

CONTENTS

	Page
1. ABSTRACT	2
2. INTRODUCTION	3
3. ARCHAEOLOGICAL BACKGROUND	4
4. ARCHAEOLOGICAL METHODOLOGY	5
5. DESCRIPTION OF RESULTS	7
6. CONCLUSIONS	8
7. ACKNOWLEDGEMENTS	9
8. APPENDICES	10
Appendix I Bibliography	10
Appendix II Sites and Monuments Record Form	11
Appendix III Environmental Report	16
Appendix IV Pottery Spot Dating	25
9. ILLUSTRATIONS	Follows page
Figure 1 Area and Site Location	2
Figure 2 Site plan showing trench location	5
Figure 3 Plan of trench 1	6
Figure 4 Sections from trench 1	7

1. ABSTRACT

An archaeological evaluation was carried out at Milk Street, North Woolwich (figure 1.) between the 4th and the 27th of November 1996 by the Archaeology Section of Newham Museum Service. A single trench was excavated to expose alluvial deposits to the depth of natural gravel. The excavated trench revealed layers in the alluvial clay of Roman date. Material from an occupational site or dump and postholes, as well as the articulated skeleton of a bovine were recorded, dated to the late 2nd -late 3rd century A.D.

2. INTRODUCTION

2.1 An archaeological excavation took place on the site lying between Milk Street and Woodman Street, North Woolwich, in advance of development by Lovell Partnership of new housing and associated facilities on behalf of the Family Housing Association.

2.2 The work was required to fulfil a planning condition (Planning Approval N/95/052) imposed by the London Borough of Newham. This planning condition was on the advice of the English Heritage Planning Officer for north-east London.

2.3 There were two aims of the evaluation. Firstly, to determine the extent, survival and importance of archaeological deposits on the site by excavation. Secondly, to examine the alluvial layers for palaeoenvironmental deposits which could provide data on changes in climate, sea level and landscape in the past, both locally and within the larger area of the Thames Valley. This was done by sampling of a single stratigraphic section by MoLAS Environmental Archaeology Section.

2.4 The site lies within an archaeological priority zone, as defined in the London Borough of Newham Unitary Development Plan.

3. ARCHAEOLOGICAL BACKGROUND

3.1 The site lies on the alluvial floodplain of the River Thames (Devoy, 1980, p.134-148), 200m north of the present north bank. The area was marshland until development in the 19th century.

3.2 The marsh appears to have been exploited since at least the Bronze Age. Rises in the gravel underlying the alluvial deposits may have been areas of drier ground in the marsh, favourable for settlement. The Milk Street site lies over one of these gravel rises (Hanson 1996, p.8).

3.3 Recent excavations by the Archaeology Section of Newham Museum Service have been revealed well preserved archaeological deposits in the alluvial clay and peat in Beckton and Barking. Most important among these have been brushwood and metalled trackways dating to the Middle Bronze Age (Hanson 1996, p.6).

3.4 During the excavation in 1880-1885 of the Royal Albert Dock (immediately to the north of the site) a dug out canoe, Roman 'black samian ware pottery' and roof tile were recorded (Spurrell, 1902, p.163-168). This material dates to the 3rd century A.D. and suggests the marsh was being exploited at this time (Hanson 1996, p.6).

3.5 The old route of Woolwich Manor Road ran north- south across the eastern end of the site along what is now Woodman Road. Research suggests this may have been a Roman Road (Watson, 1988, p.2. Hanson, 1995, p.5), running in a direct line from a ferry/harbour on the Thames to the London to Colchester road to the north (now Romford Road). This road lies 30m to the east of trench 1.

4. ARCHAEOLOGICAL METHODOLOGY

4.1 The methodology was based on the English Heritage Archaeological Brief, and conformed to the standards set out in the English Heritage Guidance Papers 3 (Standard Practices in Archaeological Fieldwork) and 5 (Archaeological Assessment and Evaluation Reports) and NMS Health and Safety Policy.

4.2 No excavations had previously taken place on site. A desktop study suggested archaeological deposits could survive on site (Hanson 1996). An evaluation was therefore deemed necessary by the English Heritage as the site lies within an archaeological priority zone.

4.3 Existing buildings on site (which had posed a health and safety risk due to asbestos roofing) were demolished before excavation began and the existing ground surface (tarmac and concrete) removed. A single evaluation trench (trench 1) measuring 12m x 12m at ground level was located to allow excavation to the depth of natural gravel. The trench followed the agreed specification outlined in the archaeological desktop study. The trench was positioned in the north west corner of the site within future building footprints (figure 2.).

