RPS Planning, Transport and Environment

INDEX DATA	RPS INFORMATION
Scheme Title A13 Extension	Details Archaeological Watching brief - Transition Bevel & culvert.
Road Number A13	Date 21/8/95
Contractor Archaeology + Local History Centre	
County Essex	
OS Reference	
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NEWHAM MUSEUM SERVICE

AN ARCHAEOLOGICAL WATCHING BRIEF

ON THE TRANSITION BEVEL AND CULVERT 7b,

CONTRACT 2, A13 EXTENSION,

RAINHAM, ESSEX

HO-FI 95 & HO-LI 95.

TQ 5180 8182

A LEVEL III REPORT

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21/8/95

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NEWHAM COUNCIL
THE HEART OF EAST LONDON
LEISURE SERVICES

1. LIST OF CONTENTS.

2. ABSTRACT.

The archaeological watching brief took place between the 17th and 26th of July 1995. During that period a total of 31 wood samples, primarily yew, were collected from peat and alluvial deposits around culvert 7b. No samples were collected from the site of the transition bevel excavation. There was no evidence for anthropogenic activity within the peats or other alluvial deposits and none of the samples appear to be worked.

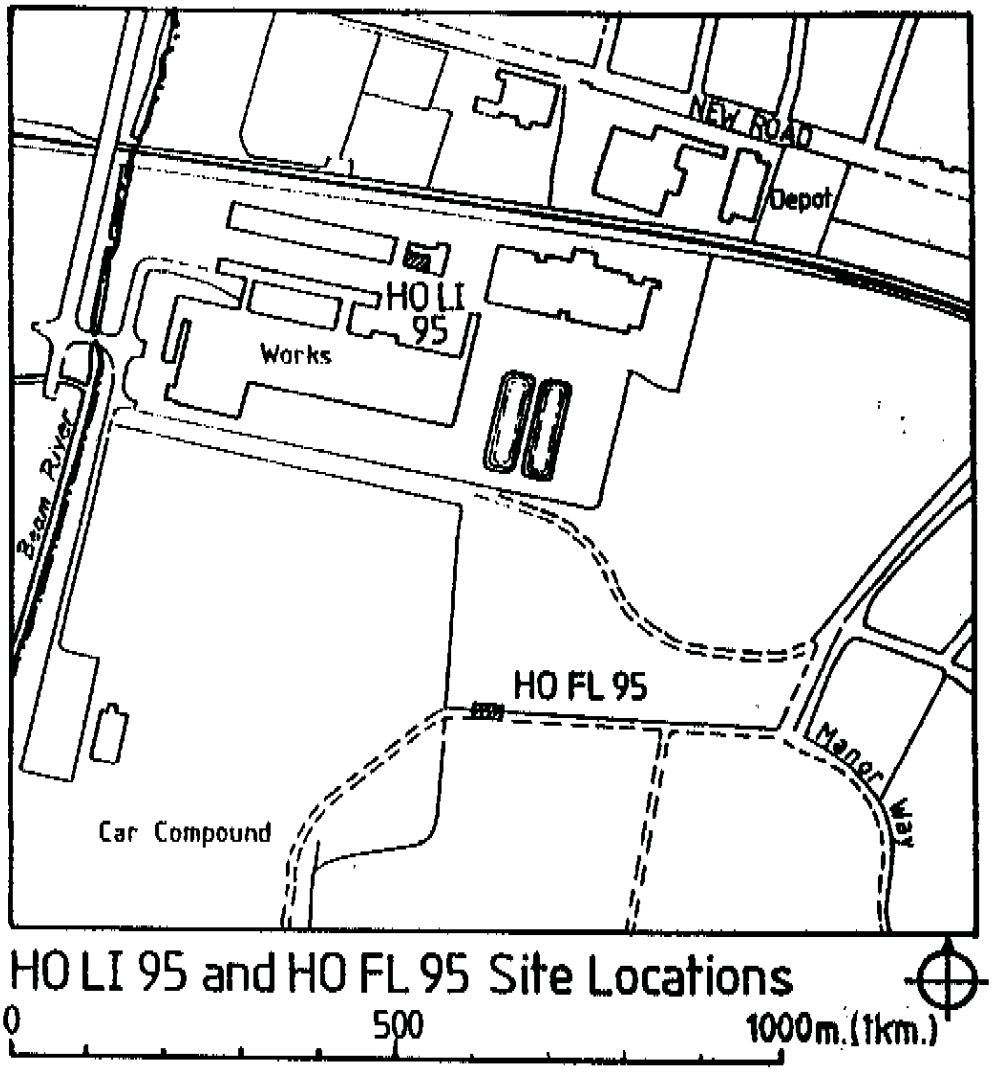


FIG 1 - SITE AND TRENCH LOCATION

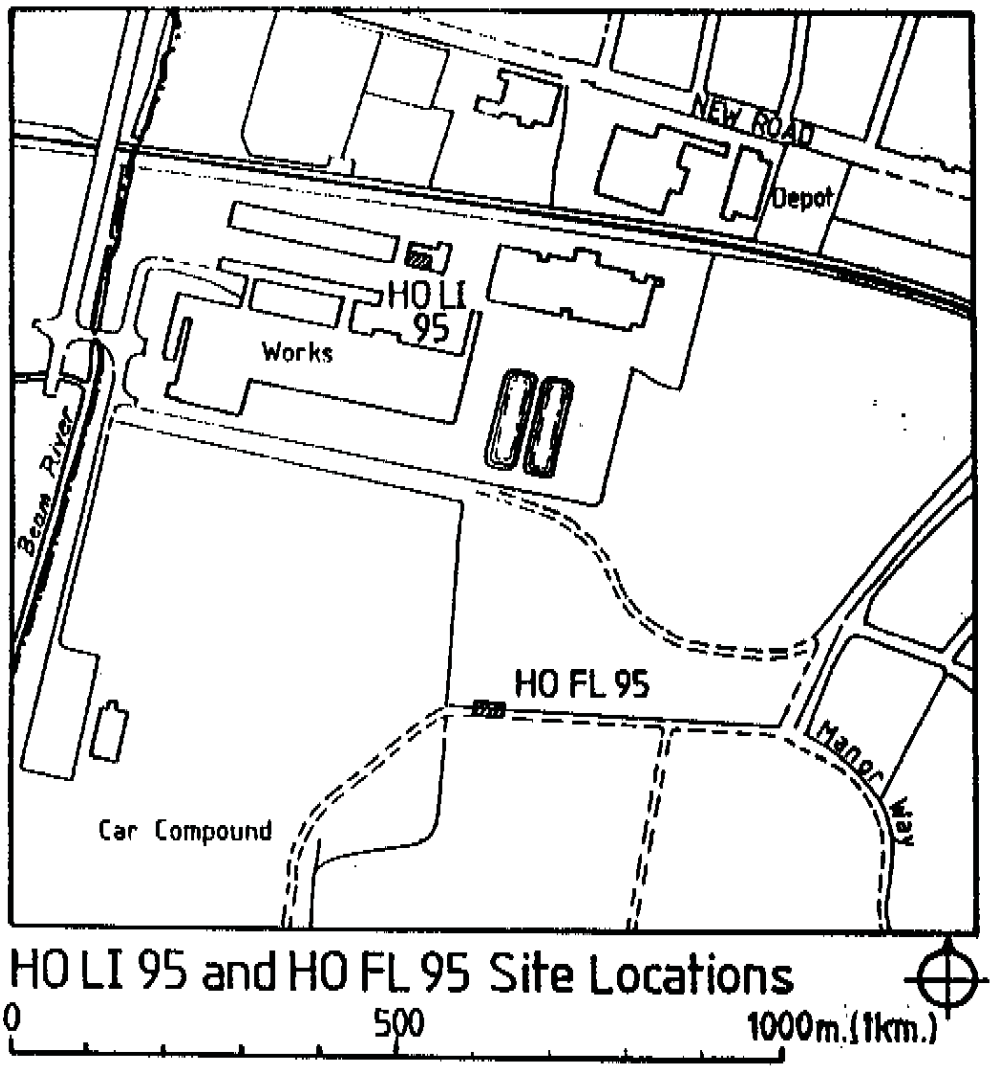


FIG 1 - SITE AND TRENCH LOCATION

3. INTRODUCTION AND METHOD.

An archaeological watching brief on the A13 extension in Rainham, Essex, was commissioned by the Highways Agency and was carried out over a seven working day period by fieldstaff of the Newham Museum Service. The area under investigation consisted of a culvert trench at the west end of Frog Lane, and a trench for a transition bevel adjacent to the existing A13 (see Fig 1). The area is described as an Archaeological Priority Zone on the Unitary Development Plan of the