

**Channel Tunnel Rail Link  
London and Continental Railways  
Oxford Wessex Archaeology Joint Venture**

**The charred plant remains from Little Stock Farm,  
Mersham, Kent (ARC LSF98)**

by Chris Stevens

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## 1 INTRODUCTION

Sixty-seven samples were taken during the excavations of Little Stock Farm (ARC LSF99), of which all were processed and assessed. While several of the samples were rich in cereal remains, many had very little identifiable material. Preservation ranged from good to quite poor within the more sparse samples. Many samples contained many roots indicative of being within the active soil horizons accounting for the poor preservation of some material. Of the sixty-seven samples thirty-one were analysed in full. Of these, two were middle to late Neolithic, one Saxon and one medieval. The remaining samples were Iron Age in date, twelve from the early to middle Iron Age and fifteen from the middle to late Iron Age.

## 2 METHODS

The samples were processed by flotation, with the flots collected onto a 250µm mesh. The residues were fractionated into 10, 4, 2 and 0.5 mm mesh sizes. The flot was dried and along with the smaller fractions of the residue sorted for plant material using a low-powered binocular microscope. Plant macrofossils were then extracted, identified and quantified. The plant taxa identified from each sample are shown in Table 1 following the nomenclature of Stace (1997). Table 1 can be found at the end of the report.

## 3 RESULTS

### 3.1 Neolithic

As with many Neolithic samples cereal grains were relatively scarce, although barley (*Hordeum vulgare sl*), hulled wheats emmer or spelt (*Triticum dicoccum/spelta*) and free-threshing wheats (*Triticum aestivum sl*) were all represented. Chaff is generally absent from Neolithic sites a point noted by Robinson (2000) however a small quantity of chaff remains was recovered from pit 2214. These were too degraded for positive identification although the width of the glumes was more indicative of spelt (*Triticum spelta*) than emmer (*Triticum dicoccum*). Spelt wheat is not known in south-east England until the later Bronze Age (Hinton 1982). However, given that this feature contained small intrusive sherds of later prehistoric pottery it is possible that the small amounts of chaff were also introduced from Iron Age activity. Both samples also contained many fragments of hazelnut (*Corylus avellana*) shell.

### 3.2 Iron Age

Several Iron Age samples from the excavation produced reasonable quantities of material, although many contained little to no information. Within the samples both barley and hulled wheats were well represented while glumes of hulled wheats outnumbered remains of hulled wheat grains. The poor condition of much of the material meant that identification of either emmer or spelt was not always possible although both appeared to be present throughout the Iron Age, with glumes of spelt wheat (*Triticum spelta*) appearing more common. Barley was also present throughout the Iron Age being represented mainly by grains rather than chaff. It was more common within the later middle to late Iron Age samples. Free-threshing wheat grains were relatively scarce in the Iron Age samples, although a rachis fragment was recovered from ditch 5006.

Wild foods were represented within many of the samples by occasional fragments of hazelnut. The frequency of fragments of hazelnut shell is unusual for the Iron Age. There is reason to suspect that many of these remains may be residual from the Neolithic. Most of the features where hazelnut fragments occur were found in close proximity to the Neolithic features discussed above. In particular, post-hole 2505 contained a large number of hazelnut fragments and a possible grain of naked barley, all of which would suggest a Neolithic rather than an earlier Iron Age date. The other features producing hazelnut shells, for example, gully 5007 and post-hole 2405 were also located within this general area. These examples reinforce the problem with residual and intrusive material that may be present on the site.

The only other possible wild food remains from Iron Age deposits were of sloe (*Prunus spinosa*) from late Iron Age ditch 5010, and a stone of hawthorn (*Crataegus monogyna*) from posthole 2405. In both these cases though such berries may have become charred if still attached to twigs or branches used for tinder.

