

1.1 Assessment of Macroscopic Plant Remains and Charcoal

Introduction

1.1.1 A large series of bulk samples was taken from sealed contexts to recover charred plants remains and charcoal to aid in determining the following for each defined phase:

- *the archaeological significance of the deposits and thus the site*
- *the nature of the local environments*
- *selection of woodland species for general and specific activities*
- *the use of the wild and cultivated resources*
- *the nature of specific activities undertaken on site, and thus the general economic status of the site*

Methodology

1.1.2 Samples were selected for processing according to the following criteria

- *A broad range of feature types was to be examined.*
- *Samples should be spatially arranged across the entire site, and*
- *Where possible, all chronological periods represented at the site should be examined.*

1.1.3 Based on these criteria, 42 bulk samples of between 1 and 10 litres were processed from Mesolithic pit **72**, and a further twelve samples of generally 10 litres were processed from a range of ditches and other features/deposits of generally prehistoric date. Samples from some undated features were also processed, partially to attempt to recover dating evidence (inc. charcoal for radiocarbon dating purposes).

1.1.4 All bulk samples were processed for the recovery and assessment of both charred plant remains and charcoals, and artefacts. Standard processing methods were used, with a 4 mm mesh being used for the coarse fraction.

Quantifications

1.1.5 The quantification of macroscopic plant remains and charcoal by sample per context for those fieldwork events conducted by Wessex Archaeology are provided in **Table 13**.

1.1.6 Low numbers of charred grain fragments were recorded in 11 samples and a few charred weed seeds, including hazel nut fragments, were observed in 17 samples from the Mesolithic pit **72**.

1.1.7 Small quantities of both charred grain and charred weed seeds were present in two samples from the Middle Bronze Age ditch **54** (including hazelnut fragments in one of these). Only a few charred weed seeds were retrieved from Middle Neolithic pit **133** and from the similarly dated burnt-out tree stump **49**.

1.1.8 Small quantities of charcoal fragments of greater than 5.6mm were recovered from 12 of the samples from the Mesolithic pit **72** and from two of the samples from the

Middle Bronze Age ditch **54**. Large amounts of charcoal were recorded in both samples from Middle Neolithic pit **133** and from the Middle Neolithic burnt-out tree stump **49**, all predominantly comprising large wood fragments.

- 1.1.9 The presence of hazelnuts is particularly common on Mesolithic sites, and the majority of occurrences at Sandway Road are from contexts presumed to be Mesolithic (6 out of 8 samples); the remainder from Middle Neolithic and Middle Bronze Age contexts. It is of note that the hazelnut fragment submitted for AMS dating from pit **72** yielded a calibrated date of 8590-8090 BC (i.e. Early Mesolithic).

Provenance

- 1.1.10 The samples generally produced small flots (average flot size for a 10 litre sample is 60 millilitres) with between 1 and 80% rooty material and varying quantities of uncharred weed seeds. Large quantities of both categories can be indicative of stratigraphic movement. The AMS dating results indicate that pit **72** at least contains both residual and intrusive material at the macroscopic level.

Conservation

- 1.1.11 There are no conservation issues that conflict with long term storage for the sorted residues and extracted flots. However, the unprocessed samples, although currently stored in stable conditions, cannot remain so in perpetuity, and as such a decision regarding discard/retention needs to be reached.

Comparative material

- 1.1.12 Although the Mesolithic samples produced relatively little in the way of charred remains, over 25% (11 of 42) contained charred cereal grain. Recovery of grain in these samples is of some concern as in Britain no cereal grain has been positively identified as Mesolithic from any site in Britain, despite occasional records of rare large Poacea pollen spores, which some have considered as being cereal, in Mesolithic contexts (cf. Edwards 1988, 1990).

- 1.1.13 A possible conclusion could be that the grain from the assessed flots, although taken from 'secure' Mesolithic contexts must have worked their way into these horizons by bioturbation, the most likely cause being biotic activity such as roots or soil fauna (e.g. worms). The relatively high numbers of unburnt weed seeds in most samples seem to confirm this. However, the AMS dating results indicate that whilst both residual and intrusive material is present, there is, nevertheless, a definite Late Mesolithic element to the charred cereal grain assemblage.

Potential for further work

- 1.1.14 Charcoal will provide detailed information on the local woodland and thus floral composition and change. It is unlikely, however, due to poor preservation that this can be corroborated by detailed analysis of pollen. Charcoal analysis may, however, not only provide evidence of the natural vegetation, but evidence for human clearance and changes of that vegetation which may consequently have irrevocably altered the nature of the soils, and even lead to the initiation of soil erosion and hillwash deposits.

- 1.1.15 Given the enhanced potential for the site as a whole to contribute to the study of early prehistory in Kent, it is recommended that all remaining samples are processed and sorted to augment the ecofact and micro-artefactual assemblages already obtained.

