APPENDIX 6: ASSESSMENT OF METALWORK

Lyn Blackmore Conservation by Liz Barham

1. Introduction

- 1.1 A total of 126 objects from ARC CXT 98 are of metal and 14 are of composite construction which includes metalwork. The majority is typical of the late 6th and 7th centuries. Most finds were recovered by hand excavation, but one or two were found in sieved residues. The study of the material should assist the following fieldwork aims:
 - To establish a chronology for the cemetery and a sequence of development within it.
 - To help determine burial practices.

2. Methodology

All the finds were examined. Each find was given an individual accession number, and the data was recorded on accession cards and on the Oracle database and subsequently transferred to RLE Datasets. Almost all the metalwork has been X-rayed and a few pieces have already been stabilised. The location of the finds in relation to the grave plan and their location in the graves has only been considered general terms.

3. Quantification

- 3.1 A total of 126 metal finds was recovered, together with 14 items which are of composite construction. The finds are stored in six large and four small plastic Stewart tubs.
- 3.2 The most abundant material is iron (87 accessions). Sixteen different types of artefact are made of iron; one item has yet to be identified (Table 14). The most common finds are knives (34 accessions), while buckles and spears are almost equally represented (12 and 11 accessions respectively). Four shield bosses are present, but there are no swords. Iron also occurs with other materials in eight composite items; iron rivets are also present in the bone comb.
- The second most common material is copper alloy (29 accessions). Twelve different types of artefact are made of copper only, and most are dress accessories and personal items (Table 14). Buckles are the most common object (12 accessions), with mounts in second place (6 accessions). In addition, copper occurs with other materials in seven composite objects.
- 3.4 Precious metals (silver and gold) are less frequent (Table 14). One pendant is made of gold alone, while another has a glass setting in a gold mount (see also glass assessment), while one buckle is of silver with decoration using gold and garnets. The eight items of silver jewellery include six rings in two sizes and a bulla pendant.
- 3.5 Mineralised organic matter is present on several items (see Organics Assessment).

Table 15: Summary quantification of the metalwork by material and object type

Object	Iron	Copper	Gold	Silver	Composite	Total
Bracelet		1				1
Buckle	8	12			5	25
Buckle plate		2				2
Chatelaine(?)	5					5
fragments						
Coin?		1				1
Lace tag		2				2
Disc	1	1				1
Ferrule	1					1
Hook/pin	1					1
Key	5					5
Knife	34				1	35
Mount	7	6			2	15
Needle case		1				1
Pendant			1	1	5	7
Pin	1	1		1		3
Purse		1				1
Purse/strike-a-light	1					1
Ring	2			6		8
Shield boss	5=4				1	6=4
Shears	2					2
Shield	1				1	1
Spear	11					11
Tool	1					1
Work box		2=1				2=1
Unknown	1				1	1

4. Provenance

- 4.1 Most items are probably of English/Kentish origin, but one or two buckles with triangular plates could be from the Continent or are Kentish copies, while a container or 'needle-case' may be from the eastern Mediterranean. An unusual ring-headed pin from grave [285] is of 'Celtic' style (see below. 6.7).
- 4.2 Most of the copper alloy is in reasonable condition. The most interesting items comprise the workbox, needle-case/container and pendants from grave [305], and the purse from [282]. There is also a good range of buckles.
- 4.3 The iron varies greatly; some of the shield bosses, spears and knives are near complete, although some are far from robust, but many other finds are badly fragmented, especially the thinner items such as shield grips, keys and chatelaine attachments. The identification of some of these latter finds is tentative and may change as the analysis proceeds.
- All the finds derive from graves. The largest group is from the rich female grave [305], which contained 17 items. Smaller groups were found in grave [372] (8 items), grave [315] (8 items) and [246] (7 items). The numbers of objects, however, do not necessarily indicate the richness of the grave. All the groups are important even those with only one or two finds, as they contribute to part of the wider picture (see below), but a few stand, either because they contain more objects or because of the nature of the finds.

Male graves.

- 4.5 Arguably the best male groups are from burials [261] and [282], both of whom wore belt buckles of continental style and seem to have had purses hanging from the belt. Grave [261] is also the only burial with 'coins'; one is real, but illegible, while a disc of silver is probably a symbolic coin. An iron disc may have had the same function, although it could be from a buckle. These were found with a small tongue-shaped mount and were probably contained in a bag or purse. This has not survived, although an iron ring and a copper alloy buckle may have been part of it. The purse seems to have been placed beneath a bunch of keys. Other finds from this grave comprise a lace chape and a mount.
- 4.6 The purse in grave [282] has a kidney-shaped metal frame with two small buckles which may have fastened the flap. It seems to have contained a knife (or shears) and two possible tools. The belt set in this grave is intriguing as it either comprises parts of two buckles (perhaps a repair), or has a D-shaped belt plate and a triangular strap-end; the latter would be unusual. Also in this grave was a large knife/
- Also of note is grave [246], which contains a spear, shield, and a composite buckle, originally with two garnet mounts encircled by beaded gold wire. The fact that the buckle was found by the thigh suggests that it may have slipped from the waist. However, as the waist was probably hidden by the shield, it is not impossible that the buckle was purposely placed so that it could be seen. The other weapon graves are also of interest for the combination of different shield and spear types, which may help refine their dating. All the above can inform on dress and burial rites as well as trade and economy.

