

HUMAN REMAINS

WHITEHILL ROAD BARROW

Area 330 Archaeological Zone 1, from Fawkham Junction, to Dale Road, south of Gravesend, Gravesham, Kent

APPENDIX 7: ASSESSMENT OF HUMAN BONE

Bill White

1. Introduction

- 1.1 A human skeleton, with a necklace of amber beads, was recovered during the excavation of the Whitehill Road Barrow, ARC WHR 99.

Methodology

- 1.2 The human skeletal material was scanned and assessed in accordance with the MoLSS Environmental Archaeology Manual (in preparation). The results of the scan are summarised in the table below.

Table 1: Assessment of Human Bone, Inhumation

Event code	Context	Context type	Period	Preservation (high/medium / low)	Completeness %	Age	Comments (pathology noted/sex)
ARC WHR 99	41	burial	EBA	Low	25	Adult	(?)female

Quantifications

- 1.3 There was a single inhumation of an adult. The presence of the necklace is not necessarily diagnostic of a female burial. However, features on some of the cranial fragments suggested that the remains were female

Provenance

- 1.4 The burial was recovered in the flexed position (Plate 2). The body had been placed on the back, with the arms across the stomach area and the legs drawn up to the right; the head was leaning to the right. The burial had been placed in a grave, cut through the partially filled inner ring ditch of the Whitehill Road barrow (ARC WHR 99) (Figure 5). A twenty-one bead amber necklace was recovered from the neck area, indicating an Early Bronze Age date for the inhumation.

- 1.5 The condition of preservation of bone was low, with most bones collapsed by post-depositional weight, dampness and degrading.
- 1.6 The skull was represented by a shattered cranium and the right half of the mandible (although all the teeth were present). There were fragments of vertebrae, ribs and the long bones.

Conservation

- 1.7 The human skeletal elements were collected in foods-quality polyethylene bags and these were packed in an archive quality cardboard box. There are no conservation requirements for the analysis stage.
- 1.8 Under the terms of the CTRL Act 1996, all human remains are to be reburied.

2. Comparative material

- 2.1 Much of the known Bronze Age human skeletal material comes from cremation burials (McKinley, 1999). The inhumation here is a secondary burial but comparative sites for inhumations would be those that have produced Beaker burials, both in Kent, including West of Northumberland Bottom (ARC WNB 98) and elsewhere such as those of the Wessex culture.

3. Potential for further work

- 3.1 The human remains, in this burial context with associated grave goods have the potential to contribute to the following fieldwork aims:
 - *to establish a record of the changing palaeo-environment for all time periods present and the interaction with past economies.*
 - *to determine the spatial organisation of the landscape, and changes through time.*
 - *Ritual and ceremonial use of the landscape*
- 3.2 Barrow burials are typically placed in areas of high visibility, usually to be seen from both the associated settlement (perhaps within 0.5km) and any nearby routeway. The barrow and burial perhaps indicate the presence of both these associated features and the amber bead necklace places the context of the individual and, perhaps, the direction of the local influences (westward rather than eastward). As a result the burial has a good context from which further research can be directed. It can be compared with the nearby cremation and Beaker burials Northumberland Bottom (ARC WNB 98) in Area 330 Zone 3, which appear to be subject to more Kentish influences.

- 3.3 Although the state of preservation of the burial as a whole was low, a detailed examination of the bones of the skull would allow reconstruction, with confirmation of the sex as female and also an estimate of the age of this individual.
- 3.4 The presence of the amber bead necklace gives a reasonably good date for the burial. The Whitehill Road site is of great importance due to the rarity of inhumation burials in association with Bronze Age ring ditches, cremation being the more normal burial rite. As a consequence of this rarity, analysis of bone for stable chemical isotopes and DNA, both human and that of pathological organisms, ought to be considered, even though it is possible they would not produce significant results, in order to maximise any information that can be gathered from this individual. Any information would add to the corpus of knowledge for human populations during this period.

4. **Bibliography**

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Twyford Down* Hampshire Field Club monograph (in press).

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NORTHUMBERLAND BOTTOM

Area 330 Archaeological Zone 3, Northumberland Bottom, south of Gravesend, Gravesham, Kent

APPENDIX 11: ASSESSMENT OF HUMAN BONE

Bill White

1. Introduction

- 4.1 Area 330 Zone 3 (specifically Northumberland Bottom ARC WNB 98) contained burials dating to the early Bronze Age and the Roman period. Excavation had revealed two beaker inhumations and also a small grave containing unburnt human bone from a neonate associated with a pottery vessel of Roman date. A small pit proved to contain the remains of another neonate.
- 4.2 Cremated human bone occurred in two contexts [316] (undated) and [2012] (associated with an early Bronze Age pottery vessel).

5. Methodology

- 5.1 The human skeletal material was scanned and assessed in accordance with the MoLSS Environmental Archaeology Manual (in preparation).
- 5.2 Preservation/bone condition, the rough percentage of completeness, general age (child/adult) and obvious pathology/sex were noted and these details are summarised in the table below. The data has been entered onto the MoLAS Oracle database for human bone and transferred to RLE Datasets.

6. Quantifications

Early Bronze Age

- 6.1 Double burial with beakers from Northumberland Bottom Area C (Figure 16, Plates 1 and 2). In addition skeletal material of an unburnt child burial was recovered from the grave fill.
- 6.2 An early Bronze Age cremation urn was recovered from the area to the north of Hazells Farm (Figure 5). The bone from this vessel had, however, almost totally disintegrated and it was not possible to study this material.

Late Bronze Age

- 6.3 A late Bronze age cremation was recovered from Area A/B at Northumberland Bottom (Figure 13). A nearby cremation was undated but may be from this period.

Late Iron Age – Early Roman

- 6.4 Disarticulated human bone (part of a cranium) was recovered from the fill of the ‘ritual pit’ [564] (Figure 10).
- 6.5 Cremated bone and a vessel were recovered from pit [232] (Figure 10).

Roman

- 6.6 Two neonate burials were recovered from Northumberland Bottom Area C (Figure 16).

7. Provenance

- 7.1 The two individuals buried with beakers were both adult. One was male, the other female (Plates 1 and 2). The grave fill also contained unburned human bone, probably a child [1069] (see table below). The bone in the beaker burials was in moderate condition. At least some metric data should be available on further analysis. Both skeletons were almost entirely complete.
- 7.2 Cremated bone occurred in two contexts [316] (Late Iron Age/Early Romano-British date, Cremation [232], Figure 10) and [2012] (Late Bronze Age date, Figure 13). The bone from the cremations is comminuted and unlikely to provide information on demography or pathology.
- 7.3 The Roman grave contained an immature skeleton, probably a neonate; the head was missing (Figure 16). A small pit nearby also contained a neonate [1037] (Figure 16). The Roman skeletal remains were also in a moderate state of bone preservation. The skeletons were more than 75% complete.
- 7.4 Disarticulated adult human bone was found in two contexts [565] (the large ‘ritual’ pit in the Late Iron Age/Early Romano British enclosure) (Figure 10) and fill [2163] of pit [2164] (Figure 13) (see table below).

8. Conservation

- 8.1 Under Schedule 11 of the CTRL act 1996 all human bone is to be reburied.

9. Comparative material

- 9.1 There are many examples of beaker burials in southern England including Thanet and the north coast of Kent but little of note has been published. The closest parallel for a double interment of the period comes from Chilbolton in Hampshire (Russell 1990). An Early Bronze Age inhumation was located as the (secondary) barrow burial at Whitehill Road (ARC WHR 99, Area 330 Zone1). This burial will provide good comparative material. Unfortunately other Bronze Age burials from the CTRL project tended to be comminuted cremations, with which little, beyond the estimated number of individuals, can be compared.
- 9.2 There are many Romano-British sites in southern England that have produced comparative material for child burial, even within a settlement. A local parallel is the occurrence of child burials found associated with Temple IV in the earlier excavations at Springhead (Penn 1960). Within the CTRL project two infant burials and a deposit of human bone were recovered from Thurnham Roman Villa (ARC THM 98). Within southern England settlement sites, where infant burial occurs, include Colchester, Verulamium and Winchester.

10. Potential for further work

- 10.1 The human skeletal material recovered from this zone has good potential to inform on the CTRL research aims:
- Farming communities (2000–100 BC)*
- *Determine spatial organisation of the landscape in terms of settlement location in relation to fields, pasture, woodland, enclosed areas and ways of moving between these*
 - *Ritual and ceremonial use of the landscape*
- 10.2 Bronze Age burials are typically placed in areas of high visibility, usually to be seen from both the associated settlement (perhaps within 0.5km) and any nearby routeway. The burials perhaps indicate the presence of both these associated features in the vicinities of Hazells Farm and Northumberland Bottom. In addition the beakers and cremation urns place the contexts of the individuals and, perhaps, the direction of the local influences (eastward rather than westward). As a result the burials have good contexts from which further research can be directed. They can be compared with the nearby, unexcavated, Neolithic Mortuary enclosure at Tollgate; the (secondary) barrow burial at Whitehill Road (ARC WHR 99, Area 330 Zone1); and the potential barrow and the early Bronze Age Collared Urn from Cobham Golf Course (ARC CGC 98 Area 330 Zone 5).
- 10.3 Disarticulated human bone is not uncommonly found on Late Iron Age/Early Roman sites and may be partly connected to a general absence of burial grounds for this date; perhaps indicating a different burial rite than inhumation/cremation. It is also not uncommon to find Roman neonate burials on settlement sites, as the Romans did not, generally, consider infants to be worthy of full and proper burial in cemeteries.

10.4 Cremated human bone occurred in two contexts [316] and [2012]. Given that all cremation burials are only samples of the body interred (Jackie McKinley pers. comm.) the “samples” here were rather small in quantity. Any subsequent discussion of the site ought to consider possible locations of the original cremation pyres.

Further work

10.5 The inhumation beaker burials are extremely important due to their relative completeness and potential for pathology study. The sex of these individuals has already been determined (one male and one female). The presence of the beaker pottery gives a reasonably good date for the double burial.

10.6 The Northumberland Bottom burials are of great importance due to the paucity of publications in this area for this date. As a consequence of this rarity, it is recommended that these two skeletons be analysed and recorded to publication level. Analysis of bone for stable chemical isotopes and DNA, both human and that of pathological organisms, ought to be considered, even though it is possible they would not produce significant results, in order to maximise any information that can be gathered from these individuals. Any information would add to the corpus of knowledge for human populations during this period.

10.7 Similarly, the Romano-British burial (s) ought to be analysed for completion, especially as they can be compared with other Roman neonate burials found on the project.

10.8 It is felt that little more can be accomplished for the cremation burials although, obviously, with regard to minimum number of individuals present they need to be included in the discussion in the report from the analysis phase. The same is true of the disarticulated bone.

10.9 Therefore further work should include:

- DNA analysis, stable chemical isotope analysis (using two teeth from each individual which would be returned) and recording of the skeletons
- Data input
- Writing the report

8 Bibliography

Penn W S 1960 Springhead: Temples III and IV *Arch. Cant.* **74** 113-140

Russell A 1990 Two beaker burials from Chilbolton, Hampshire *Proceedings of the Prehistoric Society* **56** 153-172

Table 2: ARC WNB 98 Assessment of Human Bone, Inhumations

Context	Context type	Period	Preservation (high/ medium/ low)	Completeness %	Age	Comments (pathology noted/sex)
1070	Burial	EBA	medium	90	adult	male,
1203	Burial	EBA	medium	90	adult	female,
1069	Burial	EBA	low	10	child	?
1037	Burial	UN	medium	90	neonate	?
1190	Burial	RO	medium	75	neonate	?

Table 3: ARC WNB 98 Assessment of Human Bone, Cremated Bone

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum no of individuals
316	Cremation	UN	25g	none	white	?
2012	Cremation	LBA	50g	none	white	?

PRINCIPAL SITE: CUXTON

Area 330 Zone 6 Cuxton near Rochester, Kent

APPENDIX 10: ASSESSMENT OF HUMAN BONE

Bill White

1. Introduction

- 10.10 Human skeletal material was recovered during the excavation of the Anglo-Saxon cemetery. There were 36 graves on the site but grave [240] contained remains from two skeletons, an adult female at the base and the partial remains of a child in the sieved sample [239]. It is likely this female died in childbirth or the later stages of pregnancy.
- 10.11 Investigation of the two urns, mentioned in the interim report (URS 1999) as possibly containing cremations, found there were in fact, no cremation burials on the site.

11. Methodology

- 11.1 All the human skeletal material was scanned and assessed in accordance with the MoLSS Environmental Archaeology Manual (in preparation).
- 11.2 Preservation/bone condition, the rough percentage of completeness, general age (child/adult) and obvious pathology/sex were noted and these details are summarised in the table below. The data has been entered onto the MoLAS Oracle database for human bone and transferred to RLE Datasets.

12. Quantification

- 12.1 During the excavation of ARC CXT 98 the remains of 37 inhumation burials were recovered from 36 separate graves, in which skeletal material survived in 32. Of this total 28 (87.5%) were clearly adults and 7 (21.8%) were clearly children. Of the adults four (12.5%) were obviously men and four (12.5%) were obviously women. This proportion may change after further work involving reconstruction of the skeletons.
- 12.2 It is known that at least one, probably more graves were destroyed by 19th century railway construction (London to Chatham railway) and it is possible others were removed during the construction of the M2 Medway Road Bridge. Recent work has shown that no burials occurred to the east of the M2 Bridge (A2/M2 Junctions 1 to 4 Road Widening works,

13. Provenance

- 13.1 The skeletal material came from an Anglo-Saxon cemetery provisionally dated 550 to 650 AD. Three provisional phases have been identified, based on burial alignment, but no true phasing of the cemetery has been attempted. It is thought that the burials represent a small, possibly family, group that used this site over a number of generations.
- 13.2 The condition of the bone was poor in 23 individuals (71.8%) and in only four burials (12.5%) was the condition regarded as good. This is surprising because the inhumations were made into chalk and a mildly alkaline environment such as this normally tends to lead to good preservation of bone mineral. Possibly the hillside situation, with rainwater channelled through the graves, acting as “soakaways”, and certainly tree-root activity, has affected bone stability
- 13.3 Although in a minority of cases little remained of the buried body apart from a few teeth, truncation of the skeleton was not great. Thus, sixteen (50%) had 50% or more of the skeleton present and a further nine (28%) had more than 80% of the skeleton present. Accordingly there is an adequate quantity of skeletal material to be sampled for DNA analysis or carbon-14 dating.

14. Conservation

- 14.1 The material does not require any conservation for the purpose of long-term storage, as, under the terms of the CTRL Act 1996 all human remains are to be reburied. The material also does not require any conservation in preparation for further analysis.

15. Comparative material

- 15.1 Comparative material exists from Anglo-Saxon sites in the south of England comes from Dover, Portchester Castle (Hooper 1976), Alton (Evison 1988), Great Barrington (Malin & Hines 1998), Raunds Furnells (Boddington 1996), Bidford-on-Avon (Brash 1923), and North Elmham (Wells 1980).
- 15.2 Preliminary indications from the CTRL Saltwood Anglo-Saxon cemetery are that there will be little comparative material, due to poor survival of skeletal material.

16. Potential for further work

16.1 The human skeletal material has potential for further work, despite the generally poor condition of much of the bone, due to the rarity of burial sites of this date. This together with what is assumed to be the relatively high proportion of the original cemetery population, associated grave goods and the opportunity to study this transitional period, increases its interest.

16.2 Fieldwork event Aim:

- *Palaeo-demographic and palaeo-pathological analysis*

16.3 Despite the poor condition of much of the bone itself the individual skeletons were reasonably complete and, hence the potential for demographic analysis and palaeo-pathology is high. Detailed analysis, following reconstruction, will allow diagnosis of age, sex and pathology not evident during the original rapid-scanning of remains.

- *Consider the effect on the landscape of known historical events, eg the arrival of the Anglo-Saxons*

16.4 The burials appear to cover a tight time span and there is the strong possibility that they represent a few generations of an extended family. Despite fragmentation there is a good chance that non-metric traits registered on the bone will support close family relationship. DNA analysis could then confirm genetic relationship. It may be possible to detect if this was a 'native' Kentish family that had adopted Anglo-Saxon ways, or was a distinct colonial group.

- *Ritual and ceremonial use of the landscape*

16.5 The burial site is of great importance because of the period concerned and of the fact that the graves are relatively rich (although not especially rich by Kent standards).

Further Work

16.6 Further work on the human skeletal remains should include analysis, recording and written text to publication level. In addition DNA-profiling may allow the confirmation of family grouping among burials.

- high preservation: 3 skeletons
- medium preservation: 9 skeletons
- low preservation: 23 skeletons
- data inputting
- photography and radiography
- writing the osteological report

17. Bibliography

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Table 4: Assessment of Human Bone, Inhumations ARC CXT 98

Context	Context type	Period	Preservation (high/medium/low)	Completeness %	Age	Comments (pathology noted/sex)
164	Skeleton	EM	Low	40	adult	
166	Skeleton	EM	Low	50	adult	Osteomyelitis
168	Skeleton	EM	Low	20	adult	
172	Skeleton	EM	Low	50	child	
178	Skeleton	EM	Low	50	adult	
186	Skeleton	EM	Low	35	child	
190	Skeleton	EM	Low	50	adult	
193	Skeleton	EM	Medium	90	adult	Male
210	Skeleton	EM	Low	25	adult	
214	Skeleton	EM	High	90	adult	Female
217	Skeleton	EM	Low	20	child	
239	Grave fill	EM	Low	10	child	
240	Skeleton	EM	High	40	adult	Female
242	Skeleton	EM	Low	20	child	
246	Skeleton	EM	Low	40	adult	
249	Skeleton	EM	Medium	90	adult	Male
261	Skeleton	EM	Medium	90	adult	Male
276	Skeleton	EM	Medium	10	child	
280	Skeleton	EM	Medium	50	adult	
282	Skeleton	EM	None	00	----	

285	Skeleton	EM	None	00	-----	
290	Skeleton	EM	None	00	-----	
293	Skeleton	EM	Low	10	child	
296	Skeleton	EM	Low	60	adult	Female
299	Skeleton	EM	High	80	adult	Male
302	Skeleton	EM	Medium	40	adult	
305	Skeleton	EM	Low	75	adult	
312	Skeleton	EM	Low	10	adult	
315	Skeleton	EM	Low	40	adult	
318	Skeleton	EM	Low	25	adult	
323	Skeleton	EM	Low	25	adult	
357	Skeleton	EM	None	00	-----	
360	Skeleton	EM	Low	40	adult	
363	Skeleton	EM	Medium	90	adult	Female
367	Skeleton	EM	None	00	-----	
372	Skeleton	EM	Medium	60	adult	
378	Skeleton	EM	Medium	75	adult	

PRINCIPAL SITE: BOWER ROAD

BOWER ROAD, SMEETH, KENT ARC 440/ 95+900 - 97+100 /99

APPENDIX 5 - HUMAN REMAINS

Human Remains by Angela Boyle

Introduction

- A small quantity of cremated and unburnt disarticulated human bone was recovered during watching brief fieldwork at Bower Road. The unburnt disarticulated material was hand excavated. In excavation cremation contexts were subject to 100% recovery as whole-earth samples and subsequently wet-sieved. Material from the >2 mm fraction were retained en masse. The recovery and assessment of human remains was undertaken in accordance with the Landscape Zone Priorities and Fieldwork Event Aims for the site, which are set out in section 2 of the main report, above. The material was collected to address research aims relating to ritual and ceremonial use of the landscape, particularly late Iron Age/Roman burial practice.

Methodology

- All cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Each deposit was recorded on a pro forma record sheet, which includes context, context type, period, weight, identifiable fragments, age, sex, and minimum number of individuals. The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.
- Unburnt disarticulated material was examined to determine preservation, completeness, age and sex where possible, as well as potential for further analysis.

Quantification

- Cremations and unburnt disarticulated material are summarised in Tables 5.1 and 5.2.

Cremations

- A total of six deposits of cremated bone were identified on site as potentially human. The identification of three of these was confirmed during assessment (122, 162, 243). One deposit (367) was mixed human and animal bone. Nothing from deposit 462 was identifiable, while deposit 515 consisted entirely of animal bone.

Unburnt disarticulated bone

- A single mandible was identified as that of an adult male aged 25-35 years. Hypoplastic lines were present on the left and right mandibular canines. These are the

result of a disturbance caused by infection or malnutrition during the formation of dental enamel in childhood. The dental inventory appears in Table 5.3.

Provenance

- The material derived from a variety of contexts which are summarised in Tables 5.1 and 5.2. Cremation deposit 122 (cut number 107) was located towards the west edge of the site and had been deposited in a large jar datable to the period *c* AD 170-300 together with two ancillary vessels, both Upchurch beakers of unusual form (see Appendix 1.1, above). Two fragments of human bone were recovered from late Roman pit 242; an unburnt disarticulated mandible from lower fill 250 and a small deposit of unidentifiable bone from upper fill 243. This pit also contained probable special deposits of animal bone, pottery and glass and may represent a terminal deposit. Further very small fragments of unidentifiable cremated bone were recovered from a middle fill of waterhole 372, and from ditch groups 169 (context 367) and ditch group 171 (context 462).

Conservation

- The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act, 1996, all human remains are to be reburied.

Comparative material

- Comparative material includes the small assemblage of similar date which was recovered from Westhawk Farm and from a number of sites also examined along the line of the CTRL. These include Waterloo Connection and Boys Hall Balancing Pond.

Potential for further work

- The following section discusses potential for further work in the light of the Landscape Zone Priorities and Fieldwork Event Aims.

Cremations

- All the deposits, with the exception of 122 are very small and have no potential for further osteological analysis. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then none of these deposits represent the entire remains of any one individual.
- Detailed examination of the more substantial deposit of cremated bone (122) will allow for further refinement of age and sex, and also the possible identification of pathological conditions.
- Both animal and human bone were identified in deposit 367 and it is recommended that the animal bone be identified to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron Age cremation burials at Westhampnett (McKinley et al 1997, 73) and has also been identified within

Multiple burial

- A single example of a multiple burial has been tentatively identified during the assessment phase. Deposit 122 was identified as an adult male; however, at least one fragment is the bone of a subadult.

Unburnt disarticulated bone

- The mandible was in reasonable condition. However, given that only one bone was present a decision was made to carry out full recording at the assessment stage. Therefore no further osteological work is recommended.

Ritual practices

- The presence of human bone in pits, ditches and the waterhole may have significance for the understanding of ritual practices during the Roman period. Although no further osteological work is required for this material, it should be taken into consideration in general analysis of the site and should be reported to support any conclusions drawn. Reporting can be based on the present assessment with the exception of cremation 107, where further information may be derived from additional osteological analysis.

Bibliography

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Table 5.1: Summary of cremation deposits

Context	Context type	Period	Weight	Identifiable fragments	Age	Sex	Comments
122	fill of vessel 273	AD 200-270	554 g plus unsorted residue	skull vault, long bone shaft	adult	male	subadult fragment also present
162	fill of waterhole 372	AD 100-270	>1 g	long bone shaft fragment	?	?	no further work
243	upper fill of pit 242	4th century	> 1 g	nothing identifiable	?	?	no further work
367	upper fill of ditch 368	AD 100-150	3 g	skull vault	?	?	at least one unburnt animal rib fragment
462	fill of ditch 461	AD 200-270	> 1 g	nothing identifiable	?	?	nothing identifiable
515	fill of ditch 507	?	4 g				all animal bone

Table 5.2 Summary of unburnt disarticulated human bone

Context type	Context	Period	Preservation	Completeness	Age	Sex	Comments
lower fill of pit 242	250	4th century	Medium	100%	25-35 years	male	Hypoplastic lines on both canines

Table 5.3: Summary of dentition

- - - - -	- - - - -
8 7 6 / 4 3 //	1 / 3 4 5 6 7 8

- tooth and socket absent
/ post-mortem loss

PRINCIPAL SITE: PEPPER HILL

WATERLOO CONNECTION/ PEPPER HILL, SOUTHFLEET, KENT ARC PHL 97, ARC NBR 98

APPENDIX 1- HUMAN REMAINS

1.1 Human Remains

By Angela Boyle

Introduction

- 1.1.1 All inhumations were hand excavated. In excavation cremation contexts were subject to 100% recovery as whole-earth samples and subsequently wet-sieved. Material from the >2 mm fraction were retained en masse.
- 1.1.2 The Fieldwork Event Aims to which the assemblage can be expected to contribute are as follows:
- Fieldwork Event Aim 7: To establish the chronology of the cemetery.
 - Fieldwork Event Aim 9: To establish if spatial variations exist within the cemetery in relation to burial practice.
 - Fieldwork Event Aim 10: To recover data to enable palaeo-demographic and palaeo-pathological analysis.

Methodology

- 1.1.3 All cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, age, sex, and minimum number of individuals. The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone (for example tooth roots and/or portions of tooth crowns).
- 1.1.4 Inhumations and fragments of unburnt disarticulated material were examined to determine preservation, completeness, age and sex where possible, as well as potential for further analysis.

Quantification

- 1.1.5 Cremations and inhumations are summarised in Tables 7.1 and 7.2.

Inhumations

- 1.1.6 Very poorly preserved bone fragments represented a total of 95 skeletons. Due to poor preservation it has only been possible to assign broad age categories to 46 of the total. The breakdown is as follows:

Age category	Number of individuals
ageing adult	1
adult	18
probable adult	14
25-35 years	4
young adult	1
probable young adult	1
18+ years	5
12+ years	1
subadult	1

- 1.1.7 A total of 6 probable males and 5 probable females were identified among the adult skeletons. Survival of bones was largely limited to skull vault, dentition and long bone fragments.

