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LATE MESOLITHIC, MIDDLE BRONZE AGE AND LATE IRON AGE/ROMANO-BRITISH ACTIVITY AT CROWDHILL, FAIR OAK, EASTLEIGH

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ABSTRACT

Nine areas, totalling 1.3ha were excavated after evaluation and desk-based assessment at land near Crowdhill, Eastleigh (NGR 448830 119560). Features were densest in Areas 1 and 2, with evidence dating from the Palaeolithic to the early Romano-British period. Three pieces of flint from a Long Blade assemblage were recovered, probably from a small localised scatter. A core tool rough-out, probably for a Mesolithic tranchet axe, was found in a pit with charred hazelnut shells from which two radiocarbon dates were obtained.

Two cremation graves, each containing urned deposits, and an urned 'cenotaph' provide information about the inhabitants of the area although contemporary settlement evidence is lacking. By the Late Bronze Age there was evidence for settlement in the form of a pit containing flint-tempered pottery, worked flint and burnt flint along with charred cereal grain. A radiocarbon date was obtained on charred cereal grain from this pit confirming its age. There was sparse evidence for occupation in the late prehistoric period but by the early Romano-British period a number of ditches and intercutting pits as well as artefactual material (pottery, ceramic building material, fired clay and saddle quern fragments) indicates the presence of a small rural settlement in the vicinity of the site.

INTRODUCTION

In 2015 following a programme of archaeological works (desk-based assessment, heritage statement, geophysical survey, trial trench evaluation, excavation and watching brief) were undertaken by Wessex Archaeology on land at Crowdhill, Fair Oak, as a condition of planning permission being granted for the residential development of 17.3ha of land centred on NGR 448830 119560 (Fig. 1).

The site, on the south-west side of Crowdhill, lies approximately 3km east of Eastleigh and 2km east of the River Itchen. It occupies slightly undulating ground that drops from 60m OD at the south-east to 37m OD at the west. To the north and west is Crowdhill Copse which drops down to a small valley in which there is a stream flowing west then south towards the Itchen valley. The underlying geology of the eastern part of the site is mapped as Wittering Formation Sand, Silt and Clay (British Geological Survey online viewer); Whitecliff Sand Member is recorded across the remainder of the site with the exception of an area of London Clay in the north-eastern corner.

The evaluation (Wessex Archaeology 2015) had identified a number of areas of archaeological potential within the site and as a result nine areas, totalling 1.3ha, were subject to strip-map-and-record excavation. These comprised two larger areas in the eastern part of the site – Areas 1 and 2, measuring 3400m² and 6710m², respectively – where the evaluation had indicated the highest density of features, and an array of smaller areas (Areas 3–9), each approximately 20m by 20m, focused on single or small groups of features in individual trenches. The watching brief was maintained during groundworks associated with the construction of an access road, and a swale along the south-western edge of the site.