London Borough of Barking and Dagenham. Test pits and previous excavation indicated that the culvert and transition bevel trenches would be disturbing a buried, deeply stratified alluvial sequence that lies along the north bank of the River Thames. These deposits are known to consist of river gravels oyerlain by peat and alluvial horizons. The laying down of these deposits has been explained by Devoy (1980, p136). Devoy uses the terms 'transgression' and 'regression periods'. A transgression period refers to a period of rising sea levels resulting in higher water levels in the riverine and esturine systems that flow into the sea. A regression period refers to a period of lowering sea levels resulting in lowering water levels in the same environments. The former will result in higher rates of silt and clay deposition, the latter in larger areas of open land and peat growth.

Recent excavations by the Newham Museum Service have revealed a very high frequency of archaeological remains contained within the flood plain deposits. An excavation at bridge Road Rainham in 1989 revealed a brushwood trackway and a fence line in the peat (Meddens and Beasley, 1990). Excavations in Beckton have revealed similar deposits. A substantial trackway was discovered at Evelyn Dennington Road (Beasley 1993) and at the site of the former Becton Nursery, Newham Way a number of brushwood features and another large trackway were found (Divers, 1994i). At Hays Storage Depot, Ripple Road, Dagenham, a north-south orientated causeway comprising of gravel and burnt flint was found (Divers, 1994ii), and at Highbridge Road, Barking, a number of partial trackways, and other timber structures including a possible revetment were found associated with the flood plain of the River Roding (Chew, 1994). Excavations by