Cremations

- 1.1.8 A total of 235 deposits of cremated bone represent burials per se. The remaining deposits derive from pits containing dumps of pyre debris. Broad age categories were assigned to 182 deposits and sex estimation to 28:

Age category	Number of individuals
ageing adult	4
adult/ adult?	134
Young adult	9
subadult	35

- 1.1.9 There were 1 male, 11 probable males, 2 females and 14 probable females.
- 1.1.10 At least 20 of the cremations were *in situ* or *bustum* burials.

Burnt and unburnt animal bone

- 1.1.11 The presence of unburnt animal bone in sub-groups 63 and 298 may be accidental as the absence of burning indicates that it was not present on the pyre. However, burnt animal bone has been identified in sub-groups 10474, 10943, 11017, 11779, 11800 and 11994; the fact that it is burnt clearly indicates that it was present on the pyre.

Provenance

- 1.1.12 The human bone derives from a minimum of 326 inhumation graves and 235 cremation burials. There was a high degree of intercutting of features, and some bone spreads were identified that clearly represent disturbed graves, although these are relatively few in number and do not affect the integrity of the overall phasing. Inhumation burials were not well preserved, and the majority of graves contained no trace of a skeleton. A small number survived as partially preserved skeletons or body stains only. In contrast, cremated bone was well preserved.

- 1.1.13 Some of the earliest graves occur in a notable cluster in an angle of the western boundary ditch, immediately to the south-east of the cobbled platform. This area continued to act as a focus for both inhumations and cremations throughout the period of use of the cemetery. The density of burials in this area, from a very early period, is such that there is a high degree of intercutting, suggesting that the importance of the location to the users of the cemetery overrode any concerns over disturbance of the dead. Smaller clusters of burials occur elsewhere and might perhaps represent family groups. The lowest density of burials occurs in the central part of the cemetery, including some gaps with no burials at all which, given the intensity of use elsewhere may be significant, perhaps indicating the site of memorials, trees or pyres.

Conservation

- 1.1.14 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act 1996, however, all human remains are to be reburied.

Comparative material

- 1.1.15 The CTRL project offers an opportunity to study Romano-British burial practices spanning a range of settlement types. Small groups of rural burials or isolated examples have been excavated at several CTRL sites including Northumberland Bottom, Pilgrim's Way, Boys Hall Balancing Pond, Beechbrook Wood and North of Saltwood Tunnel. These offer an opportunity to compare burial characteristics at Waterloo Connection with those of rural cemeteries in the region. This may suggest whether differences in wealth, status and social identity can be discerned. Non-CTRL comparative material from Kent includes the small assemblage of similar date which was recovered from Westhawk Farm, Ashford.
- 1.1.16 Further afield the recently published Eastern Cemetery, London will be particularly useful for comparison as it too was excavated under modern conditions. A total of 136 cremations and 550 inhumations ranging in date from the 1st to the 5th century were excavated with a focus in the 3rd and 4th centuries. There also appears to be evidence for cremation in relatively late contexts, when it is thought to have been generally superseded by inhumation. This is also the case at Waterloo Connection. The cemetery at Ospringe, Kent appears to be richer than Waterloo Connection in having a rather higher proportion of object-dated graves, a higher overall number of vessels per grave, and in the presence of glass as well as ceramic vessels. These differences make comparison of the two cemeteries highly desirable.
- 1.1.17 Outside the region, comparable cemeteries of similar date include Trentholme Drive, York.
- 1.1.18 Near continental cemeteries will provide useful comparative material for the study of potentially intrusive rites such as *in situ* or *bustum* burial, which is known from cemeteries in Gaul, Germany and Pannonia.

Potential for further work

Statement of potential

- 1.1.19 The Fieldwork Events have the very highest potential to enhance our understanding of Roman burial practice in the environs of Springhead, and the organisation and development of the cemetery through time. These objectives can be addressed by the detailed analysis of individual grave groups, followed by classification of grave groups, and integrated spatial and chronological analysis of all classes of burial and artefactual evidence. The value of the data is unfortunately reduced by the poor preservation of the unburnt human remains.
- 1.1.20 The evidence from Waterloo Connection will be of great benefit for refining our understanding of change in burial practice over time. In contrast to current models of cemetery development, there is little evidence for a clear-cut succession of cremations by inhumations at Waterloo Connection, and 1st-century inhumations, for example, are as common as cremations of the same date. A specific objective for further detailed analysis will be the identification of late Roman cremations, if present.
- 1.1.21 A group of at least 20 *in situ* cremations have been identified. The presence of the *in situ* or ‘*bustum*’ burial rite is highly unusual in Britain, and is likely to be intrusive. It may be diagnostic of a foreign element in the population of Springhead. A detailed record of the archaeologically detectable features of the ritual will therefore be particularly important for identifying continental parallels.
- 1.1.22 The *in situ* cremation burials have the potential to shed light on pyre construction and understanding of the funeral ritual. This may be achieved by detailed study of the charcoal, which will provide information on preferred fuels. Radiocarbon dating of the *in situ* cremations will determine whether this form of burial occurs throughout the use of the cemetery, as suggested by current evidence, or whether they in fact represent a more limited phase of activity.
- 1.1.23 The distribution of burials within the cemetery suggests that it was focussed on a location of religious significance in its own right. This preoccupation with a specific location suggests that, in spite of the observed diversity in burial rites and the possible foreign element in the population, the users of the cemetery shared a broadly similar belief system. The significance of the principal burial focus identified within the cemetery is unknown and probably undetectable by archaeological means. It could be associated with the cobbled platform (perhaps a roadside shrine) or the well/ shaft (as noted above, deep pits or shafts found elsewhere were often used as depositories for offerings and may have been connected with beliefs surrounding death and the underworld).
- 1.1.24 The cemetery sheds some light on the ceremonial aspects of the landscape in the environs of Springhead, although the archaeological evidence from the temple and cemetery sites is not sufficiently specific to identify the cults involved. The discovery of human infant burials as foundation deposits in one of the

Springhead temples makes it unlikely that the focus of the cults was purely classical in outlook (Burnham and Wachter 1998). The common practice of equating indigenous Celtic deities with those of the Olympian pantheon may have provided a mechanism allowing Celtic and Roman forms of religious expression to merge or exist side by side, smoothing the integration of immigrant groups into the community in the immediate post-conquest period.

Potential for palaeo-demographic and palaeo-pathological analysis

- 1.1.25 Inhumations: Although preservation of the inhumation burials is generally poor, bone survived in 95 graves and 46 of these could be assigned to age and sex categories. Basic demographic parameters can therefore be identified for some of the group, which will provide useful evidence for limited comparison with evidence from cemeteries elsewhere.
- 1.1.26 The potential for palaeo-pathological analysis is severely limited by poor preservation. However, it may be possible to apply relevant scientific techniques, such as the identification of the DNA of the bacterium responsible for infectious diseases such as tuberculosis (Mays 1998, 197).
- 1.1.27 The genetic information in ancient DNA recovered from ancient skeletons may provide a means of studying relationships between populations and, on a smaller scale, relationships between groups or individuals in a particular cemetery though it should be emphasised that to date, success in this field has been limited. It may also provide an additional means of sexing skeletons.
- 1.1.28 The study of ancient DNA is still in its early stages and potential problems include poor survival in human skeletal material as well as contamination with modern DNA. Poor survival was a major problem until the development of the polymerase chain reaction technique (Mullis and Faloona 1987) which allow trace amounts of fragmented DNA to be amplified into quantities which can be studied. It should be emphasised that gross bone preservation is not necessarily an indicator of how well ancient DNA is likely to survive.
- 1.1.29 Samples from this assemblage were not collected under controlled conditions, (ie by staff in appropriate protective clothing), however, this should not present a problem because it is possible, if required, to remove contamination by chemical or physical pre-treatment of bone samples in the laboratory.
- 1.1.30 It is therefore proposed that a pilot study be undertaken on a small number of samples in order to assess the potential of DNA analysis for the entire inhumation assemblage.
- 1.1.31 It is proposed that this work would be undertaken by the Research Group at the Research Laboratory for Archaeology and the History of Art at the University of Oxford.
- 1.1.32 Stable isotope analysis can provide direct information on the past diets of humans. Specifically the carbon isotope ratio can tell us about the amount of marine versus terrestrial protein in past diets and the nitrogen isotope ratio can

- 1.1.33 Variations in diet may also be indicative of differences in status. Recent work undertaken by the University of Bradford on samples from Poundbury Roman cemetery revealed that those individuals buried in mausolea and lead coffins had a predominantly marine diet whereas those buried in wooden coffins did not (Richards *et al* 1998).
- 1.1.34 Although preservation of human skeletal material is generally poor in many cases dentition survives. It is proposed that a pilot study be undertaken on a small number of samples in order to assess the potential.
- 1.1.35 It is proposed that this work would be undertaken by the Paleodiet Research Group at the Research Laboratory for Archaeology and the History of Art at the University of Oxford.
- 1.1.36 Cremations: The assemblage of cremation burials is a large one and there are few of comparable size that have been excavated and analysed under modern conditions. Preservation of the cremated bone was very good on the whole and there is therefore high potential to recover palaeo-demographic information. Out of a total of 235 deposits of cremated bone, 182 are assignable to broad age categories, and 28 can be identified to sex. This sample is likely to provide a useful basis for comparison with similar evidence from other cemetery sites. No clear evidence for palaeo-pathology has been identified at assessment stage, but may become apparent during more detailed examination.
- 1.1.37 Because of the importance of the site to Roman cemetery studies, it is recommended that limited further recording and analysis is carried out on the inhumations, and that the cremations are subject to detailed analysis, in order to maximise the palaeo-demographic and palaeo-pathological information recovered. This would take the form of detailed examination of the larger or better preserved groups, and those with good artefact associations, in order to derive more detailed information than can be obtained from a preliminary assessment of potential. It is nevertheless clear that preservation conditions will severely limit the scope and value of the work in the case of the inhumations.
- 1.1.38 A number of deposits are very small and offer no potential for further osteological analysis; many of these deposits do not represent the entire remains of any one individual. However, these are of interest in that they may represent rituals involving token deposition of selected body parts.
- 1.1.39 It would be useful to examine all of the bone in detail to determine the quantity of animal bone present and to identify it to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron

Age cremation burials at Westhampnett (McKinley *et al* 1997, 73) and has also been identified within cremation deposits from Westhawk Farm, Ashford, Kent.

Taphonomic issues

- 1.1.40 There is a spatial dimension to the survival of skeletal remains. For as yet undetermined taphonomic reasons, bone and body shadows survive predominantly in the central part of the cemetery. Soil chemical analysis may shed light on the factors involved in preservation, which may be connected with local variations in geology or the residual effects of aspects of funerary ritual on ground conditions.

Structured deposition

- 1.1.41 A number of the deposits were excavated in spits (sub-groups 68, 88, 178, 185236, 237, 239, 290, 298, 307, 332, 354, 355, 423, 488, 498, 554, 629, 655, 670, 672, 716, 719, 750, 875, 1015, 1070, 1071, 1180, 10109, 10166, 10263, 10313, 10426, 10458, 10512, 10568, 10595, 10605, 10698, 10703, 10813, 10824, 10837, 10871, 10907, 10953, 10986, 11007, 11017, 11052, 11058, 11064, 11079, 11097, 11118, 11231, 11271, 11281, 11286, 11312, 11353, 11360, 11365, 11402, 11408, 11455, 11475, 11510, 11598, 11599, 11637, 11684, 11756 and 11825). Therefore there is potential to determine whether or not there is any evidence of the structured deposition of body parts as they were removed from the pyre.
- 1.1.42 As an assessment, cremation sub-group 88 was excavated in a series of 20 mm spits and the bone from each of the spits was subsequently examined. The cremation vessel was a complete fine grey ware jar which was lifted as a block with its contents untouched.
- 1.1.43 The initial layer was a cleaning layer which contained natural flint nodules only. Each spit was planned and a written record produced. Photographs were taken where considered appropriate. The data was then analysed by the human bone specialist for indications of patterning in the distribution of bones and artefacts within the vessel. The data on each of the individual spits appear in Table 7.3.
- 1.1.44 It is clear from the assessment of sub-group 88 that there is considerable evidence to indicate that the deposition of the cremated remains within the vessel was structured comprising skull at the top, followed by torso (ribs and vertebrae), upper limb bones, spongy and degraded bone (?pelvis and sacrum), lower limb bones including patella. This suggests that the cremated remains were sorted into body parts prior to deposition within the vessel. Pyre debris, including charcoal is largely absent, which is a further indication that the remains were sorted or 'cleaned' prior to deposition.
- 1.1.45 The analysis of structured deposition can contribute to Landscape Zone Priority 3, Roman burial practice and ceremonial use in the environs of Springhead, and to Fieldwork Event Aim 9, to determine whether spatial variations exist within

the cemetery in relation to burial practice. Structured deposition may be a particular practice specific to some groups and not others.

Multiple burial

- 1.1.46 Examples of multiple burial have been tentatively identified during the assessment phase. Sub-group 56 contained the very partial remains of an adult female and a subadult. Sub-group 77 comprised an adult and a subadult. Sub-group 307 has been identified as the mixed remains of a young adult female and a subadult. Multiple burial is a potential indicator of relationships between individuals in life, and as such may contribute to analysis of family groups or communities in the cemetery. It may also relate to other facts of interest such as status, or belief.

Pyre debris deposits

- 1.1.47 Of particular importance, given the scarcity of published accounts of similar material from other British sites is evidence for the deposition of residues from cremation pyres. This will contribute to understanding of the burial ritual by providing evidence for material that was used in the cremation process. This could include, for example, species of wood selected for pyres. Comparison of bone fragments from the deposited residues with bone from structured cremation deposits may also cast light on differential selection of body parts for burial, which will presumably reflect ritual and systems of belief.

Grave group analysis

- 1.1.48 There is potential for detailed analysis of all classes of evidence from individual grave groups, in order to correlate relationships between treatment of human remains and specific suites of artefacts. This will contribute to research aims relating to the chronology and development of the cemetery, to the identification of families and groups, and to the identification of particular burial rites.

Scientific dating

- 1.1.49 It is proposed that a programme of radiocarbon dating is undertaken to improve the chronology of the site. Advice has been sought from the Scientific Dating Co-ordinator at English Heritage (A Bayliss). The programme would require both high precision dating and the AMS measurement of cremated bone and involves the application of newly developed statistical techniques (Bayesian modelling) to the results to substantially reduce the probable date range (Lanting and Brindley 1998).
- 1.1.50 It should be possible to establish the date of individual cremation burials to within a century or so by using high-precision measurements which would require 10-50 g of identified short-lived charcoal per burial.
- 1.1.51 It is likely that by submitting approximately 20 samples it will be possible to confirm both the start date and the end date of the period of use of the cemetery. If AMS measurements (on either bone or charcoal) are applied, this scale of

programme would be required to counteract the effects of statistical scatter on the measurements. A similar number of further dates could be required to address specific questions, such as the chronological range of *bustum* burials within the cemetery, although samples will wherever possible be selected to address multiple aims. Dating might be desirable for discrete groups of graves, or to assess the chronology of identified ritual practices; dating will also be useful to date human bone from the well/shaft, and to confirm the date of suspected Iron Age features.

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Table 7.1: Summary of cremations

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
		111			void	1	nothing identifiable	white		?	?	no further work
		112			void	138	Skull, pelvis, vertebrae	white		adult	m?	
		166	bone spread			83	Skull vault, long bone shaft	white		adult	?	
		240	Fill	248	Pyre debris dump	7	Skull vault, tooth root, long bone shaft	white		adult	?	No further work
		276	Layer	599	Disturbed grave fill	95	Skull vault, humerus	white		adult	?	
		283	Layer		Plough disturbed spread	145	Skull, petrous, mandible, humerus	white		adult	f?	
		483	Fill		disturbed	2	Skull vault, long bone shaft	white		?	?	Some fragments unburnt
		968	Layer		Disturbed spread	38	Skull vault	white		Adult?	?	No further work
Sub-group 42	3	126	Deposit	124	cremation fill	1	long bone shaft	white		?	?	no further work
42	3	43	Deposit	44	fill	1	long bone shaft	white		?	?	no further work
42	3	127	Deposit	125	cremation fill	2	nothing identifiable	grey		?	?	1 unburnt fragment, no further work
42	3	45	deposit	46	cremation fill	1542	skull vault, ulna, sacrum, pelvis, femur, humerus, phalanges	White		adult	f	high potential
42	3	47	deposit	48	cremation fill	276	skull, vertebrae, pelvis	White		adult	?	
						1822 g						
Sub-group 56	4	58	deposit	57	cremation fill	29 g	petrous, femur	white	2?	adult and subadult	f?	ferrous staining on some fragments
Sub-group 63	3	64	deposit	65	cremation fill	902 g	skull vault, acetabulum, vertebrae, charred femur shaft	white		adult	?	unburnt animal bone
Sub-group 68	3	70	deposit	82	cremation fill	1162	rib, vertebrae, tibia	white		ageing adult	?	7 spits
68	3	658	deposit	69	cremation fill	1	long bone shaft	white		?	?	no further work
						1163 g						
Sub-group 71	3	73	deposit	72	cremation fill	328	skull, nuchal crest, vertebrae, humerus, femur, fibula, canine	white		ageing adult	?	

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
71	3	106	deposit	81	cremation fill	847	root petrous, humeral head, vertebrae	white		adult	?	
						<i>1175 g</i>						
Sub-group 77	3	138	deposit	80	cremation fill	899	vault, rib, pelvis, phalange, distal humerus	white		young adult	?	
77	3	170	deposit	169	fill	387	nothing identifiable	white		?	?	
77	3	80	deposit	78	artefact	2	upper long bone shaft	white		adult?	?	no further work
77	3	79	deposit	78	cremation fill	74	skull, radius	white	2?	adult?/subadult?	?	
						<i>1362 g</i>						
Sub-group 88	4	120	deposit	119	cremation fill	<i>1165 g</i>	skull vault,	white		adult	f	12 spits
Sub-group 91	3	129	deposit	128	cremation fill	28	nothing identifiable					unsorted residue
91	3	97	deposit	96	fill	30	nothing identifiable					unsorted residue
91	3	95	deposit	94	cremation fill	283	skull vault, humerus, femur, fibula	white		adult	f?	
91	3	109	deposit	108	fill	42	nothing identifiable					unsorted residue
91	3	99	deposit	98	fill	69	nothing identifiable					unsorted residue
						<i>452 g</i>						
Sub-group 107	1	143	deposit	142	cremation fill	9	metatarsal, femur shaft	white		adult	f?	no further work
107	1	90	deposit	89	cremation fill	318	nuchal crest, atlas, humerus	white		adult	m?	
						<i>319 g</i>						
Sub-group 130	3	145	deposit	144	fill	1	skull vault	white		?	?	no further work
130	3	132	deposit	131	fill	354	vertebrae, humerus, tibia	white		adult	?	
130	3	468	deposit		fill	1	long bone shaft	white		?	?	no further work
						<i>356 g</i>						
Sub-group 133		136	deposit	137	cremation fill	3	skull vault, long bone shaft	white		?	?	no further work
133		134	deposit	135	cremation fill	13	skull vault, long bone shaft	white		?	?	no further work
						<i>16 g</i>						

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 139	2	103	deposit	105	cremation fill	1173	skull, vertebrae, humerus, tibia	white		adult	?	
139	2	116	deposit	114	fill	1	nothing identifiable	white		?	?	no further work
						<i>1174 g</i>						
Sub-group 164		163	deposit		artefact	472 g	odontoid, cervical vertebra, upper long bone	white		adult	f?	
Sub-group 178	3	179	deposit	180	fill	1	nothing identifiable	white		?	?	no further work
178	3	181	deposit	182	cremation fill	73	skull vault,	white		subadult?	?	2 spits
						<i>74 g</i>						
Sub-group 185	1	216	deposit	215	cremation fill	15	cervical vertebra, long bone shaft	white		adult	?	no further work
185	1	186	deposit	187	fill							unsorted residue
185	1	188	deposit	189	fill	339	skull vault, rib, long bone shaft, petrous	white		subadult		5 spits
185	1	202	deposit	201	cremation fill	925	skull vault, rib, femur	white		adult?	?	5 spits
						<i>1279 g</i>						
Sub-group 191	4	154	deposit		cremation fill	125	skull, radius, femur, tibia	white		adult	?	
191	4	140	deposit	198	fill	10	skull vault, long bone shaft	white		adult	?	no further work
						<i>135 g</i>						
Sub-group 217		1091	deposit	1089	cremation fill	53 g	skull vault, long bone shaft	white		?	?	no further work
Sub-group 224	3	222	deposit	221	fill	138 g	skull vault, petrous, long bone shaft	white		subadult		
Sub-group 228	3	226	deposit	1107	cremation fill	1322	skull vault, radial head, capitate, femur, humeral head, hamate, tibia, ?maxilla	white		adult	m?	high potential
228	3	229	deposit	1109	cremation fill	4	long bone shaft	white		?	?	no further work
228	3	1107	deposit	1109	artefact	10	tibia shaft	white		adult	?	no further work
						<i>1336 g</i>						
Sub-group 236	3	267	deposit	446	artefact	145	petrous, femur, calcaneus	white		adult?	?	
236	3	268	deposit	267	cremation fill	996	skull vault, petrous, distal humerus, radius,	white		adult?	m?	6 spits

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
236	3	447	deposit	446	cremation fill	1	ulna long bone shaft	white		?	?	no further work
						<i>1142 g</i>						
Sub-group 237	1	270	deposit	269	cremation fill	<i>485 g</i>	skull vault, pelvis, vertebrae, humerus, femur, fibula	white		adult	?	8 spits
Sub-group 238	3	305	deposit	448	cremation fill	<i>79 g</i>	skull vault, radius, ulna, rib, tibia	white		young adult	?	
Sub-group 239	3	428	deposit	590	cremation fill	63	skull vault, long bone shaft	white		adult?		
239	3	432	deposit	433	cremation fill	11	skull vault, molar root, pelvis, long bone	white		adult?	?	
239	3	445	deposit	438	cremation fill	5	nothing identifiable	white		?	?	no further work
239	3	425	deposit	590	fill	1386	mandible, dentition, skull vault, sacrum	white		adult	?	8 spits
						<i>1465 g</i>						
Sub-group 253	3	709	deposit	256	fill	2	long bone shaft	white		?	?	no further work
253	3	710	deposit	257	fill							unsorted residue
253	3	712	deposit	259	fill	2	nothing identifiable	white		?	?	no further work
253	3	255	deposit	254	fill	73	skull vault, femur, distal fibula	white		adult	?	
						<i>77 g</i>						
Sub-group 281	3	278	deposit	277	cremation fill	<i>278 g</i>	skull vault, odontoid, radius	white		adult	?	
Sub-group 290	3	156	deposit	203	fill	3	skull vault	white		?	?	no further work
290	3	204	deposit		artefact	414	nothing identifiable					unsorted residue, large quantity of bone present, sort
290	3	176	deposit	177	Cremation fill	271	skull vault, upper long bone shaft	white		adult?	?	4 spits
						<i>688 g</i>						
Sub-group 298	3	296	deposit	295	cremation fill	233	nothing identifiable					unsorted residue
298	3	362	deposit	295	cremation fill	895	skull vault, cervical vertebra, tibia	white		adult?	?	6 spits, animal bone
298	3	371	deposit	295	other	27	canine root	white		?	?	scan residue

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						<i>1155 g</i>						
Sub-group 299	3	304	deposit	302	cremation fill	<i>367 g</i>	skull vault, vertebrae, long bone shaft	white		adult	?	
Sub-group 300		449	deposit	448	fill	<i>54 g</i>	skull vault, rib, femur	white		adult	f?	no further work
Sub-group 307	2	310	deposit	308	fill	827	skull vault, temporal, vertebra, humerus, radius, femur	white		young adult	f?	5 spits
307	2	313	deposit	308	fill	10	skull vault, long bone shaft	white		subadult/young adult		no further work
						<i>837 g</i>						
Sub-group 332	3	334	deposit	333	cremation fill	7	skull vault, vertebral body	white		adult?	?	no further work
332	3	336	deposit	333	fill	258	fibula	white		?	?	3 spits
332	3	338	deposit	333	fill	26	skull vault	white		?	?	
						<i>291 g</i>						
Sub-group 354	3	627	deposit	624	cremation fill	<i>414 g</i>	skull vault, humerus, ulna, radius, sacrum, pelvis	white, blue-grey		adult	?	8 spits
Sub-group 355	3	575	deposit	574	cremation fill	29	long bone shaft	white		subadult?	?	no further work
355	3	480	deposit	479	cremation fill	509	skull vault, mastoid, vertebra	white		ageing adult	f?	oyster shell
355	3	478	deposit	477	cremation fill	753	skull vault, petrous, vertebrae, femur, fibula	white		adult	?	5 spits
						<i>1291 g</i>						
Sub-group 411	4	318	deposit	418	cremation fill	<i>89 g</i>	skull vault	white		subadult	?	
Sub-group 413		421	deposit	422	fill	<i>2 g</i>	nothing identifiable	white		?	?	no further work
Sub-group 423	2	571	deposit	572	cremation fill	<i>545 g</i>	skull vault, radius, ulna, pelvis	white		adult	f?	3 spits, wormian at lambda
Sub-group 444	4	252	deposit	440	fill	<i>10 g</i>	long bone shaft	white		?	?	no further work
Sub-group 450	3	452	deposit	451	cremation fill	105	skull vault, vertebral facet, humerus, femur	white		adult	?	no further work
450	3	456	deposit	451	fill	1	nothing identifiable	white		?	?	no further work
450	3	458	deposit	451	fill	131						unsorted residue

