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BRONZE AGE FUNERARY AND LATER PREHISTORIC ACTIVITY AT BADMINSTON FARM, FAWLEY, HAMPSHIRE

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ABSTRACT

Archaeological excavations were undertaken by Southern Archaeological Services Ltd. between 1999 and 2010 at Badminston Farm, Fawley, on the eastern edge of the New Forest, adjacent to Southampton Water. The excavations identified evidence of near-continuous human activity from the early prehistoric period to the present day. Mesolithic activity was followed by Early Bronze Age pits, containing 'placed' flint assemblages. Evidence of Bronze Age funerary activity included deflated barrows/ring ditches, and associated cremations. Late Bronze Age ceramics were absent but a hoard of 68 Armorican-type socketed axes may have been a votive offering marking the 'ancestral' barrow which would have been visible here. Other Bronze Age evidence included two burnt mounds and an ill-defined structure possibly associated with weaving. Iron Age activity was represented by a number of pits containing domestic pottery, while Late Iron Age and Romano-British ditches may have formed part of an enclosure. A significant assemblage of non-local worked stone attests to long distance exchange, and the possibility of a nearby farmstead. Medieval activity was represented by pits, ditches and stakeholes, with some evidence of an enclosure or structure associated with grain drying. Later land divisions and a WWII radio communication station dominated more recent use of the site.

INTRODUCTION

In 2000, Southern Archaeological Services Ltd. were appointed to undertake an archaeological evaluation by Oxford Archaeological Associates Limited (hereafter OAA) acting on behalf of RMC Aggregates (subsequently CEMEX), to fulfil planning consent prior to the extraction of minerals at Badminston Farm, Fawley, Hampshire, centred at SU 4670 0220 (Fig. 1). A previous desktop assessment and geophysical survey undertaken by OAA had identified significant archaeological potential for the site, and a field evaluation produced evidence of multi-period activity. As a result, OAA commissioned SAS on behalf of RMC Aggregates to undertake a watching brief on all topsoil and subsoil stripping in advance of quarrying. Fieldwork was undertaken on an annual basis from 2000 to 2010 apart from 2005 when no minerals were quarried. The subsequent analysis and publication of the excavation archive were managed by Pre-Construct Archaeology.

SITE LOCATION AND DESCRIPTION

The site comprises farmland and heathland covering approximately 60ha in area situated on either side of the B3053 (Fawley to Calshot) road on the western edge of Southampton Water. It extends from Badminston Farm to the north, Ower Farm to the south, Badminston Common to the west and Fawley Power Station to the east (Fig. 1). The site is for the most part relatively flat (just below 19m aOD) except to the east of the B3053 road, where the land falls gently for 200m before dropping more steeply towards its eastern boundary, which lies at a height of 3m aOD. The area which

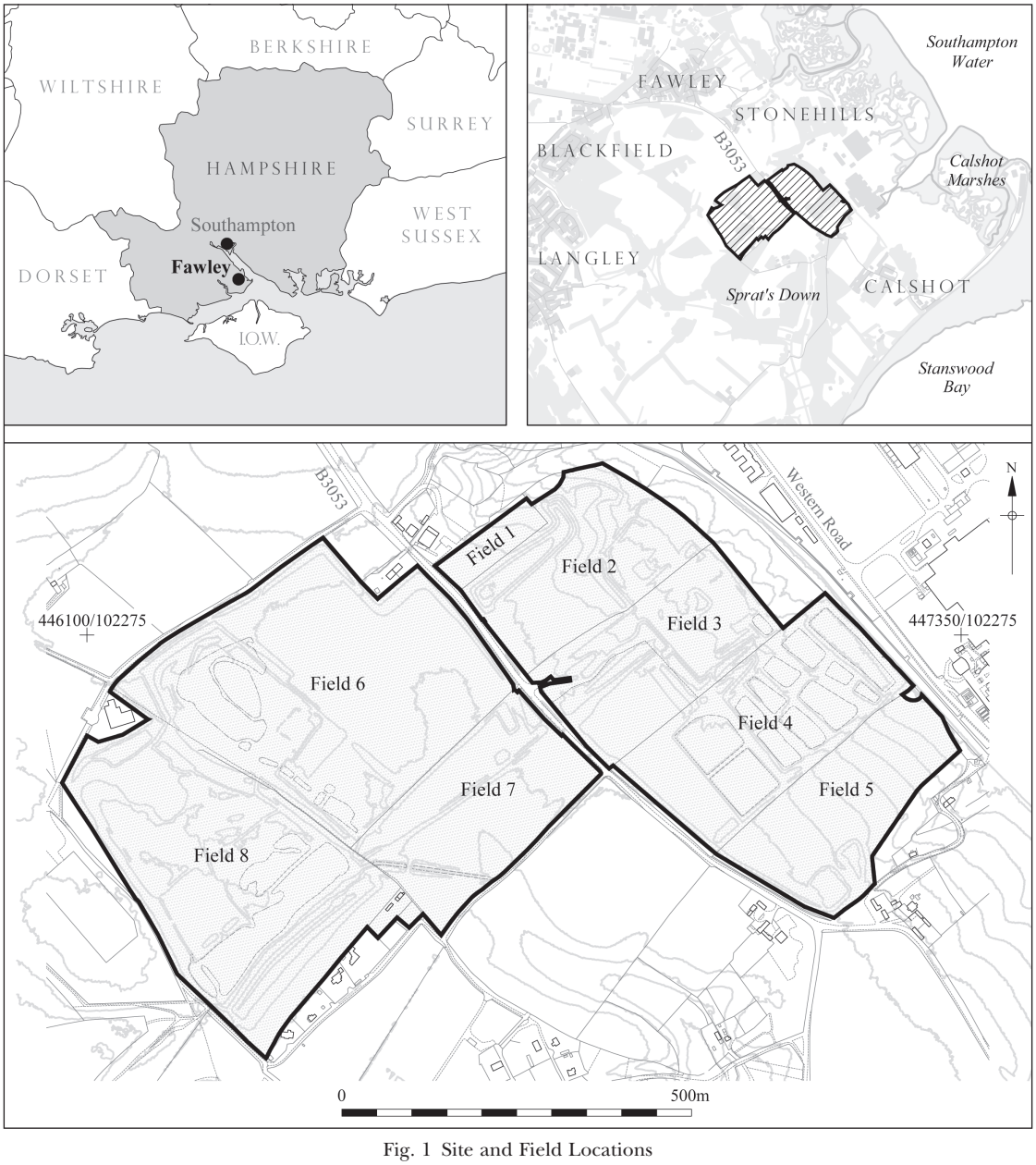

Fig. 1 Site and Field Locations

was investigated was spatially divided into seven fields as defined for the gravel extraction procedures, which were numbered two to eight (Fig. 1).

The geology, for the most part, comprises superficial River Terrace Deposits (sands and gravels with lenses of silt, clay or peat) formed between 2.588 mya and the present (BGS 1974, Map 330) overlying bedrock deposits of sand, silt and clay of the Becton and Chama Sand Formations, with the exception of an area along the extreme eastern edge of the site where

superficial deposits are absent, exposing the bedrock Becton and Charma sand formations formed between 41.2 and 37.8 mya (*ibid.*).

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

Prehistoric

Despite the site's favourable location close to the shoreline of Southampton Water, evidence of prehistoric human activity in Fawley parish is scant. Thousands of Palaeolithic worked flints have been recovered from the river terrace gravels of the New Forest, particularly from the Solent River and its tributaries (Smith 1999) and a single Palaeolithic hand axe was found at Fawley near the shore by the present Cadland House. Mesolithic activity is similarly scarce, represented solely by two *tranchet* axes. During excavations for the construction of Fawley power station, construction workers supposedly encountered two bog bodies in a layer of Neolithic peat, although their existence has never been verified (http://www.southampton.ac.uk/~imw/Fawley-Power-Station-geology.htm). Bronze Age activity in the New Forest is represented by numerous round barrows (notably at Beaulieu Heath to the north-west) and burnt mounds (Pasmore & Pallister 1967, 14–19; Piggott 1943; Smith 1999, 45–46, 52). A barrow (SU40SE/31) and linear earthworks (SU40SE/33) are believed to have existed at Field's Heath 1km to the west and a further round barrow (SU40SE/32) at Badminston Plantation some 0.5km to the south. An unspecified number of Bronze Age gold-plated penannular copper alloy rings are reputed to come from the site itself, as are an Iron Age cloak pin and gold stater (UID:30186).

Romano-British

The promontory at Stone Point on the Solent river, approximately 3.5km to the south-west, has historically been identified as a Roman haven situated at the end of a Roman road that runs from Applemore Hill to Lepe (Clarke 2003). A similar settlement may have existed at Ower Farm at the south-east corner of the site (Currie 2002) based on the detection of Iron Age and Roman coins nearby.

Anglo-Saxon

The 'Ower' placename in Ower Farm, bounding the south-eastern edge of the site, has its origins in Old English '*Ōra*', and has long held associations with a possible landing place of the Jutish king Cerdic based on the Anglo-Saxon chronicle's reference to Cerdic's *Ōra*. As yet no evidence of Anglo-Saxon activity has been found on or in the surrounding area.

Medieval

At the time of the Domesday Survey in 1086, the manor of Fawley formed part of the holdings of the Bishop of Winchester. The placename Fawley is first recorded in Domesday Book as *Falegia*, *Falelei*, meaning either 'fallow (coloured) wood clearing' or 'clearing with land broken in for arable' (Coates 1989). Badminston Farm is first referred to in the Badminston Hundreds from 1296 as *Brihtmanenstūn* meaning Brihtmann's Farm (*ibid.*). Historic records suggest that the site, and indeed its wider environs, were sparsely populated during the medieval period although there may have been farms at Badminston and Ower (Currie 2002, 36). Medieval metalwork finds recovered include a lead pilgrim's badge, a hammered silver penny of Edward III and a 12th/13th century strap end buckle fragment, two silver pennies of King John, a silver hammered penny of Edward III and a 13th/14th century French jetton, all of which could represent casual losses. By the 14th century the manor of Cadland was one of the manors of the Premonstratensian Titchfield Abbey (Watts 1958, 31) until its dissolution when it passed through a number of hands, by 1772 being acquired by Scottish banker Robert Drummond.

Post-medieval

A post-medieval salting destroyed by the construction of Fawley power station in the 1960s is shown on Taylor's map of 1759 and the remains of some of the ponds were still visible in 1954. Salt-working has a long history

dating back to the Prehistoric period, and it is likely there would have been saltings along the littoral area of the site and along Southampton Water. The purchase of the Cadland Estate by Robert Drummond in 1772 appears to mark the advent of significant alteration of the medieval landscape of small, dispersed farms and hamlets characteristic of much of the Hampshire Basin (Currie 2002) by the steady acquisition and amalgamation into larger, more economical land divisions. By 1814, the Eling Enclosure Award Map shows a clear partition of the site into plots occupying the northwest area of the estate, encompassing an area occupied by fields 2, 6, 7 and 8. The land parcels were owned by Andrew Berkeley Drummond and William Arnold. The south-east apportionment, represented by fields 3, 4 and 5, was owned by George Lambert, 8th Earl of Cavan. His son, Frederick Lambert, 9th Earl of Cavan, was born in Ower Cottage in 1815. The garage at the end of Badminston Lane once formed part of a World War II MOD radio communication station that extended eastwards into Field 8. The station once contained a number of radio masts and the whole site was enclosed by a steel palisade fence.

EXCAVATION RESULTS

Upper Palaeolithic to Late Neolithic/Early Bronze Age (12,000–1600 BC)

The earliest dateable evidence from the site amounted to a single large recorticated worked flint blade of possible Palaeolithic date found overlying natural deposits in Field 4. Carbon dating of charcoal from a pit, located amongst a cluster of undated features in Field 7, returned an early post-glacial Mesolithic C14 date (8712–8544 cal BC; SUERC-74042; GU44471) (Fig. 2). Fifteen Late Mesolithic/Early Neolithic struck flakes were recovered residually from the fills of five features and eight from unstratified contexts. The earliest in-situ activity on the site originated in the Early Bronze Age period in the form of three large sub-circular features located in fields 3, 4 and 7. All three pits measured broadly 1m–1.3m in diameter. Pits [5024] and [5241] had U-shaped profiles, while pit [5338] had vertical sides and a flat base (Fig. 2). None attained a depth greater than 0.36m and they had probably been truncated by farming associated activities. Pits [5241] and [5338] produced significant assemblages of flint working debris and the nature of their deposition suggests the pits present evidence of the Late Neolithic/Early Bronze Age 'Neolithic Pit' phenomenon (Fig. 2; Anderson-Whymark & Thomas 2012). Pit [5338], from its primary fill produced the largest assemblage, comprising 161 pieces of worked flint and knapping waste and 39 sherds of Early Bronze Age pottery in a grog tempered fabric with platy voids resulting from decalcification of shell inclusions. A charcoal-rich secondary fill contained ten sherds of Late Neolithic/Early Bronze Age pottery, in a grog tempered fabric of a Beaker tradition and six pieces of worked flint. Pit [5241] contained two fills, the primary one produced two sherds of Late Neolithic/Early Bronze Age pottery and the upper fill contained fourteen sherds of Late Neolithic/Early Bronze Age pottery and an assemblage of 30 worked flints. Pit [5024] held a single fill with charcoal and burnt flint inclusions and two sherds of Late Neolithic/Early Bronze Age pottery but no worked flint (Fig. 2).

Neolithic pottery and worked flint were also present residually in layers and features across Fields 3, 4, 7 & 8. The earliest Neolithic artefact recovered was a sherd of Middle Neolithic Peterborough Ware from a subsoil in Field 3.

