremation	LIA/early Roman	sheet fragment	18	-	y	-
23	6 (282)	F238	grave	Roman	lump, ?iron pan	-	-	y	-
19	6 (324)	F304	ditch	Roman	3 fragments thick sheet	18	-	y	?
27	6 (483) or (383)	F467	pit	Roman	hobnails in soil block	1	Roman	y	y
39	10 (28)	F1 sx 2	ditch	Roman	disc	18 (13?)	?intrusive, modern	y	-
121	10 (234)	F13 sx 9	ditch	MIA/LIA	sheet fragment + attachment	18	-	y	?
-	10 (63)	F16 sx 1	tank trap	Modern	barbed wire	13	modern	-	-

Bulk ironwork: nails

Find	Feature or Layer	Context description	Provisional phase	Number	Date	X-ray	Draw
2 (171)	u/s	-		2 + 4 shank fragments	-	-	-
6 (210)	F1	pit	Roman	1 + 1 shank fragment	-	y	-
6 (346)	F1 sx 3	pit	Roman	1 (or shank fragment)	-	y	-
6 (78)	F2	ditch	Early Roman	1	-	y	-
6 (97)	F2 sx 5	ditch	Early Roman	1	-	y	-
6 (121)	F2 sx 6	ditch	Early Roman	1	-	y	-
6 (34)	F4 sx 2	ditch	Early Roman	1	-	y	-
6 (133)	F4 sx 7	ditch	Early Roman	2 shank fragments	-	y	-
6 (347)	F5 sx 4	ditch	Roman	1	-	y	-
6 (225)	F5	ditch	Roman	1	-	y	-
6 (27)	F17	burial	Roman	2 (?3)	-	y	-
6 (71)	F17	burial	Roman	1	-	y	-
6 (38)	F28	grave	Roman	1?	-	y	-
6 (39)	F28	grave	Roman	1?	-	y	-

Find	Feature or Layer	Context description	Provisional phase	Number	Date	X-ray	Draw
6 (40)	F28	grave	Roman	1	-	y	-
6 (41)	F28	grave	Roman	1?	-	y	-
6 (44)	F28	grave	Roman	1	-	y	-
6 (50)	F28	grave	Roman	1	-	y	-
6 (53)	F28	grave	Roman	1	-	y	-
6 (55)	F28	grave	Roman	1	-	y	-
6 (56)	F28	grave	Roman	1?	-	y	-
6 (58)	F28	grave	Roman	1	-	y	-
6 (59)	F28	grave	Roman	1	-	y	-
6 (60)	F28	grave	Roman	1	-	y	-
6 (61)	F28	grave	Roman	1	-	y	-
6 (62)	F28	grave	Roman	1	-	y	-
6 (64)	F28	grave	Roman	1?	-	y	-
6 (68)	F28	grave	Roman	1	-	y	-
6 (502)	F62	cremation	LIA/early Roman	1	-	y	-
6 (110)	F65	pit	?Roman	1	-	y	-
6 (289)	F192	surface find	-	1	-	y	-
6 (176)	F227	grave	Roman	1	-	y	-
6 (183)	F227	grave	Roman	1	-	y	-
6 (190)	F231	grave	Roman	1	-	y	-
6 (191)	F231	grave	Roman	1	-	y	-
6 (192)	F231	grave	Roman	1	-	y	-
6 (193)	F231	grave	Roman	1	-	y	-
6 (194)	F231	grave	Roman	2?	-	y	-
6 (195)	F231	grave	Roman	1 shank fragment	-	y	-
6 (197)	F231	grave	Roman	1	-	y	-
6 (198)	F231	grave	Roman	1 shank fragment	-	y	-
6 (252)	F231	grave	Roman	1	-	y	?
6 (253)	F231	grave	Roman	1	-	y	-
6 (254)	F231	grave	Roman	1	-	y	-
6 (255)	F231	grave	Roman	1	-	y	-
6 (266)	F231	grave	Roman	1	-	y	-
6 (267)	F231	grave	Roman	1	-	y	-
6 (268)	F231	grave	Roman	1?	-	y	-
6 (269)	F231	grave	Roman	1	-	y	-
6 (270)	F231	grave	Roman	1	-	y	-
6 (272)	F231	grave	Roman	1	-	y	-
6 (273)	F231	grave	Roman	1	-	y	-
6 (274)	F231	grave	Roman	1	-	y	-
6 (256)	F236	surface find	-	1 shank fragment	-	y	-

Find	Feature or Layer	Context description	Provisional phase	Number	Date	X-ray	Draw
6 (280)	F238	grave	Roman	1, stud or most of shank missing	-	y	?
6 (297)	F259 sx 5	ditch	Roman	1 shank fragment	-	y	-
6 (302)	F304 sx 1	ditch	Roman	1	-	y	-
6 (327)	F304	ditch	Roman	1	-	y	-
6 (382)	F467	pit	Roman	1 (or shank fragment)	-	y	-
6 (504)	F503	trench	Modern	1 shank fragment	-	y	-
6 (442)	u/s	-	-	1 shank fragment	-	-	-
10 (234)	F13 sx 9	ditch	MIA/LIA	3 shank fragments	-	y	-
10 (107)	u/s	-	-	3 (1 + small head) + 3 shank fragments	-	-	-

Ceramic

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	Draw
-	2 (152)	F6 L24 sx 5	east enclosure ditch	Middle Iron Age	loom weight fragments (7)	3	Iron Age	-
80	2 (10)	F11	ditch	Roman	tile fragment with scratched lines, not letters	9	Roman	y
122	6 (96)	F4 sx 6	ditch	Early Roman	?loom weight fragments (4), ?unfired	3?	Middle Iron Age-early Roman	-
-	6 (23)	F23	pit	Roman?	loom weight fragments (7); four have part of perforation surviving	3	Middle Iron Age-early Roman	y (1)
-	10 (26)	F4 sx 2	ditch	LIA/early Roman	loom weight fragment	3	Middle Iron Age-early Roman	-
40	10 (24)	F11 sx 1	ditch	MIA/LIA	spindlewhorl	3	Late Iron Age	y

Stone

SF	Find	Feature or Layer	Context description	Provisional phase	Identification	Functional Category	Date	Draw
83	2 (8)	F10 sx 1	ditch	post-medieval	slate pencil fragment	7	late post-medieval to modern	-
81	2 (17)	F11 sx 1	ditch	Roman	large tessera of decorative purple stone	9	-	?

					(?basalt); 2 opposite faces smooth			
25	6 (341)	F1 sx 3	pit	Roman	Millstone grit quern stone fragment; upper-stone ?rim fragment, grinding surface worn smooth	4	Roman	y
21	6 (345)	F1 sx 3	pit	Roman	Mayen lava quern stone fragment, upper-stone rim fragment, some vertical tooling on rim remains	4	AD 43+	-
2	6 (8)	F4	ditch	early Roman	Mayen lava quern stone fragment; lower-stone rim fragment, weathered, no tooling remains	4	AD 43+	-
1	6 (11)	F5	ditch	Roman	Mayen lava quern stone fragment; reused as rubbing stone?	4	AD 43+	-
28	6 (482)	F5 sx 6	ditch	Roman	Mayen lava quern stone fragment, in 3 pieces; weathered, no visible tooling	4	AD 43+	-
3	6 (15)	F12	shallow pit	?Roman	Mayen lava quern stone fragments; many, weathered, small/powdery	4	AD 43+	-
14	6 (175)	F61 sx 5	ditch	Roman	Mayen lava quern stone fragments; many, weathered, small/powdery	4	AD 43+	-
15	6 (188)	F61 sx 8	ditch	Roman	Puddingstone quern stone fragment; small part of grinding surface remains	4	Late Iron Age-2nd century	-
32	6 (310)	F259 sx 2	ditch	Roman	Mayen lava quern stone fragments; many, weathered, small/powdery,	4	AD 43+	-
18	6 (309)	F260 sx 2	ditch	Roman	Mayen lava quern stone fragments; many, weathered, small/powdery	4	AD 43+	-
36	6 (498)	F467	pit	Roman	Millstone grit quern stone fragment; ?tooling on one face	4	Roman	-
29	6 (485)	F480	pit?	Roman	Mayen lava quern stone fragment in 4 pieces; small, weathered	4	AD 43+	-
8	6 (79)	u/s	-	-	large piece of limestone with one well-worked surface, the rest roughly-shaped and/or broken	-	Roman +	?
9	6 (80)	u/s	-	-	fragment of limestone with tool marks; combination of water worn/rolled, spalled, & roughly-shaped surfaces, now weathered (?part of SF 8)	-	Roman +	?
11	6 (161)	u/s	-	-	Mayen lava quern stone fragments; upper-stone rim fragment, no tooling remains	4	AD 43+	-

Appendix 4

Assessment of earlier prehistoric pottery

by Paul Sealey

Introduction
The pottery discussed in this evaluation is all the prehistoric pottery from the garrison excavations that pre-dates the introduction of the grog-tempered and wheel-thrown pottery of late Iron Age type known as Aylesford-Swarling or Belgic ware. For convenience it is called 'pre-Belgic' here.

Quantity and Condition of the Material Recovered
Some 8 kilos of pre-Belgic pottery was excavated. It was distributed unevenly between the three areas excavated.

More than half – 4.5kg – came from the enclosure in Area 2. Two kilos came from Area 6, and 1.5kg from Area 10.

The pottery from Areas 6 and 10 consists of small and often tiny, abraded sherds with little or nothing of the original surfaces extant. Average sherd weights are low and few diagnostic typological features have survived.

Area 2 produced pottery with higher sherd weights and there were sherds with diagnostic typological features, particularly from the ditch of the enclosure.

There are no large groups of pre-Belgic pottery; most are small, with less than ten sherds.

Material for Illustration
The Area 2 material includes about eight rims and two bases that merit illustration.

There are about five rims or bases from Area 6 that could usefully be illustrated.

None of the pottery from Area 10 needs illustrating.

Published at quarter scale, the entire garrison pre-Belgic pottery will amount to about one A4 page.

A Characterisation of the Pottery Recovered
The great majority of the pre-Belgic pottery from the garrison is middle Iron Age sand-tempered ware. It is hand-made and plain, with virtually no decoration at all.

Sherds tempered with flint or with flint-and-sand are also present. They can also be accommodated within what we know of Essex middle Iron Age pottery.

The only definitely earlier material is a small group of early Iron Age Darmsden-Linton pottery from cremation F276 in Area 10.

Aspects of Chronology
There are enough sherds with diagnostic typological features from Area 2 for one to be sure that the pre-Belgic pottery there is exclusively middle Iron Age.

In Essex middle Iron Age pottery was current from *c.*300-75/50 BC (Sealey forthcoming).

Where typological features are lacking, study of the fabrics present can help resolve problems of identification and chronology.

Apart from the sand-tempered pottery, the only other significant tempering present at the garrison is flint or flint-with-sand.

As one moves from the late Bronze Age into the early and middle Iron Age in Essex there is a decline in the quantity of exclusively flint-tempered pottery, and an increase in purely sand and flint-with-sand temper (Brown 1988,269).

Theoretically any of the flint or flint-with-sand tempered scraps of pottery from the garrison could be as early as the late Bronze Age, although typological features that early are not present.

But flint or flint-with-sand tempered pottery is still present as a significant minority element in middle Iron Age pottery assemblages (notably at the Stanway site in Colchester), and it seems reasonable to view the garrison pre-Belgic pottery as essentially middle Iron Age.

Descriptions of the Pre-Belgic Pottery Area by Area

Area 2 was 5,250m² in extent and produced 4.5kg of pre-Belgic pottery. Most of it is sand-tempered with little in the way of flint or flint-with-sand temper. Typologically the pre-Belgic pottery is unmistakably and exclusively middle Iron Age. The most important single source of pottery was the enclosure ditch. Very little was present in the lowest fills and most came from the lower part of the ditch recut. In the higher levels of the ditch, middle Iron Age pottery was associated with a late Iron Age grog-tempered storage jar rim. Small quantities of middle Iron Age pottery were present elsewhere on the site, in the central round house and (as a residual element) in the droveway that sliced across the enclosure in the late Iron Age. An important middle Iron Age vessel was retrieved from the centre of the round house. Although it is now incomplete, enough survived to show that it may have held cremated bone. Urned cremations are typical of the late Iron Age and the only other example of a cremation in a middle Iron Age pot from Essex is a vessel from Mucking (Elsdon 1975,50-1,fig.13 no.2,102). Cremation and the introduction of Aylesford-Swarling 'Belgic' pottery are closely linked in Essex and made their first appearance *c.*75-50 BC, suggesting that the round house was still a standing structure in the 1st century BC. The Area 2 enclosure is only some 700 metres east of the Barn Hall dyke, part of the defences of Iron Age Colchester. Old excavations there produced pottery (now lost) which might also have been middle Iron Age (Hawkes & Crummy 1995,24).

Area 6 was 10,175m² in extent and produced 2kg of pre-Belgic pottery. Most is sand-tempered, with only a few sherds tempered with fine or coarse flint (with or without sand). The few sherds with diagnostic typological features are middle Iron Age and there is no reason to think that any of the pottery is earlier. A few groups were residual in the fills of Roman inhumation graves. Most of the pottery came from the ditches of droveways or from field boundaries, with some from a stock pen and stock funnel. The last feature had daub in its fill and might possibly have been an eaves-drip gully, but with a projected diameter of some 17.5 metres it is too big for a conventional Iron Age round house. Otherwise there is no evidence for domestic occupation in Area 6 and the middle Iron Age pottery belongs to a thoroughly agrarian landscape and bears every appearance of weathered and abraded sherds that were residual in their contexts.

Area 10 was 14,000m² in extent and produced 1.5kg of pre-Belgic pottery. Like Area 6, Area 10 consisted of an agrarian landscape of droveways and field boundaries. Most of the pre-Belgic pottery came from the ditches of these features. There is no sign of round houses and the landscape apparently had no permanent habitation.

The only assemblage of garrison pottery earlier than middle Iron Age came from a cremation at the north of the zone, F276. It included a large flint-tempered base sherd with no rough-casting on the base. Rough-cast bases are a typical feature of late Bronze Age pottery (Rigby 1988,103) and their absence here suggests the garrison group is Iron Age. This is confirmed

by pottery from F276 decorated with grooves. One sherd has two parallel straight grooves typical of pottery of Darmsden-Linton type, current in Essex and neighbouring counties *c.*600-300 BC. Evidently the cremation was associated with a small assemblage of early Iron Age pottery with a conspicuous component of decorated or fine ware bowls. Sherds had apparently been specially selected for inclusion in the pit. A similar early Iron Age assemblage (but not from a funerary context) has been reported from Context 405 at Slough House Farm in the Blackwater estuary (Brown 1998,136). Cremations of Darmsden-Linton date are rare enough and the presence here of pottery in the grave pit that represents selective, deliberate deposition makes the group a real addition to knowledge.

Otherwise the pottery consists of sand-tempered wares, with a minor component of flint or flint-with-sand temper. Average sherd weights are low and the material is in an advanced stage of abrasion and there is nothing that merits illustration. On the basis of the predominance of sand-temper, a middle Iron Age date can be advanced for the material.

Research Potential of the Garrison Pre-Belgic Pottery

Despite its initially unpromising aspect, the pre-Belgic pottery from the garrison is important, and can make a significant contribution to knowledge.

The Area 2 enclosure and its round house with the adjacent field systems and droveways in Areas 6 and 10 are the agrarian background to the rise to national pre-eminence of Colchester as a *chef-lieu* towards the end of the Iron Age.

The droveways suggest a concentration on pastoralism, rather than more labour-intensive cereal cultivation. This would have liberated men from labour in the fields to fight. This emphasis on livestock may well have been connected with the emergence of warrior bands organised on a more durable footing under local leaders in a landscape with thinly populated or uninhabited defensive enclosures (Nash 1984,100-1), like Camulodunum.

The middle Iron Age pottery provides coherent dating evidence for the Area 2 enclosure and round house. Middle Iron Age pottery was in use in Essex for some 250 years, *c.*300-75/50 BC.

In Area 2 the presence of a cremation in a hand-made middle Iron Age pot and the association of middle and late Iron Age pottery in the upper ditch fills suggests the life of the enclosure and its house lasted until the 1st century BC.

Dating the droveway ditches and field boundary gullies in Areas 6 and 10 is more difficult because they do not themselves cut dated features. What the dateable material in their fills tells us is when the ditches went out of use and became silted up with soil wash.

Bearing in mind that the fields were manured with midden debris (see below), the layout of these field boundaries and droveways can be dated by assessing the date of the *earliest* definite pottery in their fills.

In every case the earliest dateable pottery in these ditch fills is middle Iron Age and shows that the prehistoric landscape under investigation at the garrison was middle Iron Age in its inception.

Judging by the preponderance of sand-tempered ware in the middle Iron Age pottery from the garrison, there is every possibility that this landscape was created later, rather than earlier in the middle Iron Age.

Bearing in mind the scant or negligible evidence for permanent human settlement in Areas 6 and 10, the question has to be posed of how pottery came to find its way into the features excavated there.

Elsewhere in Iron Age Britain the presence of abraded sherds in field boundaries and droveways is accounted for as relics of midden material that had accumulated on settlement

sites and which had been spread on fields as manure (Taylor 1975,30; Fowler 1981,167,202,213-14; Cunliffe 1995,12).

Colchester garrison is the first time this phenomenon has been recognised in Essex, and the project will attempt to work out the implications. This will involve addressing problems of taphonomy. Already the demonstration that broken pottery on settlement sites was moved to nearby farmland helps explain why more pre-Belgic pottery was not found on the Stanway and Abbotstone settlements at Colchester.

Quantified analysis of the Areas 6 and 10 pre-Belgic pottery will provide a benchmark for abraded sherd material that ended up in field systems as manure. Hitherto data on this topic is not available in Essex, or indeed East Anglia.

The garrison pottery is ideally suited for an exercise in taphonomy because of the striking differences between the Area 2 settlement and the fields and droveways of Areas 6 and 10. Comparison of the average sherd weights from Area 2, on the one hand, and Areas 6 and 10 on the other, will enable the manuring model for the post-breakage movement of pottery to be quantified and defined.

Appendix 5

Assessment of Late Iron Age and Roman pottery

by Stephen Benfield (CAT)

This assessment covers the Late Iron Age (LIA) pottery (essentially grog tempered wares) and all Roman wares.

There is approximately 34 kg of LIA and Roman pottery from the three sites. This is composed of:
Area 2: 0.09 kg
Area 6: 12.53 kg
Area 10: 21.1 kg
Most of the pottery is medium to small abraded sherds from pit and ditch fills, which includes some fine ware and imports such as samian and amphora.

Work to date:
The pottery from each context has been rapidly spot dated by find numbered bag, fabrics and forms noted as well as aspects such as degree of abrasion. An impression of assemblage composition and sherd size have also been noted. Weights of pottery have only been recorded as total assemblage weight for each area. Four pots from a cremation group have been sketch drawn prior to the removal of their contents.

Proposed further work:
It is proposed that most of the LIA - Roman pottery can be processed as a whole. However it should be noted that specialist contributions or consultation may be required on particular categories of pottery or in special circumstances, the most obvious of these categories of pottery being samian ware. Of pottery which will require further specialist input or comment there is a preliminary identification of a Dressel 1 amphora sherd from Area 6 (Dr. P. Sealey pers. com.). This vessel this will require further specialist comment, and all other amphorae sherds should also be at least visually reviewed by a specialist.

Recording and quantification:
Overall quantification should be based on fabric groups. The Roman pottery can and should be quantified using the Colchester fabric series devised by Symonds & Wade (1999) . There is no detailed local fabric series for LIA pottery and quantification by fabric will have to be based on perceived meaningful fabric differences in the assemblage itself, though most will probably be divided/subsumed into various categories of Grog Tempered Ware (GTW).

The quantification of the pottery should consist of sherd count and weight for each fabric, and degree of abrasion to sherds.

Any identifiable pottery forms should be recorded as far as possible using the Camulodunum form type series (Hawkes & Hull 1947 & Hull 1958 & 1967) which covers LIA and Roman pottery providing a firm core for recording of pottery forms. For the Roman pottery any additional forms, variants, or more specific form details can be compared for the Roman pottery with the illustrated material in CAR 10.

Illustration:
Based on the preliminary assessment there is no pottery, either single vessels or groups, from the general site assemblages which is considered to merit illustration other than the Dressel 1 sherd mentioned above (Dr P Sealey pers. com.), and the use of Camulodunum (Cam) form numbers to describe recognisable vessel forms and pottery quantification should suffice. However this is a provisional conclusion based on a rapid assessment and may be subject to change based on further processing.