The samples contained numerous weed seeds mainly of fat-hen (*Chenopodium album*), oats (*Avena* sp.), and /or brome grass (*Bromus* sp.). Seeds of other commonly found arable weeds were present within the samples including common chickweed (*Stellaria media*), black-bindweed (*Fallopia convolvulus*), dock (*Rumex* sp.), cleavers (*Galium aparine*) and small grasses such as meadow grass and cat's tail's (*Poa/Phleum* sp.). Most of these are not characteristic of precise soil types, however smaller numbers of seeds of more ecologically specific species were recovered. Some, such as blinks (*Montia fontana* ssp. *chondrosperma*), are usually found in wetter acidic to circum-neutral conditions, while sheep's sorrel (*Rumex acetosella*) is found in similar but drier conditions. Others such as field madder (*Sherardia arvensis*), which is commoner in the later Iron Age phases of the site, is characteristic of light, drier, but more alkaline soils.

Several of the samples also contained mineralised material. This is indicative of high amounts of phosphorous and hence cess. These were most notable in the late Iron Age hearth feature, 2006, but also in Pit 2008 and Pit 2013. No seeds of edible species were encountered indicative of human cess. Most mineralised seeds were of common settlement or arable weeds that may have become mineralised within middens or cess deposits and then deposited within the features.

### 3.3 Saxon and Medieval

The Saxon sample contained no identifiable cereal remains and no weed seeds. Only a single medieval sample from a hearth 2421 was examined. Grains of free-threshing wheat (*Triticum aestivum* s.l) dominated the sample, although several grains of barley (*Hordeum vulgare* s.l), and a few of rye (*Secale cereale*) were also identified. While several rachis fragments of free-threshing wheat were also present, they were not well enough preserved to determine whether tetraploid (e.g. durum wheat) or hexaploid (e.g. bread wheat) wheat was represented.

Two possible seeds of flax were recovered from the medieval samples, a crop known to have been present south-east England since the Neolithic period (Arthur 1970). However, whether these represent a crop cultivated for linen or linseed cannot be ascertained.

Many of the seeds of wild species present within the medieval sample were also present in the Iron Age samples. Very few seeds of the Chenopodiaceae were present, but there were more of larger seeded species, for example oat and vetches/wild pea (*Vicia/Lathyrus* sp.).

Of the seeds of wild species present, few are associated with specific soil conditions with the exception of stinking mayweed (*Anthemis cotula*). This species is commonly recorded from medieval sites where it is often associated with the cultivation of heavier clay base-rich soils (Greig 1991).

## 4 DISCUSSION

The high number of hazelnuts is characteristic of many British Neolithic sites (Moffett *et al.* 1989), although the presence of cereal remains is also typical of many Neolithic sites (Robinson 2000), indicating at least some cereal agriculture. The significance of such finds in relation to the importance of cereal agriculture versus the importance of wild foods has been highly debated (Robinson 2000; Jones 2000). That fragments of hazelnuts are so common in Neolithic samples compared to later periods would seem to indicate a greater importance of wild foods on the site during this period compared to later prehistoric and historic periods.

The presence of emmer (*Triticum dicoccum*) is of some interest as spelt is often more common over much of central and south England during the Iron Age (Greig 1991; van der

Veen 1992). Unfortunately the state of preservation of such material could not allow a comparison of the relative importance of each. Glumes of hulled wheats were however more dominant than glume wheat grains indicating that the samples are most likely waste from the separation of glumes after the pounding of spikelets (cf. Hillman 1981; 1984). Such assemblages are commonly recorded for both Iron Age and Roman sites (Stevens 2003; van der Veen 1992).

Few differences were noted between the earlier and later Iron Age samples, although this may be a product of the reworking of material. Jones (1981, 1988, 1996) has noted that seeds of the Chenopodiaceae, associated with nitrogen rich soils, are often more common in the earlier Iron Age. Within the later Iron Age to Roman period Jones noted a decline in seeds of these species while those of the Leguminosae, associated with nitrogen poor soils, rose. It is possible that the samples may reflect this change, as seeds of vetches and tares are more frequent in later Iron Age samples. However, it should be noted that the sample from hearth 2006 had abundant remains of both groups.

The medieval samples demonstrate many of the changes known to have taken place after the end of the Roman period. The Saxon to early medieval period sees the introduction of rye, while spelt wheat is replaced by free-threshing wheat. Stinking mayweed is also a common component of medieval samples, indicating the cultivation of heavier clay soils. Such cultivation may be tied with the introduction of mouldboard and heavier ploughs upon the site.