Bronze Age (2,400 BC–700 BC)

Burnt mounds

Two burnt mounds were exposed alongside two coombes by the eastern coastal margins of the site near some natural springs (Figs 3–5). Burnt mound A comprised an amorphous-shaped spread of burnt flint occupying an area approximately 16m × 16m (Figs 3 & 4). A single small sherd of prehistoric pottery came from the burnt flint spread. Removal of the burnt flint revealed a number of shallow pits broadly 2m in diameter and amorphous-shaped features cut into the natural gravel, filled with further burnt flint. Many of the features

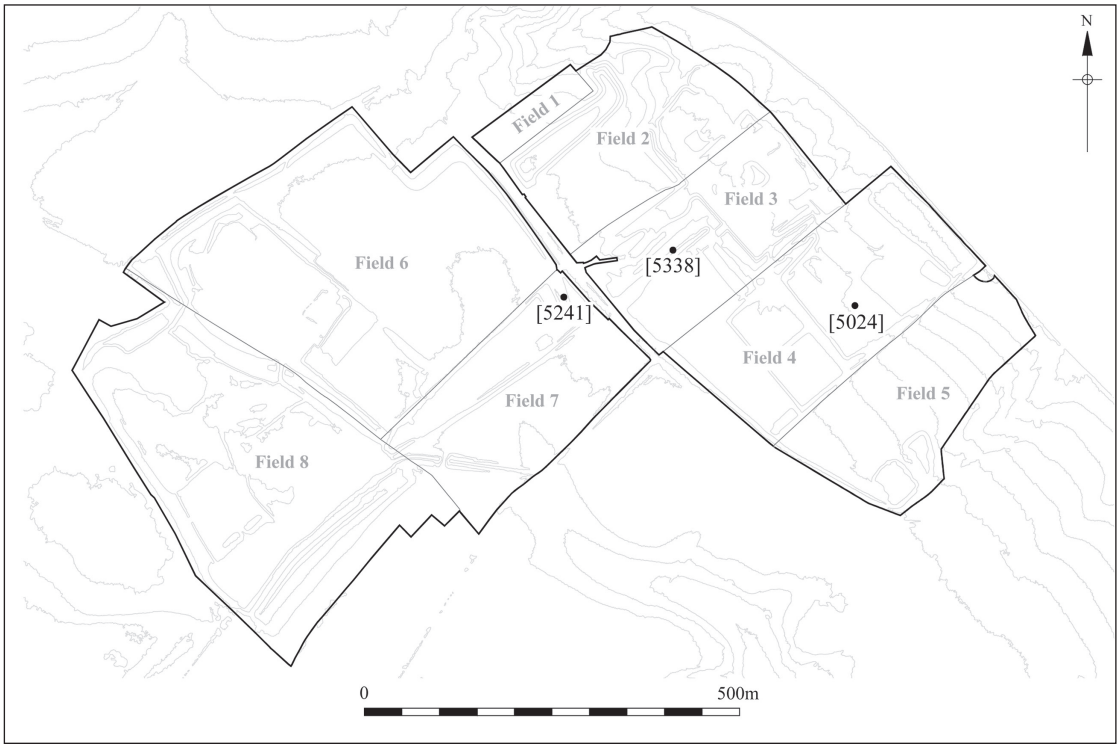

Fig. 2 Late Mesolithic to Late Neolithic / Early Bronze Age features in Fields 3, 4 and 7

intercut and the similarity in the composition of their fills made it difficult to ascertain the order in which they had been dug. One sub-rectangular feature may have formed the cut for a trough commonly associated with burnt mounds but no evidence of wooden planking lining the feature was found. Closely grouped alignments of stakeholes intercutting small pits, postholes and short linear features were recorded in the corner of one area of the burnt mound but these lacked a clear distribution pattern. Two sherds of Middle Bronze Age pottery were recovered from the fill of one of the pits and a fragment of saddle quern stone from another.

Burnt mound B measured up to 18m × 8m and was also amorphous in shape (Figs 3 & 5). The burnt flint overlay a similar array of features to those encountered under Burnt Mound A, comprising large depressions, posthole-sized features and alignments of stakeholes. There was some intercutting of features and some of the features were clearly linked but no clear spatial pattern was discernible. Six sherds of Early Bronze Age pottery were recovered from a nearby pit suggesting a date for its initial use.

Similar flint-rich features were also present to the west of both mounds comprising both large and small amorphous and sub-circular elements. Part of a shallow feature excavated at the head of the northernmost coombe in Field 2 contained abundant burnt flint and charcoal which suggests a further burnt mound may be present there, beyond the limits of excavation.

Geomorphological studies and detailed dating of nine burnt mound features in Scotland and Northumberland has demonstrated that these features here were used cyclically over periods of a little over a century (Gardner 2019). This suggests a multi-generational, perhaps seasonal role of such features for local communities.

Where the land levelled out, a scatter of features was encountered in Fields 3 and 7 (Fig. 3). As well as the Mesolithic and Neolithic

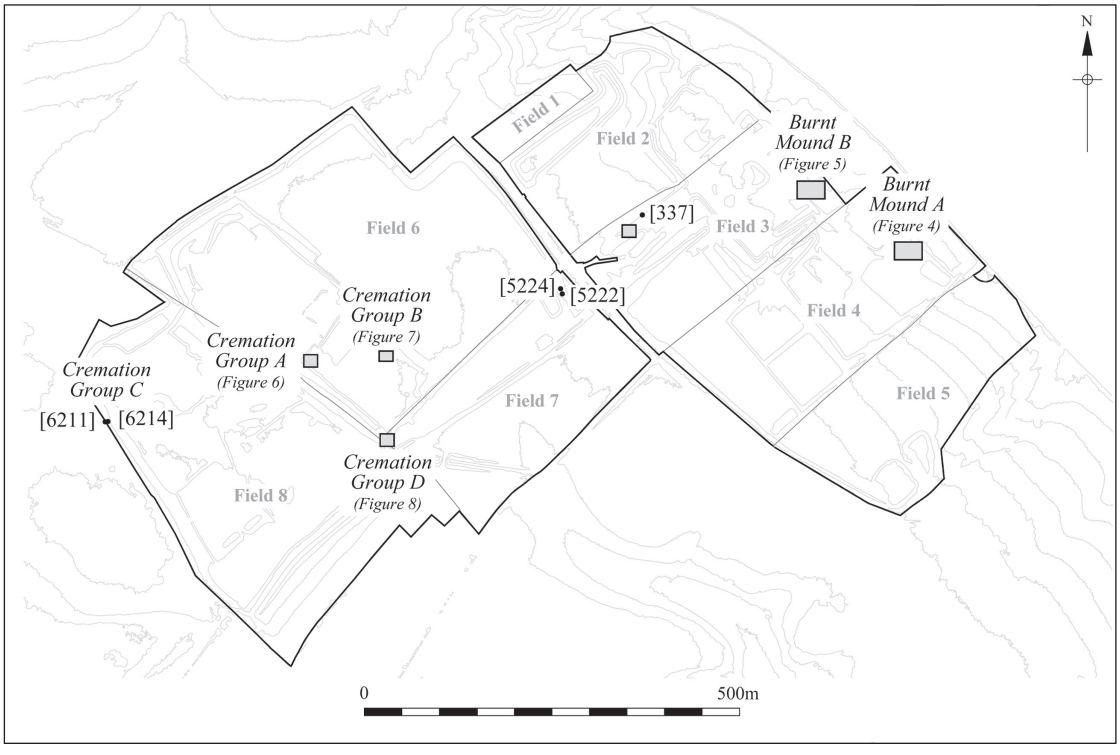

Fig. 3 Overview of the site showing all Bronze Age features

features noted above, three features could be dated to the Bronze Age; the remaining 13 were undated. Feature [5222] was rectilinear, 0.9m × 0.4m with steep sides and a flat base at a depth of 0.12m. It contained three fragments of a cross-fitting clay object that may have been a kiln prop or bar for stacking vessels (Mepham 2007). Some 5m to the north was a sub-circular feature, [5224], which was 0.33m in diameter and 0.15m deep with a dished base (Fig. 3). Despite its shallow nature it produced 38 fragments of Mid–Late Bronze Age loom/thatchweight fragments. Although, spatially, the features did not indicate any obvious pattern, the presence of the weights suggests a similar function to that hinted at in Group 1.

Further to the west in Fields 6 and 7 surviving along the margins of the field boundaries, the ring ditches for two Bronze Age burial mounds/round barrows were exposed along with two cremation groups (Figs 3, 6–8). The most southerly of the two, ring ditch [6440], was sub-circular in plan with an external diameter of broadly 10.9m (Figs 3 & 8). It was possibly of penannular form originally, but any evidence for this had been obscured by truncation by two post-medieval trackways. The width of the ditch varied from 0.4–0.6m and it had a shallow 'U'-shaped profile which survived to a depth no greater than 0.15m, which indicates it had been truncated. The shallow single fill of [6440] contained occasional charcoal and flint inclusions, a single fragment of burnt flint and a few weathered fragments of burnt clay. Three cremation burials were associated with the ring ditch, ([6435], [6442] and [6454]; Cremation Group D; Figs 3 & 8). One burial, [6454], cut the inner edge of the ring ditch, the other two, [6435] and [6442], were located within the area enclosed by the ditch. Low quantities of abraded pottery were recovered from the fills of all these burials, although the only diagnostic pottery comprised fragments of an Early Bronze Age Biconical urn recovered

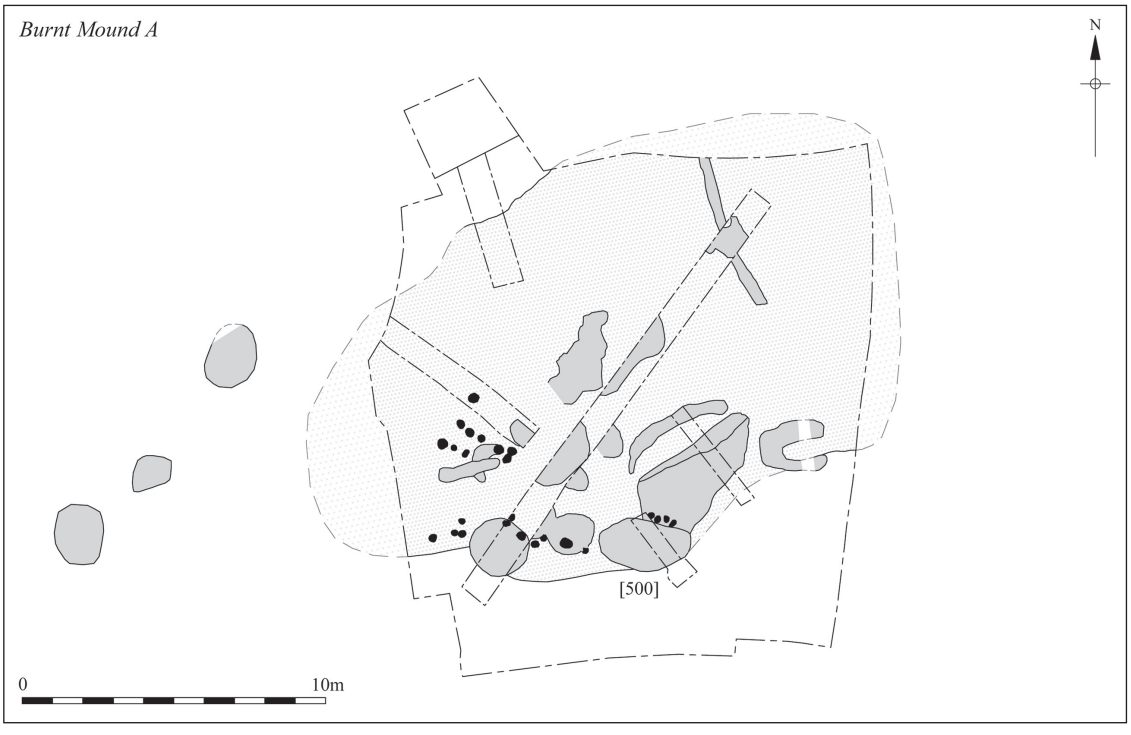

Fig. 4 Bronze Age features in Field 4: Burnt Mound A and associated features

from the fill of burial [6435]. A cluster of undated shallow discrete features located to the south-east of the ring ditch in Field 7 may have represented similar truncated cremation burials associated with this barrow. No artefacts were recovered from these contexts and only one, [5311], contained an abundance of charcoal, or possible pyre material.

The other ring ditch [6689] enclosing a truncated barrow, was penannular in form, 10.7m in external diameter and varied in width from 1.2m–1.5m (Figs 3 & 6). The entrance, measuring up to 0.6m wide, was in the south-east quadrant. The ditch was excavated to a maximum depth of 0.4m and the termini were broad with irregular sides and flattish bases. The remnants of four cremation burials in a close group were exposed in the south-west sector encircled by the ditch. No other features were exposed within the area enclosed by the ditch. A further 18 cremations were exposed flanking the south-east entrance to the ditch in a linear arrangement on a north-east to south-west alignment. Of the total of 20 burials, two were without cremated bone. All the urns from this group were Deverel-Rimbury types spanning the end of the Early Bronze Age and the Middle Bronze Age. Four of these, [6728], [6701, 6687, Fig. 11] and [6755, Fig. 12] belonged regionally to a Wessex tradition. Of these, [6728], the southernmost of the urns within this group, was a 'South-Lodge' type Barrel urn with plain applied zigzags and an applied fingertip impressed cordon. A fragment of hazel/alder charcoal from the fill of urn [6728] returned a radiocarbon date of 1428–1278 Cal BC (SUERC-74043).

Approximately 2m to the northeast of the aligned cremations an irregularly shaped, loosely filled feature measuring approximately 1.5m × 1m apparently marks the spot where, in 2000, a metal detectorist found 68 Late Bronze Age Armorican type looped socketed axe heads (Figs 3, 6 & 16). The approximate location was confirmed by the detectorist.

Not all the cremation burials were found

Fig. 5 Bronze Age features in Field 5: Burnt Mound B and associated features

in clusters. Approximately 40m to the north-east of Cremation Group A, the inverted remnants of an isolated urned cremation, [6713], were located and, approximately 40m to the north-west, the remnants of a possible further urned cremation, [6684] were found. Some 60m to the east of Cremation group A two adjacent sub-circular features were recorded; one, [6721], contained fragments of Deverel-Rimbury pottery. A large shallow pit, [6730], contained two fills, including a circular concentration of charcoal but no finds. A fragment of alder charcoal from pit [6721] returned a radiocarbon date of 1374–1126 Cal BC (SUERC-74041).