There are four whole vessels from a cremation (Area 6 F63) of LIA/early Roman date which should be illustrated. (Note: These are the four vessels which have already been drawn as base sketches motioned above. They should take little further work to turn into final drawings)

Discussion

This is the first large scale excavation project which covers extensive areas of Camulodunum beyond the known focal sites of the Roman town itself, Sheepen, Gosbecks and Stanway complexes. Given the overall aspect of the assemblages it is anticipated that the primary input of the LIA/Roman pottery to the report will be one of dating which will enable further discussion by the excavators in relation to development of the landscape in the LIA, the LIA – Roman transition and Roman period. However as group of assemblages from the wider area of the Camulodunum complex the pottery itself is of intrinsic interest in relation to previous assemblages from the known focal sites. The report (as far as the nature of the assemblages will allow) should contain a written discussion covering aspects of the range of pottery types and chronological aspects for each of the areas to enable comparison both between the excavation areas, and with other assemblages from the major sites listed above. For the excavation areas themselves assemblage size, composition and condition could suggest process by which the assemblages were formed on each area, for example on site or near-by settlement rubbish, and/or ceramic detritus in field manure scatters.

Paul Sealey's comment on the amphora sherd:

> "The Dressel 1 amphora sherd from the garrison excavations is a single sherd weighing 43 grammes. It was stratified in Area 6 F61 section 8 (Bag 187 and small finds number 123), in the field boundary that runs north-east from the main droveway. The sherd is part of the shoulder of the amphora. Its thick wall (in excess of 20 millimetres) leaves no doubt about the identification. The fabric is CAM AM 2 (Tomber & Dore 1998,89-90,pl.66)
>
> Dressel 1 is the late Republican Italian wine amphora. Production came to an end by 10 BC. The form was common at Sheepen in first century AD contexts. There was no earlier occupation there and the amphoras presumably reached the site as re-used containers at least ten or fifteen years after the terminal date of the form (Sealey 1985,101-8). Apart from a residual sherd in the *colonia* in the Boudican destruction horizon, the type is only otherwise represented at Colchester in the Lexden cemetery. It was present there in some quantity in the famous tumulus burial (Williams 1986). Exasperatingly one has little idea where these imports of Italian wine were actually drunk at Colchester by the living when Dressel 1 was current, and the sherd from the garrison site edges us a little closer towards a solution".

Appendix 6

Assessment of ceramic building materials

by Ernest Black

CATALOGUE
Three Areas (Areas 2, 6, and 10) produced tile fragments and these are dealt with in this report. Many of the fragments were too small to identify and many were simply chips of tile. It should not be assumed that these are all of Roman date. In these cases no measurements were attempted. Measurements are given in millimetres. Frag. = fragment; T = thickness; exthf = external height of flange; wf = width of flange; msd = maximum surviving dimensions (approximate).

Area 2. All contexts are prefixed by the Code GAR 2003. 210 2.

L1 (1) (as marked on the bag; the label has L2):
One frag. probably from base of tegula, broken at junction with flange;
one brick frag., T uncertain;
6 unidentifiable frags.

L2 (1):
peg-tile, T10, possibly with small part of nail-hole present; peg-tile, T11, possibly burnt;
uncertain frag. Tc.26;
brick, msd c.137 x 150, T c.42-44, sanded on base, upper surface trimmed; no edges. There is a circular depression c.12mm in diameter on the upper surface with black staining;
one unidentifiable frag.

F2 sx1 (11):
one unidentifiable frag.

F2 sx5 (39):
two joining frags and another, all unidentifiable.

F10 sx1 (7):
corner of peg-tile with two holes (one complete; one partial), msd c.112 x 132, T 10-11;
small portion of cutaway from bottom left of tegula flange;
one unidentifiable frag.

F12 (9):
6 unidentifiable frags.

F12 (16):
one identifiable frag., msd c.58 x 40, T26-27.

F12 (139):
tegula flange, exthf c.43, wf 25-30, T base c.15, abraded.

F12 sx2 (21):
brick, one edge, msd c.115 x 110, T c.33;
three unidentifiable frags.

F12 sx2 (27):
uncertain frag. with slight groove in upper surface, fabric grey-cream;
one unidentifiable frag., heavily burnt

F16 (15):
one unidentifiable frag.

F18 (28):
msd c. 42 x 39, T c.19-20, abraded.

F29 sx2 (48):
one unidentifiable frag., very abraded and burnt.

F46 sx1 (45):
two unidentifiable frags.

F97 (121):
one frag., T c.14, possible slight curve.

Area 6. All contexts are prefixed by Code GAR 2003. 210 6.

U/S (240):
tegula base, one edge, msd c.55 x 95, T 21.

U/S (325):
peg-tile, T10.

L1 (47):
tegula base, msd c.80 x 20, T c.25;
imbrex, one edge, msd c.47 x 24, T c.16;
one unidentifiable frag.

L4 (212):
one unidentifiable frag.

L5 (209):
? peg-tile, T c.10

L6 (234):
two joining frags. tegula base, msd c.77 x 50, T 15;
tegula base, one edge, msd c.58 x 34, T 17-19, probably the same tile as the preceding.

L7 (219):
three unidentifiable frags.

L7 (320):
two unidentifiable frags.

L8 (333):
brick, msd c.60 x 60, T 42.

L11 (281):
one unidentifiable frag.

L11 sx3 (275):
three unidentifiable frags., not certainly tile.

L13 (322):
brick, msd c.38 x 48, T at least 30;
One unidentifiable frag.

F1 (1):
brick, msd c.55 x 55, T c.42;
brick, msd c.45 x 25, T30;
brick, msd c.50 x53, T c.32;
probable brick, msd c.70 x 35, T c.28, abraded;
very abraded frag. of tegula flange from bottom left corner;
cutaway from bottom left corner of tegula flange;
19 unidentifiable frags.

F1 (7):
tegula base broken at junction with flange, burnt, very damaged, T c.17;
msd c.72 x62, T 14/15, ?imbrex;
12 unidentifiable frags.

F1 (372):
two unidentifiable frags.

F1 (445):
brick, msd c.48 x 40, T c.35;
brick, T c.35;
? brick, T at least 28.

F1 (446):
probable tegula base, one edge with two finger-prints adjoining, msd c.50 x 70, T22;
brick, msd c.50 x 45, T (?incomplete) c.32;
frag. T at least 38;
frag. T c.27;
three unidentifiable frags.

F1 (447):
probable tegula base, msd c.74 x62, T c.16;
one unidentifiable frag.

F1 (459):
brick, one edge, msd c.45 x 50, T c.35;
one unidentifiable frag.

F1 sx2 (216):
peg-tile, one edge, msd c.100 x 74, T c.15;
four unidentifiable frags.

F1 sx3 (326):
brick, msd c.60 x 70, T40;
five unidentifiable frags.

F1 sx3 (342):
possible peg-tile, T c.13/14;
four unidentifiable frags.

F1 sx3 (349):
two unidentifiable frags.

F1 sx3 (354):
four unidentifiable frags.

F1 sx3 (505):
two unidentifiable frags.

F2 (95):
one unidentifiable frag.

F2 sx5 (97):
brick, msd c.80 x 80, T at least 36: does not look Roman;
three unidentifiable frags.

F2 sx5 (103):
frag. of tegula flange, wf 25;
one unidentifiable frag.

F2 sx7 (350):
? brick, msd c.65 x 65, T at least 29.

F4 (49):
tegula base, one edge, msd c. 50 x 39, T c.23.

F4 sx2 (34):
frag., msd c.20 x 21, T c.18, grey staining on surfaces: resemblance to a tessera ?fortuitous.

F4 sx4 (49):
brick, msd c.52 x 44, T at least 32;
brick, msd c. 67 x 37, T at least 30.

F4 sx6 (96):
?tegula flange, very abraded;
six unidentifiable frags.

F4 sx7 (144):
brick, msd c.80 x 90, T 40-42, burnt.

F4 sx7 (202):
brick, msd c.32 x 25, T31.

F4 sx9 (306):
possible imbrex, msd c.45 x 35, T c.15.

F4 sx9 (318):
tegula base, msd c.90 x 85, T 20-21.

?F4 sx11 (33):
two unidentifiable frags., one of which burnt.

F4 sx12 (285):
portion of cutaway of tegula flange from bottom left corner, T base 22, burnt.

F4 sx13 (290):
tegula flange and base, exthf c. 45, wf c. 25, T base c. 20;
possible tegula base, msd c. 85 x 60, T c, 15-20.

F4 sx14 (294):
tegula base, msd c.45 x 65, T 20-21.

F5 (10):
brick, msd c.70 x 70, T at least 46.

F5 (227):
tegula flange, exthf c.38, wf c.20, estimated T base c.14/15;
two unidentifiable frags.

F5 sx1 (225):
brick, msd c.62 x 32, T (probably complete) 32;

two unidentifiable frags.

F5 sx3 (233):
possible imbrex, msd c.53 x 43, T c.16, burnt;
also possible imbrex, msd c. 65 x 45, T c.14.

F5 sx4 (347):
two joining frags. of brick, msd c.73 x 47, T 30.

F5 sx4 (371):
probable tegula base, msd c. 35 x 23, T c.19.

F5 sx4 (377):
tegula base with flange broken away, msd c.55 x 70, T c.19;
uncertain frag., T 13/14 (possible peg-tile).

F6 sx6 (172):
brick, msd c.85 x 73, T31.

F17 (27):
? tegula base, msd c.67 x 52, T 17, burnt.

F21 (30):
brick, one edge, msd c.65 x 60, T c.32.

F28 (57):
brick, msd c.55 x40, T c.32;
brick, msd c.80 x 56, T28.

F34 (73):
one unidentifiable frag.

F61 (169):
brick, msd c.100 x 55, T c.35, ? burnt slightly.

F61 sx2 (99):
brick, one edge, msd c.125 x 63, T31;
brick, msd c.105 x 65, T c.42, possible traces of burning;
two frags., possibly from the preceding.

F61 sx4 (117):
brick, msd c.110 x 65, T 24-25;
brick, very abraded, T at least 50;
one unidentifiable frag.

F61 sx8 (187):
brick, msd c.88 x 40, T 35-36, heavily burnt;
brick, one edge with heavily impressed ?finger-mark, msd c.110 x 80, T 34-36;
brick, msd c.100 x 100, T c.29-30, traces of burning and three impressions on upper surface (too
narrow for adult finger-marks);
brick, one edge, msd c.100 x 140, T39, trace of burning;
brick, one edge, msd c.55 x 65, T34;
tegula base, broken at junction with flange where groove is present, msd c.105 x 65, T22;
tegula flange, exthf c.48, wf 25-30, est. T base c.20, burning;
probable imbrex frag., msd c. 80 x 53, Tc.15-19;
five unidentifiable frags., one of which burnt.

F88 (128):
two unidentifiable frags.

F99 L4 (137):
two unidentifiable frags.

F227 (181):
one unidentifiable frag.

F231 (186):
one unidentifiable frag., msd c.63 x50, T c. 21, burnt.

F236 (256):
one unidentifiable frag.

F258 (208):
one unidentifiable frag.

F259 sx2 (312):
one unidentifiable frag.

F259 sx2 (314):
one unidentifiable frag.

F259 sx2 (367):
one unidentifiable frag.

F259 sx5 (297):
very heavy tegula flange, exthf c.50, wf at junction with base c.35, estimated T base c.20.

F260 sx2 (239):
one unidentifiable frag.

F260 sx2 (246):
three unidentifiable frags.

F270 (235):
brick, msd c.54 x 47, T 33.

F304 (323):
brick, msd c.19 x 25, Tc.35.

F304 (327):
brick, msd c.14 x 12, T 25;
very small, unidentifiable frag., possibly from the preceding.

F304 sx1 (302):
one unidentifiable frag.

F304 sx3 (283):
brick, one edge, msd c.240 x 180, T29-32, possible finger-mark on upper surface.

F304 sx5 (332):
frag. c.26 x 17, T c.26, grey staining on surfaces, ?crude tessera;
box-tile, corner of keyed face broken along junction with side, eight shallow tooth-marks of comb approximately parallel to the junction, T of face 19;
one unidentifiable frag. of tile / daub.

F304 sx5 (338):
? brick, very abraded, msd c.105 x 65, T at least 30.

F304 sx5 (365):

brick, msd c.45 x 34, T 33.

F304 sx6 (329):
one unidentifiable frag., msd c. 35 x 40, T at least 24, very abraded.

F306 (247):
one unidentifiable frag.

F352 (405):
imbrex frag., msd c. 22 x 29 (although very small a definite curve was present), T c.13;
five unidentifiable frags.

F442 (292):
brick, msd c.35 x 23, T 36.

F460 (361):
brick, msd c. 40 x 33, T c.35.

F461 sx1 (296):
brick, msd c. 45 x 18, T c. 33;
one unidentifiable frag.

F461 sx1 (356):
one unidentifiable frag.

F467 (384):
peg-tile, one edge, msd c.45 x 55, T 14;
one unidentifiable frag.

F467 (379):
tegula flange, exthf 48, wf 30 at shoulder, T base c.13-15.

F467 (492):
one unidentifiable frag.

F480 (484):
brick, one edge, msd c. 129 x 95, T c.30-35.

F554 (449):
two unidentifiable frags.

F478 (390):
two unidentifiable frags.

One unidentifiable frag. came from sx7 (148) and 148 (without any prefix) was repeated, presumably as the layer / feature number.

Area 10. All contexts are prefixed by Code GAR 2003. 210 10.

L4 (88):
two unidentifiable frags.

L4 (109):
two unidentifiable frags.

L5 (87):
four unidentifiable frags.

L5 (164):
ten unidentifiable frags. of tile

F1 sx3 (35):
tegula flange, exthf 48, wf 29-33, T base c. 24.

F1 sx9 (155):
unidentifiable frag(s).

F1 sx16 (232):
one unidentifiable frag., burnt.

F3 sx9 (146):
unidentifiable frag(s).

F3 sx16 (214):
? brick or tegula base, msd c.143 x 77, T c.24-30, cavity on upper surface.

F4 sx2 (26):
unidentifiable frag(s).

F10 sx2 (110):
one unidentifiable frag.

F11 sx1 (22):
one unidentifiable frag.

F13 (213):
four unidentifiable frags.

F13 sx2 (43):
two unidentifiable frags.

F13 sx3 (67):
three unidentifiable frags., one of which burnt.

F14 sx3 (127):
corner of brick, msd c.125 x 130, T c.35-38.

F14 sx6 (137):
brick, msd c.82 x 70, T c.30.

F16 sx1 (63):
peg-tile, msd c.65 x 54, T c.11.

F57 (89):
one unidentifiable frag. of ? tile with lots of crushed flint and other inclusions.

F80 (25):
unidentifiable frag(s).

F103 (80):
peg-tile, msd c.43 x 29, T 10.

F257 (73):
brick, one edge and possible corner, msd c.145 x 129, T c.34-36.

F273 sx1 (158):
unidentifiable frag(s).

F287 sx4 (209):
brick, msd c.45 x 40, T33.

F318 (236):
tegula base, msd c.110 x 85, T17-18, part of possible finger impression on upper surface; unidentifiable frag., msd c.57 x 45, T 21, burnt grey.

?F254 (86):
three unidentifiable frags. of ? tile.

Discussion

Most of the fragments of tile produced from all three areas were unidentifiable: in many cases this was because the fragments consisted of mere chips or scraps of tile. Identifiable fragments were also small with only 17 fragments from all three areas having a dimension greater than 100 mm. The number of identifiable fragments from each area was: Area 2, 5 fragments (three brick, two tegula); Area 6, 77 fragments (44 brick, 25 tegula, seven imbrex, one box-tile); Area 10, 7 fragments (five brick, two tegula). It seems likely that Area 6 was closer to the source of the tiles than Area 2 or Area 10. The nearest known potential source for the tiles is the possible bath-house at Kirkee McMunn Barracks and this in fact lies nearer to Area 6 than to the other two Areas. The box-tile fragment from Area 6 may support this though it is too small to provide a match with the material from the bath-house. Of the brick fragments 41 had a thickness of 36 mm or less; eight fell between 36 and 44 mm; only two had a thickness greater than 44 mm. Context dating is not yet available so no comment can be made on aspects of chronology.

Recommended for illustration: A6 (332) F304

Appendix 7

Assessment of prehistoric flints

by Hazel Martingell

Introduction
Due to the relatively small number of artefacts recovered and the apparent continuity of the Iron Age landscape in the area of the discussed here, it was decided that the best analysis would result from combining the material from the three Areas.

Discussion
The 76 pieces of worked flint from areas 2, 6 and 10 were of significant interest. Thirty seven percent were diagnostic of the two types of late prehistoric and in particular Iron Age lithic technology:

- Some of the flakes were of the 'salami' type' That means that, first, a suitable block of flint was selected, from which flakes were struck in sequence, one from behind the other. This usually leaves the cortex (the outer skin of the flint nodule) around the edge of the flake, apart from the sharp edge or retouched area. There is no core preparation with this technique. (Finds 34, 75, 120).
- Alternatively, a block of flint with one flat surface is chosen and used as the core. From this core, thick butted tapering flakes are struck from the flat surface (i.e. the platform). There is minimal core preparation with this technique, but sometimes the flake platform edge shows some preparation. (Find 78)

Most of the remaining pieces could be waste from these processes. Only 9% of the remaining flints cannot be associated with the Iron Age. One was a gunflint, which was probably made within the last 200 years. the other six are blades which are most likely to be early Neolithic in date.

Conclusion
It is so interesting that the flint artefacts appear to reflect the Iron Age occupation of the landscape. The six blades could suggest minimal agricultural use in the early Neolithic, or possibly they were retrieved and reused in the Iron Age.

These three areas were included in the Colchester Garrison 2002 evaluations in 2002, but no flint artefacts were recovered from these locations at that stage. Within the context of the whole site or groups of sites, these worked flints reflect the previously observed pattern of an early Neolithic presence and some middle Neolithic activity, then a really positive Iron Age occupation (for further details of Iron Age flint technology, see Young and Jodie 2003, Young and Humphrey 1999, Martingell 2003, Martingell 1990).

