4666

ASSESSMENT OF THE ENVIRONMENTAL MATERIAL FROM JUBILEE HALL SITE, LONDON.

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Introduction

This is a report on the assessment of samples taken from the Jubilee Hall site by the Inner London Archaeological Unit in 1985. The samples consist of bulk samples taken from 50 individual contexts.

Each sample was sub-sampled and all extrinsic environmental material extracted. This material was subsequently categorized, assessed in terms of information provided, and a time estimate given for the analysis of each category of material from the site.

Method of extraction

1.Sub-samples taken from the bulk samples. The size of the sub-sample varied according to the estimated size of the bulk sample:-

bulk sample		>5	litres	=	0.5	litre	sub-sample
"	"	>10	"	=	1	"	"
"	"	>30	"	=	2	"	"

2.Each bulk sample and its respective sub-sample was then labelled from A - Z24. This was neccessary as it was not always possible to locate the label allocated to the samples when they were initially collected. All samples have now been referred to by a code consisting of both labels, e.g. L.199 P.

3.Each sub-sample was floatated in buckets of water.The flot was collected in a 300 micron test sieve and transferred to an envelop consisting of kitchen tissue backed by muslin cloth. These envelops were labelled and hung to dry.

4.The residue left following floatation was wet sieved through a set of test sieves. Initially sieves of 2mm. and 1mm. mesh size were used. However this was impractical and a sieve of 5.6mm. size was obtained and used in conjunction with the 2mm. sieve. The residues left on the sieves were then dried in a drying cabinet and eventually bagged and labelled.

5.The wet-sieved residues were then sorted into different categories of material,wieghed and bagged. The residue resulting from the floatation was examined and it was found that the vast majority of carbonised material had sunk and the floatation residue consisted completely of finely comminuted carbon and of no use to this assessment.

Results

The complete list of result is tabulated in the accompanying sheets.The abbreviations used are:-

A/Bone	Animal Bone
F/B:S/M	Fish Bone:Small Mammal Bone.
Char	Charcoal
M. Moll	Marine Molluscs
mm.	Millimetres
gm.	Grammes.

RESULTS

SAMPLE	QUANTITY	CATEGORY	A/BONE	F/B:S/M	CHAR	SEED	M.MOLL.
L(?)A	2 litres	>2mm.	102gm.	0.3gm.	3gm.	----	22gm.
		>1mm.	-----	0.4gm.	-----	----	-----
L(?)B	2 litres	>2mm.	69gm.	1.2gm.	2.4gm.	----	19gm.
		>1mm.	-----	0.4gm.	-----	----	-----
L(?)C	2 litres	>2mm.	3gm.	-----	4.3gm.	----	-----
		>1mm.	-----	Pres.	-----	----	-----
L80 D	2 litres	>2mm.	48gm.	-----	1gm.	----	1gm.
L42 E	2 litres	>2mm.	113gm.	0.3gm.	1.8gm.	----	7.5gm.
		>1mm.	-----	0.4gm.	0.3gm.	----	-----
L196F	2 litres	>2mm.	31.4gm.	1gm.	0.2gm.	----	4gm.
		>1gm.	-----	0.1gm.	-----	----	-----
L78& L76 G	2 litres	>2mm.	158gm.	0.4gm.	1gm.	----	27gm.
		>1mm.	-----	0.2gm.	-----	----	-----
L174H	2 litres	>2mm.	63gm.	0.2gm.	3gm.	0.2gm	3.2gm.
		>1mm.	0.2gm.	-----	-----	----	-----
L197I	2 litres	>2mm.	46.5gm.	-----	0.8gm.	----	12.6gm.
		>1mm.	0.2gm.	-----	-----	----	-----
L(?)J	2 litres	>2mm.	115gm.	-----	1.8gm.	----	-----
		>1mm.	-----	0.5gm.	-----	----	-----
L205K	2 litres	>5.6mm.	28gm.	-----	1gm.	----	-----
		>2mm.	0.2gm.	-----	0.2gm.	----	-----
L191L	2 litres	>5.6mm.	45gm.	-----	0.2gm.	----	-----
		>2mm.	3gm.	-----	3gm.	Pres.	-----
L201M	1 litre	>5.6mm.	28gm.	-----	0.5gm.	----	2gm.
		>2mm.	2.4gm.	-----	1gm.	----	1gm.
L204N	1 litre	>5.6mm.	17gm.	-----	0.6gm.	----	12gm.
		>2mm.	1.2gm.	0.2gm.	1gm.	----	-----
L287O	2 litres	>5.6mm.	167gm.	2.3gm.	30gm.	----	-----
		>2mm.	-----	8gm.	18gm.	----	-----
L199P	1 litre	>5.6mm.	14gm.	-----	-----	----	-----
		>2mm.	1gm.	-----	0.2gm.	----	-----
L284Q	2 litres	>5.6mm.	331gm.	-----	2.3gm.	----	2.7gm.
		>2mm.	9gm.	-----	2gm.	----	-----
L154R	2 litres	>5.6mm.	114gm.	-----	1.3gm.	----	-----
		>2mm.	0.3gm.	-----	0.3gm.	Pres.	-----
L(?)S	2 litres	>5.6mm.	23.8gm.	-----	1.5gm.	----	-----
		>2mm.	2gm.	-----	5gm.	Pres.	-----