Approximately 100m to the east of Cremation Group A, a further cluster of urns was exposed (Cremation Group B; Figs 3 & 7). This group did not appear to have been encircled by a ditch or covered by a mound. Amongst its 15 features, nine contained urned cremations, three were un-urned and two held no evidence of cremation material. Whether the un-urned

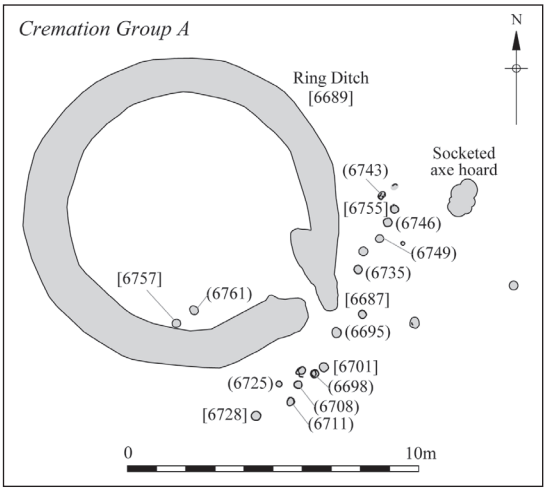

Fig. 6 Bronze Age features in Field 6: Cremation Group A and associated features

cremations had the urns removed by ploughing or never contained urns and whether the two empty features originally contained cremations

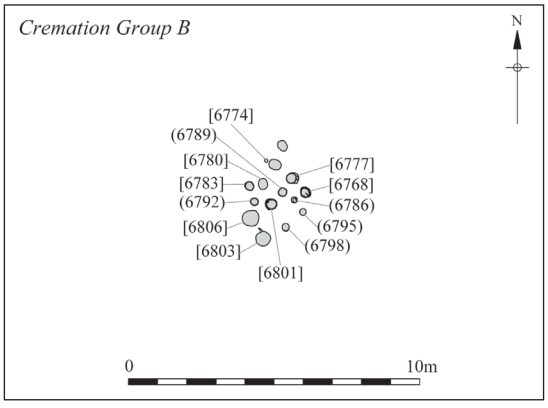

Fig. 7 Bronze Age features in Field 6: Cremation Group B

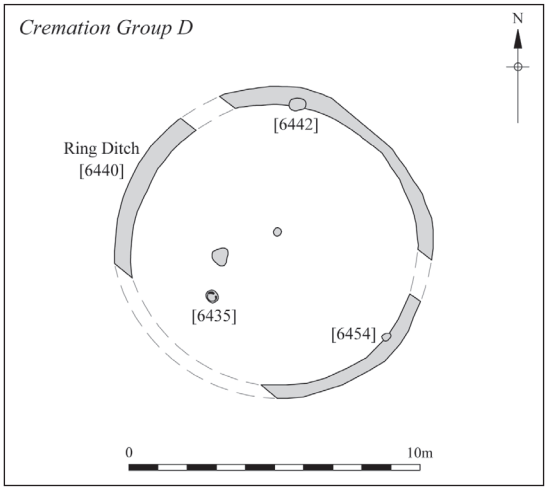

Fig. 8 Bronze Age features in Field 7: Cremation Group D and associated features

removed in their entirety by plough damage is uncertain, as the depths at which these cremations were interred probably varied. At the north-western edge of the group a stakehole or small posthole, [6774], was observed that could have represented a grave marker for the cemetery.

The urns from this group included a single Early Bronze Age Biconical urn, [6777] (Fig. 13), and two Early/Middle Bronze Age 'Wessex' 'South Lodge types, [6783] and [6801, Fig. 14]. Urn [6801] was notable by the extent of its applied internal and external decoration and wide finger-impression rim, and for its central, focal position in the group. The other urns comprised variants of the Deverel-Rimbury tradition.

Further urned and possible un-urned cremations grouped in pairs or in isolation were found in Field 8 (Fig. 3). Pit [6047] contained a charcoal and ash primary fill, [6095], from which 20g of cremated bone was recovered. There was no trace of an urn. Located centrally within Field 8 was the base of an Early Bronze Age likely biconical urn, [6168], and towards the northern end of the south-western field boundary, two adjacent cremation urns were located (features [6211] and [6214]; Cremation Group C; Fig. 3) neither of which yielded cremated bone. At the western boundary of Field 8, was a cluster of twelve discrete features. These were fairly well spread and morphologically very similar to postholes. Two ([6122] and [6136]), 1.8m apart, produced dating evidence. Cut [6122] contained what appeared to be the remnants of a cremation urn, although no cremated bone or pyre material was recovered from it. The pottery was dated to the Middle Bronze Age. Adjacent feature, [6136], contained a single sherd of intrusive Early Iron Age pottery. A possible linear foundation for a building or fence line could be postulated on a north–south axis for features [6118]–[6134] and on an adjoining east–west alignment for [6134]–[6144], measuring approximately 24m × 16m, although this interpretation is not convincing, and it is more likely the features were associated with cremation burials.

Far removed from the focus of Bronze Age activity in fields 6 and 8, in Field 4, the immediate ground surrounding an isolated small, sub-circular feature, [6563], was scorched red. Its fill contained 60 fragments of a fired clay object, some with finger impressions, interpreted as a possible loomweight or alternatively a kiln prop of transitional Late Bronze/Early Iron Age date.

Iron Age (700 BC–AD 43)

Evidence for Iron Age activity at Badminston Farm was markedly less extensive than that for the Bronze Age. On the upslope in Field 3, to the west of the burnt mounds was a group

of features consisting of postholes, stakeholes and an alignment of short linear features for a possible above-ground open-ended sub-rectangular structure (Feature Group 1; Figs 3 & 9). The limited size of the features might indicate a light structure – perhaps a tent or other temporary construction. Four of the elements included low quantities of residual Middle Bronze Age pottery. Both residual Middle Bronze Age and Early Iron Age pottery (16 sherds) were present in the primary fill, [331], of a large, shallow pit, [326], at the eastern limit of the group, and it also yielded an intact cylindrical clay loomweight, a second fragmented possible loom or thatch weight and fragments of Mid-Late Bronze Age loomweights and Bronze Age/Iron Age worked flint. The presence of the loomweights in pit [326] suggests that Feature Group 1 may have housed a loom, or looms, for weaving. The secondary fill of the pit contained ten sherds of exclusively Early Iron Age pottery. Features [369] and [373] amongst Pit Group 1 also contained low quantities of Early Iron Age pottery and isolated feature, [337], to the east of Group 1 contained thirteen sherds of Early Iron Age

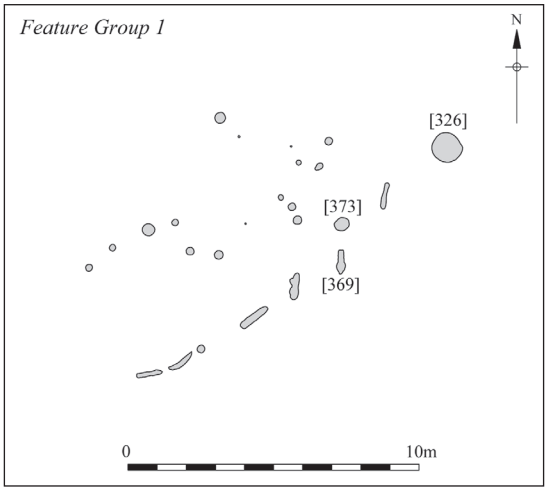

Fig. 9 Early Iron Age features in Field 3: Feature Group 1

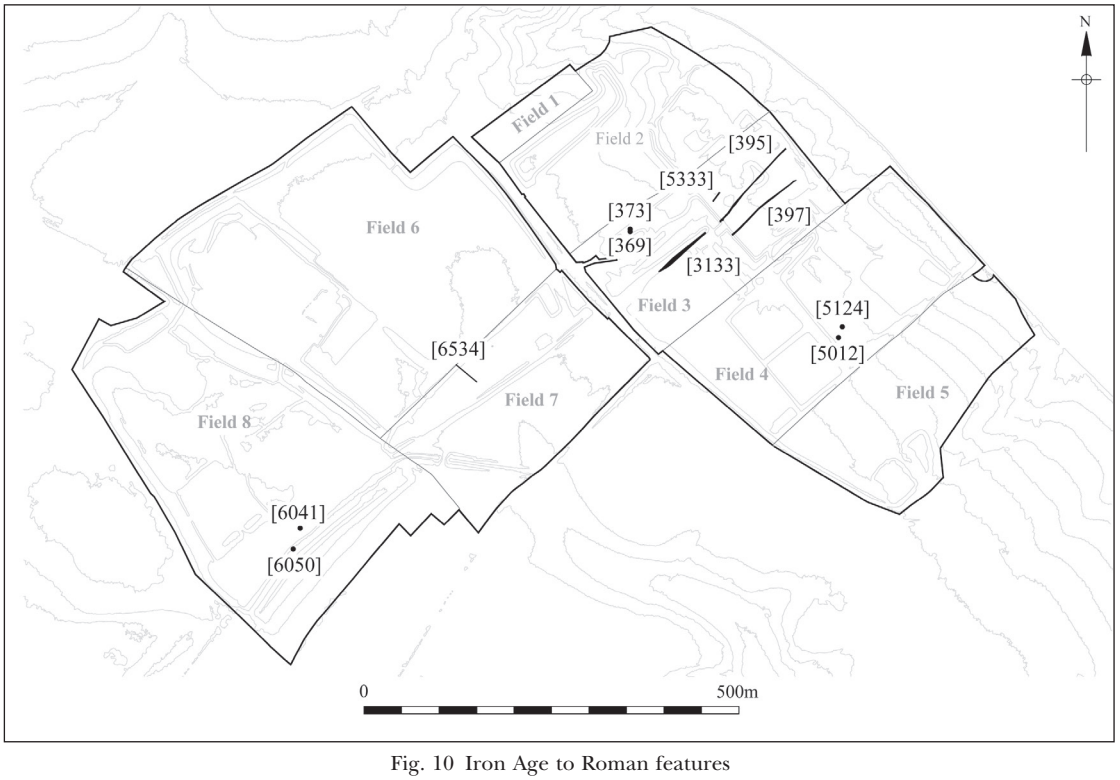

Fig. 10 Iron Age to Roman features

pottery. Collectively this evidence suggests an Early Iron Age phase of activity.

Two proximal discrete features were recorded at the southern end of Field 8. One of the pits produced 110 sherds of late post-Deverel Rimbury Early Iron Age pottery from at least six vessels (Fig. 15) and four Deverel-Rimbury sherds from the Bronze Age. Another nearby sub-circular feature contained three sherds of Early Iron Age pottery.

The only other recorded evidence of Iron Age activity within the fields to the west of the B3503 road was an isolated, barely visible 35m long north-west to south-east aligned linear ditch in Field 7, [6534], which produced three sherds of late post-Deverel Rimbury pottery.

To the east of the B3503 road two, possibly three, parallel ditches ([395], [397] and [5333]), spaced broadly 30m apart, were exposed on the same alignment as the existing Field 3 boundaries (Fig. 10). These ditches were similar in width (<1.5m) with both 'U' and 'V'-shaped profiles but varied in length; [5333] was short (*c.* 15m) whereas ditches [395] and [397] were broadly similar in length (130m and 111m, respectively). Other characteristics common to the three trenches were variations in their alignments and widths and the abruptness of their straight and pointed termini. The single fill of ditch [395] contained four sherds of Romano-British pottery and – where the ditch was renumbered [3133] – three sherds of Late Neolithic/Early Bronze Age pottery. The fill of ditch [5333] contained a large fragment of a Late Iron Age/Romano-British grinding stone. Ditch [397] had no dateable evidence. Their function remains unclear, although the near equidistant spacing suggests a planned layout for farming use.

Elements of a north-west to south-east triple ditch configuration were exposed during limited excavations in Field 5 and another possible triple ditch arrangement was recorded in Field 4 (Fig. 10). A single ditch at the southern limits of Field 5 might also form elements of a contemporary enclosure although the ditches were not similar morphologically and the dating of the small quantity of finds from them was mixed.

Roman

A few discrete Romano-British features were found disparately over the site suggesting isolated pockets of low-level activity.

Medieval (1066–1500)

The next archaeologically identifiable phase appears to have begun in the medieval period. This again reflects limited activity with an articulated cow burial, [607], containing a single sherd of 13th/14th century pottery west of the B3503 road. To the east of the road were three widely spaced parallel ditches ([326], [327] and [329]). These remain of uncertain function though they may have delimitated trackways.

A north-west to south-east 'U'-shaped linear ditch [4041], with a northern terminus to the immediate south of burnt mound A, encroached on the earlier feature.

The remainder of the medieval activity was confined to the south-east corner of Field 5 and comprised a linear double ditch, two curvilinear ditches, a pit and group of stakeholes. Three metres to the east of the double ditches two irregularly shaped conjoined features, ([6598] and [6600]), may have formed part of a single curvilinear feature.

Post-medieval (1500–1800)

Post-medieval evidence was most prevalent in Fields 6, 7 and 8 and was dominated by substantial wide and deep ditches forming trackways and field boundaries to land plots. Much of this is attributable to the late-18th century following the purchase of the Cadland Estate (of which the site forms a small part) by Robert Drummond in 1772, and the subsequent rationalisation of the small and dispersed farms relict from the medieval period into more easily farmed land parcels. This pattern of land reorganisation is revealed on the 1810 OS map and the 1814 Eling Enclosure Award which depict, the layout of ditches exposed during in the fieldwork and also shows farm buildings within Field 6. The 1825 plan of the Cadland Estate shows the land division

in Field 8 amalgamated into a much larger plot and the trackway running along the Field 6/Field 8 boundary, no longer in use. The 1838–40 Fawley Tithe Map shows much the same information as the previous map with the addition of land plots on the eastern side of the main road towards Ower Farm. Other, but less intensive, post-medieval activity was present in the eastern Fields of the site and was similarly characterised by substantial ditches forming trackways and field boundaries not evident in the cartographic evidence.