Area 2 flints

*** = sketch in archive**

Context	Find no	Description
F6 sx1 L25	23	2 flakes, secondary, wide platforms, IA? 1 chipping, tertiary, patinated/slightly burnt (1 waste block, small, burnt in 'Burnt Flint/stone bag')
F6 sx1 L8	25	1 chipping, tertiary
F6 sx2 L 11	52	8 flakes, secondary, waste, irregular, late prehistoric? 2 waste blocks
F6 sx2 L11	55	1 flake, secondary, late prehistoric?
F6 sx2 L32, ditch recut F59	60	1 flake, primary, small platform 1 waste block
F6 sx2 L32, ditch recut F59	62	1 natural plough-broken piece
F57 sx1 L42 (upper fill)	65	1 flake, tertiary, axe trimming
F6 sx2 lower fill	70	1 chipping, tertiary
F81 sx3	91	1 flake, secondary, small, trimming, good
F6 sx3, L24	104	1 micro denticulate on a blade, tertiary, worn *

F6 sx3, L25	118	1 chipping, trimming flake, tertiary
F6 sx3, L22	144	1 flake, secondary, wide thick platform
F6 sx3, L23	150	1 flake, trimming, secondary
F6 sx3, L24	159	1 chipping, tertiary

Area 6 flints

*** = sketch in archive**

Context	Find no	Description
L1 machining	2	1 gunflint, large variety *
F4 sx5, upper fill	84	1 flake, tertiary, waste
F63 upper fill	127	1 flake, secondary, waste
F76 fill	136	1 blade, tertiary, punch struck, good, 50mm long
F90 sx7	155	1 blade, tertiary, punch struck, good, butt part 45mm long, slight patination, worn
F90 sx1	159	1 blade, secondary, good, butt part 30mm long
F264 sx1	220	1 flake, secondary, cortex platform, late prehistoric
F5, sx1	226	1 flakes, tertiary, light brown stained, retouched along distal edge? later prehistoric *
F260 sx2	245	1 core, single platform, on pebble
F5 sx5	352	1 flake, secondary, platform widest part, late prehistoric

Area 10 flints

*** = sketch in archive**

Context	Find no	Description
F10, sx1	2	1 flake, secondary, waste, IA? (same type as Area 2 find 23)
F1 sx 1	7	1 bifacial fragment, tertiary
F3 sx2	15	1 flake, tertiary, platform widest part, squat, IA?
F1 sx2	16	1 flake, tertiary, trimming, waste
F11 sx1	23	1 flake fragment, tertiary
F3 sx2	30	1 retouched flake, cortex platform *
F5 sx2	32	1 flake, butt part, tertiary
F5 sx2	52	1 flake, small, secondary, cortex platform
F123 fill	57	1 bifacial fragment (part of hand axe?
F9 sx1	61	1 flake, small, tertiary, waste
above F166	70	1 flake, tertiary, thinning
L4	82	1 core, small, much plough-damaged
F10 sx1	111	1 flake, broken, tertiary, with fossil inclusion
F1 sx6	116	1 natural fragment
F3 sx7	122	1 chipping, tertiary, core/tool preparation
F14 sx5	125	1 flake, small, secondary, cortex platform
F14 sx6	132	1 flake-blade, tertiary
F14 sx6	137	(1 core fragment? burnt, in Burnt flint/stone bag)
F14 sx6	138	1 flake, tertiary, waste
F14 sx7	141	1 core, wide long platform, flakes removed plunge, with resulting obtuse angled platform. IA
F272 fill	153	1 blade-flake, tertiary, good
F1 sx9	156	1 flake, irregular, tertiary
F273 sx1	159	1 flake, secondary, cortex platform
F273 sx1	160	1 flake, secondary, waste
F273 sx1	161	1 waste block
unstrat	166	1 core fragment, small
F276 fill	180	1 flaked block, waste
F276 fill	181	1 core fragment, flake, tertiary, rough
F276 fill	182	1 flake, trimming, tertiary
F1 surface	194	1 flakes, secondary, waste
F1 surface	195	1 scraper on secondary flake *
F1 sx11	196	(1 flake, burnt, in Burnt flint/stone bag)
F3 sx15	203	1 flake-blade, tertiary
F287 sx4	210	1 flake, tertiary, small, waste
F3 sx13	211	(1 core? burnt, in Burnt flint/stone bag)
F1	212	1 blade, butt part, tertiary
F307 fill	218	1 flake, tertiary, waste

F1 sx15	227	1 flake, secondary, cortex platform
F287 sx6	229	1 flake, secondary, platform widest part
F287 sx6	230	1 flake, thinning, tertiary

Totals

Area 2

21 flakes and chippings
4 waste flakes
1 micro denticulate — subtotal 26 pieces

Area 6

5 flakes
3 blades
1 core
1 gunflint — subtotal 10 pieces

Area 10

25 flakes, flake-blades and chippings
2 bifacial fragments
1 retouched flake
6 ?cores
2 waste flakes
2 blade and blade/flakes
1 scraper — subtotal 39 pieces

total 75 artefacts

Appendix 8

Assessment of post-Roman glass

by Howard Brooks (CAT)

Introduction
A small group of post-Roman glass was recovered from the Garrison excavations. It is tabulated here:

Area	Context	bag number	quant	weight	comments
2	F18	28	1	22	green bottle frag, 19th-20th cent
2	F08	18	1	100	almost complete clear ?medicine bottle, heavy (lead glass?), 19th-20th century
2	F16	15	1	5	green beer bottle frag, 19th-20th cent
2	L02	1	1	225	base of green bottle, 19th-20th
2	u/s	170	1	450	most of a pale green marble bottle, stamped “C NICHOLSON & CO LTD. COLCHESTER”
2	u/s	170	1	60	most of a pale green ?medicine bottle
6	L01	47	1	228	complete and curious mineral water bottle with spiral twisted neck. 20th century
6	L01	47	1	2	small frag of clear frosted vessel glass
2	F18	13	2	265	frags of base of green beer bottle, stamped “COLCHESTER”
6	F02	97	1	2	plate glass, shattered. 20th cent
6	u/s	325	1	2	degraded green bottle glass frag. 18th?
10	F80	25	18	785	large part of pleasantly pale brown beer bottle, quart size, stamped “DANIELL & SONS LTD. COLCHESTER”
			30	**2146**	**TOTALS**

Discussion
This group is typical of 19th-20th century groups, in that it consists of beer, wine, and medicine bottles. In the context of the present excavations and the stated project aims, this material is entirely without consequence.

Recommendations
This material should not be retained. No further analysis is necessary.

Appendix 9

The faunal remains - summary assessment

by Julie Curl (Norfolk Archaeological Unit)

Summary
A total of 1.034kg of faunal remains, consisting of over 90 fragments, was recovered from three areas during excavations at the Colchester Garrisons. Remains of equid, cattle and sheep/goat were identified, although most of the bone was in very poor condition.

Methodology
All of the bone was examined, primarily to determine species present, types of bones and any butchering that has occurred. Ages of the animals were estimated where possible from the fusion of the bones and the wear on the teeth. Bone was quantified by counting the total number of pieces in each context, the number of measurable and countable bones following guidelines supplied by English Heritage (Davis 1992) and the number of bones identified for each species. Bone was also weighed for each context. All of the information was recorded on the faunal remains recording sheets and the information input into an Excel database for analysis. A table giving a summary of the information is included with this report.

Results and conclusions
Overall, the bone in this assemblage was in very poor condition, with no complete elements present. Bone was recovered from three areas, 2, 6 and 10 and included bone from features including Iron-Age pits, Roman ditch fills to modern trench fills, some animal bone was found with human cremated remains.

Area 2
The Iron-Age pit and ditch fills, (95), (109) and (183), produced poor quality remains of large mammal bone, including a molar which may be from cattle. The post-medieval fills (3), (13), (20) and (280 yielded equid and cattle fragments which had been butchered, several rabbit bones and a possible bird bone were also recovered; the rabbit remains included a skull and lower jaw.

Area 6
The Roman fills in this area produced remains of equid in F61 (189), cattle in F260 (321) and sheep/goat in F477 (387). The bone in this area was all fragmentary and in very poor condition.

Area 10.
A small quantity of animal bone was recovered with the possible Iron-Age cremation in F296 (208). None of the fragments of animal bone were burnt. Meat would sometimes be buried with human burials as food for the next life and it is possible that the fragments recovered represent this sort of offering.
F4 (26) produced a small humerus from a sheep/goat which may have been chopped.

Recommendations for further work
Due to the poor quality of the bone, no further work is recommended on this assemblage.

Table 1. *Summary of the faunal remains produced from excavations at the Colchester Garrison. Listed in order of area and then F or L number.*

Area	F/L No	Bag No	Date	Qty	Wt (g)	Species	Sp Qty	Butchered	Comments
2	F18	13	PM+	1	72	no ID	1		
2	F18	28	PM+	7	4	rabbit	7		
2	F20	20	PM+	7	8	rabbit	5		skull fragments
2	F20	20	PM+			bird/rabbit	2		
2	F49	109		1	2	mammal	1		
2	F9	3	PM+	6	437	mammal	6	y	equid/cattle? Butchered
2	L16/F14	95		15	36	mammal	15		burnt
2	L68	183		4	18	mammal	4		large mammal, molar
6	F260	316		8	6	mammal	8		molar fragments
6	F260	321		6	13	cattle	6		
6	F477	387		25+	200	sheep/goat	1		molar
6	F477	387				mammal	24+		molar fragments
6	F61	189		35+	92	Equid	35+		molars
6	L5	209		28	20	mammal	28		molar fragments
10	F296	215		15+	113	mammal	15+		v.poor condition, fragmentary
10	F296	208		6	3	mammal	6		small unburnt frags in crem.pit
10	F4	26		1	10	sheep/goat	1	?chopped	humerus, small

report date: March 2004

Appendix 10

Assessment of cremated human bone

by Sue Anderson (Suffolk C.C. Archaeological Unit).

INTRODUCTION
Groups of bone from one definite and two possible cremation deposits were submitted for assessment. The bone was separated from the soil matrix and examined. Identifiable pieces were separated into areas of the skeleton (skull, axial, upper and lower limbs, unidentified), counted and weighed.

AREA 6 F63 (109)
This was the most complete of the three cremation burials, and was buried with four Late Iron Age pots. A total of 145 fragments weighing 44g was collected (2 skull 1g; 13 upper limb 18g; 9 lower limb 9g; 121 unidentified 16g). Both fragments identified as 'skull' were pieces of mandible, including a fragment with an intact tooth socket. Most of the unidentified fragments were appendicular, and no axial fragments were identified. The maximum dimension of a skull fragment was 13mm and the maximum long bone fragment size was 46mm. The individual was an adult, but there were no diagnostic criteria to assess either age or sex. No pathological changes were seen.

AREA 10 F276 (175, 177, 178, 185, 187, 188)
This feature was identified as a possible disturbed Iron Age cremation burial. The six contexts all produced less than 1g of bone, and a total of 13 unidentified fragments. The pieces from 177, 185 and 188 appeared to be limb bones, and a small fragment from 187 may be part of the facet of a cervical vertebra. If so, this was a mature adult. Sex was not identifiable.

AREA 10 F296 (208)
This feature may also be a disturbed Iron Age cremation. Only seven small fragments of burnt bone were recovered (<1g), of which one was a tooth fragment (upper mesial incisor or canine?) and the rest were unidentified. Age and sex were not determined. A few fragments of unburnt animal bone were also present.

FURTHER WORK
No further work is required on this assemblage.

report date : March 2004

Appendix 11

Assessment of environmental information

by Val Fryer

Introduction

Excavations prior to major redevelopment at Colchester Garrison were undertaken by the Colchester Archaeological Trust between August and November 2003. Because of the scale of the work, excavations were conducted in pre-determined areas, and this assessment covers material recovered from Areas 2, 6 and 10. The work revealed features of Iron Age to Roman date including the gully for a large roundhouse set within a rectangular enclosure, several inter-connecting track ways, which may form elements of a coaxial system with adjoining fields, a small number of graves and possible cremations and numerous pits and post-holes, eight of the latter forming two four-post structures.

Following the recommendations of the Written Scheme of Investigation, samples for the extraction of the plant macrofossil assemblages were taken from across the excavated areas, and one hundred and six were submitted for assessment.

Methods

The samples were processed by manual water flotation, collecting the flots in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Tables 1 – 11. Nomenclature within the tables follows Stace (1997). All plant remains were charred. Modern contaminants including fibrous roots and seeds were present but not common.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. Artefacts/ecofacts were scarce, but small fragments of pot and burnt bone were removed for further specialist analysis.

Results of assessment

Plant macrofossils
The majority of assemblages were very small and plant macrofossils were generally extremely rare. However, cereal grains/chaff, seeds of common weeds and wetland plants and tree/shrub macrofossils were recorded at a low density in approximately fifty three samples. Preservation was generally poor, with many of the grains and seeds being puffed and distorted (possibly due to high temperatures during combustion) or fragmented.

Cereals
Grains of oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) were noted in thirty samples, generally as single specimens. A high density of the cereal grains were not closely identifiable due to their condition, but a possible asymmetrical lateral grain of six-row barley (*H. vulgare*) was found in sample 21 (Ditch F61 Area 6). In addition, both rounded grains of probable bread wheat type and 'drop form' grains more typical of spelt wheat (*T. spelta*) were also recorded. Cereal chaff was extremely rare, but spelt glume bases were recovered from five samples.

Wild flora
Seeds of common weed plants were extremely rare, occurring in only twenty one samples. Most were of segetal taxa or grassland herbs including fat-hen (*Chenopodium album*), black bindweed (*Fallopia convolvulus*), bedstraw (*Galium* sp.), goosegrass (*G. aparine*), knotgrass (*Polygonum aviculare*), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.). Single

nutlets of sedge (*Carex* sp.), noted in the eastern enclosure ditch in Area 2 (sample 117 F61) and pit F14 in Area 6 (sample2), were the sole wetland plant macrofossils recorded. Hazel (*Corylus avellana*) nutshell fragments were found in fourteen samples and were abundant in sample 133 from cremation F276 (Area 10 extension). Other tree/shrub macrofossils included ?bullace/damson (*Prunus* sp.) type fruit stone fragments, possible sloe (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*) fruit stones and elderberry (*Sambucus nigra*) seeds.

Other plant macrofossils
Charcoal fragments were common or abundant throughout. Other plant macrofossils were rare, but did included pieces of charred root or stem and indeterminate buds, thorns (probably *Prunus* type), tubers and twigs.

Other materials
Fragments of black porous 'cokey' material and black tarry material were common throughout. The precise origin of these residues is unknown, but some may be derived from the combustion of organic materials (including cereal grains) at extremely high temperatures, some may be products from cremation processes, and some would appear to modern contaminants in the form of coke or clinker. Small coal fragments occurred in most contexts, and whilst most are probably derived from either modern agricultural practises (for example steam ploughing) or from the use of coal in the Garrison buildings, a small quantity may be Roman in origin. Burnt bone fragments were extremely rare, but were noted in a number of contexts. The ferrous globules and pieces of vitrified material may be indicative of small scale industrial activity, but it is not known whether they are contemporary with the contexts from which they were recovered.

Discussion

For the purposes of this discussion, the samples will be dealt with by area and context type.

Area 2 The round house and associated features (Table 1)
Three samples were taken from sections across the round house gully. With the exception of charcoal fragments, plant macrofossils are extremely rare, with most probably being derived from domestic detritus. As befits the apparent high status of the structure, it would appear most likely that it was kept scrupulously clean, with most refuse probably being disposed of well away from the inhabited area. Samples 95 and 96 are from a possible disturbed cremation (F49), which was placed centrally in a shallow pit under the floor of the round house. The recovered assemblages are essentially the same as the material from the gully and it may be that they too are derived domestic detritus rather than cremation material. No burnt bone fragments were noted during sorting.

Area 2 The enclosure ditches (Tables 2 and 3)
A total of sixteen samples were taken from the enclosure ditches, seven from the eastern side, two from the southern side, two from the western ditch and five from the south-western corner. During excavation, it was postulated that the eastern ditch, which was approached from the north-east by a track way and possible bridge, formed a grand façade to the enclosure as it was well maintained and kept relatively free of rubbish. This theory is supported by the plant macrofossil assemblages, as very little in the way of detritus is present. However, all but one of the samples contain twig fragments, thorns, elderberry seeds and fruit stone fragments, and it would appear most likely that this material is derived from a hedge, which may have surrounded the enclosure as well as the ditch and probable bank. Although not common, evidence for hedges has been seen at other contemporary sites, for example Alcester, Warwickshire (Greig, 1992 and 1994). The mineralised concretions noted in samples 100, 107 and 117 may indicate that the ditch occasionally held standing water.

The assemblages from the southern ditch are similar to the above, with an extremely low density of detritus and possible evidence for a hedge. Small fragments of burnt bone are also present in both samples. Although the assemblages are small, the material from the western ditch does appear different. Cereal remains are slightly more abundant and, with the possible exception of a hazel nutshell fragment and a piece of burnt twig, hedge remains are absent.

Similar assemblages are also present in the samples from the south-western corner, and it would appear that this side of the enclosure, hidden by the round house, was significantly less impressive. Indeed, during excavation it was noted that the western ditch was less substantial and contained more evidence for the disposal of refuse in the form of a higher density of pot sherds. Mineralised soil concretions are again present in the south west corner and west ditch, possibly indicating the presence of standing water.

Area 2 The other features (Table 4)
Samples were taken from the western ditch of a post-enclosure track way and from three pits. None of the assemblages contain sufficient material for conclusive interpretation although pit F62 may have held standing water.

Area 6 The track way ditches (Table 5)
A total of nine samples were taken from sections across the ditches flanking the main track and southern track in area 6. With one exception (sample 41), only a minimum of plant material is present, and it appears most likely that much of this is derived from wind-blown detritus of unknown origin. Sample 41, from the western side of the junction of the main and southern tracks (F338), contains a very low density of charred refuse including cereals and chaff. The sample was taken from an area adjacent to a possible gate and fence, which may have been more of a focus for activity than the ordinary track way ditches.

Area 6 The field ditches and gullies (Table 6)
Sample 21 from ditch F61 contains two cereal grains. Otherwise, plant macrofossils are extremely scarce and, as with the track way ditches, are probably largely derived from wind-blown detritus of unknown origin.

Area 6 The grave fills and cremations (Tables 7a and 7b)
Samples were taken from a Late Iron Age cremation at the centre of the main track (F63) and from Roman inhumations to the north of the track in field 2 (F17 and F28) and in the western part of field 4 (F227). Single cereals/seeds were recovered from samples 12 (F28), 22, 23, 24, 25 (all F63) and 38 (F227), but it is not possible to ascertain whether these are associated with the burials or whether they are accidental inclusions. Small (circa 1mm) fragments of burnt bone are present in all samples from cremation F63.

Area 6 The pits, post-holes and hearth (Tables 8a – 8c)
A total of twenty three samples were taken from an extensive series of pits etc. recorded within area 6. Cereals are present in only two (from hearth F222 (sample 47) and pit F467 (sample 51)), single seeds are recorded from pits F14 (sample 2) and F230 (sample 37) and hazel nutshell fragments are noted in samples 10 (F14), 16 (F48), 36 (F229), 37 (F230) and 47 (F222). None of these assemblages contains a sufficient density of macrofossils to enable conclusive interpretation, and it appears most likely that, as with the above ditches, the material is largely derived from scattered/wind-blown refuse.

Area 10 The track way ditches (Table 9)
The assemblages closely parallel the material recovered from the track way ditches in area 6. Cereals, seeds and nutshell fragments are present in seven of the eleven samples, but at an insufficient density for accurate interpretation.

Area 10 The four-post structures and other post holes (Table 10)
Three four-post structures were recorded during excavation, and samples were taken from the two most northerly examples, Structures 1 and 2. With the exception of a single possible vetch cotyledon and charcoal fragments, nothing is recorded from Structure 1. However, all four post-holes of Structure 2 contain seed assemblages, with a wide variety of weed taxa (both field weeds and grassland herbs) noted in sample 64 (F57). The exact function of these four-post structures, which are often seen at Iron Age sites in southern and eastern England, is not fully understood at present. Possible interpretations include granaries and ritual platforms associated with burial, but it appears unlikely that the current assemblages are derived from either of these practises. However, it is perhaps of note that the material within sample 64 is closely paralleled by macrofossils recovered from Late Bronze Age/Early Iron

Age cremation F276 approximately twelve meters to the north of Structure 2 (see below). A further 3 post-holes were sampled, but apart from one cereal grain, only charcoal fragments are recorded from the fills.

Area 10 The other features (Table 11)
As mentioned above, the assemblage from cremation F276 contains cereals, grassland herbs (including onion couch (*Arrhenatherum* sp.) tuber and numerous bedstraw type seeds) and common fragments of hazel nutshell. Whilst the latter may have been placed on the pyre as an offering to the deceased, the remainder may either be present as kindling/fuel used during the cremation, or material burnt in situ under the pyre. The low density of material recovered from the remaining contexts sampled in Area 10 precludes the accurate interpretation of the assemblages.

Conclusions and recommendations for further work

In summary, with few exceptions, the assemblages from all three excavated areas are small (<0.1 litres), containing very few macrofossils apart from charcoal. Only rarely is sufficient material present to enable tentative interpretation of the features recorded during excavation.

As is to be expected, much of the material recovered from Area 2 is probably derived from domestic detritus, although the round house itself appears to have been kept very clean. Rubbish was probably dumped in the nearby western enclosure ditch. The enclosure may have been hedged on at least two sides, and the ditches possibly held standing water, although possibly only during the wettest seasons. The track way ditches in Areas 6 and 10 appear to contain little other than wind-blown detritus, although a small quantity of refuse may have been deposited close to a gateway to the main track in Area 6. A post-hole within four-post Structure 2 in Area 10 produced an assemblage similar to that from a nearby cremation, although at present it is difficult to link the two features and this similarity may simply be due to a shared source of material, namely the local flora.

Of the samples studied, only two (samples 64 and 133) contain quantifiably viable assemblages (i.e. 100+ specimens). These samples will be analysed further.