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						237 g						
Sub-group 474	4	406	coffin	353	other	5 g	long bone shaft	white		?	?	no further work
Sub-group 488	4	493	deposit	495	artefact	4	skull vault	white		?	?	no further work
488	4	486	deposit		fill	20	long bone shaft	white		?	?	
488	4	494	deposit	495	cremation fill	6	long bone shaft	white		?	?	no further work
488	4	496	deposit	495	cremation fill	568	skull vault, humerus, long bone shaft	white		adult?	?	5 spits
488	4	591	deposit	495	fill	43	skull vault, long bone shaft	white		?	?	
488	4	587	deposit	495	artefact	2	rib, long bone shaft	white		?	?	no further work
						643 g						
Sub-group 498	2	500	deposit	499	cremation fill	9	long bone shaft	white		?	?	no further work
498	2	502	deposit	501	cremation fill	735	skull vault, humerus, pelvis, vertebrae	white		adult	?	3 spits
498	2	503	deposit	499	artefact	1	nothing identifiable	white		?	?	no further work
						745 g						
Sub-group 507	3	464	deposit	463	cremation fill	728	skull vault, tooth roots, atlas, vertebra, femur, tibia, fibula	white		adult?	?	
507	3	463	deposit	465	artefact	7	long bone shaft	white		?	?	
507	3	576	deposit	463	fill	3	long bone shaft	white		?	?	no further work
						738 g						
Sub-group 554	3	473	deposit	472	cremation fill	403	skull vault, scapula, humerus, maxilla, humeral head, maxilla, distal femur, petrous	white		adult	?	4 spits
554	3	555	deposit	472	cremation fill	3	nothing identifiable	white		?	?	no further work
						406 g						
Sub-group 564	3	562	deposit	561	artefact	2	long bone shaft	white		?	?	no further work
564	3	563	deposit	562	fill	359	petrous, mandible, pelvis, humerus	white		adult?	?	
						361 g						
Sub-group 579		577	deposit		other	9 g	skull vault, long bone shaft	white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 585		250	deposit	584	fill	1 g	rib shaft	white		?	?	no further work
Sub-group 588	3	642	deposit	651	artefact	33 g	skull vault, upper long bone shaft	white		adult?	?	no further work
Sub-group 599	3	598	deposit	597	fill							unsorted residue
599	3	292	deposit	291	cremation fill	3	skull vault	white		subadult	?	no further work
599	3	638	deposit	291	cremation fill	222	skull vault. Long bone shaft	white		subadult	?	
						225 g						
Sub-group 620	3	280	deposit	279	Cremation fill	143 g	skull vault, radius, ulna	white		adult?	?	
Sub-group 623		644	deposit	652	artefact	46 g	skull vault	white		adult	?	
Sub-group 629	3	632	deposit	631	cremation fill	341 g	skull vault, cervical vertebrae, radius, femur	white		adult?	?	2 spits
Sub-group 655	2	657	deposit	653	fill	975 g	skull vault, humerus, ulna, femur, talus	white		adult	?	5 spits
Sub-group 670		673	deposit		cremation fill	267 g	skull vault, temporal, radius	white		adult	?	3 spits
Sub-group 672	3	683	deposit	792	artefact	90 g	skull vault, upper limb	white		adult	?	3 spits
Sub-group 690		816	deposit		fill	1	nothing identifiable	white		?	?	no further work
690		434	deposit	435	fill	2	skull vault	white		?	?	1 unburnt fragment
						3 g						
Sub-group 716	3	758	deposit	718	cremation fill	1285	skull vault, occipital, mandible, thoracic and lumbar vertebrae, femur, tibia, talus	white		adult	?	12 spits
716	3	718	deposit	1059	artefact	2	long bone shaft	white		?	?	no further work
						1287 g						
Sub-group 719	3	724	deposit	720	cremation fill	11	nothing identifiable	white		?	?	no further work
719	3	845	skeleton	720	other	12	skull vault only	white		young adult?	?	no further work
719	3	721	deposit	720	artefact	3	vertebral arch	white		?	?	no further work
719	3	722	deposit	721	cremation fill	1622	skull vault, thoracic and lumbar vertebrae, sacrum, pelvis,	white		young adult?	?	8 spits

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
							humerus, radius, ulna, rib, femur					
						1648 g						
Sub-group 727	3	729	deposit	728	fill	38 g	skull vault, long bone shaft	white		?	?	no further work
Sub-group 750	2	741	deposit	744	cremation fill	171 g	skull vault, long bone shaft	white		adult?	?	3 spits, no further work
Sub-group 793	4	715	deposit	792	fill	2	long bone shaft	white		?	?	no further work
793	4	790	deposit	792	fill	10	long bone shaft	white		?	?	no further work
						12 g						
Sub-group 832		884	deposit		fill							residue only
832		834	deposit	833	fill	20	skull vault, long bone shaft	white		adult?	?	no further work
						20 g						
Sub-group 836	3	838	deposit	837	fill	2 g	nothing identifiable	white		?	?	no further work
Sub-group 856	3	860	deposit	857	cremation fill	48	cervical vertebrae	white		adult?	?	no further work
856	3	859	deposit	858	cremation fill	89	tibia	white		adult?	?	no further work
						137 g						
Sub-group 869	3	865	deposit	864	fill	3 g	long bone shaft	white		?	?	no further work
Sub-group 875		701	deposit	725	cremation fill	20 g	long bone shaft	white		subadult?	?	3 spits, no further work
Sub-group 901	4	778	deposit	780	fill	9	frontal, long bone shaft	white		?	?	no further work
901	4	974	deposit	973	fill	2	long bone shaft	white		?	?	no further work
901	4	779	deposit	780	cremation fill	6	skull vault, long bone shaft	white		adult?	?	no further work
						17 g						
Sub-group 910	2	912	deposit	911	fill	9 g	skull vault, humerus shaft	white		adult?	?	no further work
Sub-group 981	3	770	deposit	769	fill	1 g	long bone shaft	white		?	?	no further work
Sub-group 986		794	cut		grave	1 g	long bone shaft	white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 998	3	1000	deposit		cremation fill	8	cervical vertebrae, radius	white		?	?	no further work
998	3	999	deposit		artefact	2	animal bone?	white				
						<i>10 g</i>						
Sub-group 1001	3	1003	deposit	1002	cremation fill	<i>105 g</i>	skull vault, petrous, rib, vertebral facet, femur	white		adult	?	no further work
Sub-group 1015		1140	deposit		cremation fill	5	skull vault, long bone shaft	white		?	?	no further work
1015		1014	deposit	1012	cremation fill	120	mandible, vault, cervical vertebrae	white		?	?	
1015		1013	deposit	1036	fill	88	upper long bone shaft	white		?	?	2 spits, no further work
						<i>213 g</i>						
Sub-group 1017	3	1019	deposit	1018	fill	<i>1 g</i>	long bone shaft	white		?	?	no further work
Sub-group 1024		1026	deposit	1025	fill	<i>1 g</i>	long bone shaft	white		?	?	no further work
Sub-group 1067	3	938	coffin	1103	other	<i>12 g</i>	skull vault, long bone shaft	white		?	?	no further work
Sub-group 1069	3	1094	deposit	1095	artefact	233	mandible, humerus, tibia	mixed		adult?	?	
1069	3	1092	deposit	1093	cremation fill	515	skull vault, femur, long bone shaft	mixed		adult?	?	
						<i>748 g</i>						
Sub-group 1070	3	1114	deposit	1117	artefact	7	nothing identifiable	white		?	?	no further work
1070	3	1115	deposit	1114	cremation fill	1145	skull vault, petrous, tibia, vertebra, auricular surface	white		adult	?	9 spits
1070	3	1108	deposit	1117	artefact	1	long bone shaft	white		subadult?	?	no further work
						<i>1153 g</i>						
Sub-group 1071	2	1110	deposit	1112	artefact	8	long bone shaft	white		?	?	no further work
1071	2	1111	deposit	1110	cremation fill	1162	skull vault, axis, pelvis, sacrum, humerus, ulna	white		adult	?	3 spits
						<i>1170 g</i>						
Sub-group 1126	2	1128	deposit	1127	fill	<i>1 g</i>	long bone shaft	white		?	?	no further work
Sub-group	3	1135	deposit	1133	cremation fill	18	nothing identifiable	white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
1132												
1132	3	1139	deposit	1134	fill	80	skull vault, long bone shaft	white		adult?	?	no further work
						98 g						
Sub-group 1136	4	1138	deposit	1137	fill	16 g	crown fragment, fibula	white		?	?	no further work
Sub-group 1146	5	1147	deposit	1148	fill	3 g	long bone shaft	white		?	?	no further work
Sub-group 1180	4	801	deposit	800	cremation fill	1506	skull vault, petrous, scapula, vertebrae, sacrum, humerus, radial head, navicular, talus	white		adult	?	5 spits
1180	4	1175	deposit	1176	fill	2	skull vault, long bone shaft	white		?	?	no further work
						1508 g						
Sub-group 1219		1220	deposit	1221	fill	1 g	molar root	white		12+	?	no further work
Sub-group 1340		1044	deposit	1043	fill	1 g	nothing identifiable	white		?	?	no further work
Sub-group 1384		596	deposit	595	cremation fill	1 g	long bone shaft	white		?	?	no further work
Sub-group 1386		941	deposit	940	fill	1 g	nothing identifiable	white		?	?	no further work
Sub-group 1387	3	943	deposit	942	fill	3 g	long bone shaft	white		?	?	no further work
Sub-group 1391		147	deposit	146	cremation fill	1 g	long bone shaft	white		?	?	no further work
Sub-group 1412		594	deposit	593	fill	1 g	rib, long bone shaft	white		subadult?		no further work
Sub-group 10106	3	10115	deposit	10104	fill	2 g						residue only
Sub-group 10109		10107	deposit	10108	fill	5	long bone shaft	white		?	?	no further work
10109		10110	deposit		fill	83	skull vault, long bone shaft	white		adult	?	4 spits
						88 g						
Sub-group 10166		10168	deposit	10167	cremation fill	403	skull vault, canine, femur	white		adult	?	11 spits
10166		10169	deposit		layer	10	skull vault	white		adult?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
10166			deposit	10229		62	Skull, petrous, humerus, femur	white		adult?	?	no further work
10166		10246	deposit	10167	fill	47	skull vault, long bone shaft	white		adult	m?	5 spits
						522 g						
Sub-group 10263		10261	deposit	10262	cremation fill	40 g	long bone shaft	white		adult?	?	4 spits
Sub-group 10287		10279	deposit	10278	cremation fill							residue only
Sub-group 10313		10315	deposit	10314	cremation fill	68 g	skull vault, long bone shaft	white		adult?	?	2 spits
Sub-group 10426		10425	deposit	10424	cremation fill	93 g	long bone shaft	white		?	?	8 spits
Sub-group 10438		10439	deposit		layer	5 g	tibia shaft	white		?	?	no further work
Sub-group 10458		10502	deposit	10503	fill	142	upper long bone shaft, phalange	white		adult?	?	
10458		10501	deposit	10503	cremation fill	378	skull vault, vertebrae, humerus	white		adult	?	5 spits
10458		10451	deposit	10503	cremation fill	263	skull vault	white		adult?	?	
						783 g						
Sub-group 10471		10469	deposit	10470	cremation fill	118 g	skull vault, radial head, fibula	white		adult?	?	
Sub-group 10474		10472	deposit	10473	cremation fill	5 g	skull vault, long bone shaft	white		?	?	no further work
Sub-group 10489	1	10559	deposit		other	1049	skull vault, radius, ulna	white		adult?	?	burnt animal bone, iron nails
10489	1	10538	deposit			2		white		?	?	no further work
10489	1	10558	deposit	10490	layer	48	skull vault, tibia	white		adult?	?	no further work
10489	1	10560	deposit	10490	fill	270	temporal, vault, lunate	white		adult	?	
10489	1	10561	deposit		layer	29	premolar root, talus	white		adult?	?	no further work
10489	1	10491	deposit	10490	fill	4	tibia shaft	white		?	?	no further work
10489	1	10492	deposit	10490	fill	27	long bone shaft	white		subadult?	?	very abraded fragments
10489	1	12224	deposit	10538	fill							residue only, no further work
						1429 g						
Sub-group 10504		10505	deposit	10506	cremation fill	12 g		white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 10512		10511	deposit	10510	cremation fill	111 g	skull vault, long bone shaft	white		adult	?	5 spits
Sub-group 10517		10519	deposit	10518	fill	63 g	humerus, tibia	white		adult?	?	no further work
Sub-group 10522	4	10521	deposit	10520	fill	44	skull vault, upper limb	white		adult?	?	
10522	4	10577	deposit	10572	fill	1		white		?	?	no further work
						45 g						
Sub-group 10525		10523	deposit	10524	cremation fill	7 g	skull vault, metapodial	white		adult?	?	no further work
Sub-group 10557		10556	deposit	10555	cremation fill	40 g	skull vault, long bone	white		subadult?	?	
Sub-group 10568	2	10564	deposit	10567	cremation fill	938 g	skull vault, maxilla	white		adult	m?	5 spits
Sub-group 10585		10586	deposit	10587	fill	398	skull vault, temporal, distal radius, lunate, tibia	white		adult	?	
10585		10620	deposit	10587	cremation fill	657	skull vault, rib	white		adult	?	
10585		10593	deposit	10587	fill	13	tooth roots, long bone shaft	white		adult?	?	no further work
						1068 g						
Sub-group 10595	3	10665	deposit	10601	fill							residue only
10595	3	10633	deposit	10596	other	66	?humerus	white		adult?	?	
10595	3	10597	deposit	10596	cremation fill	298	skull vault, long bone shaft	white		adult	?	3 spits
10595	3	10664	deposit	10632	fill	1		white		?	?	no further work
10595	3	10635	deposit	10596	fill	3	long bone shaft	white		subadult?	?	no further work
						368 g						
Sub-group 10605		10604	deposit	10603	cremation fill	50	skull vault, tooth root	white		adult?	?	4 spits
10605		11540	deposit	10603	cremation fill	467	skull vault	white		subadult	?	3 spits
						517 g						
Sub-group 10615		10618	deposit	10617	cremation fill	57 g	skull vault, long bone shaft	white		subadult?	?	
Sub-group 10621		10623	deposit	10622	cremation fill	23	long bone shaft	white		?	?	no further work
10621		10630	coffin	10622	other	1	long bone shaft	white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						<i>24 g</i>						
Sub-group 10626	3	10625	deposit	10624	cremation fill	<i>602 g</i>	skull vault, femur head, fibula	white		adult	f?	
Sub-group 10655		10657	deposit	10656	fill	<i>108 g</i>	femur	white		adult?	?	
Sub-group 10669	3	10673	deposit	10672	cremation fill	<i>971 g</i>	petrous, basilar, thoracic vertebrae	white		adult?	?	
Sub-group 10686	1	10688	deposit	10687	cremation fill	18	petrous	white		subadult?	?	no further work
10686	1	10690	deposit	10687	other	15		white		?	?	no further work
10686	1	10692	deposit	10691	fill	1		white		?	?	no further work
10686	1	10693	deposit	10687	fill	2	skull vault	white		subadult?	?	no further work
						<i>36 g</i>						
Sub-group 10698		10702	deposit		other	184	upper limb	white		adult?	?	4 spits
10698		10701	deposit	10699	cremation fill	290	skull vault, rib, vertebrae	white		adult	?	
						<i>474 g</i>						
Sub-group 10703	3	10747	deposit	10676	cremation fill	<i>85 g</i>	skull vault, petrous, rib, fibula	white		adult	?	3 spits
Sub-group 10712	3	10711	deposit	10710	fill	<i>18 g</i>	skull vault, mandible, acetabulum	white		adult	?	no further work
Sub-group 10741		10770	deposit	10771	fill	<i>1 g</i>		white		?	?	no further work
Sub-group 10755		10757	deposit	10756	fill	<i>52 g</i>	skull vault	white		adult?	?	
Sub-group 10789	3	10791	deposit	10790	cremation fill	14	skull vault, long bone shaft	white		subadult?	?	no further work
10789	3	10794	deposit	10790	cremation fill	8	skull vault	white		?	?	no further work
						<i>22 g</i>						
Sub-group 10802	2	10804	deposit	10803	cremation fill	<i>4 g</i>		white		?	?	no further work
Sub-group 10813	3	10817	deposit	10814	cremation fill	257	skull vault	white		adult	?	5 spits
10813	3	10815	deposit	10814	fill	24	vertebra, tibia	white		adult?	?	no further work
						<i>281 g</i>						
Sub-group 10824	3	10826	deposit	10825	cremation fill	129	long bone shaft	white		adult?	?	2 spits

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
10824	3	10827	deposit	10825	fill	319	temporal, mandible	white		adult	?	
10824	3	10829	deposit	10825	fill	1		white		?	?	no further work
10824	3	10830	deposit	10825	cremation fill	8		white		?	?	no further work
10824	3	10831	deposit	10825	artefact	84	rib, tibia	white		adult?	?	
						<i>541 g</i>						
Sub-group 10837	3	10844	deposit	10839	fill	354	skull vault	white		adult	?	
10837	3	10841	deposit	10840	fill							residue only
10837	3	10839	deposit	10838	cremation fill	139	skull vault, mandible, upper limb	white		adult	f?	3 spits
						<i>493 g</i>						
Sub-group 10845		10847	deposit	10846	fill	11	radius, femur	white		adult?	?	no further work
10845		10850	deposit	10846	fill	3	long bone shaft	white		?	?	no further work
						<i>14 g</i>						
Sub-group 10851		10854	deposit	10852	cremation fill	5 g	skull vault	white		subadult?	?	no further work
Sub-group 10856		10868	deposit	10857	cremation fill	237 g	skull vault, tibia	white		adult	?	
Sub-group 10859		10861	deposit	10860	fill	12 g	skull vault, tibia	white		adult?	?	no further work
Sub-group 10871	3	10869	deposit	10870	fill	67 g	skull vault, long bone shaft	white		adult	?	5 spits
Sub-group 10875	3	10882	deposit	10876	cremation fill	473	skull vault, humerus	white		adult	m?	
10875	3	10880	deposit	10879	fill	1		white		?	?	no further work
10875	3	10878	deposit	10877	fill	5		white		?	?	no further work
						<i>479 g</i>						
Sub-group 10883		10886	deposit	10884	cremation fill	24 g	skull vault	white		adult?	?	no further work
Sub-group 10891		10889	deposit	10898	cremation fill	42 g	long bone shaft	white		adult?	?	no further work
Sub-group 10893		10895	deposit	10894	cremation fill	59 g	skull vault	white		adult	?	
Sub-group 10907		10909	deposit	10908	fill	133	skull vault, petrous, ribs, axis,	white		adult	?	4 spits
10907		10911	deposit	10908	fill	257	vertebral facets, humeral head, radius	white		adult	?	

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						<i>390 g</i>						
Sub-group 10912	3	10915	deposit	10913	cremation fill	52 g	skull vault	white		subadult?	?	
Sub-group 10921	2	10929	deposit	10922	fill	2	skull vault, long bone shaft	white		?	?	no further work
10921	2	10930	deposit	10922	fill							residue only
10921	2	10926	deposit	10922	fill	7	skull vault, long bone	white		adult?	?	no further work
10921	2	10923	deposit	10922	cremation fill	151	mastoid, skull vault	white		adult?	?	
						<i>158 g</i>						
Sub-group 10935		10932	deposit	10934	cremation fill	8 g	long bone shaft	white		?	?	no further work
Sub-group 10936		10938	deposit	10937	cremation fill	5		white		?	?	no further work
10936		10939	deposit	10937	cremation fill	2		white		?	?	no further work
						<i>7 g</i>						
Sub-group 10943	2	10946	deposit	10944	artefact	3	long bone shaft	white		?	?	no further work
10943	2	10947	deposit	10946	cremation fill	907	skull vault, femur	white		adult	?	burnt animal bone
10943	2	10951	deposit	10950	fill	4		white		?	?	
10943	2	12229	deposit	10952	fill	1		white		?	?	no further work
						<i>915 g</i>						
Sub-group 10953	3	10957	deposit	10954	fill	47	skull vault, upper limb	white		adult?	?	no further work
10953	3	10959	deposit	10954	fill	244	skull vault, upper limb, rib	white		adult	?	8 spits
10953	3	10960	deposit	10954	fill	1		white		?	?	no further work
						<i>292 g</i>						
Sub-group 10967		10970	deposit	10968	fill	<i>102 g</i>	humerus	white		adult	?	
Sub-group 10971	3	10976	deposit	10972	cremation fill	5	skull vault, vertebrae	white		?	?	no further work
10971	3	10978	deposit	10972	fill	15	tooth root, mastoid, rib, tibia	white		adult	f?	
						<i>20 g</i>						
Sub-group 10979	3	10981	deposit	10980	fill	52	skull, upper limb	white		adult	?	
10979	3	10984	deposit	10980	cremation fill	449	skull vault, petrous, rib	white		young adult?	?	
						<i>501 g</i>						

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 10986	3	10990	deposit	10989	cremation fill	209 g	skull vault, long bone	white		adult	?	3 spits
Sub-group 11007	3	11000	deposit	10999	fill	44						residue only, no further work
11007	3	11002	deposit	11001	fill	936	skull, vertebrae, pelvis, humerus	white		adult	?	8 spits
11007	3	11042	deposit	10999	cremation fill	1 981 g		white		?	?	no further work
Sub-group 11008		11010	deposit	11009	fill	321	skull vault, cervical vertebrae	white		adult?	?	
11008		11011	deposit	11009	cremation fill	96	skull vault, humerus, radius	white		adult?	?	
11008		11013	deposit	11009	fill	73 490 g	skull vault, vertebral body	white		adult?	?	
Sub-group 11014	3	11016	deposit	11188	cremation fill	43 g	long bone shaft	white		?	?	no further work
Sub-group 11017	3	11021	deposit	11019	fill	390	skull vault, cervical vertebrae, unfused epiphyses	white		subadult?	?	7 spits
11017	3	11020	deposit	11019	cremation fill	483 873 g	skull, tooth roots, vertebrae, humerus, femur	white		adult	?	7 spits, burnt animal bone
Sub-group 11025	3	11027	deposit	11026	cremation fill	129 g	skull vault, humerus, femur	white		adult	?	
Sub-group 11048		11050	deposit	11049	cremation fill	327	skull vault	white		adult?	?	
11048		11051	deposit	11049	fill	126 453 g	skull, long bone	white				
Sub-group 11052	2	11077	deposit	11056	cremation fill	114	skull vault, occipital, petrous, radius	white		young adult	?	2 spits
11052	2	11054	deposit	11053	cremation fill	403	skull vault, petrous, upper limb	white		adult	f?	
11052	2	11055	deposit	11053	cremation fill	189 706 g	skull vault, mandible, humerus	white		adult?	?	
Sub-group 11058	1	11061	deposit	11060	cremation fill	244 g	skull vault, ulna, vertebrae, femur	white		adult	?	6 spits

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 11064	3	11066	deposit	11067	cremation fill	612 g	scapula, vertebrae, humerus, femur	white		adult	?	7 spits
Sub-group 11069	3	11071	deposit	11070	fill	23 g	skull vault, tibia	white		adult	?	no further work
Sub-group 11079	3	11081	deposit	11080	cremation fill	1		white		?	?	no further work
11079	3	11085	deposit	11084	cremation fill	76 77 g	skull vault	white		adult	?	5 spits
Sub-group 11090	3	11073	deposit	11072	fill	28	skull vault, long bone shaft	white		?	?	no further work
11090	3	11075	deposit	11072	cremation fill	160 188 g	femur	white		adult	f?	
Sub-group 11091		11095	deposit	11092	fill	265	skull vault, humerus	white		adult?	?	
11091		11093	deposit	11092	cremation fill	241	skull vault, distal humerus, femur	white		adult	?	
11091		12230	deposit	11094	fill							residue only, no further work
						506 g						
Sub-group 11097	2	11102	deposit	11101	cremation fill	798 g	skull vault, mandibular condyles, pelvis, rib, femur, talus	white		adult	?	6 spits
Sub-group 11106	3	11110	deposit	11109	cremation fill	63	skull vault, molar crown	white		subadult	?	
11106	3	11125	deposit	11111	fill							residue only, no further work
						63 g						
Sub-group 11118	3	11122	deposit	11121	cremation fill	55 g	skull vault, petrous, vertebrae, humerus	white		subadult	?	3 spits
Sub-group 11158		11160	deposit	11159	fill	8 g		white		?	?	no further work
Sub-group 11161	3	11165	deposit	11164	cremation fill	8 g		white		?	?	no further work
Sub-group 11166	2	11173	deposit	11172	fill	1		white		?	?	no further work
11166	2	11169	deposit	11167	cremation fill	82 83 g	skull vault, epiphyseal surface	white		subadult	?	

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 11179		11176	deposit	11178	fill	6	ulna	white		?	?	no further work
11179		11177	deposit	11178	fill	291	skull vault, petrous, humerus, rib	white		adult?	?	
						297 g						
Sub-group 11186	3	11181	deposit	11182	cremation fill	6	skull vault	white		subadult	?	no further work
11186	3	11183	deposit	11182	cremation fill	12	skull vault, petrous, rib	white		adult?	?	no further work
						18 g						
Sub-group 11197	3	11199	deposit	11198	fill	2	skull vault	white		adult	?	no further work
11197	3	11203	deposit	11204	fill	328	skull vault, petrous, femur	white		adult	?	
						330 g						
Sub-group 11205	1	11207	deposit	11206	artefact	7		white		?	?	no further work
11205	1	11208	deposit	11207	cremation fill	515	odontoid, petrous, vertebral facets, proximal femur	white		adult	m?	
						522 g						
Sub-group 11214	3	11217	deposit	11215	artefact							residue only, no further work
11214	3	11216	deposit	11215	cremation fill	49	skull vault, humerus	white		adult		
11214	3	11218	deposit	11217	fill							residue only, no further work
11214	3	11220	deposit	11215	cremation fill	162	skull vault, long bone shaft	white		?	?	
						211 g						
Sub-group 11231	3	11260	deposit	11259	fill							residue only, no future work
11231	3	11258	deposit	11232	cremation fill	114	skull vault, molar root	white		adult?	?	3 spits
11231	3	11254	deposit	11253	fill	126		white		?	?	4 spits
11231	3	11257	deposit	11232	artefact	1		white		?	?	no further work
						241 g						
Sub-group 11238	3	11240	deposit	11239	cremation fill	17		white		?	?	no further work
11238	3	11243	deposit	11239	cremation fill	347	skull vault, 2 petrous, distal humerus	white		adult?	?	