L(?)T	2 litres	>5.6mm.	3gm.	-----	-----	----	-----
		>2mm.	2gm.	-----	1gm.	----	-----
L(?)U	2 litres	>5.6mm.	11.7gm.	-----	0.2gm.	----	-----
		>2mm.	1gm.	-----	0.6gm.	----	-----
L(?)V	2 litres	>5.6mm.	233gm.	-----	1gm.	----	36.6gm.
		>2mm.	8gm.	1.1gm.	4.2gm.	----	-----
L198W	1 litre	>5.6mm.	1.7gm.	-----	0.5gm.	----	1gm.
		>2mm.	1gm.	-----	2.6gm.	----	-----
L206X	1 litre	>5.6mm.	5.9gm.	-----	-----	----	-----
		>2mm.	1gm.	-----	0.3gm.	----	-----
L51 Y	1 litre	>5.6mm.	0.5gm.	-----	1.6gm.	----	-----
		>2mm.	0.6gm.	-----	1gm.	----	-----
L101Z	2 litres	>5.6mm.	30gm.	-----	0.6gm.	----	-----
		>2mm.	1gm.	-----	2gm.	0.4gm.	-----
L56 Z1	2 litres	>5.6mm.	55.2gm.	-----	2gm.	----	-----
		>2mm.	6.4gm.	-----	9.3gm.	----	-----
L68 Z2	1 litre	>5.6mm.	64gm.	-----	4.4gm.	----	-----
		>2mm.	3.6gm.	-----	3.3gm.	----	-----
L60 Z3	2 litres	>5.6mm.	27gm.	-----	0.2gm.	----	-----
		>2mm.	11.8gm.	-----	0.6gm.	Pres.	-----
L168Z4	1 litre	>5.6mm.	5.4gm.	-----	0.5gm.	----	-----
		>2mm.	2.2gm.	-----	3.4gm.	----	-----
L115Z5	1 litre	>5.6mm.	4.5gm.	-----	-----	----	-----
		>2mm.	1.2gm.	-----	0.6gm.	----	-----
L69 Z6	2 litres	>5.6mm.	28.5gm.	-----	0.3gm.	----	-----
		>2mm.	4.2gm.	-----	1.2gm.	----	-----
L39 Z7	2 litres	>5.6mm.	7.2gm.	Pres.	0.3gm.	----	106gm.
		>2mm.	3gm.	-----	-----	----	-----
L53 Z8	2 litres	>5.6mm.	70gm.	-----	1.8gm.	----	2.7gm.
		>2mm.	3.8gm.	-----	2.2gm.	----	-----
L61 Z9	2 litres	>5.6mm.	16.7gm.	-----	1.2gm.	----	4gm.
		>2mm.	2.4gm.	-----	1.1gm.	----	0.5gm.
L107	2 litres	>5.6mm.	-----	-----	-----	----	-----
Z10		>2mm.	0.4gm.	-----	-----	----	0.6gm.