Female graves.

4.8 The best female group is from [305] (see above), which was richly furnished with jewellery of copper, silver and gold, as well as other personal items such as a work box and a needle-case/container. The workbox is squashed but the fine punched decoration on the lid and base is visible on the X-ray, while the zoomorphic attachment plate is particularly interesting. The second most elaborate female grave is [214], which had a number of metal items placed on the left side, at the waist and hip. These include shears, which lay under the left arm, and two knives, and a chatelaine with iron ring and two keys. A composite buckle at the waist may have fastened a shroud. Other finds include a buckle, three composite pendants and a bone comb with iron rivets (see bone and glass assessments). Both these graves can inform on dress and burial rites as well as trade and economy.

Specific items.

4.9 It was noted that knives, shields and spears were placed in a variety of locations. Knives were found to the left of the body, to the right, on the chest, at the waist or at the feet; some were pointing up while others were pointing down or laid obliquely. Spears were placed to the right or the left of the body. In grave [164] the shield and spear were on the same side of the body, but in grave [246] they were on different sides, and the shield appears to have been over the hip, as if held by the deceased. In two graves the shields were placed at or over the feet. These differences have not yet been quantified but are of relevance to the different research aims (Section 7).

5. Conservation

- This assessment considers the requirements for finds analysis, illustration and investigative conservation of the metal finds from ARC CXT 98. It also includes 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).
- 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.
- Most conservation work on metal artefacts begins with visual examination under a binocular microscope followed by mechanical cleaning using scalpel and other hand tools. Occasionally other mechanical devices such as air abrasive and power pen or mini drill are used. Mechanical cleaning will reveal detail and a conservation surface beneath often voluminous corrosion products enabling the true shape and purpose of the artefact to be understood. After cleaning to reveal detail copper alloys were stabilised with a corrosion inhibitor (benzotriazole) and coated with a protective lacquer (Incralac). Where necessary and appropriate, iron accessioned finds are coated with a tannic acid solution corrosion inhibitor.
- All conserved objects are packed in archive quality materials and stored in suitable environmental conditions. Records of all conservation work are prepared on paper and on the Museum of London collections management system (Multi MIMSY) and are temporarily stored at the Museum of London.
- The accessioned metal finds were assessed by visual examination of the objects using a binocular microscope where necessary, and by examining their related X-radiographs. The finds were reviewed with reference to the above assessment by Lyn Blackmore.
- Five copper alloy artefacts (including 2 coins) and five iron artefacts from the ARC CXT 98 assemblage were conserved in 1999 to stabilise them and to enable identification of the coins. All of the metal artefacts have been X-rayed. Where any detail needs to be clarified and a further X-ray image might assist, this has been included in the time estimate provided as part of the investigative conservation work.

Analysis/Investigative cleaning

- 5.7 It must be stressed that no conservation work can be carried out without prior analysis of the metals where relevant, and of the evidence of organics associated with many of the metal items, which hold very great potential.
- Further analysis is recommended for 4 metal accessioned items to identify metal elements present on their surfaces:
 - [282]<137> Buckle X-ray flourescence (XRF) to check for silvering or gilding on surface and XRF to identify white fill mineral packing back of buckle.
 - [261] <140> and <148> two stud fittings of identical design XRF to check for any solder on the inside, to determine how these were attached
 - [285]<126> Pin XRF to check for any gilding on surface
 - [261]<127> Disc XRF to check the identity of the metal.
- Three items were identified for further cleaning to investigate their construction.

 Treatment is necessary post cleaning. These were:

- [285] <126> Pin
- [193] <14> Lace chape
- [261] <12> Lace chape

Illustration.

Twenty seven accessioned items were identified for conservation work prior to illustration/photography. This will involve re-adhering and support fills for broken parts in some cases, cleaning and subsequent treatment in others, repacking in most cases. Please note the above recommendation regarding prior analysis.

Gold

- [305] <1> Pendant
- Silver
- [305] <9> Ring
- [305] <10> Ring
- [305] <185> Pendant
- [305] <183> Ring
- [305] <151> Ring

Copper

- [372] <2> Buckle
- [305] <22> Needlecase
- [305] <21> Workbox
- [285] <126> Large pin
- [261] <15> Buckle

Iron

- [293] <63> Spearhead
- [312] <138> Spearhead
- [246D] <49> Grip
- [315P] <99> & [315F] <100> Shield boss
- [164.5] <65> Shield boss
- [372] <61> Shield boss
- [290A] <70> Spearhead
- [299A] <62> Spearhead
- [164.1] <121> Spearhead
- [276] <45> Knife
- [193] <119> Knife
- [178] <123> Knife
- [164.3] <117> Knife
- [312] <94> Knife
- [214.4] <145> Knife
- [315A] <84> Knife
- [305D] <90> Knife
- 5.11 The need to clean three composite items including metal [214.10] <41> and [214.11]<44> and [246G] <8>, for illustration/photography has been noted elsewhere in respectively the glass, the bone and the stone report.