4.4 The site was waterlogged and flooded due to a water main which had been cracked during the demolition works as well as tidal waterflow from the George V dock at the time of excavation. Frequent pumping was necessary during excavation to keep surface and ground water at workable levels within the trench. Limits set by Thames Water on the length of time that water could be pumped off site into an allocated foul water sewer prevented ground water from being completely removed from the trench during excavation.

4.5 A 360° Hymac was used to construct a dam around the located trench in an attempt to prevent ingress of surface water, which continued to pour into the excavation through the made ground. The trench was then excavated (stepped in 1.2m for every 1.2m in depth) until archaeological features were reached. These were cleaned, examined and recorded to determine nature and date.

4.6 A ramp 10m x 12m, angled at approximately 15-20° was excavated at the south end of the trench to allow the Hymac to excavate the trench.

4.7 Excavation continued to attempt to reach natural gravel at a estimated depth of 6.5m. At a depth of 5m below ground level ingress of ground water prevented further excavation.

4.8 The trench revealed layers in the alluvial clay containing archaeological material. The contingency in the project design (Moore 1995) was used to extend the trench 4.5m x 3m south into the ramp to allow examination of the relevant layers in plan (figure 3.). Any archaeological features were cleaned, examined and recorded and material which provided data on the date and nature of the deposits collected.

4.9 To provide data on the environmental sequence within the alluvium, a column sample of the layers in section was taken by the Environmental Section of MoLAS. A bulk sample of the organic clay layer dated to the late 2nd- late 3rd century was also taken. The environmental report results are contained in appendix III .

4.10 The site was supervised by Ian Hanson and negotiated by Mark Turner on behalf of the Archaeology Section of Newham Museum Service.

5. DESCRIPTION OF RESULTS

5.1 A single trench was excavated. 18 contexts were identified and recorded. A layer of demolition material and made ground overlay alluvial layers. A series of clay layers overlay peat (figure 4.) Within the clay were two layers containing ceramics identified as Roman in date. Natural gravel was not reached by the excavation due to heavy ground and surface water.

5.2 The stratigraphy recorded in trench 1 to a depth of 3.6m reflects the sequence recorded in 3 boreholes within the site perimeter by Soil Mechanics (report no.7538/25) in May 1995. This shows the site to be lying upon intact deposits of the Thames alluvial floodplain.

5.3 The trench revealed layers of clayey peat at a depth of -1.55m A.O.D. containing a large amount of degraded wood. The uppermost peat layers were dated by C14 to the Early to Middle Bronze Age. Overlying this were layers of alluvial clay.

5.4 At a depth of -0.25m A.O.D. a layer of silty clay was recorded, with frequent iron panning and vertical streaks of brown silty clay. This suggests an open land surface or tidal zone (Spurr et al. 1997). Overlying this was a layer of dark grey brown organic clay at a depth of -0.10m A.O.D. This was most obvious on the very eastern edge trench, fading out towards the west, south and north. The layer contained a considerable quantity of ceramics dated to the late 2nd-late 3rd century A.D. including plain samian ware, possible mayen ware, mortaria, flagons, flasks, storage jars, amphora and cooking vessels, some of a fine quality.

5.5 Also in the layer were floor tile, roof tile, brick, burnt daub, charcoal, wood, wall plaster, burnt flint, slag, and the bone of domestic livestock, with evidence of butchery marks. The layer appeared to be deposited in semi -circular/oval spread with a central area of material with a very high organic content and most of the finds mentioned above (figure 3.). Analysis of the environmental evidence (Spurr et al. 1997) for this layer records cereals (wheats and oats) and grasses, indicating cultivation may have occurred close by on the dried marsh.

5.6 Also revealed cutting this layer in the trench extension were 3 postholes, containing charcoal and degraded ceramic, which was not datable (figure 3.).

5.7 This layer and the postholes were sealed above by a layer of light white grey clay which was present across the whole trench. This also contained ceramics of late 2nd -3rd century date. Also within this layer was the articulated skeleton of an immature bovine, complete except for the pelvis and tail (figure 3.).

5.8 A column sample and a bulk sample were taken for analysis at the MoLAS Environmental Archaeology Section (see appendix III). A spot date list of the pottery finds is given in appendix IV.