the Trust for Wessex Archaeology at Fort Street, Silvertown, revealed another timber trackway in association with a number of pot sherds. In all these cases the anthropogenic activity was discovered within peat deposits. All of them have been dated to the middle Bronze Age period with dates ranging from c.1600 - 1000 BC using the C14 dating method. The location of these sites can be seen in Figure 3.

It is the waterlogged and anaerobic nature of these deposits that has resulted in the high number of preserved timber features. Additionally the preservation of floral and faunal remains is of vital importance to environmental research, giving valuable insight into the nature and development of the region in prehistory.

Excavation of the two trenches was observed archaeologically, and machine excavation was halted when archaeologically sensitive deposits were encountered. Vertical sections were drawn illustrating the relationships between layers and individual deposits were recorded on pro forma context sheets. An extensive photographic record was taken. Wooden remains were removed from the

excavation areas with the kind assistance of the machine driver and Contractor's staff, and taken for environmental sampling. A number of samples had been retrieved from the previous culvert excavation (culvert 6c/2). These have been included for environmental analysis. A number of the larger wooden remains were sampled with a chainsaw for ease of removal.

The site was negotiated on behalf of the Newham Museum Service by Dr. Frank Meddens, the work was undertaken by the author. The wood samples are held by the Environmental Section of the Museum of London. The site record and archive are held by the Newham Museum Service, Archaeology and Local History Centre, 31 Stock Street, Plaistow, E13 OBX.