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						<i>364 g</i>						
Sub-group 11242		11310	deposit	11309	cremation fill	6	skull vault	white		?	?	no further work
11242		11311	deposit	11309	cremation fill	93	skull vault, upper limb	white		adult?	?	
						<i>99 g</i>						
Sub-group 11261	2	11264	deposit	11262	cremation fill	<i>332 g</i>	skull vault, femoral condyle, fibula	white		adult?	?	
Sub-group 11268		11269	deposit	11270	cremation fill	<i>12 g</i>		white		?	?	no further work
Sub-group 11271	2	11274	deposit	11272	cremation fill	52	skull vault	white		adult	?	
11271	2	11275	deposit	11273	cremation fill	635	skull vault, mandibular condyle, fibula	white		adult	?	6 spits
						<i>687 g</i>						
Sub-group 11276		11292	deposit	11291	cremation fill	73	skull vault, long bone shaft	white		?	?	no further work
11276		11293	deposit	11291	cremation fill	100	vertebrae, radius	white		adult?	?	
						<i>173 g</i>						
Sub-group 11277	2	11280	deposit	11278	cremation fill	<i>209 g</i>	skull vault, femur	white		adult	?	
Sub-group 11281	3	11283	deposit	11282	artefact	4	long bone shaft	white		?	?	no further work
11281	3	11284	deposit	11283	cremation fill	432	skull vault, molar root	white		adult	?	7 spits
						<i>436 g</i>						
Sub-group 11286	3	11289	deposit	11288	cremation fill	<i>137 g</i>	skull vault, long bone shaft	white		young adult	?	3 spits
Sub-group 11296	3	11299	deposit	11298	cremation fill	570	mastoid, mandible	white		adult	m?	
11296	3	11300	deposit	11298	cremation fill							residue only, no further work
						<i>570 g</i>						
Sub-group 11312	3	11315	deposit	11314	cremation fill	<i>70 g</i>	skull vault, scapula, tibia	white		adult?	?	3 spits
Sub-group 11320		11322	deposit	11321	cremation fill	124	long bone shaft	white		subadult?	?	
11320		11323	deposit	11321	cremation fill	313	skull vault	white		adult	?	
						<i>437 g</i>						
Sub-group		11342	deposit	11341	cremation fill	<i>116 g</i>	skull vault, temporal,	white		adult	?	

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
11340							petrous, humerus					
Sub-group 11344	3	11347	deposit	11346	cremation fill	705 g	humerus, femur, acetabulum	white		adult	?	
Sub-group 11353	3	11355	deposit	11354	cremation fill	51	long bone shaft	white		adult	?	
11353	3	11357	deposit	11354	cremation fill	76	skull vault, long bone shaft	white		adult	?	2 spits
						127 g						
Sub-group 11360	3	11363	deposit	11362	cremation fill	160	skull vault	white		adult	?	
11360	3	11364	deposit	11362	fill	172	skull vault	white		adult	?	5 spits
						332 g						
Sub-group 11365	3	11370	deposit	11366	artefact	344	skull vault, petrous, rib, long bone	white		adult	?	3 spits
11365	3	11369	deposit	11368	fill	7		white		?	?	no further work
11365	3	11371	deposit	11370	fill	28	skull vault, talus, navicular	white		adult?	?	no further work
11365	3	11373	deposit	11372	fill							residue only, no further work
11365	3	11374	deposit	11366	cremation fill	900	skull vault, mandible, humerus, radius, femur	white		adult	?	2 spits
11365	3	11367	deposit	11366	cremation fill	460	rib, humeral head, radius, femur, talus	white		adult	?	
						1739 g						
Sub-group 11389		11391	deposit	11390	fill							residue only, no further work
Sub-group 11402	2	11398	deposit	11393	cremation fill	371	atlas, rib, tibia	white		adult?	?	6 spits
11402	2	11393	deposit	11400	artefact	1	long bone shaft	white		?	?	no further work
						372 g						
Sub-group 11403		11399	deposit	11401	cremation fill	217 g	skull vault, humerus	white		adult?	?	
Sub-group 11405		11434	deposit	11433	cremation fill	4 g	long bone shaft	white		?	?	no further work
Sub-group 11406	3	11438	deposit	11437	cremation fill	131 g	cervical vertebra	white		adult?	?	
Sub-group 11407	3	11464	deposit	11440	cremation fill	44	skull vault, premolar and molar crowns	white		subadult	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
11407	3	11444	deposit	11441	fill							residue only, no further work
						<i>44 g</i>						
Sub-group 11408	3	11412	Deposit	11411	fill	1		white		?	?	no further work
11408	3	11414	deposit	11409	fill	1		white		?	?	no further work
11408	3	11410	deposit	11409	cremation fill	1314	skull vault, vertebrae, femur	white		adult	?	3 spits
						<i>1318 g</i>						
Sub-group 11416	3	11418	deposit	11417	cremation fill	<i>59 g</i>	upper limb	white		adult?	?	no further work
Sub-group 11455	2	11451	deposit	11453	cremation fill	<i>535 g</i>	occipital	white		adult	m?	4 spits
Sub-group 11457	3	11461	deposit	11458	cremation fill	216	mandible, rib, femur	white		adult	?	
11457	3	11462	deposit	11458	cremation fill	153		white		?	?	
						<i>369 g</i>						
Sub-group 11475	3	11471	deposit	11474	cremation fill	32	tooth root	white		?	?	no further work
11475	3	11472	deposit	11473	cremation fill	481	2 petrous, femur	white		adult	?	6 spits
						<i>513 g</i>						
Sub-group 11477	3	11480	deposit	11478	fill	<i>138 g</i>	skull vault, long bone shaft	white		adult?	?	
Sub-group 11486	3	11488	deposit	11487	cremation fill	25		white		?	?	no further work
11486	3	11490	deposit	11487	cremation fill	390	humerus	white		adult	?	
						<i>415 g</i>						
Sub-group 11502		11505	deposit	11504	cremation fill	131	skull vault, rib	white		adult	?	
11502		11503	deposit	11504	cremation fill	145		white		?	?	
						<i>276 g</i>						
Sub-group 11506		11508	deposit	11507	fill	<i>1 g</i>		white		?	?	no further work
Sub-group 11510	1	11513	deposit	11512	cremation fill	830	skull vault, petrous, ulna	white		adult?	?	4 spits
11510	1	11514	deposit	11511	cremation fill	332	skull vault, petrous, radius, tibia	white		adult	?	
						<i>1162 g</i>						

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 11519	2	11523	deposit	11520	cremation fill	26		white		?	?	no further work
11519	2	11562	deposit	11520	cremation fill	267	skull vault, rib, epiphyses	white		subadult	?	
						293 g						
Sub-group 11525		11527	deposit	11528	cremation fill	87 g	vertebra	white		?	?	
Sub-group 11529	2	11533	deposit	11532	fill							residue only, no further work
11529	2	11531	deposit	11530	cremation fill	124	skull vault, femur	white		adult?	?	
11529	2	11535	deposit	11530	cremation fill	195	skull vault, rib	white		adult	?	
						319 g						
Sub-group 11549	2	11558	deposit	11550	cremation fill	777	skull vault, long bone shaft	white		adult	m?	
11549	2	11551	deposit	11550	cremation fill	102	long bone shaft	white		?	?	
11549	2	11555	deposit	11550	cremation fill							residue only, no further work
11549	2	11557	deposit	11556	cremation fill	1		white		?	?	no further work
						880 g						
Sub-group 11559	2	11560	deposit	11541	artefact	5 g		white		?	?	no further work
Sub-group 11592		11565	deposit	11564	fill	1 g		white		?	?	no further work
Sub-group 11598	3	11593	deposit	11597	cremation fill	251	skull vault, vertebra	white		adult	?	
11598	3	11594	deposit	11595	cremation fill	7	skull vault, long bone shaft	white		adult?	?	no further work
11598	3	11595	deposit	11597	artefact	2		white		?	?	no further work
11598	3	11596	deposit	11597	cremation fill	655	tibia, navicular	white		adult	?	2 spits
						915 g						
Sub-group 11599	2	11601	deposit	11600	cremation fill	401	skull vault, humeral head, femur	white		adult	f?	2 spits
11599	2	11605	deposit	11604	fill	1	long bone shaft	white		?	?	no further work
11599	2	11606	deposit	11600	cremation fill	290	skull vault, radial head, femur	white		adult	?	2 spits
						692 g						
Sub-group 11607		11609	deposit	11608	fill	1 g	long bone shaft	white		?	?	no further work

Sub_group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
Sub-group 11610		11612	deposit	11611	fill	9 g	skull vault, scapula	white		adult?	?	no further work
Sub-group 11613	1	11615	deposit	11614	cremation fill	130	skull vault, tibia	white		ageing adult	?	
11613	1	11616	deposit	11614	cremation fill	326	skull vault, humerus	white		adult	?	
						456 g						
Sub-group 11618	3	11621	deposit	11619	cremation fill	196 g	skull vault	white		adult?	?	
Sub-group 11636	3	11634	deposit	11633	cremation fill	8 g	skull vault	white		subadult	?	no further work
Sub-group 11637	3	11640	deposit	11638	cremation fill	97	skull vault, distal fibula	white		adult	?	
11637	3	11641	deposit	11638	artefact	2		white		?	?	no further work
11637	3	11639	deposit	11638	cremation fill	120	skull vault, tooth root	white		adult	?	
11637	3	11758	deposit	11641	cremation fill	1177	skull vault, mandible, vertebral bodies, rib, proximal tibial epiphysis	white		subadult	?	2 spits
						1396 g						
Sub-group 11643		11572	deposit	11571	fill	1 g		white		?	?	no further work
Sub-group 11671		11380	deposit	11379	fill	7 g	skull vault, long bone shaft	white		?	?	no further work
Sub-group 11684		11676	deposit	11739	cremation fill	32	skull vault, humerus	white		adult?	?	
11684		11738	deposit	11739	cremation fill	747	petrous, vertebra, pelvis	white		adult	?	3 spits
						779 g						
Sub-group 11688		11690	deposit	11689	fill	1 g	long bone shaft	white		?	?	no further work
Sub-group 11700	1	11701	deposit		fill	18	skull vault, tibia	white		adult	?	no further work
11700	1	11704	deposit	11702	artefact	10	long bone shaft	white		?	?	no further work
11700	1	11706	deposit	11702	cremation fill	834	skull vault, petrous	white		adult?	?	
						862 g						
Sub-group 11707		11710	deposit	11708	cremation fill	12	skull vault, long bone shaft	white		subadult	?	no further work
11707		11709	deposit	11708	cremation fill	14	molar crown, long bone shaft	white		adult?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
						26 g						
Sub-group 11756		11827	deposit	11755	cremation fill	49	skull vault, petrous	white		adult?	?	burnt flint
11756		11753	deposit	11755	cremation fill	194	long bone shaft	white		adult?	?	
11756		11754	deposit	11755	cremation fill	344	skull vault, malar, humerus	white		adult?	?	3 spits
						587 g						
Sub-group 11765		11767	deposit	11766	fill	1 g		white		?	?	no further work
Sub-group 11779		11782	deposit	11780	cremation fill	241 g	skull vault, humerus	white		adult?	?	
Sub-group 11800	1	11728	deposit	11801	cremation fill	267 g	femur	white		adult?	?	burnt animal bone
Sub-group 11802	3	11870	deposit	11803	cremation fill	594	skull vault, humerus, ulna, rib	white		adult	?	burnt animal bone
11802	3	11804	deposit	11803	cremation fill	132	tibia	white		adult	?	
						726 g						
Sub-group 11825		11869	deposit	11823	cremation fill	38	skull vault, humerus	white		young adult	?	
11825		11824	deposit	11823	cremation fill	70	petrous, radius	white		adult?	?	4 spits
						108 g						
Sub-group 11847	2	11843	deposit	11845	fill	1 g		white		?	?	no further work
Sub-group 11854	3	11856	deposit	11855	fill	1 g	long bone shaft	white		?	?	no further work
Sub-group 11960	3	11964	deposit	11963	cremation fill	43 g	skull vault, petrous, rib, phalange	white		subadult	?	sort residue
Sub-group 11994	1	12003	deposit	12005	artefact	7 g	long bone shaft	white		?	?	no further work
11994	1	12000	deposit	11999	fill	3		white		?	?	no further work
11994	1	12004	Deposit	12003	cremation fill	1040	skull vault, humerus, tibia, 1st metatarsal	white		adult?	?	burnt animal bone
11994	1	12006	Deposit	12005	cremation fill	10	long bone shaft	white		?	?	no further work
11994	1	12014	Deposit	12005	cremation fill	102	phalange, long bone shaft	white		adult?	?	
						1162 g						
Sub-group 12034	4	12036	Deposit		fill	10 g		white		?	?	no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Weight	Identifiable fragments	Colour	MNI	Age	Sex	Comments
		10613		10436	fill	26	Skull vault, long bone shaft	white		Adult?	?	No further work
		10613		10650	fill	183	Skull vault, vertebrae, femur	white		Adult?	?	Wormian bone
		10613		10659	fill	68	Skull vault, long bone shaft	white		Adult?	?	
		10613		10727	fill	91	Lumbar vertebrae	White, blue-grey		Adult?	?	
		10613		10748	fill	348	Lumbar vertebrae	white		adult	?	
		10613		10812	fill	31	2 petrous	white		Adult?	?	No further work
		10613		10902	Fill	20	Long bone shaft	white		Adult?	?	No further work
		10613		11446	Fill	1		white		?	?	No further work
		10613		11484	fill	12	fibula	white		Adult?	?	
						780 g						
		10668		10679	fill	173	Skull vault, rib	white		Adult?	?	
				10627	layer	29	Long bone shaft	white		Adult?	?	Burnt flint
				10903	layer	11	Skull vault	White, blue-grey		Adult?	?	No further work
				10614	layer	69	Skull vault, fibula	white		Adult?	?	
				10177	layer	44	Skull vault, humerus, radius	white		adult	?	No further work
				11224		12	Skull vault, long bone shaft	white		Adult?	?	No further work
		10170		10159	fill	1		white		?	?	No further work
				10150	layer	1		white		?	?	No further work
		10124		10117	other	17	Skull vault	white		Subadult?	?	No further work
				10092	artefact	20	Long bone shaft	white		?	?	No further work
				10091	layer	1	Skull vault, long bone shaft	white		?	?	No further work
		12204		12205	fill							Residue only, no further work
		10613		10901	fill	90	Long bone shaft	White, grey		Adult?	?	No further work
		10613		10900	Fill	34	Skull vault, long bone shaft	white		?	?	No further work
		10227		10223	fill	8	Long bone shaft	white		?	?	Some fragments unburnt

Table 7.2: Summary of inhumations

Sub group	Phase	Context	Type	Fill of	Interpretation	Preservation	Completeness %	Age	Sex	Comments
ARC PHL97										
191	4	196	skeleton	198	other	low	1	adult	m?	skull vault, no further work
193	3	152	skeleton	194	other	low	5	ageing adult	m?	skull vault, no further work
235		205	deposit	234	fill					animal bone, no further work
235		233	skeleton	234	other	low	1	?	?	unidentifiable fragments, no further work
253	3	666	skeleton	254	other	low	2	adult?	?	skull vault, enamel fragments, no further work
253	3	666	skeleton	254	other	low	5	adult	?	skull vault, long bone shaft, 2 burnt fragments, no further work
290	3	289	skeleton	203	other	low	5	adult	?	skull vault, no further work
294		241	skeleton	160	other	low	5	adult?	?	skull vault, no further work
298	3	297	deposit	295	artefact	low	1	?	?	long bone shaft, no further work
444	4	339	skeleton	440	other	low	15	adult	m?	skull vault, tooth crowns, right and left leg, no further work
498	2	501	deposit	499	artefact	low	1	?	?	unidentifiable fragments, no further work
541	3	542	skeleton	544	other	low	2	?	?	long bone shaft, no further work
573		288	deposit	287	fill	low	5	adult?	?	skull vault, femur shaft, no further work
690		691	skeleton	435	other	low	1	adult	f?	right and left femur, no further work
690		817	skeleton	815	other	low	5	?	?	long bone shaft, no further work
831		913	skeleton	862	other	low	5	adult?	?	skull vault, no further work
832		834	deposit	833	fill	low	0.02	?	?	enamel fragments, no further work
836	3	839	skeleton	837	other	low	0.15	adult?	?	femur shaft, no further work
891	2	977	skeleton	892	other	low	0.1	adult		femur shaft, probably part of skeleton 892
901	4	1058	skeleton	973	other	low	0.01	?	?	dental enamel fragments, no further work
910	2	1016	skeleton	911	other	low	0.05	adult?	?	right femur, no further work
944	3	904	skeleton	698	other	low	0.05	adult	?	skull vault, atlas, no further work
985		984	skeleton	982	other	low	0.1	adult?	?	skull vault, dental enamel, no further work
986		835	skeleton	794	other	low	0.15	25-35	m?	skull, mandible, odontoid, no

Sub group	Phase	Context	Type	Fill of	Interpretation	Preservation	Completeness %	Age	Sex	Comments
										further work
1052		1079	skeleton	1053	other	medium	0.1	25-35	f?	skull, dentition, score dentition
1072		1158	skeleton	1073	other	low	0.05	adult?	?	skull vault, parietal foramen, no further work
1120	5	1267	skeleton	1266	other	low	0.05	young adult?	?	score dentition
1120	5	1251	skeleton	1269	other	low	0.05	?	?	femur shaft?, no further work
1126	2	1127	cut		grave	low	0.05	?	?	score dentition
1179		1303	skeleton	1177	other	low	0.01	?	?	dental enamel fragments, no further work
1198	3	1157	skeleton	1028	other	low	0.05	subadult?		?femur fragments
1200	2	1246	skeleton	1078	other	low	0.05	?		dental enamel fragments, no further work
1282		1285	skeleton	1262	other	low	0.05	?	?	long bone shaft, no further work
1282		1285	skeleton	1262	other	low	0.05	?	?	femur shaft?, no further work
1325		1330	skeleton	1326	other	low	0.01	?	?	dental enamel fragments, no further work
1378		1275	deposit		layer					animal bone, no further work
1385		173	deposit	172	fill		0.05	young adult	?	tooth crowns, no further work
1392	2	149	deposit	148	fill	low	0.05	adult?	?	skull vault, no further work
ARC NBR98										
10106	3	10115	deposit	10104	fill	low	0.02	?	?	unidentifiable fragments, no further work
10114		10113	skeleton		other	low	0.1	25-35	?	skull, dentition, left and right femur, score dentition
10114		10112	deposit	10111	fill					residue only
10185		10188	skeleton	10186	other	low	0.05	?	?	tibia shaft, no further work
10242		10244	skeleton	10243	other	low	0.05	adult	?	skull vault, no further work
10267		10291	other		other	low	0.05	?	?	long bone shaft, no further work
10271		10269	skeleton	10270	other	low	0.1	adult	?	left and right femur, no further work
10323		10407	skeleton	10321	other	low	0.1	?	?	long bone shaft, no further work
10344		10152	deposit	10151	fill	low	0.05	?	?	unidentifiable fragments, no further work
10403		10405	skeleton	10404	other	medium	0.5	adult	m?	clean and record
10403		10406	deposit	10404	fill					residue only
10430	2	10466	skeleton	10465	other	low	0.05	?	?	score dentition
10431		10434	skeleton	10432	other	low	0.02	?	?	enamel fragments, no further work
10484	1	10483	skeleton	10485	other					residue only
10517		10584	skeleton	10518	other	low	0.05	adult?	?	femur shaft, no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Preservation	Completeness %	Age	Sex	Comments
10522	4	10576	deposit	10571	fill					residue only
10522	4	10521	deposit	10520	fill					residue, 16 g cremated bone
10533	2	10543	skeleton	10532	other	low	0.05	?	?	score dentition
10537		10565	deposit	10482	other	medium	0.5	adult	?	skull, dentition, torso, long bones, clean and record
10590	3	10666	skeleton	10589	other	low	0.1	adult	f?	score dentition
10636	1	10639	skeleton	10638	other	low	0.05	?	?	score dentition
10655		10657	deposit	10656	fill					residue only
10712	3	10874	skeleton	10710	other	medium	0.8	adult	f?	mandible, torso, long bones, record
10712	3	10711	deposit	10710	fill					residue only
10755		10757	deposit	10756	fill					residue only
10845		10850	deposit	10846	fill	low	0.01	?	?	enamel fragments, no further work
10862	4	10866	skeleton	10863	other	low	0.05	18+	?	score dentition
10971	3	10976	deposit	10972	cremation fill					residue only
11090	3	11306	skeleton	11072	other	medium	0.7	25-35	f?	skull, torso, long bones, clean and record
11158		11252	skeleton	11159	other	medium	0.8	adult	?	humerus, femur, tibia, pelvis, clean and record
11329		11327	deposit	11328	fill	low	0.05	?	?	score dentition
11388		11387	skeleton	11386	other	low	0.15	adult	?	skull vault, femur shaft, no further work
11465	1	11500	skeleton	11466	other	low	0.01	18+	?	score dentition
11566		11617	skeleton	11567	other	low	0.05	?	?	unidentifiable fragments, no further work
11566		11630	deposit	11567	other	low	0.05	adult?	?	left and right femur, no further work
11585		11588	deposit	11586	fill					residue only
11591		11626	skeleton	11589	other	low	0.1	adult?	?	score dentition
11599	2	11604	deposit	11600	artefact	low	0.05	?		no further work
11649		11652	deposit	11650	other	low	0.01	12+	?	score dentition
11653	3	11740	skeleton	11654	other	low	0.01	?	?	enamel fragments, no further work
11670	4	11751	skeleton	11668	other	low	0.05	?	?	enamel fragments, no further work
11673	3	11987	skeleton	11990	other	low	0.02	adult	?	score dentition
11688		11757	skeleton	11689	other	low	0.1	adult	?	femur shaft, no further work
11713		11714	deposit	11715	fill					residue only
11732		11730	skeleton	11731	other	medium	0.6	adult	m?	clean and record
11744		11746	deposit	11745	fill	low	0.05	?	?	long bone shaft, no further work
11744		11747	skeleton	11745	other	low	0.01	?	?	unidentifiable fragments, no further work

Sub group	Phase	Context	Type	Fill of	Interpretation	Preservation	Completeness %	Age	Sex	Comments
11828		11829	skeleton	11830	other	low	0.02	?	?	enamel fragments, no further work
11835	1	11895	deposit	11837	fill					residue only
11850	2	11975	skeleton	11998	other	low	0.05	adult?	?	score dentition
11898		11928	skeleton	11899	other	low	0.02	?	?	unidentifiable fragments, no further work
11906		11904	skeleton	11905	other					residue only
11930		11933	skeleton	11931	other	low	0.02	18+	?	score dentition
11942		11947	skeleton	11945	other	low	0.02	18+	?	score dentition
11976		11979	skeleton	11977	other	low	0.05	?	?	score dentition
11985		11983	skeleton	11984	other					soil only, no further work
12010	1	12193	skeleton	12011	other	low	0.05	?	?	score dentition
12025		12091	skeleton	12026	other					residue only
12028		12030	skeleton	12029	other	low	0.15	adult?	?	right femur, no further work
12037		12133	skeleton	12038	other	low	0.05	?	?	score dentition
12046		12121	skeleton	12047	other	low	0.02	?	?	enamel fragments, no further work
12062	1	12122	skeleton	12063	other	low	0.05	?	?	score dentition
12062	1	12156	deposit	12155	fill					residue only
12069		12071	skeleton	12070	other	low	0.05	adult	?	skull vault, no further work
12108		12110	Skeleton	12111	other	low	0.02	?	?	unidentifiable fragments, no further work
12115	2	12162	Skeleton	12114	other	low	0.05	18+	?	score dentition
12120		12118	Cut		grave	low	0.02	?	?	unidentifiable fragments, no further work
12120		12119	Skeleton	12118	other	low	0.05	?	?	unidentifiable fragments, no further work
12157		12160	Skeleton	12159	other	low	0.05	?	?	enamel fragments, no further work
12175		12178	Skeleton	12176	other	low	0.02	?	?	unidentifiable fragments, no further work

Table 7.3: Analysis of cremation sub-group 88

Spit No.	Identifiable bone	Comments
1	no bone	stone inclusions
2	4 skull vault fragments	?organic patches
3	2 skull vault fragments	Adult
4	Skull, mandible, single tooth which disintegrated during excavation.	Spreading throughout spit, in previous spits there were isolated fragments
5	Ribs, vertebrae, scapula, upper limb bones, a single tooth	many of bones substantial while <i>in situ</i> , all fragmented during removal
6	Humerus, ribs and vertebrae, spongy bone	spongy bone in very poor condition
7	Ribs, skull which belonged to previous spits appears here, not possible to excavate it sooner because of position in relation to overhanging rim	
8	a few vertebrae though spongy bone predominates	
9	a few vertebrae (?lumbar), femur	
10	Femur, tibia, acetabulum, patella	
11	Femur, tibia	1 fragment of charcoal
12	Femur, tibia	2 fragments of charcoal, the lowest 10 mm clearly worm sorted.

PRINCIPAL SITE: WHITE HORSE STONE

WHITE HORSE STONE, AYLESFORD, KENT ARCWHS 98

APPENDIX 2- ASSESSMENT OF HUMAN BONE

2.1 Human bone

By Angela Boyle

Introduction

- 2.1.1 All inhumations were hand excavated. In excavation cremation contexts were subject to 100% recovery as whole-earth samples and subsequently wet-sieved. Material from the >2 mm fraction was retained en masse.
- 2.1.2 The material was recorded in accordance with the fieldwork event aims specified in section 2.2 above.