6. CONCLUSIONS

6.1 The evaluation at Milk Street, North Woolwich revealed archaeological deposits dating to the Roman period, late 2nd -late 3rd century A.D.

6.2 A silty clay sub soil was overlain by a organic silty clay containing ceramics dated to the late 2nd -late 3rd century A.D., as well as material and environmental evidence consistent with an local occupational site. 3 post holes without datable finds cut this layer.

6.3 The organic clay layer was overlain by a clay layer also containing ceramics dated to the late 2nd -late 3rd century A.D. as well as building material. This layer sealed the 3 post holes.

6.4 The trench was excavated within the footprint of proposed housing. The eastern half of the site is to be developed as a road and carpark, leaving archaeological deposits at a depth of -0.10m A.O.D. (1.7m below ground level) unaffected. However, if development such as drains or sewers are to be constructed at depth in this area, further archaeological assessment would be necessary.

6.5 It is the recommendation of this report that construction work may proceed as proposed within the area of the Milk Street site.

7. ACKNOWLEDGEMENTS

The Archaeology Section of Newham Museum Service wishes to thank the Family Housing Association for funding the excavation, Steve Norton, Steve Dickinson, John Novak and Alan the site manager of Lovell Partnership for their help, advice and interest, and Newham Plant Hire for their expert excavating. Thank you to G. Spurr, J. Giorgi and R. Symonds of MoLAS for their environmental analysis and comments on the artefacts within the samples. The author would like to thank Mark Turner and Peter Moore for their project management, Graham Reed for his illustrative work, and Shaun Tamblyn and Paul Thrall for their hard work and professionalism on site during quite difficult conditions.

APPENDIX I

BIBLIOGRAPHY

- Devoy, R J 1980, "Post Glacial Environmental Change and Man in the Thames Estuary: A Synopsis", in Thompson, F H, ed., *Archaeology and Coastal Change*, The Society of Antiquaries of London. **Occasional Paper (New Series) 1**, p 134-148
- English Heritage 1991, *Management of Archaeological Projects II*. London.
- English Heritage 1992, *Archaeological Guidance Papers 2, 3, 5 and 6*. London. (London Division)
- Hanson, I 1995, Royal Albert Dock (North) Archaeological Desktop Study. Unpublished report. Newham Museum Service.
- Hanson, I 1996, Milk Street Site, North Woolwich, An Archaeological Desktop Study of Sub-Surface Geological Contours. Unpublished report. Newham Museum Service.
- Moore, P 1995, Project Design for the Archaeological Evaluation of Milk Street, North Woolwich. Unpublished report Newham Museum Service.
- Soil Mechanics Site Investigation for proposed housing at Milk Street, London E16.(**report no.7538/25**). May 1995.
- Spurrell, F.C.J, 1902, *Romano-British surface, Thames Alluvium*, Essex Naturalist. **vol.xvii** , Essex Field Club, p163-169.
- Swan, V 1988, *Pottery in Roman Britain*, Shire Archaeology, Shire Publications Ltd.
- Watson, M, 1988, Assessment of the archaeological importance of the Royal Albert Docks development unpublished report.

The site records and archive are currently held at the Archaeology and Local History Centre, 31, Stock Street, Plaistow, London, E13 OBX.

APPENDIX II

GLSMR/RCHME NMR ARCHAEOLOGICAL REPORT FORM

1. TYPE OF RECORDING

Evaluation ✓ Excavation Watching brief

Other (please specify)

2. LOCATION

Borough: LONDON BOROUGH OF NEWHAM

Site address: MILK STREET,
NORTH WOOLWICH,
LONDON. E16.

Site name: MILK STREET, NORTH WOOLWICH

Site code: HE-MS 96

Nat. Grid Refs: **Centre** of site: TQ 180050, 543700

Limits of site: a) N/A b)

c) d)

3. ORGANISATION

Name of archaeological unit/~~company~~/society:

Address:

ARCHAEOLOGY SECTION
NEWHAM MUSEUM SERVICE
31, STOCK STREET
PLAISTOW
LONDON
E13 OBX

Site director/ supervisor: IAN HANSON

Project manager: MARK TURNER

Funded by: FAMILY HOUSING ASSOCIATION

4. DURATION

Date fieldwork started: 4/11/96

Date finished: 27/11/96

Field work previously notified?

~~YES~~/ NO

Fieldwork will continue?