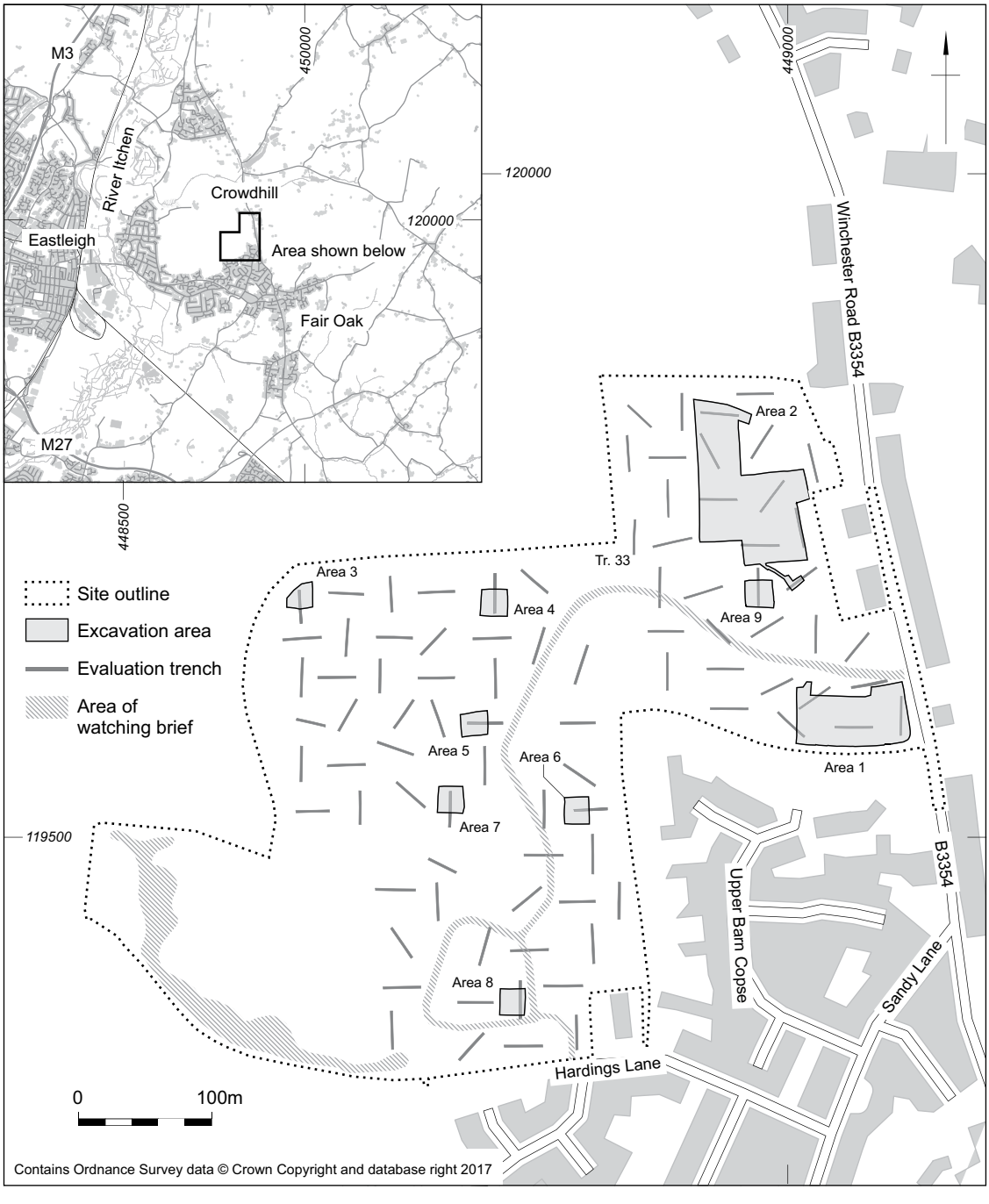

Fig. 1 Site location

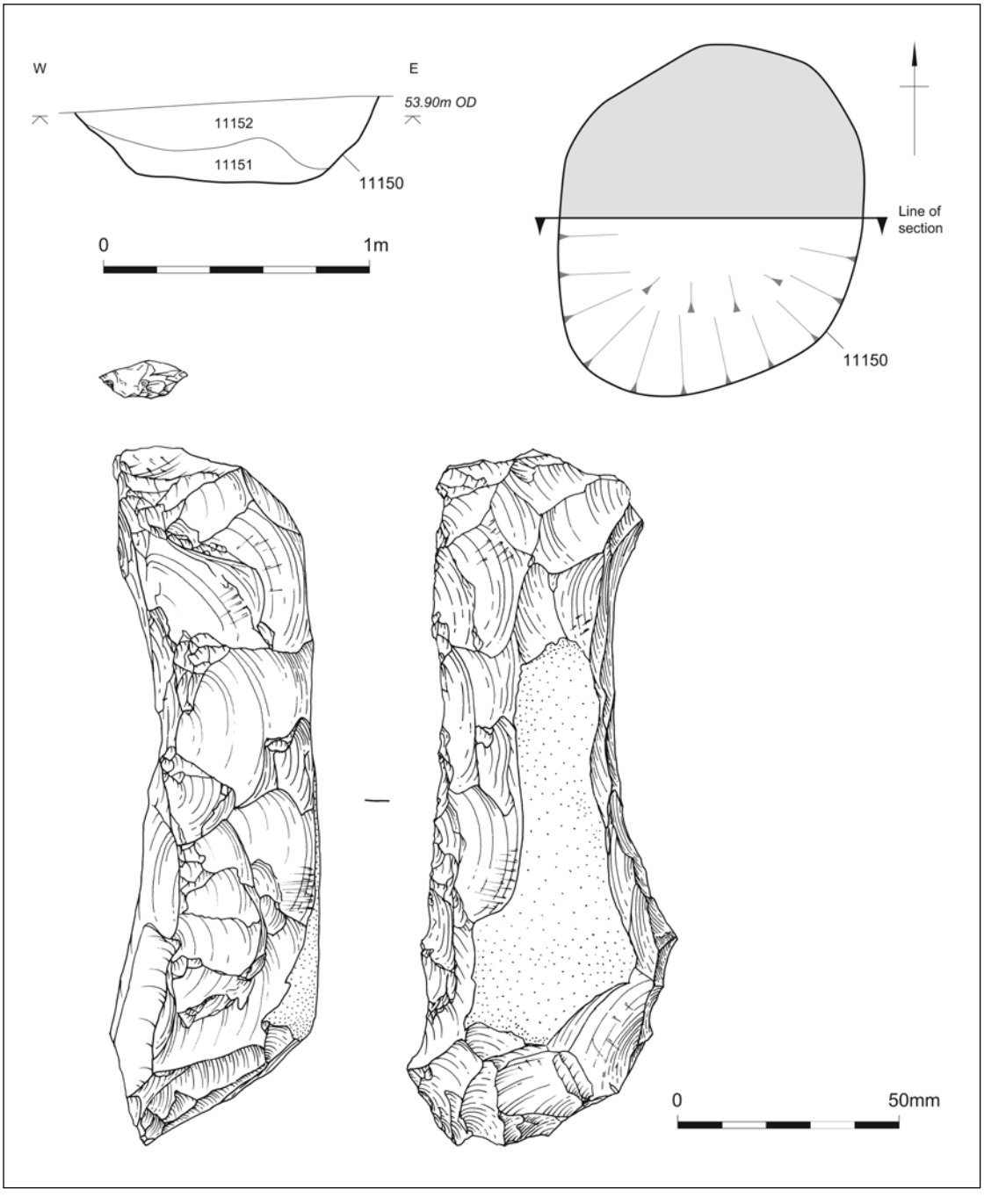

Fig. 2 Mesolithic feature 11150, plan and south-facing section, illustration of worked flint

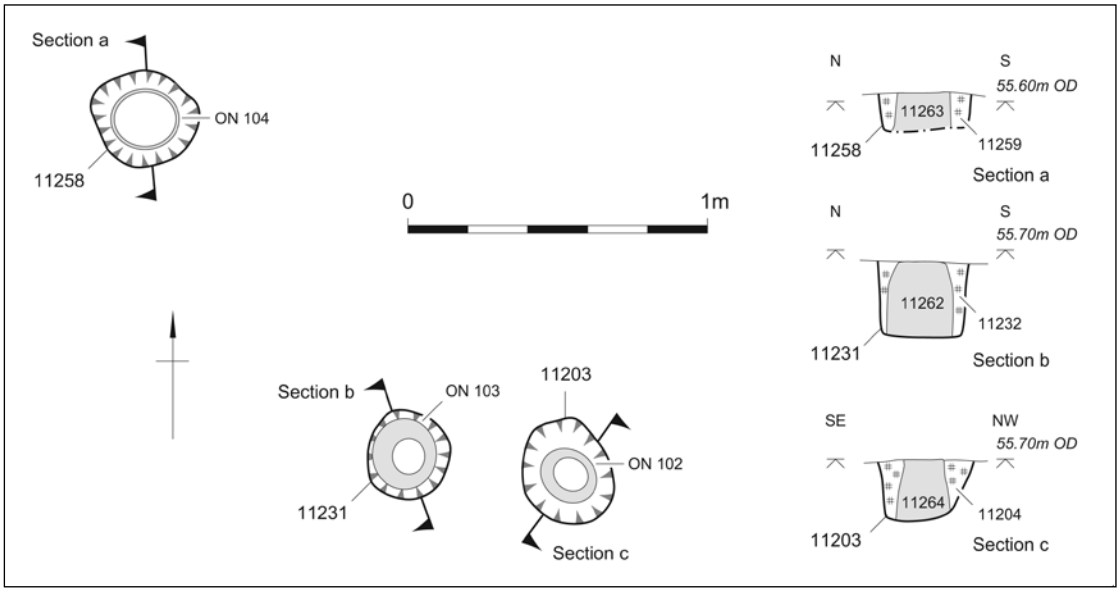

Fig. 3 Middle Bronze Age cremation graves 11231 and 11258 and feature 11203, plans and sections

ARCHAEOLOGICAL BACKGROUND

There is no evidence for early prehistoric activity from in the vicinity of the site, although a large assemblage of Palaeolithic handaxes was recovered from Colden Common, 2.5km to the north (Gardiner 2002) and Mesolithic flint tools have been recorded at Knowle Hill and Stoke Common approximately 1.6km to the south-east and north-west, respectively (Wymer 1977).

