

## **APPENDIX 4: ASSESSMENT OF WORKED FLINT**

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### **1.1 Introduction**

- 1.1 A total of 231 pieces of worked flint were recovered from the excavations (Tables 11 and 13). The worked flint consists of mostly hard-hammer struck flakes, irregularly worked cores, core fragments. A range of mostly minimally retouched forms were recovered (retouched or used flakes, serrated flakes, scrapers, piercers and denticulates. The flint is generally hard-hammer struck with very little evidence for platform preparation or maintenance during knapping. Retouching is generally limited in extent, and many retouched pieces are made on thick cortical flakes. This assemblage is typical of mid-late Bronze Age technologies.
- 1.2 Burnt unworked flint was recovered from ARC CGC98 and ARC 33098 (see Tables 12 - 14). The burnt unworked flint consists of a range of small to large sized fragments or pebbles of heavily calcined flint.

### **2. Methodology**

- 2.1 The worked and burnt unworked flint was recorded onto the Oracle database using standard MoLSS methods. The material was recorded by typological group, where appropriate notes were made on pertinent technological attributes. Brief notes were also made on the general condition of the material. The burnt unworked flint was briefly scanned and quantified, a general note of the condition of the material was also made. Natural unworked flint was discarded.
- 2.2 A single box of unstratified (recovered from the ploughed subsoil and roughly plotted to the western third of the site) material from ARC CGC 98 was scanned only. Its composition was very similar to the rest of the material from this site.

### **3. Quantifications**

- 3.1 A total of 226 pieces of worked flint and 145 pieces of burnt unworked flint (weighing 7111g) was recovered from ARC CGC 98.
- 3.2 Five pieces of worked flint and 10 pieces of burnt unworked flint (weighing 35g) came from ARC 330 98. The flint is summarised in the Tables below.

### **4. Provenance**

- 4.1 The worked flint was recovered from only a relatively limited number of contexts. The burnt unworked flint was spread over more contexts and concentrations, by both numbers and weight can be noted in several contexts eg [160] and [176]. The distribution by weight is slightly more varied.
- 4.2 The flint came from a range of features across Area 330 Zone 5 but were mostly recovered from Cobham Golf Course, ARC CGC 98 and a flint scatter to the east

of Knights Place Farm. From ARC CGC 98 flint was recovered from pit and ditch fills, and also from a later ploughsoil. At Knights Place Farm the flints were found redeposited in a later ploughed soil.

- 4.3 Good groups were recovered from ARC CGC 98 ditch fills, pit fills and layers, in particular contexts [161], [221], [223], [227] and [248]. Middle and late Bronze Age pottery was also recovered from these features. In addition many of these features produced burnt unworked flint, indicating a range of domestic tasks were being carried out, the debris being deposited in selected features across the site.
- 4.4 Some of the material from these contexts may well refit. No refits were identified during the assessment, although possible refits were identified in contexts [161] and [221] (Table 11) and the similarity of some of the raw materials suggests that this would be a worthwhile exercise. Similarly several examples of usewear and possible usewear were identified during the assessment (eg contexts [223] and [248] see Table 11). The numerous different types of cores recovered, the flakes and trimming flakes all indicate the approach to knapping that was taken: rough nodules were worked fairly unsystematically to remove useable cores. Other cores were worked slightly more systematically.
- 4.5 Very limited evidence for a pre-middle Bronze Age presence was suggested by the lithics: a few blades and blade-like flakes were recovered. However, these may simply have been produced non-intentionally during knapping, as many Bronze Age assemblages have a limited proportion of blades, rather than as deliberate removals. A possible Mesolithic burin was recovered from context [3002] (ARC 300 98).
- 4.6 Earlier, nearby archaeological evaluations at Cobham produced evidence for Neolithic and early Bronze Age activity (Durden 1997; Pre-Construct Archaeology 1996).

## **5. Conservation**

- 5.1 The flint is appropriately bagged and boxed for long-term storage. Some of the burnt unworked flint is beginning to disintegrate, however, there is little that can be done to prevent this. No conservation is required. All of the natural flint has been discarded.
- 5.2 Selected burnt unworked flint could be discarded, keeping only a selection of representative material for archive purposes. The full quantification (by weight and number), together with a description of the material discarded would provide sufficient records for any future work.

