

Mucking Excavations, Essex

Archive and Publication Project
- Prehistoric and Roman -

Overview and Assessment

Revised Version

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CONTENTS

| | |
|--|-----------|
| 1. BACKGROUND | 1 |
| 1.1 Outline and Original Research Aims..... | 1 |
| 1.1.1 Circumstances of the Project..... | 1 |
| 1.1.2 Background and Broader Context | 1 |
| 1.1.3 Post-Excavation Work..... | 2 |
| 1.1.4 Initial Objectives of the CAU ALSF-funded Project | 3 |
| 2. ASSESSMENT | 3 |
| 2.1 Material of critical importance for interpretation of the site..... | 3 |
| 2.1.1 The Archive..... | 3 |
| 2.1.2 Phasing, Stratigraphy and Feature Series (Prehistoric and Roman)..... | 7 |
| 2.1.3 The Artefactual Assemblage (Prehistoric and Roman) | 9 |
| 2.1.4 Pottery | 9 |
| 2.1.5 Ceramic Building Materials | 13 |
| 2.1.6 Metalwork | 13 |
| 2.1.7 Slag and other metalworking waste..... | 14 |
| 2.1.8 Preserved Organic Material..... | 14 |
| 2.1.9 Preserved Textile Remains | 15 |
| 2.1.10 Human Remains | 15 |
| 2.1.11 Faunal Remains | 16 |
| 2.1.12 The Environmental evidence..... | 16 |
| 2.1.13 Radiocarbon Dating..... | 16 |
| 2.1.14 Fired /Burnt and Unfired Clay..... | 17 |
| 2.1.15 Flint | 17 |
| 2.1.16 Stone..... | 18 |
| 2.1.17 Other Materials..... | 18 |
| 3. POST-ASSESSMENT RESEARCH DESIGN..... | 19 |
| 3.1 Aims and Objectives..... | 19 |
| General:..... | 19 |
| 3.2 Publication and Presentation | 23 |
| 3.2.1 Synopsis | 23 |
| 3.2.2 Report Breakdown..... | 23 |
| 3. REFERENCES..... | 24 |
| APPENDIX I | 26 |
| Files submitted to ADS | |

1. BACKGROUND

1.1 Outline and Original Research Aims

1.1.1 Circumstances of the Project

Intensively investigated between 1965 and 1978 prior to and during gravel extraction, the Mucking, Essex campaigns led to open area excavations across 18ha; it was renowned in its time as the largest excavation to date in Europe. It revealed a dense, multi-period landscape palimpsest with activity and settlement ranging from the Neolithic to the Medieval period, but primarily comprising later Bronze and Iron Age, Roman and Saxon settlement; in total, more than 44,000 features were excavated. Notable among these were over a thousand burials (including four Romano-British and two Anglo-Saxon cemeteries), the LBA South Rings enclosure, 110 roundhouses, a similar number of four- and six-post structures, and a Romano-British settlement with over twenty pottery kilns and associated structures and enclosure systems. While the Saxon settlement has been published (Hamerow 1993), along with the Site Atlas and generic specialist summaries (Clark 1993), the rest of the site has remained unpublished (although the major Anglo-Saxon cemeteries are in press (Hirst and Clark forthcoming)). At the behest of Dr JD Hill of the British Museum, the Cambridge Archaeological Unit (CAU) agreed to progress the publication of the prehistoric and Roman aspects of the settlement sequence, for which initial funding was granted by English Heritage via the Aggregates Levy Sustainability Fund (ALSF).

1.1.2 Background and Broader Context

Despite it now being 30 years since the final excavations at Mucking, understanding the site sequence and significance of the various settlements on the site remains vitally important for a range of research questions. The site location is recognised as being an extremely strategic one, overlooking as it does the Thames Estuary, and the probably crossing point of the Thames. This was presumably the reason for the siting of the Late Bronze Age South Rings monument on the hilltop. This remains a key, but still poorly understood, exemplar of this monument type, and its full publication is still keenly awaited, particularly given its strong association with salt-making activity. Subsequent settlement on the hilltop comprised an extensive Iron Age settlement, consisting predominantly of roundhouses (represented both by post-hole structures and by penannular gullies), but also including an series of four- and six-post structures of varying sizes. Current phasing suggests that these structures date from the LBA onwards, with some even being of Romano-British date. Understanding and analysing these two structural sequences and their relationship with contemporary enclosure systems will provide a significant contribution to understandings of Iron Age settlement in south-east England. Also key for historical understandings will be an examination of the LIA to Early Roman transition at Mucking; the settlement intensity of both periods is high, and both are represented by burials and cemeteries. The potential role of the Roman army at Mucking (particularly in relation to the very early development of a major pottery industry, and the laying out of formalised settlement enclosures) will add to the debate about the nature and pace of Romanisation in Britain. While the Mucking Anglo-Saxon settlements and cemeteries do not form a part of this project, understanding the scale and nature of later Roman activity at Mucking can add to debates about the extent of Roman-Saxon continuity in the area. Perhaps what is most unusual about Mucking is its intensity of settlement activity over 2000 years; the site is virtually unparalleled in this respect.

1.1.3 Post-Excavation Work

MPX-era

MPX (Mucking Post-Excavation) commenced immediately after the formal close of excavations in 1977, under the direction of the site director, Margaret Jones. This focused on the enumeration and detailing of various feature series (building on those already started during excavation), such as graves (GR/CREM), barrows, kilns, wells, corndriers, roundhouses/penannular gullies (RH/PG) and post-hole or ground-level buildings (PHB/GLB) (Clark 1993, 12). Folders were compiled for these, and for other features such as various classes of pit, which included typed-up notebook entries (the site was recorded through notebooks compiled by site supervisors, rather than through single-context recording) and, often, inked-up plans and sections (see section 2.1.1 below for further details). Many artefact line-drawings were also made, and a programme of conservation instigated through the Ancient Monuments Laboratory (AML), which also provided radiocarbon dates and some environmental reporting.

Much effort was invested in artefact cataloguing, and computerisation of the resultant datasets (see Section 2.1.1 below for details of the computerisation of individual artefact and feature types). While Clark (1993, 13) suggested that the majority of this data was irretrievable (as indeed it was at that time), this was found not to be the case in 2008, given the existence of specialist data retrieval companies. All MPX-era computer files have now been retrieved and converted into Excel spreadsheets, and comprise the detailed finds catalogues that had been completed by 1984, the index to plans and sections, summary notebook data and descriptive data on key feature series such as graves and roundhouses. Despite the impression of high error rates and over-elaboration of data given by Clark (1993, 13), this data has been found to be of consistently high quality: rigorously coded (with a full index to codes provided through the detailed Question Source Files) and coherently structured. Most importantly, each catalogue entry was linked to its geographical origin through northing, easting and level, as well as through feature information.

Growing dissatisfaction with the progress of MPX led to repeated attempts to withdraw funding; while the Jones' tried to maintain a degree of work on the archive after official funding ended in 1983, by 1985 any support had ceased and MPX ended. Government funding for the thirteen years of excavations and for the years of MPX had together totalled £254,000 (Clark 1993, 13).

Towards the end of MPX (and in anticipation of the removal of the site archive to the British Museum), various elements of the site archive were microfiched, with an associated digital index (these are detailed in Section 2.1.1 below).

BM/EH-era

In 1985 responsibility for the Mucking archive was removed from MPX, and what is now English Heritage provided a grant to the British Museum to employ a project team with 'the task of preparing the ordered archive in the British Museum and devising and implementing a publication research design' (Clark 1993, 14). The ordered archive was necessary for the British Museum to complete registration, and English Heritage needed to discharge their responsibility for publication of the site (*ibid.*).