Sample No.	**114**	**121**	**118**	**95**	**96**
Context No.	**145**	**156**	**154**	**105**	**106**
Feature No.	**F4**	**F44**	**F75**	**F49**	**F49**
Context type	**Gully**	**Gully**	**Gully**	**?Crem.**	**?Crem.**
Cereals					
Hordeum sp. (grains)			xcf		x
Triticum sp. (grains)	xcf				
Herbs					
Galium sp.			x		
Tree/shrub macrofossils					
Corylus avellana L.		xcf			
Prunus sp. (fruit stone frag.)	x				
Other plant macrofossils					
Charcoal <2mm	xx	xx	xx	xxx	xxx
Charcoal >2mm	xx	x	x		
Indet.bud		x			
Other materials					
Black porous 'cokey' material	x	x	x		x
Black tarry material	x	x		x	
Bone					
Burnt/fired clay					x
Ferrous globules					x
Small coal frags.	xx	xx	xx	x	x
Vitrified material	x				x
Sample volume (litres)	**10**	**5ss**	**5**	**4**	**5**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**

Table 1: Charred plant macrofossils and other remains from the round house, Area 2

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**100**	**101**	**104**	**105**	**106**	**107**	**117**
Context No.	**37**	**24**	**63**	**127**	**72**	**69**	**76**
Feature No.	**F6**	**F6**	**F6**	**F6**	**F6**	**F6**	**F61**
Cereals							
Cereal indet. (grains)		x				x	x
Hordeum sp. (grains)		xcf					xcf
Triticum sp. (grains)							xcf
Herbs							
Galium aparine L.							x
Rumex sp.					x		
Tree/shrub macrofossils							
Prunus sp. (fruit stone frag.)	x					x	x
Sambucus nigra L.	x	x		x			x
Wetland plants							
Carex sp.							x
Other plant macrofossils							
Charcoal <2mm	xxx	xxx	xx	xxx	xx	x	xxx
Charcoal >2mm	xx	xxx		xx	x	x	x
Charred root/rhizome/stem		x	x	x	x		x
Indet.thorn (Prunus type)	x	x					x
Indet.tuber frag.				x			
Indet.twig frags.	xx	x			x		xx
Other materials							
Black porous 'cokey' material	xx	xx	xxx				xx
Black tarry material	x	x	xx		x		xx
Bone						x	xb
Mineralised soil concretions	xxx					xxx	xx
Small coal frags.	xx	xx	xx	x			xx
Vitrified material	x		x				xx
Sample volume (litres)	**15**	**15ss**	**10**	**5**	**5ss**	**10**	**10**
Volume of flot (litres)	**0.1**	**0.2**	**<0.1**	**0.2**	**<0.1**	**<0.1**	**0.1**
% flot sorted	**100%**	**50%**	**100%**	**50%**	**100%**	**100%**	**100%**

Table 2: Charred plant macrofossils and other remains from the eastern enclosure ditch, Area 2

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**97**	**123**	**119**	**120**	**124**	**125**	**115**	**130**	**131**
Context No.	**56**	**94**	**153**	**158**	**179**	**169**	**147**	**192**	**187**
Feature No.	**F14**	**F14**	**F52**	**F55**	**F136**	**F136**	**F143**	**F143**	**F143**
Cereals									
Avena sp. (grains)			x			x			
Cereal indet. (grains)		x	x	x		x			
Triticum sp. (grains)		xcf							
(glume bases)			x		x				
T. spelta L. (glume bases)			x		x				
Herbs									
Chenopodium album L.		x		x					
Chenopodiaceae indet.	x								
Galium aparine L.		x							
Tree/shrub macrofossils									
Corylus avellana L.			x						
P. spinosa L.		xcf							
Rubus sect. Glandulosus Wimmer&Grab							x		
Sambucus nigra L.		x							
Other plant macrofossils									
Charcoal <2mm	xxx	xxx	xxx	xxx	xxx	xx	xxx	x	xx
Charcoal >2mm	x		x	x	x	x	x		xx
Charred root/rhizome/stem	x		x		x				
Pteridium aquilinum (L.)Kuhn (pinnule frag.)					xcf				
Indet.seeds	x								
Indet.thorn (Prunus type)		x							
Indet.twig frags.	x	xx		x					
Other materials									
Black porous 'cokey' material			xx	x		x	x		
Black tarry material		x	x			x			
Bone	xb	xb	x						
Burnt stone	x					x			
Mineralised soil concretions				xxx	xxx		xxx	xxx	xxx
Small coal frags.		x	xx	xx	x	xx			
Vitrified material			x						
Sample volume (litres)	**0.5**	**5**	**10**	**10**	**5ss**	**10**	**5ss**	**5ss**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 3: Charred plant macrofossils and other remains from the southern and western enclosure ditches, Area 2

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**99**	**103**	**122**	**102**
Context No.	**29**	**111**		**112**
Feature No.	**F2**	**F43**	**F62**	**F82**
Context type	**Ditch**	**Pit**	**Pit**	**Pit**
Cereals				
Cereal indet. (grains)		xfg		
Triticum sp. (grains)	x			
Herbs				
Chenopodiaceae indet.		x		
Vicia/Lathyrus sp.		x		
Other plant macrofossils				
Charcoal <2mm	xx	xx	xx	xxx
Charcoal >2mm	x	xx		xxx
Charred root/rhizome/stem	x		x	
Indet.fruit stone frags.				x
Indet.twig frags.		x		
Mineralised wood frags.			xcf	
Mineralised root channels			xx	
Other materials				
Black porous 'cokey' material	x	xx		
Mineralised soil concretions			xx	
Small coal frags.	x	x		x
Vitrified material		x		
Sample volume (litres)	**5**	**10**	**5**	**10**
Volume of flot (litres)	**<0.1**	**0.1**	**<0.1**	**0.9**
% flot sorted	**100%**	**100%**	**100%**	**12.50%**

Table 4: Charred plant macrofossils and other remains from other features, Area 2

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	5	6	7	46	34	42	48	49	41
Context No.	**85**	**63**	**70**	**291**	**222**	**317**	**364**	**369**	**339**
Feature No.	**F2**	**F4**	**F4**	**F4**	**F259**	**F260**	**F304**	**F304**	**F338**
Cereals									
Cereal indet. (grains)									x
Hordeum sp. (grains)								xcf	
Triticum sp. (grains)									x
(glume bases)									x
(rachis internodes)									x
T. spelta L. (glume bases)		x					x		
Tree/shrub macrofossils									
Corylus avellana L.									xcf
Crataegus monogyna Jacq.		xcf							
Other plant macrofossils									
Charcoal <2mm	xx	xx	x	x	x	x	xx	xx	xx
Charcoal >2mm	x			x	x		x	xx	
Charred root/rhizome/stem			x		x			x	x
Indet.seeds	x								
Other materials									
Black porous 'cokey' material	x	xx	x	x	x	x	x	x	xx
Black tarry material	x	x			x	x	x	x	xx
Bone				x			xb		xb
Mineralised soil concretions		xxx							xx
Small coal frags.	x	xx	xx	x	x	x		x	xx
Vitrified material							x		x
Sample volume (litres)	**5ss**	**5ss**	**5ss**	**5ss**	**5ss**	**8ss**	**5**	**5**	**8**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 5: Charred plant macrofossils and other remains from trackway ditches, Area 6

Sample No.	44	17	18	21	32	43
Context No.	**351**	**145**	**149**	**101**	**139**	**330**
Feature No.	**F5**	**F46**	**F46**	**F61**	**F76**	**F307**
Context type	**Ditch**	**Gully**	**Gully**	**Ditch**	**Ditch**	**Ditch**
Cereals						
Cereal indet. (grains)				x		
Hordeum vulgare L. (grain)				xcf		
Other plant macrofossils						
Charcoal <2mm	x	xx	xx	x	x	xx
Charcoal >2mm		x	x	x	x	
Charred root/rhizome/stem				x		
Other materials						
Black porous 'cokey' material		x		x	x	x
Black tarry material	x	x	xx		x	x
Small coal frags.	x	x	x	x	x	x
Vitrified material		x	x			
Sample volume (litres)	**5ss**	**5ss**	**8ss**	**5ss**	**5ss**	**8**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 6: Charred plant macrofossils and other remains from ditches and gullies, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	3	4	11	12	108	109(1)	109(2)	109(3)
Context No.	**32**	**33**	**69**	**51**	**42**	**42**	**42**	**42**
Feature No.	**F17**	**F17**	**F17**	**F28**	**F28**	**F28**	**F28**	**F28**
Context type	**Grave**	**?Grave**	**Grave**	**?Grave**	**?Grave**	**?Grave**	**?Grave**	**?Grave**
Cereals								
Cereal indet. (grains)				x				
Other plant macrofossils								
Charcoal <2mm	xx	xxx	xx	xx	x	x	xxx	xxx
Charcoal >2mm	x	x	x	x		x	x	xx
Charred root/rhizome/stem				x	x			x
Indet.buds								x
Indet.seeds							x	
Other material								
Black porous 'cokey' material			x	x	x	x	x	x
Black tarry material			x	xx				
Bone				x				
Burnt/fired clay			x					
Small coal frags.	x	x	x		x	x		
Vitirified material	x			x				
Sample volume (litres)	**2**	**0.5**	**8**	**5ss**	**5**	**0.5**	**0.5**	**0.5**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 7a: Charred plant macrofossils and other remains from grave fills and cremations, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**22**	**23**	**24**	**25**	**26**	**31**	**38**
Context No.	**102**	**116**	**122**	**142**	**125**	**109**	**177**
Feature No.	**F63**	**F63**	**F63**	**F63**	**F63**	**F63**	**F227**
Context type	**Crem.**	**Crem.**	**Crem.**	**Crem.**	**Crem**	**Crem.**	**?Grave**
Cereals							
Cereal indet. (grains)	x	x		x			x
Herbs							
Polygonum aviculare L.	x	x					
Polygonaceae indet.			x				
Tree/shrub macrofossils							
Prunus sp. (fruit stone frags.)			x				
Other plant macrofossils							
Charcoal <2mm	xxx	xxx	xxx	xx	xx	xxx	xxx
Charcoal >2mm	xx	xx	xx	xx	x	x	xx
Charred root/rhizome/stem	x	x	x		x		
Indet.seeds			x				
Indet.tuber frags.			x				
Other material							
Black porous 'cokey' material	x	x	x	x	x	xx	x
Black tarry material		x	x		x	x	
Bone	xb	xb	xb	xb	xb	x xb	
Ferrous globules					x		x
Pot	x						
Small coal frags.	x		x	x	x		x
Vitirified material	x						
Sample volume (litres)	**10**	**20**	**8**	**9**	**5**	**4**	**9**
Volume of flot (litres)	**0.1**	**0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 7b: Charred plant macrofossils and other remains from grave fills and cremations, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**33**	**8**	**9**	**2**	**10**	**1**	**27**	**28**
Context No.	**231**	**86**	**93**	**21**	**46**	**20**	**52**	**65**
Feature No.	**F1**	**F13**	**F13**	**F14**	**F14**	**F15**	**F34**	**F34**
Context type	**Pit**	**Pit**	**Pit**	**Pit**	**Pit**	**Pit**	**Pit**	**Pit**
Tree/shrub macrofossils								
Corylus avellana L.					x			
Wetland plants								
Carex sp.				x				
Other plant macrofossils								
Charcoal <2mm	xx	xxx	xxx	xxx	xxx	x	xxx	xxx
Charcoal >2mm	x	x	x	x			xxx	xxx
Charred root/rhizome/stem					x			
Other materials								
Black porous 'cokey' material	x	x			x	xx		
Black tarry material		x	x			x		
Ferrous globules					x			
Mineralised soil concretions						xxx		
Small coal frags.	x	x	x		x	xx		
Vitrified material	x	x	x		x			
Sample volume (litres)	**5**	**8ss**	**5ss**	**5ss**	**5**	**5ss**	**5ss**	**4**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**1.1**	**1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**<10%**	**<10%**

Table 8a: Charred plant macrofossils and other remains from pits, post holes, hearths, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**13**	**14**	**15**	**16**	**20**	**19**	**35**	**47**	**36**
Context No.	**74**	**92**	**76**	**87**	**112**	**207**	**166**	**300**	**179**
Feature No.	**F38**	**F41**	**F43**	**F48**	**F71**	**F119**	**F222**	**F222**	**F229**
Context type	**Pit**	**Pit**	**Pit**	**Pit**	**ph**	**Pit**	**?Hearth**	**?Hearth**	**Pit**
Cereals									
Cereal indet. (grains)								x	
Tree/shrub macrofossils									
Corylus avellana L.				xcf				x	xcf
Other plant macrofossils									
Charcoal <2mm	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Charcoal >2mm	xx	xxx	x	xx	x	xx	x	x	xx
Charred root/rhizome/stem			x	x				x	x
Indet.seeds	x								
Indet.tuber frags.				x					
Other materials									
Black porous 'cokey' material	x				x	x	x	x	x
Black tarry material	x		x						
Burnt/fired clay						xx			
Ferrous globules			x			x			
Small coal frags.				x	x		x		
Vitrified material			x		x				x
Sample volume (litres)	**5**	**2**	**5**	**5ss**	**4ss**	**5ss**	**5ss**	**5**	**5**
Volume of flot (litres)	**0.3**	**0.2**	**<0.1**	**0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**	**0.1**
% flot sorted	**50%**	**50%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 8b: Charred plant macrofossils and other remains from pits, post holes, hearths, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**37**	**39**	**40**	**52**	**51**	**53**
Context No.	**178**	**251**	**250**	**404**	**392**	**388**
Feature No.	**F230**	**F234**	**F309**	**F352**	**F467**	**F477**
Context type	**Pit**	**Pit**	**Pit**	**Pit**	**Pit**	**ph**
Cereals						
Cereal indet. (grains)					x	
Triticum sp. (grains)					x	
(rachis internodes)					x	
T. spelta L. (glume bases)					x	
Herbs						
Fallopia convolvulus (L.)A.Love	x					
Galium aparine L.	x					
Tree/shrub macrofossils						
Corylus avellana L.	x					
Other plant macrofossils						
Charcoal <2mm	xxx	xxx	xx	xx	x	x
Charcoal >2mm	xx		x	x	x	
Charred root/rhizome/stem				x		
Other materials						
Black porous 'cokey' material		x		x		
Black tarry material		x	x	x	x	
Burnt/fired clay	x					
Small coal frags.		x	x	x	x	x
Vitrified material		x				
Sample volume (litres)	**5ss**	**4ss**	**5**	**5ss**	**5ss**	**1**
Volume of flot (litres)	**0.2**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**50%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 8c: Charred plant macrofossils and other remains from pits, post holes, hearths, Area 6

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**71**	**73**	**55**	**70**	**74**	**75**	**76**	**56**	**54**	**137**	**72**
Context No.	**129**	**123**	**50**	**126**	**143**	**136**	**173**	**66**	**39**	**235**	**128**
Feature No.	**F1**	**F3**	**F4**	**F5**	**F5**	**F8**	**F11**	**F12**	**F13**	**F13**	**F14**
Cereals											
Avena sp. (grains)			xcf								
Cereal indet. (grains)						x	x		x		
Hordeum sp. (grains)								x			
Triticum sp. (grains)			x								
Herbs											
Chenopodiaceae indet.			x								
Large Poaceae indet.			x								
Rumex sp.									x		
Vicia/Lathyrus sp.			x								
Tree/shrub macrofossils											
Corylus avellana L.			xcf	xcf				x			xcf
Other plant macrofossils											
Charcoal <2mm	xxx	xxx	xxx	xxx	xxx	xxx	xx	xx	xxx	xxx	xxx
Charcoal >2mm		x	x	x	xx		x	x	xx	xxx	x
Charred root/rhizome/stem	x	x				x	x		x	x	x
Indet.tuber frags.			x								
Indet.twig frags.										x	
Other materials											
Black porous 'cokey' material	xx	x	x	xx	x	xx	x	x	x	x	x
Black tarry material	x	x	x	x	x	xx		xx	x		x
Ferrous globules			x								
Small coal frags.	xx	xx	x	xx	xx	xx	x	xx	x	x	
Vitrified material	x	x	x		x			x	x		x
Sample volume (litres)	**20**	**20**	**20**	**15**	**5ss**	**20**	**20**	**20**	**5ss**	**10**	**25**
Volume of flot (litres)	**<0.1**	**<0.1**	**0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.2**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**50%**	**100%**

Table 9: Charred plant macrofossils and other remains from trackway ditches, Area 10

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**59**	**62**	**60**	**61**	**63**	**64**	**66**	**67**	**65**	**68**
Context No.	**77**	**78**	**76**	**79**	**91**	**90**	**94**	**92**	**93**	**96**
Feature No.	**F17**	**F18**	**F19**	**F20**	**F56**	**F57**	**F58**	**F55**	**F154**	**F44**
Cereals										
Cereal indet. (grains)						xfg			x	
Herbs										
Bromus sp.						x				
Chenopodium album L.						x				
Chenopodiaceae indet.						x		x		
Fallopia convolvulus (L.)A.Love					x	x				
Galium sp.						x	xcf			
G. aparine L.						x		x		
Persicaria maculosa/lapathifolia						x				
Plantago lanceolata L.						x				
Small Poaceae indet.						xcf				
Large Poaceae indet.								x		
Polygonum aviculare L.					x	x				
Rumex acetosella L.						x				
Solanum sp.						x				
Vicia/Lathyrus sp.	xcf					x	x	x		
Tree/shrub macrofossils										
Corylus avellana L.						xcf				
Other plant macrofossils										
Charcoal <2mm	xx	xx	xx	xx	xx	xx	xx	xxx	xx	**xx**
Charcoal >2mm	x	x	x	x	x	x	x	x		
Charred root/rhizome/stem		x								
Indet.seeds						x				
Other material										
Black porous 'cokey' material	x	x	x	xx	x	x			xx	**xx**
Black tarry material	x			x	x	x	x	x		
Pot	x									
Small coal frags.	x	xx	x	x	x	x	x	x	xx	**xx**
Vitrified material				x						
Sample volume (litres)	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**

Table 10: Charred plant macrofossils and other remains from 4-post structures and other post holes, Area 10

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Sample No.	**58**	**57**	**133**	**135**	**132**	**134**
Context No.	**81**	**74**	**176**	**225**	**206**	**222**
Feature No.	**F162**	**F257**	**F276**	**F287**	**F296**	**F313**
Context type	**Pit**	**Ditch**	**Crem.**	**Ditch**	**Crem.**	**Pit**
Cereals						
Cereal indet. (grains)			x	x		
Hordeum sp. (grains)			x			
(glume base)				x		
Herbs						
Arrhenatherum sp. (tuber)			x			
Atriplex sp.			x			
Chenopodium album L.			x			
Chenopodiaceae indet.			x			
Galium sp.			xxx			
G. aparine L.			xx			
Ranunculus sp.			xcf			
Solanum sp.			x			
Vicia/Lathyrus sp.				x	x	
Tree/shrub macrofossils						
Corylus avellana L.	x		xxx			
Other plant macrofossils						
Charcoal <2mm	xxx	xx	xxx	xxx	xxx	xxx
Charcoal >2mm	xx	x	x		xx	x
Charred root/rhizome/stem			x		x	
Other materials						
Black porous 'cokey' material		xx	x	x	xx	x
Black tarry material	xx	xx	x	x		
Bone			xb		x	
Pot			x			
Mineralised soil concretions		xxx				
Small coal frags.	x	x	x	xx	x	x
Vitrified material			x	x	x	x
Sample volume (litres)	**10**	**10**	**60**	**20**	**20**	**4**
Volume of flot (litres)	**0.2**	**<0.1**	**0.4**	**<0.1**	**0.1**	**<0.1**
% flot sorted	**50%**	**100%**	**50%**	**100%**	**100%**	**100%**

Sample No.	**59**	**62**	**60**	**61**	**63**	**64**	**66**	**67**	**65**	**68**
Context No.	**77**	**78**	**76**	**79**	**91**	**90**	**94**	**92**	**93**	**96**
Feature No.	**F17**	**F18**	**F19**	**F20**	**F56**	**F57**	**F58**	**F55**	**F154**	**F44**
Cereals										
Cereal indet. (grains)						xfg			x	
Herbs										
Bromus sp.						x				
Chenopodium album L.						x				
Chenopodiaceae indet.						x		x		
Fallopia convolvulus (L.)A.Love					x	x				
Galium sp.						x	xcf			
G. aparine L.						x		x		
Persicaria maculosa/lapathifolia						x				
Plantago lanceolata L.						x				
Small Poaceae indet.						xcf				
Large Poaceae indet.								x		
Polygonum aviculare L.					x	x				
Rumex acetosella L.						x				
Solanum sp.						x				
Vicia/Lathyrus sp.	xcf					x	x	x		
Tree/shrub macrofossils										
Corylus avellana L.						xcf				
Other plant macrofossils										
Charcoal <2mm	xx	xx	xx	xx	xx	xx	xx	xxx	xx	**xx**
Charcoal >2mm	x	x	x	x	x	x	x	x		
Charred root/rhizome/stem		x								
Indet.seeds						x				
Other material										
Black porous 'cokey' material	x	x	x	xx	x	x			xx	**xx**
Black tarry material	x			x	x	x	x	x		
Pot	x									
Small coal frags.	x	xx	x	x	x	x	x	x	xx	**xx**
Vitrified material				x						
Sample volume (litres)	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**

Table 11: Charred plant macrofossils and other remains from other features, Area 10

Key to Table
x = 1 – 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens
ss = sub-sample b = burnt fg = fragment crem. = cremation ph = post-hole

Appendix 12

Assessment of Phosphate Analysis

by P Clogg

Report awaited. The results of the phosphate analysis will be reported in full in the final analysis report

Appendix 13

Assessment of pollen analysis

by John Daniell (University of Gloucestershire)

Introduction

Samples for pollen analysis were collected on site by the author.

Sub-samples of at least 10ml were taken from the sample monoliths. From these any pollen was concentrated using standard methods as described in Faegri and Iversen (1989) and Moore et al. (1991).

In summary, the processing stages used for these samples were:

1. Hot NaOH - 10 min.
2. Sieving through 180 µm nylon mesh.
3. Heavy liquid separation of mineral content using $ZnCl_2$
4. Acetolysis - 2 min.
5. Staining with aqueous Saffranin.
6. Mounting in glycerol jelly.

Report

Unfortunately, there was very little in any of the sub-samples, with the exception of charcoal and a few pollen grains. The provenance of the isolated pollen grains is not certain, and nothing can really be inferred from them. The data is presented in tabulated form below. The five processed surface samples have been passed to Pat Wiltshire. It is recommended that these should be examined in full.