Preparation for archive deposition.

- Nine copper items are actively corroding and should be treated to stabilise them. These are as follows. Please note the above recommendation regarding prior analysis.
 - [282] <137> Buckle
 - [290C] <6> Buckle
 - [282] <137> Buckle
 - [178] <3> Buckle
 - [190] <134> Buckle
 - [282] <17> Mount
 - [285] <126> Pin
 - [164.4] <7> Buckle
 - [246G]<8> Buckle
- All the ironwork is actively corroding. It is generally in deteriorating condition, and in one particular case is at an advanced stage ([372]<85>Spearhead). All the iron accessioned finds should continue to be packed in dry silica gel.
 - [372] <85> should be actively treated as added protection as it is already close to disintegration.
- Twenty eight accessioned metal items that need no further work, are insufficiently supported in their boxes and need re-packing. These are:
 - Iron: [367] <107>; [214.7] <50>; [293] <71>; [305F] <87>; [240C] <51>; [240B] <56>; [296] <78>; [190.4] <114>; [296] <77>; [285B] <68>; [246A] <46>; [315G] <86>; [261] <57>; [240A] <53>; [73] <293>; [130] <261>; [48] <246B>; [72] <299C>; [305C] <89>; [54] <214.7>; [96] <312>; [246E] <52>; [240D] <59>; [293] <66>; [261] <131>; [290D] <67>; [293] <63>; [315A] <84>.

6. Comparative material

General

6.1 There are numerous sites in the county and beyond with which this assemblage should be compared. The material appears to fit well within the Kentish culture of the late 6th and 7th centuries. Although some pieces such as the large 'purse frame' are quite unusual, several parallels for the buckles, purse mount/strike-a-light, spears and shields have already been noted in other cemeteries across the country. Some examples of relevant sites/finds are listed below.

Relevant sites

6.2 Sites in north-west Kent which have, or are likely to have, relevant comparative material include Horton Kirby (Cumberland 1940), Cuxton, Strood and various sites in Rochester (Payne 1985; 1897; 1900), and Polhill (Philp 1973, fig.54, No.507). Little of this material has been adequately published, and so museum collections (notably those in Rochester and Maidstone) should also be visited to ensure that Cuxton is correctly related to them. Other sites in Kent include Faversham (eg Leeds 1936), which is broadly contemporary with this group, Buckland, near Dover (Evison 1987), and Finglesham (Hawkes 1958). Some parallels also exist in the much larger assemblage from Saltwood, although this may have a longer time scale and contains a wide range of objects not found at Cuxton (such as jewellery of Scandinavian and Frankish type, buckets and Coptic bowls). Comparanda will also be found in Faussett's *Inventorium* Sepulchrale and from other early archaeological work in Kent (Swanton 1973; Meaney 1964; Geake 1997). Sites outside Kent include the Cambridgeshire cemeteries of Burwell and Shudy Camps (Lethbridge 1931; 1936), Continental literature has not been checked, but there are undoubtedly relevant assemblages in France and the Low Countries.

Work boxes

Workboxes similar to <21>/<141> have been found at various sites including Buckland (Evison 1987, 106-8), at Dunstable, Burwell (eg. Lethbridge 1936, Fig.36), and Polhill in Kent (Philp 1973, Fig.53, No.489; Hawkes 1973, 196-8); these reports and that on Finglesham reports include numerous references to similar finds from other sites. The 'needle-case' <22> may prove to be an import from the eastern Mediterranean; stylistically it can be compared with a censer from Glastonbury Abbey, also thought to be from the eastern Mediterranean (now in the British Museum). The Cuxton container is probably related to finds in bone from Buckland and from Liege, Belgium (Evison 1987, Fig.21b, 108-110).

Jewellery

Pendants with filigree decoration of similar type to the gold example <1> from Cuxton have been found at Faversham (Leeds 1936, Pl.XXXc) and Sibertswold (Hawkes 1990, PL.4, L.21), amongst other sites. Gold pendants, with and without glass settings and similar to those from [305] have been found at Risely and Sibertswold (Cumberland 1940; Hawkes 1990, Pl.4, L.22; see glass assessment), Burwell (Lethbridge 1931, Fig.36) and Buckland, Dover (Evison 1987), amongst others.

Purses

Purse frames like [282] <20> are very rare, especially with associated buckles and mounts and possible contents. A much more elaborate example was found at Sutton Hoo, while simpler examples containing tools are known from Swallowcliffe Down and a few other sites. The iron mount/strike-a-light is a much more common type, with several parallels in Kent and also at Shudy Camps, Cambs.

Buckles and lace tags

The 'Continental' buckles and possible strapend with triangular plates ([261], [282]) could be imported, but are more likely to be Kentish copies of continental styles. Several parallels from Faversham and other sites are now in the British Museum and Ashmolean Museum (MacGregor and Bolick 1993); they include a buckle with decorated D-shaped plate and iron axis pin from Faversham (*ibid*, no.34.1). Many parallels can be found for the small copper alloy buckles, some of which may derive from scabbards (*cf.* Lethbridge 1936, 13-4; Fig.7; Swanton 1973, Fig.64). A buckle with three large decorative rivets securing the rectangular buckle plate has a parallel at Polhill, where a lace tag was also found (Philp 1973, fig.54, Nos.491-2; no.507).