The inability of the BM/EH team to access the computerised MPX artefact and site data led to near-insurmountable difficulties. As Clark (1993, 14-15) states, “at the start of the project it was recognised that there was an urgent need to cross-reference plans and notebooks, and then to ascribe the new context numbers to the finds. The first two stages are complete, but it is estimated that only a third of the 1.7 million finds have been put into context...The ‘contexting’ of the site proved a much more time-consuming task than anticipated”. Aside from the publication of the Site Atlas, the main achievement, in terms of the prehistoric and Roman-period archaeology, of the BM/EH project was the work by Steve Trow and John Etté on elements of the prehistoric pottery (see Section 2.1.4 below; their datasets have been used by Matthew Brudenell in his analysis of the LBA and MIA pottery from the excavations).

Despite funding for this stage of over £330,000, the site’s finds remain unregistered by the British Museum (in the absence of usable catalogues), and the only elements of the site to have reached publication are the Anglo-Saxon settlement (Hamerow 1993) and the Site Atlas with period and generic specialist summaries (Clark 1993). The Anglo-Saxon cemeteries are nearing publication, but the prehistoric and Roman-period remains are still unpublished.

1.1.4 Initial Objectives of the CAU ALSF-funded Project

The initial objectives of this most recent programme of work were to (a) consolidate the existing data and post-excavation research from the excavations of the prehistoric and Roman phases at Mucking, and (b) to conduct a limited amount of further archival work on the prehistoric pottery assemblages. The first element to this involved the digitization of the (1993) Site Atlas plans and the compilation of full gazetteers of key feature series (such as the roundhouses, the kilns and the burials *etc.*). It was intended that initial phased site plans, feature gazetteers, prehistoric pottery reports and assessment of the archive would be made available via the ADS website at this stage, and these are presented here. The completion of this stage of the project, together with the British Museum-funded rescue of the MPX data, thereby brings the available information up to a standard such that it will now be possible to fully analyse, publish and make available the results of this great, ‘landscape-scale’ site. Specific research objectives to be covered by the publication are detailed in Section 3. It should be noted that a draft Romano-British Cemeteries text has been produced (Lucy *et al.* forthcoming), and this assessment therefore focuses on the prehistoric burials and settlements, and on the Romano-British settlement.

2. ASSESSMENT

This section summarises the results of the assessment stage of the project and outlines the potential of various aspects of the archive and material assemblage to contribute to further study. Aims and objectives of the proposed further research and publication are dealt with in Section 3.

2.1 Material of critical importance for interpretation of the site

2.1.1 The Archive

Site Records – 1965-1977

Site preparation, logistics and correspondence

Approximately four large four-draw filing cabinets relate to the fieldwork preparation, planning and logistics. Copies of correspondence, invoices, receipts and volunteer application forms and excavators' instructions are present. One cabinet contains the completed forms from volunteers who excavated at Mucking for the duration of fieldwork. The potential of this archive is limited to historiographic analysis. Included in this material are instructions to site staff, methods of excavating and recording features, site summaries and correspondence to and from specialists.

Site survey

The site was initially surveyed by the OS during a revision of the area. Using an electricity pylon located in the southern end of the site, the base of the pylon was used as a fixed-point from which the site grid was derived. The site grid consisted of 100x100 foot squares. Northings (N) and eastings (E) were employed to provide co-ordinates to locate and plan archaeological features and drag-lines. Features located to the west and south of the point of origin were assigned a negative value, although west (W) and south (S) were also used. While unique feature or context records were not used, some feature types were assigned to a numerical feature series in the field (*e.g.* GR/CREM; GH etc.). Some ditch labelling was also used (RBI, RBII, DDI, for example). Other discrete features and ditch slots were identified by their central co-ordinate (for example, Pit 212Nx323E). Topographical survey of the site was conducted by 42 Squadron, Royal Engineers. A partial geophysical survey of the southern-central site was also conducted to test resistivity readings.

Field and site notebooks

A total of 363 field notebooks and associated finds, comparanda and drawing registers are extant. The notebooks record each year's excavation, detailing features, finds and relationships between cuts. Each entry or feature is accompanied by co-ordinates. Many entries contain sketch plans and section drawings and brief illustrations of finds. The field notebooks thus provide comprehensive original field records and sketches. Completed by site supervisors (initially tasked with supervising a 100x100 square) and excavators, site notebooks in addition provide a site diary and coincidentally record where specific individuals were working. This information can be related to the staff lists and volunteer records.

Small finds catalogues

Small finds were initially recorded in field notebooks and site registers, each detailing the co-ordinate, feature type and category of find. Additional notebooks record specific categories of finds, for example metalwork, Romano-British pottery, and fired clay. The sequence is not complete as these were completed piecemeal as time permitted and between excavation seasons. Systematic cataloguing of many of the finds was undertaken during the MPX phase of the project.

Site drawings

Site drawings consist of base plans and feature plan and section drawings. Base plans were drawn up for each of the site's 100ft squares (241 in total); these were at 1:60, and were used as the basis for the published Site Atlas. Significant features were planned prior to excavation and as each spit (between 3 and 12 inches) was removed. Each feature thus potentially has several plans. Sections were recorded for each slot and half-feature. Nearly all feature plans and sections were drawn at 1:12 (a few were at 1:6, 1:24 and 1:60); the number of sheets exceeds 4000, and there are 16,225 indexed drawings. Each plan or section provides a co-ordinate number, notebook cross-references and fill descriptions, and a full digital index to plans and sections exists.

Burials and cremations

Burials and cremations were recorded *in situ* using a combination of notebook entries, photographs and specific plan and section drawing sheets (at a scale of 1:12). Each grave or cremation was assigned a unique number in addition to a central co-ordinate with a separate card index completed; a series of human bone recording sheets relate to both inhumations and cremations. Notebook entries and plan and section drawings were copied onto record sheets to create a permanent record and index. Inhumation and cremation data was also computer catalogued during the MPX phase.

Photographic record

On-site photographs were taken of inhumations/cremations and significant finds, features and structures. The record includes a comprehensive collection of site photographs and aerial images (prints of varying sizes) of the extent of quarrying, cropmarks and excavated features and also of cropmarks in the wider Mucking environs. Unfortunately, no photographic catalogue was compiled on site or during post-excavation and not all images are labelled; however, several boxes are clearly marked, for example 'South Rings', 'Corndrier III', 'all PH buildings' and principal enclosures. Slides of sections, plans, maps and plots also form part of the photographic record in addition to photographs of named individuals. Media used include black and white contact prints (in seventeen folders), original 120 negatives (c. 516) and 4388 35mm colour and black and white slides (plastic and cardboard mounts).

Environmental samples

Original sample records have not been located, although in view of the extent and extant nature of the archive, these may be stored within the various folders held in the BM store-room. Nonetheless, the computerised record provides basic summary data on the location and feature type for 1641 soil samples and demonstrates that these are cross-referenced with the appropriate notebook entry and feature and location information in the majority of cases.

MPX post-excavation archive – 1977-1985

General archive

The MPX archive, excluding the material referred to above, was generated between fieldwork seasons and after excavation ceased in 1977. Largely conducted at Thurrock Museum, this involved the cataloguing of small finds, phasing of features (limited), specialist analysis and preparation of illustrations for publication by the Drawing Office, Department of the Environment. A full list of this archival material was provided in the original proposed project design (Evans 2007) and is currently stored in the BM Blythe House facility. Over 250 folders, box-files and wallets from the MPX phase and later BM/EH publication phase are stored within 21 cupboards and cabinets, in addition to an unquantified amount of correspondence, receipts and miscellaneous documents relating to the archive. The stored material also includes the original site plans, feature drawings and sections, pottery and small finds illustrations (these indexed in Notebooks 297B and 297F), inked illustrations, structure plans and draft atlas drawings (Clark 1993). Excluded from the CAU assessment of the archive is a large body of material relating to the Anglo-Saxon settlement (Hamerow 1993) and cemeteries (Hirst and Clark forthcoming).