Data

Samples 112/113 - outline stratigraphy

112 (0-37 cm)		
	0-18 cm	Reddish sand with stones and darker flecks
	18-25.5 cm	Reddish sand with stones, becoming paler. Darker flecks
	25.5-30 cm	Whitish stony sand
	30-33 cm	Reddish-brown band with dark inclusions
	33-37 cm	Whitish stony sand
113 (0-62 cm)		
	0-24 (37-61) cm	Reddish stony sand, occasional darker flecks
	24-31 (61-68) cm	Becoming paler with dark bands. More clayey.
	31-62 (68-99) cm	Grey-white clay

Pollen sub-sampling

Sample	***Sub-sample depth (cm)***	***Comments***
112	8-9	Charcoal frags.
	16-17	Charcoal frags.
	22-23	
	29-30	Charcoal frags.
	31-32	Charcoal frags. + amorphous organic matter
	35-36	Charcoal frags.
113	8-9	
	18-19	Charcoal frags. + amorphous organic matter
	24-25	Charcoal frags. + veg frags
	28-29	
	32-33	Charcoal frags. + veg. frags. Occ. fern spores and Caryophyllaceae
	36-37	Charcoal frags.
	42-43	Abundant charcoal + veg. frags.
	54-55	Charcoal frags
81		Dry, sandy with occ. roots
	8-9	Charcoal frags. + veg. frags.
	16-17	Abundant charcoal frags
80		Dry, sandy and stony
	16-17	
	24-25	
	32-33	
	40-41	
90		Yellowish sandy soil with stones becoming paler below 50cm
	16-17	Charcoal frags + occ. fern spores
	32-33	Charcoal frags + occ. fern spores. *Plantago* pollen grain.
	48-49	Charcoal frags + occ. fern spores. Cereal pollen grain?
	64-65	Charcoal frags.
89		Dark red/yellow sandy soil with stones
	16-17	Abundant charcoal frags.
	32-33	Charcoal frags.
	48-49	Charcoal frags. Cereal pollen grain?
	56-57	Charcoal frags.
138		Dark red/yellow sandy soil with stones (top 3 cm crumbing). Some roots.
	16-17	Charcoal frags.
	24-25	Charcoal frags.
	32-33	Charcoal frags.
	40-41	Charcoal frags.

Recommendations

A target number of fruitful samples (numbers 81, 89, 90, 112, 113) have been identified and sent to Patricia Wiltshire. These should be subject to full analysis.

Appendix 14

Assessment of OSL dating

by Jean-Luc Schwenninger

Measurements have been taken on all five samples collected by the author. The results of the neutron activation analyses (NAA) to calculate the age estimates, are awaited. The luminescence measurements on samples OSL1, 2 and 3 are rather scattered and I suspect that this may be due to partial bleaching, where the sediment has not been properly reset by exposure to light and some grains may have retained a small 'geological' signal. For this reason the OSL age estimates of theses samples are likely to be unreliable.

There is little that can be done in such cases except to try and date single grains with a single-grain laser machine and thereby isolate the geological signal from that associated with the archaeological phase. This type of analysis is very time consuming and costly, and is not worthwhile for the project budget.

However, the author will conduct the work free of charge due to its experimental nature in terms of dating ditch fills. He is keen to do the work because he still feels that he can get a reliable date. At the earliest, this will be conducted around the end of March, beginning of April. In addition the author has processed and measured the extra samples OSL4 & OSL5 and is confident that dates can be obtained from those samples. The measurements look promising although they are probably a bit too high to be Roman.

Appendix 15

Assessment of Charcoal

by Anne-Maria Bojko (Colchester Museums)

The following samples were received. Comments on identifications are given in table below.

Area	Context	Bag no.	Sample no.	Identifiable?	Comments
2	F6 sx1, L41	67	⬍110	probably not	Very thin deposit, may not even be wood
2	F143, L65	191	-	yes	Quite well preserved
2	F51,sx2, L15	96	-	probably not	small frags
2	F6 sx1, L21	42	⬍94	possibly	Sample moist and quite degraded
2	F6 sx1, L8	32	⬍93	yes	Well preserved small frags
6	F13	91	-	possibly	Quite distorted ?knotwood
6	F227	200	⬍45	possibly	Very small fragments, but some might be identifiable
6	F231	182	-	yes	Well preserved
6	F34	66	⬍29	yes	Large fragments of well preserved wood
6	F34	67	⬍30	yes	Large fragments of well preserved wood
10	F13 sx1	37	-	probably not	Tiny frags
10	F296	202	-	possibly	Very small frags
10	F5	144	-	yes	Twigs

Recommendations
Full identification should be done on all favourable samples.

Appendix 16

WRITTEN SCHEME OF INVESTIGATION (WSI) FOR AN ARCHAEOLOGICAL EXCAVATION AT THE NEW GARRISON, COLCHESTER GARRISON PFI.

AREA 2 – EXCAVATION (south of Ypres Road) – July 2003

Prepared by RPS in association with CAT on behalf of RMPA Services and MoD, July 2003

Introduction

1.1 This written scheme of investigation (WSI) is for an archaeological excavation to take place in advance of the construction of the 'New Garrison' at Colchester. The WSI has been prepared by RPS Planning, Transport and Environment in association with Colchester Archaeological Trust (CAT) on behalf of RMPA and the MoD. The WSI mirrors standards and practices contained in *Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester* (Colchester Borough Council's 1996. revised 1999). The document has been produced in accordance with a research design prepared by RPS in association with CAT and approved **(to be approved)** by Colchester Borough Council (CBC), entitled *'Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester'* RPS/CAT 2002.

1.2 The projects' aims and objectives, in addition to the full archaeological background, are provided within the *research design*, which should be read in conjunction with this WSI. This document is specifically designed to provide a sound basis for excavation and post excavation practice for the excavation of 'mitigation area 2' located within currently open short grassland, utilised as public open space, to the south of Ypres Road. Figure 2 shows the location of the mitigation area within Colchester Garrison whilst Figure 2 is a detail of the area including the results of the evaluation. This WSI sets out proposals for the archaeological excavation including treatment of finds, production of a report, and deposition of the archive.

1.3 The proposed development of the Colchester Garrison PFI site involves the building of a new 101 hectare garrison between the existing Kirkee & McMunn, Goojeraat, and Roman Barracks, the demolition and refurbishment of existing barracks, and the redevelopment of the areas released by demolition, primarily for residential use. In response to the proposed redevelopment, an appropriate programme of archaeological evaluation was agreed between MoD, RMPA Services, RPS (the project archaeological consultants), Colchester Archaeological Trust (CAT), Colchester Borough Council Archaeological Officer (CBCAO), and English Heritage. The preceding stages of archaeological evaluation, upon which the scope of Mitigation Area 2 is based, comprised desk top assessment (CAT Report 97 – 2000), fieldwalking, magnetometer survey (CAT Report 184 – 2002) and trial trenching (CAT Report 197).

1.4 *Colchester Garrison PFI archaeological project strategy proposal* (RPS 2002) defines a number of mechanisms to manage the archaeological resource during the redevelopment programme, and has identified a number of Mitigation Areas where appropriate archaeological action is recommended, for instance where the 2002 trial trenching evaluation revealed significant archaeological remains. This is the WSI for the excavation of one such area of important archaeological remains (Mitigation Area 2) lying to the south of Ypres Road (Figure 1). Area 2 is a rectangular block 100m in length by 52.5m in width (5250m2) located within evaluation area C. A brief summary of the evaluation results within area C is provided in section 3 below.

1.5 This method statement is in accordance with the research design developed in consultation with CBC and complies with the guidelines laid down in *Planning Policy Guidance on Archaeology and Planning (PPG 16)* and with the Institute of Field Archaeologist's *Standards and Guidance for Archaeological Excavations* (IFA 1997). CAT (the contractor) will liase closely with RPS (the Archaeological Project Managers), RMPA (the Project Managers) the MoD with respect to all important matters concerning the co-ordination and management of the project. CBC will be kept fully informed of all archaeological developments. All archaeological excavation areas will be monitored and 'signed off' by the Archaeological Project Managers, Project Managers, the MoD and the CBC monitors prior to any construction works by the contractor.

2 Site location and description.

2.1 The proposed excavation site lies on the south edge of Ypres Road (NGR TL 9945 2350: centre).

2.2 The land is under grass.

2.3 The site is more or less flat, at approximately 35m above Ordnance Datum.

2.4 Drift geology of the area is predominantly sands and gravel. This is occasionally in a clay matrix, and is sometimes capped by cover loam.

3. Archaeological background

The site in its broader context

3.1 The archaeological and historical setting of the proposed Garrison redevelopment area has already been comprehensively explored in *An archaeological desk-based assessment of the Colchester Garrison PFI site* (CAT Report 97, by Kate Orr, 2000), and will only be summarised here.

3.2 The proposed excavation site (like much of the land south and south-west of Colchester's modern town centre) falls within the area of the pre-Roman *oppidum* of Camulodunum. The only above-ground traces of this *oppidum* are the linear banks and ditches of the defensive dyke system that surrounded it. The Garrison area occupies the eastern edge of the *oppidum*, and one of the defensive dykes (the Berechurch Dyke) crosses the extreme south-eastern edge of the Garrison (on the east edge of Roman Barracks).

3.3 As presently understood, the *oppidum* had two main centres of activity: at modern Gosbecks Farm (2km south-west of the Garrison), which was a Late Iron Age (LIA) and Roman rural farmstead (and possibly the home of Cunobelin); and Sheepen (2km north-west of the Garrison), which was the industrial and trading centre. Apart from these two large centres (above), it is likely that there were a number of smaller domestic and farming sites in the *oppidum*. One of these may have been identified by the field boundaries paddocks and other features recorded at Kirkee & McMunn Barracks in 1994 (Shimmin 1998: figs 8, 11 here). A large area of cropmarks is recorded over the southern part of the Garrison area. Geophysical survey has confirmed and added to the pattern of linear cropmark features (CAT Report 184, 2002). An informed interpretation based on previous limited excavation would indicate that they are late prehistoric and/or Romano-British in date, and represent the trackways, paddocks and field boundaries of a rural settlement of that period.

3.4 **Summary of evaluation findings**: The evaluation of the Garrison Area specifically targeted the cropmark ditches and possible geophysical anomalies. In Area C, 14 trial trenches were cut, and where dating evidence was recovered, it confirmed the LIA/Roman date of the ditches. Field divisions on a north-east/ south west and north-west/ south-east alignment within adjacent evaluation Areas DR, E, F and G appear to be directly associated with a previously known early Romano-British settlement at

Kirkee McMunn Barracks. The field divisions are best regarded as a type described by English Heritage (1988b) as Coaxial Field System. The Kirkee McMunn farm buildings included significant occupation finds material within coaxial ditches on the same alignment as those within the Areas C, DR, F and G, and a Romano-British hypocaust (under-floor heating system) pit containing box flue and Romano-British tile categories (Shimmin 1998) indicative of a small villa-type farmstead.

3.5 Romano-British trackway ditches within Trench 16 of Area C comprise CF1601 and CF1602, spaced 6m apart. A parallel early Romano-British ditch within Trench C11, CF1101, appears to form a component of this landscape. Further fragments of Romano-British landscape represented by coaxial ditches CF1504 and CF1606-8 within Trenches C15 and C16. It is possible that further such features will be encountered within the proposed excavation area.

3.6 The most significant finding from the field Area C evaluation relates to the Middle Iron Age. Relatively few Middle Iron Age features were found during the course of the extensive trial trenching exercise beyond proposed Mitigation Area 2, for instance isolated pits have been identified within Area C (CF605, CF1105) and Area E (EF403). Middle Iron Age pottery has also been found residually within Area F (FF2701). Several ditches of potential middle Iron Age date were additionally found to the south within Area R. Those features were generally representative of small-scale landscape divisions and consequently contained relatively low-grade inorganic fills. The exception was the relatively substantial ditch CF703 within evaluation Area C and the focus of Mitigation Area 2, which contained a charcoal rich sediment potentially derived from hearth clearance. The large north-south orientated ditch CF703 was found to be 2.84m in width and 1.3m in depth, running for 13.11m through the trench (Figure 3). Truncation by modern ploughing is presumed to have had a relatively limited impact upon the survival of the large ditch but will have substantially reduced the depth of less robust pits and ditches which are more typical of the period. The ditch produced an assemblage of Middle Iron Age pottery in addition to burnt flint.

3.7 The relatively substantial form of the ditch suggests that it may have formed a landscape boundary rather than a simple field division. The finds within this feature and from a single nearby pit CF702 hint at the possibility of associated settlement. Mitigation Area 2 is designed to expose this feature and any potential settlement or landscape features which may be associated with the boundary. The ditch implies the presence of relatively large-scale boundary features, which pre-date the construction of the oppidum. These features have potential to complement existing knowledge of late prehistoric settlement form, distribution and agricultural practices, but also give some insight to the relatively sparse occupation of the pre-oppidum landscape.

3.8 Expected feature density - The number of features which may be expected in Mitigation Area 2 is calculated as follows. In evaluation area C, there were 11 significant archaeological features (not counting undated and natural features) in 2610m2, or one feature in every 237m2 of ground. This equates to 42 features per hectare, and 31 in Mitigation Area 1.

4. Aims

4.1 The general aim of the excavation is to recover sufficient evidence to characterise the nature, date, function and importance of the archaeological features within the selected area. To achieve this the following will be objectives:

- to establish the date, phasing, and function of the ditches, paying particular attention to terminals and junctions,
- to establish whether the site is rural or domestic in character,
- to establish whether there are any buildings or other structures (farm fences?) on site (in the form of post holes, gullies, etc),
- to establish, as far as is practicable, how the site relates to other pre-oppidum related features in the vicinity.

4.2 The overarching research themes, as stated in the research design are to:

1. inform how the landscape was used and to what level of intensification, prior to the construction of Camulodunum,
2. to elucidate the nature of spatial organisation within the oppidum and
3. to address the question of the effect of the establishment of the Roman town on the agricultural hinterland.

4.3 **Specific Aim**: The close dating of the Middle Iron Age sequence, and in particular the associated environmental data such as pollen and plant macrofossils, is of central importance for the research priority to provide data pertaining to the landscape character and use immediately prior to the construction of the oppida. Ditch CF703 and the adjacent area has been specifically targeted by excavation due to the high potential of this feature and possibly associated features, to provide well-stratified and relatively large uncontaminated pottery assemblages suitable for detailed analysis. The sand-tempered pottery from the feature is typical of Middle Iron Age material in Essex (Drury 1978). At present the pottery suggests a date at least a century prior to the construction of the dykes of Camulodunum. The ditch is relatively deep and as such its lower levels have been protected. It may be possible to extract pollen from the strata for landscape reconstruction purposes. In addition a charcoal rich lens within the ditch segment examined during the evaluation demonstrates moderate potential for bulk environmental sampling to provide both charcoal suitable for radiocarbon dating and macrofossils suitable for landscape characterisation including burnt grain. Any placed deposits which may be encountered the period will be studied in terms of their possible ritual or symbolic roles in Iron Age society and will be closely dated wherever possible.

4.4 The relevant project aims derived from the research design are as follows:

4.5 **Overarching Research Objective**: To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period.

4.6 **Project Aim 3**. What was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there indications of landscape division and settlement which might allude to the origins of the oppidum?

4.7 **Project Aim 4** – To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

4.8 **Project Aim 8** – To clarify the date, form and function of the co-axial field system, to establish the nature of its development within the oppidum and/or the Roman town's hinterland and to establish the evidence for association with the probable villa at Kirkee McMunn Barracks.

5 Method Statement

Excavation Methodology

5.1 **Removal of Topsoil and Overburden.** The area to be stripped is shown on Figures 2, 3 and 4 as Mitigation Area 6. A 360 degree tracked mechanical excavator utilising a toothless ditching bucket will remove the c.0.3m thick topsoil under permanent supervision of and to the satisfaction of a CAT archaeologist. The lower levels of topsoil will be removed in spits of no more than 0.15m to cleanly expose the surface of the natural subsoil. 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 supervised 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. The advice of a geoarchaeologist will be sought in the event that particularly interesting site formation processes are encountered. No potentially significant archaeological deposits will be removed prior to recording, sampling (if necessary) and adequate understanding of their character.

NOTE: from now, this text is common to WSIs of Areas 2, 6 and 10

5.2 **Surveying.** Following the site 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.

5.3 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.

5.4 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

5.5 Archaeological excavation will be by hand and will respect the stratigraphy of archaeological layers, features, deposits and structures. Each context will be excavated in sequence. Occasionally further use of the mechanical excavator may be required. The use of mechanical excavators will only be undertaken with agreement from the CBC Archaeologist. 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. Fast excavation techniques involving (for instance) picks, forks, or mattocks will not be used on complex stratigraphy.

5.6 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. There will be a 15% contingency (15% of the overall excavation project budget for Areas 2, 4, 6 and 10) in the event of unforeseen discoveries, for higher levels of sampling where the realization of the project aims would be enhanced, or in the event of unworkable weather conditions. Use of contingency sums is to be agreed with RPS and RMPA.

(i) Normally 50% of the fills of all pits and other discrete archaeological features will be excavated. Pits will be fully excavated if they are particularly rich in environmental or and/or artefactual evidence, should this contribute to the research aims. Variation to lower the sample level for pits will only be acceptable where the full sampling strategy has no potential to contribute to the research aims. A sample of tree throw holes/possible natural features (up to 5% of the total number) will be excavated sufficient to establish the nature of the features and to provide dating evidence.

(ii) 20% of the exposed lengths of ditches, including enclosure ditches, will be excavated, in segments of up to 2 metres in length. The segments will be placed to provide adequate coverage of the ditches and will include excavation of all terminals and intersections. A flexible approach will be adopted to the

location of excavation samples such that areas of exposed ditch fill with higher artefact or ecofact content may be targeted. A lower excavation sample ratio of ditches will only be acceptable in the event that the research aims will not be further advanced by full 20% excavation. Any such reduction in sample ratio will be agreed with CBC and RPS.

(iii) 25% of ring gullies will include excavation of the terminals and sections at each side to the rear of the gully. Special regard will be given to significant stratigraphical relationships and concentrations of artefactual material.

(iv) In the event that stone structures are encountered, these will be excavated in sufficient detail to establish their construction sequence and sequence of repairs or extensions. All stratigraphic associations will be recorded. Should floor levels (which are not anticipated) be encountered, these will be fully excavated and environmentally sampled.

(v) Furnaces or kilns are not anticipated but should these be encountered they will be fully excavated (and bulk sampled) to determine their function and any sequence of repairs or replacements. Archaeomagnetic dating may be considered and is allowed for within the project budget.

(vi) Animal and human burials, including cremations, will be fully excavated. A license from the Home Office will be acquired in the event of the discovery of any human remains. The discovery of human remains will be reported to the local coroner. Other structured or placed deposits will be recorded and retained as “small finds”.

(vii) Water will be used where appropriate to further archaeological investigation in respect of aiding the identification and definition of excavated features or deposits and to assist their recording thereof, particularly by photographic means.

(viii) 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) All 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) All 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. Colour transparencies (on 35mm film) will be used for all important contexts illustrating both the detail and context of the principal archaeological features and finds discovered. 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. The black and white negatives and contact prints will be filed, and the colour transparencies will be mounted using appropriate cases. 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.

Treatment of Samples

5.7 Industrial 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.

5.8 The environmental sampling policy is as follows. CAT is advised by Peter Murphy (EH 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 VF, and future sampling policy on other excavations areas will follow her advice. If any complex or outstanding deposits are encountered, then PM and/or VF will be asked onto site to advise.

5.9 In addition to retrieving environmental evidence (above), bulk sampling will be used to collect charcoal for C14 dating. This will help to date features such as field ditches where ceramic evidence is not forthcoming and is key to the research aims.

5.10 A strategy of pollen analysis has been agreed with Patricia Wiltshire. The aim will be to identify a number of deep contexts from which soil columns or bulk samples can be extracted for pollen analysis. Ditch CF703 is already identified as one such feature to be sampled by means of column samples. Over the length of the project this will enable an assessment to be made of the local environmental background, even if only at a basic level. Patricia Wiltshire's (or colleague) will visit each site and extract samples for analysis. Based on these test samples, the viability of further sampling on the site will be assessed by PW, and her advice will be followed. Clearly, if the test samples are unproductive, there will be no justification for further sampling.

5.11 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 bioarchaeologist and the Site Director:

(i) 50 litre bulk samples (or 100% of smaller contexts) of anthropogenic concentrations will be taken and of selected deposits where remains are not visible (but may nevertheless occur). These shall include well sealed deposits, floors, hearths etc.

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

(iii) Bulk samples will be taken from 50% of all ring gully sections.

(iv) 50 litre bulk samples will be taken (if possible) from closely dated pits. These deposits will be sampled regardless of whether or not there are visible macrofossils or molluscs. In practice it is likely that large numbers of similar features and fills, many of which will be undated or poorly dated, will be encountered and it will be necessary to agree the most suitable method of bulk sampling in the field to avoid production of meaningless data. In order to accommodate such a discussion bulk sieving will be conducted in concert with the excavation from the initial stages and will provide early indications of the quality and consistency of the samples and the need to adjust the sampling strategy accordingly.