4. PHASE DISCUSSION.

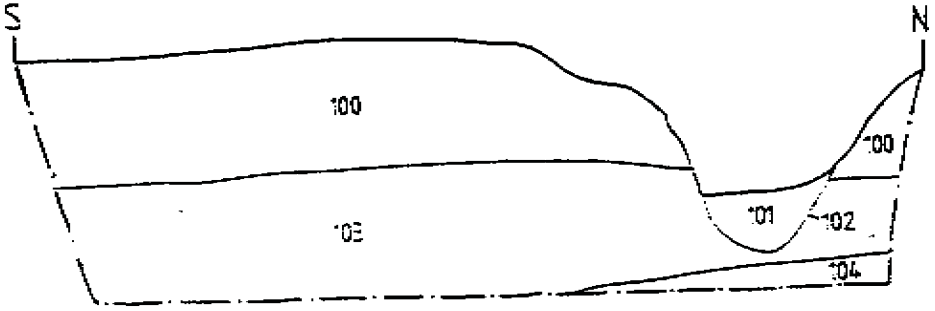
PHASE 1.

This phase contains groups 2 and 4 and represents natural deposits in both trenches. In the culvert trench (HO-FL 95) a layer of clayey peat was observed. This was overlain by a pale blue clay deposit which represents a period of transgression, when water has deposited this fine material over the area. In the transition bevel trench (HO-LI 95) a very thin layer of fibrous peat was observed which had developed over a layer of Thames river gravel. There was no indication in this area of waterborne alluvial deposits. This may be due to the height OD of the peat in this trench - substantially higher than in the culvert - but more likely was caused by truncation of the deposits in the twentieth century.

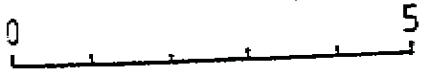
PHASE 2.

This phase contains groups 1 and 3 and represents twentieth century activity. Group 1 is a drainage gully and a road surface associated with the Frog Lane culvert. Group 3 consists of a substantial water service and a series of layers comprising a yard surface adjacent to the existing A13. There is no indication that these groups represent anything other than mid to late twentieth century activity.