In the north-west corner of Field 8, six large star-shaped features were exposed measuring approximately 60m in diameter. These comprised a central point – consisting of a circular concrete base in three of the features – from which eight equally spaced copper strips emanated. Collectively the six features formed an equilateral triangle with sides measuring 125m covering an area of approximately 6 acres bordered along their eastern and northern extents by paired postholes for a pre-existing steel palisade fence. These features were part of an antenna array for a W/T and R/T transmission station (wireless and radiotelegraphy) associated with the Calshot seaplane repair base situated a little to the south and illustrated and described on an MOD record site plan (1091/45) (AIR 2/2879 COMMUNICATIONS (Code B, 25): Provision of VHF and W/T Stations). The controlling facility for the system was housed in the adjoining building on Badminston Lane, previously an annexe to Fawley Junior school and now a garage.

To the immediate north of the star shaped features a number of large pits were exposed, of which, one, measuring broadly 14.3m × 10.2m, was machine excavated. Excavation revealed four square-based, triangular-sided concrete bases, each containing the corroded remnants of metal pillars. These structures will have been the foundation elements of the tall antenna structures known to have been situated on the site and as visible on a 1947 aerial photo of the site (EAW006578 ENGLAND (1947); Fields Farm looking towards Ashlett Creek, Fawley, from the south-west).

FINDS AND ENVIRONMENTAL REPORTS

The prehistoric struck flints by Barry Bishop

The 21 phases of excavations at Badminston Farm resulted in the recovery of 263 pieces of struck flint. These were recovered from 17 features and unstratified deposits, although the great majority of the pieces came from just two pits, [5241] and [5338], with a further concentration found as unstratified deposit [6197]. The remainder of the material was found singly or in low quantities from a variety of features, and it is likely that most, if not all, had been residually deposited.

Possibly the earliest piece is a large cortical blade measuring 105mm long collected overlying natural deposits in Field 4. Whilst not specifically diagnostic, its size and heavily recorticated state sets it apart from the rest of the assemblage, and it would certainly not be out of place within a Late Glacial/Early Post-glacial assemblage, such as those identified at Nea Farm or Hengistbury Head (Barton 1992; Barton *et al.* 2007). There are also a few pieces that may be of later Mesolithic or Early Neolithic date, including a narrow-flake or blade core from later prehistoric pit [3316] as well as a small scattering of well-struck, blade-like flakes.

Pit [5338] produced the largest single assemblage, amounting to 167 pieces. The mostly good or only slightly chipped condition of the material combined with general similarities in the raw materials used and the presence of some refittable sequences, indicate that this material was produced from perhaps two or three different cores, and that it had been deliberately deposited into the pit. Although all stages in the reduction sequence are represented, only a small proportion of what must have been produced is present, indicating that this assemblage was selected from a larger accumulation of flint-working debris, and 161 pieces, came from fill [5341]. This includes high quantities of knapping waste, including decortication flakes and micro-debitage (flakes and flake fragments measuring less than 15mm in maximum dimension). The most notable aspect is the high proportion of retouched pieces present, which account for 12.4% of the total assemblage or 30.8% if the

micro-debitage is excluded. The retouched pieces include three simple edge-trimmed flakes, two denticulates and a rod-like implement. The remainder comprises scrapers including end-, side- and end-and-side scrapers. Some are coarsely or minimally retouched, many have well-formed and nicely arced working edges. Three cores were also recovered; all multi-platformed with two having been extensively and centripetally worked whilst the other has a keeled platform and further working confined to one end of an elongated nodule. Fill [5339] produced a technologically similar but much smaller group, comprising six pieces including a further end-scraper and a side-scraper.

Pit [5241] generated a technologically similar assemblage to pit [5338] even more dominated by retouched pieces, with 18 examples accounting for 60% of the assemblage identified. The main difference between this and pit [5338] is the lack of micro-debitage. The retouched pieces include an edge-trimmed flake, a denticulate, a bifacially worked small chopping tool and a 'flaked flake', but again the majority of pieces comprise scrapers of very similar form and range to those from pit [5338].

A concentration of struck flint from the site came from 'unstratified finds group' [6197]. This comprises 24 pieces which are technologically comparable to the assemblages from pits [5241] and [5338] and which again contains a very high proportion of retouched pieces, contributing 41.7% of the total from this group. These are also dominated by scrapers, which provide nine or the ten examples present.

Discussion

The excavations at Fawley Quarry have provided a small but interesting lithic assemblage. It indicates long lived, if sporadic and low-key, prehistoric activity at the site that possibly began as early as the late Glacial period. They provide a welcome addition to the rather sparse evidence for both well-contexted flintworking and domestic or residential activity in Hampshire during that time.

The filling of pits with artefactual debris is a common practice in the Neolithic and Early Bronze Age that has been recognized from across Britain (Bamforth 1982; Thomas 1999; Garrow 2006; Anderson-Whymark & Thomas 2011).

The assemblages contain knapping waste and high proportions of retouched implements, dominated by scraping type tools. This indicates that the assemblages may have been subjected to a degree of selection and gathered from a larger accumulation of flint-working debris and used tools. The pits do not seem to have been used to dispose routinely generated 'rubbish'. Their contents may have been intended to convey more complex information concerning the flint-working or the nature of the occupation. As Thomas suggests, the materials employed as pit deposits and the details of their deposition may have acted as a material language, albeit one that was highly localized in its meaning (1999, 69).

The stone by Kevin Hayward

Introduction

Excavations at Badminston Farm have resulted in the recovery of 15 fragments (7324g) of stone including quern, hone, vessel and other stone fragments.

Prehistoric

It seems likely that the slightly curved rubblestone piece from feature [500] from Bronze Age burnt mound A represents a saddle quern. The stone comprises, a light grey cryptocrystalline quartz sandstone termed a sarsen or greywether. This was locally acquired from the Pleistocene Plateau Gravel (Osborne-White 1915, 51). Saddle querns made of such local materials are more likely to be prehistoric (Neolithic-Late Iron Age) in date, than Roman.

Prehistoric–Roman

The largest item of worked stone from linear feature [5333] consisted of what appears to be part of a 400mm diameter circular heavy-duty sharpening block at least 110mm high, having a low angled 30˚ splayed base. The base has small circular pick marks made with a small, pointed tool such as an awl. The stone type is an extremely hard, fine grained meta-volcanic green andesite-diorite with a porphyritic texture of white feldspar which, like the meta-siltstone rubble stone mentioned above, is derived

from geologically very old Pre-Cambrian or Palaeozoic outcrops from the Channel Islands, Brittany or the Lizard complex of Cornwall. Stones fitting this description, such as the Hornblende diorite rubblestone sourced to Green Island in the Channel Islands, were again used as foundation rubble in the Proto Palace at Fishbourne (Cunliffe 1971, 1–2) and like the material from Badminston Farm, shipped over as cross-channel ballast stone.

Roman

Examples of locally acquired rubblestone from the chalk present in linear feature [2027] may be raw material for lime or mortar production, given the size of the block. Far more interesting, however, is an example of Mixon limestone from, probable, post-medieval linear feature [5003]. This distinctive hard cream-grey foraminiferal limestone, characterised by large 10mm rods of the foraminiferal microfossil *Alveolinia* outcrops today only along a submerged Eocene reef off Selsey Bill (Bone 2003, 93). Its exploitation and use as foundation rubble, relates to the early Proto Palace at Fishbourne (Cunliffe 1971, 1–2) and other masonry structures fronting the palace (Bone 2003, 91). Its presence here is an indication of boat supply and transport, probably as ballast during the Roman period. As well as some Purbeck limestone rubble also from linear feature [2027] whose petrological character and source are commented on more fully below, there is an "exotic" rubblestone made of a hard, variegated red brown to green micaceous metasiltstone with distinctive cleavage from linear feature [5270]. This stone, typical of Tertiary and Quaternary bedrock, is of great geological Age, Palaeozoic or even Pre-Cambrian. The closest outcrops of rocks fitting this description are the Pre-Cambrian meta-sediments and metavolcanics from the Channel Islands and Brittany and the younger Devonian meta-sediments of Devon and Cornwall. Use of these much older, harder rocks, along the south-coast as rubblestone is again restricted to the foundations of the Proto-Palace at Fishbourne, where various meta-volcanic and meta-sediments have been identified (Cunliffe 1971, 1–2).

A small fragment of shallow (22mm thick) rotary quern from the topsoil of Field 4 and made from a hard, angular coarse quartz sandstone, termed "gritstone" (e.g. Laws 1987, table 14, Page 168) is probably Roman in date. The stone bears a striking resemblance to Millstone Grit (Namurian) Carboniferous from South Yorkshire and South Wales. The suitability of this stone as a quern material, on account of the hard, coarse angularity of the quartz, accounts for its widespread distribution and use throughout central-southern, eastern and northern *Britannia*.

Part of a steep sided stone mortar with one surviving distinctive protruding (55mm) lug came from linear feature [6598] in Field 5. In a good state of preservation, the stone mortar is made of a type of condensed fine light cream-grey shelly Purbeck limestone or Featherstone with some hollowed out oyster shell similar to Burrstone from the Lower Cretaceous (Purbeckian) of the Isle of Purbeck. The use of these stone mortars was widespread, including on the Isle of Wight and the Solent (Palmer 2014, figure 4), with 'Purbeck-Burr' (Palmer 2014, 223) one of the more common varieties of Purbeck limestone in use. Local use seems to relate to the later Romano-British period (Palmer 2014, 224).

Medieval–Post Medieval

Examples of medieval to post medieval York stone sharpening stones are present as crisp, rod shaped hone fragments from the topsoil of Field 4 and [2064]. Gently tapering at one end, indicating use, both objects are typically 35mm wide by 15mm deep. Hones made from this fine green laminated micaceous sandstone from the Upper Carboniferous of Yorkshire (also termed Elland Flags) and Lancashire only begin to be more widely used from the 18th century onwards. Hones of this dimension and shape were often used as sharpening tools for butchery (Hayward 2017, 158).

Conclusions

The assemblage is small but nevertheless extremely varied, with 10 lithotypes identified, reflecting in part their diffuse spread across a large site and long periods of land-use, however, it also echoes the excellent riverine and maritime communications towards the Isle of Wight, south-coast, south-west coast as well

as cross-channel transportation. The variety of rubble stone materials encountered; Mixon stone (Selsey Bill), Purbeck limestone (Isle of Purbeck; East Dorset Coast), metasiltstones (Channel Islands; Brittany or South West England) is an indication of how important coastal maritime supply was in the haulage of these heavy bulky items transported as ballast. All these materials are also associated with the foundations and super-structure of Fishbourne Roman Palace (Cunliffe 1971, 1–2; Bone 2003, 93) so it is possible that these blocks are of a Roman date. There are many late prehistoric and Roman sites along and close to the south coast such as Hengistbury Head (Laws 1987) and Wytch Farm (Cox & Hearne 1991) where there are considerable varieties of stone types from native and continental sources being used.

The absence of any Roman paving, roofing, ashlar and architectural stone discounts there being any pre-existing masonry building of Roman date on the site. At best, what is present are the highly scattered remains of what was once a low-status masonry foundation farmstead. The presence of common locally available utilitarian Purbeck limestone stone mortar (Palmer 2014), and traces of Millstone grit quern provides further evidence for a farmstead.

Confirmation of earlier prehistoric occupation is provided by a Sarsen saddle quern, a stone type obtained from the local Pleistocene gravel. The most interesting artefact encountered was undoubtedly the large circular stone object made from a highly unusual distinctive green intermediate meta-volcanic or igneous rock rather like the andesites and diorites encountered as foundation rubble at Fishbourne (Cunliffe 1971, 1–2). Although the low angled profile edge is comparable with the profile of a quern, its thickness and irregularity is much too great to have been used for this purpose. Furthermore, this consistently very fine, hard volcanic material, is completely unsuitable for the grinding of cereal for flour or for brewing which requires a coarse, angular quartz or igneous surface. This material type is more typically associated with the sharpening of tools and should instead be a more heavy-duty stand-alone circular sharpening item.

Post medieval presence is reflected in the occasional fresh hone made from York stone. These are known to have been used elsewhere from the 18th century to sharpen tools.

The pottery by Mike Seager Thomas

Neolithic and Beaker

Badminston Farm yielded a single sherd of Middle Neolithic Peterborough Ware pottery weighing 10 g, and 136 sherds of Late Neolithic/Early Bronze Age Beaker pottery weighing 0.5 kilograms. The Beaker sherds derive from a minimum of three vessels and all are heavily weathered.

The Neolithic sherd (Fawley 1) is from a subsoil in Field 3. It is in a laminated, coarsely flint-tempered fabric (*VCF*), and comprises an incurved, internally bevelled rim sherd, the exterior of which is decorated with whipcord-impressed chevrons, and the bevel, with diagonal whipcord-impressions. It is from a Mortlake or Fengate Ware bowl. The Beaker pottery is from widely separated locations across Fields 3, 7 and 8. Most was residual in later features. It comprises sherds in a sandy, grog-tempered fabric, with rare fine flint inclusions (*G*) from two vessels decorated with horizontal lines of fingernail impressions (Fawley 2 and 4) and one with tool (possible comb) impressed hatching, probably in a horizontal band (Fawley 3). Fawley 4 has a slightly expanded rim and a weak shoulder.

Owing to their lack of interpretable contextual associations, the roles of neither the Peterborough Ware nor the Beaker material on site is known and their principal importance is in providing evidence for activity per se. The fabrics and forms comprising them, apart from the Beaker rim, are consistent with what we would expect of these traditions within the region (cf. Clarke 1970; Cleal 1991; Seager Thomas 2005).