A number of cropmarks in and around the site may be of prehistoric date, some of which, situated along a ridge to the north-west, have been interpreted as possible Bronze Age round barrows. Further evidence for Bronze Age funerary activity consists of a scheduled round barrow (SM 1012710) at Moorgreen, approximately 4km to the south. Other cropmarks could be of Iron Age or Romano-British date, although there is no firm evidence for activity in either period within the site.

Isolated finds of Romano-British material, including pottery, have been recorded from several locations, including at East Horton Farm, approximately 2km to the south-east (Wessex Archaeology 1987). The Roman road that ran between *Venta Belgarum* (Winchester) and *Portus Adurni* (Portchester) lies some 3.5km to the east, while that between *Venta Belgarum* and *Clausentum* (Bitterne in Southampton) ran 4km to the west.

PALAEOLITHIC AND MESOLITHIC

During the evaluation, a naturally backed flint blade (Fig. 8.1) was recovered from the subsoil (1402) in trench 14 (Fig. 6), which could form part of a Long Blade industry dating to the end of the Last Glaciation (*c.* 10,000–9,000 BC) (see *Worked flint*, below). A second blade (Fig. 8.2) and a broken flake (Fig. 8.3), both residual, were recovered during the excavation from a ditch (11218, slot 11160) within 2–3m of trench 14 (in the southern part of Area 2), and together the three pieces appear to form part of a single assemblage (see *Worked flint*, below).

Evidence of activity during the Mesolithic was indicated by a subcircular pit (11150) (Fig. 2) (or possible a tree-throw hole) towards the

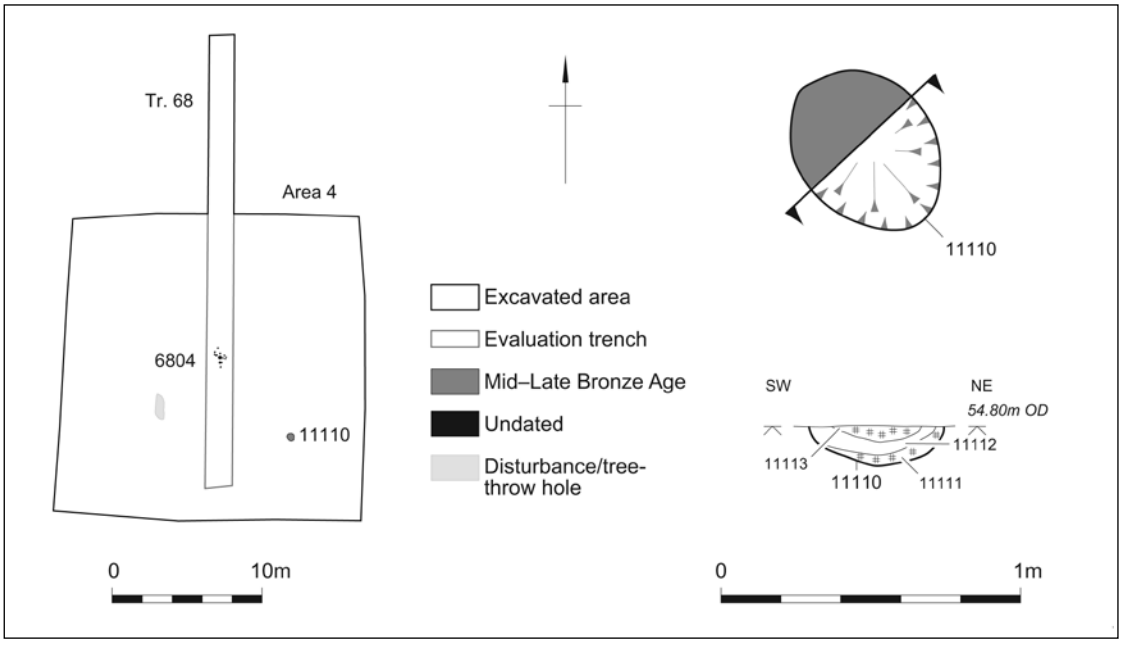

Fig. 4 Late Bronze Age pit 11110, plan and south-east-facing section

northern end of Area 2 (Fig. 6). It was 1.15m by 1.4m wide and 0.33m deep, with moderately steep sides and a flat base, and had two fills, a moderately stony silty clay (11151) on the base and a similar but less stony upper fill (11152). The pit was half-sectioned, and the only find from the excavated half was a core tool rough-out (Object number (ON) 101) (Fig. 2), possibly for a Mesolithic tranchet axe, recovered from the upper fill, along with fragments of charred hazelnut shells. Two samples of hazelnut shell were submitted for radiocarbon dating and returned significantly different dates: of 5290–5040 cal BC (SUERC-74971, 6199±33 BP) and 4230–3970 cal BC (UBA-34996, 5254±37 BP) (Table 4). Both dates fall within the Late Mesolithic, but UBA-34996 is approximately 1000 years later falling immediately before the onset of the Neolithic (see *Radiocarbon Dating*, below).

Further Mesolithic flints were recovered from the subsoil across the site, and residually from later ditches (see *Worked flint*, below).

MIDDLE AND LATE BRONZE AGE

There were two Middle Bronze Age cremation graves (11231 and 11258) and an associated cremation-related feature (11203), all within 2m of each other in Area 2, each containing urned deposits (Figs 3 & 6); the very small quantity of cremated bone in feature 11203 may indicate that the vessel contained a 'cenotaph' deposit (see *Human bone*, below). All three features were 0.30–0.35m in diameter and 0.13–0.25m deep with vertical sides and flat bases. The three vessels – Bucket Urn ON 103 in grave 11231, Globular Urn ON 104 in grave 11258, and Bucket Urn ON 102 in feature 11203 – were all inverted. Although the deposits had been damaged by ploughing this did not appear to have led to any loss of bone. The two burials (graves 11231 and 11258) were of individuals aged over 18 years, while the bone in feature 11203 was from an individual aged over 13 years. Samples of cremated human bone from the two graves and the cremation-related deposit were submitted for radiocarbon

