APPENDIX 8: ASSESSMENT OF ORGANICS

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1. Introduction

1.1 A total of 44 objects from ARC CXT 98 have the remains of organic matter. The metal artefacts were all recovered by hand excavation.

1.2 The study of the material should assist the following fieldwork event aims:

- *To establish a chronology for the site.*
- *To help determine burial practices.*

2. Methodology

2.1 All the finds were examined for traces of organic material such as textiles, leather or wood. Since these mainly survive as traces on a metal object, they share the same accession number. The material appears to consist of impressions on corrosion product or mineral preserved organics from an original organic artefact. Preliminary assessment under low magnification suggests that little if any material remains truly organic.

2.2 The data was recorded on accession cards and on the Oracle database and subsequently converted to RLE Datasets.

2.3 The finds were broadly related to the graves on the grave plan and to their location in the graves.

3. Quantification

3.1 A total of 44 finds have traces of mineralised organic matter. Mineralised wood and textiles occur on 26 and eleven artefacts respectively, while one accession comprises wood fragments only. Traces of mineralised leather seem to be present on seven objects, while unidentified mineralised organic matter is present on four items. These materials occur in combination on seven items.

3.2 Four of these objects are buckles of composite metals, two are on objects of copper alloy while the remainder are of iron, mainly knives, spears and shields.

4. Provenance

4.1 Mineralised organic materials were present in 21 graves; most fragments are very small, but sufficient survives to address some of the research aims. Some of the mineralised organics from finds which have provisionally been identified as keys or chatelaine fragments could in fact be from coffins or smaller boxes.

Wood.

4.2 Most mineralised wood occurs in conjunction with shield bosses and grips, and in the shafts of spears, but is also found on knives. The best groups are from [246] and [315].

Textiles.

4.3 Most textiles are associated with buckles, but they also occur on shields, spears and knives. Grave [296] is the only one which has textiles marked on the site plan (over the thighs), but none were retrieved or noted on the objects. The best finds are from [214], [246], [261], [290] [293] and [372]; all finds, however, should be examined by a textile specialist. In all cases the amounts of cloth are small, but sufficient survives to show that different kinds of textiles are present, both fine linen (perhaps undergarments or shrouds) and coarser cloths, perhaps used for cloaks. Both types are visible on <70>, a spear from [290]. Textiles might have been expected in the workbox from [305], as has been found on other sites in the country (Crowfoot 1973), but none were recovered. No remains of the bags or purses survived other than traces on the purse-mount/strike-a-light <135> from grave [305].

Leather.

4.4 Leather remains are much harder to identify with certainty at this stage; some possible pieces were noted in association with mounts, but it possible that more survive in the corrosion products.

5. Conservation

5.1 This assessment considers the requirements for analysis and investigative conservation of the mineral-preserved organics on the metal finds from ARC CXT 98. It also considers work necessary to produce a stable archive in accordance with MAP2 (English Heritage 1992), and to the standard required by the Museum of London's "Standards for archive preparation" (Museum of London 1999).

5.2 Treatments are carried out under the guiding principles of minimum intervention and reversibility. Whenever possible preventative rather than interventive conservation strategies are implemented. Procedures aim to obtain and retain the maximum archaeological potential of each object.

5.3 All conserved objects are packed in archive quality materials and stored in suitable environmental conditions. Records of all conservation work and analysis technical reports are stored on paper and on the Museum of London collections management system (Multi MIMSY) and are temporarily stored at the Museum of London.

5.4 The accessioned metal finds and their associated organics were assessed by visual examination of the objects using a binocular microscope where necessary, and by examining their related X-radiographs.

Analysis/Investigative cleaning.

5.5 No conservation work on the accessioned metal finds should be carried out without prior analysis of the evidence of organics associated with them, which hold very great potential. Preliminary assessment under low magnification suggests that these consist of textile, wood and leather, mostly preserved in

mineralised form or as impressions in the corrosion product. Much of this material can be conserved *in situ*, provided that conservation treatments and cleaning for investigation and prior to illustration/photography are carried out selectively. A value judgement would have to be taken on pieces where detail is obscured by preservation of organics, however in most cases, the mineral-preserved organics provide very significant evidence about their context and should not be removed. Fully mineralised items can be stored as metals; enclosed with dry silica gel, but where true organic material survives, stable mid-range environmental conditions will be necessary to conserve this for future examination/analysis.

5.6 This approach may affect the survival of the metal element of these artefacts in the long term, but where there is good survival of mineral preserved organics, their rarity makes this approach a valid risk to take. Conducive environmental conditions; physically protective packaging and storage/display in stable temperatures and humidities will assist greatly.