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Table 1: The charred plant remains from Little Stock Farm

Phase			MLNEO		EIA			E/MIA#1					E/MIA		E/MIA	
Feature			Pit	Pit	Pit/hearth		Posthole	post-ring	r-h ditch	Gully 5007			Pit		Pit	Ditch
Feature			2507	2214	2013		362706	2505	5002	5007	2227	354606		362708	355116	
Context			2506	2213	2011	2012	362707	2504	362716	2027	2009	2226	354602	354603	362709	355112
Sample			3024	3025	3020	3022	6	3023	8	3040	3016	3036	1	2	7	15
Size (litres)			10	10	5	8	15	10	15	5	5	8	15	15	15	15
Flot size (ml)			30	20	40	5	10	20	25	5	10	60	150	125	20	10
Roots (ml)			0.6	10	4	0.5	1	2	2.5	0.5	1	24	135	112.5	2	1
Items per litre			25.3	10.6	20.8	3.25	2.666667	6.9	3.2	3.6	3.4	4.875	1.6667	1.8667	1.4	0.1333
Latin name	common name	plant part														
<b>Cereals</b>																
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	-	cf.1	-	4	1	1	cf.1naked	1	-	1	1	2	4	1	-
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	TG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	R	-	-	-	-	-	-	1	-	-	-	-	-	-	1
<i>Secale cereale</i> L.	rye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum</i> sp. L.	wheat	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
<i>Triticum cf. dicoccum</i> (Schübl)	emmer wheat	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Triticum dicoccum</i> (Schübl)	emmer wheat	GB	-	-	1	-	-	-	-	1	-	cf.1	-	-	2	-
<i>Triticum dicoccum</i> (Schübl)	emmer wheat	SF	-	-	-	-	-	-	-	-	-	-	-	cf.1	-	-
<i>Triticum cf. spelta</i> L.	spelt wheat	GB	-	-	-	-	-	-	-	-	1	4	1	1	-	-
<i>Triticum cf. spelta</i> L.	spelt wheat	SF	-	-	2	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum dicoccum/spelta</i>	emmer/spelt wheat	-	-	-	5	1	1	-	1	1	-	2	2	3	1	-
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	TG	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	SF	-	1	2	1	1	-	1	-	-	-	-	-	2	-
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	GB	-	2	20	12	9	2	6	2	6	15	3	7	8	-
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	R	-	-	-	-	-	1	-	2	-	-	-	-	2	-
<i>Triticum cf. aestivum</i> L. <i>sl</i>	bread wheat	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum cf. aestivum</i> L. <i>sl</i>	bread wheat	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cereal	cereal	-	-	1	16	1	2	-	6	-	1	3	-	2	2	-
Cereal	cereal	frgs	-	-	-	-	-	-	14	6	-	-	10	-	-	1
Cereal	cereal	R	-	-	-	-	-	cf.2 lg.	-	-	-	-	-	6	-	-