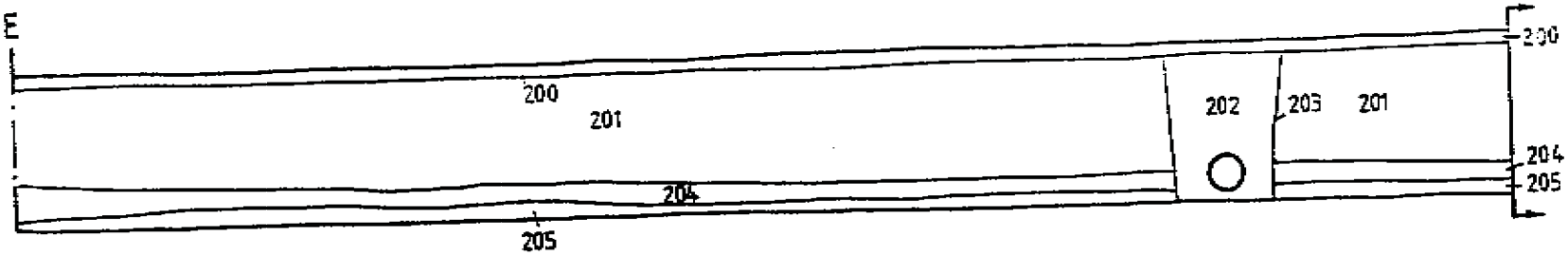
HO FL 95 Section 1 EAST FACING



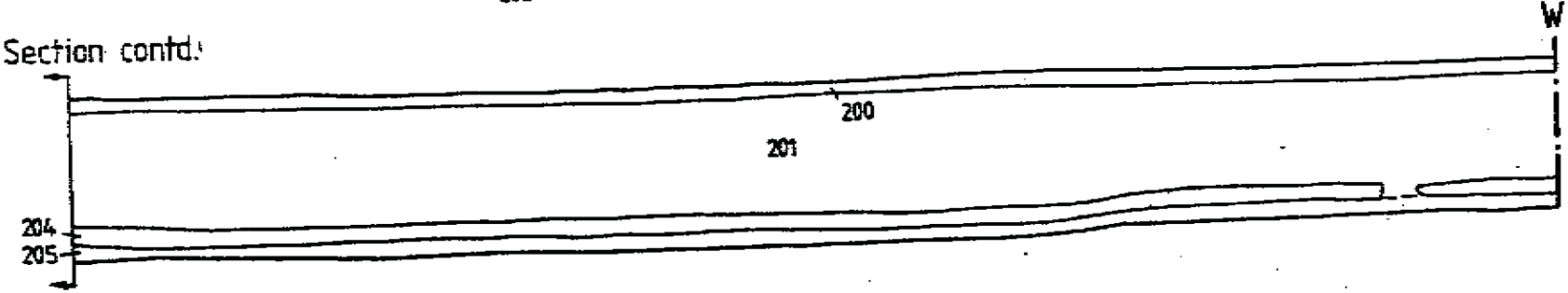
HO LI 95 and HO FL 95 Sections



HO LI 95 Section 2 SOUTH FACING



Section contd.



5. SUMMARY AND CONCLUSIONS.

HO-LI 95.

The peat deposit in the transition bevel excavation proved to be insubstantial, truncated, and sealed by a twentieth century layer. The trench was contaminated with hydrocarbons, so in-depth investigation was impossible. It was clear, however, that no substantial wooden remains were present within the peat. No samples were taken from this trench, and with the exception of the twentieth century drain and make-up layers there was no signs of human activity.

HO-FL 95.

The peat deposit in the culvert trench was far more substantial than that observed in HO-LI 95 although the depth of excavation, -1.79m OD, disturbed only the top 0.15 metres of the peat. (this deposit is known to extend to at least -2.20m from the evidence of the adjacent culvert 6c/2). Twenty nine of the thirty one recovered timber samples came from this deposit, including two naturally fallen yew trees. This is of interest as yew is known to prefer dry alkaline conditions and not the wet acidic soils of a peat marsh. However, yew trees have been found at a number of excavations in the alluvium of the Thames flood plain in north-east London and may represent a substantial forest (Divers, 1995). Dendrochronological (tree-ring) dating will be of little use here as no sequence exist as yet for yew trees, however the samples from the Frog Lane culvert in association with those from other sites could contribute to establishing a master tree ring curve for yew. Overlaying the peat deposit was a layer of heavily compacted silty clay. This layer represents flooding of the site in antiquity.

CONCLUSIONS.

The alluvial deposits within HO-LI 95 had been heavily truncated and sealed by twentieth century deposits. Soil contamination made in-depth investigation impossible. Biogenic deposits were observed and recorded at HO-FL 95 and thirty one wood samples were taken for analysis. There was no evidence for cultural activity in either excavation, although environmental analysis may reveal evidence of anthropogenic activity. The analysis of the sampled remains should greatly enhance our knowledge of the environmental condition of the Rainham Marshes in antiquity, and together with the evidence of other excavations help to build up a full picture of the ecology, and exploitation, of the Thames foreshore and adjoining marshes in prehistoric times.

