

7.18 ASSESSMENT OF THE PLANT REMAINS

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Summary

- 7.18.1 Excavation work included the sampling of deposits for charred plant remains. Nine standard samples of early medieval date were assessed for their potential for analysis and seven yielded such remains. 13 samples also provided loose seeds that were included in the assessment, some of these had been mineralised and were extracted from flotation residues, others were carbonised and collected from the flots of small samples. Generally, the concentration of remains was low although two samples produced more substantial remains. Cereal crops included bread-type wheat, spelt wheat, oats and barley. Pulses included broad bean and possible cultivated vetch (*Vicia sativa* subsp. *sativa*). What may have been subsidiary crops, including flax, beet and plum or sloe, were also identified. Occasional mineralised seeds, particularly of brassica may be derived from sewage. Some further detailed analysis is recommended.

Introduction

- 7.18.2 Samples were collected from ditches, pits (including cess-pits) and post-holes during excavation and wet-sieved for the recovery of carbonised and mineralised material. The deposits examined were generally of early medieval date (Phase 3, c. 1050-1200). The samples were taken in order to address questions concerning the diet, cereal economy and environment of the site.

Methodology

- 7.18.3 Samples of 10 to 40 litres were processed by bucket flotation and the flots collected onto 0.5mm mesh sieves. Flots were air dried slowly prior to a rapid visual assessment of nine of them. Occasional seeds were picked out of residues or small flots from an additional 13 samples and were also submitted.
- 7.18.4 Each flot was assessed by scanning under a binocular microscope at x10 magnification. Any seeds or chaff noted were provisionally identified and an estimate of abundance made. Random fragments of charcoal were fractured and examined in transverse section at x10 and x20 magnification.

Quantification

- 7.18.5 Nine flots were assessed and the seeds extracted from a further 13 samples were provisionally identified. Flots were small to moderately sized (10 to 300 ml). Several samples contained frequent roots and two (samples 1009 and 1048) were rich in molluscan remains. The results of the examination are detailed below (Table One).

- 7.18.6 Seven of the nine flots produced charred cereal remains, generally in low numbers (up to 50 grains), although two samples (samples 1022 and 1029) were slightly richer, with 51 to 100 grains. Species noted included *Hordeum vulgare* (barley), free-threshing *Triticum* sp. (bread or rivet wheat), possible *Triticum spelta* (spelt wheat) and *Avena* sp. (oats). Cereal chaff was very rare, being recorded in one sample only (1022). The chaff noted consisted of a single *Hordeum vulgare* rachis. Weeds were quite common in sample 1022, but were rare or absent from the remaining flots. Non-cereal items were found in six flots and included seeds of possible *Brassica* sp. (cabbage, mustard *etc.*; mostly preserved by calcium phosphate mineralisation), *Vicia faba* (broad bean), *Vicia* cf. *sativa* (fodder vetch), *Linum usitatissimum* (flax), *Corylus avellana* (hazel-nut), *Beta vulgaris* (beet) and *Prunus* sp. (sloe, plum *etc.*). Wood charcoal was present in eight samples and was common in sample 1064. The taxa was generally provisionally assigned as *Quercus* sp. (oak) or Pomoideae (hawthorn, apple *etc.*), with occasional *Corylus/Alnus* sp. (hazel/alder).
- 7.18.7 The loose material included occasional charred cereal grain and *Vicia/Pisum* sp. (pulses), mineralised seeds of *Brassica* sp. (cabbage, mustard *etc.*) and a *Prunus* sp. (plum, sloe *etc.*) stone. Seeds of *Sambucus nigra* (elderberry) were recovered in quite large quantities from two samples (1067 and 1072). The *Sambucus* material was not charred; the seeds of this species tend to be particularly robust and resistant to decay, tending to survive where other remains do not (*e.g.*, in waterlogged deposits which have subsequently dried out).