Phase			MLNEO		EIA			E/MIA#1				E/MIA		E/MIA		
Feature			Pit	Pit	Pit/hearth	Posthole	post-ring	r-h ditch	Gully 5007		Pit		Pit	Ditch		
Feature			2507	2214	2013	362706	2505	5002	5007	2227	354606	362708	355116			
Cereal	cereal	CN	-	-	-	-	-	-	-	-	-	-	-	-		
Cereal	cereal	AW	-	-	-	-	-	-	-	-	-	-	-	-		
Species																
<i>Ranunculus</i> L. sp. subg <i>Ranunculus</i> arb	buttercup	-	-	-	-	-	-	1	-	-	-	-	-	-		
<i>Urtica dioica</i> L.	common nettle	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Corylus avellana</i> L.	hazel	NS	c.250+	c.100	-	-	-	56	1	3	4	1	-	3	-	-
Chenopodiaceae/Caryophyllaceae	goosefoot/campion	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
<i>Chenopodium</i> sp. L.	goosefoot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Chenopodium album</i> L.	fat hen	-	-	-	13	2	12	-	1	-	-	2	-	-	1	-
<i>Atriplex</i> sp. L.	oraches	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
<i>Montia fontana</i> subsp. <i>chondrosperma</i> (Fenzl) Walters	blinks	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
<i>Stellaria media</i> (L.) Vill.	common chickweed	-	-	-	2	1	-	1	-	-	-	-	-	-	-	-
<i>Cerastium</i> sp. L.	mouse ear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Silene</i> sp. L.	campion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polygonaceae indet.	knotweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Persicaria maculosa</i> L.	red shank	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
<i>Polygonum aviculare</i> L.	knotgrass	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<i>Fallopia convolvulus</i> (L.) Å. Löve	Black bindweed	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
<i>Rumex</i> sp. L.	docks	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-
<i>Rumex acetosella</i> L.	sheeps sorrel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Rumex</i> cf. <i>crispus</i> L.	curled dock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Malva</i> sp. L.	mallow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Viola</i> sp. L.	violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Raphanus raphanistrum</i> L.	runch	Capsule	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Aphanes arvensis</i> L.	parsley-pierts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Prunus</i> sp. L.	cherry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Crataegus monogyna</i> Jacq.	hawthorn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Vicia</i> sp. L.	vetch	-	-	-	6	-	-	-	-	-	-	-	-	-	1	-
<i>Vicia/Lathyrus</i> sp. L.	vetch/pea	-	-	-	4+1m	1	-	-	4	-	-	-	-	1	-	-
<i>Lathyrus</i> sp. L.	pea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Phase			MLNEO		EIA		E/MIA#1				E/MIA		E/MIA
Feature			Pit	Pit	Pit/hearth	Posthole	post-ring	r-h ditch	Gully 5007		Pit	Pit	Ditch
Feature			2507	2214	2013	362706	2505	5002	5007	2227	354606	362708	355116
<i>Medicago</i> sp. L.	medick	-	-	-	1	-	-	-	-	-	-	-	-
<i>Medicago/Trifolium</i> sp. L.	medick/clover	-	-	-	-	-	-	-	cf.1	-	-	-	-
<i>Trifolium</i> sp. L.	clover	-	-	-	-	-	-	-	-	-	-	-	-
<i>Linum usitatissimum</i> L.	flax	-	-	-	-	-	-	-	-	-	-	-	-
<i>Berula erecta</i> (Hudson) Coville	lesser water-parsnip	-	-	-	-	-	-	-	-	-	-	-	-
<i>Aethusa cynapium</i> L.	fool's parsley	-	-	-	-	-	-	-	-	-	-	-	-
<i>Torilis</i> sp. Adans.	hedge parsley	-	-	-	-	-	-	-	-	-	-	-	-
<i>Hyoscyamus niger</i> L.	henbane	-	-	-	-	-	-	-	-	-	-	-	-
<i>Lamium</i> sp. L.	dead nettle	-	-	-	-	-	-	-	-	-	-	-	-
<i>Veronica hederifolia</i> L.	ivy-leaved speedwell	-	-	1	-	-	-	-	-	-	-	-	-
<i>Odontites vernus</i> (Bellardi) Dumort	red bartsian	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sherardia arvensis</i> L.	field madder	-	-	-	-	-	-	-	-	-	-	-	-
<i>Galium aparine</i> L.	cleavers	-	-	-	-	-	-	1	-	-	-	-	-
<i>Sambucus nigra</i> L.	elder	-	-	1	-	1	-	-	-	1 min.	-	-	-
<i>Valerianella dentata</i> (L.) Pollich	narrow fruited corn salad	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carduus</i> L./ <i>Cirsium</i> sp. Mill.	thistle	-	-	-	-	-	-	-	-	-	-	-	-
<i>Anthemis cotula</i> L.	stinking chamomile	-	-	-	-	-	-	-	-	-	-	-	-
<i>Anthemis/Tripleurospermum/ Leucanthemum</i> sp. L./Mill.	chamomile/mayweed/ox-eyed daisy	-	-	1min	-	-	-	-	1	-	1	-	-
<i>Tripleurospermum inodorum</i> (L.) Sch. Bip.	scentless mayweed	-	-	-	-	-	-	-	-	-	-	-	-
Cyperaceae type	sedge	S	-	-	-	1	-	-	-	-	-	-	-
<i>Carex</i> sp. L.	sedge	-	-	-	-	-	-	-	-	1	-	-	-
Poaceae small indet.	grasses	-	-	-	-	-	-	-	-	-	1	-	-
Poaceae small	grasses	CN	-	-	2	-	-	1	-	-	-	-	-
Poaceae	grasses	IN	-	-	-	-	-	1	-	-	-	-	-
Poaceae	grasses	L/BCN	-	-	-	2	-	3	-	-	-	-	-
<i>Lolium</i> L. sp.	rye grass	-	-	-	-	-	-	-	-	-	-	-	-
<i>Poa</i> sp. L.	meadow grass	-	-	-	1	-	-	-	-	-	-	-	-
<i>Poa/Phleum</i> sp. L.	meadow grass/cats'-tails	-	-	2	1	-	-	1	-	1	-	-	-
Poaceae (Meliceae type)	medicks	-	-	-	-	-	-	-	-	-	-	-	-