Computer discs and printouts

To aid the post-excavation process a microcomputer was acquired (see Clark 1993, 12 for details) and data-input files written to catalogue small finds and to produce rudimentary, but effective, site distribution analyses and plots of some finds (there are

extant dot-matrix printouts of fired clay, flint, CBM, and environmental data). Small finds and feature categories (graves, structures, drawing numbers *etc.*) were entered onto separate databases with a unique serial number allocated for each entry within an individual dataset. All data entries contain information on co-ordinates, level and notebook references. Not all catalogues were started or completed (for example the lead artefacts and a proportion of the Roman-British pottery). Data was stored on 8" floppy disks. An unquantified number of printouts of the computer records forms a substantial part of the MPX archive. Sixty-eight disks have been converted into Excel format during the CAU project phase; the remaining disks are copies or operating system disks, with only one disk unreadable – Margaret Jones' bibliography A-D.

Specialist reports

A number of specialist reports were compiled during the MPX phase (using a combination of computer-generated printouts and plots and field notes) for the following categories:

Prehistoric pottery – Neolithic, Beaker, Middle Bronze Age
Petrological analysis – LBA/Early Iron pottery, RB pottery from kilns at Mucking
Molluscan analysis of local clay
South Rings quern report
Copper alloy Bronze Age ingot metallurgical analysis
Metalworking and casting debris (including tuyères, crucibles and moulds, for which the report was completed in 1999)
Romano-British pipe-clay figurine report
Amphorae report
Samian report (including stamps)
Graffiti on the Romano-British pottery
Corn-dryer phasing and carbonised grain reports
Interim copper alloy metalwork summary
Textile analysis – Roman
Environmental analysis – one pollen sample was reported

It should be noted that several copies of each report exist in varying states of editing or redrafting and are consequently 'unfinished'; however, a large proportion of the above require little editing to bring them to publication.

Radiocarbon dating

Original radiocarbon requests and results are included in the MPX archive, subsequently calibrated and published in the Site Atlas (Clark 1993, 35).

Drawings

A large number of finds drawings and site plans and sections were traced and inked in preparation for publication or further post-excavation analysis. Period/phase folders of finds and structures were produced, for example, of post-built structures, roundhouses, wells and kilns. Burial and cremation illustrations were redrawn with scaled images of accompanying grave goods. The Anglo-Saxon settlement features and site plans have been published separately.

X-rays

Small finds X-rays are cross-referenced in digital catalogues. Over 400 X-ray plates are in the archive, but a full index has not yet been located.

Microfiche

All the original notebooks, finds catalogues, a large number of the finds drawings, site area plans and original feature plans and sections were photographed and copied to microfiche; there exist 2755 fiche with c. 48,000 individual pages or drawings.

BM/ EH Phase – 1986-1989

General archive

Complementing the MPX archive is the material generated during the BM/EH project. Contact with original BM/EH team members by the CAU resulted in the acquisition of five lever-arch folders, divided into specific phases (prehistoric to Anglo-Saxon) and publication proposals/project management. Each period folder contains original MPX data/material. Eleven additional folders (lever-arch and paper) were supplied, primarily relating to the Later Bronze Age pottery (including data-sheets and pottery recording proformas), but also including details and MPX archival material relating to the prehistory of the site; two folders summarise the phasing of the majority of the notebook entries. In addition, Chris Going has supplied two folders containing a draft manuscript relating to the Romano-British settlement and cemeteries. Details of these folders have been provided in the original CAU project proposal (Evans 2007).

Site Atlas

Draft atlas plans, copies, documents and folders relating to the proposed excavation publication form part of the general archive.

Context sheets

One cupboard and a four-tier bookshelf contain folders of context sheets. These sheets provide a paper record of context numbers allocated during this phase to excavated slots and features and corresponding fills. Each sheet also records relevant co-ordinate and notebook cross-references and some information about artefacts from each context; however, this information is generally of a low level (e.g. '1 bag pottery').

Specialist reports

Specialist reports used during this phase reproduce/copy those of the MPX phase and are complemented by further reports on outstanding areas, for example patterned daub.

Computer tapes

Three TORCH tapes of data were retrieved from the BM Computer Department. Digital catalogues of context details and information have been retrieved from these tapes. The catalogues provide a useful cross-referencing tool enabling Site Atlas context numbers to be related to specific notebook entries, drawing plans and sections. Additional raw data was also retrieved, but limited to flint, ceramic building materials, numbered kiln/oven co-ordinates and fired clay; however, recovery of the original MPX digital data has rendered these later data source files redundant. The only original computer data recovered from these tapes, aside from that relating to the contexting, were the LBA and MIA databases (see Section 2.1.4 below).

2.1.2 Phasing, Stratigraphy and Feature Series (Prehistoric and Roman)

Assessment

Within the archive, a series of large-sheet 'dye-lines', containing the Jones' draft phasing were located. These broke the site down into 'Bronze Age', 'Iron Age', 'Roman', 'Anglo-Saxon', 'Post-Saxon' and 'Uncertain'. These phase plans were added

to the digitised Site Atlas plans, within a CAD file, to create a ‘snapshot’ of Mucking as understood by the Jones. The result of this work is presented here as an overall site plan, along with breakdowns by phase. Little further work has been conducted on site stratigraphy, as the Site Atlas plans capture that information graphically. Also within the site archive were some feature series folders, providing more or less detailed information on key series.

The Jones had thus phased all of the site’s major features and, matters of detail aside, clearly had a well-developed sense of its sequence. The main components remaining as ‘uncertain’ were the discrete features (*i.e.* postholes and pits) and, indeed, many of these remain unattributed, in the absence of any finds or stratigraphic relationships. This has implications for any phase characterised by unenclosed settlement, particularly the Late Bronze Age and Early Iron Age. The area of the site where this may be most relevant is the northern quarter, where there is a mass of such features and where preliminary artefact distributional analyses indicate a definite Late Bronze Age ‘presence’.

Potential

Further refinement of the phasing is now possible, as the full finds catalogues have been retrieved (see Sections 2.1.4-16 for full details). Main sources for this full phasing have, for prehistory, been the various pottery datasets (see Section 2.1.4). These have enabled phasing of the site into Neolithic, EBA, MBA, LBA-EIA, MIA and LIA (although the lack of analysis of this latest prehistoric pottery means this is the least well-defined phase). Using the Romano-British pottery type-series, which has been refined and updated by Rosemary Jefferies (who worked on the pottery both for MPX and for BM/EH in the 1980s), it has recently been possible to compile a more detailed draft phasing of the Roman-period settlement itself (until now this has been phased just as ‘Roman’, with no further elaboration). Thus, as well as being able to identify discrete features as Roman, it has also been possible to assign them to a phase within the Roman period. As well as the stratigraphic evidence that is currently documented, the chronological development of the enclosure systems has been tied down using this pottery data. Key to this is that artefactual material was recorded using the Jones’ layering system: it is therefore possible to see what pottery (and other material) was found in the lowest fills of ditches; it is this which helps to assign them to phase (as it is the time at which they were dug which is of most relevance here). It has also been possible to assess for how long they remained as open features.

The Society of Antiquaries of London has funded work on the other intrinsically-dateable small finds material from the prehistoric and Roman period: this includes the coins and other metalwork, including the brooches. This data has been used alongside the pottery in the site phasing. Once the full phasing of the site is finalised in digital format, the full analytical potential of the site can be explored. One point to note here is the (now) unusual density at which features were excavated. Between 75% and 100% of every feature was excavated, and all the finds recorded (against a modern – perhaps inadequate – sample of 10% for ditches and 50% for most discrete features). Essentially, this is a site recorded in three dimensions through its finds, and its like will not be seen again; it has enormous potential for exploring different sampling strategies.