(v) Whole fill samples from post holes of definable structures will taken for assessment.

(vi) Kilns and furnaces will be sampled and dated by scientific methods (if appropriate) in line with the research objectives.

(vii) Cremations and other "special deposits" will be 100% sampled.

(viii) 100% recovery of animal bones will be undertaken from the soil samples. It is possible that 100 litre samples for bone may also be necessary in some circumstances.

General Methodology

5.12 All works will be undertaken by a team of professional archaeologists. The proposed team structure is given in the appendix (end of document).

5.13 All work will be according to CAT *Policies and Procedures* (2000), and will be informed by *Management of Archaeological Projects* (English Heritage 1991), and *Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester* (Colchester Borough Council1996, revised 1999).

5.14 Scans of the area by BacTec International revealed a service (presumed to be an electric cable) close to the north edge of the proposed excavation area (CAT report 184, figure 18). This cable will be located with a CAT scanner, and (if necessary) will be avoided by the excavation area.

5.15 If any human remains are exposed, RPS will be notified immediately and RPS will inform the MoD, RMPA and CBC. In practice, there is a distinction between the handling of isolated and demonstrably ancient cremation burials often encountered in field evaluation, and the discovery of recent burials which are the proper business of the Coroner. A Home Office license for dealing with demonstrably ancient burials will be sought as a matter of course, and it is anticipated that these will be excavated or recovered by CAT in the normal way. In the unlikely event that recent burials are encountered, then RPS and the Client will inform the Police and/or coroner.

5.16 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.

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

5.18 The Code of Conduct of the Institute of Field Archaeologists (IFA) will be followed.

5.19 There are no proposals to fill the excavation area at the end of fieldwork.

6 Public Archaeology

6.1 Due to health and safety restrictions during the construction period it will not be possible to provide public access to Mitigation Area 2.

7. Health and Safety

7.1 All work will be in accordance with procedures laid down in the *Safety Plan* (RPS 2003). RPS will submit a further Risk Assessment and Safety Plan for the project with the client prior to the commencement of the excavation.

7.2 All the latest Health and Safety guidelines will be followed on site. CAT has a standard safety policy (CAT 1999), which will be adhered to. A risk assessment will be prepared.

7.3 No personnel will work in deep or unsupported excavations. The sides of all excavations or trenches deeper than 1.4 metres will be stepped or battered. Due to the difficulty of working in shored trenches, shoring will be avoided wherever possible. Safety helmets will worn by personnel in deep trenches or other potentially unsafe positions. All deep trenches shall be fenced off and will be clearly indicated by “deep excavation” signs.

7.4 The archaeologist(s) will not enter an area under machine excavation without alerting the machine driver to his/her intention.

7.5 The archaeologist(s) shall remain alert and take due care not to impede the progress of moving machinery. He/she shall stand well back from the turning circle of an excavator’ buckets and cabs.

7.6 Spoil will be stored at a safe distance away from trench edges.

7.7 CAT will provide suitable accommodation for staff to shelter from inclement weather and during breaks. Hand washing facilities will be provided.

7.8 CAT will provide any necessary protective footwear, high-visibility jackets, and safety helmets. All staff and visitors to the site will be expected to wear full PPE at all times.

7.9 A procedure of signing in and out for staff with the RPS manager, at the contractor’s site office, will be adopted.

8 Finds

8.1 Unstratified finds will only be collected where they contribute significantly to the research aims or are of intrinsic interest. All finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed according to the United Kingdom Institute for Conservation’s *Conservation Guidelines No.2,* the Council for British Archaeology’s *First Aid For Finds* (Third Edition, 1998) and the Institute of Field Archaeologist’s *Guidelines for Finds Work* (1992). Iron finds may require X-rays prior to conservation and similarly residues on pottery may require study ahead of any conservation which may be appropriate.

8.2 All finds and bones will be recorded, collected and labelled according to their individual stratigraphical context. Finds from each archaeological context will be allocated an individual finds tray and waterproof labels will be used for each tray to identify unique individual contexts. Each label will be marked with the appropriate context number in waterproof ink and will be securely attached to each tray.

8.3 A policy of marking for pottery and other finds will be agreed with Colchester Museums. Marking will include the site code and context number.

8.4 All lifting, conservation or other on-site treatment of delicate finds will be done by Anne-Maria Bojko of Colchester Museums. It is anticipated that robust items such as intact cremations will be lifted by site staff.

8.5 The site archive will be presented to Colchester Museums in accordance with the requirements for conservation and storage as outlined in *Guidelines on the Preparation and Transfer of Archaeological Archives to Colchester Museums* (Colchester Borough Council 1996).

8.6 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. Any other finds remain for the MoD to assess and dispose of.

8.7 Finds work will be to accepted professional standards and adhere to the Institute of Archaeologists' published booklet Guidelines for Finds Work.

8.8 Agreement with the landowner will be sought for deposition of the finds and paper archive. Arrangements for the finds to be viewed by the landowner will be made if he/she wishes.

8.9 The following specialists have been approached for artefact and environmental analysis:

- Sue Anderson – Human Bone
- Susan Curle - animal bone;
- Nick Lavender/Nigel Brown– prehistoric pottery
- Valerie Rigby/Stephen Benfield late Iron Age and Roman pottery;
- Dr Paul Sealey - Amphoras
- Joanna Bird - Samian
- Ernest Black – Roman Brick/tile
- Dr Hilary Cool – Roman glass
- Dr John A Davies – Roman coins
- Nina Crummy – Small finds
- Sue Tyler- Saxon Pottery
- Helen Walker – Medieval and Post-Medieval pottery
- Hazel Martingell - Lithics
- Lynn Keys – Metalworking residues;
- Pat Wiltshire- pollen analysis
- Peter Murphy - Environmental
- Val Fryer- Archaeobotanist
- Jackie McKinley- Cremations.

9 Post Fieldwork Assessment

9.1 MAP 2 (Management of Archaeological Projects:2 (English Heritage 1991) stipulates that towards following a fieldwork programme, an assessment will be undertaken to determine a suitable post fieldwork project design. The volume and diversity of the

recovered materials, the potential importance of the finds and the resultant publication and archiving requirements will be taken into consideration.

9.2 The post fieldwork project assessment will ensure that the following requirements are fulfilled:

(a) provision of adequate finance;
(b) adequate level of human and technical resources;
(c) nomination of relevant specialists;
(d) pre-determined levels of analysis; and
(e) clearly defined project management structure.

9.3 Fully integrated and structured site matrices will be produced such that the site may be accurately and comprehensively phased. The completed matrix will be incorporated into the final excavation and any other subsequent report.

9.4 The assessment stage should include an updated project design in accordance with the recommendations of MAP 2 Stage 3. The updated project design will set out post fieldwork proposals for the approval of the client and to meet the requirements of MAP 2. No further post fieldwork analysis will begin until this process has been fully undertaken.

9.5 The assessment report will include quantification's of archaeological contextual/ structural categories, finds/ industrial categories and environmental categories. Special regard will be given to the state of preservation, density of material and their significance. The individual elements of the project will be assessed with regard to their potential to contribute to the original project aims and for their potential to address any further research areas which may have come to light during the excavation or assessment phase.

9.6 Assessment may include technological residues analysis and the completion of any bulk processing or sub-sampling of the bulk samples which had not been undertaken in the field (it is the intention to complete the majority of the bulk sampling during the fieldwork). A cost effective strategy for scientific dating will be considered at the assessment stage. The assessment report will also include detailed illustrations of the site and a text outlining methodologies, results, discussion and initial conclusions. The report will be deposited with CBC no later than 6 months following the completion of the fieldwork. Specialists will be given written instruction of the duration of the assessment phase.

9.7 This report will include:

- A concise non-technical summary of the project results
- Contents list, explanation of the proposed development,
- The aims and methods adopted in the course of the excavation
- archaeological and historical background.
- Location plan of the site(s), and trenches.
- Text report giving detailed results with a suitable conclusion & discussion.
- Sufficient plans and illustrations to back up the text report
- Sections and drawings of all excavated features showing depth of deposits including present ground level with Ordnance Datum, and a scale.
- All specialist reports and assessments.
- An assessment of the archaeological potential of the site it contribute to the project aims
- location of the archive and proposals for deposition.
- Project timescale and staff structure
- Acknowledgements and references
- Tabulated lists of contexts and finds.
- the appropriate part of this WSI as an appendix

10 Analysis, Publication and Dissemination

10.1 Following agreement with RPS, MoD, RMPA, CBC and English Heritage on the recommendations of the assessment the final analysis stage will be undertaken. The consultations will include agreement regarding scientific dating methods and the targeted phases or elements.

10.2 Two objectives will be met:

(i) the production of a research archive and final report; and
(ii) the production of a report for publication.

10.3 Adequate resources will be allocated to facilitate these functions. As MAP 2 points out, the resources will include provision for frequent reviews of the extent to which the objectives are being met, bearing in mind that the process of synthesis can often lead to a revision of the original stated aims.

Final Report

10.4 Appendix 7 of MAP 2 sets out the guidelines for the preparation of published reports. The report will describe and explain the results of the excavation and will realize the objectives outlined in the post excavation assessment and updated project design to meet the full potential of the site to contribute to archaeological knowledge. A full analysis of the sites phases will be included. The report will conform to MAP Appendix 7 and will form the basis of the publication within an approved archaeological journal. The contents of this report will include the following:

- A list of contents and figures used in the report;
- An explanation of the development and the reasons for the excavation;
- A non-technical summary that explains the main issues in layman's terms;
- A general introduction to the project, including details of the site location, the planning applicant, the archaeological contractor, project staff and the author(s) of the report;
- The aims and objectives of the project;
- The methodology used in the project;
- A description of the historical and archaeological background and context of the proposal site;
- A description of the geology and topography of the proposal site and the results of any previous archaeological fieldwork in the vicinity;
- The methods used to excavate the site;
- Specialists reports on the finds and environmental projects including significant dating evidence (including scientific dating), discussion and illustrations (including finds illustrations);
- A detailed description of the results, with a detailed discussion and interpretation on the reliability of the findings;
- Details of the project timetable with details of the project manager and staff structure;
- Details of the location of the project archive and finds at the time of the compilation of the report, and the proposed date of their eventual deposition;
- Sufficient illustrations to support the text including figures to show the location of the site in a national, regional and local context, detailed plans of the entire site and specific site areas, structures or areas of interest, selected sections drawings to illustrate the main findings and sufficient interpretative drawings to illustrate the main findings. Phase drawings will be produced as appropriate. The national grid will be shown on the plans;
- Discussion and conclusions such that the site may be placed within its regional context;
- The project brief and project design and WSI will be included in the excavation report as appendices; and

- Tabulated lists of contexts and finds, matrices and acknowledgements, a bibliography and a glossary of terms for the non-specialist.

10.5 Copies of the final report will be issued to the RPS, MoD, RMPA, CBC (two copies – one for the UAD), the Essex County Council Heritage Conservation Record and English Heritage. A copy of the report will also be deposited with the finds and archive at Colchester Museums.

10.6 A full report on the project will be published in an appropriate journal, yet to be decided. If the report is concise, it may be appropriate to publish it in *Essex Archaeology & History*. However, longer reports may be need to be published in a different format, perhaps the new CAT in house *Journal*. In any case, a short summary of the work will be submitted to *Essex Archaeology & History* for inclusion in the annual round-up. Appendix 7 of MAP 2 sets out the guidelines for the preparation of published reports. A publication grant will be provided to the publishers in accordance with their requirements.

11 Archive and Finds Deposition

11.1 All retained artefacts will be cleaned, conserved and packaged in accordance with the requirements and guidelines of the United Kingdom Institute for Conservation's' *Conservation Guidelines No. 2,* the Council for British Archaeology's *First Aid for Finds* (Second Edition, 1987) and the Institute of Field Archaeologist's *Guidelines for Finds Work* (1992). Small finds will be boxed separately from the bulk finds. Plans will be presented on hanging strips to fit Colchester Museums storage systems. A full archive will be prepared to standards outlined in *Management of Archaeological Projects: **2*** (English Heritage 1991).

11.2 The full archive will be deposited at Colchester Museums, subject to MoD consent and subject to the guidelines and requirements of MAP 2, as soon as is practicable, and within six months of completion of publication text on the project. All requirements for archive storage as given in Colchester Borough Council's *Guidelines for the standards and practice of archaeological fieldwork in the Borough of Colchester*, will be followed.

11.3 Finds (and other retained materials) will be bagged and boxed in the manner recommended by Colchester Museums.

11.4 Photographic archive is to be presented as follows: colour slides in hanging strips or in folders of archival quality, original digital data on CD Roms, hard copies of digital photos on high quality paper, or as otherwise requested by Colchester Museums.

11.5 CD Roms of material held on computers will be presented to Colchester Museums, along with bound copies of printouts.

11.6 Deposition of the archive will be confirmed in writing to CBCAO, and a summary of the contents of the archive shall be supplied to CBCAO.

11.7 All artefacts recovered from the archaeological excavation shall be deposited at the Colchester Museums. All recovered artefacts shall be fully catalogued, shall constitute one single deposit and shall be deposited within two years of the completion of the archaeological excavation.

11.8 Prior to the deposition of the artefacts with Colchester Museums the following procedures will have been completed:

- Notification of the fieldwork and approximate quantity of finds will be given to the museum ahead of the fieldwork phase. A 'notification form' will be supplied with the relevant details of the project at this stage;

- Where possible the site code/accession number and context number shall be marked on all finds;
- All finds packaging, including boxes and bags will be clearly marked with the assigned accession number;
- Transfer of ownership from the MoD to Colchester Museums will be agreed in principle prior to the fieldwork and a written transfer of ownership form will be forwarded to the museum ahead of deposition. Any other finds remain for the MoD to assess and dispose of;
- The archive will be deposited complete and will include a full index of contents;
- There may be a case for non retention of certain artefacts of low academic value. The selection of these will accord with SMA (1993, revised 1997).
- Further guidelines and requirements of the Museums for the acceptance of finds and archive as outlined in the Museum's Procedures for the deposit of archaeological archives will be adhered to.

11.9 A project's archive comprises every record relating to that project, from written records and illustrative material to the retained artefacts.

11.10 The archive (including artefacts) will be retained intact, will be prepared to the standards and requirements of Colchester Museums. The archive shall be deposited at the Colchester Museums within two years of the completion of the archaeological excavation. The accession number assigned for the artefacts will be used for the whole project archive.

11.11 The project manager will ensure that every element of the archive is kept clean and secure, and that it is stored in a suitable environment.

11.12 The archive comprising written, drawn, photographic and electronic media, will be fully catalogued, indexed, cross referenced and checked for archival consistency.

11.13 A copy of the archive (on microfiche) should be deposited with the NMR and SMR.

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

12 **Staffing and timetable**

12.1 The overall archaeological project will be managed by Ken Whittaker MIFA assisted by Robert Masefield AIFA (RPS). The archaeological contractor CAT will be managed by Philip Crummy. The excavation will be directed in the field by Carl Crossan. The experience of the project team are included in the Appendix of this method statement.

12.2 A total of approximately two weeks is allocated for the site stripping of the excavation of Area 2. The duration is not fixed due to the unpredictable duration of the ordnance survey. The start date is yet to be determined. The excavation following the site strip is estimated to last 6 weeks.

13 Monitoring

13.1 A programme of monitoring of the project in the field shall be agreed in advance between CAT, RPS, MoD, RMPA, CBC and English Heritage and will be notified to all parties by RPS. Provision (through regular consultation) will be made for the CBC Archaeological Officers and the English Heritage's Regional Scientific Adviser to monitor the excavation as required, including the post fieldwork analysis and report preparation stages of the project. A series of site meetings will be held during the course of the excavations at Flagstaff House. These meetings will be notified by and led by RPS.

13.2 A minimum period of two weeks notice shall be given to CBC prior to the commencement of the archaeological excavation. The timing and frequency of each monitoring visit will be agreed in advance with CBC.

13.3 Any variation or modification to the project programme in terms of working or recording either on site or off will be fully discussed and agreed with RPS, MoD, RMPA and CBC in advance.

13.4 Any variations of the WSI shall be agreed between RPS, CBCAO and CAT prior to their being carried out.

13.5 The excavation will not be deemed to be complete until CBCAO (or his agent) has had the opportunity to inspect it.

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

14 References

Association of County Archaeological Officers	1993	*Model clauses on Archaeological Briefs and Specifications*
Brown N and Murphy P	1997	*In Glazebrook J (eds) Research Archaeology. A Framework for the Eastern Counties. 1. Resource assessment. EAA Occ. Paper No.3*
CAT	2002	Colchester Garrison redevelopment: method statement and risk assessments for archaeological fieldwalking survey, geophysical survey, and evaluation trenching
CAT	(revision of Feb 2000)	*Colchester Archaeological Trust Policies and Procedures.*
CAT	(revision of Aug1999)	*Site Safety Policy*
CAT Report 184	2002	*An archaeological evaluation by fieldwalking and geophysical survey at Colchester Garrison PFI site, Colchester, Essex: January-March 2002, by Howard Brooks*
CAT Report 197	2002	An archaeological evaluation by trial-trenching on Area C at Colchester Garrison PFI site, Colchester, Essex: May-June 2002, by Howard Brooks
CAT Report 203	2002	*An archaeological evaluation by trial-trenching on Area E/F at Colchester Garrison PFI site, Colchester, Essex: May-June 2002, by Howard Brooks*
CAT Report 205	2002	*An archaeological evaluation by trial-trenching on Area KR at Colchester Garrison PFI site, Colchester, Essex: June-July 2002, by Howard Brooks*
CAT Report 206	2002	*An archaeological evaluation by trial-trenching on Areas A, B, D, GJ, H, J, N, V and YP at Colchester Garrison PFI site, Colchester, Essex: June-July 2002, by Howard Brooks*
CAT Report 207	2002	*An archaeological evaluation by trial-trenching on Areas DR, G, M, P, Q, R, RO, S and T at Colchester Garrison PFI site, Colchester, Essex: May-September 2002, by Howard Brooks*
CAT Report 97	2000	*An archaeological desk-based assessment of the Colchester Garrison PFI site, by Kate Orr*
Colchester Museums (Colchester Borough Council)	1996, revised 1999	*Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester*
Colchester Museums (Colchester Borough Council)	1996.	*Guidelines on the Preparation and Transfer of Archaeological Archives to Colchester Museums*
Drury PJ	1978	*Excavations at Little Waltham 1970-71 CBA Research Report*
English Heritage	1988b	*Coaxial Field Systems; unpublished Monument Class Description Report*
English Heritage	2000	*Standard and guidance for archaeological field evaluations*

English Heritage	1991	*Management of Archaeological Projects*
English Heritage (Centre for Arch. Guidelines)	2002	*A guide to the theory and practice of methods, from sampling and recovery to post excavation*
Framework Archaeology	2000	*Perry Oaks Sludge Works, Western Perimeter Road, Heathrow, London. Project Design Update Note 2.*
Institute of Field Archaeologists	Various dates	*Model Briefs and Specifications for Archaeological Assessments*
Institute of Field Archaeologists	1992	*Guidelines for Finds Work*
Murphy & Wiltshire	1994	*A guide to sampling deposits for environmental analysis*
RPS	2002	*Colchester Garrison PFI archaeological project strategy proposal*
RPS	2002	*Colchester Garrison PFI Health and Safety Plan*
RPS	2002	*Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester*
Shimmin, D	1998	*'A late Iron Age and Roman occupation site at Kirkee McMunn Barracks, Colchester', Essex Archaeology and History,* ***29****, 260-69*
Wilkinson, DE and Neal V. (CBA)	1987 (Third ed. 1998)	*First Aid for Finds*

TEAM STRUCTURE

RPS PROJECT MANAGEMENT TEAM

Archaeological Project Manager
Ken Whittaker

Assistant RPS Manager
Rob Masefield

LIST OF CAT TEAM MEMBERS

Project Management
Philip Crummy
Howard Brooks

Site Managers
Carl Crossan, Stephen Benfield, Donald Shimmin

Site staff
C Austin, B Holloway, B Hurrell, K Orr, P Lomas, L Pooley, N Rayner, M Ripley, P Skippins, AN Others.

Finds
N Weller

Metal detecting
Brian Hurrell, Francis Nicholls, John Lay

Finds consultants
Susan Anderson (Suffolk County Archaeology Service) Human bones
Stephen Benfield (CAT) LIA/Roman pottery
Joanna Bird (Guildford) Samian ware
Ernest Black (Colchester) Roman brick/tile
Nigel Brown (ECC) Prehistoric Pottery

Hilary Cool (Nottingham) Roman glass
Nina Crummy (Colchester): Small finds
Susan Curle (Norfolk Archaeological Unit) Animal bone.
John Davis (Norwich Museum) Roman coins
Val Fryer (Loddon) Environmental processing
Nick Lavender (ECC) Prehistoric pottery
Hazel Martingell (Braintree) Lithics
Peter Murphy (UEA) Environmental policy
Valerie Rigby (British Museum) LIA ceramics
Paul Sealey (Colchester Museums) Roman Amphoras
Susan Tyler (ECC) Saxon Pottery
Helen Walker (ECC) post-Roman pottery.