5.7 Examination under an SEM could assist in most cases with identifying the material present; the nature, ply and spin of thread and type of weave; or, where an appropriate sample survives, the species of wood or source of leather. In most cases the textile remains appear too mineralised to separate out fibres for identification of an individual sample, but they may be distinguishable *in-situ*. The expertise of identification in textiles, wood and leather would need to be out sourced, and funding allowed to cover this work. In some cases, some preliminary cleaning away of surface corrosion would be necessary by a Conservator to clarify the detail before examination.

5.8 Provision for illustration and stabilisation for archive deposition or storage prior to display is covered in the metals assessment report.

6. Comparative material

6.1 There are numerous relevant sites in the county and beyond with which this site must be compared, notably Polhill, Kent (Crowfoot 1973) and Buckland, Dover (Crowfoot 1987). Little material from the local sites in the Rochester area has been published.

Wood.

6.2 The identifiable wood in the spears from Polhill was mainly found to be oak and hazel, with one of ash. At Buckland a wider range of wood species was identified, including lime and willow; the latter might be expected on a site by the Medway.

Textiles.

6.3 The textiles from Polhill were limited, being associated with only five objects, but a range of different weaves was found which can be compared with the Cuxton finds. Those from Buckland provide a much larger sample; as at Cuxton most were preserved on iron objects. Other sites with textile remains include Darenth Park, Dartford (Crowfoot 1990), Orpington (Crowfoot 1968), Sibertswold, Finglesham and Kingston in Kent (Crowfoot 1973, 203; Crowfoot 1958), Sutton Hoo and Broomfield (Crowfoot 1983), Dunstable and Kempston (Crowfoot 1973, 203); some of these sites are, however, earlier than Cuxton.

7. Potential for further work

7.1 The study of the material should assist the following Fieldwork Event Aims:

- *To establish a chronology for the cemetery.*

7.2 The organics offer little scope for dating other than by ^{14}C analysis; none of the wood is capable of dendro dating.

- *To establish a sequence of development within the cemetery.*

7.3 The finds may offer some scope for comparison of shields and spears and perhaps of dress, but they are unlikely to contribute to refining the sequence of development. Analysis of the insect pupae, and possibly also the textiles, however, may inform conditions at the time of different burials.

- *To help determine burial practices.*

7.4 The finds have the potential to conform on how the deceased was dressed and how the grave goods were placed in the grave. Study of the position of different finds in the graves and where the organic material occurs may help to inform on items which were no longer present by the time of excavation. Wood remains on the outside of a shield boss, for example, may derive from a collapsed shield (eg grave [372]), or from an adjacent spear (eg [315]). If the wood is compressed, it may indicate the lack of, or rapid collapse of a coffin. Good preservation suggests a coffin or a protected environment such as within a spear socket. Of special interest are the purses from male graves [261] and [282]; the layout of these finds in the graves may help establish the size of the original bags in which they were placed.

7.5 The textiles hold greater potential for comparative research. Can the nature, ply and spin of the thread be defined (eg. linen, flax, wool)? What is the range of fabrics (eg. tabby, twill, tablet weave)? Did the Cuxton people share the same preference for tabby weave as those at Buckland and Updown (Crowfoot 1987, 194)? If so, does it reflect a southern preference for less heavy cloth than was favoured in the north, or was the choice of cloth dictated by the burial rites, climate, or the season at the time of burial? Can colour or embroidery be detected? Are any hems or seams present? Is the textile on the buckles from belts or from other pieces of clothing? Analysis of the textiles might help to show whether mats were placed in the graves., What are the other organics? Does leather survive in any of the buckle plates and can it be identified to species? Can leather sheaths or fleece linings from them be detected on the knives

7.6 The following Landscape Zone aims (towns and their rural landscapes 100 BC-AD 1700) may be addressed when the finds are considered together with the other accessions:

- *The ways in which human populations moved through the landscape, including the organisation of communication networks.*
- *The economy of human populations using the landscape, including trade and contact with other populations.*

7.7 Identification of the wood used in the shields and spears may help to determine the species, the kind of landscape from which it was obtained, and perhaps differences between the materials used shields and spears. The textiles form an important addition to the finds from the known cemeteries of west Kent/the Medway area, of which only Polhill has been adequately published (Crowfoot 1973). Identification of the fibres and textile remains may help to determine their

quality (are they the work of professional weavers?) and establish whether any cloth or raw material was imported.

Further Work.