~~YES~~/ NO/ ~~NOT KNOWN~~

5. PERIODS REPRESENTED

Palaeolithic

Roman✓

Mesolithic

Saxon (pre-AD 1066)

Neolithic

Medieval (AD 1066 -1485)

Bronze Age

Post-Medieval

Iron Age

Unknown

6. PERIOD SUMMARIES Use headings for each period (Roman; Medieval; etc.), and continue on additional sheets as necessary.

ROMAN

A single trench was excavated revealing alluvial deposits of clay overlying peat. Within the alluvial clay two layers were dated to the Roman period. A light grey silty clay sub soil with frequent iron panning was overlain by a very organic dark grey brown clay containing ceramics dated to the late 2nd-late 3rd century A.D., including plain samian ware, possible mayen ware, mortaria, amphora, flagons, flasks, storage jars and cooking vessels, some of a fine quality. Also in this layer were roof tile, floor tile, brick, bone, slag, charcoal, wood and burnt flint. Three post holes cut this layer. This seems to be material from an occupational site in the immediate vicinity or dumped material possibly imported to raise the ground level.

Sealing and overlying this layer and the postholes was a light white grey clay also containing ceramics including plain samian ware dating to the late 2nd-late 3rd century A.D, and the articulated skeleton of an immature bovine complete except for pelvis and tail. This layer seems to be clay deposited by flooding.

7. NATURAL. (state if not observed; please DO NOT LEAVE BLANK)

Type: GRAVEL

Natural not observed within trench, but reported in bore hole logs from site.

Height above Ordnance Datum: -5.30m A.O.D.

8. LOCATION OF ARCHIVES.

a) Please indicate those categories still in your possession:

Notes	Plans	Photos	Negatives
Slides	Correspondence	Manuscripts (unpub. reports etc.)	

b) All/ ~~some~~ records have been/ ~~will be~~ deposited in the following museum/ records office etc. :

ARCHAEOLOGY SECTION,
NEWHAM MUSEUM SERVICE,
31, STOCK STREET,
PLAISTOW,
LONDON E13 OBX.

c) Approximate year of transfer: 1996

d) Location of any copies: AS ABOVE

e) Has a security copy of the archive been made? YES/ ~~NO~~

If not, do you wish RCHME to consider microfilming? ~~YES~~/ NO

9. LOCATION OF FINDS.

a) In your possession? ~~ALL/ SOME/~~ NONE

b) All/ ~~some~~ finds have been/ ~~will be~~ deposited with the following museum/ ~~other~~ body:

ARCHAEOLOGY SECTION,
NEWHAM MUSEUM SERVICE,
31, STOCK STREET,
PLAISTOW,
LONDON.
E13 OBX.

c) Approximate year of transfer: 1996

10. BIBLIOGRAPHY

- Devoy, R J 1980, "Post Glacial Environmental Change and Man in the Thames Estuary: A Synopsis", in Thompson, F H, ed., *Archaeology and Coastal Change*, The Society of Antiquaries of London. **Occasional Paper (New Series) 1**, p 134-148.
- English Heritage 1991, *Management of Archaeological Projects II*. London.
- English Heritage 1992, *Archaeological Guidance Papers 2, 3, 5 and 6*. London. (London Division)
- Hanson, I 1995, Royal Albert Dock (North) Archaeological Desktop Study. Unpublished report. Newham Museum Service.
- Hanson, I 1996, Milk Street Site, North Woolwich, An Archaeological Desktop Study of Sub-Surface Geological Contours. Unpublished report. Newham Museum Service.
- Moore, P 1995, Project Design for the Archaeological Evaluation of Milk Street, North Woolwich. Unpublished report Newham Museum Service.
- Soil Mechanics Site Investigation for proposed housing at Milk Street, London E16.(**report no.7538/25**). May 1995.
- Spurrell, F.C.J, 1902, *Romano-British surface, Thames Alluvium*, Essex Naturalist.**vol.xvii** , Essex Field Club, p163-169.
- Swan, V 1988, *Pottery in Roman Britain*, Shire Archaeology, Shire Publications Ltd.
- Watson, M, 1988, Assessment of the archaeological importance of the Royal Albert Docks development unpublished report.

SIGNED:

DATE: 2nd December 1996

NAME (Block capitals): IAN HANSON

Please return completed form to The Greater London Sites and Monuments Record, English Heritage London Region, 30 Warwick St., London W1R 5RD. Tel. 0171 973 3731/ 3779 (direct dial).