Full gazetteers have now been compiled for the following feature series, and are presented here: the Bronze Age field system, the EBA barrows and other prehistoric burials, LBA roundhouses, the South Rings, MIA roundhouses, IA four- and six-post structures, IA and Roman cemetery groups (the latter now in draft publication text), Roman structures, wells and kilns, the Roman enclosure system and pits of prehistoric and Roman date. These are in Word or Excel format as appropriate. Some work is still

needed on the gazetteers related to the settlement to bring them to publishable standard (principally the integration of the finds data and scanning of plans and sections from the archive, many of which already exist in inked-up format), but otherwise analysis and comparative research is all that is needed to bring them to publishable standard.

2.1.3 *The Artefactual Assemblage (Prehistoric and Roman)*

A huge finds assemblage was collected from the site, due in part to the aim of total excavation of all features, but also to the sheer density of settlement activity from the Bronze Age onwards. The quantity of all finds types are listed below (these are minimum numbers, drawn from the computerised catalogues, plus other reporting).

| Material | Number |
|---------------------|---------|
| Pottery (MPX) | 166,000 |
| Pottery (BM/EH) | 30,538 |
| Animal Bone* | 6,999 |
| Slag* | 2003 |
| Fired Clay* | 73,000 |
| Unfired Clay* | 375 |
| Quern/Worked Stone* | 1900 |
| CBM | 7063 |
| Metal* | 3,753 |
| Worked Flint | 26,737 |
| Charcoal* | 8,015 |
| Glass* | 512 |

Table 2.1: Finds totals (*indicates some Anglo-Saxon material included in the total)

Summary Assessment and Potential

The artefact assemblage as a whole is relatively well preserved (with the exception of animal and human bone), well stratified and well recorded, although there is some variation in this (often depending on circumstances of excavation: some areas of the site had to be more hurriedly excavated than others).

The individual material types are listed below along with their condition and state of assessment. This is followed by a consideration of the potential for the material (either individually or in category group) to inform the detailed analysis. Aims and objectives arising from this are outlined in Section 3.

2.1.4 *Pottery*

Prehistoric Pottery: Assessment

Prehistoric pottery from Mucking encompasses a wide date range, from Neolithic through to later Iron Age. Its study has involved work on various different subsets, by different specialists. From the MPX archive has been retrieved the following:

- A data file recording in detail 24,947 sherds (EVE 234.28) of Neolithic to LMIA pottery from pits, postholes and other discrete features, giving details of location, feature type and number and notebook reference.
- A data file recording in detail 7493 sherds (EVE 103.72) of LBA to LMIA pottery from penannular gullies and roundhouses, giving details of location, feature type and number and notebook reference.
- A catalogue and discussion by Ian Longworth of nine Earlier Neolithic vessels, with some locational information.
- A catalogue and discussion by Mark Birley of 291 sherds of Grooved Ware pottery with some locational information.
- A catalogue and discussion by Alex Gibson of c.77 Beaker sherds with some locational information.
- A catalogue and discussion by Nigel Brown of 511 sherds of Middle Bronze Age pottery, with some locational information.

From the BM/EH archive has been retrieved the following:

- A data file (compiled by John Etté) recording in detail 11,099 sherds of LBA pottery (140,259g, EVE 67.12) from selected slots through the South Rings, features internal to the rings, and a range of other pits, post-holes and post-built roundhouses located in the north of the site. The data is recorded by context, with partial locational information, but no notebook references.
- A datafile (compiled by Steve Trow and Sarah Wilde) recording in detail 18,928 sherds (159,460g, 65.95 EVE) recovered from a number of features across the site, with particular emphasis on the MIA North Enclosure, but also including a selection of other contemporary features. The data is recorded by context, with partial locational information, but no notebook references.

It is thus apparent that the detailed pottery quantifications from the MPX and BM/EH phases are largely complementary, recording different bodies of data, with the exception of some roundhouses and a small number of pits, whose pottery was recorded in both phases. It should be noted, however, that there remains a substantial amount of prehistoric pottery that does not appear to have been computer-catalogued, much of which comes from discrete features such as further pits and postholes, particularly from the northern end of the site. There is an MPX data file that gives the northing, easting and level from which this unquantified pottery originated, and it seems that much may be MIA or later flint-gritted pottery. This may explain why the only well-recorded Later Iron Age pottery from Mucking is the decorated La Tene assemblage recorded by Sheila Elsdon and commented on by Matthew Brudenell (see below).

Prehistoric Pottery: Potential

Neolithic and earlier Bronze Age

Studied by Mark Birley and Alex Gibson, Mucking's Neolithic and Beaker pottery has already been reported upon and requires no further work. Aside from incidental quantities of Early Neolithic plain bowl and Mildenhall ware (six sherds) and three sherds from Mortlake/Peterborough vessels, it includes some 288 Grooved Ware and 77 Beaker sherds (plus a complete Beaker from Grave 137). Equally, Nigel Brown has reported upon in excess of 500 sherds of Middle Bronze Age pottery and, accordingly, these also require no further work.

Later Bronze and Iron Age
Matthew Brudenell

The exact quantity of Late Bronze Age pottery recovered from the excavations remains unknown, but that from the South Rings alone must far exceed 140kg. To date this is the second largest quantified assemblage of Late Bronze Age pottery from Essex, the only county in East Anglia to produced an abundance of Late Bronze Age ceramics, and more importantly, clearly stratified sequences of ceramics deposited in deep ditch contexts. The accompanying report concerns material quantified during the EH/BM phase of post-excavation. The methodology for sampling and recording the pottery was designed by John Etté, who implemented much of the initial data analysis. The fact that the results of this process can be presented here, over fifteen years after EH/BM phase of post-excavation ceased, is credit to the exceptional data set produced; a resource of relevance to prehistoric pottery specialists across southern Britain. The completed report characterises the assemblage, analyses differences between the various sub-assemblages from different parts of the site, before discussing them, particularly the South Rings assemblage, in relation to other major ring-work sites and contemporary enclosures.

The MIA pottery from Mucking is one of the largest quantified Middle Iron Age pottery groups from East Anglia, eclipsed only by those from Little Waltham and Haddenham V. The completed report concerns material quantified during the EH/BM phase of post-excavation. The recording methodology was designed by Steve Trow in 1987, though much of the quantification and initial analysis was conducted by Sarah Wilde. Data quantified and computerised during MPX (principally by Jonathan Catton) has not been considered, only because it was not retrieved until after the main body of this text was completed. This earlier recording system was different to that employed during the EH/BM phase of post-excavation. However, in the future, elements of the two datasets could be made compatible, providing a more complete sample of the pottery. The value of the MPX archive should not, therefore, be overlooked, especially as it details feature-based assemblages not considered in this report. The quantified assemblage derives from a restricted range of features, including the North Enclosure, a series of 21 roundhouses, fourteen pits and a single four-post structure. These features were selected because a) they contained large pottery assemblages which could yield reliable statistical results; b) they were comparatively well excavated and recorded, especially with regards to the stratigraphic position of finds and lack of 'contamination' from later material; c) they were distributed across the site; and d) they included different feature 'types', *i.e.* pits, post-holes, eaves-gullies and ditches. After characterising the pottery assemblage, stratified pottery groups from the North Enclosure are analysed in detail, allowing a chronological refinement to be applied to the other assemblages from the site. In addition, the La Tene wares (catalogued by Sheila Elsdon during MPX) are also reported on. Further work on the later Iron Age wares from the site would involve initial analysis of the material itself.

Romano-British Pottery: Assessment

A large quantity of Romano-British pottery was recovered from the excavations at Mucking. A significant proportion has been fully quantified: *c.* 145,000 sherds from the settlement were quantified in detail during MPX (the pottery grave-goods from the Romano-British graves were not included in this dataset, but have now been reported on in full in the draft Cemeteries volume text). This total includes 2691 sherds (EVE 58.87) of *terra sigillata* (reported on during MPX by Joanna Bird and Brenda Dickinson, with reports updated in 2008), 443 sherds of mortaria (with the original work by Kay Hartley currently being revised) and 1129 amphorae sherds (David Williams having updated his original report in 2008). The main dataset (with full records as to location, origin and

notebook reference) classified material by fabric and form, with full measurements (but no weight recorded) and details of decoration and condition (EVE 1774.01). Much of this material was from ditches and other large features such as wells and kilns, plus a range of pits and postholes.