L34Z11	1 litre	>5.6mm.	14.6gm.	-----	3.5gm.	----	-----
		>2mm.	10.3gm.	-----	5.6gm.	----	-----
L169	1 litre	>5.6mm.	1.4gm.	-----	2.3gm.	----	-----
Z12		>2mm.	0.8gm.	-----	3gm.	----	-----
L281	0.5 litre	>5.6mm.	83gm.	-----	0.7gm.	----	0.8gm.
Z13		>2mm.	0.2gm.	-----	0.2gm.	----	-----
L250	0.5 litre	>5.6mm.	6.8gm.	-----	2.5gm.	----	12.6gm.
Z14		>2mm.	1gm.	-----	0.3gm.	----	0.3gm.
L297	0.5 litre	>5.6mm.	3gm.	-----	4gm.	----	-----
Z15		>2mm.	1gm.	-----	1gm.	----	8.2gm.
L193	0.5 litre	>5.6mm.	-----	-----	-----	----	-----
Z16		>2mm.	-----	-----	-----	----	-----
L49	0.5 litre	>5.6mm.	2.5gm.	-----	0.3gm.	----	-----
Z17		>2mm.	0.7gm.	-----	0.8gm.	----	-----
L46	0.5 litre	>5.6mm.	11gm.	-----	-----	----	-----
Z18		>2mm.	Pres.	-----	-----	----	-----
L73	0.5 litre	>5.6mm.	0.1gm.	-----	0.5gm.	----	-----
Z19		>2mm.	-----	-----	-----	----	-----
L228	0.5 litre	>5.6mm.	15.2gm.	-----	-----	----	-----
Z20		>2mm.	0.1gm.	-----	0.3gm.	----	-----
L121	0.5 litre	>5.6mm.	16gm.	-----	0.1gm.	----	0.5gm.
Z21		>2mm.	1.2gm.	-----	1gm.	----	-----
L194	0.5 litre	>5.6mm.	17.3gm.	-----	-----	----	-----
Z22		>2mm.	0.7gm.	-----	0.2gm.	----	-----
L161	0.5 litre	>5.6mm.	-----	-----	-----	----	-----
Z23		>2mm.	-----	-----	-----	----	-----
L151	0.5 litre	>5.6mm.	0.8gm.	-----	0.2gm.	----	-----
Z24		>2mm.	0.1gm.	-----	0.6gm.	----	-----

Assessment

The assesment will be made in terms of categories of material, rather than context by context. For each category of material reference will be made to those contexts worth processing fully. An estimate of the amount of material that can be expected from each bulk sample will be extrapolated from the sub-sample results. This will give an estimate of the total quantity of any given material that can be obtained from the bulk samples. A method for efficiently processing each category of material will be outlined and an estimate of the number of man hours required to do this will be made.

Animal Bone

Animal bone, in varying degrees of preservation and concentrations was found in most of the sub-samples. The following table specifies those samples worth dealing with further and gives an estimate of the quantities of animal bone to be expected.

L(?)A	= 1530gm.	L199P	= 140gm.	L61Z9	= 240gm.
L(?)B	= 1035gm.	L284Q	= 5100gm.	L34Z11	= 146gm.
L(?)C	= 45gm.	L154R	= 1710gm.	L281Z13	= 830gm.
L80D	= 720gm.	L(?)S	= 357gm.	L49Z17	= 25gm.
L42E	= 1695gm.	L(?)T	= 45gm.	L46Z18	= 110gm.
L196F	= 465gm.	L(?)U	= 175.5gm.	L228Z20	= 152gm.
L78&76G	= 237gm.	L(?)V	= 3495gm	L121Z21	= 480gm.
L174H	= 945gm.	L101Z	= 45gm.	L194Z22	= 173gm.
L197I	= 697gm.	L56Z1	= 828gm.		
L(?)J	= 1725gm.	L68Z2	= 650gm.		
L205K	= 420gm.	L60Z3	= 405gm.		
L191L	= 720gm.	L168Z4	= 54gm.		
L201M	= 280gm.	L69Z6	= 427.5gm.		
L204N	= 170gm.	L39Z7	= 108gm.		
L287O	= 2505gm.	L53Z8	= 1050gm.		