APPENDIX III

A Palaeoenvironmental Investigation of the Milk St. Sedimentary Deposits (Hems 96)

Graham Spurr with contributions by J. Giorgi & R. Symonds

Environmental Archaeology Section

ENV/ASS/02/97

Museum of London Archaeology Service

CONTENTS

INTRODUCTION.....	17
METHODS	17
RESULTS AND DISCUSSION.....	17
CHRONOSTRATIGRAPHY	17
LITHOSTRATIGRAPHY	18
<i>Unit C (-0.525m OD).....</i>	<i>18</i>
<i>Unit B (0.02m OD to -0.525m OD)</i>	<i>18</i>
<i>Unit A (0.22m to 0.02m OD)</i>	<i>18</i>
BIOSTRATIGRAPHY	19
<i>Plant Macrofossils.....</i>	<i>19</i>
<i>Cereals.....</i>	<i>20</i>
FINDS	20
<i>Pottery</i>	<i>20</i>
CONCLUSIONS.....	21
RECOMMENDATIONS	22

LIST OF TABLES

TABLE 1 : C ¹⁴ ASSAY RESULTS.....	17
TABLE 2 : SEDIMENTARY UNIT DESCRIPTION FROM MONOLITH SAMPLES (G.SPURR)	19
TABLE 3 : PLANT MACROFOSSIL SPECIES IDENTIFICATION HE-MS 96 UNIT C (J.GIORGI).....	20
TABLE 4 : CEREAL SPECIES IDENTIFICATION HE-MS 96 UNIT A (J. GIORGI).....	20
TABLE 5 : POTTERY IDENTIFICATION HE-MS 96 UNIT A (R. SYMONDS).....	21

Introduction

As part of an archaeological evaluation carried out by the Newham Museum Service (the former Passmore Edwards Museum) two Monolith tin samples were taken from a single stratigraphic section exposed by a trial trench. The aim of the stratigraphic sampling was to provide a more detailed analysis of the different sedimentary units present in order to reconstruct the nature of the palaeo-environmental conditions influencing their deposition and the site as a whole.

Methods

Monolith tins were placed vertically into the side of the trial pit in a staggered, overlapping fashion to retrieve continuous stratigraphic samples. The number of tins used was dependent upon the depth and/or significance of the stratigraphic sequence. Each monolith tin was plotted on the section drawing of the relevant trial pits and related to Ordnance Datum (OD) by the supervising archaeologist. Added to this, bulk samples of organic units were taken for finds and environmental data as well as C¹⁴ dating. The monolith tins and bulk samples were then sealed and transported to the MoLAS Environmental laboratories. Once at the laboratories the monolith tins were described to standard sedimentary criteria (e.g. Gale and Hoare, 1991) and the bulk samples divided for C¹⁴ dating and wet sieving.

Results and Discussion

The results for the chronostratigraphy, lithostratigraphy, biostratigraphy and finds are tabulated in Tables 1,2, 3,4 & 5.

Chronostratigraphy

During assessment limited amounts of absolute dating are carried out in order to establish a basic chronology for the organic residues in the sequence. In order to do this two samples from the lowest deposit were submitted to Beta Analytic Inc., Miami, for conventional C¹⁴ assay. The results are as follows:

Unit	Beta Analytic No.	Date Yrs B.P.	Date Yrs BC
C	100886	3010 +/- 70	1420-1060
C	100885	3230 +/- 70	1690-1390

Table 1 : C¹⁴ assay results

These dates ally archaeologically with the early to middle Bronze Age periods.

Lithostratigraphy

Unit C (-0.525m OD)

Exhibits no internal structure (e.g. laminae) therefore is probably a flood deposit containing, in part, re-deposited silts. The well humified organics contained within suggest re-deposition originally, possibly just within or on the margins of an active channel. However, the non-humified roots probably belonged to vegetation growing on top of these re-deposited silts (i.e. post depositional growth) causing bioturbation of the unit to some degree. Either the channel migrated away from the site during this stage or water levels dropped. The C¹⁴ dates place the accumulation of this deposit in the Early to mid Bronze Age at the end of the Thames III transgression and the beginnings of the Tilbury IV regression (Devoy, 1979). However, the Tilbury deposits are not considered to be directly related to the deposition of this unit (or subsequent units) given the high Ordnance Datum levels of the deposits at Milk St.