Table 1 Quantification of pottery by period and ware type

Ware type	*No.*	*Wt (g)*	*% sherds*	*MSW (g)*
Middle Bronze Age				
Flint-tempered ware (F1)	304	2490		
Fine flint-tempered ware (F2)	59	762		
Middle Bronze Age subtotal	*363*	*3252*	*58.6*	*9.0*
Late prehistoric				
Flint-tempered ware	20	48		
Sandy ware	1	11		
Late prehistoric subtotal	*21*	*59*	*3.4*	*2.8*
Late Iron Age/Romano-British				
Central Gaulish samian	1	5		
Amphora	9	406		
Other imports	5	48		
South-east Dorset Black Burnished ware	8	87		
Flint-tempered ware	17	420		
Grog-tempered ware	6	177		
Oxidised ware	39	257		
Sandy ware	104	1338		
Greyware	13	145		
Late Iron Age/Romano-British subtotal	*202*	*2883*	*32.6*	*14.3*
Medieval				
Laverstock-type coarseware	13	206		
Medieval coarseware	2	9		
Medieval subtotal	*15*	*215*	*2.4*	*14.3*
Post-medieval/modern				
Redware	1	13		
White salt glazed ware	1	11		
Refined whiteware	15	83		
Stoneware	2	35		
Post-medieval/modern subtotal	*19*	*142*	*3.0*	*7.5*
Total	620	6551		10.6

Table 2 Summary of scan of cremated human bone

Cut	*Context*	*Deposit type*	*Weight (g)*	*Age/sex*	*Pathology/pyre goods*
11231	11232	grave fill	0.2	= 11262	-
11258	11259	grave fill	0.6	= 11263	-
11231	11262	urned burial	423.6 *(600.6)*	subadult/adult 15–30 yr ??female	-
11258	11263	urned burial	361.5 *(525.5)*	subadult/adult 15–35 yr ?female	blue/green spot staining – femur
11203	11264	?cenotaph	28.7 *(28.8)*	subadult/adult >12 yr	periosteal new bone – tibia

Table 3 Charcoal results (showing fragment count)

	Feature	*?Cenotaph 11203*		*Grave 11231*		*Grave 11258*		*Pit 11110*
	Context	*11204*	*11264*	*11232*	*11262*	*11259*	*11263*	*11111–3*
	Sample	*107*	*115*	*108*	*112*	*111*	*113*	*105*
Quercus sp.	Oak	-	1	24 (h)	25 (hb)	-	-	26 (rhs)
Betula sp.	Birch	-	-	-	-	-	-	6 (r)
Alnus glutinosa Gaertn.	Alder	19 (r)	9 (r)	-	-	25	10	6
Corylus avellana L.	Hazel	-	-	-	-	-	-	4
Alnus/Corylus	alder/hazel	-	3	-	-	-	-	1
Prunus spinosa L.	Blackthorn	-	-	-	-	-	-	2
Maloideae	hawthorn group	6	12	-	-	-	-	3r
Acer campestre L.	field maple	-	-	-	-	-	-	2
Fraxinus excelsior L.	Ash	-	-	1	-	-	-	-

dating (Table 4). All three dates fall mostly within the 15th century cal BC and could have been made within a period of up to two to three generations (approximately 50 years) (see *Radiocarbon dating*, below). The two cremation burials, 11231 and 11258, were made at some point during *1520–1430 cal BC* (SUERC-70575, BRAMS-2071 at 95% probability) and *1510–1430 cal BC* (SUERC-70576, BRAMS-2073 at 95% probability), respectively. The cremation-related deposit, 11203, was made during *1500–1320 cal BC* (SUERC-74087, BRAMS-2072 at 95% probability).

A single small pit (11110) in Area 4 (Fig. 4), 0.45m wide and 0.13 deep, contained three sherds (10g) of flint-tempered pottery of possible Late Bronze Age date, along with three pieces of struck flint and 305g of burnt flint. The finds, along with flecks of charcoal, were found in the lower and upper of the pit's three fills. A charred cereal grain submitted for radiocarbon dating returned a date in the Late Bronze Age of 920–810 cal BC (UBA-34995, 2715±35 BP at 95% confidence). The only other features in this part of the site were a posthole (6804) surrounded by a cluster of stakeholes, 7m to the north-west, recorded during the evaluation (Fig. 4); the posthole had contained a well-made flint end scraper of possible Late Neolithic/Early Bronze Age date.

POSSIBLE LATE PREHISTORIC

In Area 1, a shallow curving ditch or gully (11057), 0.4–0.6m wide and up to 0.2m deep, aligned approximately north-west to south-east (Fig. 5), produced no finds but was cut by Romano-British ditches 11056 and 11058 (see below), and therefore could be of later prehistoric date. There was a narrow terminal immediately north-west of ditch 11056, but the ditch's line may have been extended for at least a further 6m, to where another possible terminal was obscured by a tree-throw hole.

A number of features contained sherds of pottery datable only as late prehistoric. These included ditch 11219 in Area 2 (Fig. 6), which contained 11 flint-tempered late prehistoric sherds (28g), as well as single sherds of Late Iron Age/early Romano-British, Romano-British and medieval date, along with small quantities of struck and burnt flint. Some of this material must be either residual or intrusive, and the ditch therefore cannot be securely dated, but it is at least possible that it is of later prehistoric date. The ditch aligned north-west and was traced for 44m, was 0.7–1m wide and 0.2–0.3m deep with moderately steep sides with a concave base.

There were a number of other undated ditches on the site which could be contemporary with ditch 11219, and therefore represent part

Table 4 Radiocarbon dating results

Lab. reference	*Feature*	*Context/sample*	*Material*	*Date uncal BP*	*δC^{13}‰ (IRMS)*	*Calibrated (2 sig. 95.4%)*	*Posterior density estimate (95%)*
SUERC-74971	Pit 11150	11152/109 II	*Corylus avellana* shell frag.	6199±33	-25.9‰	5290–5050 cal BC	-
UBA-34996	Pit 11150	11152/109 I	*Corylus avellana* shell frag.	5254±37		4230–3980 cal BC	-
SUERC-70575	Cremation grave 11231	11262/4D	1 frag. human femur	3237±33	-22.5‰		
BRAMS-2071				3216±25	-32.8		
Combined (SUERC-70575 + BRAMS-2071) **χ^2 T'=0.3; ν=1; T'(5%)=3.8**				**3224±20**		**1530–1430 cal BC**	***1520–1430* cal BC**
SUERC-74087	Cremation-related feature 11203	11264	Cremated human long bone shaft fragments 1.6 g)	3163±29	-25‰		
BRAMS-2073				3221±23	-24.2‰		
Combined (SUERC-74087 + BRAMS-2073) **χ^2 T'=2.5; ν=1; T'(5%)=3.8**				**3199±19**		**1510–1420 cal BC**	***1510–1430* cal BC**
SUERC-70576	Cremation grave 11258	11263/4B	3 frags human femur	3130±35	-21.1‰		
BRAMS-2072				3127±24	-27.5‰		
Combined (SUERC-70576 + BRAMS-2072**) χ^2 T'=0.0; ν=1; T'(5%)=3.8**				**3128±20**		**1440–1310 cal BC**	***1500–1320* cal BC**
UBA-34995	Pit 11110	11111–3/105	*Triticum* cf. *spelta* grain	2715±35		920–810 cal BC	-

of a more extensive potentially prehistoric field system. These include parallel ditches 11168 and 11170, which were 13–15m apart and ran north-east to south-west, at right angles to ditch 11219 (Fig. 6); ditch 11219 terminated 24m from ditch 11170. They extended across the whole of Area 2 but were not recorded in surrounding evaluation trenches. Ditch 11168 was up to 1.4m wide and 0.4m deep, with a profile similar to ditch 11219. Ditch 11170 was more substantial, up to 1.6m wide and 0.7m deep.