Ring-headed pin

No real parallel has yet been found for the unusual ring-headed pin with its stepped profile ([285] <126>; the plan ring is off-set from the shank); it could be part of a set of linked pins, but also resembles more ornate handpins of the Saxon period which have been described as Celtic (Youngs 1989, 25-6; *cf* examples in the British Museum). The term 'Celtic' in this sense is used to describe an artistic style most prevalent in Ireland and Scotland in the 6th to 9th centuries, which was spread by missionaries and incorporated Frankish and Anglo-Saxon traditions.

Weapons

Spears and shields figure frequently in cemetery assemblages in the region. Several parallels exist in the material from sites in Rochester, including a ferrule identical to [293] <71> found at Roebuck Road and a shield with four circular rivets like those from [372] <108> from Watts Avenue. Another local site with weapons is Strood. Parallels for the spear styles can be found in Swanton (1973) and the sites listed therein. A butt-ferrule from [372] is paralleled at Guildown, Surrey (Swanton 1973, Fig.58) and also at Finglesham, Kent (Hawkes 1958, 22 Fig.14c). The shield boss types can be matched in Dickinson and Härke (1993).

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 With the exception of one or two possible heirlooms, the assessment has shown that the metalwork is slightly later than first thought. It indicates a general time-scale of c. AD 580 to 700 for the site, and that most graves probably date to the period to AD 600-680. A chronological sequence of the shield boss types represented can be traced from [372], to [315], to [164], to [246], and many other finds can be broadly placed within the earlier, mid- or later 7th century. The potential thus exists to refine the dating of some, if not all graves when the combined dating evidence of different groups of finds has been analysed and thus offer a more precise chronology for the site.

- *To establish a sequence of development within the cemetery.*
- At present it can be noted that three of the four graves with shields are on the northern side of the site; none have ring ditches. The four graves with the most prestigious grave goods are at the south-western end of the site, with a broadly east-west orientation; three of these lack associated ditches. Most of the graves within penannular ditches contained few finds. Some possible trends can thus be identified and explored. Correlation of the refined dating evidence for the graves, the spatial distribution of the burials and the nature and orientation of the different classes of burial will permit better conclusions to be drawn regarding the place of different burial practices within the sequence of cemetery development and which of these are contemporary.
 - To help determine burial practices.
- 7.4 The assessment of the metal shows that the finds derive from male and female graves. As a whole the assemblage is normal, but there are some important individual finds and useful assemblages of both weaponry and domestic/personal equipment. It can be seen that some graves were simply furnished, while two female graves and two male graves were more prestigious; of these, a male and a female were buried side-by-side and may be related. The nature and placing of the finds in the graves shows no deviation from the norm at the period during which the cemetery was in use; indeed, most graves are quite simply furnished, especially by comparison with sites such as Saltwood. Nonetheless, GIS, computer-based and manual study of the combination and positioning of the different items in the graves (or how they have corroded), will help to throw more light on burial practices and rituals which may reflect age, gender or status (see above, provenance). If the patterns already noted can be developed by or new patterns identified with can be these can then be compared with other sites of the period. In particular, the finds have the potential to inform on:
- ➤ a) The dress in which the deceased was buried and how the choice of belt buckle, the use of pins and buckles at the shoulder to fasten cloaks may relates to age, gender, status and social or cultural affinities or changes through time (see also organics assessment).
- ➤ b) Whether differences in the placing of items in male, female and child graves can be related to age, gender, status or cultural affinities. Knives and buckles are particularly useful indicators as they are common to all categories of burial on the site, were found in a variety of positions, and occur in different sizes; some may been in a sheaths. The positioning of spears and shields may help to identify specific male groups or burial practices for males of different ages.
- 7.5 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.

- 7.6 The Medway was a northern boundary of the kingdom of Kent, and so the weapon graves can be used to address questions related to the changing political situation in the 7th century, and the defence of the river crossing at Rochester. Weapons of the 5th and 6th century would have been used in this way, but if the need to defend the crossing continued in the 7th century why are there comparatively few shields and no swords (see also general assessment of the graves).
 - The economy of human populations using the landscape, including trade and contact with other populations.
- 7.7 The metal finds from this site comprise a very important assemblage with some high quality pieces and some of particular interest. Most are quite homogenous, and show a Kentish 'cultural identity' for the site, but a few finds such as the continental-type buckles, the purse frame and the pendants are more informative as to trade and wider contacts. Given that there are only two continental-type buckles, what is their significance? Do they represent gifts or incomers to the local community? Whether imported or not they demonstrate some influence of foreign dress on the local population. XRF analysis of the copper alloys would determine which items were of bronze, brass and might demonstrate whether items were produced at the same site or different sites. This is particularly applicable to the buckles, which constitute the largest group of copper alloy finds and to the 'Celtic' pin and needle-case/container, as the latter two may demonstrate contact (direct or indirect) with places beyond the usual Kentish/Frankish sphere. The relatively large amount of iron from the site shows that the community had sufficient means to bury artefacts that could otherwise have been recycled. Metallurgical analysis of the iron might show the composition of the iron and the techniques used in its manufacture; this data could then be compared with that from other sites, including Saltwood and the analysis of finds from other sites such as Ramsbury in Wiltshire (Tylecote et al 1980).