Unit B (0.02m OD to -0.525m OD)

Again, this unit exhibits no internal structure thereby indicating a probable flood deposit. The woody fragments at the base of the unit (decreasing upward) indicate possible re-deposition / slight erosion of unit below locally. Iron staining associated with roots / root penetration indicates probable (later) bioturbation throughout the unit especially toward top. N5 Gray clay patches exhibiting crumbly structure could indicate dying out of unit to some degree. Certainly, the predominance of roots at top of unit suggest an open land surface or tidal zone developing on to which the unit above (Unit A) was deposited.

Unit A (0.22m to 0.02m OD)

This unit is a less disturbed deposit unlike the units below. The predominance of building material / pot (decreasing upward) suggests human habitation / settlement locally on a surface which was either gently flooded or dumped upon / into. This could indicate an (encroaching?) shallow, low energy tidal environment. The possible charring / charcoal staining at the contact and above is notable for a possible reason for the abandonment or discarding of the finds in this deposit. Notably, the Ordnance Datum (OD) of close to zero at the base of this unit probably puts its inception at around the late third century AD (T. Brigham, pers. comm.).

Unit	Colour	Description
Unit A (0.22m to 0.02m OD)	5Y 5/1 Gray becoming 2.5Y 2.5/1 Black	Silty clay becoming darker with depth probably through carbon staining; blocky structure probably through drying; possibly CaCO ₃ concentrations; occasional brick fragments throughout increasing toward base of unit concurrent with pot fragment (10x15mm approx.). Contact with unit below sharp and horizontal.
Unit B (0.02m OD to -0.525m OD)	2.5Y 4/2 Dark greyish brown with N5 Grey patches becoming 10YR 4/1 Dark grey with depth.	Silty clay; no internal structure although more crumbly at top; random patches of grey clay and iron staining throughout upper part of unit; occasional wood lumps in creasing in lower part of unit especially at the base. Diffuse contact with unit below.
Unit C (-0.525m OD)	10 YR 3/1 Very dark grey	Highly organic silty clay; no internal structure; numerous non-humified to well-humified root / wood fragments throughout. Depth unknown.

Table 2 : Sedimentary Unit description from monolith samples (G.Spurr)

Biostratigraphy

Plant Macrofossils

The identifiable plant macrofossils (see Table 2) are all representative of species not unexpected in an environment near to or within the vicinity of a water course. Whether specifically a lover of damp grassy places such as the sedges (*Carex* spp) or the mosses, or the invasive species such as Bramble (*Rubus* spp) and Elder (*Sambucus* sp) whose habitats range from woods to marginal / rough ground (Stace, 1991), none represent anything but a natural accumulation. Added to this, all the plant macrofossils identified are considered robust enough to sustain movement or abrasion which would be expected in an eroded and re-deposited sediment as envisaged for this unit in the lithostratigraphy section above. Indeed, the very erosion / re-deposition of the sediment probably accounts for the bias in favour of these robust species and the poor preservation of the wood (J.Giorgi, pers.comm).

Cereals

The identifiable cereal species are listed in Table 3 . Emmer wheat (*Triticum dicoccum*) was a major crop in the Neolithic and Bronze Age but becomes less prevalent in the Iron Age and later (Champion *et al*, 1996). In contrast, Spelt wheat (*Triticum spelta*) reached its peak in terms of use as a crop during the Iron Age and subsequent Roman periods (*ibid*). It is however, very difficult to separate the two species on the basis of grain morphology especially when charred (because of distortion) and with the lack of any discerning chaff fragments differentiation becomes almost impossible (J.Giorgi, pers.comm). Oat (*Avena sp*) was not in Britain until the Iron Age - although common throughout Europe during the Bronze Age (Masefield *et al* , 1985) - when it occurs as carbonised wild form although some cultivars are present at this time (Champion *et al*, 1996). On the whole, the cereal species identified were cultivated within the Iron Age / Roman periods.