There were two further undated ditches, arranged at a right angle, at the northern end of Area 2 (Fig. 6). East–west ditch 11193 continued west beyond the excavation, but ended to the east at a large undated subcircular feature (2513), partially revealed during the evaluation (but not subsequently during the excavation), which appeared to be a group of intercutting pits; their relationship was not established. The second ditch (11171) was aligned north–south from pit group 2513. Both ditches had similar dimensions and profiles, 0.7m wide and 0.5m

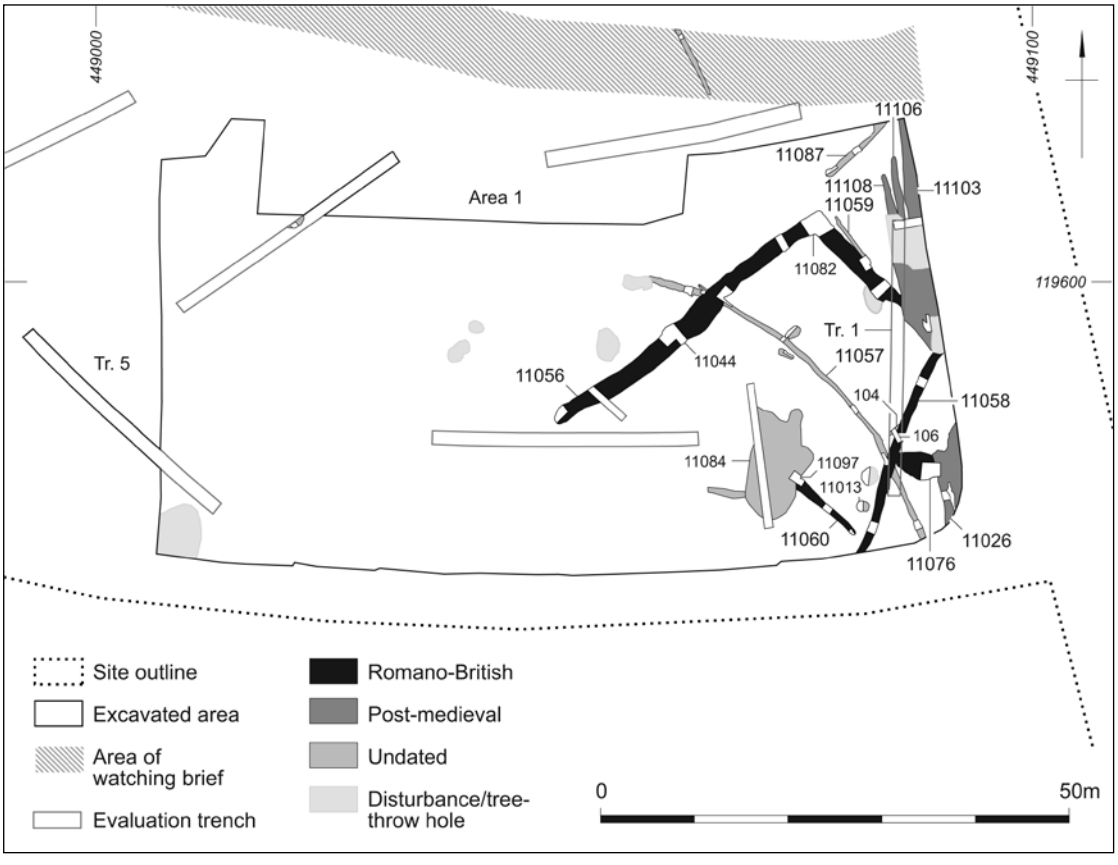

Fig. 5 Area 1 plan of phased features

deep with steep sides. The only find was one piece of worked flint from ditch 11171.

A number of other short lengths of undated ditch, on variable orientations, were recorded during the evaluation, excavation and watching brief stages, but they form no obvious pattern or relationship with other dated or undated features. These included north–south ditch 11218, from which two pieces of Late Palaeolithic flint were recovered (see above).

Similarly, some of the undated discrete features could be of later prehistoric date. For example, a shallow circular pit (11013), 1.2m in diameter and 0.2m deep, 4m west of gully 11057 (Fig. 5), contained single pieces of worked flint and burnt flint.

LATE IRON AGE/ROMANO-BRITISH

The bulk of the pottery from the site was of Late Iron Age/Romano-British (117 sherds, 1606g), early Romano-British (36 sherds, 258g) or general Romano-British (45 sherds, 813g) date, suggesting a period of activity spanning the 1st–mid 2nd centuries AD. All of it came from Area 1 (Fig. 5), and 94% (by weight) came from three features – ditches 11056 and 11058 which may be associated, and a group of intercutting pits (11076).

Ditch 11056 was aligned north-east and traced for 35m from a point where it appeared to have been completely truncated (rather than having a defined terminal), before turning to the south-east for a further 12m. Beyond this it was cut by a large modern feature on the