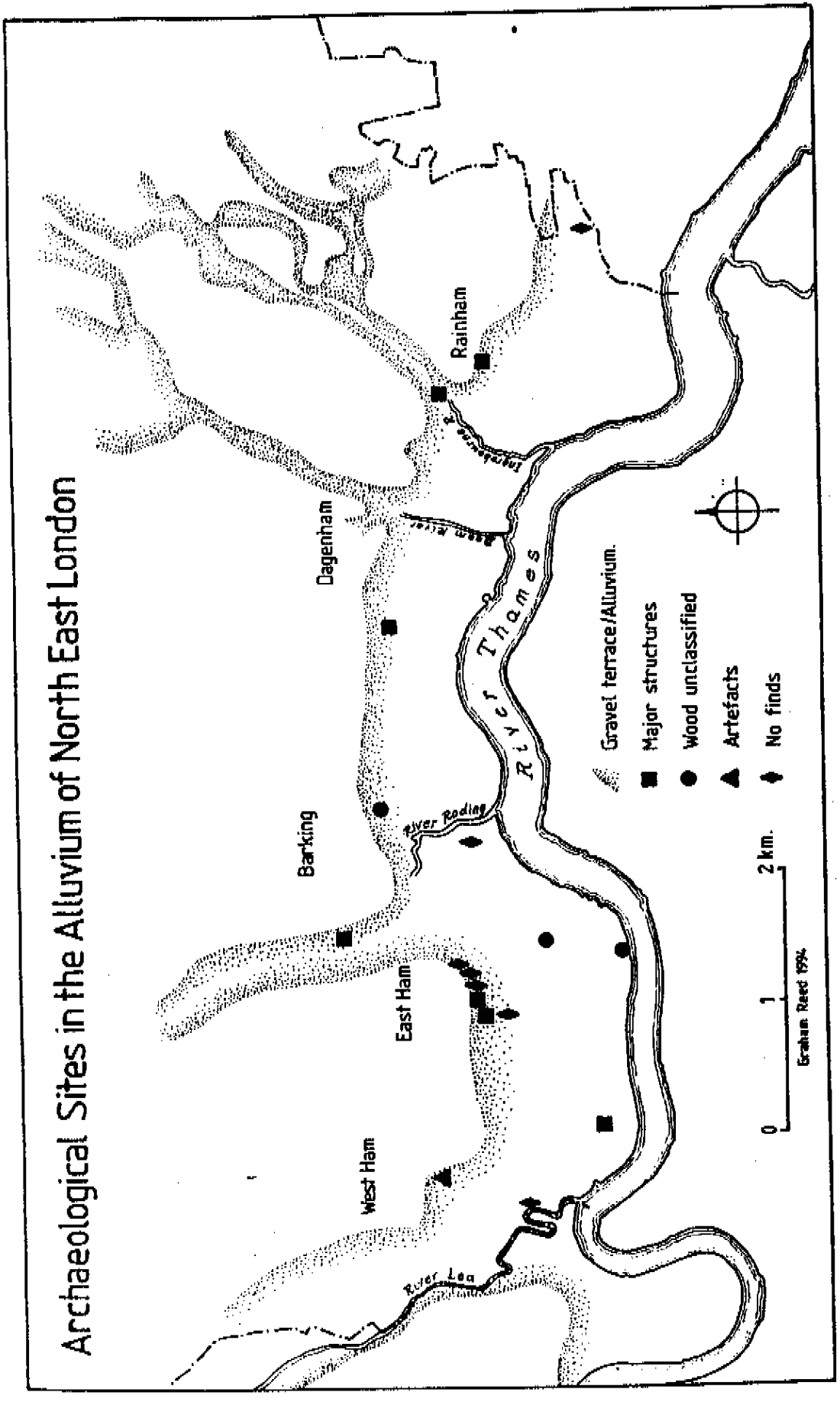


FIG 3 - SITES IN THE ALLUVIUM OF THE THAMES FLOODPLAIN.

6. ACKNOWLEDGEMENTS.

The Author and the Newham Museum Service are indebted to the following for their kind assistance during this project; The Highways Agency for funding the excavation, all those at Acer Construction Ltd for the site accommodation particularly the chainmen Lee and Papps for the driving. Thanks are also due to Mike Simmons, Gaz Ojay and Will Pank of Acers for their assistance and coffee. The chainsawing was carried out by Paul Thrale of the Newham Museum Services and the illustrations were drawn by Mr Graham Reed.

