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EVIDENCE OF AN EARLY BRONZE AGE FIELD SYSTEM AND SPELT WHEAT GROWING, TOGETHER WITH AN ANGLO-SAXON SUNKEN FEATURED BUILDING, AT MONKTON ROAD, MINSTER IN THANET

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Archaeological investigations carried out by Wessex Archaeology (WA) between February and April 2009 at Monkton Road, Minster, uncovered a series of prehistoric field boundary ditches, part of which is radiocarbon dated to the end of the Early Bronze Age (1900-1700 cal BC), a small number of prehistoric pits, an Anglo-Saxon sunken featured building (SFB) and a possible former tributary channel of the Wantsum (**Fig. 1**). The work was commissioned in advance of a residential development on land at Monkton Road, Minster (NGR 630580 164627) (WA 2009).

The site comprised two irregularly shaped plots, Areas 1 and 2 and is located south of the ridge of higher ground that traverses Thanet from east to west and is close to the northern extent of the former Wantsum Channel (Fig. 1). The underlying geology is Head Brickearth capping Upper Chalk (British Geological Survey, Sheet 274, Ramsgate) at 11.17m AOD.

Palaeochannel

A silted up palaeochannel [1050] was investigated in Area 2 (Fig. 1), which had previously been recorded during evaluation as a large ditch (Archaeology South-East 2007). The feature was machine excavated to a depth of 1-1.20m and its edge traced for 20.20m, extending from the southern side of the trench and continuing beyond the eastern extent. A hand dug slot reached a depth of 0.38m and three machine dug sondages reached a depth of 0.65m before the feature flooded; the sondages were then hand-augered for a further 0.40-0.60m. The interventions revealed a

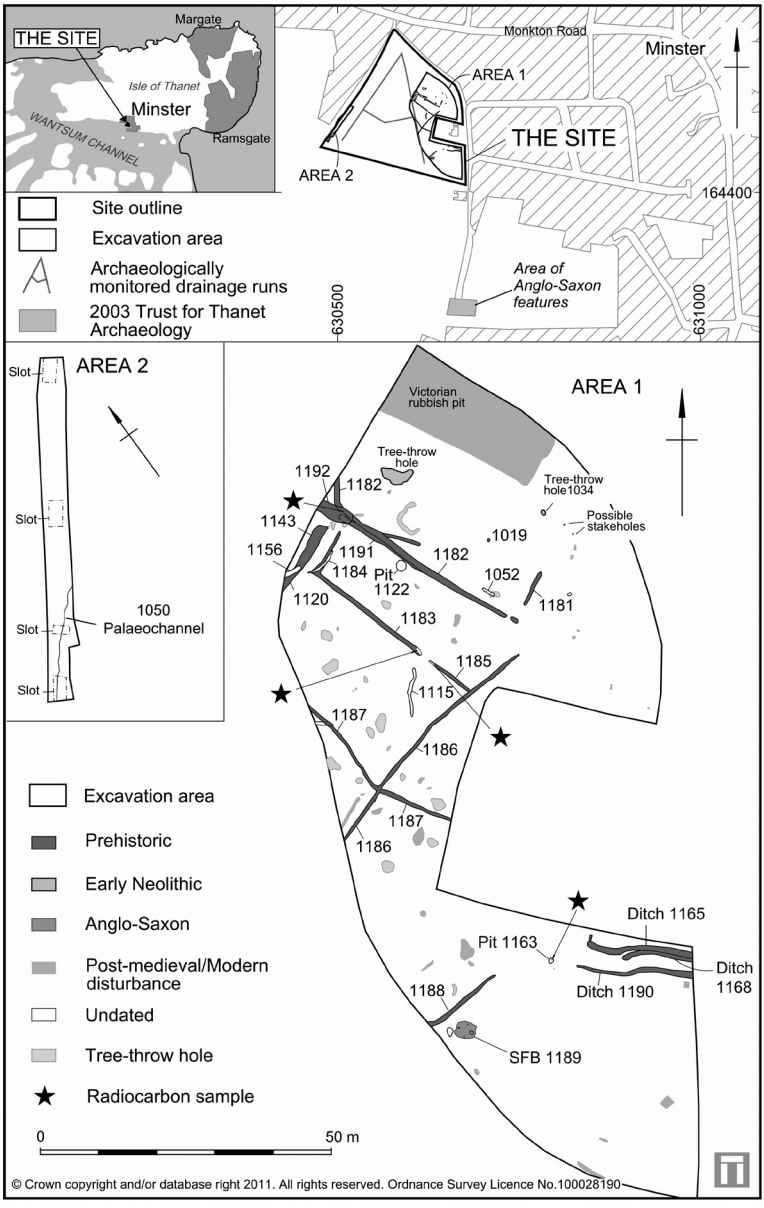

Fig. 1 Location of the excavation area and detail of the excavated features in Areas 1 and 2. Inset: location of the site on the edge of the former Island of Thanet near to the Wantsum Channel (after Perkins 2007).

single fill which contained struck flint, animal bone and two sherds of flint-tempered prehistoric pottery. A very low-level of charred plant remains was recovered from the samples which may indicate a later-prehistoric date for the channel; however, there is a high probability that they are intrusive.