7.8 Further work should include:

- Scientific analyses of the organic remains
- Study of the relation of the finds groups to location on the site and comparison of the position of finds in the graves
- Comparison with material from surrounding sites
- Compilation of catalogues for inclusion in publication
- Liaison with conservation and other specialists
- Writing of discussion by object/function
- Writing of thematic texts
- Preparation of finds/instructions for illustration/photography
- Photography
- Conservation

8. Bibliography

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Table 1: Assessment of the organic materials

Context	Special number	Material	Period	Date	Comments
164-1	121	Iron	EM	7th century	Wood in the socket of a spear. Also pupae cases?
166	118	Iron	EM	7th century	Wood (mineralised) on a knife
172	116	Iron	EM	7th century	Wood (mineralised) associated with a knife blade X-6648
178	115	Iron	EM	7th century	Wood adhering to a chatelaine or chain, 3 pieces
190-3	120	Iron	EM	7th century	Wood (mineralised) associated with a knife
193	14	Copper alloy	EM	Later 7th century	Textile(?) remains inside a lace chape/strap end,
193	23	Composite	EM	7th century	Textile/wood/leather under a copper alloy mount
214-7	54	Iron	EM	7th century	Organics; slight traces on a round buckle
214-9	25	Composite	EM	7th century	Textile; excellent remains on the back of a composite buckle
240-C	51	Wood	EM	7th century	Wood (mineralised) with good potential for identification of species
246-A	46	Iron	EM	7th century	Wood in situ in spear shaft; also ?pupae cases.
246-D	49	Iron	EM	7th century	Wood (mineralised) possibly from spear? Also excellent textiles on shield grip; compare textile with 372
246-E	52	Iron	EM	7th century	Wood (mineralised) on the tang of a knife
246-E	146	Iron	EM	7th century	Wood in situ between twin domed rivets (?shield fitting);
261	57	Iron	EM	7th century	Textile fragments (excellent) on a chain/chatelaine;
261	147	Copper alloy	EM	7th century	Leather associated with a small tongue-shaped mount
282	69	Iron	EM	7th century	Wood/leather traces on a mount (?shield fitting);
282	76	Iron	EM	7th century	Wood.(good preservation) associated with a ?knife
285-B	68	Iron	EM	7th century	Wood fragments associated with a ?knife
290-A	70	Iron	EM	7th century	Wood (mineralised) and excellent textile preservation (2 types) on a spear
290-D	67	Iron	EM	7th century	Textile and/or wood adhering to a knife

Context	Special number	Material	Period	Date	Comments
293	66	Iron	EM	7th century	Wood (mineralised) on tang of a knife,
293	73	Iron	EM	7th century	Leather traces on a buckle with oval frame,
293	74	Silver	EM	7th century	Textile (excellent mineralised) on a ?silver pin.
296-A	79	Iron	EM	7th century	Wood on tang of a knife
296-B	77	Iron	EM	7th century	Wood in a hasp with chain link
296-D	122	Iron	EM	7th century	Leather and pupae cases on a round buckle,
299-B	81	Iron	EM	7th century	Wood on tang of a small angle-backed knife
299-C	72	Composite	EM	7th century	Textile (belt?); good remains on a composite metal buckle
305-C	89	Iron	EM	7th century	Textile/leather traces on a small oval buckle
305-F	135	Iron	EM	7th century	Textile (mineralised) traces on a purse/strike-a-light
312	94	Iron	EM	7th century	Wood (mineralised) on a small angle-backed knife
312	96	Composite	EM	650-700?	Textile/organics on a composite buckle
315-A	84	Iron	EM	7th century	Wood in shaft and textile remains on a spear
315-D	98	Iron	EM	7th century	Organics (?leather) on a buckle with oval frame
315-D/P?	99	Iron	EM	Late 7th/early 8th century?	Wood (mineralised wood) on a shield boss (as <100>)
315-F	99	Iron	EM	Late 7th/early 8th century?	Wood associated with shield boss
315-G	86	Iron	EM	7th century	Wood associated with a spear (part of <84>)
363	24	Composite	EM	Mid- 7th century	Organics (mineralised) on a composite buckle
363-A	97	Iron	EM	7th century	Textiles (mineralised) and ?pupae cases on a buckle,
372	61	Iron	EM	Mid- to late 6th century	Wood (mineralised) on the of outside of a shield boss, possibly from collapsed coffin; also good textile remains on grip; compare textile with 246
372	83	Iron	EM	Later 7th century	Wood in the socket of a spear.

Context	Special number	Material	Period	Date	Comments
372	85	Iron	EM	7th century	Wood in socket of a butt-ferrule
372	105	Iron	EM		Wood (mineralised) on a knife