7.BIBLIOGRAPHY.

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APPENDIX I - GROUP DISCUSSIONS

HO-FL 95

GROUP 1

101
|
102
|
100
|

Where;

101 - Fill. Black, oily, slightly clayey silt.	-0.70- -1.38m
102 - Cut. Regular concave sides and base. linear in plan.	-0.70- -1.38m
100 - Layer. Compact sandy clay, frequent brick rubble.	1.50 - -0.75m

Group 1 represents the build up and surfacing of Frog Lane (100) and a drainage gully which cuts through it to the north (102). The fill of this gully was seen to contain various assorted twentieth century rubbish. This group dates to the early part of the twentieth century.

Photographs; BW - 1,1, 1,7-8.
C/S - 1,1, 1,7-8.

GROUP 2

103
|
104
|
Limit of Excavation.

Where;

103 - Layer.Very compact, blue, alluvial clay	-0.75- -1.79m
104 - Layer.Reddish brown, slightly clayey fibrous peat	-1.74 - ?

This group represents natural activity associated with a wetland environment. The peat deposit (104) was not fully excavated but was seen to be a typical example of its type, containing a very large quantity of wet wood including yew trees. Radio carbon assay of this deposit will not be carried out, as it was impossible to collect a stable sample due to working methods of excavation. It is likely that the peat is of Neolithic or Bronze Age date. Layer (103) is an alluvial deposit caused by flooding in antiquity.

Photographs; BW -1, 1-2, 1, 7-15.
C/S - 1,1-2, 1,7-15.

HO-LI 95

GROUP 3

200
|
202
|
203
|
201

Where;

200 - Layer. Hard-core and concrete surfacing	2.10 - 1.85m
202 - Fill. Loose sandy clay and brick rubble	1.85 - ?
203 - Cut. Linear in plan, vertical sides, base not observed	1.85 - ?
204 - Layer. Green/grey, clean silty clay	1.85 - 0.10m

Group 3 represents a substantial water service trench. Cut (203) and its fill (202), cutting through a very clean clay deposit (201). This deposit was sterile and contained no inclusions, it did not have the appearance of being alluvially deposited, and may have been brought into the site to be used as a stable make-up layer for the yard surface (200).

Photographs; BW - 1,3-6.
C/S - 1,3-6.

GROUP 4

204
|
205
|
Limit of Excavation.

Where;

204 - Layer. Loose, moderately clayey fibrous peat	0.10- -0.15m
205 - Layer. Very compact, orange/brown sandy gravel	-0.15 - ?