Bronze Age

The Bronze Age pottery assemblage from Badminston Farm comprises 2498 sherds with a combined weight of approximately 28.1 kilograms, most of which derive from three discrete groups of cinerary urns (Figs 11–14). Three, and possibly as many as four, pottery traditions are represented comprising Biconical Urn, the Early Bronze Age, Deverel-

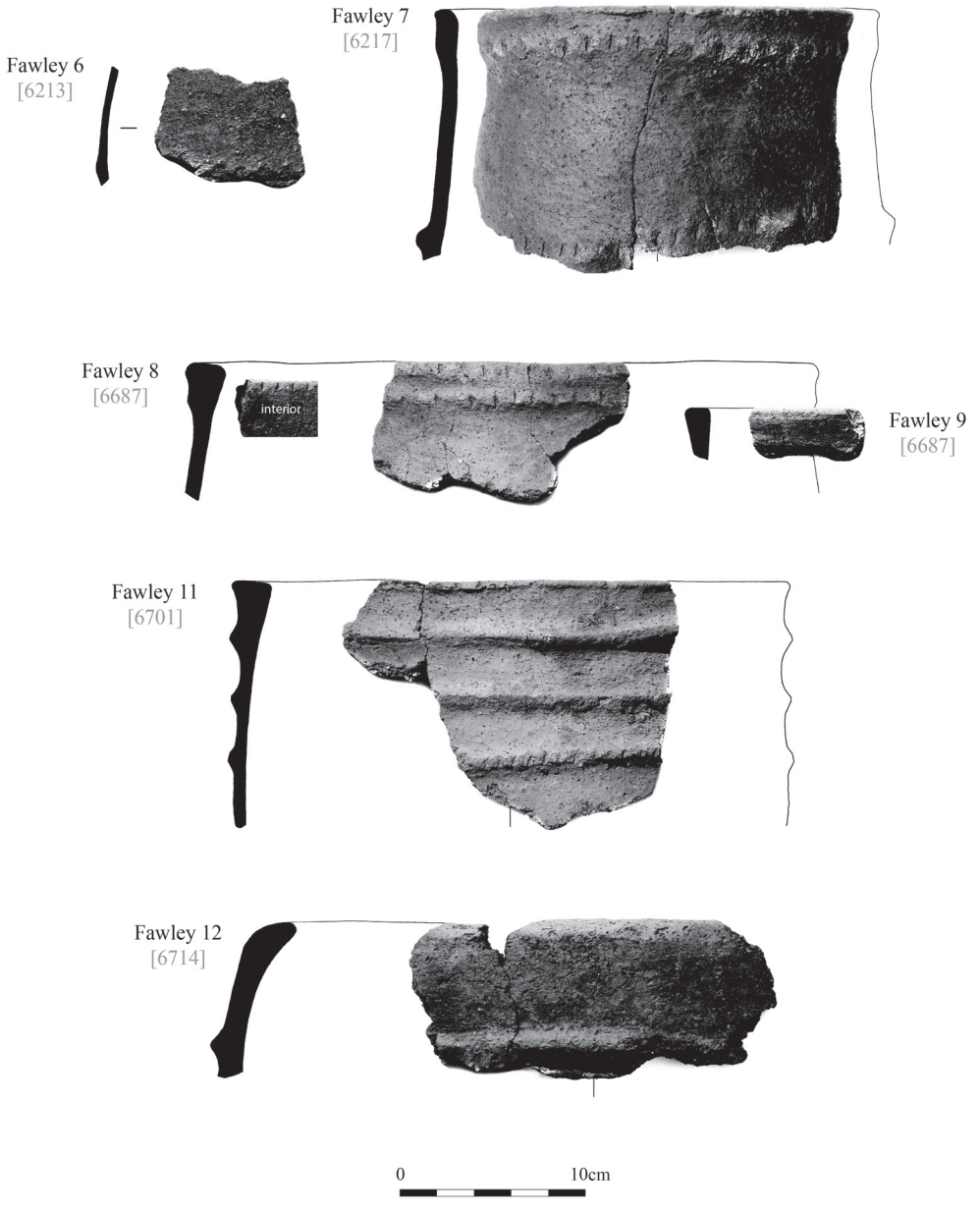

Fig. 11 Bronze Age cremation urns

Rimbury 'South Lodge' type Urns, the end of the Early Bronze Age, Deverel-Rimbury, the Middle Bronze Age and post Deverel-Rimbury, the Late Bronze Age. Radiocarbon dates for these traditions (Needham 1996) and – in all probability – the start and end dates for their use overlap considerably but the broad sequence from tradition to tradition is reliably

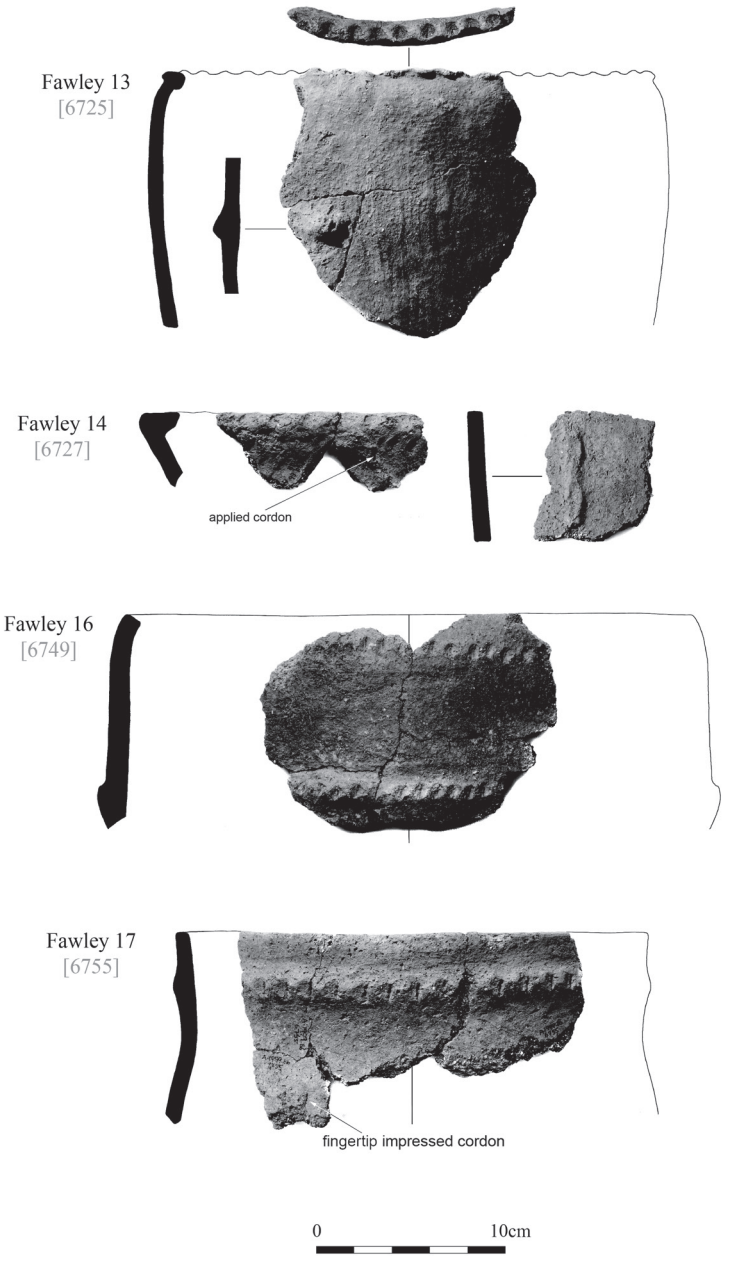

Fig. 12 Bronze Age cremation urns

established by their contextual associations and by typological and fabric seriation. The assemblage appears to be uncontaminated by residual or intruded material.

Probable Early Bronze Age pottery was represented by a handful of typologically undiagnostic sherds in a single grog-tempered fabric analogous to (but not identical with)

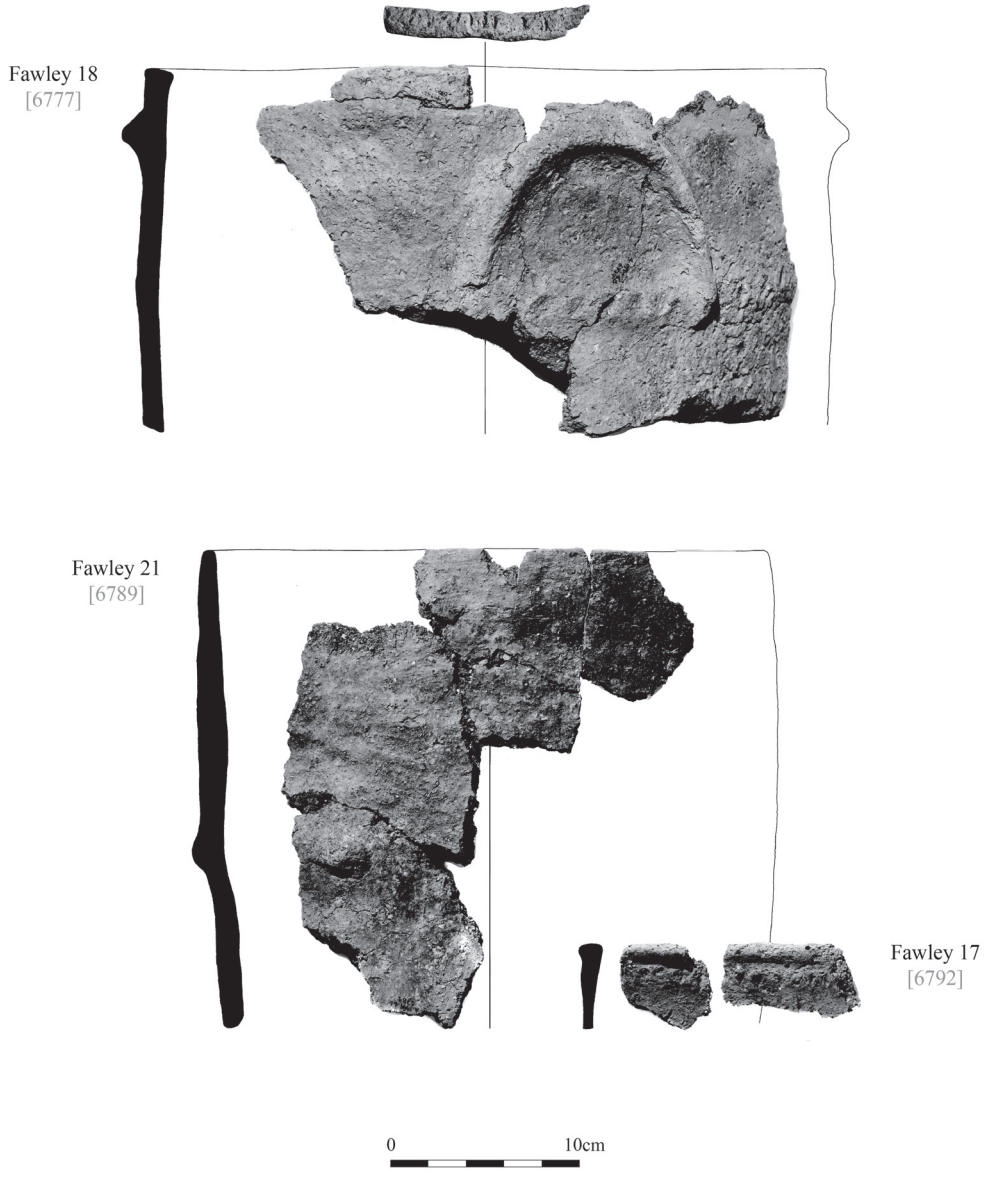

Fig. 13 Bronze Age cremation urns

grog-tempered fabrics associated with both Collared and Biconical Urns elsewhere, and a single near whole Biconical Urn of a type that occurs across south central and southeast England and on the near Continent (Fawley 18; Fig. 13). These occurred in widely separated locations across the site (in Fields 3, 6, 7 and 8), in cremation burials (the Biconical Urn and two other context assemblages) and two features of uncertain interpretation.

Deverel-Rimbury pottery was represented by a continuum of fine to medium to coarse flint-tempered fabrics analogous to (but again mostly not identical with) flint-tempered

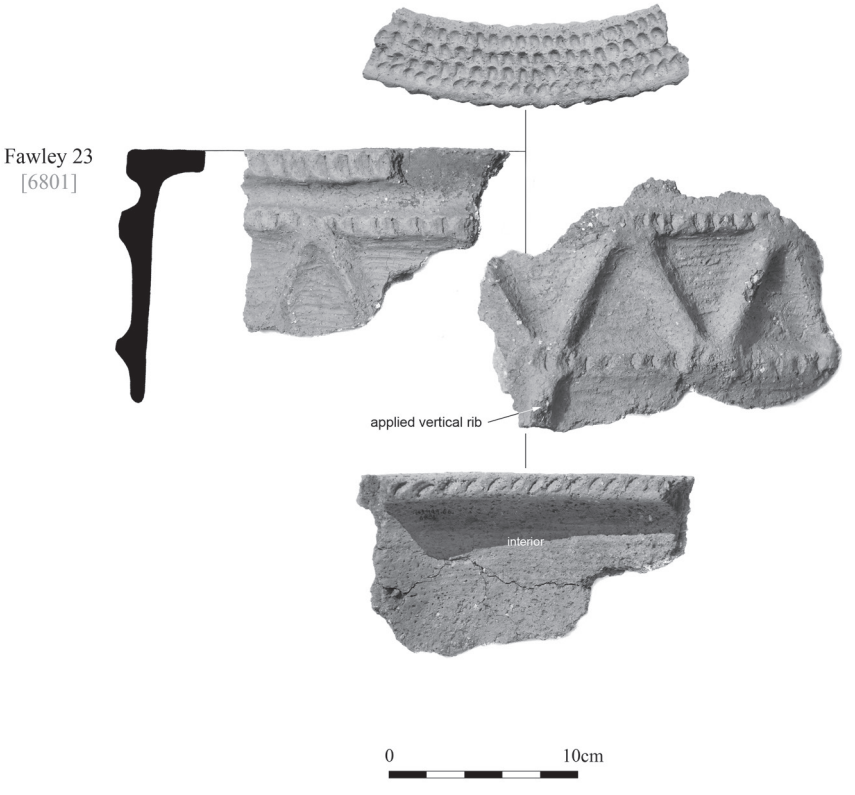

Fig. 14 Bronze Age cremation urns

fabrics associated with Deverel-Rimbury pottery elsewhere, and, primarily, sherds from 24 reconstructable (out of a possible total of 31) cinerary urns. A typical Wessex group, it included South Lodge-type urns, usually equated with the beginnings of the Deverel-Rimbury tradition (Fawley 14 and 23; Figs 12 & 14), albeit that the associated C14 dates here are a little later (e.g. [6728] 1428–1278 Cal BC (SUERC-74043) and [6801] 1453–1298 Cal BC (SUERC-74408)). There are other typical Wessex types present (Fawley 8, 11 and 17; Figs 11 & 12) as well as more widely distributed Deverel-Rimbury types (Fawley 6, 7, 12, 17 and 21; Figs 11–13), and one jar of a possible transitional Deverel-Rimbury/post Deverel-Rimbury type (Fawley 13: Fig. 12). The bulk of the cinerary urns were clustered in two groups, one outside ring ditch [6689] (cremation group A), and another 80m to the west of this (cremation group B) (both in Field 6). Between the two clusters was a single isolated urned cremation and at a much greater distance, in Field 8, another isolated urn and a pair of urns (cremation group C). Deverel-Rimbury pottery was also present in small quantities in a small number of features of other types, including one of the site's burnt mounds, a couple of small pits or postholes and a hearth (in Fields 3, 4, 6 and 7).