Further research aims:

7.8 The group forms an important addition to the finds from the known cemeteries of west Kent/the Medway area. Study of the finds in their own right will inform on technology and use, and will help to provide a much-needed typology of different classes of finds for this part of Kent, where many earlier finds still go unpublished.

Weapons

The weapons form an important group of finds and merit study as a group. The typology and dating of the shields should be considered in the light of the typology and research presented by Dickinson and Härke (1993); it is of note that the true sugar-loaf form considered typical of the later 7th century is absent from this group. The spears have been provisionally assigned to groups defined by Swanton (1973), but these identifications, and the function of the spears need to be confirmed. Are they all throwing spears and are they all typical for Kent? Are any forms rare examples of their type in Kent? Apart from typology, the technology of the spears should also be considered, *ie.* metallurgy and evidence for pattern welding. It may be possible to reconstruct the diameter of the shields from fittings such as the four rivets, and it must also be established whether some of the longer, thinner items currently listed as keys or possible chatelaine fragments are not parts of shield grips. This study would also inform on the function of the site in the context of the Medway as a boundary of Kent.

Knives

7.10 The knives occur in a range of shapes and sizes. All are small to medium in size, but some are very small indeed; some are straight-backed, while others are angle-backed; no seaxes are present, although [178] <123> is a smaller version of this form. In some cases the nature of the handles and presence of sheaths can be suggested. The collection can be used to construct a typology of shape, size, date and function (the latter yet to be determined) which can be compared with other sites and then applied to questions such as economy and trade connections.

Technology

7.11 Scientific analysis of the selected spears, knives and composite items will inform on their construction and technology. The metal of buckle [282]<137> should be tested to ascertain if it was silvered or gilded, while the plaster-like filling must also be identified and its function determined; was it a filling to keep weight down? If so, why does it also cover part of the upper surface? This work is also of relevance to questions of burial practice and the wider economy.

Further work

- 7.12 It is recommended that all finds are illustrated from life or from X-ray in order to present complete inventories of the graves. Some of this could be achieved by details of grave plans, as in the Buckland report. The better pieces (c.100) should be drawn and or/photographed for the catalogues; the best examples of each object type could be used to illustrate typologies in artefact discussions. Further work should include:
 - 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 literature on relevant sites
 - Visits to museums and relevant collections to view unpublished material (British Museum, Rochester, Maidstone, Canterbury and Dover museums, Saltwood and any other CTRL Saxon sites)
 - Compilation of finds catalogue for inclusion in publication
 - Liaison with conservation and other specialists (beads, wood and textiles) Study and integration of specialist analytical reports
 - Writing of finds discussion by object/function type
 - Preparation of finds/instructions for illustration/photography
 - Conservation
 - Scientific Analysis & investigative cleaning
 - Conservation for illustration/photography
 - Preparation for archive deposition

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Table 16: Assessment of the metalwork by material and object type

Context	Special number	Material	Count	Period	Date	Description and comments
299-С	72	Composite	1	EM	7 th century	Buckle. Iron with copper alloy rivets; very poor condition.
214-9	25	Composite	1	EM	7 th century	Buckle. Iron with copper alloy rivets X- 6642; Investigate/conserve
246-G	8	Composite (silver, gold garnet)	1	EM	Mid-to second half of 7 th century	Buckle. With two fragments of buckle plate, silver. One (of two) cabochon garnet in mount of beaded gold wire. X-6643. Conserve/restore for photo/display
312	96	Composite	1	EM	Later 7 th century	Buckle. Iron with copper rivets (decorative); X-6653. Poor condition but clean for photo/display
363	24	Composite	1	EM	Mid-7 th century	Buckle. Complete; iron frame with copper alloy plate.X-6642
299-В	82	Composite	1	EM	7 th century	Knife? Complete; iron with copper rivet ?pattern welding X-6656
193	23	Composite	1	EM	7 th century	Mount. Copper on textile wood/leather; X- 6642; clean/investigate (some mould)
246-F	13	Composite	1	EM	7 th century	Mount. From shield? Complete oval plate +2 perforations; copper with iron on the back. X-6642; stabilise
305	186	Composite	1	EM	7 th century	Mount. Copper/iron; X-6643
305-D	93	Composite	1	EM	7 th century	Pendant. Bone or amber in iron mount; cf [214]. X -6653;
214-11	44	Composite	1	EM	7 th century	Pendant. Decorated antler disc with iron mount X- 6646. Clean for photo/display