Phase			MLNEO		EIA			E/MIA#1				E/MIA		E/MIA		
Feature			Pit	Pit	Pit/hearth	Posthole	post-ring	r-h ditch	Gully 5007		Pit		Pit	Ditch		
Feature			2507	2214	2013	362706	2505	5002	5007	2227	354606	362708	355116			
<i>Arrhenatherum elatius</i> ssp. <i>bulbosum</i> (Willd.) Hyl.	false oat grass	tuber	-	-	-	-	-	cf.1	-	-	-	-	-	-		
<i>Avena</i> sp. L.	oats	-	-	-	2	1	2	-	3	1	-	1	2	-	-	-
<i>Avena</i> sp. L.	oats	FBI	-	-	1	-	1	1	-	-	-	-	-	-	-	-
<i>Avena</i> sp. L.	oats	FBW	-	-	-	-	1	-	-	-	-	-	-	-	-	-
<i>Avena</i> sp. L.	oats	AW	-	1	3	1	2	-	-	-	1	2	-	-	-	-
<i>Avena/Bromus</i> sp. L.	oats/brome	-	-	-	2	-	1	-	-	-	-	2	1	-	-	-
<i>Phleum</i> sp. L.	cats'-tails	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
<i>Bromus</i> sp. L.	brome	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-
<i>Hordeum</i> cf. <i>murinum</i> L.	wall barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sparganium erectum</i> L.	branched bur-reed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seed Indet.		-	-	1	-	-	-	-	-	-	1	-	-	1	-	-
Seed small indet.		-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Seed large		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parenchyma material			-	-	3	-	-	1lg+9fig.	-	-	1	-	-	1	-	-
Tree Buds.			-	-	1	-	-	-	-	-	-	-	-	-	-	-
Mineralised indet.			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fish bone			-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Key**

-: seed/fruit/grain; AW: awn; CN: culm node; FBI: floret base indet.; FBW: floret base wild; GB: glume base; IN: culm internode; L/BCN: lower/basal culm internode; NS: nutshell fragment; R: rachis fragment; S: stem; SB: spikelet base; SF: spikelet fork; TG: tail grain

Table 1 (continued)