There remain in the British Museum a further 300 storage boxes of unquantified Romano-British pottery, mainly from surface clearing and from smaller discrete features such as pits and postholes. Completeness of the archive would demand at least summary cataloguing of this material, but there is some dating evidence available, derived from work conducted by Chris Going in the 1980s. He systematically went through the evidence for discrete features in the notebooks, and has handed to the CAU ring binders with what is essentially a spot-dating for these features (which number in the thousands), based on information noted during excavation. Each entry in the ring-binder comprises northing, easting, notebook number and page, feature type, context number where assigned and summary finds evidence. While obviously not a perfect record, this does provide positive dating evidence for those features not included in the full MPX quantification. Going noted the presence of 'G5' pottery (dated to the mid 1st century AD), 'ER' (earlier Roman: later 1st and 2nd century AD) and 'LR' (3rd and 4th century AD). This evidence has been drawn on in the site phasing. Crucially, where pottery from discrete features has been fully quantified, its date coincides with that provided by Going, suggesting its general reliability.

Romano-British Pottery: Potential
Rosemary Jefferies

The quantified Romano-British pottery from Mucking represents a significant proportion of the total from the settlement, and it has been decided to accept this as a meaningful sample for analysis, coming as it does from across the geographical extent of the settlement, and from a range of different features, including kilns, wells, ditch sequences, penannular gullies, fence-lines, structures and a range of other discrete features such as pits, hollows and ovens. The 1st and 2nd centuries at Mucking saw the existence of an important pottery industry, represented on the site by seventeen mid to later 1st-century 'proto-kilns' producing a range of pottery that was termed 'Belgic' during MPX, but should really be considered Romano-British. This industry saw continuation in the form of seven 2nd-century kilns producing a range of grey wares.

Initial work on the Romano-British pottery assemblage has involved the reconstruction of the MPX type series: the vessel forms were coded alphanumerically (such that a form could be AB07 or FA01, for example). A4 ring binders in the archive contained drawings and codings for most of the forms, but this type series was by no means perfect, with several codings that were present in the dataset not represented in the folders and *vice versa*. In addition, the type series contained unnecessary over-elaboration (with what would normally be considered a single form represented by several closely-related codes). Following on from the full reporting and analysis of the cemetery vessels, therefore, work has focused on creating a usable type series, linked to kiln products and pottery from external sources. In particular, a concordance will be created between the Mucking type series and other key classifications in Essex and the Thames Estuary. The main types have now been dated, and this information used in the site phasing (see above).

The next stage is detailed reporting on the kilns and their products. A draft kilns text dating from the mid 1980s reported on the physical structures, and much analysis of the products had been carried out; this is now being compiled into a formal report. Once complete, further analytical work on the assemblage as a whole can be conducted. The

pottery assemblage (in conjunction with other finds data) can give a good indication as to the duration of settlement intensity (current indications are of a dramatic decline in pottery use (and therefore presumably in settlement activity) from AD250 or even before. Geographical distributions of the various phases of pottery can indicate how settlement foci changed through time, while differential distributions of vessel types may indicate functional differences for the various contemporary enclosures and sub-enclosures and the penumbra of structures. Changing patterns of ceramic supply both to and from Mucking can further advance understandings of early Roman pottery industries in the South-East, and potentially also the circulation of various foodstuffs.

2.1.5 Ceramic Building Materials

Assessment

MPX fully recorded all the CBM from the site, including substantial amounts of modern brick. Of the 7063 records in the dataset, 3783 are definitely assigned a Roman date (comprising 125 entries for brick, 351 for imbrices, 598 for tegulae, 178 for tubulae, two for voussiors and 2529 of uncertain form), with a further 848 of uncertain date, some of which may be Roman. The Roman material is recorded to fabric, dimensions, weight and surface treatment. In common with all material in these datasets, each item is recorded to northing, easting, level and feature type and number, as well as notebook page and reference.

Potential

This full quantification means that the CBM data can be fully integrated into the site interpretation. The key to this will be an assessment of from where the material derives on the site: is it evidence for substantial buildings, and, if so, where were these located? (It should be noted that the presence of CBM was one of the reasons behind Margaret Jones' interpretation of the Roman settlement at Mucking as part of a villa infield system.) Alternatively, did some of this material originate from one or more of the 'corndriers' on the site? After spot-checking of the identifications, patterns of deposition can be analysed.

2.1.6 Metalwork

Assessment

Prehistoric and Romano-British metalwork from Mucking consists of iron, copper alloy and lead artefacts, a silver finger-ring (already reported on by Martin Henig), and a coin series.

The iron assemblage was catalogued by Quita Mould during MPX, and comprises 3325 items from a variety of contexts (this number excludes the iron from *Grubenhäuser*, which was reported on in Hamerow 1993). While a small amount may be of Anglo-Saxon date, the bulk will be either Iron Age or Romano-British. Following the retrieval of the MPX dataset, Quita Mould has in 2008 classified the artefacts by function and is currently compiling a publication catalogue (with feedback as to probable dating by context from the CAU project team). The data therefore has full locational information, notebook references, measurements and descriptions, as well as a series of working drawings that were microfiched at the end of MPX. The data includes AML reference

numbers, and is cross-referenced to the X-ray numbers (all of which were present in the archive).

The copper alloy artefacts were poorly reported on during MPX. During 2007/2008, the 78 brooches (incorporating a number of iron examples) have been catalogued and commented on by Colin Haselgrove, and the other 273 LIA/RB copper alloy artefacts by Grahame Appleby. A further thirteen artefacts of Bronze Age date have been catalogued and reported on by Ben Roberts. Through a combination of information from the notebook catalogues and that written on the finds bags themselves, locational information and notebook references have been reconstructed for all these finds.

Similarly, the lead items were not systematically catalogued during MPX, and await specialist reporting (for which funding has been applied for). It will be possible to reconstruct their location and referencing in the same way during this process.

Potential

Once cataloguing and reporting of the prehistoric and Romano-British metalwork assemblage is complete, the data can be investigated more fully, looking at functional and chronological distributions and associations with specific features. There is potential to identify a wide range of activities, including craft and industrial activity, and determine whether this is spatially zoned in the different periods represented. Large collections of finds are important because they allow overall assemblage analysis of the finds using all material types (applying techniques that are, for example, used for pottery or animal bone analysis) rather than having to concentrate on objects of intrinsic interest. Broad changes or similarities across the site can initially be sought using these techniques, including any that may show changes through time, before more detailed analysis is undertaken. Information from individual objects can then be integrated with this more broad-brush approach, where they indicate specific activities or events.

2.1.7 *Slag and other metalworking waste*

Assessment

The excavations at Mucking produced 365kg of metalworking slags and residues (summarily reported on by McDonnell in the Site Atlas in 1993 and in more detail in AML Report 4/93), as well as a small collection of crucibles, moulds and tuyeres, dating mainly to the LBA and Iron Age (reported on by Dungworth and Bailey in 1999). These AML reports appear to have involved reassessment of the material. A series of MPX datasets also catalogue this material, giving more detail than is provided in the formal reports as to its origin.

Potential

The published reports can be used to isolate potential areas of prehistoric and Romano-British metalworking activity; further information can then be derived from the MPX data if necessary, once its veracity has been checked. This can then feed into the site interpretation of craft and industrial activity.