Context	Special number	Material	Count	Period	Date	Description and comments
214-10	41	Composite	1	EM	Late 6 th or 7 th century	Pendant. Copper and reused bead with reticella decoration. Clean for photo/display
214	40	Composite	1	EM	7 th century	Pendant. Antler/iron
305	39	Composite	1	EM	7 th century	Pendant. Complete; small gold pendant with green glass setting
315-E	101	Composite	1	EM		Shield. X-6653 wood, iron and copper
305	19	Copper	1	EM	7 th century	Large bracelet, with twisted fastening; complete. Good condition. X-6644
290-С	6	Copper	1	EM	Mid-late 7 th	Buckle. Tiny buckle with oval frame and square buckle plate with serrated edge. X-6642
164-4	7	Copper	1	EM	mid 7 th -century	Buckle. Very small; oval frame and triangular plate. X-6642
178	3	Copper	1	EM	7 th century	Buckle. Complete; small oval frame, square buckle plate, X-6643
190-1	4	Copper	1	EM	mid-7 th	Buckle. Complete; tiny oval frame and rectangular buckle plate. X-6642
190	134	Copper	1	EM	7 th century	Buckle plate. Two tiny fragments
261	18	Copper	1	EM	Late 6 th - to early 7 th	Buckle. Complete oval frame; see <16>. X-6642/6644;
261	133	Copper	1	EM	7 th century	Buckle. Complete; tiny. X-6642
282	137	Copper	1	EM	Late 6 th - to early 7 th century	Buckle. Large, with integral triangular plate in two pieces (laminated). Continental type; filled with plaster-like matter, which also covers part of the upper surface. X-5883. Silvered or gilded? Test metal
282	188	Copper	1	EM	mid-7 th century	Buckle. Complete; tiny buckle associated with purse; see <189><190>. X6643

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Context	Special number	Material	Count	Period	Date	Description and comments
282	17	Copper	1	EM	7 th century	Mount. Complete; triangular with tiny rivets. X-6642;
282	190	Copper	1	EM	7 th century	Mount. Strip, associated with purse; see <188><189>. X-6643
305	22	Copper	1	EM	7 th century	Needle case. Complete; incised decoration, lid attached to a chain, possible import. X-6644. Good condition; clean for photo/display
285	126	Copper	1	EM	Mid to later 7 th century?	Pin. Unusual ring- headed form (Celtic or part of set of linked pins? Possibly gilded? X-6642. Test metal/investigate construction/clean for display/photo
282	20	Copper	1	EM	Later 7 th century	Purse. Holes for attachment to cloth. Associated with two small buckles and mount (<140>, <148><149>; X-6643
305	21, 141	Copper	1	EM	Second half of 7 th century	Workbox. Complete; cylindrical but squashed, other fittings present. Punched cruciform decoration on lid and base, and a zoomorphic attachment plate. X-6641. Clean for photo/display ?restore
305-Р	1	Gold	1	EM	Second half of the 7 th century	Pendant. Complete; scutiform with filigree quatrefoil and central boss (applied, not repousse); X-6643. Clean for photo/display
246-B	48	Iron	1	EM	7 th century	Buckle. Small oval with pin; X-6646
296-D	122	Iron	1	EM	7 th century	Buckle. Complete circular frame, with pin (conserved); X-6651.
305-C	89	Iron	1	EM	7 th century	Buckle. Complete; small oval frame with long triangular plate; X-6650. Clean for photo/display

Context	Special number	Material	Count	Period	Date	Description and comments
315-D	98	Iron	1	EM	7 th	Buckle. Complete; oval
313 D	70	non	1	Livi	century	frame; X-6650
363-A	97	Iron	1	EM	7 th	Buckle. Complete with
303-71	71	Hon	1	LIVI	century	rectangular buckle plate;
					Contary	X-6650.
						Clean/investigate
						construction
166	111	Iron	1	EM	7 th	Buckle. Complete with
100	111	non	1	Livi	century	pin; oval frame; poor
						condition. X-6651
214-7	54	Iron	1	EM	7 th	Buckle. Complete with
21.,		non	1	Livi	century	scarf joint (bent); X-
					Containy	6646.
293	73	Iron	1	EM	7 th	Buckle. Oval frame, pin
2,5	, 5	Tion .	1	Livi	century	missing; X-6651
296-B	77	Iron	1	EM	7 th	Chain/hasp with ring; 3
2,0 5	, ,	Tion .	1	Livi	century	pieces; X-6653.
296-C	78	Iron	1	EM	7 th	Chatelaine or keys; as
2,00	, 0		1	2	century	<77>; X-6652
178	115	Iron	1	EM	7 th	Chatelaine or chain, 3
170	110	Tion .	1	Livi	century	pieces; X-6653.
261	57	Iron	1	EM	7 th	Chain/chatelaine. X-
201		II OII	1	Livi	century	6653. Poor condition
					Contain	(21 fragments).
305	87	Iron	1	EM	7 th	Chain. X-6650
					century	
261	129	Iron	1	EM	7 th	Disc, perforated ?buckle
					century	fitting?symbolic coin
293	71	Iron	1	EM	7 th	Ferrule; from a spear.
					century	Cylindrical binding
						around a central tang. X-
						6654
164-2	110	Iron	1	EM	7 th	Hook or key?; X-6650
					century	3
214-7	143	Iron	1	EM	7 th	Key bit. X-6646; from
					century	<60>
214-7	144	Iron	1	EM	7 th	Key bit. X-6646; from
					century	<60>
214-7	60	Iron	2	EM	7 th	2 keys in 6 pieces) - see
					century	<143> <144>; X-6647
		<u> </u>				Poor condition
261	130	Iron	1	EM	7 th	Key or chatelaine
					century	fragments X-6554;
						very poor condition
						(c.20 small pieces).
190-4	114	Iron	1	EM	7 th	Key bit? X-6653 end
					century	fragment?