Graphics
M McDonald, J Chittenden, H Brooks

Report writing
H Brooks, C Crossan

RPS Experience

Name:	Kenneth Martin Whittaker
Office	Oxford
Position in company	Director of Archaeology. MIFA
Qualifications / Membership	B.Sc. (Hons)
Date of Birth:	14th June 1962
Areas of Expertise	Archaeology and Historic Environment

Ken has worked in various sectors of the cultural heritage profession, carrying out regulatory, managerial and commercial consultancy roles. Currently leads the archaeology section at RPS, a multi-disciplinary commercial planning and environmental consultancy. Main duties include managing teams drawn from various technical and design-led professions, such as planners, architects, landscape architects, ecologists and engineers. Recent work has focussed on archaeological risk assessment and project management, in some instances as Principal Contractor (CDM regs), for civil engineering projects (including road and rail construction) and major urban regeneration schemes. He previously worked at English Heritage where he provided Local Authorities in London with planning advice. He was also closely associated with developing heritage conservation policy in London and the Thames Estuary, sometimes in partnership with other statutory advisers, such as English Nature and the Environment Agency. He contributed to Regional Planning Guidance for the Thames Gateway, the Maritime Greenwich World Heritage Site Management Plan, the greater Thames Estuary Archaeological Research Framework and recently managed the production of the Tintagel Castle Conservation Plan. He was also closely involved in conservation-led regeneration projects on Thames-side brownfield sites, which promoted local community involvement in joint heritage and nature conservation initiatives. Since graduation in 1984 he has continued to develop expertise in Late Pleistocene and Holocene geoarchaeology and landscape development. Ken has established long-term partnerships with university sector and has been an expert witness in Public Inquiry proceedings.

Key Clients: RMPA Services Ltd, Ministry of Defence, Highways Agency, South West Regional Development Agency, Redrow Homes

Experience Includes:

- 2001 **Technical Director** RPS, Oxford
- 2000-2001 **Principal Archaeologist**, Gifford and Partners Ltd London
- 1999-2000 **Senior Archaeologist**, Gifford and Partners Ltd, London
- 1992-1999 **Archaeology Advisor**, English Heritage, London Region
- 1988-1992 **Deputy Area Officer**, Museum of London, London

- 1987-1988 **Senior Archaeologist**, Museum of London, London
- 1986-1987 **Archaeologist**, Museum of London, London
- 1985-1986 **Archaeobotanist**, English Heritage, London

Name: Robert B Masefield
Office: RPS, Oxford
Position in Company: Archaeological Consultant
Qualifications / Memberships: BSc. (Hons) MA. AIFA
Date of Birth: 15th October 1969

Area of Expertise:
Robert has 16 years experience in Archaeology. Expertise includes project management of major archaeological projects, directing archaeological excavations, evaluations and watching briefs and production of numerous reports for clients to English Heritage/County Council standards and journal publications for the above. In addition he has produced a number of Environment Statement cultural heritage chapters. He is experienced in negotiations on behalf of clients with local authority Archaeologists and English Heritage and is an Associate member of the Institute of Field Archaeologists.

Key Clients:

Southern Water Technology Group	I O Group
Daventry International Freight Terminal plc	JJ Gallagher
Andrew Martin Associates	Oxford United Football
Notting Hill Housing Trust	GU Projects
National Power Plc	Deacon & Jones
Campbell Reith Hill	Balfour Beatty
RMPA Services	Wimpy/Bryant Homes

Experience Includes:

- Supervising on the major excavation of a Roman Town at Heybridge Essex with additional post excavation archiving.

- Directing and reporting on major evaluations at Harlow Essex, (Neolithic, Bronze Age, Iron Age, Roman Saxon and medieval activity, including trenching within a Scheduled Monument), Ford Waste Water Treatment Works, West Sussex (Mesolithic, Bronze Age, Iron Age/Roman), Elstow Storage Depot/A6 widening, Bedfordshire (Iron Age/Roman), and Didcot West, Oxfordshire (Neolithic, Bronze Age, Iron Age and Roman).

- Directing and reporting on excavations including a deeply stratified urban site at Great Yarmouth (medieval), an urban site in the city of London (Roman/medieval), Harefield Middlesex (Saxon evidence), West Drayton, Middlesex (Iron Age trackway), Ford WTW West Sussex (Bronze Age, Iron Age/Roman settlement), Swalecliffe Waste Water Treatment Works (major Bronze Age well complex) and the A41 Aston Clinton Bypass Sites A-D (Bronze Age, Iron Age, Roman occupation and early Saxon settlement and cemetery)

- Environmental statement studies including Southern Water Technology Group (Bognor–Littlehampton, and Bexhall, Hastings), National Power/JJ Gallagher (Elstow Storage Depot) and Wimpy/Bryant Homes (Didcot West Expansion).

- Project Management duties on numerous watching briefs evaluation and excavation projects, including production of written schemes of investigation and research designs.

DETAILS OF CAT TEAM MEMBERS

SENIOR SITE STAFF

Philip Crummy MA, FSA, MIFA

Philip is a very experienced field archaeologist, and the longest-serving director of excavations at any major archaeological organisation in Britain. Since joining CAT (or Colchester Excavation Committee as it was then, and Colchester Archaeological Unit soon after) as Site Director in the early 1970s, he has supervised or directed large urban projects including Lion Walk, Balkerne Lane, Butt Road, and Culver Street, as well as numerous small projects. Philip's publication record is outstanding, and includes sole or joint authorship of eight of the *Colchester Archaeological Report* series, principally volumes **1**, **3**, **6**, **9**, and **11**. He also produces major parts of the CAT annual magazine *The Colchester Archaeologist*. He has also contributed to *Britannia*, *Post-medieval Archaeology*, and several of the BAR series. His most recent work *City of Victory* is one of the local bestsellers in bookshops in Colchester. He lectures widely.

Carl Crossan
Carl is a very experienced field archaeologist. Since joining CAT in the early 1970s he has supervised or directed many major projects including Balkerne Lane, Butt Road Roman cemetery, St Mary Magdalene's Church, St Botolph's Priory, and the Colchester Garrison Project. His publications include *Colchester Archaeological Report 9: Excavations on Roman and later cemeteries, churches and monastic sites in Colchester 1971-88 (1993),* and a contribution to *Colchester Archaeological Report 6: Excavations at Culver Street, the Gilberd School, and other sites in Colchester 1971-85.*

Stephen Benfield BA, Cert Archaeol (Oxon) (CAT)
After working in farming Banking, Estate Agency, and in a Jobcentre, Stephen discovered archaeology. His first involvement with Colchester archaeology was in 1985, working on a Manpower Services Commission sponsored project, assisting in processing the enormous collection of Roman pottery from excavations in the town. After that he studied for his post-graduate Certificate in Archaeology at Oxford. Returning to CAT, he has since worked on many CAT projects at various supervisory and directorial positions, including the major projects at Stanway Iron Age burial site and Gosbecks Roman temple/theatre complex. Stephen has also, through much hands-on experience, built up a considerable working knowledge of LIA and Roman ceramics. He now completes ceramic assessments and full reports for CAT, drawing on the unrivalled catalogues provided by the standard Colchester works *Camulodunum* (Hawkes & Hull 1947), *Roman Colchester* (Hull 1958) and now *CAR 10*, and by examining the fabric series held at CAT headquarters.

Howard Brooks BA (Hons) MIFA (CAT)
Howard's involvement in Essex archaeology goes back to 1970 when he dug at Sheepen, Colchester with Ros Dunnett. He worked for Colchester Archaeological Trust between 1976 and 1981, and again in 1985, and was involved at various levels of responsibility (up to Co-Director) in the excavation of deeply stratified urban remains in Roman Colchester and suburbs (*Colchester Archaeological Report 3* [1984]). Between 1985 and 1992 he worked for Essex County Archaeology Section, first in directing the fieldwalking and excavation project at Stansted Airport (forthcoming *East Anglian Archaeology*), and then in Development Control. Howard then left ECC to set up and run HBAS, the county's smallest contracting team, in which capacity he carried out over twenty field projects and wrote a dozen consultancy reports. He rejoined CAT in 1997, since when he has been involved with major excavations at the Old Post Office on Head Street, the Co-operative Stores on Long Wyre Street, and other major projects. He regularly contributes to *Essex Archaeology & History*, and teaches WEA and University evening classes on archaeology.

FINDS SPECIALISTS

Sue Anderson BA MPhil MIFA DipMusStud (SCCAS) - Human Bone
Sue is Suffolk C.C. Archaeological Service's Finds Manager, specialising in human skeletal remains, post-Roman pottery and Roman to post-medieval ceramic building material. She has worked in Suffolk since 1995, and was previously employed as a freelance human bone specialist (for English Heritage, Norfolk Archaeological Unit, Hampshire C.C. and Cleveland Archaeology), a museum cataloguer at Hampshire County Museums Service, and a site assistant at Wessex Archaeology. She has worked on large assemblages of bone from

Norfolk, Suffolk and the North-East, and large groups of ceramics from Norfolk, Suffolk and Cambridgeshire. Publications include human bones from Caister-on-Sea and Burgh Castle, Norfolk (East Anglian Archaeology 60), and several large reports in the Ancient Monuments Laboratory Report Series (all forthcoming). A full list can be found on her website http://www.spoilheap.co.uk/splist.htm.

Joanna Bird FSA (Guildford) Samian
Joanna is one of the country's top Samian specialists. Among her large corpus of work is a contribution to the blockbuster *Colchester Archaeological Report 10: Roman pottery from excavations in Colchester 1971-86.*

Ernest Black (Colchester) Roman brick/tile
Ernie is a Colchester schoolteacher with a wide interest in archaeology and the classical world. In this sense, he is following in the footsteps of A.F. Hall and Mike Corbishley who were also local schoolmasters. He has developed his specialism by large scale hands-on experience with Roman brick and tile, and has contributed to the *Archaeological Journal* , *Colchester Archaeological Report 6: Excavations at Culver Street, the Gilberd School, and other sites in Colchester 1971-85.*

Nigel Brown BA MIFA FSA FSA (Scot): (Essex CC) Prehistoric Pottery.
Nigel is the county's leading prehistoric pottery specialist, and is building a reputation farther afield. He has worked for the County Archaeology Section since 1980, contributes regularly to Essex Archaeology & History, and has directed several major excavations in Essex, principally the Bronze Age Farmstead at Loft's Farm (*Proc Prehist Soc* 54 [1988]), and North Shoebury project (*East Anglian Archaeology* 75). He also contributed to *Colchester Archaeological Report 6: Excavations at Culver Street, the Gilberd School, and other sites in Colchester 1971-85.*

Dr Hilary Cool FSA MIFA (Nottingham) Roman glass
Yet another graduate of the University of Wales, Hilary is now a freelance glass and finds specialist, and has written many reports on glass from Colchester sites, including contributions to Colchester Archaeological Report 6: Excavations at Culver Street, the Gilberd School, and other sites in Colchester 1971-85, and Colchester Archaeological Report 9: Excavations on Roman and later cemeteries, churches and monastic sites in Colchester 1971-88 (1993). Among her major works is the internationally selling Colchester Archaeological Report 8: Roman vessel glass from excavations in Colchester 1971-85.

Nina Crummy (Colchester) Small finds
Nina first worked in the early 1970s as finds assistant on the major urban excavations in Colchester for the Colchester Excavation Committee (later the Trust). Over the next twenty years she built up an unrivalled working knowledge of small finds of all types. She has collaborated in most of the *Colchester Archaeological Reports*, and was principal author of the best-selling *Colchester Archaeological Reports* **2** (Roman small finds), **4** (*The coins from excavations in Colchester 1971-9*) and **5** (*The post-Roman small finds from excavations in Colchester 1971-85*). She recently worked for the Museum of London, and was instrumental in the recent transfer of and the massive improvement in accessibility to archaeological archives in London. She now works freelance on small finds reports for CAT, HBAS, and other bodies including Winchester Excavation Committee.

Julie Curle (to follow)

Dr John A Davies (Norwich Museum) Roman coins
John has, for some years, written reports on Roman coins from Colchester excavations. He specialises in barbarous radiates, and has contributed to *British Numismatic Journal* on that topic. Among his other publications is a contribution to *Colchester Archaeological Report 4: The coins from excavations in Colchester 1971-9,* and *Colchester Archaeological Report 9: Excavations on Roman and later cemeteries, churches and monastic sites in Colchester 1971-88 (1993).*

Hazel Martingell (to follow)

Hazel has completed many specialist reports on lithics from archaeological excavation and survey in Essex. In Colchester and District, she has been involved with CAT projects at Fordham, Head Street, and Colchester Garrison. She also teaches finds drawings at Essex University evening classes.

Peter Murphy BSc M Phil (UEA) Environmental
Peter needs no introduction, but I'll give one anyway. His first contact with Essex Archaeology was as a graduate at Southampton University where he processed and reported on environmental samples from the urban excavations in Colchester the mid 1970s. He joined the Centre for East Anglian Studies (University of East Anglia) in Norwich in 1977, and from that base has established himself as the father figure of East Anglian environmental studies. He has been involved at a personal level or as an advisor on virtually every major project in the east of England over the past twenty years where environmental studies are concerned, and has written and lectured widely. He covers East Anglia in general (Norfolk, Suffolk, Essex, Lincs, Cambs, Herts) but has a specific role for English Heritage in co-ordinating environmental matters in Midland Region (most of Southern England).

Valerie Rigby (British Museum) LIA ceramics
Val is one of the country's leading authorities on later prehistoric ceramics in general, and traded wares in particular. She has published widely. Her major work include *Baldock : the excavation of a Roman and pre-Roman settlement, 1968-72* (*Britannia Monograph Series* **7**, with Ian Stead). On a more local level, she has contributed to the magisterial *Colchester Archaeological Report 10: Roman pottery from excavations in Colchester 1971-88,* and to Ros Niblett's *Sheepen: an early Roman industrial site at Camulodunum* (Council for British Archaeology Research Report 57, 1985).

Dr Paul Sealey (Colchester Museums) Amphoras
Paul has worked at Colchester Museum since the late 1970s. His PhD specialism was Roman amphoras, a topic on which he writes specialist reports for Colchester sites. His main areas of interest are prehistory and the Roman period, and he has developed a familiarity with those periods and their ceramics. He has published widely. His major works include *Amphoras from the 1970 excavations at Colchester Sheepen* (British Archaeological Report 142, 1985), contributions to Ros Niblett's *Sheepen: an early Roman industrial site at Camulodunum* (Council for British Archaeology Research Report 57, 1985). He regularly contributes to *Essex Archaeology & History*.

Sue Tyler (ECC) Saxon Pottery
Sue is the County authority on Saxon material, especially pottery. She has had several spells working with Essex County Archaeology Section, interrupted by a late-1980s spell in Hertfordshire. She has written reports on Saxon material for many Essex Projects, and contributes regularly to *Essex Archaeology & History*, including the Anglo-Saxon cemetery at Prittlewell (*Essex Archaeol Hist* 19 (1988)).

Helen Walker BSc (ECC) Medieval and post-medieval pottery.
Helen is Essex County Council Field Archaeology Group's medieval and post-medieval pottery specialist. Before joining ECC in 1985, she worked on finds in Carmarthen, and for Hampshire CC on projects in Winchester. Since 1985, she has contributed reports on ceramics to many other projects in the county. A regular contributor to *Essex Archaeology & History*, her principal publications include reports on the Rayleigh kiln dump, and George Street and Church Street, Harwich (*Essex Archaeology & History*, 21 [1990]), and North Shoebury (*East Anglian Archaeology* 75).

Appendix 17

WRITTEN SCHEME OF INVESTIGATION (WSI) FOR AN ARCHAEOLOGICAL EXCAVATION AT THE NEW GARRISON, COLCHESTER GARRISON PFI.

AREA 6 – EXCAVATION – January 2002

Prepared by RPS in association with CAT on behalf of RMPA Services and MoD, July 2003

Introduction

1.5 This written scheme of investigation (WSI) is for an archaeological excavation to take place in advance of the construction of the 'New Garrison' at Colchester. The WSI has been prepared by RPS Planning, Transport and Environment in association with Colchester Archaeological Trust (CAT) on behalf of RMPA and the MoD. The WSI mirrors standards and practices contained in *Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester* (Colchester Borough Council's 1996. revised 1999). The document has been produced in accordance with a research design prepared by RPS in association with CAT and approved (to be approved) by Colchester Borough Council (CBC), entitled *'Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester'* RPS/CAT 2002.

1.6 The projects' aims and objectives, in addition to the full archaeological background, are provided within the *research design*, which should be read in conjunction with this WSI. This document is specifically designed to provide a sound basis for excavation and post excavation practice for the excavation of 'mitigation area 6' located within a currently arable field to the south east of Kirkee McMunn Barracks (Figure 1). This WSI sets out proposals for the archaeological excavation including treatment of finds, production of a report, and deposition of the archive.

1.7 The proposed development of the Colchester Garrison PFI site involves the building of a new 101 hectare garrison between the existing Kirkee & McMunn, Goojeraat, and Roman Barracks, the demolition and refurbishment of existing barracks, and the redevelopment of the areas released by demolition, primarily for residential use. In response to the proposed redevelopment, an appropriate programme of archaeological evaluation was agreed between MoD, RMPA Services, RPS (the project archaeological consultants), Colchester Archaeological Trust (CAT), Colchester Borough Council Archaeological Officer (CBCAO), and English Heritage. The preceding stages of archaeological evaluation, upon which the scope of Mitigation Area 6 is based, comprised desk top assessment (CAT Report 97 – 2000), fieldwalking, magnetometer survey (CAT Report 184 – 2002) and trial trenching (CAT Report 203 - 2002).

1.8 *Colchester Garrison PFI archaeological project strategy proposal* (RPS 2002) defines a number of mechanisms to manage the archaeological resource during the redevelopment programme, and has identified a number of Mitigation Areas where appropriate archaeological action is recommended, for instance where the 2002 trial trenching evaluation revealed significant archaeological remains. This is the WSI for the excavation of one such area of important archaeological remains (Mitigation Area 6) lying to the south-east of Kirkee & McMunn Barracks (fig 1). Area 6 is rectangular with an area of 10,175m2. The excavation is located within evaluation Area F and is designed to mitigate the effect on buried archaeology of the eastern area of the construction compound and the subsequent construction of sports pitches. A brief summary of the evaluation results within Area F and adjacent Areas E and KR is provided in section 3 below.

1.5 This method statement is in accordance with the research design developed in consultation with CBC and complies with the guidelines laid down in *Planning Policy Guidance on Archaeology and Planning (PPG 16)* and with the Institute of Field Archaeologist's *Standards and Guidance for Archaeological Excavations* (IFA 1997). CAT (the contractor) will liase closely with RPS (the Archaeological Project Managers), RMPA (the Project Managers) the MoD with respect to all important matters concerning the co-ordination and management of the project. CBC will be kept fully informed of all archaeological developments. All archaeological excavation areas will be monitored and 'signed off' by the Archaeological Project Managers, Project Managers, the MoD and the CBC monitors prior to any construction works by the contractor.

2 Site location and description.

2.1 The proposed excavation site lies 300 metres south-east of the parade ground at Kirkee & McMunn Barracks (NGR TL 9890 2295: centre).

2.2 The land was recently in arable cultivation. It was ploughed specifically to assist the fieldwalking survey (CAT Report 184), but has not been worked agriculturally since the 2002 harvest.

2.3 The site is more or less flat, at approximately 33m above Ordnance Datum.

2.4 Drift geology of the area is predominantly sands and gravel. This is occasionally in a clay matrix, and is sometimes capped by cover loam.

4. Archaeological background

The site in its broader context

3.1 The archaeological and historical setting of the proposed Garrison redevelopment area has already been comprehensively explored in *An archaeological desk-based assessment of the Colchester Garrison PFI site* (CAT Report 97, by Kate Orr, 2000), and will only be summarised here.

3.2 The proposed excavation site (like much of the land south and south-west of Colchester's modern town centre) falls within the area of the pre-Roman *oppidum* of Camulodunum. The only above-ground traces of this *oppidum* are the linear banks and ditches of the defensive dyke system that surrounded it. The Garrison area occupies the eastern edge of the *oppidum*, and one of the defensive dykes (the Berechurch Dyke) crosses the extreme south-eastern edge of the Garrison (on the east edge of Roman Barracks).