Before they were lifted, many of the cinerary urns, including the Biconical Urn, appeared to have been more or less intact. Though including some large, fresh-looking sherds, the surviving assemblage is in poor condition. Sherds belonging to some of the urns cannot be handled at all without causing damage, while washing them is like washing dried, but unfired clay. Comparison with the sherds comprising the site's late post Deverel-Rimbury assemblage,

which though shattered, remains mostly hard and good, shows the degradation of this earlier assemblage to be peculiar to it. The principal reason for this seems to be the employment in it of shelly clays, which subsequently decalcified (e.g. fabrics *FMFV* and *MCFV*). We shall return to these below. It is worth noting at this point, however, that the Bronze Age assemblage's condition today, unlike that of the late post Deverel-Rimbury assemblage, has nothing to do with its original use or deposition and does not therefore feature in the interpretative discussion that follows.

Finally, very small amounts of possible early PDR pottery, represented by two flint-tempered fabrics not present in the Deverel-Rimbury or late post Deverel-Rimbury groups, were recovered from two pits in Field 3. It should be emphasized however that these fabrics could belong to any one of the three groups identified.

The interpretative implications of the assemblage

A number of research issues are worth exploring in the context of the Bronze Age assemblage. All relate to pottery chronology. Owing to the nature of the contexts from which it was derived, the assemblage lacks both internally related context assemblages and useful cross-context relationships and is restricted in terms of the Bronze Age pottery repertoire as a whole and the interpretative tools available to us to conduct this exploration are limited to the study of on-site typology and fabric and the local and regional contexts of these. Our understanding of date, for example, is informed by both the types and fabrics present and the distribution of these on the ground; of settlement and cultural continuity, by the co-occurrence (or not) of types and fabrics belonging to different dates and traditions; of funerary rites, by the selection of types, the way these were deposited and where and how these depositions developed.

Pottery chronology

As stated above, the broad sequence of the pottery traditions represented in the Bronze Age pottery assemblage from Badminston Farm is reliably established. It is not necessary to rehearse these again here. Less clear, however, is when the particular traditions begin and end and to what extent they overlap. Two observations on the present assemblage contribute to our understanding of this. The first is the presence in a Deverel-Rimbury cemetery of a Biconical Urn, and the absence from the same group of Collared Urn; and the second, the wide spacing of the Biconical Urn and the distinguishably Wessex types within the two main urn groups. It is the nature of cemeteries to be added to over time. Neither of the Badminston Farm clusters, however, demonstrably grew from a single location; yet both could have grown from a more widely spaced larger spaced funerary area, Biconical and Wessex types amongst them, the pan-regional Deverel-Rimbury and Deverel-Rimbury/post Deverel-Rimbury types filling the gaps between these. Thus, on the one hand, it is possible that we have a Biconical Urn that is relatively late (as is indeed suggested by the associated C14 dates), and on the other, a Deverel-Rimbury assemblage that is relatively early. As we shall see below, for the latter, this view finds support in the relative proportions of different types of Deverel-Rimbury pottery seen on other Wessex sites. Otherwise its different sub-groups on site are too close to confidently suggest any sort of sequence.

Land-use continuity

There is some suggestion from the pottery traditions represented within the assemblage that occupation in the vicinity of Badminston Farm may have been uninterrupted from the Beaker period, right through the Bronze Age and into the Early Iron Age. The intensity of pottery using activity, however, and where discernible, the likely activities represented by this, varied. Beaker was very thinly spread across Fields 2, 3, 7 and 8 but was absent from Field 6, the later focus of Deverel-Rimbury pottery deposition. Its use on site is unknown. Early Bronze Age-type pottery was also thinly distributed but was present over a much wider area including the focus of Deverel-Rimbury pottery deposition (Field 6). Three out of the five contexts from which it was recovered appear to have been associated with cremation deposits. Deverel-Rimbury pottery was present in the same areas but was much more abundant.

It too was recurrently linked with funerary deposits and only present in a handful of features of other types, suggesting a degree of continuity in pottery use within the site from one period/tradition to the next. By contrast, Late Bronze Age/early post Deverel-Rimbury pottery is both rare and occurs in a single field only (Field 3), or two if we include the possible transitional Deverel-Rimbury/post Deverel-Rimbury jar, which intimates either a re-focus of pottery using activity off-site, or a major reduction in pottery use. Finally, during the Early Iron Age, pottery-using activity, though still sparse, spread back across the site (Fields 2, 4, 7 and 8). By this time, however, its use or the use of the site had changed, and pottery was more diverse and deposited in features of a range of types, including a possible cremation but also pits, hearths and ditches, a feature suite at this period usually associated with everyday settlement.

The funerary rite

Four things characterized the inurnment of cremated remains at Badminston Farm. Firstly, the selection of a limited range of urns; secondly, the deposition of these in an inverted position; thirdly, their clustering in small groups, in two cases linked with barrows; and fourthly, their isolation from domestic-type activity. Most of the pots chosen belong to a group often characterized as 'heavy duty' (as opposed to 'everyday') wares (Woodward 1995). They are large, roughly finished, often thick-bodied, and most were decorated in some way. Of the possible total of 34 urns, 17 were definitely inverted, and all but two of the others (both in Early Bronze Age-type fabric *GV*) lack base sherds, which might have been expected to survive had they been deposited in an upright position. The bulk of these were deposited at uneven distances from each other in two relatively closely spaced groups (within 100m of each other), one in a rough line outside a gap in a penannular ditch (cremation groups A), and one forming an isolated cluster (cremation groups B). A further urned cremation was isolated between these, while another two form a pair some distance away (cremation groups C). Within the two larger groups, the only obvious structuring was that early and distinguishably Wessex types are widely spread out (Fig. 6). There was no obvious structuring in terms either of form or fabric.

Groups of urns such as these are now often interpreted as family cemeteries (Ellison 1980), but it should be emphasized that this interpretation is a logical inference, and that there is no evidence outside the existence of the clusters themselves with which to support the view. Certainly, there is no such evidence from Badminston Farm where similar fabrics and forms are represented in all four locations.

Cultural identity

A recurrent theme in the study of British Bronze Age pottery is regional grouping. Collared and Biconical Urns (of the variety represented in the present assemblage) are recognized to be pan-regional (Burgess 1987, fig. 2; Longworth 1984), whereas Deverel-Rimbury and, up to a point post Deverel-Rimbury, are divided into a number of regional subgroups, comprising types peculiar to or focused on the territory with which the subgroup is identified – Ardleigh, the Thames Valley, Sussex, Wessex – alongside pan-regional and apparently unique forms (e.g. Barrett 1973, figs 1–4; Erith & Longworth 1960, fig. 4; Seager Thomas 2008, figs 5–7; 2015, figs 4–6 etc.). The Badminston Farm assemblage is inescapably a Wessex group, with close regionally specific parallels in assemblages from both the north and west (such as those from Kimpton and Simons Ground: Dacre & Ellison 1981; White 1982). Throughout the southeast, however, a growing number both of cross-regional parallels and apparently unique forms is eroding these subgroups. Our interest here is whether the balance of regional, pan-regional and local types in the present assemblage is skewed as well and what this means in terms of cultural tradition.

Wessex types in the present assemblage include the South Lodge urns (Fawley 14, 19 and 23) and the two other urns with heavy plastic decoration on, and/or immediately below the rims (Fawley 8 and 11). Pan-regional forms include the Biconical Urn (Fawley 18), several urns with an applied cordon some distance below the rim (Fawley 10, 12 and 16, etc.) and the urns with bosses (Fawley 13, 20 and 21). Also notable are the EBA-type

grog-temper and a few jars, including two of those with bosses, in non-shelly flint-tempered fabrics, which would be interchangeable with fabrics from well outside the region (e.g. Seager Thomas 2008, pl. 1). Finally, local peculiarities include the site's shelly fabrics, the thin-bodies of some of the 'heavy duty' wares (Fawley 11), an almost complete absence of Deverel-Rimbury 'globular jars', the rim of the most complete of the South Lodge urns (Fawley 23), which is unusually exaggerated, and an urn from cremation group C (Fawley 7), fashioned from what looks like the local shelly clay, but best paralleled across the Channel in an assemblage from Tatihou (Marcigny & Ghesquière 2003, fig. 70).

There are about half as many distinguishable Wessex types, then there are pan-regional and non-Wessex types. Omitting globular jars from our calculations, the proportion of Wessex types is none the less higher than in the assemblages from either of the two aforementioned Wessex sites. That is to say, Badminston Farm's is a typically Wessex assemblage. The meaning of this is not certain. Possibly it is date related. Perhaps there was a move from the regional to the pan-regional over time, and Badminston Farm is earlier than these other sites, or, proportionately, the number of inurnments there diminished over time. This view would be consistent with the recovery of a – presumably later – Deverel-Rimbury assemblage with almost no specifically Wessex traits at nearby Twyford Down (Walker & Farwell 2000). Alternatively, it could have been an exaggerated cultural response to a peripheral coastal position, in relation to France and a distinct regional Deverel-Rimbury to the east in West Sussex and beyond.

The burial rite also stands out as locally distinct in the positioning of the jars and the preference for decorated 'heavy duty' wares over globular jars. At both West Sussex's Drayton and Simons Ground, for example, where both upright and inverted urns were found, the latter were very much in the minority (Seager Thomas 2010, White 1982, figs 10, 13), while many Wessex and rather fewer Sussex cemetery groups include globular jars (Calkin 1964, fig. 10; Dacre & Ellison 1981, figs 14–17; Seager Thomas 2008, fig. 7; White 1982). This too could be read as a statement of a distinct regional tradition.

Summary

The present analysis raises questions about the Bronze Age assemblage's date, and the meaning in terms of contemporary social organization of the types represented in it and the way these were deposited. Our understanding of the Wessex tradition and wider Bronze Age must be tempered by an acknowledgement of the small size of the assemblage and the limited range of interpretative tools used in its analysis. It is clear that the assemblage's form and manner of deposition was related to the site's peripheral position within the Wessex region.

Early Iron Age

The Early Iron Age pottery comes from a range of feature types including pits, ditches, hearths and a possible cremation across Fields 3, 4, 7 and 8. In total 148 sherds weighing just over a kilogram were recovered. The bulk of it – 110 sherds from at least 6 vessels – comes from a single pit in Field 8 [6041]. It is upon this group that the present discussion focuses.

It belongs to the final phase of the post Deverel-Rimbury pottery tradition in Britain. It comprises a suite of six sandy, fine, to medium to coarse flint-tempered and (now decalcified) shelly fabrics). Chronologically diagnostic pots represented include three burnished fine ware bowls or jars, one 'onion shaped' (Fawley 25: Fig. 15), one apparently tripartite with a narrow shoulder and flared rim (Fawley 26), and one hematite-coated with furrows above the shoulder (Fawley 27) (these last too fragmented to reconstruct illustratively), and two coarse, weakly-shouldered jars (Fawley 28–9: Fig. 15).

These forms are widely paralleled in late Post Deverel-Rimbury groups, but not often all together, and the 'onion-shaped' type more usually further east (Cunliffe & Phillipson 1968, figs 15–18; Place 2004, fig. 17; Seager Thomas 2002, fig. 5; Wolseley & Smith 1924, etc.). Herein lies the principal interest of the group. It provides evidence for the contemporaneity of these types in Wessex and beyond. The high proportion of fine to coarse wares is also common in late Post Deverel-Rimbury. As noted above the late Post Deverel-Rimbury pottery's

Fig. 15 Early Iron Age post-Deverel Rimbury bowl and jars

feature associations suggest a connection with everyday settlement activity.

Metalwork by Frank Meddens

The socketed-axes

A Llyn Fawr hoard of 68 Bronze Age socketed axes was recovered from a pit situated approximately 2.5m to the west of the northern most cremation urn in group A and some 5m east of the round barrow defined by ring ditch [6689], by a metal detectorist. The axes are of Armorican type, manufactured in the north-west, Brittany region of France and are dated to the period 800–700BC. These Armorican axes have flat sides and a rectangular cross section with a narrow collar (The Portable Antiquities Scheme, 2019). The 68 axes from Badminston Farm all appear to differ marginally in shape, length and the number of ribs around their collars, so must have been individually cast (Fig. 16). All 68 axe heads were unused, and all have flashing, and sprues present from the casting moulds. The silvery patina of some of the axe heads suggests a high lead content, a characteristic of this type of Armorican axe (Boughton 2015, 45; Henderson 2007, 93), which together with the thinness of the metal used in their construction renders them unsuitable as a weapon or tool and indicates they were never intended for a practical use. Indeed, Armorican socketed axes as a group share this feature and furthermore lack evidence of wear or ever having been hafted, often still retaining parts of their clay core in their sockets (Boughton 2015, 47–8). Their use as ingots or a proto currency has been suggested (Boughton 2015, 54). Their close proximity to cremation group A and ring ditch [6689] appears likely to be intentional. Though the cremations would not have been visible, the barrow associated with the ring ditch would have been an obvious marker evident in the heathland landscape. The other apparent aspect in the siting of this hoard is its close proximity to both Southampton Water and Stanswood bay, it being on the promontory dividing the two. Other nearby Llyn Fawr hoards with Armorican socketed axes are known from the New Forest and from Ventnor on the Isle of Wight (O'Connor 2007, 75–6). Although Armorican axe finds from the UK are known from other locations by far their largest concentration is in hoards from coastal sites along the south and southwest coast (Henderson 2007, 94, Fig. 3.20; O'Connor 2007, 64).