## 6. Comparative material

6.1 Little material on middle to late Bronze Age lithics have been published from Kent and little useful comparative material has been recovered from the CTRL works in Area 330/350. Some crudely worked fairly undiagnostic material came from Area 330 Zone 3 (Bradley 2001) which may be contemporary with the Zone 5 material. An assemblage of later Bronze Age flint came from Coldharbour Road, Gravesend (Bradley 1995), and the MSA at Hollingbourne (Bradley 1998).

6.2 In a wider context later Bronze Age assemblages have begun to receive attention. Recent work on usewear analysis, coupled with reduction technology and site distribution, has produced some interesting results (Brown and Bradley forthcoming). These results, at Wallingford have shown that retouch was only used in certain cases when the users' hands required protection; many pieces were used unmodified or with very minimal retouching. This is a pattern that can be seen across Britain during the later Bronze Age.

## 7. Potential for further work

7.1 The numerous cores, core fragments, flakes and trimming flakes (Table 11) will provide an excellent opportunity to examine later Bronze Age knapping strategies, which have shown to be of considerable interest nationally (cf Brown and Bradley forthcoming). Examination of flake types may also show that particular flakes (eg trimming flakes) were selected for retouching or use unmodified. The detailed examination of the flint in conjunction with the ceramics may elucidate chronological differences in the lithics. The distribution across the site in conjunction with a more detailed examination of the middle and later Bronze Age ceramics will also provide some interesting data, although the lithic assemblage is on the small side for detailed statistical analyses to be undertaken.

7.2 The flint can contribute to the following time period research objectives:

*Farming communities (2,000-100BC).*

- *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*
- *Determine how settlements were arranged and functioned over time.*

7.3 Lithics may help to clarify the pre-late Bronze Age activities on site but given the generally small numbers and the lack of diagnostic forms this may be somewhat limited.

7.4 The majority of the lithics are clearly middle to later Bronze Age in date and as such have great potential to elucidate the domestic use of the landscape at this time.

7.5 The flint should be examined for possible usewear data and possible refits that have been identified during the assessment. Detailed analysis of the flint will enable any reduction sequences to be reconstructed. The possible usewear will require low-level microscopic analysis to enable the type of wear to be categorised.

- Investigate/confirm possible refitting flint and analyse for usewear
- Detail comparison with ARC CGC 97 etc lithics
- Time for preparing publication
- A selection of lithics would require illustration (around 20 pieces – cores and retouched forms)

## 8. Bibliography

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- Brown, A and Bradley, P forthcoming Worked flint, in A Cromarty, A Barclay and G Lambrick *Excavations at Whitecross Farm Wallingford*, OAU monograph
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- Healey, E 1973 The flint (Hayes Common), in B Philp, *Excavations in West Kent 1960-1970*, 38-43
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Table 11: ARC CGC 98 Worked Flint

Context	Count	Period	Comments
73	4		Flakes, all worn
73	1		?tested nodule/irreg worked core, also 4 natural
110			5 natural inc 1 sarsen frag
112	1		Small flake
144			1 natural
146	2		1 burnt poss used?, 1 CRF - platform
132	1		Trimming flake ?used edge
160			Lump of sarsen - unworked
161	10		All large and many cortical - some poss refits?
161	2		Cores irregularly worked also 5 natural
162	1		Flake with ?used edges
164	13		Some trimming flakes, some used edges, several irreg flakes, 1 burnt flake
164	1		Misc retouched flake
176	1		Trimming flake
192	6		Inc 1 thick flake from a nodule
192	2		Core/core frags both irregularly worked, Also 6 natural
194	1		Single platform flake core irregularly worked
196	2		Slightly irregular trimming flakes
196	1		Multi-platform flake core, irreg worked
198	1		End and side scraper, on thin blank some cortex, neatly retouched, some wear to scraping edge
198	2		Two flakes, also 1 natural
198	1		?tested nodule, irregularly worked, possibly natural
200	1		Denticulate on a thick side trimming flake
200	1		Multi-platform flake core many overhangs and hinges, also 2 natural
202	-		Non-flint ?worked stone
202	1		Thick trimming flake
202	2		Two tested nodules very crudely worked, also 3 natural
204	2		1 trimming flake, 1 possible flake - very crudely struck, also 5 natural
221	4		Blade-like SH flakes
221	41		Many irregular flakes, many trimming flakes, some used edges, poss refits? , also 3 natural
221	5		Multi-platform, irregularly worked cores, many HF's and overhangs and incipient cones
221	1		End and side scraper on cortical blank, retouch is relatively neatly executed
221	1		End scraper of thick cortical blank, minimal retouch at distal end
221	2		Denticulates, 1 is minimally retouched, other is semi-circular in shape and quite elaborate
221	1		Retouched flake, irregular retouch on irregular thick flake