3.3 As presently understood, the *oppidum* had two main centres of activity: at modern Gosbecks Farm (2km south-west of the Garrison), which was a Late Iron Age (LIA) and Roman rural farmstead (and possibly the home of Cunobelin); and Sheepen (2km north-west of the Garrison), which was the industrial and trading centre. Apart from these two large centres (above), it is likely that there were a number of smaller domestic and farming sites in the *oppidum*. One of these may have been identified by the field boundaries paddocks and other features recorded at Kirkee & McMunn Barracks in 1994 (Shimmin 1998: figs 8, 11 here). A large area of cropmarks is recorded over the southern part of the Garrison area. Geophysical survey has confirmed and added to the pattern of linear cropmark features (CAT Report 184). An informed interpretation based on previous limited excavation would indicate that they are late prehistoric and/or Romano-British in date, and represent the trackways, paddocks and field boundaries of a rural settlement of that period.

3.4 Summary of evaluation findings: The evaluation of the Garrison Area specifically targeted the cropmark ditches. In Area F, thirty-two trial trenches were cut, and where dating evidence was recovered, it confirmed the LIA/Roman date of the ditches. Field divisions on a north-east/ south west and north-west/ south east alignment within evaluation Areas C, DR, F and G appear to be directly associated with a previously

known early Romano-British settlement at Kirkee McMunn Barracks. The field divisions are best regarded as a type described by English Heritage (1988b) as Coaxial Field System. The Kirkee McMunn farm buildings included significant occupation finds material within coaxial ditches on the same alignment as those within the Areas C, DR, F and G, and a Romano-British hypocaust (under-floor heating system) pit containing box flue and Romano-British tile categories (Shimmin 1998) indicative of a small villa-type farmstead.

4.5 Romano-British trackway ditches within Trench 16 of Area C comprise CF1601 and CF1602, spaced 6m apart. A parallel early Romano-British ditch within Trench C11, CF1101, appears to form a component of this landscape. Further fragments of Romano-British landscape represented by coaxial ditches CF1504 and CF1606-8 within Trenches C15 and C16. Area YP to the north west of Area C produced two ditches potentially associated with the Late Iron Age or Romano-British landscape within Trenches 3, 4 and 5 (features YPF407 and YPF509). The dating evidence within these ditches was however limited to Romano-British tile.

4.6 The elements of the Late Iron Age/ early Romano-British landscape are particularly clearly defined within areas adjacent to Kirkee McMunn barracks. Two north-east/south-west orientated trackways dissect evaluation Areas E and F. The ditches of the western track were excavated within Trenches E1, 2, 3 and 4 and F22 as EF101, 203, 204, 301/2, 401 and FF2201. The ditches of the eastern track were excavated within Area F as FF1001, FF1202/3 and FF2705. These trackways are approximately 12m in width. A linked north west/ south east orientated track was recorded within Area F Trench 27 as ditches FF2703 and FF2712 where the ditches were approximately 4m apart. This track is demonstrated by geophysical survey and as cropmarks and clearly extends to the south east where it was intercepted within Trenches G12, G13 and G14 within Area G (Ditch segments GF1201/2, GF1302-5, and GF1401/2). A further north-east/ south-west orientated track connected with this trackway within Area F as a routeway leading to the south-west. The track was excavated within Trench F28 as FF2801/2 and was 9m in width. Further ditches within Areas E and F included EF103, EF303 and EF1102 whilst probable elements of this landscape within the northern area of Area G included north east/ south-west orientated ditch GF1003/6 within Trench G10, and north-west/ south-east orientated ditches GF904/6 and GF902/5 within Trench G9. Fragments of amphora of the Late Iron Age period were found within pit FF2803 within Trench F28, adjacent one of the trackways. The dating for this landscape is based upon pottery including 'grog tempered wares' typical of the Late Iron Age in combination with early Romano-British pottery and tile. These finds were typically found to be concentrated within ditches adjacent to Kirkee McMunn Barracks. Furthermore Romano-British tile finds from these trackway ditches included box-flue tile which almost certainly derived from the Romano-British hypocaust within Kirkee McMunn Barracks.

4.7 Less well defined evidence of contemporary fields within Areas M, P, and R (ditches MF102/4, MF305/8, MF309, P104 and R203/5) suggest that this area was also farmed during the oppidum period. However the variable alignments of these features may indicate a less structured landscape character than was laid out immediately adjacent to the Kirkee McMunn settlement.

4.8 The Romano-British building investigated in 1994 has subsequently been covered by Garrison buildings that are to be retained and the major archaeological feature of this phase is not at significant risk. The investigations by Colchester Archaeological Trust (Shimmin 1998) suggest that remains of this farm survive beneath the existing buildings, but these will have already been partly truncated as a result. However, the far more extensive gridded field systems do survive. Plough truncation has reduced the depth of all of the field and trackway ditches. The features are filled with low grade, homogenous sandy silts typical of landscape as oppose to settlement features.

4. Aims

4.1 The general aim of the excavation is to recover sufficient evidence to characterise the nature, date, function and importance of the archaeological features within the selected area. To achieve this the following will be objectives:

- to establish the date, phasing, and function of the cropmark ditches, paying particular attention to terminals and junctions,
- to establish whether the site is rural or domestic in character,
- to establish whether there are any buildings or other structures (farm fences?) on site (in the form of post holes, gullies, etc).

4.2 The overarching research themes, as stated in the research design are to:

4. inform how the landscape was used and to what level of intensification, prior to the construction of Camulodunum,
5. to elucidate the nature of spatial organisation within the oppidum and
6. to address the question of the effect of the establishment of the Roman town on the agricultural hinterland.

4.3 **Specific Aim**: Mitigation Area 6 is deliberately located over a prominent T-junction of two trackways and a field boundary, as excavated in evaluation trenches F27 and F28 (CAT Report 203, 18-19 and figures 3, 6). The excavation will provide an opportunity to accurately date and provide further information on the nature of the oppidum and early Roman landscape. As such the investigation is central to the project aims provided within the research design.

4.9 The relevant project aims derived from the research design are as follows:

4.10 **Overarching Research Objective**: To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period.

4.11 **Project Aim 3**. What was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there indications of landscape division and settlement which might allude to the origins of the oppidum?

4.12 **Project Aim 4** – To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

4.13 **Project Aim 8** – To clarify the date, form and function of the co-axial field system, to establish the nature of its development within the oppidum and/or the Roman town's hinterland and to establish the evidence for association with the probable villa at Kirkee McMunn Barracks.

5 Method Statement

Excavation Methodology

5.20 **Removal of Topsoil and Overburden.** The area to be stripped is shown on Figures 2, 3 and 4 as Mitigation Area 6. A 360 degree tracked mechanical excavator utilising a toothless ditching bucket will remove the c.0.3m thick topsoil under permanent supervision of and to the satisfaction of a CAT archaeologist. The lower levels of topsoil will be removed in spits of no more than 0.15m to cleanly expose the surface of the natural subsoil. 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 supervised 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. The advice of a geoarchaeologist will be sought in the event that particularly interesting site formation processes are encountered. No potentially

significant archaeological deposits will be removed prior to recording, sampling (if necessary) and adequate understanding of their character.

(please refer here to common text in Area 2 WSI above for sections 5.21 onwards).

Appendix 18

WRITTEN SCHEME OF INVESTIGATION (WSI) FOR AN ARCHAEOLOGICAL EXCAVATION AT THE NEW GARRISON, COLCHESTER GARRISON PFI.

AREA 10 – EXCAVATION – June 2003

Prepared by RPS in association with CAT on behalf of RMPA Services and MoD

Introduction

1.1 This written scheme of investigation (WSI) is for an archaeological excavation to take place in advance of the construction of the 'New Garrison' at Colchester. The WSI has been prepared by RPS Planning, Transport and Environment in association with Colchester Archaeological Trust (CAT) on behalf of RMPA and the MoD. The WSI mirrors standards and practices contained in *Guidelines on Standards and Practices for Archaeological Fieldwork in the Borough of Colchester* (Colchester Borough Council's 1996. revised 1999). The document has been produced in accordance with a research design prepared by RPS in association with CAT and approved **(to be approved)** by Colchester Borough Council (CBC), entitled *'Research Design for Archaeological Excavations and Watching Brief at the New Garrison, Colchester'* RPS/CAT 2003.

1.2 The projects' aims and objectives, in addition to the full archaeological background, are provided within the *research design*, which should be read in conjunction with this WSI. This document is specifically designed to provide a sound basis for excavation and post excavation practice for the excavation of 'Mitigation Area 10' located within a currently arable field to north of Roman Barracks (Figure 2). This WSI sets out proposals for the archaeological excavation including treatment of finds, production of a report, and deposition of the archive.

1.3 The proposed development of the Colchester Garrison PFI site involves the building of a new 101 hectare garrison between the existing Kirkee & McMunn, Goojeraat, and Roman Barracks, the demolition and refurbishment of existing barracks, and the redevelopment of the areas released by demolition, primarily for residential use. In response to the proposed redevelopment, an appropriate programme of archaeological evaluation was agreed between MoD, RMPA Services, RPS (the project archaeological consultants), Colchester Archaeological Trust (CAT), Colchester Borough Council Archaeological Officer (CBCAO), and English Heritage. The preceding stages of archaeological evaluation, upon which the scope of Mitigation Area 10 is based, comprised desk top assessment (CAT Report 97 – 2000), fieldwalking, magnetometer survey (CAT Report 184 – 2002) and trial trenching (CAT Report 207 - 2002).

1.4 *Colchester Garrison PFI archaeological project strategy proposal* (RPS 2002) defines a number of mechanisms to manage the archaeological resource during the redevelopment programme, and has identified a number of Mitigation Areas where appropriate archaeological action is recommended, for instance where the 2002 trial trenching evaluation revealed significant archaeological remains. It should be noted that Area 10 was not provided as a mitigation zone within the strategy proposal and Cultural Heritage Chapter of the Composite Environmental Statement (October 2002) since Area 3 was at that time the preferred location to examine an Iron Age trackway which crosses both areas. Area 10 now replaces Area 3 since it is currently uncertain whether the proposed sports pitches will have a significant impact on buried archaeology within Area 3. Mitigation Area 10 is situated to the north of Roman Barracks and is bordered to

the east by Berechurch Road. Area 10 is a sub-rectangular area encompassing an area of 14,091m2. The excavation is located within evaluation DR1 (Figures 1, 2 and 3). A brief summary of the evaluation results within Area DR1 is provided in section 3 below.

1.5 This method statement is in accordance with the research design developed in consultation with CBC and complies with the guidelines laid down in *Planning Policy Guidance on Archaeology and Planning (PPG 16)* and with the Institute of Field Archaeologist's *Standards and Guidance for Archaeological Excavations* (IFA 1997). CAT (the contractor) will liase closely with RPS (the Archaeological Project Managers), RMPA (the Project Managers) the MoD with respect to all important matters concerning the co-ordination and management of the project. CBC will be kept fully informed of all archaeological developments. All archaeological excavation areas will be monitored and 'signed off' by the Archaeological Project Managers, Project Managers, the MoD and the CBC monitors prior to any construction works by the contractor.

2 Site description.

2.2 The land was recently in arable cultivation in 2002 and is currently left fallow.

2.3 The site slopes down gently from north to south, from approximately 33.5m to 31.5m above Ordnance Datum. The site is centred on NGR TL 59961 22285

2.4 Drift geology of the area is predominantly sands and gravel. The 2002 archaeological trenches demonstrated that there a c.0.3m thick topsoil/ ploughsoil overlaying a variable c.0.3m thick sandy clay subsoil which in turn overlays the sand and gravels.

3 Archaeological background

The site in its broader context

3.1 The archaeological and historical setting of the proposed Garrison redevelopment area has already been comprehensively explored in *An archaeological desk-based assessment of the Colchester Garrison PFI site* (CAT Report 97, by Kate Orr, 2000), and will only be summarised here.

3.2 The proposed excavation site (like much of the land south and south-west of Colchester's modern town centre) falls within the area of the pre-Roman *oppidum* of Camulodunum. The only above-ground traces of this *oppidum* are the linear banks and ditches of the defensive dyke system that surrounded it. The Garrison area occupies the eastern edge of the *oppidum*, and one of the defensive dykes (the Berechurch Dyke) crosses the extreme south-eastern edge of the Garrison (on the east edge of Roman Barracks).

3.3 As presently understood, the *oppidum* had two main centres of activity: at modern Gosbecks Farm (2km south-west of the Garrison), which was a Late Iron Age (LIA) and Roman rural farmstead (and possibly the home of Cunobelin); and Sheepen (2km north-west of the Garrison), which was the industrial and trading centre. Apart from these two large centres (above), it is likely that there were a number of smaller domestic and farming sites in the *oppidum*. One of these may have been identified by the field boundaries paddocks and other features recorded at Kirkee & McMunn Barracks in 1994 (Shimmin 1998: figs 8, 11 here). A large area of cropmarks is recorded over the southern part of the Garrison area. Geophysical survey has confirmed and added to the pattern of linear cropmark features (CAT Report 184). An informed interpretation based on previous limited excavation would indicate that they are late prehistoric and/or Romano-British in date, and represent the trackways, paddocks and field boundaries of a rural settlement of that period.

3.4 Summary of evaluation findings: The evaluation of the Garrison Area specifically targeted the cropmark ditches. In Area DR1, seven trial trenches (DR1-7) were cut.

Trenches DR1, 3 and 4 were designed to encounter a north-east/ south west orientated 'curvilinear trackway', as indicated by aerial photography and magnetometer geophysical survey within Areas Q, DR1, P, M and R. The hand excavated samples of the curvilinear trackway flanking ditches within DR1 (features DRF 101-102, DRF303 and DRF403-4) provided sherds of pottery consistent with a Late Iron Age or Roman date. A second trackway on a similar north east/ south west alignment was encountered in the north west area of DR1 (DRF109-110). Field divisions on a north-east/ south-west and north-west/ south-east alignment were recorded within evaluation Areas C, F and G to the north-west, west and south-west of Area DR1 respectively, during the 2002 trenching evaluation. These boundaries appear to be directly associated, at least in their Roman use, with a previously known early Romano-British settlement at Kirkee McMunn Barracks (Shimmin 1998). Such field divisions are best regarded as a type described by English Heritage (1988b) as Coaxial Field System. It appears that the trackways within Area DR1 formed parts of this field system, but are unlikely to have been in simultaneous use given their close proximity to one another and their slightly diverging alignments. A further ditch on a north/south alignment within trench DR2 may date to the later prehistoric period.

3.5 It appears likely that the main 'curvilinear' trackway feature is contemporary with the Late Iron Age oppidum as a line of communication through its eastern area. A connecting track was confirmed by trenching within fields M and P (MF301/3 and PF501), possibly leading towards the late Iron Age centre at Gosbecks. In field R, to the south, the trackway was proven to be 12.2m wide with its ditches 2m in width and 0.6m in depth. Within DR1 the trackway is less substantial at around 7m in width with the ditches between 1.3 and 2m and a depth of 0.48m (within trench DR1).

3.6 Three post-holes within trench DR1, a pit within DR2 and pits or post holes within DR4 suggest human activities and perhaps the presence of structures within the vicinity of the main trackway. However these features are undated and may not be associated with the track. It is possible that earlier features such as late Bronze Age/ early Iron Age and or middle Iron Age fields divisions may also be present within Area DR1 as at least four undated ditch segments were encountered within DR1, three of which do not conform to the postulated Late Iron Age/ Roman co-axial field system, and may pre-date it.

3.7 A Second World War tank trap trench runs from east to west through Mitigation Area 10. This temporary line of defence was protected by a series of pill boxes, two of which survive within the New Garrison proposal area (elements of Mitigation Area 9 on Figure 2). The tank trap has been labelled as Mitigation Area 8 beyond the confines of Mitigation Area 10. The strategy for recording the feature (as defined within the Composite Environmental Statement, October 2002) is to record the section of the trench following machine excavation during the watching brief. However this task can now be conducted under archaeological control within Area 10.

3.8 Expected feature density: using the information derived from field evaluation there will be 735m of known ditches encountered (based on geophysical survey and archaeological trenches) and 760m linear of conjectural ditches (based on the probable continuation of ditch segments encountered by evaluation) within the proposed excavation area. In addition it is predicted, based on the field evaluation results within trenches DR1-DR4 that one non-linear feature will be encountered per 16m2 (average). This equates to approximately 880 such features within Area 10. A large proportion of these features are likely to be tree throw holes rather than pits or post-holes.

4. Aims

4.1 The excavation is designed to recover sufficient evidence to characterise the nature, date, function and importance of the archaeological features within the selected area. The following will be objectives:

- to establish the date, phasing, and function of the ditches, paying particular attention to terminals and junctions,

- to establish whether the site is rural or domestic in character,
- to establish whether there are any buildings or other structures (farm fences?) on site (in the form of post holes, gullies, etc),

4.14 The overarching research themes, as stated in the research design are to:

7. inform how the landscape was used and to what level of intensification, prior to the construction of Camulodunum,
8. to elucidate the nature of spatial organisation within the oppidum and
9. to address the question of the effect of the establishment of the Roman town on the agricultural hinterland.

4.15 Specific Aim: **The Curvilinear Trackways**: Notwithstanding the limited dating evidence, the curvilinear trackways appear to be one of a number of features at the Garrison which demonstrate the intensification of land use which is characteristic of the later Iron Age and the subsequent early Romano-British period. At Colchester this process also involved the initial construction of the oppidum earthworks to the west of the Garrison Site at Gosbecks and Sheepen. The precise relationship between the appearance of the trackway and the construction of Berechurch Dyke, immediately to the east, is unclear. It is probable that the trackway pre-dates Berechurch Dyke, which may have been a late addition to the earthwork defences, constructed by the Romano-British (P Crummy pers com).

4.16 The trackway enabled local communities to achieve greater mobility across the farmed landscape in the lea of Camulodunum's western defences, which was subsequently protected with an eastern defensive earthwork. The trackway was therefore a significant part of the local oppidum infrastructure and demonstrates a departure, in terms of scale, form and organisation, from the relatively small-scale structure of the preceding Late Bronze Age/Early Iron Age and Middle Iron Age landscape. Unmetalled double ditched trackways are known from both enclosed and unenclosed Late Iron Age/early Romano-British rural landscapes throughout southern Britain. Numerous examples occur locally within the oppidum, revealed by cropmarks and geophysical surveys at Sheepen and Gosbecks.

4.17 An aim of the project will be to determine the extent to which the trackways within the Garrison site belonged to one system and also to determine its period of evolution and use. These are particularly important issues because the trackways within the Garrison site are almost certainly a small part of a much bigger network of trackways covering the whole of the oppidum and probably beyond. The trackways at Gosbecks represent a focal point for this system - probably the main one since they converge there on a single large enclosure (the 'farmstead enclosure'). Dating evidence for the trackways at Gosbecks is slim because of limited excavations, but work in 1995-6 (CAT Archive Report 138 by S Benfield) did not provide evidence for use before the late Augustan period (Section 9). The date of the field systems associated with the trackways also requires clarification.

4.18 The relevant project aims derived from the research design are as follows:

4.19 **Overarching Research Objective**: To characterise the nature of landscape utilisation and change from the Neolithic (or earlier) to the Romano-British period.

4.20 **Project Aim 1**. What was the nature of small scale agricultural Neolithic and early-middle Bronze Age activities within the site, and in particular can ritual and/or settlement areas be identified?

4.21 **Project Aim 2**. What was the nature of later Bronze Age/ early Iron Age activities and in particular is there evidence of the emergence of more permanent settlements and field systems within the proposal site?

4.22 **Project Aim 3**. What was the nature of the Middle Iron Age settlement within the area of the later oppidum and are there indications of landscape division and settlement which might allude to the origins of the oppidum?

4.23 **Project Aim 4** – To elucidate the nature of spatial organisation within the oppidum, establish how this relates to general agricultural settlement expansion at this time and establish what inferences can be made from the distribution of coins.

4.24 **Project Aim 5** - To clarify the form/function and duration of the trackways with respect to the oppidum and to establish which elements of the social landscape they connected.

4.25 **Project Aim 8** – To clarify the date, form and function of the co-axial field system, to establish the nature of its development within the oppidum and/or the Roman town's hinterland and to establish the evidence for association with the probable villa at Kirkee McMunn Barracks.

4.26 **Project Aim 10** – To record and contextualise any modern military features within the New Garrison site for which there are insufficient current records.

5 Method Statement

Excavation Methodology

5.21 **Removal of Topsoil and Overburden.** The area to be stripped is shown on Figures 2, 3 and 4 as Mitigation Area 6. A 360 degree tracked mechanical excavator utilising a toothless ditching bucket will remove the c.0.3m thick topsoil under permanent supervision of and to the satisfaction of a CAT archaeologist. The lower levels of topsoil will be removed in spits of no more than 0.15m to cleanly expose the surface of the natural subsoil. 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 supervised 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. The advice of a geoarchaeologist will be sought in the event that particularly interesting site formation processes are encountered. No potentially significant archaeological deposits will be removed prior to recording, sampling (if necessary) and adequate understanding of their character.

(please refer here to common text in Area 2 WSI above)