The size of the feature suggests a silted-up watercourse of some considerable size, although the fact that only one edge was revealed limits the conclusions which can be drawn. It is likely to be related to the Wantsum channel, which separated the Isle of Thanet from mainland Kent to greater or lesser degrees throughout prehistory and into historic times (Perkins 2007; Moody 2008). Its exact course and extent at various times has been a matter of debate; there is a paucity of historic sources, and within the area of Minster, the historic extent of the Wantsum is indicated to a certain extent by alluvial deposits (BGS Sheet 274), which reach their northern limit 360m south of the excavation. The north-east to south-west course of the excavated palaeochannel could suggest it is a tributary of the main Wantsum Channel or its actual edge. The mapping of the alluvial deposits is not necessarily exact and likely to have been diffuse, variable and shallow (Perkins 2007 and fig. 1). Perkins' map of the channel's maximum extent would reach beyond the palaeochannel (see Fig. 1 *inset*).

Field system, pits and tree-throw holes

Excavation in Area 1, not far from the edge of the palaeochannel, revealed a series of parallel and intersecting ditches [1165, 1181-88, 1191] co-axially aligned north-west to south-east and north-east to south-west that form at least six or more fields (Fig. 1). The most complete field was rectilinear in plan, measuring *c*.35 x 15m with entrances on the south-western edge and the north-eastern corner and possibly the eastern corner. The ditches [1181-8] typically measured less than 1.00m wide and 0.50m deep. Ditch 1182 was a recut or realignment of an earlier ditch [1191]. Both ditches were cut by ditch 1192, a much larger feature on the same alignment that measured 2.67m wide and 0.91m deep. Its fills contained burnt flint, struck flint and fired clay but no pottery. Its greater depth and size suggests that it may have formed part of a stock or defensive enclosure during a later phase of activity.

A number of environmental samples from these features (along with pit 1163 [1164] yielded relatively rich charred deposits. These included charred grains of barley (*Hordeum vulgare*) and grains and glume bases of hulled wheat, from which both emmer (*Triticum dicoccum*) and spelt (*Triticum spelta*) could be identified. There were also a few barley rachis fragments within ditch group 1185. Also present within the ditches were a few fragments of Celtic bean (*Vicia faba*), while a large number of hazelnut (*Corylus avellana*) shell fragments were present in pit 1163.

The more numerous presence of glumes rather than grain in these

TABLE 1: RADIOCARBON DETERMINATIONS

Feature	Cxt	Charred grain (except where noted)	Lab. Ref.	$\delta^{13}C$ ‰	Date BP	calibration BC 2 sig. 95.4%
Pit 1163	1164	*Triticum* cf. *dicoccum*	SUERC-32250	-22.0	3465±30	1890-1690
Ditch Grp 1185 seg 1103	1104	*Triticum cf. dicoccum/ spelta*	SUERC-32251	-23.0	3530±30	1950-1750
Ditch Grp 1182 seg 1154	1155	*Triticum spelta* (glume bases)	SUERC-32886	-25.0	3470±30	1890-1690
Ditch Grp 1183 seg 1105	1106	*Triticum cf. dicoccum/ spelta*	SUERC-32269	-23.8	3420±30	1880-1630

Dates were calibrated using OxCal 4.1.7 (Bronk-Ramsey 1995; 2001), the IntCal09 atmospheric curve (Reimer *et al*. 2009) and are quoted in the form recommended by Mook (1986), with the end points rounded outward to 10 year.

samples is indicative of the charring of cereal processing waste. As such they are intrinsically related to domestic activities, and provide, along with the radiocarbon dating, perhaps the clearest evidence on the site for settlement itself *per se* at an Early Bronze Age date.

Single grains or glumes from recognised *in situ* dumps of material (i.e. same age as the context and not likely to be reworked) were selected for radiocarbon dating from four contexts [pit 1163 and ditches 1182-3 and 1185]; **Table 1**: SUERC-32250-1, 32269 and 32886). All four of the calibrated dates fall within the final centuries (1900-1700 cal BC) of the Early Bronze Age (**Fig. 2**) and provide a reasonable indication of when the ditches were open. (See further discussion below.)