Context	Special number	Material	Count	Period	Date	Description and comments
240-D	59	Iron	1	EM	7 th century	Knife. Complete small blade/tang; possibly in leather case; poor condition but associated wood; X-6646; as <51>?
246-E	52	Iron	1	EM	7 th century	Knife. Blade with part of tang, tip missing; X-6646
282-	125	Iron	1	EM	7 th century	Knife. Complete (2 pieces); angle-backed type, poor condition; X-6650
290-D	67	Iron	1	EM	7 th century	Knife. Blade + tang (3 pieces) in poor condition; X-6646.
290-D	150	Iron	1	EM	7 th century	Knife. X-6651
296-A	79	Iron	1	EM	7 th century	Knife. Complete (2 pieces); X-6651.
299-В	81	Iron	1	EM	7 th century	Knife. Complete small angle-backed; X-6648
305-D	90	Iron	1	EM	7 th century	Knife. Blade;. poor condition. X-6648; as <92>?
305-D	91	Iron	1	EM	7 th century	Knife. Blade (2 pieces, poor condition); X-6648
315-B	104	Iron	1	EM	7 th century	Knife. Blade, poor condition. X-6651
363-B	102	Iron	1	EM	7 th century	Knife. Long angle-backed knife (2 pieces; see also <103>); X-6648
363-B	103	Iron	1	EM	7 th century	Knife. Tang; X-6651 (part of <102>)
164-3	117	Iron	1	EM	7 th century	Knife. Complete; small, angle-backed blade+tang,;X-6648. Clean for photo?
166	118	Iron	1	EM	7 th century	Knife. Tang and part of blade; X-6648;
172	116	Iron	1	EM	7 th century	Knife. Blade fragment, X-6648
178	123	Iron	1	EM	Later 7 th century	Knife. Complete; medium-sized angle- backed seax-type; reasonable condition. X- 6655. Clean for photo?

Context	Special number	Material	Count	Period	Date	Description and comments
190-3	120	Iron	1	EM	7 th	Knife. Complete but
170-3	120	non	1	LIVI	century	missing tip; large knife
					Century	blade/tang, poor condition;
						X-6655
190	149	Iron	1	EM	7 th	Knife. Fragments X-
					century	6655; (was <120>)
193	119	Iron	1	EM	7 th	Knife. Complete small
					century	blade; X-6651. Clean
						for photo?
214-4	58	Iron	1	EM	7 th	Knife. Blade and part
					century	tang; poor condition;. X-
						6646
214-4	145	Iron	1	EM	7 th	Knife. Blade and part
					century	tang (3 pieces). X-6646
						(was <58>)
261	131	Iron	1	EM	7 th	Knife. Half of a long
					century 7 th	blade. X-6648
276	45	Iron	1	EM	7 th	Knife. Complete small
					century	blade + tang; X-6650.
					th	Clean for photo?
293	66	Iron	1	EM	7 th	Knife. Complete blade +
					century	part tang (2 pieces);
					41-	poor condition. X-6651.
305	88	Iron	1	EM	7 th	Knife. Blade (3 small
					century	pieces); X-6648
305	92	Iron	1	EM	7 th	Knife. Tang; X-6653; as
					century	<90>?
312	94	Iron	1	EM	7 th	Knife. Complete small
					century	angle-backed; X-6648.
					41-	Clean for photo/display
312	95	Iron	1	EM	7 th	Knife. Blade; X-6648;
					century	blade
318	139	Iron	1	EM	7 th	Knife. X-6651
					century	
323	124	Iron	1	EM	7 th	Knife. 6 small fragments,
					century	very poor condition; X-
267	106	T	1	EM	7 th	6653
367	106	Iron	1	EM	′	Knife. Blade (2 small
272	105	Iror	1	EM	century 7 th	pieces); X-6648
372	105	Iron	1	EM	,	Knife. Complete blade
					century	(4 pieces, poor
205 D	60	Inon	1	EM	7 th	condition); X-6651.
285-B	68	Iron	1	EM	'	Knife. Six fragments in
202	7.0	T	20	EM	century 7 th	poor condition; X-6653.
282	76	Iron	2?	EM	1 '	Knife. Possibly two
					century	items (7 pieces); X-
						6650 in very poor
						condition.