Context	Count	Period	Comments
223	1		End scraper on cortical blank minimal retouch ?used edges
223	1		Piercer on cortical blank, small point
223	26		Many cortical flakes, some very irregular, some used edges, mostly HH
223	1		2 platform core, irreg worked
223	36		Flakes - some trimming, many large irregular ones, some used edges, many HFs, also 1 natural
223	3		Blade-like SH flakes
223	2		Serrated/worn flakes both on blade-like blanks
223	1		Single platform flake core on large irregular nodule
223	1		Multi-platform flake core
223	1		Core on a flake
223	1		End and side scraper on thick cortical flake, very crudely worked, partly denticulated retouch
225	3		Flakes, poor quality flint
225	1		Retouched flake, minimal retouch poss used as a scraper
227	8		Many irregular flakes, and trimming flakes
227	2		End scrapers both on trimming flakes, thick blanks
227	1		Single platform flake core irregularly worked, burnt
233	1		Flake, poor quality flint
237	1		Small flake fragment
242	5		Multi-platform flake cores, all large (2 very large irreg nodules), little controlled working
248	7		Flakes inc some very large eggs, some used edges, mostly HH
248	1		Denticulate
248	1		End scraper on fairly thick non-cortical blank, minimal retouch
248	1		Serrated/worn flake
248	3		Core fragments all quite irregularly worked
248	2		Irregularly worked cores also 2 natural
<b>Total</b>	<b>226</b>		

Key:

HH Hard hammer

SH Soft hammer

HF Hinge fracture

Table 12: Burnt Flint ARC CGC 98

Event code	Context	Count	Weight	Comments
ARC CGC 98	61	1	74	Small burnt pebble, also 2 natural
ARC CGC 98	112	2	141	Calcined grey
ARC CGC 98	122	1	89	Calcined grey
ARC CGC 98	128	4	284	Calcined grey and red
ARC CGC 98	136	2	195	Calcined grey
ARC CGC 98	136	6	36	
ARC CGC 98	138	3	167	Calcined grey
ARC CGC 98	142	1	99	Calcined grey
ARC CGC 98	142	6	86	Calcined grey
ARC CGC 98	146	2	140	Calcined grey
ARC CGC 98	148	4	406	Calcined grey
ARC CGC 98	160	9	118	Calcined grey
ARC CGC 98	160	37	2257	Calcined grey and occasional red, mostly large nodules/frags
ARC CGC 98	160	7	289	Calcined grey
ARC CGC 98	161	2	37	Calcined grey with red tinges
ARC CGC 98	162	25	642	Calcined grey
ARC CGC 98	164	3	164	Calcined grey
ARC CGC 98	168	2	140	Calcined grey
ARC CGC 98	176	5	3	Calcined grey
ARC CGC 98	176	2	110	Calcined grey
ARC CGC 98	176	14	1178	Calcined grey, inc large pieces from nodules
ARC CGC 98	178	3	281	Calcined grey
ARC CGC 98	182	1	5	Calcined grey, also 25 natural
ARC CGC 98	223	2	141	Calcined grey
ARC CGC 98	227	1	29	Calcined red
Total		145	7111	

Table 13: Worked Flint ARC 330 98

Event code	Context	Count	Period	Comments
ARC 330 98	3002	2		1 slightly worn, other is a flake from an opposed platform core - flake removals
ARC 330 98	3002	2		serrated/worn flakes possible gloss
ARC 330 98	3002	1	Mesolithic	possible burin on large partly cortical flake
Total		5		

Table 14: Burnt Flint ARC 330 98

Event code	Context	Count	Weight	Comments
ARC 330 98	362	10	35	Calcined white to grey
Total		10	35	