2.1.8 *Preserved Organic Material*

Assessment

A total of 88 iron artefacts or artefact groups produced evidence for mineral-preserved organic material (this is in addition to much preserved wood associated with coffin nails, dealt with in full in the cemeteries volume). These are described within the iron catalogue, but mainly comprise preserved wood on nails, leather on hobnails *etc.* Otherwise, the main form of preserved organic material from the site comprises well timbers preserved in damp conditions. Within the MPX well folders some sketch drawings and recording are preserved, which can be drawn on in analysis and reconstruction of the wells. The timbers themselves remain in the BM archive; these have not been unwrapped to assess their condition as yet.

Potential

In general, the mineral-preserved organics associated with iron artefacts serve to add to the interpretation of the individual artefacts, and will therefore be dealt with in the iron report itself. The well timbers offer more analytical potential (assuming their adequate preservation). While extant records will be mainly relied on for the well reconstructions, an assessment of the wood itself will be made.

2.1.9 Preserved Textile Remains

Assessment

Aside from textile impressions on one Romano-British grave-good (reported on in the cemeteries volume), a handful of sherds of Romano-British pottery were observed to have textile impressions preserved. These were catalogued and reported on by the late Elizabeth Crowfoot.

Potential

No further work is needed on these textile remains, but these reports may add some detail to the site interpretation, and can be reproduced and used in the publication.

2.1.10 Human Remains

Assessment

While the Romano-British cemeteries and smaller grave-groups have had a draft volume produced, a number of other burials still require publication. These comprise two beaker burials, cremations associated with the Bronze Age barrows and a number of Iron Age cremations and inhumations. In common with the later burials, generally good post-excavation records exist (and gazetteers of the burials have been completed by the CAU). Human bone recording sheets have now been located for most of the prehistoric burials, and information from these can be incorporated (although there are some reservations about the ageing and sexing methodologies employed at the time, particularly with regard to their use on cremated bone).

Potential

Enough data exists to incorporate the prehistoric burial records into the publication without further research on the material itself, with the possible exception of any grave-goods that might require further reporting.

2.1.11 Faunal Remains

Assessment

Of the faunal remains recorded in MPX datasets, 3506 records relate to material recovered from *Grubenhäuser* (reported on by Done in 1993). A further 7750 records relate to other features, a small proportion of which may also be Anglo-Saxon, but the majority of which will be prehistoric and Romano-British. The bone preservation at Mucking was extremely poor, a result of the acidic soils, and the information that can be gleaned from such a fragmentary record is therefore small. Nevertheless, the MPX data does record to species and body part in many instances, with more detailed recording where preservation allowed it. Full locational and notebook data is included.

Potential

The MPX data will allow a summary statement of faunal provisioning to be compiled for the prehistoric and Roman periods, in much the same way as was done for the Anglo-Saxon remains in Hamerow (1993). The data will also allow spatial distributions to be examined (including evidence for butchery), adding to the site interpretation. Individual features can also be interrogated, thereby adding detail to depositional case studies of particular structures or features.

2.1.12 The Environmental evidence

Assessment

As detailed above, 1651 soil samples were taken during the excavations. Assessment of their preservation has recently been undertaken by a doctoral researcher (University of Leicester), and a report is due shortly.

Other forms of environmental evidence comprise the carbonised grain report from one of the corndriers (in fact a malting kiln); a report on the large quantity of bivalves and gastropods recovered from a single Romano-British pit; a solitary pollen analysis (further samples were not processed due to the poor preservation) and in excess of 8000 charcoal identifications from across the site (including Anglo-Saxon).

Potential

The forthcoming report will determine whether any further analysis of the soil samples is recommended. Even if it is not, and the samples have deteriorated, the accompanying dataset records the reason for the sample being taken, and useful information may thus be derived. The existing specialist reports can be drawn on in the analysis of particular features, while charcoal identifications may add to the interpretation of site provisioning. Although weights and amounts of charcoal were not consistently recorded, the species identifications, in conjunction with recorded feature locations, should enable some limited reconstruction of patterns of woodland exploitation.

2.1.13 Radiocarbon Dating

A total of fifteen radiocarbon dates were obtained during MPX (and reported on in Clark 1993, 35-6). All charcoal from the excavations has been retained and, should it be thought necessary, further dates could be sought. The charcoal database has been recovered (see above), and retains its full locational information. The original dates should also be recalibrated using the latest version of OxCal.

2.1.14 Fired/Burnt and Unfired Clay

Fired Clay: Assessment

The quantity of fired clay recovered during the excavation programme totalled over 73,000 pieces (c. 1643kg; including the Anglo-Saxon material) and constitutes a significant component of the artefactual material recovered from Mucking. Boxed and stored separately from other artefact categories from the outset, the fired clay was further sub-divided into different object categories, with the processing of the fired clay completed on a selective basis dependant upon artefact type and context. The fired clay was quantified and catalogued in a series of MPX data files. Furthermore, it was the subject of an extremely detailed report by Paul Barford (running to sixteen chapters), that dealt with all time periods.

Fired Clay: Potential

Using both Barford's original text, and checking against the MPX datasets, Grahame Appleby has summarised the fired clay reporting into a more useful format which can be reproduced in the publication. Distributional analyses of the various fired clay artefact types by period (*i.e.* loomweights, 'Belgic' bricks *etc.*), can be integrated into the chronological and functional analyses of the various settlements. Of particular significance is the Bronze Age salt-making assemblage associated with the South Rings.

Unfired Clay: Assessment

Samples of 'raw' or unfired clay were catalogued in the same MPX dataset as the soil samples from the site. A total of 385 samples of unfired clay were from features other than *Grubenhäuser*, the majority of which will therefore be of prehistoric or Romano-British date.

Unfired Clay: Potential

Unfired clay samples sometimes seem to represent 'sticky' fills, possibly of the natural brickearth found in parts of the site. Others represent the linings of the so-called 'clay pits', which seem to date to various periods of the site. It is possible that examination of these samples may shed further light on the function of such pits. While many of the unfired clay samples from *Grubenhäuser* represent unfired loomweights, this does not seem to be the case for other feature types.

2.1.15 Flint

Worked Flint: Assessment

In total, 26,737 pieces of worked flint were catalogued by Elizabeth Healey during MPX; this seems to represent the totality of the assemblage. The material was classified by flint type, presence of cortex, whether the flint was burnt, blank classification, tool

identification, cortication, removal and flaking techniques, with further data for cores. Only weight and measurements were not recorded (another more basic data file lists artefact length for each piece). As usual, locational, feature and notebook data was also recorded.

Worked Flint: Potential

The MPX dataset offers a valuable resource for analysis of the prehistoric occupation at Mucking. Dating from the Mesolithic to the Middle or Later Bronze Age, it can be treated both as an overall assemblage (in order to characterise the earlier prehistoric settlement activity over time), but also can be used to investigate the duration and nature of settlement in specific areas of the site through time. Thus far, relatively few pre-Middle Bronze Age discrete features have been identified, but analysis of the flint assemblages, in conjunction with the pottery datasets will surely locate more. However, the incredible potential of Mucking's worked flint relates to the size of its assemblage (for example, more than 35 arrowheads and 500 cores), which is the direct result of the quantity of residual material recovered from the intensive excavation of later features (*e.g.* Iron Age and Roman ditches). Treating this residual-status flint as if it derives from ('missing') ground surface-/buried soil-type horizons offers tremendous scope to investigate large-scale land-use dynamics and to distinguish changing activity and settlement foci over time.

2.1.16 Stone

Quernstone and Other Worked Stone: Assessment

A total of 1900 pieces of worked stone were catalogued during MPX. While most of these were identified as 'scrap', with tentative identifications, a total of 305 pieces were positively identified as quernstone fragments. All stone was classified by stone type and condition, artefact type and weight, with further information given as free comment. The querns were catalogued and described by David Buckley and Hilary Major, while the other stone was catalogued by MPX staff. Locational, feature and notebook references are associated.

Quernstone and Other Worked Stone: Potential

A range of stone types are represented in the catalogued material, suggesting a variety of sources for the material. Issues of supply to the site could be investigated for each period by examining local *versus* non-local resources. The quantity of quernstones present can also be analysed, and compared with contemporary sites, to investigate the nature of milling and grinding activity: for example, whether this was conducted at purely a domestic scale, or represented more centralised activity.