Context	Special number	Material	Count	Period	Date	Description and comments
246-E	146	Iron	1	EM	7 th	Mount. Twin domed
					century	rivets? shield fitting; X-
						6646.
149	109	Iron	1	EM	7 th	Mount or hinge X-6650;
					century	clean to investigate
190-5	112	Iron	1	EM	7 th	Mount. With 3 rivets X-
100.2	112		1	TD 6	century 7 th	6653
190-2	113	Iron	1	EM	,	Mount. X-6653
261	132	Inon	1	EM	century 7 th	Mount Complete
261	132	Iron	1	EIVI	,	Mount. Complete; curved ?coffin/box
					century	fitting X-6648
372	108	Iron	4	EM	6 th	Mount. 4 large circular
312	100	11011	'	Livi	century?	shield mounts; X- 6654
282-D	69	Iron	1	EM	7 th	Mount. Strip, in poor
					century	condition ?shield fitting;
						X-6651.
240-A	53	Iron	1	EM	7^{th}	Pin? Two joining pieces,
					century	with textile; X-6646
305-F	135	Iron	1	EM	7 th	Purse/strike-a-light,
					century	complete; X-6650.
					0	Clean for photo/display
214-7	50	Iron	1	EM	7 th	Ring. Complete; from
					century	chatelaine or bag. X-
2.67	107		1	TD 6	7 th	6646
367	107	Iron	1	EM	,	Ring. From chatelaine?
					century	in 15 small pieces; X-6652
296-C	80	Iron	1	EM	7 th	Shears. Near complete
290-C	80	11011	1	LIVI	century	(4 pieces) but in poor
					Century	condition; X-6656.
214-3	43	Iron	1	EM	7 th	Shears. extremely poor
				21,1	century	condition (18 pieces)
						X-6647;
246-D	49	Iron	1	EM	7 th	Shield. Mount or grip;
					century	X-6646. Clean/conserve
						for photo/display
246-C	64	Iron	1	EM	Mid-late	Shield boss. Complete;
					7 th	conical (not sugar loaf type) + grip; the latest
					century	from the site; X-6638
315-D/P?	99	Iron	1	EM	Late 6 th	Shield boss. Half small
					-earlier	low cone, copy of
					7^{th}	continental type? X-
					century	6649. Potentially
						reconstructable; Clean
						conserve for
						photo/display

Context	Special number	Material	Count	Period	Date	Description and comments
315-F	100	Iron	1	EM	Late 6 th -earlier 7 th	Shield boss fragments. As <99>);,X-6649
164-5	65	Iron	1	EM	late 6 th – mid 7 th century	Shield boss. Virtually complete low cone type; 3 rd in the sequence on the site; also part of associated mount; X-6637. Clean conserve for photo/display
372	61	Iron	1	EM	6 th century?	Shield boss. The oldest from the site (group 3 type?). Near complete with spike at top; X-6636.Clean/conserve for photo/display
246-A	46	Iron	1	EM	7 th century	Spear. 4 pieces, part of blade and socketed end; X-6647.
290-A	70	Iron	1	EM	7 th century	Spear. 3 pieces; X-6656. Reconstructable;
299-A	62	Iron	1	EM	7 th century	Spear. Complete. Short angular trowel-shaped blade (Swanton type E1 or F2?) with long shank. Good condition. Clean for photo/display?
315-A	84	Iron	1	EM	7 th century	Spear. Near complete short leaf-shaped with long shaft (Swanton type D.1); average condition (see also <86>). X-6658; X-6653
315-G	86	Iron	1	EM	7 th century	Spear. 2 small fragments, X-6653; part of <84>
164-1	121	Iron	1	ЕМ	7 th century	Spear. Near complete; short leaf-shaped blade (Swanton type D1?), with unusual rounded base. X-6657. Good condition. Clean for photo/display?
293	63	Iron	1	EM	7 th century	Spear. Complete type D leaf-shaped; X-6639. Good condition. Clean for photo/display?

Context	Special number	Material	Count	Period	Date	Description and comments
312	138	Iron	1	EM	7 th century	Spear. Complete; small leaf-shaped – type D or F? X-6657. Good condition. Clean for photo/display?
372	83	Iron	1	EM	Later 7 th century?	Spear. Near complete leaf-shaped (Swanton type C.3); latest find in grave?. Poor condition. X-6645.
372	85	Iron	1	EM	7 th century	Spear. Butt-ferrule. X-6655
276	47	Iron	1	EM	7 th century	Spear. Possible spear shaft (3 joining pieces); X-6655.
282-B/C	75	Iron	1	EM	7 th century	Awl? complete? 2 pieces and numerous flakes; X-6658
240-В	56	Iron	1	EM	7 th century	Uncertain. Perforated disc with additional attachment; need to re-X-ray or clean; X-6646
305	185	Silver	1	EM	Late 7 th century	Pendant (bulla). 3 fragments; X-6643. Clean for photo/display
293	74	Silver	1	EM	7 th century	Pin. Metal to be checked. X-6653
214.1	11	Silver	1	EM	7 th century	Ring. Complete
305	9	Silver	1	EM	7 th century	Ring. X-6643. Clean for photo/display
305	10	Silver	1	EM	7 th century	Ring. Complete; X-6642 . Clean for photo/display
305	151	Silver	1	EM	7 th century	Ring. Complete (as <10>). Clean for photo/display
305	183	Silver	1	EM	7 th century	Ring. Complete, small X-6643 (was <9>). Clean for photo/display
305	184	Silver	1	EM	7 th century	Ring. Fragment; X-6643 (as <9><10>)

Key: X-X-radiography sheet number