Bibliography

Edwards, K, 1988, 'The hunter-gatherer agricultural transition and the pollen record in the British Isles', in H H Birks, H J, Birks, P E Kaland and D Moe (eds), *The Cultural Landscape; past, present and future*. Cambridge, Cambridge University Press, 255-66.

Edwards, K J, 1990, 'Mesolithic-Neolithic vegetational impact in Scotland and beyond: palynological consideration', in C Bonsall (ed.), *The Mesolithic in Europe*. Edinburgh, Donald 143-55

Table 13: Ecofact quantification

Sample Details				Flot Details							Residue Details
Feature	Context	Sample	Size (litres)	Size (ml)	Grain	Chaff	Weed Unburnt	Seeds Burnt	Charcoal >5.6mm	Other	Charcoal >5.6mm
SWR98 Evaluation											
MNE Tree-throw 357705	357706	1	15	50 ^{7.5}			++	+	+		+
MBA Ditch 357703	357704	2	15	25 ^{17.5}			++	+	+		
Hearth (BTS?) 363204	363203	3	15	1000 ¹⁵⁰			+	+	++		
SWR99 Excavation											
(Pre?) ME Pit 167	166	73	10	15 ^{7.5}			++	+			
ME Pit 72	73	6	10	35 ²¹			++		+		
	116	7	10	30 ²¹	+		++	+	+		
	117	8	10	30 ^{22.5}			++				
	375151	32	10	40 ³⁰			++	+(h)			
	364851	37	4	20 ¹²	+		++				
	364951	38	1	10 ⁵			+				
	385051	39	4	30 ¹⁸			++		+		
	384951	40	1	10 ⁶			+				
	374851	41	6.5	15 ¹²			++				
	384961	42	2	10 ⁵			+	+			
	394831	43	6	30 ^{22.5}			++	+	+		
	345031	44	5	20 ¹²		+		+	+	+	
	374831	45	5	20 ¹⁵		+		++			
	395041	46	5	15 ¹²				+			
	355051	47	5	15 ⁹				+			
	384841	48	5	25 ^{18.75}				++			
	375051	49	4	15 ^{7.5}		+		++	+(h)		
	374841	50	4	25 ^{17.5}		+		++		+	
	364841	51	5	15 ⁹				++	+		
	374961	52	3	15 ¹²		+		+	+(h)		
	375041	53	6	25 ¹⁰				++			
	355041	54	4	20 ¹⁵				++	+	+	
	385041	55	4	35 ²¹				++			
	384831	56	5	40 ³⁰				++	+	+	
	364831	57	4	15 ¹²				++	+		
	344831	58	2	15 ⁹				+			
	354831	59	6	25 ²⁰				++		+	
	375031	60	6	25 ^{12.5}				++			
	355031	61	5.5	25 ¹⁵				++			
	385031	62	5	25 ^{18.75}				+	+(h)	+	
	395031	63	6	25 ²⁰				++	+	+	
	375061	64	6	10 ⁶		+		++			
	355061	65	4	10 ⁶				++			
	375071	66	5	5 ^{1.25}		+		++	+		
	385061	67	5	15 ^{11.25}				+	+(h)	+	
375081	68	4	5 ^{2.5}		+		++				
354961	69	2	3 ^{1.5}				+				
374971	70	2.5	10 ⁵		+		+	+			
364961	71	2	10 ⁴				+				
364971	72	2.5	5 ^{2.5}				+				
354951	74	2	5 ⁴				+				
374951	75	2	10 ⁵				+	+(h)			
ME Pit 156	155	29	10	30 ¹⁸			+	+	+		
MNE Pit 133	135	9	10	425 ^{4.25}			+		++		
	134	10	9	120 ^{2.5}			+	+	++		
MNE Tree-throw 160	159	36	10	40 ²⁶			++	+(h)			
MNE BTS 49	50	1	10	500 ³⁵			+	+	++		
MBA Ditch 54	70	3	10	25 ^{12.5}	+		++	+(h)	+		
	87	4	10	5 ²			++				
	89	5	10	10 ^{1.5}	+		+	+	+		

Contd.

Table 13: Quantification of Ecofacts (contd.)

Sample Details				Flot Details							Residue Details
Feature	Context	Sample	Size (litres)	Size (ml)	Grain	Chaff	Weed Seeds		Charcoal >5.6mm	Other	Charcoal >5.6mm
							Unburnt	Burnt			
SWR99 Excavation (contd.)											
Tree-throw 151	152	26	10	30 ¹⁰			+	+	+		
	152	27	10	20 ⁵			+	+	+		
BTS 63	64	2	5	30 ³			+		+		

Key: BTS = Burnt-out tree stump; Flot size in superscript = ml of rooty material; h = hazelnut; + = 1-10, ++ = 11-50

ME = Mesolithic; MNE = Middle Neolithic; MBA = Middle Bronze Age