Methodology

- 2.1.3 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet that includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals. The > 2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone. Inhumations and fragments of disarticulated material were examined to determine preservation, completeness, age and sex where possible.

Quantification

- 2.1.4 Cremations

Table 9.1.1: Cremation deposits from ARC WHS98

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
6131	Fill of pit 6132	MIA; LIA	302 g	Long bone shaft	White-grey	Possible sub-adult
2416	Cremation pit 2415	LBA; EIA	7 g	Long bone shaft, metacarpal fragment, phalange	Mainly grey	?adult

Table 9.1.2: Cremation deposits from ARC PIL98

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
143	Fill of pit 119	IA; RO	321 g + 1748 g of	Skull vault, ulna, misc. long bone	White	Adult, uncertain sex

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
			unsorted residue	fragments , unburnt animal bone		
144	Fill of pit 119	IA; RO	8 g	Nothing identifiable	White	
152	Fill of pit 119	IA; RO	> 1 g	Nothing identifiable	White	
453	Fill of posthole 452		4 g	Long bone shaft, distal end of humerus	White	?adult
544/545	Fill of pit 543		89 g + 239 g of unsorted residue	Scapula, femur, long bone shaft	White	
552/553	Fill of pit 543		67 g + 70 g of unsorted residue	Petrous, Humeral head, ?acetabulum, long bone shaft	White	Adult
553	Fill of pit 553		8 g	Long bone shaft	White	
565/566	Fill of pit 543		60 g + 189 g of unsorted residue	Long bone shaft	White	
820	Fill of posthole 820		1 g	Nothing identifiable	White	
853	Upper fill of pit 852		1652 g	Unsorted residue	White	
853/854	Fill of pit 852		68 g	Skull vault, phalange (hand), vertebral facet, long bone shaft, unburnt animal tooth	White	
854	Lower fill of pit 852		1270 g + 2863 g of unsorted residue	Occipital, petrous, humerus shaft	White	Adult
871	Fill of pit 870		193 g + 220 g of unsorted residue	Skull vault, petrous, ?radius, femur	White	Adult
873	Fill of		1 g +	Nothing	White	

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
	872		151 g of unsorted residue	identifiable		
912/914	Fill of 911/913		3 g + 871 g of unsorted residue	Nothing identifiable	Blue-grey	
926	Lower fill of 925		2 g + 544 g of unsorted residue	Nothing identifiable	White	
927	Upper fill of 925		13 g + 509 g of unsorted residue	Long bone shaft, ?humerus	White	Probable adult
949	Fill of pit 948		137 g plus 269 g of unsorted residue	Skull, ?pelvis, long bone	White	Adult
950	Fill of pit 948		4 g + 464 g of unsorted residue	?premolar tooth root	White	
955	Fill of pit 952		1 g	Long bone shaft	White	

2.1.5 Unburnt bone

Table 9.1.3: Unburnt bone from ARC WHS98

Context	Context type	Period	Preservation	Completeness	Age	Comments
2113	Fill of pit 2214	EIA	Medium	<5%	Juvenile	Skull vault
2114	Fill of pit 2119	EIA	Medium	<1%	?adult	Fibula shaft fragment
2120	Fill of pit 2130	EIA	Medium	<5%	?adult	Fibula shaft fragment
2187	Fill of pit 2184	EIA	Medium	<5%	Juvenile	Skull vault
2291	Fill of pit 2184	EIA	High	90%	Juvenile	
2295	Fill of	EIA	High	90%	Adult male	

Context	Context type	Period	Preservation	Completeness	Age	Comments
	2296					
2297	Fill of 2296	EIA	Medium	>1%	?	Nothing identifiable
2341	Fill of 2339	EIA	Medium	<1%	Adult	Lumbar vertebra
4005	Fill of field boundary or drainage ditch 4006	RO	Medium	<1%	Child	Phalange
6126	Fill of 6110	EIA; MIA	Medium	5%	Adult ?male	Left tibia, left clavicle
6127	Fill of 6110	EIA; MIA	Medium	<5%	Adult	Skull vault
8015	Within storage pit 8012	LBA; EIA	Medium	15%	Adult male	Skull and mandible
8016	Part of 8015	LBA; EIA	Medium	<5%	?adult	Left tibia
8020	Part of 8015	LBA; EIA	Medium	<5%	Adult	Left femur
8029	Part of 8015	LBA; EIA	Medium	5%	Adult	Right tibia
9025	Within 9011	680-970 cal AD (95% confidence)	High	70%	Adult female	Missing skull

Provenance

Pilgrim's Way

- 2.1.6 All the cremation deposits from Pilgrim's Way were cut into natural and were truncated by medieval ploughing. The material derived from 13 pits and postholes. All of the deposits are undated with the exception of the example from pit 119, which was associated with a bone pin. Iron Age pottery from this feature is likely to be redeposited from the buried soil. The pin is of a type which can be paralleled at a number of sites of broad Roman date including Colchester (Crummy 1983, 24, Figure 22) no 420, 423.

White Horse Stone

- 2.1.7 At White Horse Stone the early Iron Age settlement site produced a single richly furnished cremation (2.4.11) and three human pit burials. Two of the latter were tightly crouched inhumations, placed in fairly deep storage pits. The third was very shallow and severely plough-truncated but may have been crouched in its own grave cut. A radiocarbon date of 420-100 cal BC on a human femur from 2291 supports the assertion that the burial is early-middle Iron Age in date.

- 2.1.8 Cremation deposit 6031 is of particular significance. It was associated with pottery spread 6100 and grain dump 6130. The deposit produced an exceptional group of Iron Age artefacts, including an iron knife, four iron awls, a whetstone, a small curved iron blade and a group of at least six pottery vessels, one of which was a large urn containing a deposit of grain. Charred grain from this deposit has produced a radiocarbon date of 490-160 cal BC and supports the assertion that the burial is transitional early-middle Iron Age in date. Deposit 2416 is believed to be of late Bronze Age-early Iron Age date and was located at the periphery of the settlement.
- 2.1.9 Skeleton 2291 was found in the base of early Iron Age pit 2184. The mandible was located on the torso and various other bones have been displaced. This is likely to have been deliberate, unless it was the result of disturbance in antiquity (the subsequent fills were also early Iron Age in date). Juvenile skull vault fragments were also found in fill 2187 and are almost certainly part of the same individual.
- 2.1.10 Skeleton 2295 had been damaged by ploughing and was associated with pottery, two spindle whorls and charcoal. The skeleton was overlain by fill 2297 that contained a fragment of sacrum. The position of the skeleton suggests that originally the legs were drawn up over the lower torso. The right arm was extended while the left was bent under the left shoulder.
- 2.1.11 Selected bones of an adult male were recovered from fills 6126 and 6127 of storage pit 6110.
- 2.1.12 Deposit 8015 comprised a quantity of disarticulated material. Deposits 8016, 8020, 8029 and 8030 were also found in storage pit 8012 and are likely to belong to the same individual who has been identified as an adult male. Disarticulation of the bones of a single individual is likely to be indicative of excarnation and subsequent selection and deliberate deposition of the material.

Conservation

- 2.1.13 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act 1996, however, all human remains are to be reburied.

Comparative material

- 2.1.14 Although only one deposit at Pilgrim's Way has been dated by the presence of a bone pin to the Iron Age or Roman period, it is assumed that the remainder of the assemblage is of comparable date.
- 2.1.15 The assemblage as a whole represents a wide range of Iron Age burial practice and falls within a well-known Iron Age tradition of human and animal burials in and around settlement sites. There is certainly mounting evidence, mainly the identification of Iron Age inhumation cemeteries by radiocarbon dating, that human pit burials do not represent the normal Iron Age burial rite, but have some other significance, possibly representing sacrificial offerings.

Potential for further work

- 2.1.16 The assemblage has the potential to contribute towards a number of the original fieldwork event aims, in particular aims 1 and 9. The possibility that some of the burials might represent sacrificial offerings could be further explored, although at the assessment stage no direct evidence was observed.

Pilgrim's Way

- 2.1.17 The potential of individual deposits of cremated bone is limited by the small size of the deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then many of these deposits do not represent the entire remains of any one individual. While the burial of token deposits of cremated material is known to have been deliberate in some cases, all of these features have been truncated by medieval ploughing.
- 2.1.18 A total of 11 deposits weigh less than 10 g and for these no further analysis is recommended. However, detailed examination of the more substantial deposits of cremated bone will allow for further refinement of age and sex, and also the possible identification of pathological conditions. In the case of the more substantial deposits the smaller fraction of cremated bone (<10 mm) requires sorting and detailed analysis. This deposit also contained unburnt animal bone as did deposit 853/854.
- 2.1.19 The presence of unburnt animal bone in two of the deposits may be accidental as the absence of burning indicates that it was not present on the pyre. It would nonetheless be useful to examine all of the bone in detail to determine the quantity of animal bone present and to identify it to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron Age cremation burials at Westhampnett (McKinley *et al.* 1997, 73).

A number of small Iron Age and Romano-British rural cremation groups have been recorded along the CTRL route (eg Boys Hall Balancing Pond, Chapel Mill). Whilst the potential of individual cremations is limited, there is the potential for examining the extent, morphology and function of, and interaction between, settlement and ceremonial features, one of the original fieldwork event aims.

White Horse Stone

- 2.1.20 The potential of the cremated bone from the early Iron Age cremation is again limited by the small size of the deposits. Burnt antler (possible red deer) has been identified in the cremated deposit 6131. The fact that it too is burnt clearly indicates that it was present on the pyre. Therefore it would be useful to examine all of the bone in detail to determine the quantity of animal bone present and to identify it to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron Age cremation burials at Westhampnett (McKinley *et al.* 1997, 73).

- 2.1.21 The preservation of the metalwork is exceptional. This factor, together with the secure context, apparently early date and associations with other outstanding artefact and economic assemblages, indicate that this group is of national importance.
- 2.1.22 The inhumations and the disarticulated human bone are well preserved. The disarticulated material is unlikely to provide any further information and therefore no further analysis is recommended. However, the inhumations should be analysed and recorded in full.
- 2.1.23 Burial 9025 is of significance give its Saxon date and location adjacent to a principal boundary (Pilgrim's Way marks the parish boundary between Aylesford and Boxley at this point). Evidence from Saxon charters demonstrates that judicial execution sites were regularly located at such boundaries (Reynolds 1997). It is perhaps noteworthy that the skull is absent.

Updated research aims

- 2.1.24 Themes concerning settlement, landscape and society have the potential to be addressed.
- What is the significance of the funerary deposits of Iron Age date? To what extent can these be describe as ritual? How usual is the rite of cremation during the early-middle Iron Age? What is the significance of finding animal bone and human bone in the same deposit?
 - What meaning can be attached to the human burials and cremations of Iron Age date found at the open settlement and near to the Pilgrim's Way, considering the composition and location of the burials? To what extent do these features reflect concerns with symbolism and cosmology?

Recommended further work

- 2.1.25 The above research aims may be addressed by the following methods:
- 2.1.26 Further detailed recording work is recommended for the inhumations. This will allow for further refinement of age and sex, and also the possible identification of pathologies. No further work is recommended for the cremations.
- 2.1.27 Radiocarbon dating on otherwise undated burials and cremations. Confirmation of artefact dated burials by radiocarbon dating.
- 2.1.28 Plotting of the human bone deposits in relationship to the landscape and settlement features.

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PRINCIPAL SITE: CHAPEL MILL

CHAPEL MILL, LENHAM, KENT ARC CML 99

APPENDIX 3- HUMAN REMAINS

3.1 Assessment of Human Remains

by Angela Boyle

Introduction

- 3.1.1 During strip, map and sample works at Chapel Mill, cremation contexts were subject to 100% recovery as whole-earth samples, and were subsequently wet-sieved. Material from the >2 mm fraction were retained *en masse*. Unburnt human bones were also retrieved during the fieldwork.
- 3.1.2 The study of the material was aimed at determining the number, age and sex of the burials in order to address the Fieldwork Event Aims and Landscape Zone Priorities for the site, which are set out in section 2 of the main report, above. The material was considered to have the potential to illuminate the nature of activity at the site during the late Iron Age, and to provide evidence for change or continuity in burial practices between the late Iron Age and the Roman period.

Methodology

- 3.1.3 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals. All fragments of unburnt bone were also examined to determine preservation, completeness and age. The > 2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

Cremations

- 3.1.4 Cremated remains were recovered from five contexts in two cremation pits. The remains from the two contexts in cremation pit 205 weighed in total 206 g, and those from the three contexts in cremation pit 213, weighed 337 g (Table 8). Burnt animal bone was also found in the deposits in pit 205. No estimates of age or sex could be made.

Disarticulated unburnt bone

- 3.1.5 A small quantity of unburnt bone was recovered from the fill 249 of a tree-throw hole. The identifiable bone comprised four fragments of adult femur shaft, three of which were conjoining. In addition, there were three

conjoining fragments of upper limb shaft, also adult. Two recent breaks were visible but the majority were very abraded and clearly occurred in antiquity.

Provenance

- 3.1.6 Pottery dating from the late Iron Age to *c* AD 70 was found in both the primary and upper fills of cremation pit 205. The upper fill also contained fragments of metalwork (burnt and possibly unburnt). Tree-throw hole 249 was cut by ditch 225-235 which also contained late Iron Age pottery. Although it contained no pottery, cremation 213 was located a few metres from 205 and is probably also late Iron Age in date.

Conservation

- 3.1.7 The material does not require any conservation for the purposes of long-term storage.

Comparative material

- 3.1.8 Small cemeteries associated with rural settlements of this period are not well known in the south-east of England (Drewett, Rudling and Gardiner 1988, 233) and for this reason, although the location of the associated settlement is unknown, the small group excavated at this site is a significant addition to our understanding of the burial rites of the late Iron Age-early Roman period. Their significance will be more apparent when they are compared with larger groups of burials of similar date from along the CTRL and elsewhere. Comparable deposits were found at other CTRL sites including Boys Hall Balancing Pond and Snarkhurst Wood.

Potential for further work

- 3.1.9 The potential of this assemblage is limited by its small size as a group and by the poor preservation of the cremations. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then the deposits from Chapel Mill do not represent the entire remains of any one individual. Burnt animal bone (sheep sized rib shaft) has been identified in the deposit from pit 205. The fact that it too is burnt clearly indicates that it was present on the pyre. Therefore it would be useful to examine the bone in detail to determine the quantity of animal bone present and to identify it to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron Age cremation burials at Westhampnett (McKinley *et al* 1997, 73).

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Table 8: Summary of cremated human remains

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
203	Upper fill of pit 205	LIA	199 g	Rib, proximal phalange of hand, carpal fragments, ?femur shaft, pre-molar root, canine/incisor fragment, one fragment of sheep-sized rib	White and grey	?
204	Lower fill of pit 205	LIA	7 g	Distal fragment of metacarpal, long bone shaft	White and grey	?
210	Upper fill of pit 213	LIA	2 g	Nothing identifiable	White and grey	?
211	Middle fill of pit 213	LIA	73 g	Skull vault, long bone shaft, fibula shaft	White and grey	?
212	Lower fill of pit 213	LIA	262 g	Skull vault, petrous bone, rib shaft	White and grey	?

SOUTH OF SNARKHURST WOOD, HOLLINGBOURNE

APPENDIX 4- HUMAN REMAINS

4.1 Human Remains

by Angela Boyle

Introduction

- 4.1.1 A single cremation deposit was recovered during excavation works at South of Snarkhurst Wood.
- 4.1.2 The single cremation was subject to 100% recovery as a whole-earth sample and subsequently wet-sieved. Material from the >2 mm fraction was retained.
- 4.1.3 The recovery and study of the material was carried out in accordance with the fieldwork event aims specified in section 2 of the main report, above, with specific reference to change or continuity in late Iron Age/Romano-British burial practice.

Methodology

- 4.1.4 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded by context, context type, period, weight, identifiable fragments, colour and minimum number of individuals, as in Table 6.1 below. All fragments of unburnt bone were also examined to determine preservation, completeness and age. The > 2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

Table 6.1: Details of cremation burial

Context	Context type	Weight	Identifiable fragments	Colour	Minimum number of individuals
127	Fill of feature 236	188 g	Skull vault, occipital, ?incisor root, femur and tibia shaft	White and grey	1?

Provenance

- 4.1.5 A single deposit of cremated human bone (127) was recovered from feature 236, located in the western part of Area B. No pottery or dating evidence was available for this feature. Areas of burning were identified and quantities of charcoal were also present, therefore the feature may have been a pyre site.

Conservation

- 4.1.6 The material does not require any conservation for the purposes of long-term storage. The CTRL Act 1996 requires that all human remains are reburied.

Comparative material

- 4.1.7 Unfortunately this deposit is undated and therefore cannot be compared with other material. From the location it is likely to be Iron Age, and if dated would have been of interest as small cemeteries associated with rural settlement of this period are not well known in the south-east of England (Drewett, Rudling and Gardiner 1988, 233).

Potential for further work

- 4.1.8 The potential of the material is limited by the fact that it is an isolated undated example, and by the small size of the deposit. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then the deposit from this site does not represent the entire remains of any one individual. The material has no further potential for analysis.

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THURNHAM ROMAN VILLA

APPENDIX 5- HUMAN REMAINS

5.1 Assessment of the Human Remains

by Angela Boyle

Introduction

- 5.1.1 A small quantity of human bone from three burials was recovered during excavation works at Thurnham Roman Villa (ARC THM 98).
- 5.1.2 The skeletons were hand excavated. In excavation cremation contexts were subject to 100% recovery as whole-earth samples and subsequently wet-sieved. Material from the >2 mm fraction was retained en masse.
- 5.1.3 The recovery and study of human remains was undertaken in accordance with the Fieldwork Event Aims for the site, which are set out in section 2 of the main report, above. This material has particular relevance for the study of ritual and ceremonial use of the landscape, in accordance with the Landscape Zone Priorities identified for the CTRL project.

Methodology

- 5.1.4 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. The cremation deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals. The > 2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone. Inhumations and fragments of disarticulated material were examined to determine preservation, completeness, age and sex where possible.

Quantification

- 5.1.5 The assemblage comprises the partial remains of two infant skeletons and a single deposit of cremated human bone. Tables 8.1 and 8.2 set out the quantities of material surviving from these burials.

Provenance

- 5.1.6 The cremation deposit was located in a pit close to the Bronze Age waterhole and it may be of similar date. Skeleton 20431 was found in the top fill of ditch 20428 which predated the villa construction. Skeleton 10633 was buried in a stone-lined grave cut and was accompanied by two pots, a

fragment of animal rib and a flint flake. The pottery has been dated to the late 2nd century.

Conservation

- 5.1.7 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL act, however, all human remains are to be reburied.

Comparative material

- 5.1.8 The cremation may be of broadly similar date to the small Bronze Age assemblage from Tutt Hill. The skeletons could be compared with the small assemblage from excavations at Springhead (Boyle nd, 33-34) where it was concluded that a normal pattern of infant mortality was represented, that is, there was an absence of clustering around 38-40 weeks. The burial of an infant in a stone cist can be paralleled at a small number of sites in south-east England, at Springhead, Snodland, St Michael's and St Alban's (Philpott 1991, 64).

Potential for further work

CTRL Landscape Zone Priorities and Fieldwork Event Aims

- 5.1.9 The following section discusses potential for further work in the light of the Landscape Zone Priorities and Fieldwork Event Aims.
- 5.1.10 The cremation has the potential to provide evidence relating to ritual and ceremonial activity. An average adult cremation can weigh between 1000-2400g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then this deposit does not represent the entire remains of one individual. However, the burial of token deposits of cremated material may have been deliberate. Unburnt animal bone has been identified in the assessment of this deposit. The fact that it is unburnt may indicate that it was an accidental inclusion. However, it would be useful to examine all of the bone in detail to determine the quantity of animal bone present (burnt or unburnt) and to identify it to species if possible. The identification of animal bone within human cremations has implications for the study of burial practice of the period. Sheep/goat was present within a proportion of the Iron Age cremation burials at Westhampnett (McKinley *et al* 1997, 73).

New research aims and objectives for the CTRL archaeology project

- 5.1.11 The inhumations are reasonably well preserved. It is recommended that both skeletons be examined in detail in order to provide a more precise age estimate. It is possible to determine neonatal age to within a couple of weeks using long bone lengths. Detailed analysis of the likely age may shed some light on the question of infanticide. An age of *c* 40 weeks is taken to be representative of a full-term infant. In modern populations perinatal deaths (that is, stillbirths and natural deaths in the immediate post-natal period) have a fairly flat age distribution with no marked peak at full term. In contrast most Roman groups do have a very marked peak in deaths at around full term and this is believed to be indicative of infanticide because it does not reflect a 'normal' pattern of neonate mortality. It has been argued elsewhere that a pattern of

clustering around 38-40 is suggestive of infanticide as it was generally carried out immediately after birth (Smith and Kahila 1992; Mays 1993).

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BOYS HALL BALANCING POND, SEVINGTON

HUMAN REMAINS

1.1 Assessment of the Cremated Human Bone

by Angela Boyle

Introduction

- 1.1.1 Five deposits of cremated human bone in pottery vessels were recovered by hand during excavation works. These were recovered as soil samples and were subsequently wet-sieved. Material less than 2 mm has not yet been sorted. The study of the material is aimed at achieving both of the fieldwork event aims specified in section 2.2 above.

Methodology

- 1.1.2 Material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals.

Quantification

- 1.1.3 Five cremations were found, and are quantified and described in Table 10. Very little survived of all but one of them, in which the remains of two individuals, perhaps one male and one female, were identified.

Provenance

- 1.1.4 The cremations were located in a cluster in the south-eastern corner of the site. All were originally placed in vessels which had been truncated by later ploughing. Only the base of the pot survived in the case of 39. Four of the cremations were severely truncated as can be demonstrated by their weight (see Table 10). Four of the cremations were associated with pottery vessels and as such are well-dated. Preservation is poor due to the level of truncation by later ploughing. Four of the cremations were associated with charcoal which in each case was identified as oak.

Conservation

- 1.1.5 Further analysis of cremation (44) would not conflict with long term storage. The material does not require any conservation for the purposes of long-term storage.

Comparative material

- 1.1.6 Small rural cemeteries associated with peasant settlement of this period are not well known in the south-east of England (Drewett, Rudling and Gardiner

1988, 233) and for this reason the small group excavated at this site is a significant addition to our understanding of the burial rites of the early Roman period. Their significance will be more apparent when they are compared with larger groups of burials of similar date from along the CTRL and elsewhere.

Potential for further work

- 1.1.7 The potential of this assemblage is limited by its small size as a group and by the poor preservation of the cremations due to truncation. Only cremation 44 is of substantial size and merits more detailed osteological analysis. Scanning of this deposit has suggested the possibility that two individuals are represented.

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Table 10: Summary of cremated human bone

Context	Context type	Period	Weight (g)	Identifiable fragments	Colour	Minimum number of individuals
39	Pot and fill	c. AD 50-250	18	None	white	?
40	Charcoal layer	c. AD 43-100	7	Skull vault	white	?
44	Fill of pot	c. AD 43-100	1361	Skull vault, mandible, third molars, mastoid, rib, radius, ulna, fibula	white	2? (male and female?)
45	Fill of pot	LIA-AD 70	22	None	white	?
48	Fill of pot	LIA-AD 70	21	Long bone-upper limb	white	?

HURST WOOD, CHARING HEATH

APPENDIX 6- HUMAN REMAINS

6.1 Assessment of the Cremated Human Remains

by Angela Boyle

Introduction

- 6.1.1 Two small deposits of middle-late Bronze Age cremated remains were recovered during the watching brief at East of Newlands, and a further small deposit, dated to the early Roman period, from the watching brief at Westwell Leacon and Leda Cottages. The study of the material was aimed at determining the number, age and sex of the burials and details of burial practices.

Methodology

- 6.1.2 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals (where determined). The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

- 6.1.3 The cremated remains are quantified and summarised in Table 5 (East of Newlands) and Table 6 (Westwell Leacon and Leda Cottages) below.

Provenance

- 6.1.4 The two deposits from the East of Newlands watching brief came from two pits (3 and 7) dated to the middle-late Bronze Age. Both were associated with pottery although they were so disturbed that it is unclear whether the cremations were actually placed within them or they were accompanying grave goods.
- 6.1.5 The deposit from the Westwell Leacon and Leda Cottages watching brief came from one of the pits (5) in a loose cluster which was dated to the early Roman period.

Conservation

- 6.1.6 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL act, however, all human remains are to be reburied.

Comparative Material

- 6.1.7 The middle-late Bronze Age cremations from East of Newlands are so disturbed that little could be learnt from comparisons. Cremations of similar date were found at Tutt Hill. Only a very small sample of cremated remains was recovered at Westwell Leacon and Leda Cottages and comparisons will be equally difficult. There is, however, a wealth of burial evidence of comparable date from along the CTRL at Pepper Hill, Boys Hall Balancing Pond Chapel Mill and other sites.

Potential for Further Work

- 6.1.8 The potential of this assemblage is limited by its small size as a group and by the size of the deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then they are only token deposits most of the deposits do not represent the entire remains of any one individual. No further analysis is recommended.

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Table 5: Summary of cremated remains from the East of Newlands WBSDI

Context	Context type	Period	Weight (g)	Identifiable fragments	Colour	Minimum number of individuals
2	Fill of pit 3	M-LBA	84	Skull vault, rib and long bone shaft	White	? 1 adult
6	Fill of pit 7	M-LBA	34	Skull vault, rib	White	? 1 adult

Table 6: Summary of cremated remains from the Westwell Leacon and Leda Cottages WBG

Context	Context type	Period	Weight (g)	Identifiable fragments	Colour	Minimum number of individuals
4	Fill of pit 5	ER	> 1	Long bone shaft	white	

EYHORNE STREET, HOLLINGBOURNE

APPENDIX 7- ASSESSMENT OF HUMAN REMAINS

7.1 Cremated Human Bone

by Angela Boyle

Introduction

7.1.1 Cremation contexts were subject to 100% recovery as whole-earth samples during the watching brief and were subsequently wet-sieved. Material from the >2 mm fractions were retained en masse. The study of the material was aimed at determining the number, age and sex of the burials and details of burial practices.