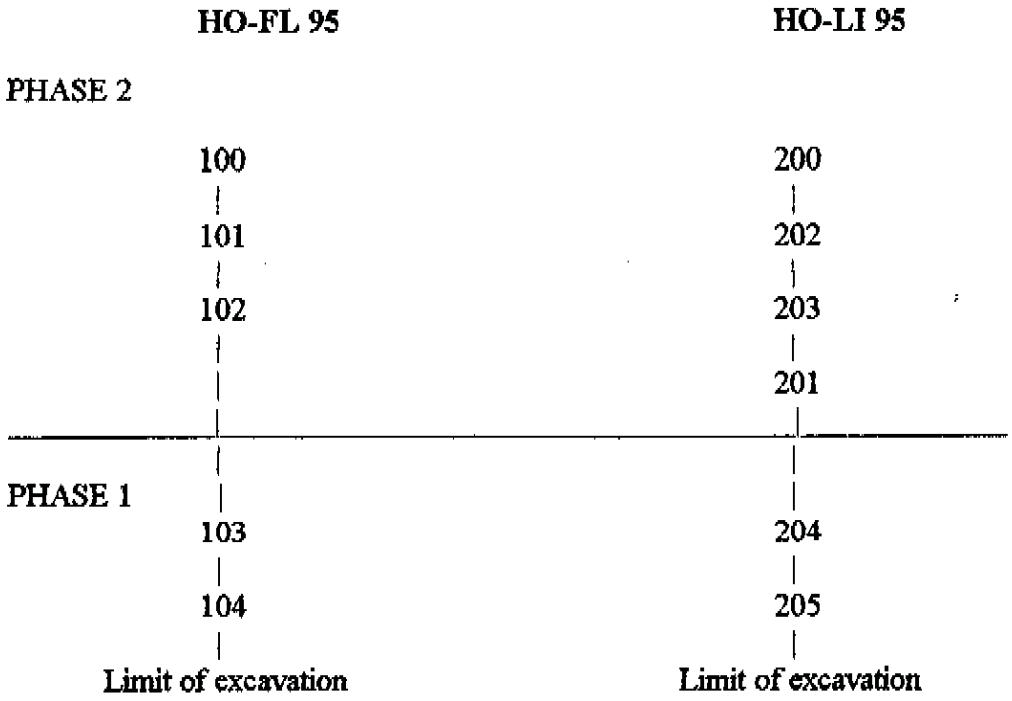
This group represents natural deposits within the transition bevel trench. The relative shallowness of the peat deposit may be due to truncation by layer (201) when it was used to stabilise the yard surface. No large organic remains were observed in the peat. In depth investigation was made impossible by contamination in the trench. Layer (205) was seen to be a natural gravel deposit.

Photographs; BW - 1,3-6.
C/S - 1,3-6.

APPENDIX II - UPDATED LEVEL II INDEX

Con #	Area	Section	BW	C/S	Group	Phase
100	HO-FL 95	1	1,1	1,1	1	2
101	HO-FL 95	1	1,1	1,1	1	2
102	HO-FL 95	1	1,1	1,1	1	2
103	HO-FL 95	1	1,1-2	1,1-2	2	1
104	HO-FL 95	1	1,1-2,7-15	1,1-2, 7-15	2	1
200	HO-LI 95	2	1,3-6	1,3-6	3	2
201	HO-LI 95	2	1,3-6	1,3-6	3	2
202	HO-LI 95	2	1,3-6	1,3-6	3	2
203	HO-LI 95	2	1,3-6	1,3-6	3	2
204	HO-LI 95	2	1,3-6	1,3-6	4	1
205	HO-LI 95	2	1,3-6	1,3-6	4	1

APPENDIX III - SITE MATRIX



APPENDIX IV - SAMPLE REGISTER

Sample #	Context #	Trench	Notes
1	103	7b	Sampled as found
2	104	7b	Sampled as found
3	104	7b	Sampled as found
4	104	7b	Sampled as found
5	104	7b	Sampled with chainsaw
6	104	7b	Sampled as found
7	104	7b	Sampled as found
8	104	7b	Sampled with chainsaw
9	104	7b	Sampled as found
10	104	7b	Sampled as found
11	104	7b	Sampled as found
12	104	6c/2	Sampled with Bow saw
13	104	6c/2	Sampled as found
14	104	6c/2	Sampled as found
15	103	7b	Sampled as found
16	104	7b	Sampled as found
17	104	7b	Sampled as found
18	104	6c/2	Sampled as found
19	104	6c/2	Sampled as found
20	104	6c/2	Sampled as found
21	104	6c/2	Sampled as found
22	104	6c/2	Sampled as found
23	104	6c/2	Sampled as found
24	104	6c/2	Sampled as found
25	104	7b	Sampled with chainsaw
26	104	7b	Sampled with chainsaw
27	104	7b	Sampled with chainsaw
28	104	7b	Sampled with chainsaw
29	104	7b	Sampled with chainsaw
30	104	7b	Sampled with chainsaw
31	104	7b	Sampled with chainsaw