The three modelled dates (Fig. 2) indicate that the first ditch infilling (at 95% probability) could have occurred during *1910-1750 cal* BC *(1880-1770 cal* BC *at 68%)*, with the latest event, probably associated with the recutting of the ditch 1182, occurring between *1860-1690 cal* BC *(1870-1680 cal* BC *at 68%)*. While these dates provide evidence for both field-systems and settlement activity in the Early Bronze Age, it should be noted that Late Bronze Age pottery from ditches on the same alignment might provide evidence for, if not settlement activity itself, then at least the reuse of the field-system in the following centuries.

The location of ditches 1120, 1143 and 1156 suggests that they were unconnected to the field system but may have been associated with the larger ditch 1192, perhaps forming another side of a possible enclosure. In the southern part of Area 1 and extending from its eastern edge, three

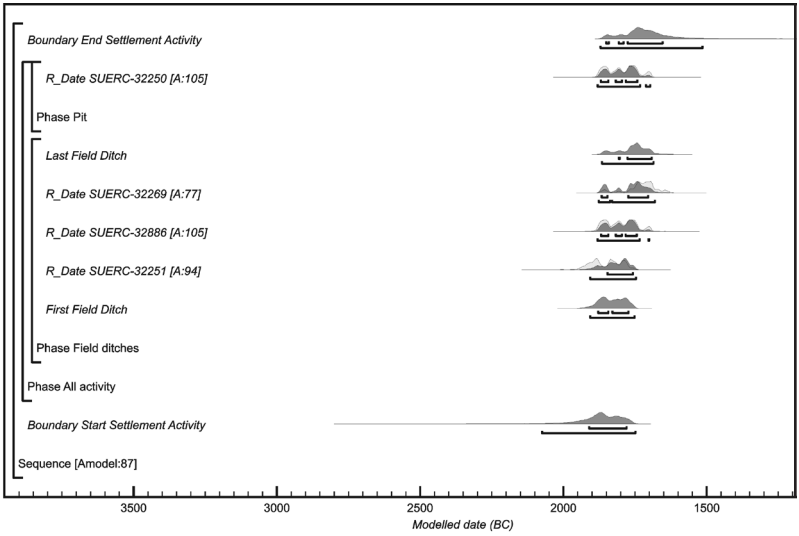

Fig. 2 Radiocarbon dating. Probability distributions of the results listed in Table 1. For each date two distributions are plotted: one in outline, which is the result of simple radiocarbon calibration, and a solid one that is based on the chronological model. The square brackets down the left side along with the OxCal keywords define the overall model.

sinuous ditches, 1190, 1165 and 1168, were aligned east to west on a slightly different axis to the field system. They could have formed part of a separate field system, a double-ditched boundary or droveway. The relationship between ditches 1052 and 1115 on either side of the rectilinear field enclosure that is described above is uncertain. Both are tentatively assigned a prehistoric date (1052 contained one struck flint, no finds were recovered from 1115). The samples from these features contained very little charred material and contrary to the evidence from the field system described above, in which there was clear evidence for settlement, there was no evidence for such domestic occupation from these features.

Other probable prehistoric features recorded in Area 1 comprised two pits [1122 and 1163] and two tree-throw holes. Pit 1122, within the rectilinear field, had a single fill that contained burnt and struck flint, including a Mesolithic backed bladelet, as well as indeterminate grain fragments. Pit 1163, in the southern part of Area 1, contained struck and burnt flint and charred plant remains, including hazelnut shell, hulled wheat, barley grain fragments, emmer and spelt glume fragments. A radiocarbon measurement on a single charred grain of emmer wheat (*Triticum dicoccum*) returned a date of 1890-1690 cal BC (95% SUERC-32250).

A shallow, sub-circular hearth/oven [1145] of uncertain date was

recorded immediately to the west of an Anglo-Saxon SFB (see below). It appeared to have a pronounced lip on the southern edge, tentatively identified as a rudimentary flue. It was 1.50m long, 0.96m wide and 0.25m deep and had three fills; the two lower fills contained flecks and fragments of charcoal. An environmental sample taken from the basal fill contained hulled wheat, barley grain fragments and glume fragments. No other dating evidence was recovered, although the character of the environmental remains indicated a possible prehistoric date.

The tree-throw holes produced struck flint as well as three small sherds of flint-tempered prehistoric pottery (one from 1034 and two from 1019), of which the sherd from 1034 could be of Early Neolithic date.