7.1.2 The recovery and study of the human bone was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular Aim 1.

Methodology

7.1.3 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals (where determined). The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

7.1.4 The cremated remains are quantified in Table 1.1. Both deposits of cremated remains weigh only 2 g, only a small fraction of the weight of the complete remains of a human cremation. Only long bone fragments could be identified.

Table 1.1: Summary of cremated human remains

Context	Context type	Period	Weight (g)	Identifiable fragments	Colour	Minimum number of individuals
22	Primary fill of pit 23	LN;EB A	2	Nothing identifiable	white	?
24	Upper fill of pit 23		-	Residue only, no bone		-
61	Primary fill of pit 60	LN;EB A	-	Residue only, no bone		-
62	Upper fill of pit 60		2	Long bone shaft	White	?

Provenance

- 7.1.5 The deposits came from two Beaker associated pits (23 and 60) located near the south-eastern end of the site.

Conservation

- 7.1.6 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act 1996, however, all human remains are to be reburied.

Comparative Material

- 7.1.7 Cremations of comparable date have been found at Tutt Hill, and further deposits may exist at Saltwood and elsewhere in Kent, while token deposits from pits are less easy to parallel. It is unlikely that valuable insights would be yielded by comparison of these small deposits of cremated remains with those elsewhere, except insofar as it might reveal the consistency with which small, possibly token deposits of human remains were deposited.

Potential for Further Work

- 7.1.8 The potential of this assemblage is limited by its small size as a group and by the small size of the individual deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). It therefore seems probable that those observed at Eyhorne Street are only token deposits, which do not represent the entire remains of any one individual. Nevertheless, it is recommended that the provisional identification of the material is confirmed and that its context is examined alongside associated stratigraphic, artefactual and palaeoenvironmental evidence in order to characterise the deposits and if possible determine their true function. Such a study would benefit from an integrated approach considering all similar features from CTRL sites.

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BEECHBROOK WOOD, HOTHFIELD

APPENDIX 8 HUMAN REMAINS

by Dr Peter Hacking

Introduction

- 8.1.1 In excavation cremation contexts were subject to 100% recovery as whole-earth samples and subsequently wet sieved. Material from the >2 mm fraction were retained en masse. Some of the material was only identified and recovered during environmental processing of bulk soil samples.
- 8.1.2 The fieldwork priorities, as set out in the Written Scheme of Investigation (WSI) in accordance with the CTRL Research Strategy, were to address specifically the following issues:
- the ritual and ceremonial use of the landscape, with emphasis on burial practices in the Roman and post-Roman periods
- 8.1.3 The Fieldwork Event Aims to which the assemblage can be expected to contribute are as follows:
- the recovery of a detailed site plan
 - the definition of the nature of the possible enclosure ditches identified by evaluation ARC BBW 98
 - correlation of the results of the fieldwork with those from South of Beechbrook Wood strip, map and sample excavation ARC BWD98 and previous evaluation data
 - the recovery of additional dating evidence for secure phasing of all recorded activities
- 8.1.4 The WSI stated that a modification or supplementation of these primary aims would be necessitated by the discovery of unanticipated significant archaeology. The cremated human bone assemblage can be categorised as an unexpected discovery.

Methodology

- 8.1.5 All cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, age, sex, and minimum number of individuals. The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone (for example tooth roots and/or portions of tooth crowns). Relevant comments such as the presence of charcoal or animal bone were also included. The information was compiled as an Access database in accordance with the CTRL dataset structure.

Quantification

- 8.1.6 Cremation deposits are summarised in Table 6.1.
- 8.1.7 Cremated bone was recovered from 46 contexts. Many of the contexts contained very small quantities of cremated human bone; from Area C half of the contexts (12 out of 24), and from Area A just over one third (9 out of 22) contexts produced deposits weighing 1 g or less. Apart from recognising these fragments as burnt bone, probably human, little or no further information can be obtained.
- 8.1.8 Where larger quantities of bone have been recovered some age estimation is possible, from sizeable pieces of incompletely burnt bone, but in no case could the sex of the individual be determined. Most of these samples consisted of large numbers (1000+) of tiny fragments.
- 8.1.9 Features 173 and 175 from ARC BWD98 were interpreted in the field as possible cremations, however, subsequent processing did not yield any cremated human bone from within these vessels.

Burnt and unburnt animal bone

- 8.1.10 Burnt animal bone was associated with a small number of deposits. Sheep and pig was present in 561, sheep in 2342, with unidentifiable animal bone fragments in 2213. The fact that this material has been burnt suggests the possibility of deliberate inclusion on the pyre.

Provenance

Target Area C

- 8.1.11 Whereas in Target Area A the majority of all human cremated remains were recovered from the area of the Middle/Late Iron Age enclosure 3072, the contexts yielding such remains were more varied in date and type in Target Area C.

Phase 3: Late Neolithic/Early Bronze Age (Beaker period) 2600-1800 BC

- 8.1.12 A small quantity of cremated human long bone shaft was recovered from fills (1376 and 1377) of Beaker period pit [1374] within group 3022.

Phase 4: Middle Bronze Age-Late Bronze Age (1500-700 BC) and Late Bronze Age (1100-700 BC)

- 8.1.13 Small quantities of cremated human bone were recovered from ring ditches 1007 (contexts 938, 947, 956) and 851 (contexts 865 and 908). Ring ditch 851 was cut by ring ditch 1007. There were no identifiable fragments. The remains were recovered from single context samples distributed along the circumference of the ditch. This is in contrast to ring ditch 2150 where the remains were recovered from consecutive fills in section cuts. The quantity of material recovered may well be an under-representation given the partial nature of the excavation of these features.

- 8.1.14 In the case of the Bronze Age ring ditches, whilst tempting to count all remains occurring in one feature as one incident, their spatial separation, both horizontally and vertically, makes this ambiguous. As noted in 3.2.14., some differences in deposition exist between earlier ring ditch 851 and later 1007, whereby human remains are exclusively found in the top fills of 851, whilst also occurring in lower and single surviving fills in 1007, leading to the conclusion that those in 1007 were potentially redeposited during the demolition/erosion of barrow 851. Given the partial excavation of both features, it can only be stated that at least one individual is present here also.
- 8.1.15 Another adult is identified from fill (1604) in cremation [1603] overlying Late Mesolithic pit feature group 3013. Due to their clear provenance from the later feature, intrusive fragments of burnt bone from pit fill (1674) were included in this assessment. [1603] is one of a probable Bronze Age date and possibly associated with a field system of that date, group 3018. Further cremated remains were recovered from fills (1289) and (1293) in the cuts allocated to group 3020, cremation burials also in association with possible field system 3018. Context (901) from undated cremation [901] shows similar associations.

Phases 6 and 7: Middle Iron Age (400-100 BC) to 'Belgic' Late Iron Age (c AD 70)

- 8.1.16 Other small unidentifiable pieces were recovered from a variety of contexts: pit/cremation [237] in Middle/Late Bronze Age activity group 1952 (context (238)), fill (277) in enclosure ditch 1022 in Late Iron Age industrial plot 1972 and from fill (525) in one of its internal pits, [504], fill (1479) in ditch 1020 around Late Iron Age industrial plot 3006 and from internal posthole fill [1502] (fill (1501)).

Phase 8: Early Romano-British Period (c. AD 70-200+)

- 8.1.17 All three fills of Romano-British cremation [1344] (contexts (1345), (1346), (1347)) contained human adult bone with a total weight of 338 g, possibly from one individual. In nature and date, this cremation is related to pit/cremation group 3008, which yielded fragments of three ribs and a long bone, seemingly from a child's cremation, in fills (729) and (735).
- 8.1.18 Assessment of the number of individuals present in Target Area C depends on highly interpretative spatial association at this stage. In two cases, [1344] and [1603], this is fairly secure, indicating the presence of one adult individual in each feature. Due to their spatial proximity, the child remains from pit group 3008 may derive from one individual.
- 8.1.19 A maximum of 12 individuals including 2 adults and at least 1 child may be present in Target Area C.

Target Area A

Phase 4: Middle Bronze Age-Late Bronze Age (1500-700 BC) and Late Bronze Age (1100-700 BC)

- 8.1.20 One small piece of burnt bone, possibly human, was recovered from pit fill (455) in relation to possible structure 3037 in Middle/Late Bronze Age activity area 2442.

Phases 6 and 7: Middle Iron Age (400-100 BC) to 'Belgic' Late Iron Age (c AD 70)

- 8.1.21 Late Iron Age cremation group 2441, associated with enclosure 3072 produced a total of 619 g of human cremated bone. The area was heavily plough-truncated and contexts were grouped according to likely spatial association. Three recognisable sub-adults or adults were represented (contexts (2030) (2036) 435g, (2040) (2042) 59g, and (2044) 73g) and one probable child (contexts (2047) (2050) 52g).
- 8.1.22 Four section cuts across the south-eastern extent of inner ditch, sub-group 2150, in enclosure 3072 produced human cremated remains: 112g of unidentifiable small fragments from cuts [2182] (contexts (2184) (2185)) and [2006] (contexts (2205), (2222), (2228)), adult fragments from [2212] of key section 2013, contexts (2209),(2210), (2213), (2345), (2346) and pot fill (2438)) and a probable adult from [2246] (contexts (2240), (2241), (2242)).

Conservation

- 8.1.23 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act 1996, however, all human remains are to be reburied.

Comparative material

- 8.1.24 Three different types of deposit can be identified:
- apparent token deposits in pits and postholes associated with industrial or domestic activity
 - in enclosure and ring ditches
 - as conventional cremation burials, both single and in groups
- 8.1.25 The Bronze Age deposits both in relation to possible field system 3018 and the ring ditches have useful parallels in the nearby CTRL site at Tutt Hill, but also on a regional and national level.
- 8.1.26 The human remains from Middle/Late Iron Age enclosure ditch 2150 occur alongside a significant part of a new ceramic fabric series identified for the region, and seem to form part of structured ritual deposits. The investigation of these deposits should add significantly to the understanding of Iron Age burial practices in the region, and on a national level.
- 8.1.27 Late Iron Age/Early Roman cremation deposits in small groups such as group 2441 have been found elsewhere along the CTRL (eg. Boys Hall Balancing Pond, Chapel Mill), and the examples from Beechbrook Wood add to the picture of this tradition of burials. At Beechbrook Wood, the group is part of a useful chronological sequence, with the (associated) human remains from ditch 2150

predating group 2441, and those from the Late Iron Age/Early Roman contexts in Area C of a slightly later date, providing useful insights into the changing nature of human burial from the Middle Iron Age through to the Early Roman period.

- 8.1.28 In itself, the Roman cremation [1344] is not remarkable, but is interesting in its apparent relationship with pit group 3022 and industrial enclosure 1972. Although cremated human remains were encountered in the vicinity of Late Iron Age/Early Roman metalworking at the CTRL site at Snarkhurst Wood, their association is not proven. Comparanda for the association between metalworking evidence and the deposition of human remains (also evident in Middle Bronze Age activity area 1952 at ARC BBW00) may therefore have to be sought further afield.

Potential for further work

- 8.1.29 The quantities of human bone recovered are too small to warrant further analysis. In no case the entire remains of one individual appear to have survived: an average adult cremation can weight between 1000-2400 g if complete (McKinley 1997: 68). All samples from Beechbrook Wood fall well below this average.
- 8.1.30 A programme of radiocarbon dating of the human cremated material may further our understanding of the site, and in particular the chronology of the new ceramic fabric series.
- 8.1.31 The mixed deposits of burnt human and animal bone should be analysed in detail in conjunction with the animal bone specialist in order to ascertain their precise nature.

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Table 6.1 Quantification of cremated human bone by context from ARC BBW00

Context	Context type	Period	Weight	Identifiable fragments	Colour	MNI	Comments
<i>Area C</i>							
238	Cremation	MBA/LBA	1g	Small long bone shaft	White		
277	Material dump? Where	LIA/ERB	11g	Small long bone shaft	White		100+ tiny pieces
455	Pit 456 /3037/2442 ?where	MBA/LBA	<1g	None	White		1 tiny piece
525	Charcoal filled pit 504 ?where	LIA/ERB	<1g	None	White		2 tiny pieces
561	Cremation pit ?near LBA cremation. 550/551	?	76g	Animal bone	White		500+ tiny pieces, 24 >10mm including sheep bone. Trace of charcoal.
729	Ditch 3017 terminus	ERB	2g	3 rib pieces	White	? Child	
735	Pit 737, group 3008	ERB	3g	Small long bone	White		
865	Upper fill of ring ditch 851	MBA/LBA	<1g	None	White		2 tiny pieces
901	Potless cremation. 902	?	3g	None	White		15 tiny pieces
908	?	?	<1g	None	White		2 pieces
938	Upper fill of ring ditch 1007	(MBA)/LBA	<1g	None	White		1 tiny piece
947	Secondary fill of ring ditch 1007	(MBA)/LBA	<1g	None	White		3 tiny pieces
956	Single fill of ring ditch 1007	(MBA)/LBA	<1g	None	White		3 tiny pieces; ? 938, 947 & 956 all from 1 cremation
1289	Small group of cremations 3020	?	52g	Long bone shaft	Blackened/w hite		1000+ tiny pieces
1293	Group 3020	?	<1g	None	White		? Part of 1289
1345	Basal fill of cremation 1344	RB	196g	LB shaft, cranial vault, vertebra	White	Adult	Also 1000+ tiny pieces. Some charcoal.
1346	Middle fill of cremation 1344	RB	138g	Long bone shaft, pelvis, thoracic vertebra	White	Adult	Also 1000+ tiny pieces. Trace of charcoal.
1347	Top fill of cremation 1344	RB	4g	Long bone shaft, vertebral facet	White	Adult	1345-1347 probably 1 cremation
1376	Pit 1374, domestic pits 3022.	LNE/EBA	1g	None	White		Trace of charcoal
1377	Pit 1377	LNE/EBA	4g	Long bone shaft	Whitish- yellow		? 1 cremation with 1376
1479	Industrial enclosure 1020	LIA/ERB	<1g	None	White		9 tiny pieces
1501	Posthole 1502	LIA/ERB	<1g	None	White		
1604	Single cremation over L Mesolithic. pit	?BA	105g	Fibula, other LB, skull, molar	Whitish-	One Adult	5-10% charcoal, also 1000+ pieces

	1623			tooth?3rd	brown		
1674	From L Mesolithic. Pit 1623	?BA	9g	Cranial vault, LB thick cortex	White	Adult	
<i>Area A</i>		<i>Area A</i>					
2030	Cluster outside enclosure 2151	LIA/ERB	393g	Skull, 2 teeth, LB: radius/ulna/fibula/?femur/tibia	White	Sub-adult or adult	1000++ tiny fragments. Trace of charcoal.
2036	As 2030	LIA/ERB	42g	Cranial vault and LB shaft	White	Adult	1 cremation c. 2030
2040	As 2030	LIA/ERB	18g	Skull, vertebrae. neural arch, LB	Grey-brown	Adult	
2042	As 2030	LIA/ERB	41g	Long bone, thick cortex.	White	Adult	1 cremation c.2040
2044	As 2030	LIA/ERB	73g	Femur head, acetabulum, vertebral neural arch, rib, long bone	White	Adult	
2047	As 2030	LIA/ERB	<1g	None	White		
2048	As 2030	LIA/ERB	51g	long bone, thin cortex, skull, incisor root	White	? Child	200+ tiny pieces
2050	As 2030	LIA/ERB	<1g	None	White		
2184	From enclosure ditch 2150	(MIA)/LIA	<1g	None	White		
2185	As 2184	(MIA)/LIA	<1g	None	White		
2205	As 2184	(MIA)/LIA	<1g	None	White		
2209	As 2184	(MIA)/LIA	<1g	None	White		
2210	As 2184	(MIA)/LIA	5g	1pce LB	Brown		Trace of charcoal
2213	As 2184	(MIA)/LIA	73g	LB shaft, thick cortex, vertebral body	Brown	Adult	
2222	As 2184	(MIA)/LIA	1g	Rib	White		
2228	As 2184	(MIA)/LIA	<1g	None	White		
2240	As 2184	(MIA)/LIA	<1g	None	White		
2241	As 2184	(MIA)/LIA	6g	LB shaft	White	? Adult	
2342	As 2184	(MIA)/LIA	11g	LB, also animal.	Brown and white		Sheep metapodial.
2345	As 2184	(MIA)/LIA	7g	LB shaft	White		
2346	As 2184	(MIA)/LIA	5g	LB shaft	Black and white		Trace of charcoal. ? 1 cremation c. 2342,2345,2346
2438	As 2184	(MIA)/LIA	4g	LB shaft, mandible, molar tooth roots	Grey	Adult	

TUTT HILL, WESTWELL

APPENDIX 9- HUMAN REMAINS

9.1 Assessment of the Cremated Human Remains

by Angela Boyle

Introduction

- 9.1.1 Eight deposits of cremated bone in fourteen contexts were recovered by sieving from a variety of pits. Most of these pits contain no direct dating evidence, but three of the cremations can be dated to the early-middle Bronze Age, the middle Bronze Age and the late Iron Age-early Roman period. The samples were collected with the aims of identifying the number, age and sex of the cremated individuals and assessing other details of the practice of cremation and the deposition of cremated remains.

Methodology

- 9.1.2 During the watching brief cremation contexts were subject to 100% recovery as whole-earth samples and were subsequently wet-sieved. Material from the >2 mm fractions were retained en masse. Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals (where determined). The < 2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

- 9.1.3 The cremated human remains are quantified and summarised in Table 5.1. The quantity of cremated remains in most of the pits was very small, usually between 1 g and 7 g, though two (pit 46, dated to the early-middle Bronze Age and pit 44, undated) contained much larger deposits. In only one case (the upper fill of pit 46) could a definite identification - of an adult male - be made, although three adults, two possibly male could be tentatively identified (pit 46, lower fill, dated to the early-middle Bronze Age, pit 70, dated to the late Iron Age early Roman period, and pit 44, undated).

Provenance

- 9.1.4 The cremated remains were all recovered from pits, most of which were shallow, having suffered from significant truncation. Their form and contents are summarised in Table All were accompanied by charcoal. Pottery was the only artefactual material associated with the cremations and this occurred in only three.

Conservation

- 9.1.5 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act, however, all human remains are to be reburied.

Comparative Material

- 9.1.6 The specification of comparative material is hindered by the lack of dating evidence for most of the cremations. The few dated examples, however, will allow some comparisons to be made. It is not unusual for early and middle Bronze Age cremations to be associated secondarily with earlier ring ditches as the two dated examples here appear to be. Nor is it unusual for them to contain only small deposits of cremation remains, as though only a token portion of the cremation remains have been deposited (cf Boyle 1999, 176). Unfortunately the truncation of the cremations means that little detail of the original form survives, and the potential for significant comparisons is thus limited.
- 9.1.7 A number of late Iron Age-early Roman cremations in small groups have been found elsewhere along the CTRL (eg Boys Hall Balancing Pond, Chapel Mill and Snarkhurst Wood). Together these burials provide a significant sample of apparently low status burials, the importance of which will be more apparent when they are compared with larger groups of burials of similar date from along the CTRL and elsewhere.

Potential for Further Work

- 9.1.8 The potential of this assemblage is limited by its small size as a group and by the size of all but two of the deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). Clearly, then most of the deposits do not represent the entire remains of any one individual. Nevertheless, the assemblage provides further evidence to address CTRL research aims relating to the definition of ritual landscape in the 'early agriculturalists' period, and to study of change and continuity in burial practice in the late Iron Age and Roman period.

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Table 5.1: Summary of cremated human remains

Context	Context type	Period	Weight	Identifiable fragments	Colour	Minimum number of individuals
71	Primary fill of pit 70	?	4 g	Skull vault, parietal	White	?1 adult male
72	Upper fill of pit 70	LIA-early Roman	>1 g	Skull vault	White	
45	Fill of pit 44	?	505 g	Skull vault, femur, tibia and fibula shaft	White	?adult
48	Fill of pit 46	E-MBA	3 g	Nothing identifiable	White	
49	Fill of pit 46	E-MBA		4-2 mm residue, no bone		
50	Fill of pit 46	E-MBA	22 g	Skull vault, vertebral arch fragment, long bone shaft	White	?adult
47	Fill of pit 46	?	1347 g	Skull vault, occipital, nasal bone, vertebrae, radius, rib, odontoid	White	Adult male
99	Fill of pit 98	?	7 g	Skull vault, long bone shaft	White	
271	Middle fill of pit 269	?	3 g	Shaft fragments	White	
270	Primary fill of pit 269	?	> 1 g	Long bone shaft	White	
298	Upper fill of pit 301	MBA	7 g	Long bone shaft	White	
24	Upper fill of pit 23, <i>in situ</i> burning, associated charcoal	?	> 1 g	Long bone shaft	white	
268	Upper fill of clay-lined pit 266	?	> 1 g	Nothing identifiable	white	
272	Upper fill of pit 269	?	2 g	Long bone shaft	white	

Table 5.2: Summary of cremations

Context	Period	Shape in plan	Sides	Base	Diameter /length-width (m)	depth	Location within cremation fill	Cremated remains (g)	charcoal (as % of deposit)	Artefacts	Comments	Location
301	MBA	Circular	Steep	Flat	0.6	0.35	fill of urn upper	- 7	present much	pottery pottery	Cremation in inverted urn	south of ring ditches
23	?	Circular	Steep	Flat	1.3 x 1.1	0.47	Primary Upper	- <1	5% 40%		Burnt <i>in situ</i>	84+450
98	?	Circular	steep	Rounded	0.7	0.18	Single	7	20%	v. fragmentary pot, flint		south-east of ring ditch 90, near LBA ditch 78
266	?	Circular	steep	Rounded	0.9	0.3	Primary Upper	- <1	- 10%		Clay lining of pit (clay imported)	near LBA ditch 190
46	E-MBA	Oval	steep	Rounded	1.2 x 0.83	0.23	Primary Upper	25 1347	10% <10%	pottery		south-east of ring ditch 90, near LBA ditch 78
44	?	Oval	shallow	Rounded	0.51 x 0.31	0.07	Single	505	-			between ring ditches 81 and 90
269	?	Irregular	irregular	Irregular	1.95 x 0.8	0.28	Primary Middle Upper	<1 3 2	40% 20% <1%		Disturbed by animal burrow	near southern end of LBA ditch 76
70	LIA-ER	Subrectangular	vertical	Rounded	1.18 x 0.34	0.24	Primary Upper	4 <1	8% flecks only		Disturbed	north-west of ring ditches

A20 DIVERSION HOLM HILL, HARRIETSHAM

Assessment of Cremated Human Bone

J I McKinley

Introduction

- Cremated bone was retrieved by whole-earth recovery from three adjacent pits in trench 3695TT. The deposits (359605, 359607 and 359608) are all probably of Romano-British date. The deposits were whole-earth sampled to ensure the complete recovery of not only all cremated bone (human or otherwise) but also any associated artefacts. Partial sampling may not have recovered elements of the entire assemblage that may contribute to our understanding of the funerary process as a whole, particularly if spatial variations were present within the deposits.

Methodology

- The bone from each deposit was weighed, and an assessment of cremation efficiency and bone fragmentation was made (McKinley 1994). The number of individuals per deposit and the age of those individuals were also assessed (*op cit.*) (**Table 14**).

Quantifications

Table 14: Summary of cremated bone

Feature	Context	Context type	Bone weight	Colour	Age
Pit 359604	359605	?Redeposited pyre debris	41.3g	White	Adult
Pit 359606	359607	?Redeposited pyre debris	97.8g	White	Adult
Pit 359609	359608	?Redeposited pyre debris	48.1g	White	Adult
		TOTAL	187.2g		

Provenance

- The bone was in good condition, both compact and spongy bone being recovered, suggesting little bone is likely to have been lost as a result of adverse burial conditions. Some level of truncation may have occurred, the features ranging in depth from 0.15 - 0.26m, consequently it is possible that some bone may have been lost from the deposits.
- The mixed nature of the deposits - fragments of cremated bone dispersed amongst charcoal and fragments of fired clay – and the small amounts of bone recovered, suggests they may not represent cremation burials, but rather redeposited pyre debris cleared from the pyre site(s) after the collection of bone for burial (McKinley 1998).

Conservation

- There are no conservation issues that may affect further analysis.

Comparative material

- A number of fieldwork events elsewhere on the CTRL have produced cremation-related features and deposits of a broad Romano-British date. Most notably, a

considerable number of cremated burials and *in situ* cremations (*bustum*s) were recorded at the Waterloo Connection site, Northfleet (ARC NBR98; URS 1999a), as well as examples at, for instance, Pilgrim's Way (ARC PIL98; URS 1999b) and North of Saltwood Tunnel (ARC SLT98; URS 1999c).

- Similar types of deposit have been recovered from Romano-British cemetery sites at Holborough (Jessup 1959) and East London (Barber and Bowsher 2000, McKinley *in press*). It is likely that these types of deposit are more common elsewhere, but have been mis-interpreted as unurned burials.