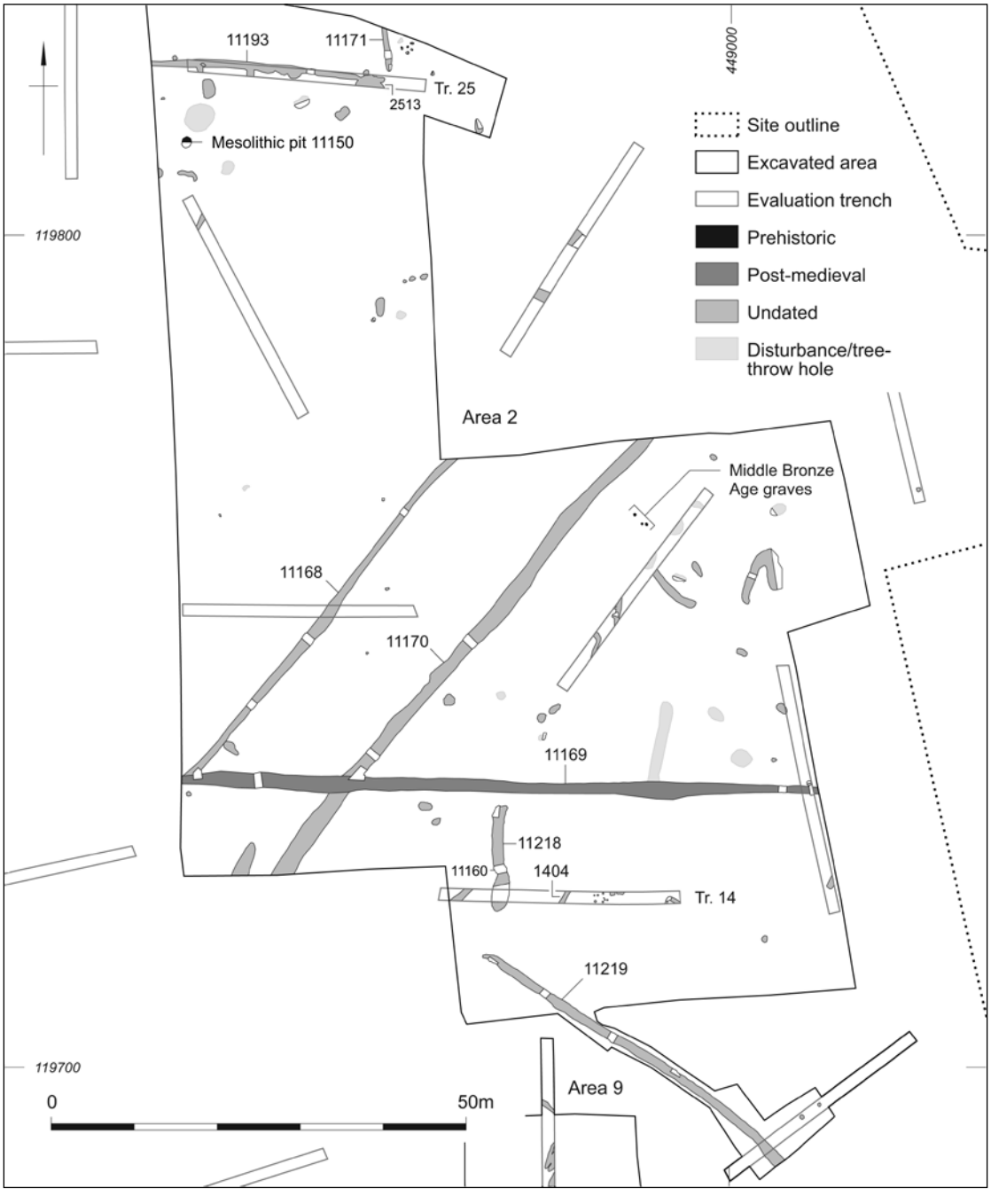

Fig. 6 Area 2 plan of phased features

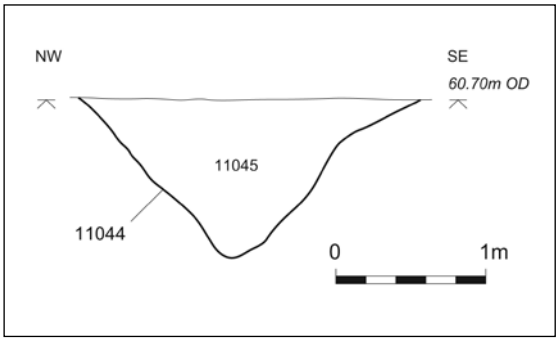

Fig. 7 Romano-British ditch 11056, south-west facing section of slot 11044

edge of the excavation. The ditch was up to 2.3m wide and 1.05m deep, with a generally V-shaped profile (Fig. 7). It produced 96 sherds (1451g) of Late Iron Age/Roman-British pottery and eight sherds (83g) dated only as Romano-British, and six pieces (1258g) of Romano-British ceramic building material (CBM), as well as an unidentifiable scrap of iron (5g), 17 pieces of worked flint and 776g of burnt flint.

From the south end of the modern feature there was a less substantial SSW aligned ditch 11058 (Fig. 11). It was recorded during the evaluation (slot 106) as 1.5m wide and 0.5m deep with moderately steep straight sides and a flat base, but was more heavily truncated by the machine stripping (no more than 0.25m deep) when examined during the excavation. It produced 34 sherds (380g) of Late Iron Age/early Romano-British pottery, six pieces (893g) of Romano-British CBM and a fragment of saddle quern (ON 100), as well as two pieces of worked flint and a large quantity (almost 37kg) of burnt flint, most of the latter recovered during the evaluation from slot 106, fill 108 (Fig. 11).

Immediately east of ditch 11058 was a small cluster in intercutting pits (11076), up to 0.9m deep, and measuring together at least 4m east–west by 3m north–south (Fig. 12). At the west these abutted the ditch, but their stratigraphic relationship with it was not established. The south-eastern quadrant of the pit group was excavated and produced 50 sherds of pottery of Late Iron Age/early Romano-British (10 sherds, 75g), early Romano-British (36 sherds, 258g) and Romano-British (4 sherds, 352g) date, as well as one piece of Romano-British CBM (42g) and quantities of fired clay (486g) and burnt flint (492g). At the east, the relationship between the pit group and a north–south gully (11026, below) was also not established.

Three Late Iron Age/early Romano-British sherds (16g) were also recovered from a 9m length of shallow gully (11060), 0.65m wide and up to 0.1m deep, which appeared to terminate at its south-eastern end just short of ditch 11058, and which was cut at the north-west by another possible group of intercutting pits. The only finds from this group were an iron nail (from pit 11097), and two sherds (one Late Iron Age/early Romano-British, the other Romano-British) from an overlying spread of soil (11084).

MEDIEVAL, POST-MEDIEVAL AND MODERN

Medieval activity is represented by 15 sherds (215g) of pottery, nine of them from the upper fill of Romano-British ditch 11056, at its northern corner (slot 11082) (Fig. 5). A further four of the sherds came from the south-west terminal of a smaller ditch (11087), 0.8m wide and 0.3m deep, 4m north-east of the corner, and with a similar orientation to the western part of ditch 11056. Single medieval sherds were also recovered from ditch 11219 in Area 2 (Fig. 6), and from the subsoil in evaluation trench 5 (Fig. 5).

A substantial east–west ditch (11169), extending across the full width of Area 2, and recorded further west in evaluation trench 33 (Fig. 1), matches the line of a field boundary shown on the 1840 Bishopstoke tithe map (HRO ref: 21M65/F7/21–2). It was just over 2m wide and up to 0.44m deep with moderately steep sides and a concave base. Its fill contained fragments of modern brick and clinker, as well as residual pieces of struck flint. It cut ditches 11168 and 11170 (see above).