Environmental analysis by Lucy Allott and Mariangela Vitolo

Introduction

Bulk environmental samples were routinely taken during the various stages of fieldwork on the site. The results from processing proved disappointing, with little macro botanical evidence recorded from the samples. Fragments of wild legumes and seeds of weed taxa were prevalent within features

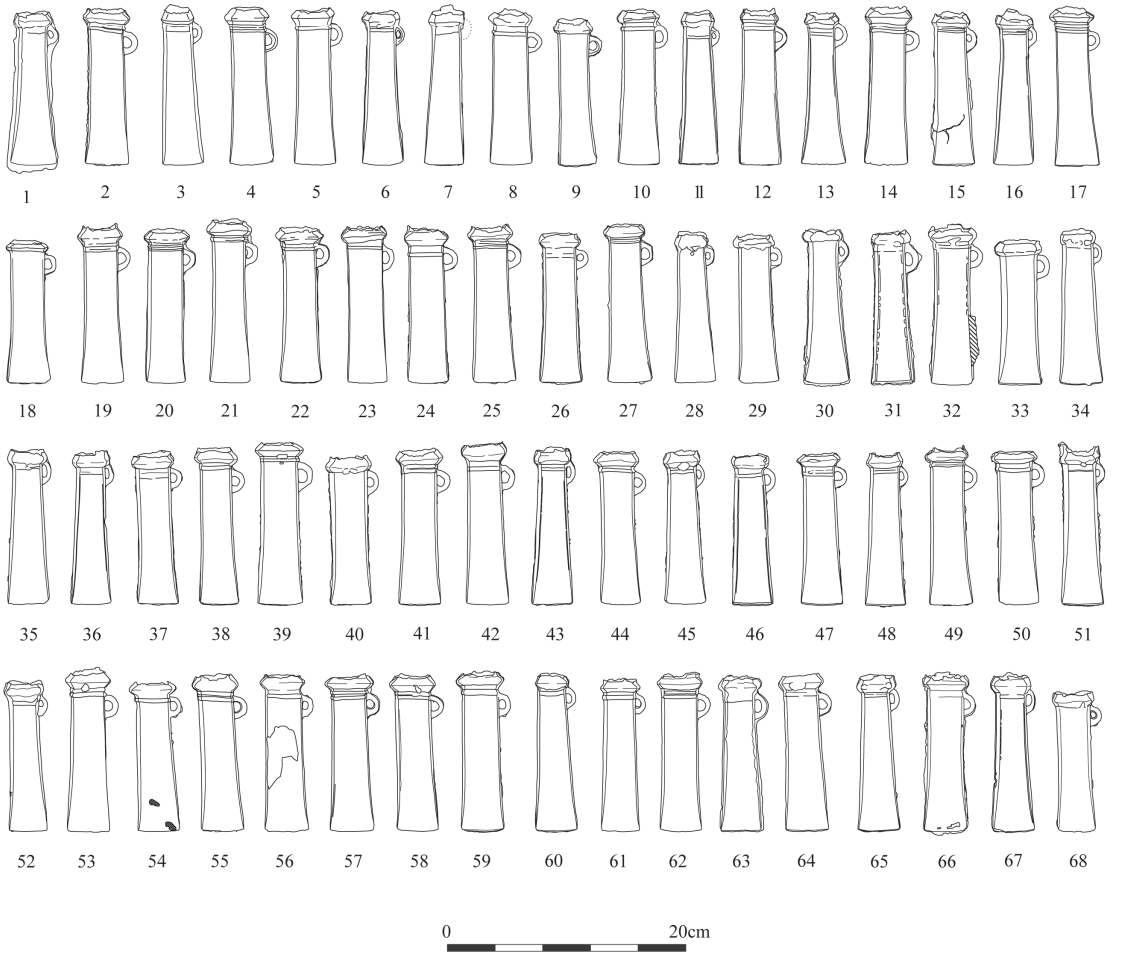

Fig. 16 Bronze Age axe hoard from Badminston Farm

across the site, which probably represents modern intrusion. Evidence of cultivated plant remains (*Triticum* sp.) was present in the contents of just three of the urns in group A. Where charred material survived in significant quantities within features it was collected for both the purpose of identification analysis and radiocarbon determination. On assessment, a large proportion of the material was deemed unsuitable for further analysis. The assessment reports from all phases of fieldwork can be found in the unpublished grey literature retained within the archive. The environmental analysis presented here focuses on the charred macro botanical remains and wood charcoal present within the fills of the cremation urns from cemeteries A, B and C.

Group A (Urns [6687], [6701], [6708], [6711], [6724], [6728], [6734], [6737], [6742], [6749], [6761], [6769]) and isolated urn [6714])

Charred macro botanical remains in urns distributed across the site were similar to those recorded in the cluster of urns discussed above. Arable weeds of knotgrass/dock, goosefoot, plantain, knotweed and black bindweed were all recorded with knotweed, knotgrass/dock, plantain and black bindweed most abundant in the fills of urns [6728], [6735] and [6711].

Occasional examples of vetch/tare/wild pea and wild grass seeds were recorded in [6687], [6701], [6708], [6711] and [6728]. Urns [6711] and [6714] (which contained cereal caryopses) and [6749] (in which a wheat (*Triticum* sp.) caryopsis and rachis fragments were noted) provide the only evidence for remains of cultivated plants.

Charcoal was moderately abundant in the fills of feature [6721] and urns [6725], [6728], [6735], [6749] and [6698]. Oak was recorded in urns [6698], [6701], [6725] and [6728]. Urns [6701], [6728] and [6735] contained hazel/alder wood charcoal and this identification was refined to alder for a well-preserved assemblage from pit [6721]. Vitrified and poorly preserved fragments were also moderately common in this group of cremation urns.

Charcoal fragments from the contents of urns [6698] and [6728] and feature [6721] were considered suitable for submission to the SUERC laboratory for AMS dating. A fragment of alder charcoal from [6721] returned a radiocarbon date of 1374–1126 Cal BC (SUERC-74041). A fragment of hazel/alder charcoal from urn [6728] returned a radiocarbon date of 1428–1278 Cal BC (SUERC-74043). Urn [6698] did not yield material suitable for radiocarbon dating.

Feature [6721] was dominated by alder (Alnus sp.) with a small number of fragments that were unidentifiable due to vitrification. The latter happens when the wood anatomy fuses, displaying a glossy appearance. Vitrification is linked to the use of high temperatures (Braadbart & Poole 2008), although recent experimental work has shown that this is not a sufficient cause for charcoal to become vitrified (McParland *et al.* 2010). A secure cause is not yet known, however it is possible that other co-factors, such as prolonged burning, presence of resin in the wood or, in the case of cremations, fat leaking from the bones into the wood could contribute with high temperatures to aid vitrification.

Urn [6728] was dominated by hazel/alder (Corylus avellana/Alnus sp.). The two taxa present many similarities in terms of wood anatomy and occasionally, when preservation is particularly poor, they cannot be differentiated. Vitrification had caused the distortion of anatomical characteristics in all the fragments from this urn. However, given that alder was identified in feature [6721], it is likely that this taxon was also represented in this context.

Urn [6698] was dominated by oak (Quercus sp.). In this case, a number of fragments were also unidentifiable due to distortions caused by vitrification. Oak wood represents an excellent fuel, and it is fairly sturdy, which makes it particularly suitable for the structure of a cremation pyre. The human cremations in this assemblage would partly mirror others arising from Bronze Age cremations across southeast England, where oak is dominant, alongside ash (cf. Alldritt 2006a, 2006b, 2006c; Challinor 2006; Gale 2009). The definite and likely dominance of alder in two deposits would be harder to explain, as other taxa that burn less well tend to appear in low amounts in cremations, as they were either used for kindling or were accidentally included into the pyre. Fresh alder wood does not burn very well, although it does make good charcoal (Taylor 1981). It is possible that alder, alongside willow/poplar identified in other contexts during assessment, was growing in proximity of watercourses or on damp ground near the site and its use in these deposits could represent opportunistic fuel acquisition.

Group B (urns [6789], [6786], [6795], [6798], [6801], [6792], [6783] and feature [6803])

Flots were reviewed from eight of the fourteen urns located within this group. Urns [6789], [6795], [6801], [6792], [6783] and feature [6803] contained charred macro botanical remains. The small assemblage comprised fragments of Legumes, including wild pea/vetches/tare (*Vicia/Lathyrus* sp.) and seeds of weed taxa such as knotgrass/dock (*Polygonum/Rumex* sp.), knotweeds (*Persicaria* sp.), black bindweed (*Fallopia convolvulus*) and goosefoot (*Chenopodium* sp.) that are common to arable land and disturbed waste ground as well as plantain (Plantago sp.) and violet (*Viola* sp.) which are typically found in grassland habitats. Grass stem fragments and woody stems with charred buds were also recorded in several of the urn deposits.

Wood charcoal fragments were recovered

from the fills of each urn in this group. On the whole fragments were small, primarily <2mm in size, although occasional fragments >4mm were noted. Oak and possible elder (cf. *Sambucus nigra*) wood charcoal was recorded in urn [6801], although the majority of fragments were distorted and often vitrified/glassy with anatomical features used for identification poorly preserved. Fragments of hazel/alder were present in urns [6792] and [6783], with oak and willow/poplar also noted in the upper spit of the latter vessel [6783]. This urn also contained distorted and vitrified fragments for which no identifications were obtained.

Macro botanical remains such as seeds and fruits were infrequent, however weed seeds common to arable land, grassland or waste/disturbed ground that are often associated with areas of settlement were identified. It is difficult to draw significant conclusions from the small quantities of seeds preserved as it is possible that seeds from plants growing in the vicinity were incorporated unintentionally if the pyre was constructed on top of such vegetation. These remains may subsequently have been translocated into the urns and buried, as inclusions with the cremated bone and wood charcoal. Weeds common to grassland are not uncommon in cremation related deposits and similar assemblages recorded by Stevens (2009) in a possible Bronze Age cremation at West Malling and Leybourne by-pass in Kent were also interpreted as remnants from the local vegetation. Infrequent cereal remains as seen in the Badminston urns provide little indication of agricultural activities in and around any settlement and may also have been incorporated inadvertently. Tubers are sometimes frequent inclusions in funerary deposits of Bronze Age date and their absence in this assemblage is therefore interesting. Tubers similar in form to pignut were recorded at Westhampnett Bypass, West Sussex (Hinton 2008) located to the north-east of Badminston, whilst elsewhere, tubers of onion couch grass (such as in Kent) are also common. Remains of charred tubers have been interpreted as remnants of tinder (Robinson 1988), possible food offerings (Moffett 1991) and as evidence for clearance of ground surrounding the pyre to create a fire break and subsequent use as kindling (Stevens 2009) or discard within the pyre. Clearance of land could also account for the occurrence of the weed seeds and occasional grass stem fragments noted in the Badminston urns. If this was undertaken, then the absence of tubers may indicate a real absence in the vegetation habitat.

Cremated bone by Lucy Sibun and Paola Ponce

Cremated bone was recovered from 23 contexts. Of these, nine produced very small quantities of unidentifiable bone: [5336], [6455], [6688], [6709], [6747], [6784], [6796], [6804] and [6807]. Human bone was identified in the remaining 14: [6436], [6696], [6712], [6715], [6744], [6750], [6756], [6770], [6778], [6779], [6781], [6787], [6790] and [6802]. With the exception of [5336] which was collected from an isolated pit and [6781] which was from an un-urned burial in group B, the twelve contexts containing positively identified cremated human bone were from the contents of urns.

The bone recovered from two contexts [6787] and [6802] was radiocarbon dated (SUERC-74407, 74408) and the results provided ages of 1437–1291 and 1492–1298 Cal BC respectively, thus positioning these cremation deposits in the Middle Bronze Age period which is broadly consistent with the pottery dating of the urns.

The presence and weight of fragments from all skeletal areas (skull, axial skeleton, upper limb, and lower limb) was noted. The minimum number of individuals (MNI) was assessed by the observation of repeated skeletal elements. The potential of the assemblage to yield demographic information regarding sex and age was considered. Sex estimates were based on the sexually dimorphic features of the skull and pelvis preserved following the diagnostic criteria by Buikstra & Ubelaker (1994). Due to the fragmentary nature of the bone, the age estimation was separated into infant, juvenile, adult, and older adult categories whenever possible following Scheuer and Black (2000).

Bone colour, a reflection of the oxidation process and indicative of the efficiency of the cremation (McKinley 2004), was assessed with reference to Holden *et al.* (1995 a, b). Finally, the material was also scanned for the presence of possible staining on bone or for animal bone.

Discussion of the results

The total amount of cremated bone recovered from all contexts analysed was 3298.07 g. The degree of fragmentation revealed that the >8mm fraction corresponded to 44.4% of the total cremated bone sampled (1467.40 g) followed by the 4–8mm size representing 38.7% (1278.17 g) of the total. The smallest fraction (2–4mm) produced the least quantities of bone (552.50 g) representing 16.7% of the total amount analysed.

The distribution of the cremated bone according to skeletal areas revealed that not all of these were represented in the assemblage. Unidentifiable skeletal fragments corresponded to the largest group, weighing 2442.22 g in total. Within the identifiable material the skull was the skeletal area most represented across all the samples contributing 391.34 g in total, followed by elements from the lower limb represented by 231.49 g. The least represented skeletal areas were those of the upper limb that weighed 190.47 g followed by the axial skeleton with only 62.90 g.

The largest quantity of cremated bone was from fill [6778] producing 1821.53 g. This quantity of bone is relatively close to the range expected of 1001.5 to 2422.5 g corresponding to a modern adult cremation (McKinley 1993).

Another example from which a relatively large amount of cremated bone was from fill [6802], producing 433.7 g. The smallest quantity of bone was from [6744], which produced only 1.59 g.

In terms of demography, it was noted that with the exception of context [6790] it was not possible to sex the remaining cases due to the absence of surviving dimorphic elements of the skull and pelvis. In cremation [6790] two fragments of un-sided temporal bones displayed a large mastoid process and a robust posterior zygomatic, which would be indicative of a possible male individual.