A number of the ditch fills contained burnt flint, struck flint and small quantities of prehistoric pottery. The pottery from the ditches (44 sherds, 106g) is in markedly poor condition; sherds are small, friable and generally heavily abraded. Mean sherd weight is 2.4g, implying that much if not all of this material was re-deposited in the ditch fills. Fabric types are mainly flint-tempered, and this includes a wide range of density and size of flint inclusions. Some grog-tempered wares are also present. The dating of this small group has proved very problematic, due to the small size and poor condition of the sherds, combined with the known lengthy currency of all the ware types during the prehistoric period in Kent. Flint-tempered wares, for example, were used from the Neolithic period through to the Late Iron Age. For these reasons, it has not been possible to assign a closer date range to most of the prehistoric sherds. However, one impressed decorated rim sherd [ditch 1165] is of Early Neolithic form, while five further sherds (two from ditch 1168, one from ditch 1183, and two from 1190) have been tentatively dated as Early Neolithic on grounds of fabric similarity. In addition, two very small, joining sherds from ditch 1182 are in a soft, heavily abraded, grog-tempered fabric, and can be identified as Beaker.

Five hundred and forty pieces of worked flint, mostly poor quality nodular material, were recovered from 28 features across the site (a further 129 pieces were found unstratified).The density of worked flint is relatively low and most comprised derived material from the prehistoric ditches (403 pieces). A limited number of flakes and well made scrapers confirm the broad Neolithic/Early Bronze Age date range, indicated by the earlier pottery.

Sunken Featured Building

An Anglo-Saxon sunken featured building (SFB) was recorded in the southern half of Area 1 (Fig. 1). It was sub-rectangular in plan and measured 3.50m long, 2.80m wide and 0.25m deep. The feature was aligned west-north-west to east-south-east. There were four post-holes within the building, located at approximately the midway point of each side. The post-

holes were roughly circular with steep, almost vertical sides and varied in size and depth. The largest post-hole, measured 0.60m in diameter and 0.75m deep, the smallest, measured 0.15m in diameter with a depth of 0.38m. The fills contained charcoal flecks, very small fragments of fired clay, animal bone fragments and shell. Two small sherds of Romano-British pottery were retrieved from the lower fill of one post-hole. One post-hole appeared to be re-used, with a slot being dug to facilitate the insertion of a fresh post.

The SFB had a single fill that contained charcoal, fired clay, animal bone, daub, shell and pottery as well as four iron objects, two nails, a small knife and a hooked object, possibly a latch lifter, pieces of bone comb, a fragment of glass and fragments of an annular loomweight. Environmental samples from the fill of the SFB contained fragments of free-threshing wheat which is consistent with Anglo-Saxon SFBs found elsewhere on Thanet. Analysis of the animal bone and shellfish assemblages shows that the deliberate backfill of the SFB contained food waste. This does not, however, necessarily mean that the SFB itself was used for domestic occupation purposes. In the majority of SFBs the fills are the result of later refuse dumping and not an accumulation of usage/occupation debris.

The remains of SFBs vary considerably in size, shape and construction and there is continuing debate concerning their possible functions. The dimensions of the SFB place this feature at the smaller end of the size range for SFBs (Tipper 2004, 66). The presence of four post-holes within the building is somewhat unusual as most SFBs excavated on Thanet contained no more than two post-holes (Moody 2008 170; Tipper 2004, 68). Tipper suggests that trying to assign a rigid function to buildings of type is not necessarily an accurate representation of the flexible nature of domestic and agricultural activities at this time. Weaving, dwelling, food preparation, storage and/or other small-scale industrial or agricultural tasks are all possible activities.

As this is currently an isolated feature, with no evidence for structures which can be more convincingly interpreted as dwellings, the function of the SFB cannot be reliably identified or indeed the scale and character of the associated settlement. Traces of Anglo-Saxon settlement were recorded just to the south of the excavation at King George's Field (Boast 2003). Little settlement evidence of this date is recorded locally, although as Boast notes (2003, 6), Minster was an important ecclesiastical centre at this time.