2.1.17 Other Materials

Glass: Assessment

No MPX dataset for glass was ever compiled; over 400 pieces were excavated. Instead, the late Donald Harden sorted through the glass, and compiled identifications for those classified as Romano-British (Anglo-Saxon glass is summarily reported in Hamerow 1993). A glass dataset has now been compiled, using information from the notebook catalogues (each glass sherd was numbered sequentially in the field) and from the finds

bags themselves. Final identification and reporting is due to be made by Jennifer Price (for which funding has been applied).

Glass: Potential

Once the glass has been satisfactorily catalogued, its distribution across the site and association with particular areas and features can be analysed. The presence of high status vessel glass will be particularly interesting in trying to determine any social differentiation within the Romano-British settlement. In addition, Harden identified several sherds as being Roman window glass. If these identifications are verified, their distribution may indicate the location of higher-status structures on the site.

Jet, Shale and Worked Bone/Antler Artefacts and Pipe-clay Figurines

A handful of other artefact types are represented in the small finds catalogues, some of which may date to the prehistoric or Romano-British periods. While the three pipe-clay figurines have already been reported on, funding has been applied for to report on the jet, shale and worked bone/antler artefacts, which in total number less than twenty. These additions to the knowledge of the material culture of the site can be integrated with other classes of material in site interpretation.

3. POST-ASSESSMENT RESEARCH DESIGN

Discovery of the MPX datasets and the realisation of the sheer quantity of material and site data recorded during MPX has led the CAU team to radically revise their opinion of the potential of the Mucking archive. With a few exceptions (notably the lack of knowledge of the LIA pottery sequence, due to its not having been catalogued during MPX to any great extent), the bulk of the finds assemblages have been quantified in enough detail to enable a range of research questions to be addressed. These are outlined below, at both general, and period-specific levels.

3.1 Aims and Objectives

General:

- (A1) To identify the character, status and longevity of the site
- (A2) To better understand the number, variety and function of structural types on the site. For each structural type the following will be considered:
- Architecture
 - Structural longevity
 - Form and function
 - Re-use and structural sequence
 - Abandonment and backfilling
 - Resources
 - To model any pattern in the distribution of different forms.
- (A3) To better understand the relationship between the various settlements and their inherited archaeological landscape.
- (a) To examine evidence for curation/use of older artefacts.
- (b) To better understand the location of each successive settlement in relation to its predecessor.

(A4) To identify the number, extent and nature of craft/industrial areas. In particular, to determine whether specifically prehistoric or Romano-British metal-working areas can be delineated and whether it is the case that there were particular zones for separate craft working or whether this was more loosely arranged.

(A5) To use faunal remains to reconstruct animal husbandry patterns. Although bone preservation is generally poor, the overall assemblage is adequately recorded. To use this body of evidence to increase understanding of agricultural systems, provisioning and diet, food preparation, disposal *etc.*

(A6) To better understand the settlement in its broader local context.

Period Specific:

Neolithic and Bronze Age

Christopher Evans

Analysis of Mucking's earlier prehistoric landscape will need to focus upon two main facets. Firstly, the relatively slight traces of Neolithic and earlier Bronze Age land-use activity need to be addressed. This will need to include what early pit groups have and can be identified (*e.g.* the Grooved Ware cluster) and will also require interrogation of the site's flint distributions (both material *in situ* and of residual status) in order to distinguish any lithic scatters. The latter will proceed based on the distribution and any clustering of obvious and/or period-specific tool types (*e.g.* arrowheads, cores and scrapers) and, by this means, trace the shifting foci of activity/settlement over time. As is the case with so much of Mucking's data, scale is the issue to highlight here, seeing the data as contributing to the study of large-scale landscape dynamics. However, given the lack of economic and environmental evidence (and the general paucity of pottery), it is not expected that the site will significantly contribute to issues concerning the character of 'non-robust' pre-Middle Bronze Age modes of settlement activity.

Secondly, the establishment and character of Mucking's Middle Bronze Age fieldsystem needs addressing, along with whether there is evidence of any potentially contemporary settlement. Equally important will be the fieldsystem's relationship with the round barrow cemetery and whether it remained in use long enough to make it at all contemporary with the South Rings.

Based on their intrinsic value, the site's eight round barrows certainly warrant detailed reportage; it should, however, be noted that only three have any radiocarbon attributions. (Radiocarbon dating should be undertaken of the group of twelve unaccompanied cremations sited nearby the fieldsystem in the area of 2362–2422N/722–763E.)

As a monument type, the Late Bronze Age South Rings requires full publication. Only having *c.* 200 identifiable animal bones, it is unlikely that it will greatly contribute to the understanding of the domestic economy of such enclosures. Otherwise, aside from its salt-making briquetage (*c.* 1500 pieces), associated metalwork (respectively now reported on by Barford, Appleby and Roberts) and metalworking debris, it is the enclosure's pottery that is its most important assemblage. Involving more than 140kg (*c.* 11,000 sherds), as discussed above, this material has now been fully analysed and

reported upon, and its distributions analysed. Not only does the latter provide major insights concerning the phasing and depositional dynamics of The Rings, but, together with its small finds, will allow for discussion of the status and function of the enclosure as a defended settlement.

The only other area of the site that requires further analysis as regards the distinction of later Bronze Age settlement is its northern quarter. In addition to briquetage, there are pottery distributions of this date throughout the area (as well as Middle Bronze Age material) and number of discrete features of the period have been identified there (including post-built roundhouses); obviously, this was an area of 'open' late 2nd-early 1st millennium BC settlement.

Iron Age

Christopher Evans

In the absence of full cataloguing of the Iron Age pottery (see Section 2.1.4 above), some 69 of the 110 roundhouses can be broadly dated (variously drawing on the work of Birley, Brudenell, Catton and Ette). The vast majority are of Middle Iron Age attribution (e.g. only four definite 'Early period' structures have been identified, while a small number are of earlier Roman date). Given the partial analysis of the period's pottery (again coupled with the paucity of economic data), Mucking will not be a site to provide nuanced insights into the nature of the Iron Age 'occupation module'. Instead, and as has already been attempted, the site's data does provide some information as regards the pattern of land-use at that time, and the sheer quantity of its buildings permit statistical analysis (e.g. finds density vs. building size, and also the dynamics of 'pairing').

Equally, there has been sufficient study of the Banjo and North Enclosure compounds to allow for their presentation as developmental case-studies; the ABC Enclosure's sequence being that much more poorly understood.

With only two roundhouses ascribed to the Late Iron Age, it is this period that should demand the greatest degree of further analysis. As thus far identified, its focus was upon the reuse of the North Enclosure, but it clearly also involved other components along the eastern side of the site, which warrant further teasing-out. This would not only include the square barrow cemetery and the 'monumental' 4-, 6- and 9-post raised granaries running up the main axis of the site, but may also relate to origins of the great rectangular post range (probably a fenced enclosure) within the interior of the Double-Ditched Enclosure. Seemingly of quite a different character to the Iron Age settlement foci in the west of the site (and lying at remove from them), it appears to have had 'special' qualities suggestive of higher status, and the large post range might even relate to a Fison Way-type setting (Gregory 1991). Moreover, the rectilinear alignment and location of this occupation (including the North Enclosure) appears to have influenced the layout of subsequent Roman settlement.

Also warranting further study, Late Iron Age coins and brooches occur within the area of both the 'Banjo' and RBI enclosures (focused on the rectilinear ditched paddocks that represent the later features in the Banjo area). Also relevant in this context is the question of whether any of the kilns occurring within that feature complex were, indeed, of Late Iron Age date (vs. Conquest Period).

Obviously, given the limited state of knowledge of Mucking's Iron Age its potential for future research and study will be strongly highlighted.