Potential for further work

- The potential for further analysis is limited. Although, given the small quantities of bone recovered, it is difficult to be conclusive, there is no reason to suppose that the three deposits do not all relate to separate cremation episodes. The bone all represent adult remains and further analysis is unlikely to expand on demographic detail. There was no evidence of pathological lesions.
- The bone is universally white in colour, evidence of efficient cremation (Holden *et al.* 1995a, 1995b). The quantities of bone recovered are very small, ranging from 41.3g to 98.8g, the latter representing a maximum of 10% of the expected weight of bone from an adult cremation (McKinley 1993). The maximum fragment size is *c.* 25mm, most fragments being <10mm. Full analysis further pertaining to pyre technology and ritual will only serve to expand on the skeletal elements represented within the deposit and the possible significance of the distribution, though no obvious bias in skeletal areas was noted in assessment.
- The main potential of this assemblage lays in the observation that the presence of redeposited pyre debris is indicative of the probable presence of both burials and pyre site(s) in the immediate vicinity. Assessment of published data from comparable sites in the area may illustrate if similar deposits existed in other Romano-British cemeteries in the region.
- In this capacity, the cremated remains offer the potential to contribute to our understanding of the funerary process as a whole for the Romano-British period in the region, as little attention to these deposits, other than as 'burials' *per se*, has been given in the past. They therefore offer the potential to contribute to the landscape zone priority concerning the ritual and ceremonial use of the landscape.

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LITTLE STOCK FARM, MERSHAM

Assessment of Human Bone

J I McKinley

Introduction

- Disarticulated bones and fragments of unburnt human bone were recovered by hand from five Iron Age contexts.

Methodology

- All the bone was scanned to assess demographic data, potential for indices recovery and presence of pathological lesions. Assessments were based on standard methodologies (Brothwell 1972, Bass 1986, Buikstra & Uberlaker 1994).

Quantification

- Each of the contexts contained elements of both human and animal bone. The identifiable animal remains comprise cattle and deer; the human remains represent parts of two adult females, the recovered skeletal elements of which are summarised in **Table 16** below.

Table 16: Human Bone quantification

Context	Feature	Sub-group	Period	Preservation	Age	Comments
2442	Pit 2441	5019	E/MIA	Medium	Adult (female?)	Three fragments of parietal? skull vault - age uncertain (20-40+?), though not from 2030
SK2033	Grave 2037		E/MIA	Medium	Adult female	Skull (inc. mandible, occipital vault and malar); axial skeleton (fragments from all areas of spine, sternum, ribs and innominate); upper limbs (fragments of both clavicles, scapulae and forearms, one humerus, hand bones); lower limbs (fragments from right side including foot bones) - same individual as 2032?, age 20-30
2032	Grave 2037		E/MIA	Medium	Adult female	Few fragments from all areas (same individual as 2033?) - age 20-30
SK2030	Grave 2031		M/LIA	Medium	Adult female	Mostly skull, two fragments sacrum and one foot phalanx - age c. 40+
2029	Grave 2031		M/LIA	Medium	Adult female	Fragments of skull and lower limb bones - age uncertain (20-40+?)

SK = Skeleton

- Skeleton 2033 represents a very small, gracile individual aged c. 20-30 years, fragments from the same individual probably being represented by the bone recovered from context 2032. Matching between diaphyseal and epiphyseal fragments from skeleton 2033 suggests that at least some of the remains were articulated at the time of deposition.
- Skeleton 2030 represents the remains of an older adult, aged c. 40 years. Some fragments of upper limb from 2030 may be from the younger adult female 2033; bone fragments from context 2029 may originate from either individual. Two of

the parietal vault fragments from skeleton 2030 appear to show an unhealed wound from a 'pick-like' implement.

- The fragments of skull recovered from Early/ Middle Iron Age pit **2441** are not part of skeleton 2030, but cannot be excluded from possibly being part of skeleton 2033 due to so little skull being recovered from the latter. If so, given the relative dates assigned to these features, this would imply that skeleton 2033 were previously buried within or near, pit **2441** before being moved to grave-pit **2037**.

Provenance

- All the bone is in relatively good condition, with slight root/insect erosion of the cortical long bone from skeleton 2033, but heavily fragmented; almost all the breaks, including the 'pick-like' wound to skeleton 2030 apparently sustained in antiquity.
- The fragmentary condition of the earliest burial (skeleton 2033) suggests it was either disturbed in antiquity or originally deposited as disarticulated remains. In view of the position of the secondary grave-pit **2031** cutting through the earlier feature (and the subsequent disturbance of both features by medieval pit **2036**), it is not implausible that skeleton 2033 has been disturbed. However, the heavy fragmentation of the rest of the bone, and the absence of most of the skull, suggests there was also some other form of disturbance or bone removal, or that the body was perhaps not complete when initially buried.
- Skeleton 2030 largely comprised skull, and probably was already dry at the time of deposition. It was located within in a confined space in the north-west corner of pit **2031**, and almost certainly represents re-interred disarticulated remains.

Conservation

- There are no conflicts between further analysis and short-term storage. Under the terms of Schedule 11 of the CTRL Act 1996, all human remains are to be reburied.

Comparative material

- The deposition of disarticulated human remains in Iron Age pits is not uncommon (Whimster 1981); in this instance, the discrete location of the bone suggests deliberate placement rather than incidental inclusion in the fill. 'Special' deposits within Iron Age pits may include human bone and similarly, remains have also been recovered from midden deposits. The physical transition from cadaver to skeleton also appears to have carried a transition in the cultural identity of the remains and the way in which they were viewed. The nature of this transition, presumably by way of some form of excarnation, is not clear, but the lack of apparent gnawing by scavengers suggests exposure was not the method used, exhumation being the most likely alternative.

Potential

- A full archival record of the human remains is required. Some reconstruction of skull fragments is recommended to assess the nature and extent of observed pathological lesions. The full potential of further analysis will lie not necessarily in the extraction of further demographic data or the recovery of pathological

information but in consideration of the ‘ritual’ nature of the deposits and expanding our understanding of Iron Age mortuary activities. The nature of the deposits may be best understood when considered in relation to the other contexts around them.

- DNA analysis may assist in identifying individual remains, and therefore post-depositional movement between features, as well as potentially indicating related individuals. However, it is by no means certain that suitable samples may be obtained from the remains recovered at Little Stock Farm. Although diagnostic ceramics were obtained from the graves, radiocarbon dating of the skeletal remains will place these features more confidently within a chronological framework. Again though, it is by no means certain that sufficient material (such as collagen) survives to enable such samples to be taken.

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SALTWOOD TUNNEL, FOLKESTONE

Assessment of Human Bone

J I McKinley

Introduction

- Human bone – unburnt and cremated - was recovered from all areas excavated and all major periods (i.e. Bronze Age, Iron Age, Romano-British and Anglo-Saxon) represented at Saltwood. The fragility of most of the bone from the inhumation burials resulted in much of it being block-lifted on site for subsequent excavation and cleaning under more controlled conditions. A suite of samples recovered from the grave fills resulted in the retrieval of some additional material. Cremation-related deposits were subject to whole-earth recovery and wet-sieved to 1mm fraction-size.

Methodology

- The bone lifted in soil blocks was cleaned prior to assessment by gentle ‘spray-washing’, which proved to be the most effective mode of retrieval and cleaning. All the bone was subject to a rapid scan to assess demographic data, potential for indices recovery, and presence of pathological lesions. Assessments were based on standard methods (Brothwell 1972, Bass 1987, Buikstra and Ubelaker 1994). In addition, the cremated bone from each deposit was weighed, and an assessment of cremation efficiency and bone fragmentation was made (McKinley 1993, Holden *et al* 1995 a and b).

Quantification

- Unburnt human bone was recovered from 145 contexts and burnt or cremated bone was recovered from 114 contexts at Saltwood. A summary of the scan results is presented in **Table 46**. Bone recovered from several deposits that was initially considered to be human has since been identified as animal, as well as one deposit that comprised only soil when examined in detail; these are not included in the tables. It is possible that further small fragments of human bone may be retrieved from as yet unprocessed soil samples.
- The poor condition of the unburnt bone (see below) is a major factor affecting all areas of the proposed analysis. Bone was examined from 114 inhumation burials (see below, *Provenance*, for deposit types), including one possible dual burial. The cemetery population included a minimum of 13 immature individuals, the youngest of which was a *c.* 2 year old infant, the remainder comprising adults of both sexes spanning a wide age range.
- A significant proportion of the cremated bone from Saltwood (**Table 47**) appears to represent material disturbed and redeposited in antiquity (therefore identified as undated). Confirmed cremation deposits include a possible urned and unurned cremation burial to the east of Stone Farm Bridleway, and a minimum of 12 cremation burials to the west of the bridleway. Most of the bone represents the remains of subadult-adult individuals.

Table 46: Saltwood inhumed bone

Event code	Grave no.	Context	Period	Type	% skel.	Age	Sex	Comments
ARC SLT99	C4507	Sk 4552	E/MBA	?	c. 25%	Adult 25-40 yr.	?female	Fragments from all skeletal areas; vertebrae crumbled to dust. Bone remaining moderately preserved. Excavated with 2 left legs?
ARC SLT99	C4619	Sk 4676	E/MBA	Inh. burial	c. 35%	Adult >40 yr.	male	Heavily degraded fragments from all areas of the skeleton. Osteoarthritic lesions in cervical & lumbar, thoracic rib facets; osteophytes in left proximal ulna.; Large skeleton.
ARC SFB99	W64	1356	E/MIA	Inh. burial	<1%	?	?	tiny scraps tooth enamel
ARC SFB99	W68	1445	E/MIA	?inh. burial	c. 1%	Adult	??male	Fragment thick vault
ARC SFB99	W68	1446	E/MIA	?=1445	<1%	Subadult-adult	?	Degraded scraps vault
ARC SFB99	W69	1412/1448/ 1449	E/MIA					no bone surviving, pending sample processing
ARC SFB99	W97	1735	E/MIA	Redep.; ?=1736	<1%	Adult c. 20-30 yr.	?	Tooth enamel. Cremated bone (see below). Lower grave fill.
ARC SFB99	W98	1738-40	E/MIA					tooth enamel
ARC SFB99	W105	1381	E/MIA					no bone recovered
ARC SFB99	W103	1804/5	LIA/ERO					no bone surviving, pending sample processing
ARC SLT98C	C212	Sk 211	LRO					no bone surviving, pending sample processing
ARC SLT99	C2164	2165	LRO					no bone surviving, pending sample processing
ARC SLT98C	C1	1001	EM	?	<1%	>infant	?	Shattered fragments tooth enamel & skull from sample.
ARC SLT98C	C1	Sk 1017	EM	Inh. burial	c. 5%	Adult c.18-30yr.	?female	tooth crowns; degraded vault (4-5); upper & lower limb fragments (3-4); ?intrusive tooth crown
ARC SLT98C	C2	1026/1029	EM	?	<1%	Subadult-adult	?	Teeth.
ARC SLT98C	C3	1039	EM	?redep. or = 1029	<1%	Subadult-adult	?	totally shattered fragments of tooth enamel.
ARC SLT98C	C3	Sk 1029	EM	Inh. burial	<1%	Juvenile-young adult	?	shattered fragments tooth enamel
ARC SLT98C	C5	1046	EM	?redep. or = 1075	<1%	?	?	shattered fragments tooth enamel
ARC SLT98C	C5	1075	EM	?inh. burial	<1%	Adult	?	tooth crown
ARC SLT98C	C7	1084	EM	?redep. or = 1310	<1%	Subadult-adult	?	splinters of bone inc. vertebrae; worn and degraded (5)
ARC SLT98C	C7	Sk 1310	EM	Inh. burial	c. 26%	Adult c. 25-40 yr.	male	skull (2), axial skeleton (4), shattered fragments upper limb (4-5), lower limb very degraded (5): ?some reconstruction?: caries
ARC SLT98C	C9	1109	EM	?inh. burial	<1%	Infant-adult	?	shattered tooth enamel; scrap burnt bone
ARC SLT98C	C12	1134	EM	?inh. burial	<1%	Adult	?	tooth crown fragment
ARC SLT98C	C14	1118	EM	?redep. or = 1140	<1%	Adult c. 25-45yr.	?	tooth crowns; fragments cremated bone
ARC SLT98C	C14	Sk 1140	EM	Inh. burial	c 1%	Adult c. 25-40yr.	?	Tooth enamel
ARC SLT98C	C15	1183	EM	?inh. burial	<1%	Subadult-adult	?	tiny fragments shattered tooth enamel
ARC SLT98C	C16	1120	EM	?redep. or = 1167	<1%	Adult	?	shattered fragments tooth enamel; 0.2g burnt bone. Fragment animal tooth.
ARC SLT98C	C17	Sk 1157	EM	Inh. burial	c. 1%	Adult c.25-40 yr.	?	
ARC SLT98C	C18	Sk 1160	EM	Inh. burial	<1%	Adult	?	Shattered tooth crown & scraps of bone.
ARC SLT98C	C20	1164	EM	?inh. burial	<1%	?	?	tiny fragments shattered tooth enamel
ARC SLT98C	C21	1187	EM	?redep. or = 1256	<1%	Adult >40yr.	?	teeth & degraded skull (5)
ARC SLT98C	C21	Sk 1256	EM	Inh. burial	c. 2%	Adult c. 35-60yr.	?female	Teeth, frontal fragments (3)
ARC SLT98C	C21	unstrat.	EM	?redep. or = 1256	<1%	?	?	degraded bone (5+)
ARC SLT98C	C22	1198	EM	?inh. burial	<1%	?	?	shattered tooth enamel

ARC SLT98C	C23	1203	EM	?inh. burial	c.1%	Adult c. 20-35 yr.	??male	Tooth crowns. Fragments cattle tooth.
ARC SLT98C	C23	1388	EM	?redep.	<1%	Adult c. 18-35yr	?	Tooth crown
ARC SLT98C	C25	Sk 1347	EM	Inh. burial	<1%	Juvenile-young adult c. 7-25 yr.	?	Shattered tooth enamel
ARC SLT98C	C29	Sk 1254	EM	Inh. burial	<1%	Infant c. 2-3yr.	?	Tooth crowns
ARC SLT98C	C30	Sk 1276	EM	Inh. burial	<1%	Subadult- adult c. 13-25yr.	?	tooth crowns.
ARC SLT98C	C33	1330/1331	EM	?inh. burial	<1%	?	?	shattered tooth enamel
ARC SLT98C	C34	Sk 1361	EM	Inh. burial	c. 4%	Adult c. 25-45 yr.	?	Tooth crowns. Degraded fragments upper & lower limb shafts (5).
ARC SLT98C	C35	1363	EM	Inh. burial	<1%	Adult c.30-50 yr.	?	Tooth crowns. Scraps of ?long bone.
ARC SLT98C	C37	Sk 1415	EM	Inh. burial	<1%	Adult c. 20-35yr.	??male	Tooth crowns.
ARC SLT98C	C39	1351	EM	Inh. burial	c. 1%	Juvenile-subadult c. 9-14 yr.	?	Tooth crowns
ARC SLT98C	C40	1357	EM	Inh. burial	<1%	Adult	?	shattered tooth enamel
ARC SLT98C	C40	1358	EM	?redep.	<1%	Adult c. 25-40yr.	?	Tooth crowns, degraded skull fragments.
ARC SLT98C	C40	unstrat.	EM	?redep.	<1%	?	?	shattered tooth enamel; 0.2g burnt/cremated bone; from sample
ARC SLT98C	C44	1239	EM	?inh. burial	<1%	Adult c. 20-35yr.	?	Tooth crown: = 1343
ARC SLT98C	C50	1380/ Sk 1381	EM	Inh. burial	<1%	Adult c. 25-45yr.	?	Shattered tooth enamel
ARC SLT98C	C53	Sk 1417	EM	Inh. burial	c.1%	Adult c.25-40yr	??female	Tooth crowns.
ARC SLT98C	C55	1404	EM	?redep. or = 1404	<1%	?	?	shattered fragments tooth enamel
ARC SLT98C	C55	Sk 1403	EM	Inh. burial	<1%	Juvenile-adult	?	fragment shattered tooth enamel
ARC SLT98C	C57	Sk 1452	EM	Inh. burial	<1%	>infant	?	shattered fragments tooth enamel
ARC SLT98C	C171	Sk 6140	EM	Inh. burial	c. 17%	Adult	??male	Eroded (3-4) upper & lower limb shafts, foot bones.
ARC SLT98C	C171?	unstrat.	EM	?redep. or =6140	c. 15%	Adult >40yr.	??female	Teeth & degraded skull (4-5)
ARC SLT98C	C177	Sk 6527	EM	Inh. burial	c. 16%	Adult 30-45 yr.	?	Degraded (4) skull, tooth crowns, lower limb fragments (4-5), foot bones relatively well preserved (2).
ARC SLT98C	C181	Sk 6636	EM	Inh. burial	<1%	Adult c.25-45 yr.	??, female	/2 – tooth crowns ;/3 -Scraps degraded long bone shaft.
ARC SLT98C	C185	Sk 6517	EM	Inh. burial	c. 3%	Adult	?	degraded fragments lower limb
ARC SLT98C	C185	Sk 6517/ 6528	EM	Inh. burial	c. 10%	Adult c. 30yr +	??female	teeth, degraded skull fragments (3-5) & cervical vertebrae ; periodontal disease, calculus
ARC SLT98C	C190	Sk 6420	EM	Inh. burial	<1%	>infant	?	Degraded scraps supposedly feet
ARC SLT98C	C195	SK 6417	EM	Inh. burial	<1%	Juvenile-young adult	?	Shattered fragments tooth enamel.
ARC SLT98C	C196	Sk 6523	EM	Inh. burial	<1%	Young infant c. 0-2yr.		unworn deciduous tooth crowns
ARC SLT98C	C198	Sk 6565	EM	Inh. burial	c. 45%	juvenile c. 8-10yr.	?	Most of skull, warped & shattered vault (3). Late eruption of premolars. Legs moderately well preserved (2-3), axial skeleton disintegrated, upper limb poorly preserved (3-4). Left distal tibia recorded with femur as thigh bone.
ARC SLT98C	C199	Sk 6646	EM	Inh. burial	c.%	juvenile; c. 7-10yr.	??male	Permanent and deciduous tooth crowns.
ARC SLT98C	C1290	Sk 1343	EM	Inh. burial	<1%	Subadult-adult c. 12-30 yr.	?	Tooth crowns
ARC SLT98C	C1451	1450	EM	Inh. burial	<1%	Juvenile-young adult	??male	Tooth crowns.
ARC SLT98C	C2401	2400	EM	?redep. or = 2515	<1%	Juvenile-subadult	?	Shattered fragments unworn premolar & molar crowns. 0.2g cremated bone.
ARC SLT98C	C2559	2558	EM	?redep. or = 2598	<1%	Juvenile-subadult		Shattered fragments unworn molar crown; 0.3g cremated bone.
ARC SLT98C	C2816	Sk 2817	EM	Inh. burial	<1%	Juvenile-adult; c. 7-30 yr.	?	Tooth enamel
ARC SLT98C	C2869	2886	EM	?redep. or = 2906	<1%	Subadult-adult	?	shattered tooth enamel
ARC SLT98C	C2869	Sk 2906	EM	Inh. burial	<1%	Adult c. 25-40 yr.	??female	Tooth crown fragments

ARC SLT98C	C6639	Sk 6639	EM	Inh. burial	c. 1%	adult c.35-50 yr.	?	Tooth crowns. Scraps long bone shaft & skull(5+)
ARC SLT99	C109	Sk 3716	EM	Inh. burial	c. 5%	Adult >45 yr.	male	mandible, maxilla, occipital vault; cervical; lower limb; poor preservation, right worse than left; pathology degenerative disc disease, osteophytes, exostoses.; Residues to scan.
ARC SLT99	C110	Sk 3727	EM	Inh. burial		Adult c. 18-30yr.	female	Tooth crowns; degraded vault. Degraded fragments lower limb (5+).
ARC SLT99	C113	3746	EM	Inh. burial	c. 2%	Adult c. 20-35yr.	?	shattered fragment tooth enamel
ARC SLT99	C114	Sk 3788	EM	Inh. burial	<1%	Older juvenile-young subadult	?	6 tooth crowns (enamel only) mandibular & maxillary
ARC SLT99	C116	Sk 3760	EM	Inh. burial	<1%	?	?	degraded scraps vault
ARC SLT99	C117	3758	EM	Inh. burial	<1%	>infant	?	sliver of long one shaft
ARC SLT99	C118	Sk 3782	EM	Inh. burial	<1%	Adult c. 20-35yr.	?	Tooth crowns. Tiny scraps cremated bone
ARC SLT99	C121	Sk 3786	EM	Inh. burial	c. 2% ;	Adult 20-30 yr.	?male	comminuted fragments ?ilium & ?femur (5+), maxillary & mandibular molar crowns (enamel only); degraded fragments skull (4).
ARC SLT99	C122	Sk 3785	EM	Inh. burial	c. 1%	Adult c. 25-45yr.	?	Tooth crowns.
ARC SLT99	C123	Sk 3823	EM	Inh. burial	c. 8%	Adult >35 yr.	?female	Eroded (3-4) & warped vault fragments, teeth.
ARC SLT99	C124	Sk 3857	EM	Inh. burial	<1%	Adult 18-25 yr.	?	5 tooth crowns (enamel only) mandibular
ARC SLT99	C125/ C126	Sk 3928/ Sk 3929	EM	Inh. burial	<1%	Subadult-adult c. 15-30 yr.	?	Tooth enamel
ARC SLT99	C126	Unstrat.	EM	Inh. burial	<1%	Subadult-adult	?	scraps long bone shaft. Fragments burnt bone.
ARC SLT99	C127	Sk 3942	EM	Inh. burial	c. 1%	Adult 18-30 yr.	?	mandibular & maxillary tooth crowns (enamel & some with roots), vault fragment. Poor preservation of bone. Green staining. 2 beads.
ARC SLT99	C129	3884	EM	Inh. burial	c. 10%	Adult c. 25-40yr	?male	tooth crowns; degraded vault (4), right femur & innominate. Poor preservation but can see morph.; cremated bone (see below)
ARC SLT99	C131	Sk 3954	EM	Inh. burial	<1%	?	?	2 tiny fragments tooth enamel.
ARC SLT99	C133	Sk 3999	EM	Inh. burial	<1%	Adult 18-35 yr.	?	F2043&2126: shattered fragments tooth enamel; 3 small fragments burnt bone. F. 2267 animal bone not human, moderate preservation.
ARC SLT99	C134	4503	EM	Inh. burial	<1%	Adult c.25-40 yr.	?female	tooth crowns
ARC SLT99	C134	4505	EM	?redep.	<1%	Adult c.25-35 yr.	?	Tooth crowns – mandibular & maxillary
ARC SLT99	C137	Sk 4594	EM	Inh. burial	c. 1%	Adult >25 yr.	?	Highly degraded fragments vault, innominate & lower limb.
ARC SLT99	C139	Sk 4612	EM	Inh. burial	c. 39%	Adult >40 yr.	male	Skull and upper body well preserved, most breaks recent, inc. some with no joins. Pelvis & lower limb highly degraded. Green cu-alloy stains on left hip (acetabulum); ante mortem tooth loss; degenerative disc disease – cervical; osteophytes – cervical, thoracic & lumbar, right distal radius; pitting – rib facets, medial clavicle; rotator cuff – right; Very robust skull
ARC SLT99	C145	Sk 4662	EM	Inh. burial	c. 1%	Subadult-adult	?female	Fragments occipital vault; slivers from ?right leg. ; Residues to scan.
ARC SLT99	C146	Sk 4658	EM	Inh. burial	<1%	Adult c. 25-35yr.	?female	Small mandibular & maxillary tooth crowns, few roots. ; Beads from residues. Small residues to scan.
ARC SLT99	C150	4681	EM	Inh. burial	<1%	Juvenile-adult	?	Degraded fragments long bone shaft.
ARC SLT99	C151	4678/ Sk 4679	EM	Inh. burial	c. 1%	Adult	?	Teeth
ARC SLT99	C154	Sk 4689	EM	Inh. burial	<1%	Adult c.30-50 yr.	?	Fragments tooth crown. Small fragment cremated bone; residue to scan.
ARC SLT99	C156	4701	EM	Inh. burial	<1%	Adult c.20-40 yr.	??male	mandibular & maxillary tooth crowns
ARC SLT99	C158	Sk 4717	EM	Inh. burial	c. 1%	Adult c. 18-40 yr.	?	Tooth crowns, shattered & degraded vault (5); Fragment created

								bone
ARC SLT99	C170	Sk 4727	EM	Inh. burial	<1%	Subadult-adult	?	Fragment humerus shaft, slightly degraded (3)
ARC SLT99	C170?	?4725	EM	?redep. or =4727	c. 1%	Adult 25-45 yr.	?	tooth crowns & vault fragments
ARC SLT99	C173	Sk 6204	EM	Inh. burial	c. 1%	Subadult- adult; c. 16-25 yr.	??female	Tooth crowns.
ARC SLT99	C174	Sk 6230	EM	Inh. burial	c.26%	Older subadult-young adult c. 17-20	?male	Teeth; skull (3-4); degraded fragments mandible; right proximal femur recorded as left, as was innominate. Degraded (varies with side 3-5) fragments lower limb & upper limb & axial skeleton; calculus; ?some reconstruction.
ARC SLT99	C176	Sk 6407	EM	Inh. burial	c. 1%	Infant-juvenile c. 4-6 yr.	male	Tooth crowns
ARC SLT99	C1138	Sk 1167	EM	Inh. burial	<1%	Adult	?	Shattered tooth crowns. Scraps of ?vault.
ARC SLT99	C1193	Sk 1330	EM	Inh. burial	c. 1%	Adult c 20-30 yr.	?male	Tooth crowns. Slivers of long bone shaft.
ARC SLT99	C1195	Sk 1283	EM	Inh. burial	<1%	?	?	Scraps of tooth crown
ARC SLT99	C2401	Sk 2515	EM	Inh. burial	<1%	Juvenile-subadult c. 8-18 yr.	?	Tooth crowns
ARC SLT99	C2559	2558/ Sk 2598	EM	Inh. burial	<1%	Subadult/adult		Shattered enamel
ARC SLT99	C3041	3039	EM	?inh. burial	<1%	Juvenile-subadult	?	Unworn mandibular molar crown
ARC SLT99	C3047	3046	EM	Inh. burial	c.1%	Adult c. 18-30	?	Tooth crowns & fragments shattered tooth enamel.
ARC SLT99	C3777	3776	EM	?inh. burial		>infant		1g burnt bone – mandible & long bone.
ARC SLT99	C3896	3894/3895	EM	?inh. burial	nil			cattle tooth
ARC SLT99	Unknown	Sk 4899	EM	Inh. burial	<1%	Subadult-adult	?	Fragment degraded petrous temporal.; Residue to scan.
ARC SFB99	W7	3033	EM	Inh. burial	c. 15%	Adult c. 18-45 yr.	?male	Degraded & disintegrating skull vault, robust femur shafts.
ARC SFB99	W11	1055	EM	Inh. burial	c. 3%	adult	??male	Degraded scraps of vault, and lower limb shafts. Appears to have been supine & extended.
ARC SFB99	W12	1076	EM	?redep.	c. 4%	Adult >30 yr.	?female	occipital parietal vault. Degraded (3-4). Upper fill of grave - ?redeposited
ARC SFB99	W12	1146	EM	Inh. burial	c. 5%	Adult >50 yr.	?	Degraded (4-5), skull fragments. Warped longitudinal. Sutures obliterated. Uneven occlusal wear in canine – cultural?
ARC SFB99	W12	1147	EM	=1146 or 1076	<1%			Degraded scrap skull vault
ARC SFB99	W13	1075/1077	EM	Inh. burial(?s)	<1%	Subadult-adult; ?) infant		Actually only surviving bone on ‘non-skeleton’ 1077. Check with in situ teeth - ?late eruption some permanent teeth. Basal fill of grave. Most recovered from sample.
ARC SFB99	W18	1125	EM	?redep. or remains inh. burial	<1%	Adult		canine crown. From grave fill – no burial remains recovered from this grave - this may actually be non-number 1168
ARC SFB99	W20	1119	EM	?redep.	<1%	Juvenile-subadult	?	Unworn maxillary molar crown. From grave fill – no burial remains recovered from this grave.
ARC SFB99	W22	1332	EM	Inh. burial	c. 1%	Subadult	?	tooth enamel, some root.
ARC SFB99	W23	1345	EM	Inh. burial	<1%	Subadult	??male	tooth enamel, mandibular and maxillary.
ARC SFB99	W29	1322	EM	?redep. or = 1328	<1%	Adult	?	shattered tooth crown
ARC SFB99	W29	1328	EM	Inh. burial	<1%	Adult c. 30-45 yr.	?	tooth enamel, mandibular & maxillary. Disturbed?
ARC SFB99	W38	1515	EM	?redep.	<1%	Adult	?	tooth crown fragment. Some cremated bone in here (see below). From backfill above 1516.
ARC SFB99	W38	1516	EM	Inh. burial	<1%	Subadult	?	Unworn-lightly worn tooth crowns. Retained deciduous canine. Fragment cremated bone (see below).
ARC SFB99	W40	1763	EM	Inh. burial	c. 1%	Adult c. 30-45 yr.	?	Teeth