Anglo-Saxon Pottery *by Lorraine Mepham*

The pottery recovered from SFB 1189 comprises 54 sherds (539g), all but one in sandy fabrics of a varying degree of coarseness (the remaining sherd is in a calcareous fabric). There are several diagnostic pieces amongst this small group – the profile of a slightly convex flared bowl with a slightly

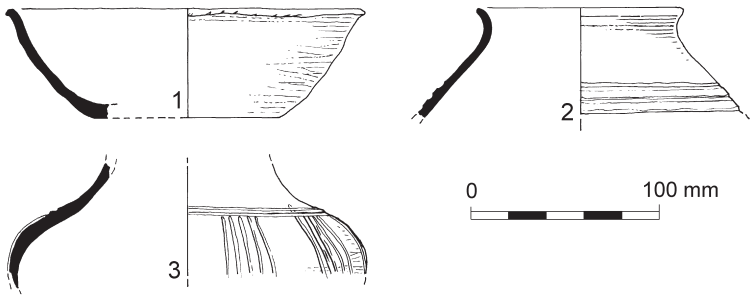

Fig. 3 Anglo-Saxon pottery from SFB 1189.

everted rim (**Fig. 3**, 1); the everted rim from a jar with horizontal tooled decoration on the shoulder (Fig. 3, 2); and three sherds, probably all from the same vessel (two sherds join), with a rounded profile, carrying tooled linear decoration around the girth (Fig. 3, 3). Three further small rims are from vessels of unknown form. The bowl and jar are both burnished, as were several other body sherds. The vessel forms and decoration are not particularly chronologically distinctive within a broad early to middle Anglo-Saxon date range, but some indication of date is given by the absence of organic-tempered fabrics. Sandy and calcareous (chalk-tempered) fabrics are paralleled amongst the early/middle Anglo-Saxon assemblage from Canterbury, and are characteristic of the earlier part of that date range, organic-tempered fabrics not constituting a significant proportion until the later sixth century (Macpherson-Grant 1995). This small group, then, is likely to fall within the early Saxon period, within the range of fifth to early sixth century, supported by the presence of the annular loomweight, a typical early Saxon form.

Discussion of environmental remains and the significance of their date *by Alistair J. Barclay and Chris J. Stevens*

The radiocarbon dates provide not only evidence for one of the earliest well-dated field systems within southern England, but also the earliest date for the introduction of spelt wheat (Table 1) and quite possibly Celtic bean. Other Early/Middle Bronze Age field systems have been dated in Thanet at Westward Cross (Gollop 2004; Wessex Archaeology 2006), to 1620-1450 cal BC (3265±30 BP; NZA-26511). Even earlier field systems are suggested for Fengate, Cambridgeshire, dating to 2200-1800 cal BC; however, these dates are from a hedgewood assemblage from a pit and their relationship to the actual field system itself is unclear (Evans 2009, 256).

Spelt associated with barley from Westwood Cross, Thanet (*ibid*.), is associated with a slightly later date of 1500-1100 cal BC (3149±35 BP; NZ-26512 date obtained on associated charred barley grains). From Princes Road, Dartford (Hutchings 2003, 47; Pelling 2003, 71: radiocarbon laboratory references and sample details not cited) there are dates for a deposit containing spelt of 1740-1410 cal BC (3240±60 BP) and 1670-1420 cal BC (3150±60 BP). Unfortunately it is not stated in the report if this date relates to grains, glumes or charcoal. However, Pelling cites extremely similar dates from Cambridgeshire and Oxfordshire.

The dates for spelt glumes from Monkton Road at 1890 to 1690 cal BC and for the field systems at 1910-1750 cal BC provide well-dated evidence for both, at least a century or more prior to previously known examples. However, further dating of other field systems and spelt remains on Thanet (see Moody 2008, 99) and in southern England generally is required before the significance of the Monkton Road results can be evaluated. Certainly the geographical position of Thanet as a gateway to mainland Europe is intriguing in this respect.

The evidence from Monkton provides a clear indication that spelt wheat, probably along with Celtic bean, arrived in southern England, possibly with the idea of field systems, at the end of the Early Bronze Age. This is a time when the first post-built roundhouses appear and when Biconical Urn, a type of pottery (occasionally flint-tempered) is found in late round barrows and in occupation deposits in southern England. Interestingly this type of pottery occurs on both sides of the Channel (Cruse 2007, 169 and fig. 3; Tomalin 1988).

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The fieldwork was directed by Jon Martin and supervised by Chloe Hunnisett and Cornelius Barton with the assistance of Matthew Astill, Katharine Barber, Nicolas Bigourdan, Darryl Freer, Kenneth Lymer, John Powell and Tom Wells. This report incorporates information on the pottery, worked flint and other finds provided by Lorraine Mepham, Alistair Barclay and Phil Harding. Chris J. Stevens and Sarah F. Wyles analysed the charred plant remains and coordinated the radiocarbon dating. The illustrations are prepared by E.S. James. The project was managed on behalf of Wessex Archaeology by Caroline Budd. This report was written by Jon Martin and edited by Jörn Schuster and Alistair J. Barclay with

research regarding the Wantsum channel by Chloe Hunnisett. The project archive is currently held by Wessex Archaeology under the project code 70960; it will be deposited in due course with an appropriate museum in the local area.

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