Three parallel north–south ditches (11103, 11106 and 11108) were recorded in the north-east corner of Area 1 (Fig. 5). Although none contained datable finds, their roadside location

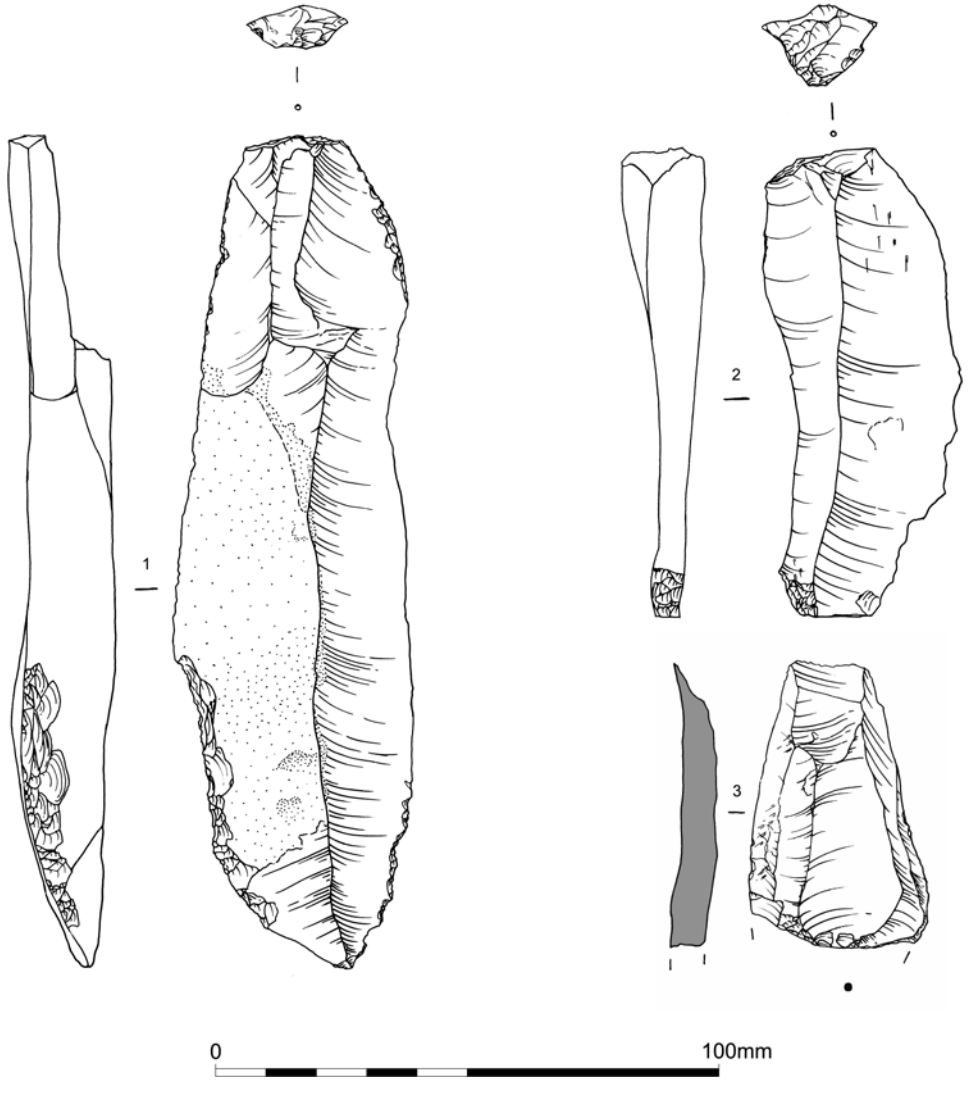

Fig. 8 Worked flint 1–3

(alongside the current B3354) and the presence of clinker in the fill of ditch 11103, strongly suggest they are of post-medieval/modern date. All had moderately steep sides, and while ditches 11006 and 11008, which were 0.32m and 0.36m deep, petered out to the north, ditch 11003, at 0.68m deep, continued beyond the excavation area. To the south they were cut by the modern disturbance. Further to the south there was another undated gully (11026) on a similar line, whose relationships with Romano-British pit group 11076 to its west, and an irregular feature to the east, were not established.

Three small groups of postholes may also be of relatively recent date. One group, of up to seven postholes (some intercutting) averaging 0.2m diameter and 0.2–0.6m deep, lay at the northern end of Area 2 (east of ditch 11171) (Fig. 6). All contained small amounts

of charcoal. They were very well preserved, and there were similar features nearby still containing the remains of posts. A group of five postholes near the southern edge of Area 9 (Fig. 1) were similar in appearance (and again there were modern posts nearby), as were a group of eight postholes in evaluation trench 14 (Fig. 6), in Area 2.

FINDS AND ENVIRONMENTAL REPORTS

Worked flint by Phil Harding

The archaeological evaluation and subsequent phase of excavation produced 90 pieces of worked flint from 29 contexts. Only 55 pieces were collected from stratified deposits, which were predominantly from ditch sections; none represented *in situ* knapping deposits nor was microdebitage present. Despite the derived nature of the material most artefacts from stratified deposits remained relatively fresh with no post-depositional edge damage, a characteristic that was common on material from the ploughsoil. All artefacts were unpatinated and indicated that flint was of good quality and probably obtained from surface deposits, including fluvial or marine gravel.

The bulk of the assemblage comprises large, robust core trimming flakes. This component is generally undiagnostic but survives better in ploughsoil contexts than more fragile thinning and trimming by-products. Two small groups of material deserve more detailed comment. These groups both illustrate the length of human activity in the area and the exploitation of what is currently documented as a poorly occupied Post Glacial landscape.

A naturally backed blade, 162mm long, with a faceted butt and abrupt, direct backing at the distal end (Fig. 8.1) was found in the subsoil (1402) in evaluation trench 14. A second blade, 91mm long, also with a faceted butt and traces of cresting at the distal end (Fig. 8.2), and a broken flake, 56mm long (Fig. 8.3), were recovered subsequently from a short unphased ditch (11218, slot 11160) which crossed the same trench. The broken flake was detached to remove a hinge fracture from an opposed platform blade core. These three artefacts, which were probably made from fresh flint obtained direct from the Chalk, show identical technical ability on the part of the knapper and were undoubtedly derived from one assemblage. It is likely that additional material from this assemblage was present within the unexcavated subsoil and formed part of a small localised flaking scatter. Taken together the consistent use of blade technology employing faceting, suggests that this small collection represents 'Long Blade' or Epipalaeolithic technology and dates to the end of the Last Glaciation (*c.* 10,000–9,000 BC).