ARC SFB99	W42	1777	EM	?inh. burial	c. 1%	1) juvenile-subadult; adult	?	Tooth crowns from 2 dentitions; ?disturbed, some redeposited (very near surface, central to grave)
ARC SFB99	W43	1575	EM	?coffined; inh. burial	c. 27%	Adult c. 30-50 yr.	male	Degraded skull (4-5); upper & lower limb, & innominate fragments
ARC SFB99	W45	1856	EM	Inh. burial	c. 25%	Adult c. 25-35 yr.	??female	Teeth good; degraded skull (3-4); fragments heavily degraded upper & lower limb shaft.
ARC SFB99	W57	1750	EM	Inh. burial	c. 1%	Adult c. 25-35 yr.	?	Teeth, some root. Scraps degraded skull. Long bones disintegrated, scraps left femur.
ARC SFB99	W59	1391	EM	Redep.?	c. 2%	Adult c. 20-35 yr.	??female	Tooth crowns; degraded skull & mandible fragments (4-5). Hypoplasia.
ARC SFB99	W60	1514	EM	Inh. burial	c. 1%	Adult c. 25-40 yr.		Cu-alloy staining on righth mandibular premolar-molars. Mandibular & maxillary teeth.
ARC SFB99	W70	1606	EM	?inh. burial	<<1%	?	?	samples; .2 slivers of bone; .4 no bone; .5 no bone
ARC SFB99	W83	1293	EM	Inh. burial	c. 3%	Adult c. 30-50 yr.	?female	Degraded fragments skull and tooth enamel, innominates (obtuse greater sciatic notch); disintegrating scraps long bone.
ARC SFB99	W104	1743	EM	?coffined inh. burial	<1%	Adult c. 25-40 yr.	?	Tooth enamel. Disturbed.
ARC SFB99	W111	1811	EM	Dual inh. burial	<1%	Adult c.20-30 yr.; young infant		Tooth enamel crowns; inc. deciduous mandibular molar
ARC SFB99	W120	1896	EM	Inh. burial	<1%	Adult c. 25-45 yr.	?	4 maxillary tooth crowns, roots degraded.
ARC SFB99	W123	1854	EM	Inh. burial	c. 1%	Subadult-adult; c. 16-25 yr.	?	Fresh appearance; tooth crown enamel.
ARC SFB99	W123	1855	EM	Redep. ?; ?=1854	<1%	Subadult-adult; c. 15-30 yr.	?	Tooth crown. Cremated bone (see below).
ARC SFB99	W125	3127	EM	Inh. burial	c. 1%	Subadult-young adult c. 13-25 yr.	??male	Tooth crowns.
ARC SFB99	W126	3085	EM	Inh. burial	c. 1%	Older juvenile ; c. 8-10 yr.	1) ?male	Teeth, crowns good condition, roots degraded; 12 permanent maxillary & 12 mandibular, 1 maxillary & 2 mandibular deciduous molars - ?later eruption premolars (see SLT 98C 6565). Hypoplasia.
ARC SFB99	W185	1329	EM	Inh. burial	c. 3%	Adult c. 25-40 yr.	?	tooth enamel, scraps mandible & skull, degraded scraps long bone. Residue to sort.
ARC SLT98	-	1000	?	?	c. 3%	Adult	?	Lower limb shafts (4)
ARC SLT98	-	1122	?	?	<1%	?	?	shattered tooth enamel
ARC SLT98	-	1372	?	Inh. Burial	<1%	Adult	?	shattered fragments tooth enamel
ARC SLT98C	Ditch 2741	2890	?	?	<1%			Fragment shattered tooth enamel
ARC SLT99	Ditch 3828	3827/3831	?	Inh. Burial	<1%	Subadult-adult	?	Highly degraded fragment ?tibia shaft.
ARC SLT99	Cut 3891	3890	?	?	<1%	?	?	?human/?animal long bone fragments – shattered
ARC SLT99	Pit 3910	3970	?	Inh. Burial	c. 1%	Adult c. 25-35yr.	?female	mandibular & maxillary tooth crowns (enamel only) heavier occlusal wear one side

Table 47: Saltwood cremated bone

Site	Feature	Context	Period	Type	Bone wt.	Age	Comments
ARC SLT99	C3709	3708	LBA/EIA	?	18.0g	Adult	Pitting - articular process
ARC SLT99	C3710	3711	LBA/EIA	?	483.5g		
ARC SLT99	C3739	3737/8	LBA/EIA	?			Bone yet to be examined
ARC SLT99	C3777	3776	LBA/EIA	?			Bone yet to be examined
ARC SLT99	C3806	3805	LBA/EIA	?	5.4g		
ARC SLT99	C3806	3809	LBA/EIA	?	1.4g		
ARC SLT99	C3896	3894/5	LBA/EIA	?			Bone yet to be examined
ARC SLT99	C3935	3933/4	LBA/EIA	?			Bone yet to be examined
ARC SFB99	W99	1704	LBA/EIA	?rpd	10.3g	Adult	2 sub-contexts; mixed charcoal rich pit
ARC SFB99	W100	1727	LBA/EIA	?u. cb/; ?rpd	33.3g	Adult	Quantities of charcoal? see photo. & plan
ARC SFB99	W101	1729	LBA/EIA	?rpd	12g	Subadult-adult	Charcoal rich pit fill
ARC SFB99	W102	1700	LBA/EIA	?rpd	4.6g	>infant	4 sub-contexts; charcoal rich shallow pit
ARC SFB99	W102	1701	LBA/EIA	= 1700	0.3g		?human; 2 sub-contexts
ARC SFB99	W106	1723	LBA/EIA	?			Bone yet to be examined
ARC SFB99	W107	1725	LBA/EIA	?redep.	1.2g	>infant	
ARC SFB99	W223	3603	LBA/EIA	unurn.	143.0g	Adult	
ARC SLT98	C6	5	E/MRO	?	291.7g	Adult	
ARC SLT98	C12	67	E/MRO	?	2.0g		
ARC SLT98	C12	68	E/MRO	?	121.4g	Adult	
ARC SLT98	C12	69	E/MRO	?	0.4g	Adult	Osteophytes
ARC SLT98	C14	59	E/MRO	?	50.7g	Adult	Few u/b cattle teeth; 2 samples
ARC SLT98	C14	60	E/MRO	?	279.5g	Adult	Iron panning
ARC SLT98	C14	61	E/MRO	?	0.2g		
ARC SLT98	C14	62	E/MRO	?	22.5g	Subadult-adult	Inc. animal bone; sherd
ARC SLT98	C15	49	E/MRO	?	2.4g	Subadult-adult	Pot sherds
ARC SLT98	C16	86	E/MRO	?	113.5g	Adult	
ARC SLT98	C19	95	E/MRO	?	1.0g		
ARC SLT98	C19	96	E/MRO	?	20.5g	Adult	
ARC SLT98	C20	56	E/MRO	?	0.7g	Subadult-adult	
ARC SLT98	C20	58	E/MRO	?	16.2g	Adult >40 yr.	?some animal bone; sherds
ARC SLT98	C21	82	E/MRO	?	3.7g	Subadult-adult	
ARC SLT98	C21	83/84	E/MRO	?	133.8g	Adult	Worn sherds
ARC SLT98	C21	85	E/MRO	?	14.4g	Subadult-adult	
ARC SLT98	C22	100	E/MRO	?	6.7g	Adult	
ARC SLT98	C22	101	E/MRO	?	89.3g	Adult	Sherds
ARC SLT98	C337	336	E/MRO	?	1192.8g	Adult	Charcoal stained
ARC SLT99	C2187	2186	E/MRO	?	0.1g		
ARC SLT99	C2210	2208	E/MRO	?	41.4g		Charcoal stained; two samples
ARC SLT99	C2215	2216	E/MRO	?	124.6g		Heavily fragmented
ARC SLT99	C2233	2232	E/MRO	?	245.8g	Adult	
ARC SLT99	C2303	2301	E/MRO	?	0.1g		

ARC SLT99	C3008	3007	E/MRO	?	640.5g	Adult	
ARC SLT99	C3193	3192	E/MRO	?	0.7g		
ARC SLT99	C3705	3704	EM	?	791.5g	Adult	
ARC SLT98	-	unstrat	UN	?	28g	Subadult-adult	Unstratified
ARC SLT98	C33	32	UN	?	0.1g		Ditch fill
ARC SLT98	C71	34	UN	?	0.2g		Ditch fill
ARC SLT98	C1019	1018	UN	?	<0.1g	?	?animal/?human; minuscule fragment; pit fill
ARC SLT98	C1031	1030	UN	?	1.4g	Adult	From inh. grave fill
ARC SLT98	C1137	1118	UN	redep.	0.7g	Subadult-adult	From inh. grave fill
ARC SLT98	C1154	1155	UN	?	1.1g	Subadult-adult	From inh. grave fill
ARC SLT98	C1244	1243	UN	?	0.5g		From inh. grave fill
ARC SLT98	C1252	1251	UN	?	0g	?	Human; ditch fill
ARC SLT98C	C2493	2492	UN	?	<0.1g		Probably human; ditch fill
ARC SLT98C	C2538	2537	UN	?	0.1g		Probably human; posthole fill
ARC SLT98C	C2554	2553	UN	?	<0.1g		Probably animal; pit fill
ARC SLT98C	C2723	2722	UN	?	<0.1g		Animal/?human?; posthole fill
ARC SLT98C	C2778	2777	UN	?	<0.1g		Animal/?human? – tiny fragment; pit fill
ARC SLT98C	C2805	2802	UN	?	0.5g		Probably animal; 3 samples; pit fill
ARC SLT98C	C2805	2803	UN	?	<0.1g		?animal/?human; pit fill
ARC SLT98C	C2805	2804	UN	?	<0.1g		Probably animal; pit fill
ARC SLT98C	C2805	2813	UN	?	0.2g		?human/?animal; 3 samples; pit fill
ARC SLT98C	C2805	2814	UN	?	0.1g		Probably animal; 2 samples; pit fill
ARC SLT98C	C2812	2811	UN	?	<0.1g		Burnt & unburnt animal; ditch fill
ARC SLT98C	C2816	2815	UN	?	0.1g		?human; from inh. grave fill
ARC SLT98C	C2819	2818	UN	?	0.1g		?human; posthole fill
ARC SLT98C	C2845	2844	UN	?	<0.1g		?human; ditch fill
ARC SLT98C	C2869	2868/2886	UN	?	0.5g		?human; from inh. grave fill
ARC SLT98C	C2899	2898	UN	?	<0.1g		Human; from inh. grave fill
ARC SLT98C	C2919	2918	UN	?	0.3g		Human; pit fill
ARC SLT98C	C2966	2967	UN	?	<0.1g		?animal/human; from inh. grave fill
ARC SLT99	C2101	2102	UN	?	0.2g		Ditch fill
ARC SLT99	C3014	3013	UN	?	neg.		Pit fill
ARC SLT99	C3116	3115	UN	?	6.7g	Subadult-adult	Pit fill
ARC SLT99	C3143	3145	UN	?	neg.		?burnt animal; posthole fill
ARC SLT99	C4757	3701	UN	?	3.5g		
ARC SLT99	C3713	3712	UN	?	0.4g		Inc. u/b shattered tooth enamel. ; ?backfill inh. grave
ARC SLT99	C3715	3714	UN	?	0.1g		Tiny fragments; from inh. grave fill
ARC SLT99	C3722	3721	UN	?	0.3g		Root fragment
ARC SLT99	C3724	3723	UN	?	<0.1g		Tiny fragment; posthole fill
ARC SLT99	C3726	3725	UN	?	1.7g		?backfill inh. grave; tiny fragments
ARC SLT99	C3741	3731	UN	?	0.3g		?backfill inh. grave; inc. fragment u/b tooth enamel
ARC SLT99	C3751	3750	UN	?	20.9g	Subadult-adult	?backfill inh. grave; 2 bags
ARC SLT99	C3753	3752	UN	?	6.3g	?	2 bags; pit fill
ARC SLT99	C3755	3754	UN	?	0.9g		Inc. u/b crown; from backfill inhum. grave

ARC SLT99	C3757	3756	UN	?	neg.		?backfill inh. grave
ARC SLT99	C3764	3763	UN	?	0.5g		?backfill inh. grave
ARC SLT99	C3779	3778	UN	?	0.1g		From inh. grave fill
ARC SLT99	C3781	3780	UN	?	0.7g		Inc. fragments u/b tooth crown; from backfill inh. grave
ARC SLT99	C3764	3782	UN	redep?	1.4g	Subadult-adult	?backfill inhum. grave; human skull
ARC SLT99	C3830	3829	UN	?	0.2g		Pit fill
ARC SLT99	C3864	3865	UN	?	5g	Subadult-adult	?backfill inh. grave
ARC SLT99	C3866	3867	UN	redep.	2.4 g		Backfill inh. grave
ARC SLT99	C3885	3884	UN	redep.	16.0g	Subadult-adult	?human/?animal; backfill inh. grave
ARC SLT99	C3918	3917	UN	?	1.2g		Ditch fill
ARC SLT99	C4665	4717	UN	redep.	.2g		Human; in backfill inh. grave.
ARC SFB99	W24	1115	UN	redep.	0.5g		?human/?animal; in fill inh. grave
ARC SFB99	W33	1355	UN	redep.	1.2g	Subadult-adult	Ditch fill
ARC SFB99	W38	1515	UN	redep.	0.8g		Human; backfill inh. grave
ARC SFB99	W38	1516	UN	redep.	0.3g	Subadult-adult	Inh. burial, i.e. = 1515
ARC SFB99	W44	1602	UN	redep.	0.4g	Subadult-adult	In basal ditch fill
ARC SFB99	W45	1578	UN	?rpd/; ?redep.	6.8g	Subadult-adult	Inc. sample; upper fill inh. grave 1577, some charcoal – rpd?, redep?; u/b fragment, ?animal/?human
ARC SFB99	W45	1859	UN	redep.	2.5g		?human; fill inh. grave
ARC SFB99	W57	1635	UN	redep.	2.7g	Adult	In fill inh. grave, ?redep. burial/rpd?
ARC SFB99	W59	1390	UN	?rpd/ ?redep.	2.2g	Subadult-adult	Inc. sample; charcoal flecking, ??rpd or just redep.; pit fill
ARC SFB99	W62	1697	UN	redep.	0.2g		?human; in fill ditch
ARC SFB99	W67	1410	UN	?redep.	0.3g		?human; in charcoal rich pit fill
ARC SFB99	W69	1412	UN	redep.	2.5g		?human; in inh. grave fill
ARC SFB99	W70	1605	UN	redep.	2.9g	Subadult-adult	Some slightly blue/grey; in fill inh. grave
ARC SFB99	W95	1573	UN	redep.?	2.6g	Subadult-adult	In ditch fill; charcoal flecks ?rpd?
ARC SFB99	W97	1735	UN	redep.	0.7g	Subadult-adult	In backfill inh. grave
ARC SFB99	W103	1805	UN	redep.	5.3g	Adult	In backfill inh. grave
ARC SFB99	W104	1706	UN	redep.	0.8g		Human; in fill inh. grave
ARC SFB99	W109	1845	UN	redep.	0.6g	Subadult-adult	In backfill inh. grave
ARC SFB99	W122	1465	UN	?rpd	2.1g	Subadult-adult	Inc. sample; charcoal rich pit
ARC SFB99	W123	1855	UN	redep.	13.5g	Subadult-adult	2 sub-contexts; few fragments slightly grey; u/b tooth crown, unworn. In backfill inh. grave
ARC SFB99	W139	3410	UN	?	0.1g		?human/animal; in pit fill, discrete deposit
ARC SFB99	W170	3646	UN	?rpd	15.5g	Juvenile-adult	2 samples; charcoal flecking, could be rpd in ditch fill
ARC SFB99	W180	3498	UN	?	2.2g		?human/animal; charcoal rich pit fill
ARC SFB99	W190	1647	UN	?redep.	0.4g	>infant	Pit fill, charcoal

Provenance

- The deposits from which unburnt human remains were recovered largely comprised the remains of inhumation burials, including two associated with Bronze Age barrows, six of Early/Middle Iron Age date, one Late Iron Age/early Romano-British, and two late Roman or ‘sub-Roman’ (bone from the latter has yet to be examined). The remainder, comprising the large majority of inhumation burials from all sites, was of Early Anglo-Saxon date (coded EM in **Tables 46-7**).
- Most of the cremated bone recovered to the west of Stone Farm Bridleway was from deposits of Late Bronze Age/Early Iron Age and Romano-British date, including the remains of cremation burials and other cremation-related deposits; one cremation burial believed to be of Anglo-Saxon date was also recovered. Much of the cremated bone recovered to the east of the bridleway derived from the backfill of Anglo-Saxon inhumation graves, with some deposits from ditch fills. Other deposits, including several which appear to represent redeposited pyre debris, were recovered from the vicinity of Late Bronze Age/Early Iron Age features. In addition, one possible urned cremation burial (W100) and one unurned burial (W223) were recovered.

Conservation

- The unburnt bone from the inhumation burials is generally in very poor condition, being extensively degraded (mostly scoring 5 on a decreasing scale of 1-5) and in many cases the disintegration process is on-going rendering the bone very fragile. Frequently, the only part of the skeleton to survive intact is the enamel of the tooth crowns. The poor condition of the bone is reflected in the levels of percentage skeletal recovery, which in the vast majority of cases is <1%. More than *c.* 10% of the skeleton survived in only 9% of the inhumation graves, the maximum being *c.* 45% from a juvenile in grave C198 and *c.* 27% from an adult from grave W43. It may be noted that bone from the two Early/Middle Bronze Age inhumations (C4507, C4619) survived in better condition than from the later inhumations.
- The cremated bone is generally in good condition. The quantity of bone from the large majority of the deposits was very small, with only 26 contexts in total containing in excess of 10g of bone. The greatest weight of bone from a single deposit was 1192.8g (C337) with a maximum of 33.3g from the eastern part of the site (W100). The small weight of bone and frequently comminuted fragments largely reflects the type of deposit, many of which represent disturbed or redeposited material. The bone is almost universally the buff-white indicative of a high level of oxidation.
- Under the terms of Schedule 11 of the CTRL Act 1996, all human remains are to be reburied.

Comparative material

- The human remains from Saltwood in themselves cover a wide temporal range and comprise the contents of several cemeteries relating to various population groups. Some ten other archaeological sites excavated along the Channel Tunnel Rail Link Route have produced varying quantities of human remains from individual burials or cemeteries – both inhumation and cremation – from the Bronze Age through to Anglo-Saxon (Glass 1999). These new sites join a corpus

of published data from Kent including nine Bronze Age, two Iron Age, one Iron Age-Romano-British, 14 Romano-British and 17 Anglo-Saxon cemetery/burial sites (Anderson 1994, Shaw 1994, Mays and Anderson 1995, Ashbee 1997, Parfitt 1999).

- From these comparable cemeteries a minimum of 21 Bronze Age (mostly cremation burials) three Iron Age, 138 Romano-British (mostly inhumation burials) and 640 Anglo-Saxon (all inhumation burials) burials have been recovered. Limitations in comparisons will be imposed not just by the poor condition of much of the bone from Saltwood, but the similarly poor condition of much of the unburnt bone from other sites in Kent, the lack of skeletal analysis in some cases and limited analysis in others (Mays and Anderson 1994).
- Wider comparisons with material from excavations outside Kent e.g. Edix Hill, Cambridgeshire (Duhig 1998) and Apple Down, West Sussex (Harman 1990) may illustrate broad region similarities or variations.
- Various types of cremation-related deposit have been found on sites from all periods (e.g. Jessup 1959, McKinley 1997a and b, Barber and Bowsher 2000, McKinley in press). The recovered data will be used to assess the various types of deposit and the mortuary rituals and rites they may reflect.

Potential for further work

- The human bone assemblage, both cremated and unburnt, covers a wide temporal range from the Early/Middle Bronze Age to Anglo-Saxon, with a major concentration in the latter phase. The overall potential of the unburnt bone assemblage is severely limited by the very poor condition of the bone, but the frequent recovery of tooth crowns offers the possibility of the further recovery of data pertaining to demography and health.
- Age will largely have to be assessed from tooth wear patterns. The occasional presence of additional ageing criteria will allow the establishment of controls against which any necessary adjustments can be made to the age ranges offered by standardised tooth wear pattern charts (Miles 1962, Brothwell 1972). This data may counteract the effects of different diet, general health and genetic predisposition within different population groups. In many cases it should be possible to attribute tighter age ranges than those given for this assessment.
- Sexing of a greater number of individuals may be attempted using multivariate analysis of measurements taken from the tooth crowns (Ditch and Rose 1976). The demographic data may be compared with that of others within the region and nationally to assess the nature and development of the cemeteries, and to assess any variations in spatial distribution within the cemeteries.
- There will be little opportunity to assess physical characteristics. It will not be possible to undertake calculation of skeletal indices, for example, stature estimation or cranial index, but there may be limited potential for the calculation of other indices reflective of the homogeneity of the assemblage. This data may also be used for regional and national comparisons.

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- Very few pathological lesions were observed in assessment and, consequently, there is restricted potential to comment on the health, economy and status of the cemetery populations of any period as reflected in the condition of the skeletal remains. There will be limited scope for assessment of diet as indicated by the dental health of the individuals, though the predominant recovery of only dental enamel from the Anglo-Saxon cemeteries will necessitate a restricted interpretation.
 - The use of DNA sampling to assist in gender determination, and the identification of family groups, is likely to be limited by the very poor bone survival. While some of the inhumation burials within the Anglo-Saxon cemeteries have potentially survived well enough to provide adequate DNA samples, these are unlikely to provide a sufficiently wide range of samples to answer specific questions – the identification of gender for random isolated samples is not sufficient.
 - The use of strontium and lead isotope analysis to determine geographical origins, however, has a higher potential, since this process can utilise tooth enamel. This analysis could be used, for example, to demonstrate similarities (or lack of) in geographical origin between the three Anglo-Saxon cemetery groups.
 - The possibility of obtaining high precision dates for burials of any date is likely to face similar restriction due to poor bone preservation – even where bone does survive, this may only comprise the mineral component, without the collagen which is necessary for dating. Bone from the inhumation burials of pre-Saxon date, however, does survive in better condition, and may be sufficient to provide adequate samples for dating – this would be most appropriate for the groups of burials considered to be of Early/Middle Bronze Age and Early/Middle Iron Age date.
 - The patterns of skeletal survival within the inhumation graves from the eastern part of the site may be assessed in the light of a suite of pH samples extracted from targeted areas within the grave fills. This may indicate the original presence of organic materials within the grave that have altered the microenvironment sufficiently to enhance bone survival. However, preliminary analysis of a small sub-sample of these pH samples indicates few significant variations in pH value to date. Other factors may also have had similar effects, such as soil chemistry, and these will also be considered in any discussion of differential bone survival across the site.
 - Assessment of cremation-related deposits, their type and nature – requiring reference to the primary context data - will demonstrate aspects of the funerary rites and rituals (McKinley 1994a, 1997, 1998 and in press).

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