Similarly, due to the high degree of fragmentation, fragments enabling the age at death to be confidently established were rare and age estimates were only made having taken into consideration the size of elements. Thus, with the exception of possible infant/juvenile [6756], and [6778] where two possible adults and one juvenile were present, all cremations were thought to be of adults or possible adult individuals. In context [6778] there were repeated fragments of the cruciate protuberance of occipital bones as well as two odontoid processes of the axis of adult individuals. On the basis of fragment size and the observation of bone thickness in ribs, petrous portions of the temporal bones and skull fragments it is suggested that this cremation deposit comprised two adult individuals and one sub-adult, perhaps a juvenile. The remainder of the cremation deposits appear to contain the remains of a single individual as no repeated elements were noted elsewhere.

No evidence of pathology was noted on any of the fragments analysed and no animal bones were identified in the assemblage. It was noted that 99.5% of the collection was fully oxidised white which according to Holden *et al.* (1995a, b) suggests a highly efficient burning process (>*ca.* 600° C). The remaining 0.5% was brown in colour (or unburnt) observed only in [6750].

DISCUSSION AND CONCLUSIONS

Palaeolithic to Neolithic

Limited Upper Palaeolithic evidence is provided by a single large isolated cortical worked flint blade. This find doubles the number of Palaeolithic finds from Fawley, with an axe known from the shoreline of the Solent to the east of Cadland House in Stanswood. Thousands of Palaeolithic worked flints have been recovered from the river terrace gravels covering the New Forest, particularly from the River Solent and its tributaries.

Evidence for Mesolithic flint use on the site probably of a transient nature was provided by flint scrapers found over a wide area in both layers and residually in features suggesting they had been redeposited by ploughing and were introduced into features residually. Charcoal collected from a charcoal-rich feature in Field 7 returned an early post-glacial Mesolithic C14 determination (8712–8492 Cal BC; SUERC-74042; GU44471). The wood was identified as pine (Pinus sp.), and the calibrated C14 date range for the charcoal is within the European Pollen Zone V and VI when temperature

conditions favoured a mixed juniper, birch, pine and juniper woodland environment.

Three pits and a linear ditch dated to the Early Bronze age spread over the site represent the earliest in-situ evidence with earlier Middle Neolithic activity suggested by a single sherd of Peterborough Ware.

'Neolithic/Early Bronze Age Pits' are known throughout archaeological sites in Britain and Ireland and for most of these sites the pits represent the only activity for the period (Garrow, cited in Anderson-Whymark & Thomas 2011). This appears to be the case at Badminston Farm, to the exclusion of an isolated linear ditch in Field 8. The limited evidence at Badminston Farm indicates sparse activity. Pits [5024] and [5241] were located in the vicinity of other period prehistoric and undated features in Field 4, but clear associations to suggest function were lacking.

There is little to be said of the possible late Neolithic/Early Bronze Age ditch in Field 8. The dating evidence was slight, in keeping with the ephemeral nature of the feature, although morphologically it was clearly from a different phase to the proximal post-medieval field boundaries. Notably, the ditch was slightly kinked towards its centre suggesting that a further ditch of a similar dimensions, morphology and alignment, and also kinked towards its centre, some 40m to the west may have been contemporaneous. A simple interpretation for the features is that they represent ancient field boundaries but without similar adjoining and enclosing elements to the north and south this remains conjectural.

Bronze Age

The Bronze Age at Badminston Farm parallels, for the most part, the type of prehistoric activities recorded elsewhere on the heathlands of the New Forest (Bradley & Frazer 2010, 15; Gardiner 2007; Piggott 1943; Smith 1999). Here it consists predominantly of funerary activity in the form of denuded barrows and associated urned cremations, with burnt mounds flanking natural springs (Cook 2018). This activity centred on two topographically contrasting locations, the funerary evidence on the higher ground approximating the 20m contour at the western side of the site and the burnt mounds on the 10m contour along the site's eastern coastal margin.

The burnt mounds

There is still much debate as to the use or uses of burnt mounds. The issue is not further clarified by the situation at Badminston Farm where neither burnt mound yielded any diagnostic finds other than low quantities of pottery sufficient for dating purposes. Environmental samples from the burnt flint and charcoal fills of the features yielded little ecofactual evidence, due to the poor survival on the acidic gravel which they were cut into. The morphology and distribution of the features below both burnt mounds revealed little of their nature, comprising intercutting elements with poorly defined edges, shallow fills and uncertain relationships. Both burnt mounds contained large amorphous-shaped burnt flint spreads, sub-circular pits and closely grouped stakehole alignments which may have served to delineate or divide different activities or, alternatively, represented the foundations for some form of holding structure or platform. Whatever their true purpose, the spatial arrangement of features below both burnt mounds did not inform on the associated activities, albeit that in context of the dating and micromorphology of such features elsewhere (Gardner 2019), it seems likely that such activities were cyclical and involved multiple generations of the community responsible for their creation.

Funerary tradition

Early Bronze Age ceramic traditions were represented by three cremation urns from three distinct areas of burial including an isolated urn in Field 8, an urn burial associated with cremation cluster D, also in Field 8, and an inverted Biconical urn from cremation cluster B in Field 6. The limited material remains from the isolated inurnment and group D offer little for further characterisation; the urned cremations from group B, however, provided a coherent closely clustered group with pottery types spanning the Late Early to Middle Bronze Age. The Biconical urn, [6777], from group B represents an Early Bronze Age pottery tradition with pan-regional affiliations

from the south-east and central England, northern France and the Netherlands. It also contained the largest quantity of cremated bone from the urns, producing 1821.53 g within the expected range of 1001.5 to 2422.5 g (McKinley 1993), with this cremation fill including the remains of at least two adult individuals and one sub-adult (Sibun and Ponce above). Best represented amongst this cemetery were vessels belonging to the Deverel-Rimbury tradition and, more specifically, to a sub-regional 'Wessex' tradition. The 'Wessex' tradition is defined by Barrel and Bucket urns, particularly the 'South Lodge' type with flint and grog temper fabrics and heavy applied plastic decoration on, or immediately below the rim, and a particular type of globular jar. These are typically dated to the end of the Early Bronze Age and the beginning of the Middle Bronze Age (Seager-Thomas, this report). The cremated bone from the fill of urn [6801], returned a radiocarbon date of 1453–1298 Cal BC which places the cremation firmly in the Middle Bronze Age. This discrepancy in the dates suggests the manufacture and use of South Lodge urns continued into the Middle Bronze Age or otherwise the use or re-use of a curated vessel.

The wide distribution of Early Bronze Age urns at Badminston Farm suggests that there was no focal burial group here around or from which a later Bronze Age cemetery emanated, rather that cremation groups commenced around the same time in different areas of the site. Cemetery clusters A, B and D were formed of small groups of urned cremations and it may be that these represent the burial sites of family and kin collectives (Ellison 1980; Seager-Thomas above) albeit that there is no independent evidence to support this inference. Two of the clusters were directly paired with round barrows. These barrows would have been a conspicuous feature in the heathland landscape and they may have been discernible on the skyline from the shoreline and to anyone approaching on the water to the east and south.

Two seemingly 'paired' urned cremations at the south-western edge of Field 8 ([6122] and [6136]) were of Middle Bronze Age and Early Iron Age date, respectively. If the dating of the respective urns is secure, then the Bronze Age urn must have been visibly evidenced above ground in some fashion and such marking maintained over the extended time period between the two burials. There was no evidence of such a marker, but any possible indication could have easily been removed by later truncation.

The cluster of undated features recorded outlying the ring ditch of cremation group D, in consideration of their proximity to the ring ditch probably represented the bases of cremations.

There was no evidence to suggest that the cremations were individually marked above ground although, presumably, this could have been achieved without breaking into the ground by placement of an object or mounding of earth above it. In any case, the linkage of groups A and D to associated round barrows could have made additional marking superfluous. At Simon's Ground (White 1982) it was suggested that stakes, as evidenced by stakeholes adjacent to cremation burials, may have evidenced such markers, although these were not present in cremation group A and only one was present in group B. If cluster B lacked a mound, as the evidence suggests, it might have been served by a stake or post in the ground to locate it within the landscape rather than to mark the location of the individual inurnments within it.

Of the 34 urns recovered from the cemeteries at Badminston Farm, 17 were inverted. There were no clear examples of any urn being placed upright, further confirmed by the absence of base sherds from amongst the heavily truncated urns. This would contrast with the urn cemeteries at Simon's Ground (White 1982) and Longham Lakes, where inverted urns were in the minority. The practice of inverting the urns may have had some particular, local significance.

Both clusters A and B appear to have gone out of use by the Late Bronze Age as no early post Deverel-Rimbury fabrics were present amongst the urns. Late Bronze Age/early post Deverel-Rimbury pottery was rare from the site only found in a pit in Field 3 and in a burnt flint feature possibly associated with burnt mound B. This paucity of Late Bronze Age activity across the site suggests it was, primarily,

a focus for burial during the Middle Bronze Age and that the open, unwooded, sandy soils of the heathland presented favourable conditions for the formation of barrowed and possibly un-barrowed monuments. The cemetery location on the higher ground overlooking Southampton Water may have been a consideration in its siting as a visible memorial. The positioning of the cemetery clusters at Badminston Farm may also reflect the eastern boundary of a group of cemeteries including those to the west on Beaulieu Heath.

The falling out of use of the cemetery clusters A & B in the Late Bronze Age appears to coincide broadly with the burial of a Llyn Fawr hoard comprising 68 complete socketed axe heads in a pit approximately 2.5m to the west of the northern most cremation urn in cremation group A (Figs 3 & 6). The socketed axe deposit comprises a set of Armorican type axes of what were as cast, undamaged and unused objects (Fig. 16).

With the axes from Badminston Farm group their placement on the east side of what would have been a highly visible barrow, delimited by ring ditch [6689], and therefore also on the edge of cremation cluster A, and on the other hand its proximity to the outflow of Southampton water and the sea, implies an association with ancestral and dryland/sea boundary liminal space. The absence of broken metal objects and casting waste amongst the axe heads, confirms the hoard's ritual intents rather than its representing a founders hoard.

Armorican type socketed axes delimit the end of the Bronze Age, and transition to the Iron Age (Boughton 2015, 36). They originate from Normandy and Brittany. They were produced in large numbers and most have such a high lead contents that they could not have been used practically and they are mostly known from hoards (Henderson 2007, 93–5). Indeed, the axe types most common for the Llyn Fawr phase, the Breton and Sompting types were also not designed for practical use (Sharples 2010, 115). The largest group of Llyn Fawr phase axes from the Langton Matravers hoards on the Isle of Purbeck, comprise a large group of similarly partially finished axes. These hoards, with both a high tin and lead contents, and frequently retaining their casting cores and were found in a similar coastal location to the Badminston Farm Fawley group, on a spur overlooking the sea. Unlike the Badminston Farm group however these axes did have their casting sprues and flashing removed and were predominantly a likely locally produced Linear Faceted type Portland variant axe, as well as a smaller number of Blandford type and hybrid examples. (Roberts *et al.* 2015). The group of axes at Badminston Farm besides representing a placed deposit and the next largest sized group after the Langton Matravers hoards in southern Britain, manifests the interaction between and exchange of goods of this area with the Northwest French coast to the south, reflecting the final stages of the extensive Bronze Age trade networks.

Structures/craft activity

Groups of post- and stakehole clusters on the gently rising land in between the funerary activity on the high ground to the west and the lower eastern coastal margins of the site, may have formed buildings – albeit light structures based on the narrow girth of their foundations – associated with textile weaving (loomweights were the only diagnostic artefacts associated). Whilst representing craft activity, it does not provide evidence of a settlement on or near the site in itself, and may represent temporary, seasonal events relevant to the landscape in which it was found.

Iron Age

The evidence at Badminston Farm suggests contraction during the Late Bronze Age into the Early Iron Age, although two Iron Age pits were recorded amongst the Bronze Age and, largely, undated and possible funerary activity and an Early Iron Age inurnment at the south-west edge of the site in Field 8, suggests some activity there. Pit [6041] is of particular interest due to the quantity of pottery pertaining to at least six vessels. It was noted that at least two of these appeared to have been stacked, one on top of the other. This assemblage of bowls or jars suggests usage associated with everyday activity in contrast to the predominantly funerary association of the earlier ceramics from the site. The two, relatively deep, amorphous-shaped

features located in the south-eastern corner of Field 4 ([5012] and [5142]) contained evidence of in-situ burning suggestive of hearths but there was no nearby evidence of settlement. A further small sub-circular discrete feature in Field 4 [6563] contained parts of a finger impressed fired clay object, identified as a possible loomweight or possibly a kiln prop. The relative infrequency and isolation of these cuts does not suggest any particular focus of activity during the Iron Age on the site, however large areas of the fields in the south-east area of the site – where site evaluation had predicted a higher concentration of Iron Age and Romano-British activity – remained unexposed at the conclusion of fieldwork on the site. This area, if subject to future development, may provide settlement evidence.

Romano-British

Romano-British evidence was slight comprising a small group of linear features. A small but varied assemblage of large Roman stone fragments, comprising quern stones, sharpening stones and ballast, attests to Romano-British activity in the south-eastern part of the site. The Roman stone from the site derived variously from the east and west Dorset coast, the West Sussex coast, the Channel Islands, Brittany and south-west England which attests to the site's prominent coastal location cross channel connections.

Medieval

Dateable medieval evidence came predominantly from Field 5 with the exception of a loosely dated ditch from Field 4. The medieval remains comprised a small cluster of features in the south-east corner of Field 5, mainly comprising ditch elements.

Post-medieval

Towards the end of the 18th century it became increasingly popular amongst the wealthier landowners across the country to seek 'land improvement' in the form of rationalisation of the dispersed small farms and hamlets of the Mediaeval period into larger, more easily manageable land parcels. This pattern of land reorganisation is demonstrated by the cartographic evidence for the study site which shows a gradual rationalisation of the landscape from the Late 18th Century up to the late 19th Century.

Modern

Evidence from the latter half of the 19th Century onwards is peripheral across the site consisting mostly of dispersed discrete features, although fieldwork uncovered significant evidence of a 1930/40s RAF W/T & R/T transmission station enclosed within a steel palisade fence occupying the western half of Field 8. The 1868 OS map shows the field division much as it is at present day.

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