Romano-British
Sam Lucy

Analysis of the Romano-British site needs to proceed on three different levels: looking at the site as a whole; characterisation of the enclosures and other site areas, and focusing in on particularly interesting features or assemblages as case studies. Approaches to these are described here in turn.

Romano-British archaeology has become increasingly adept at using finds material in combination with archaeological data to characterise sites. With the realisation of the range of variability seen in the Roman landscape, the potential of finds assemblages to define what ‘type’ of site is being dealt with is being more fully explored (Hingley and Willis 2007). Coin profiles have been used in this way for decades (Reece 1995), but it is also possible to expand this approach into other artefactual classes. The coin profile from Mucking is predominantly early, with a general absence of 3rd- and 4th-century coinage, and a profile closest to a number of early military sites. This is something worth exploring; Margaret Jones consistently referred to the RBI enclosure as ‘the paramilitary enclosure’ (*i.e.* not quite rectangular or regular enough to be truly military), and the number of early brooches on the site, as well as the transitional pottery assemblages, and a series of LPRIA burials, strongly indicate considerable pre-Conquest activity. An initial aim will therefore be to identify the chronological duration of the Romano-British settlement at Mucking: when does it start (is there continuance from the high density of MIA settlement?), and for how long does it continue? Although the coin profile does not indicate extensive later Roman settlement activity, the initial pottery distributions suggest that there may be an element of 3rd- and 4th-century activity or settlement, as do a small number of the burials.

Having defined the chronological extent of the settlement, the next matter to deal with is its nature. Margaret Jones saw Mucking as the infields of a villa settlement, assuming the villa itself lay off to the east. This is now not considered a viable model for the site. In its layout of enclosures, Mucking strongly resembles other recently excavated sites (such as that at Langdale Hale in Cambridgeshire), and is probably a fairly ‘normal’ Roman rural settlement, with the core of the settlement excavated, rather than just its periphery (although what ‘normal’ is, in terms of Roman rural settlements, has yet to be subject to detailed critique). This is a hypothesis that needs fully exploring, however, given its tentative indications of possible military involvement (and full discussion of the role of the early kiln industry will be key here), and its highly strategic location overlooking that part of the River Thames that may well have seen a major crossing. The site’s involvement in trade networks also needs analysis (again, centred on the pottery industry, but also other imports and possible exports): was this a producer site for products other than pottery (something the animal bone and worked stone may help indicate)? Finally, what was the status of the settlement? Comparison of its finds assemblages against other local and regional sites will be necessary (with care taken to compare assemblages statistically, in order to account for the variation in sampling strategies). The findings from the cemeteries can also be drawn in here, as they give a direct link to the resident population of the site through the Roman phases (and the high status late 4th-century stone coffin burial in Cemetery IV is particularly intriguing in this context).

Having established the duration and probable nature of the settlement, its inner workings will need more detailed analysis. The Roman settlement is comprised of a series of enclosures (with two of the Roman cemeteries reusing existing Late Iron Age

enclosures), which presumably were either of differing date or function (or both). With the refinement of the phasing, the development of the enclosure systems has now been mapped (enabling their relationship with the LIA occupation to be explored). The finds data, together with the archaeological detail, can then be used to explore what the enclosures were used for. While there are fifteen timber structures already assigned to the Roman-period settlement, the phasing has indicated possible sites for others. Analysis of the nature of these structures, and the finds assemblages from nearby ditches and negative features, can help shed light on their function and duration (for a comparable approach to a major Anglo-Saxon settlement, see Lucy *et al.* forthcoming). Enough Roman timber buildings are now documented (for example in excess of 65 from the major site at Earith Campground) to provide adequate parallels, and data for comparison. Again, the interaction with the kilns of the major pottery industry will need defining, and the location of the corn-driers (now identified as probable malting ovens), and butchered animal bone will shed light on potential agricultural processing areas of the site. Intriguingly, at least one of the roundhouses in the so-called Double-Ditched Enclosure (DDE) has been positively identified as Roman in date, facing onto an entrance in the large fenced enclosure; the role of this and other possible examples will need addressing: could this potentially have related to religious practices? Status is also an issue that will need addressing, in relation to the zoning of the site: can areas of higher status activity be defined, either through the structural evidence or through the finds distributions?

Finally, there will be aspects of the structural sequence that are of intrinsic interest, and will demand detailed analysis through a series of case studies. The corn-driers have already been mentioned, and the structures will also require this detailed treatment, as will several of the wells (the kilns have a detailed report already). One feature that consistently stands out is Well 4, located in the Double-Ditched Enclosure. This massive feature, over 10m deep, stands out for its remarkable finds assemblage, including thousands of sherds of burnt pottery, including a major *terra sigillata* assemblage, and over a tonne of burnt daub. Its chronological history and function (did it contain the remains of a burnt-out building?) will comprise one of the key case studies.

In short, the Roman settlement at Mucking deserves thorough and detailed analysis, and its recording – both of features and of finds – is more than capable of sustaining this. It is unique, both in terms of its sheer extent (having four Roman cemeteries and a large series of enclosures stretching over 18 hectares makes it one of the largest and most complete Roman rural settlements ever excavated), but also in terms of its density of excavation and the quality of finds recording. It has the potential to be the standard against which all other Roman rural settlement excavations can be compared.

3.2 Publication and Presentation

3.2.1 Synopsis

The main publication is envisioned as a single volume monograph, with the Roman Cemeteries volume as a companion. This will be a coherent synthesis drawing on all the site and specialist data. Although broadly temporal the main emphasis will be the prehistoric and Romano-British settlements. Specialist reports will be fully integrated into the period-based chapters.

3.2.2 Report Breakdown

Abstract

Chapter 1: Background 6,000 words

- Project history and methodology

(Site context and excavation methodologies are dealt with in Clark (1993), so will only be summarily dealt with, from a historiographical point of view).

Chapter 2: Earlier Prehistory 10,000 words

- Neolithic activity
- Bronze Age barrows and other burials
- MBA field system

Chapter 3: Later Bronze Age 25,000 words

- The South Rings and associated structures
- Pit groups
- The northern settlement, including roundhouses

Chapter 4: Earlier to Later Iron Age 25,000 words

- The roundhouse settlement
- Four-, six- and nine-post structures
- Pit groups
- The North Enclosure
- Later Iron Age 'Banjo' and rectilinear enclosures
- Cemeteries and grave groups

Chapter 5: Romano-British 25,000 words

- The enclosure systems and associated structures
- Kilns and their products
- Wells
- Corndriers and other industrial activity
- The relationship with the cemeteries and other grave-groups
- The end of Roman Mucking

Chapter 6: Discussion: a Landscape Palimpsest 10,000 words

- Overview and regional/national comparanda
- Project retrospect

3. REFERENCES

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- Hamerow, H. 1993. *Excavations at Mucking, Volume 2: The Anglo-Saxon Settlement*. English Heritage Archaeological Report 21.
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APPENDIX I

Files submitted to ADS

Mucking overview and assessment document

Initial phase plans (based on the Jones' dyelines):

- Bronze Age Mucking
- Iron Age Mucking
- Romano-British Mucking including kilns
- Romano-British cemeteries at Mucking
- Mucking: all digitised

Prehistoric data:

- Prehistoric feature summary
- 4-9 post building gazetteers
- Roundhouse gazetteer
- Bronze Age burial gazetteer
- Prehistoric burial gazetteer
- Iron Age burial gazetteer
- Pits gazetteer
- Middle-Late Bronze Age enclosures gazetteer
- Banjo enclosures gazetteer
- Iron Age enclosures gazetteer
- LBA pottery analysis and report
- MIA-LIA pottery analysis and report

Roman data:

- Kilns gazetteer (including sub-kilns)
- Roman enclosure descriptions
- Roman structures gazetteer
- Roman wells gazetteer

Mucking interim reports summaries