Phase			M/LIA (#1)						M/LIA (#2)				LIA #1			LIA1&2	LIA #2	e/mSax	MED	
Feature			Grave	Posthole	Ditch		E-ditch 5024		Ditch	Pit	Pit	4 Post 5015	Hearth	Hearth	4-poster-Postpit	ditch	Ditch	Pit	Hearth	
Feature			2031	2405	5006		5003	5011	2410	2008	2036	2342	2006	2006	2124	5001	5010	2437	2421	
Context			2029	2406	2210	362711	362722	2321	2412	2007	2035	2343	2003	2003	2125	2001	355204	2438	2423	
Sample			3041	3014	3015	3	12	3029	3033	3008	3045	3052	3005	3007	3043	3002	9	3056	3048	
Size (litres)			10	10	10	15	15	10	10	4	4	10	10	4	10	10	15	10	10	
Flot size (ml)			25	60	10	15	10	25	50	5	15	40	10	15	25	5	20	10	50	
Roots (ml)			3.75	18	0.5	6	3	7.5	15	1	10	6	3	1.5	1.25	1	1	3	1	
Items per litre			7	13.9	0.5	2.4667	8.4	7.8	1.9	24.3	4	12.8	23.1	166.75	4.9	5.1	1.2	0.3	28.2	
Latin name	common name	plant part																		
Cereals																				
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	-	4	5	1	5	24	2	1	12	1	32	29	117	10	-	1	-	13	
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	TG	-	-	-	-	-	-	-	3	-	-	2	-	-	-	-	-	2	
<i>Hordeum vulgare</i> L. <i>sl</i>	barley	R	-	-	-	-	-	-	-	-	-	cf.1	-	-	-	1	-	-	-	
<i>Secale cereale</i> L.	rye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
<i>Triticum</i> sp. L.	wheat	-	1	-	-	1	1	1	-	-	1	-	-	-	2	-	-	-	8	
<i>Triticum</i> cf. <i>dicoccum</i> (Schübl)	emmer wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Triticum dicoccum</i> (Schübl)	emmer wheat	GB	-	-	1	-	-	cf.2	-	2	-	-	-	1	cf.1	-	-	-	-	
<i>Triticum dicoccum</i> (Schübl)	emmer wheat	SF	1	cf.1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Triticum</i> cf. <i>spelta</i> L.	spelt wheat	GB	-	3	-	2	-	-	3	-	-	6	-	-	1	1	-	-	-	
<i>Triticum</i> cf. <i>spelta</i> L.	spelt wheat	SF	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
<i>Triticum dicoccum/spelta</i>	emmer/spelt wheat	-	4	4	-	-	3	2	2	5	cf.1	9	14+2wgb	18	-	1	-	-	-	
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	TG	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	SF	-	5	-	-	1	-	-	1	-	1	2	2	1	-	-	-	-	
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	GB	15	75	-	-	8	25	2	5	2+cf.2	14	26	19	10	26	-	-	-	
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	R	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
<i>Triticum</i> cf. <i>aestivum</i> L. <i>sl</i>	bread wheat	-	cf.1	-	-	cf.1	-	-	-	-	-	-	-	-	-	-	cf.2	-	88	
<i>Triticum</i> cf. <i>aestivum</i> L. <i>sl</i>	bread wheat	R	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	15	
Cereal	cereal	-	2	5	-	1	22	9	7	14	-	18	22	12	9	8 fg	2	1	18	
Cereal	cereal	frgs	23	12	3	10	8	-	-	6	3	-	58	180	5	8	9	2	100+	
Cereal	cereal	R	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	
Cereal	cereal	CN	2	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	