This gives an estimated total of 29.935kg.of animal bone from this site.

It is proposed that this material be extracted by wet-sieving through a sieve of sieve size @0.5cms, since the 0.2mm. category examined contained only poorly preserved fragmented bone. If a large sieve was constructed, large quantities of bulk samples can be processed quickly and would make it worthwhile processing all those samples listed above, even those with low concentrations. Thereby a sample for analysis of >85% of the total amount of bone present, would be available.

It is suggested that this would take @10 days to process and about another 70 days for analysis and writing of the report.

Fish Bone:Small Mammal Bone

Specific sub-samples were found to containsmall identifiable bones. These were primarily fish bones but some were recognisable as those of small mammals. The following table identifies these samples and estimates the amount of bone to be expected.

L(?)A	= 10.5gm.	L196F	= 16.5gm.	L204N	= 3gm.
L(?)B	= 24gm.	L78&76G	= 9gm.	L287O	= 154.5gm
L80D	= 15gm	L174H	= 3gm.	L(?)V	= 16.5gm.
L42E	= 10gm	L(?)J	= 7.5gm.		

This gives an estimated total of 267.5gm. of fish bone:small mammal bone from this site.

This material would best be extracted by wet-sieving through a sieve of mesh size >2mm., with a preliminary sieving through a mesh of >5mm on order to remove the larger non-F/B:S/M components of the samples and therefore reduce the amount of sorting neccessary. Given the great amount of sorting that would be required to deal with all these samples, it is suggested that sample L287O be dealt with fully and supplemented with sub-samples from the other samples containing this category of material.

It is estimated that this would involve @10 days processing and @50 days for analysis and writing of the report.

Seeds

Carbonised plant remains were retrieved from some of the sub-samples. These consisted totally of carbonised cereal seeds. The following samples are regarded as being worth further examination, as they are estimated as containing the stipulated amounts of carbonised seed remains.

L174H = 3gm.(250seeds) L101Z = 6gm.(500seeds)

These would be best extracted by means simular to those for extracting F/B:S/M.

It is suggested that this would require 5 days for sorting and another 10 days for analysis and writing of the report.

Marine Molluscs

Very small fragments of marine molluscs (primarily oyster) were found in most sub-samples. However sample L39Z7 produced considerable amounts of marine molluscs (estimate: 615gm. of oyster; 975gm. mussel; cockle).

It is sugested that this category of material be processed by sieving through a 2mm. sieve. This would take @1 day to do with another 10 days for analysis and report writing.

Charcoal

Charcoal was found in almost all samples. The quantities are recorded in the results. This will give an outline of those contexts that could provide material for C14 dates if required. However, perhaps a small quantity of charcoal from sample L287O could be identified as this sample produced large amounts of charcoal clearly derived from a domestic hearth (given the amounts of bone that accompanies it).

This would ammount to no more than 1 days work and would indicate that wood locally available and easily collected for domestic fires.

Other material

The main categories encountered are those described above. In addition it was found that some samples contained whathas been identified as fish scales. However these can not provide any information other than the remains of an unspecified species of fish were deposited in a given context. Fish scales were recorded in samples L(?)V, L49Z17, and L2870.

Artifacts

The following artifacts were recorded:-

L(?)B	Mortar.	L(?)V	Slag ?
L80D	Glass fragment.	L51Y	Pottery.
L42E	Slag ?	L287O	" .
L197I	Pottery.	L154Z3	" .
L191L	Burnt clay/daub.	L250Z14	" .
L204N	" " " .	L121Z21	Daub.

Conclusions

The assessment has illustrated that there is a varied range of environmental material present in the samples taken. Although the actual amounts of material are not as substantial as would be ideally required, an examination of them will provide an insight into the economy of the site.

In total 167 days worth of work is estimated to be required in order to process, analyse, and report on the environmental material from this site.