7.18.8 Table One
Plant Remains

<i>Sam- ple</i>	<i>Con- text</i>	<i>Feature</i>	<i>Phase</i>	<i>Type</i>	<i>Flot size (ml)</i>	<i>Grain</i>	<i>Chaff</i>	<i>Weed seeds</i>	<i>Other</i>	<i>Id-Other</i>	<i>Char- coal</i>	<i>Comm- ents</i>
1007	347	Cess pit	3	Seeds	0							Modern rubus
1009	353	Ditch	5	Flot	100						+	Mollusc rich
1016	374	Ditch	3	Seeds	0				+	Brassica		Mineral -ised
1017	366	Pit	3	Seeds	0	++			++	Brassica		Mineral ised
1019	383	Cess pit	3	Flot	100	++			+	Beta vulgaris, Corylus	++	Rooty
1022	403	Pit	3	Flot	200	+++	+	+++	++	Vic.faba Vic.sat Corylus Linum	++	2xflots
1023	414	Cess pit	3	Flor	200	++		++			++	Rooty, 2xflots
1024	419	Cess pit	3	Seeds					+	cf Prunus,		Mineral -ised
1028	440	Pit	3	Flot	300	++		+	+	Corylus Prunus Vic/lath Crataegus	++	Very rooty
1029	432	Pit - iron working?	3	Flot	200	+++		+	+	Corylus Vic/Pis	++	2xflots
1038	498	Cess pit	3	Seeds	0	+		+				
1048	519	Ditch	3	Flots	10	+						Moll- uscs
1064	567	Pits	3	Flots	50						+++	
1067	570	Pits	3	Flots	50	+		+	+	Corylus	++	Elder
1070	573	Pits	2	Seeds	0	+			+	Vic/Pis		
1072	575	Pits	3	Seeds	0			++				Elder
1075	584	Pit	3	Seeds	0	+						
1076	587	Pits	3	Seeds	0							Modern seeds
1078	595	Ditches	3	Seeds	0							Modern seeds
1082	605	Post- holes	3	Seeds	0							Modern seeds
1087	610	Pots- holes	3	Seeds	0	+						
1090	618	Pits	2	Seeds	0				+	Vic/Pis		

Provenance

- 7.18.9 Those samples that contained moderate to good quantities of grain were all taken from pit fills (contexts 383, 403, 414, 440, 432). The mineralised brassica seeds recovered from pit fill 366 would suggest that this pit contained sewage material and therefore may have been a cess-pit. Other than the brassica seeds, mineralised remains were not common although occasional items, including the *Prunus* stone in context 419, do confirm the interpretation of some features as cess-pits. The charred remains recovered from both cess-pits and other features are likely to represent small-scale cereal processing and food-preparation waste as well, perhaps, as waste from hearth or furnace fires.

Conservation

- 7.18.10 The flots are in a stable condition and can be archived for long-term storage.

Comparative material

- 7.18.11 Comparable sites of this period are infrequent in Kent. A tenth-century assemblage was recovered from the Graveney Boat (Wilson, 1978), which produced a range of estuarine and salt marsh species, terrestrial trees and shrubs and herbaceous plants as well as the actual cargo of the boat which included, most notably, a large deposit of *Humulus lupulus* (hops). The Graveney deposits are, however, rather unusual. Slightly later (twelfth-/thirteenth-century) deposits from Ebbsfleet, and a possible Saxon grave at Chalk Hill, were examined as part of the Sandwich Bay archaeological project (Scaife 1995). The assemblages were limited, but the Ebbsfleet samples produced a comparable species list with free-threshing wheat, possible spelt wheat, *Hordeum vulgare*, oats, and rye rachis, broad bean and pea. Material from Northfleet (Pelling, unpubl.), dated to the eleventh/ twelfth century, again suggests a mixed cereal economy, producing free-threshing wheat, barley, oats and rye. The pulses at this site included cultivated vetch as well as beans and peas. The sites all suggest that *Triticum turgidum* (rivet wheat) was not cultivated in Kent at this time, although it is known from eleventh and twelfth century records elsewhere in the country (Moffett, 1991). They do suggest that cultivated vetch is present from at least the eleventh century, as the Mersham sample seems to support.
- 7.18.12 Outside of Kent, there is a growing body of archaeobotanical assemblages from this period, for example the large scale assemblages examined from West Cotton (Campbell 1994) which cover the late Anglo-Saxon and early medieval periods, although with many gaps in the record. While there are many references to medieval urban deposits (see Robinson and Wilson 1987), many are slightly later (thirteenth century onwards) and small-scale rural assemblages have been less frequently examined. This is a period of potential economic and agricultural change, with new introductions from Scandinavia and Norman France. It is, therefore, important to continue to develop the data-set for areas, like Kent, for which the data is still limited in order to trace the introduction of new species and to analyse developing agricultural and, perhaps, climatological trends throughout the country.

Potential for further work

7.18.13 Given the paucity of comparative material for this period in Kent and the importance of building up a national data-set for all potential periods of change, some further work on the material is recommended. To this end, it is suggested that the five samples that produced moderately sized deposits should be sorted and analysed in full (samples 1019, 1022, 1023, 1028 and 1029). In addition the loose grain and brassica seeds extracted from sample 1027 should be identified and discussed. Further work on this assemblage has the potential to address the following Landscape Zone priorities:

- changes to the organisation of the landscape through time;
- reliance on pastoralism versus arabalism;

And the following Fieldwork Event Aims:

- to recover environmental and other economic indicators present on the site;
- to determine the landscape setting of the site and its interaction with the contemporary local environment.

7.18.14 Bibliography

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