Phase			M/LIA (#1)						M/LIA (#2)				LIA #1			LIA1&2	LIA #2	e/mSax	MED
			Grave	Posthole	Ditch		E-ditch 5024		Ditch	Pit	Pit	4 Post 5015	Hearth	Hearth	4-poster-Postpit	ditch	Ditch	Pit	Hearth
Feature			2031	2405	5006		5003	5011	2410	2008	2036	2342	2006	2006	2124	5001	5010	2437	2421
Cereal	cereal	AW	-	1 min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Species																			
<i>Ranunculus</i> L. sp. subg	buttercup	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
<i>Ranunculus</i> arb		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Urtica dioica</i> L.	common nettle	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Corylus avellana</i> L.	hazel	NS	2	2	-	2	-	1	-	-	1	1	-	-	-	1	-	-	2
Chenopodiaceae/Caryophyllaceae	goosefoot/campion	-	-	-	-	-	2	-	-	2	1	1	1	-	-	-	-	-	1
<i>Chenopodium</i> sp. L.	goosefoot	-	-	2	-	1	4	-	-	3	-	-	9	2	-	-	-	-	-
<i>Chenopodium album</i> L.	fat hen	-	4	8	-	-	13	10	-	6	1	12	2	78	5	2	-	-	-
<i>Atriplex</i> sp. L.	oraches	-	2	-	-	-	2	2	-	1	-	-	8 min.	cf.19m	-	-	-	-	2
<i>Montia fontana</i> subsp.	blinks	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
<i>chondrosperma</i> (Fenzl) Walters		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Stellaria media</i> (L.) Vill.	common chickweed	-	-	-	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-
<i>Cerastium</i> sp. L.	mouse ear	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
<i>Silene</i> sp. L.	campion	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
Polygonaceae indet.	knotweed	-	-	-	-	-	1	-	-	-	-	-	1 min.	1	-	-	-	-	-
<i>Persicaria maculosa</i> L.	red shank	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Polygonum aviculare</i> L.	knotgrass	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Fallopia convolvulus</i> (L.) A. Löve	Black bindweed	-	2	-	-	-	7	1	-	1	-	1	-	2	1	-	-	-	-
<i>Rumex</i> sp. L.	docks	-	-	2	-	-	1	1	-	1	-	1	1	2+1m	-	2	-	-	1
<i>Rumex acetosella</i> L.	sheeps sorrel	-	-	-	-	-	-	1	-	-	-	-	-	cf.1	-	-	-	-	-
<i>Rumex</i> cf. <i>crispus</i> L.	curled dock	-	-	-	-	-	-	1	-	-	-	-	3	11	-	1	-	-	-
<i>Malva</i> sp. L.	mallow	-	-	-	-	-	-	-	-	1	-	1	-	4+1m	-	-	-	-	-
<i>Viola</i> sp. L.	violet	-	-	-	-	-	-	-	-	cf.1m	-	-	-	-	-	-	-	-	-
<i>Raphanus raphanistrum</i> L.	runch	Capsule	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>Aphanes arvensis</i> L.	parsley-pierts	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Prunus</i> sp. L.	cherry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
<i>Crataegus monogyna</i> Jacq.	hawthorn	-	-	1 fruit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1x thorn
<i>Vicia</i> sp. L.	vetch	-	-	-	-	-	13	2	1	14	-	-	14+1 m	9+1 m	-	-	1 p/b	-	-
<i>Vicia/Lathyrus</i> sp. L.	vetch/pea	-	2	1	-	3	-	2	1	5	-	4c+1	10	110	1	3	1	-	6

Phase			M/LIA (#1)						M/LIA (#2)				LIA #1			LIA1&2	LIA #2	e/mSax	MED
			Grave	Posthole	Ditch		E-ditch 5024		Ditch	Pit	Pit	4 Post 5015	Hearth	Hearth	4-poster-Postpit	ditch	Ditch	Pit	Hearth
Feature			2031	2405	5006		5003	5011	2410	2008	2036	2342	2006	2006	2124	5001	5010	2437	2421
<i>Lathyrus</i> sp. L.	pea	-	-	-	-	-	1	-	-	1	-	-	1	8	-	-	-	-	-
<i>Medicago</i> sp. L.	medick	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>Medicago/Trifolium</i> sp. L.	medick/clover	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<i>Trifolium</i> sp. L.	clover	-	-	-	-	-	-	1	-	-	-	1	cf.2	-	-	-	-	-	-
<i>Linum usitatissimum</i> L.	flax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	cf.2
<i>Berula erecta</i> (Hudson) Coville	lesser water-parsnip	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Aethusa cynapium</i> L.	fool's parsley	-	-	-	-	-	-	-	-	-	-	-	-	2min	-	-	-	-	-
<i>Torilis</i> sp. Adans.	hedge parsley	-	-	-	-	-	-	-	-	-	-	1	2min	3+13m	-	-	-	-	-
<i>Hyoscyamus niger</i> L.	henbane	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-
<i>Lamium</i> sp. L.	dead nettle	-	-	-	-	-	-	-	1m	-	-	1	-	-	-	-	-	-	-
<i>Veronica hederifolia</i> L.	ivy-leaved speedwell	-	-	-	-	-	-	-	-	-	-	-	-	1min	-	-	-	-	-
<i>Odontites vernus</i> (Bellardi) Dumort	red bartsian	-	-	-	-	-	-	-	1	-	-	1min	7+2m	-	-	-	-	-	-
<i>Sherardia arvensis</i> L.	field madder	-	-	-	-	-	-	1	-	-	-	-	2	2	-	1	-	-	-
<i>Galium aparine</i> L.	cleavers	-	1	-	-	1	3	1	-	1	1	-	1+1 m	2+2 m	-	-	-	-	1
<i>Sambucus nigra</i> L.	elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Valerianella dentata</i> (L.) Pollich	narrow fruited corn salad	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Carduus</i> L./ <i>Cirsium</i> sp. Mill.	thistle	-	-	-	-	-	-	-	-	-	-	-	1min	-	-	-	-	-	-
<i>Anthemis cotula</i> L.	stinking chamomile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Anthemis/Tripleurospermum/Leucanthemum</i> sp. L./Mill.	chamomile/mayweed/ ox-eyed daisy	-	1	-	-	-	-	-	-	-	-	-	1min	1	-	-	-	-	-
<i>Tripleurospermum inodorum</i> (L.) Sch. Bip.	scentless mayweed	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Cyperaceae type	sedge	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Carex</i> sp. L.	sedge	-	-	-	-	-	-	-	-	-	-	cf.1	-	-	-	-	-	-	-
Poaceae small indet.	grasses	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	1
Poaceae small	grasses	CN	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	3
Poaceae	grasses	IN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poaceae	grasses	L/BCN	1	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-
<i>Lolium</i> L. sp.	rye grass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Poa</i> sp. L.	meadow grass	-	-	-	-	-	1	-	-	-	-	-	1 min	2	-	-	-	-	-
<i>Poa/Phleum</i> sp. L.	meadow grass/cats'-tails	-	-	-	-	-	1	-	-	-	1	-	2	10	-	-	-	-	-