Species	Common Name	Abundance
<i>Carex</i> spp	Sedges	1-10
<i>Rubus</i> spp	Bramble : Blackberry / raspberry	1-10
<i>Sambucus</i> sp	Elder	1-10
unidentifiable	Wood (very fragmented)	50+
unidentifiable	Moss (fragments)	1-10

Table 3 : Plant macrofossil species identification HE-MS 96 Unit C (J.Giorgi)

Species	Common Name	Abundance
<i>Triticum dicoccum/spelta</i>	Emmer / Spelt Wheat	1-10
<i>Avena</i> sp	Oat	1-10
<i>Triticum</i> sp (Spikelet base)	What chaff	1-10
<i>Graminae</i>	Grasses	1-10
	Charcoal	1-10

Table 4 : Cereal Species identification HE-MS 96 Unit A (J. Giorgi)

Finds

Pottery

Pottery was found in the stratigraphic unit A along with the cereal grains. Unfortunately, most pot was too fragmented to identify but those that were identifiable are listed in Table 4. Interestingly, part of the identification problem centred around the objects being burnt prior to deposition although the lack of

abrasion does tend to signify little or no transport during deposition. The broad range of dates, although too broad to be particularly helpful, do put this deposit squarely into the Roman period and within the dates estimated for the low OD.

Fabric	Date	No. of Shards
Oxfordshire Mortarium	AD 180-400	1
Highgate Wood (C)	AD 70-160	4
Sand	AD 50-400	1

Table 5 : Pottery identification HE-MS 96 Unit A (R. Symonds)

Conclusions

The Milk St. stratigraphic sequence tends to indicate, on the whole, flood deposits of silty clays associated with a river channel dating from the Bronze Age through to the Roman periods. However, the deposition of the silty clays is probably not due to a marine transgression for the most part as the OD levels seem too high for sea level rise to have any major effect in this area (see Long, 1995). Added to this, the archaeological evidence generally sees river levels dropping by and throughout the bulk of the Roman period until, at least, around the late third century AD (Brigham, 1990). Indeed, it seems more likely that these deposits relate to overbank flood deposits from a subsidiary to the Thames, possibly the River Roding.

The Unit A sedimentary unit containing the Roman finds however, could relate to the transgression or sea level rise dated archaeologically to the late third century with the construction of the river side wall in Londinium at this time (*ibid.*). Again, however, the deposits are probably those of the tributary rather than those of the Thames itself for two reasons : firstly, the sedimentary units lack the gravel bands (although followed by silts and clays) which erode and seal the latest Roman waterfronts (*ibid.*); and secondly, the Milk St. Roman deposit has been levelled in at 0.02m OD and this was deposited at the time the riverside wall was built to remain high and dry at 0.4m OD.

Possible scenarios for the Unit A deposits therefore, include higher water levels generally causing the tributary to drop its finer sediments further upstream thereby gently flooding marginal areas of the floodplain and /or the area of the deposit being / becoming a tidal zone. Both these theories could also account for the Roman deposits in this unit. Either the archaeology was a result of dumping on marginal riverside land possibly from a nearby settlement / villa or perhaps the area formed a small harbour where dumping from boats, for example, created the deposit.

Recommendations

In the light of these conclusions therefore, it is recommended that :

- (a) Further desktop analysis in search of tributaries to the Thames that may have influenced the site given that the area would have remained largely untouched up until the late historic period.
- (b) Further palaeo-environmental investigation in terms of Diatom analysis of the silts should be undertaken to ascertain possible changes in the saline nature of the waters depositing the material. From this investigation marine transgression / regression or tributary deposition could be extrapolated.
- (c) Finally, should any wider development be undertaken archaeological investigation is paramount given the possibility of a local Roman settlement / villa and/or revetments.

BIBLIOGRAPHY

- | | |
|--|--|
| Brigham, T. (1990) | <u>The Late Roman Waterfront in London</u> . Britannia 21 pp 99-183 |
| Champion, T.C. and Collis J.R. (eds) (1996) | <u>The Iron Age in Britain and Ireland - Recent Trends</u> . J.Collis pub. University of Sheffield. |
| Devoy, R.J.N. (1979) | 'Flandrian sea level changes and vegetational history of the Lower Thames estuary'. <i>Phil. Trans. R. Soc. B</i> 285, 355-407. |
| Gale, S.J. and Hoare, P.G. (1991) | <u>Quaternary Sediments</u> Belhaven Halsted London |
| Long, A.J.(1995) | Sea Level and Crustal Movements in the Thames Estuary, Essex and East Kent. <i>In</i> Bridgeland, D., Allen, P. & Haggart B.A. <u>The Quaternary of the Lower Reaches of the Thames Field Guide</u> Quaternary Research Association. |
| Masefield, G.B., Wallis, M., Harrison, S.G. and Nicholson, B.E. (1985) | |

Stace, C.A. (1991)

New Flora of the British Isles. C.U.P.

APPENDIX IV

Pottery Spot Date List