Phase			M/LIA (#1)						M/LIA (#2)				LIA #1			LIA1&2	LIA #2	e/mSax	MED
			Grave	Posthole	Ditch		E-ditch 5024		Ditch	Pit	Pit	4 Post 5015	Hearth	Hearth	4-poster-Postpit	ditch	Ditch	Pit	Hearth
Feature			2031	2405	5006		5003	5011	2410	2008	2036	2342	2006	2006	2124	5001	5010	2437	2421
Poaceae (Meliceae type)	medicks	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<i>Arrhenatherum elatius</i> ssp. <i>bulbosum</i> (Willd.) Hyl.	false oat grass	tuber	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
<i>Avena</i> sp. L.	oats	-	-	3	-	8	5	4	-	5	-	8	3	7	-	-	-	-	12
<i>Avena</i> sp. L.	oats	FBI	-	1	-	-	1	-	-	-	1	2	-	-	-	-	-	-	-
<i>Avena</i> sp. L.	oats	FBW	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
<i>Avena</i> sp. L.	oats	AW	-	1	-	-	-	3	-	2	-	1	1	2	-	-	-	-	-
<i>Avena/Bromus</i> sp. L.	oats/brome	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
<i>Phleum</i> sp. L.	cats'-tails	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Bromus</i> sp. L.	brome	-	1	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>Hordeum</i> cf. <i>murinum</i> L.	wall barley	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<i>Sparganium erectum</i> L.	branched bur-reed	-	-	-	-	-	-	-	-	-	-	-	-	cf.1	-	-	-	-	-
Seed Indet.		-	-	-	-	-	-	1	-	1	-	1	4 min	7 min	-	-	-	-	-
Seed small indet.		-	-	1	-	-	1	-	1	1	-	2	1	-	-	-	-	-	-
Seed large		-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Parenchyma material			2	-	-	1cf. p/b	-	-	-	-	-	-	-	-	-	1	-	-	2(1?p/b)
Tree Buds.			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mineralised indet.			-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Fish bone			-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-

**Key**

-: seed/fruit/grain; AW: awn; CN: culm node; FBI: floret base indet.; FBW: floret base wild; GB: glume base; IN: culm internode; L/BCN: lower/basal culm internode; NS: nutshell fragment; R: rachis fragment; S: stem; SB: spikelet base; SF: spikelet fork; TG: tail grain