The presence of Mesolithic (9,000–4,000 BC) groups in the area is also indicated by a core tool rough-out, possibly an un-struck tranchet axe (Fig. 2), from pit 11150 in the north. Radiocarbon determinations derived from carbonised hazelnut shells produced two statistically inconsistent measurements of 4230–3980 cal BC (UBA-34996, 5254±37 BP) and 5290–5050 cal BC (SUERC-74971). Additional Mesolithic activity is indicated by the recovery of a well worked blade core with opposed striking platforms from the secondary fill of ditch Romano-British 11056 on the eastern margins of the site.

The remaining artefacts and bulk of the assemblage was largely composed of undiagnostic flakes that are frequently ascribed to the Neolithic and Bronze Age; some are likely to be contemporary with the Bronze Age activity at the site. Individual blade fragments may be additional indicators of Mesolithic activity but may equally relate to Early Neolithic occupation.

The worked flints from Crowdhill are significant. They document the embryonic use of the landscape in the Hampshire Basin at the end of the Last Glaciation, pre-dating the introduction of agriculture. The site location forms an integral part of this land use, offering a ready water supply in the Crowdhill Copse stream. It is unclear by how much the local environment may have changed following the retreat of the ice, possibly developing from a relatively open appearance into a more heavily wooded landscape. Within this developing environment the west-facing slopes of the location may have been more favourable and encouraged reuse.

The Long Blade technology is present in many parts of Britain and represents a

European tradition most closely related to the Ahrensburgian culture of Germany and Northern France (Barton 1997). Evidence of this period from the region remains sparse (Hey 2014). Records are largely restricted to river valley locations, most notably from the Rivers Kennet (Froom 2005) and Colne (Lewis with Rackham 2011) with only isolated evidence from inland locations, as at Deer Park Farm (Green *et al.* 1998). Sites also coincide with sources of high-grade flint (Barton 1997, 131). The discoveries from Crowdhill reflect many of these trends, maintaining links with the River Itchen yet extending evidence of activity beyond the confines of the floodplain to the margins of the river basin. In addition, the strong links with the Chalk escarpment, which lies only 10km to the north, are maintained. The relatively limited quantity of material suggests that the location was occupied for only a relatively short period, possibly by a small group which may have formed part of a much larger band. These communities are recognised as having relied largely on hunting, following a range of species including wild horse across an established territorial range.

The Mesolithic activity at the same location may have been determined by ancestral knowledge of their environment and resulted in return visits on a seasonal or intermittent basis. Evidence of Mesolithic activity is similarly sparse in the immediate area, although it is not unknown. The lack of evidence may to some extent relate to the nature of and lack of previous fieldwork. Wymer (1977) recorded Mesolithic material from the immediate area around Crowdhill, including five micro-cores from Allington Manor Farm, Fair Oak, five microliths and 10 blade cores from Knowle Hill, Fair Oak and two tranchet axes and 12 blades and flakes from Stoke Common, Bishopstoke; other tranchet axes were listed from Eastleigh. The work at Crowdhill has provided reliable radiocarbon determinations to demonstrate continued presence in the area through to the end of the Mesolithic into the establishment of more settled communities.

Pottery by Elina Brook

The pottery assemblage totals 620 sherds (6551g) and ranges in date from the Middle Bronze Age to post-medieval, although the focus is primarily on the Middle Bronze Age and Late Iron Age to early Romano-British period. Most of the sherds are of small to medium size (mean sherd weight of 10.6g) and a large proportion have suffered high degrees of abrasion on surfaces and broken edges.

The Middle Bronze Age assemblage has been subjected to detailed fabric and form analysis, in accordance with the current nationally recognised guidelines (PCRG, SGRP and MPRG 2016). These sherds were examined using a x10 power binocular microscope and assigned to a fabric group based on the most frequent or most obvious inclusion type. The vessels were assigned a form type, and other variables such as surface treatment and firing were also recorded. All other sherds were assigned to broad ware groups (e.g. flint-tempered ware; sandy ware) or known fabric types (e.g. Central Gaulish samian). Established type series were used to record the South-east Dorset Black Burnished wares (Seager Smith & Davies 1993), while the remainder of the rims were recorded using broad form types (e.g. everted rim jar; flanged bowl) and compared with those from other, nearby sites (e.g. Dairy Lane, Nursling; Dowd's Farm, Hedge End; Winnall Down; Twyford Down). A breakdown of fabric totals by chronological period is presented in Table 1.

Middle Bronze Age

The entire Middle Bronze Age assemblage was recovered from two graves (11231 and 11258) and a cremation-related feature (11203) in Area 2. Each feature contained a fragmentary inverted vessel associated with cremated human remains. Two flint-tempered fabrics were identified, one (F1) much coarser than the other (F2). Both are likely to have been locally produced. They are described as follows:

F1: A soft fabric containing common (20%), moderately sorted, sub-angular flint (1–3mm), sparse (3%), poorly sorted, sub-rounded iron oxides (< 1mm), and rare (< 1%) sandstone (< 2mm) in a slightly micaceous sandy matrix.

F2: A soft fabric containing common (20%), moderately sorted, sub-angular fine flint

(< 1mm), sparse (3%), poorly sorted, sub-rounded iron oxides (< 1mm) and rare carbonised organic material (< 2mm) in a slightly micaceous sandy matrix.

With the exception of a single fragment of base angle (cremation-related feature 11203), the base and lower parts of all three vessels are missing. Two of the vessels are Bucket Urns (feature 11203, Fig. 9.1; grave 11231, Fig. 9.2) both made in the coarser flint-tempered fabric F1. They are of neutral profile and have plain, slightly inturned rims, flattened in places. The rim of the vessel from cremation-related feature 11203 is internally expanded (form R1), whilst the rim of the urn from grave 11231 varies from rounded to internally expanded around its circumference (form R2). Coarse wipe marks are also visible on the interior surface of this urn. Neither vessel appears to be decorated, although the exterior surface condition is so poor that more subtle forms of decoration, such as fingertip impressions, may have been lost. The third vessel is a Globular Urn (grave 11258, Fig. 9.3) made in the fine flint-tempered fabric (F2). This has a plain, upright rim (form R3) with a horizontal row of at least nine plain lugs/bosses arranged approximately 70mm below the rim. The exterior surface is burnished.

Stylistically, these vessels fit within the Central Wessex group of Middle Bronze Age pottery as defined by Dacre & Ellison (1981, 173–83). The Globular Urn is comparable to Type 1B vessels (*ibid.*, 176, fig. 15, D/E 5), whilst the Bucket Urns are likely to fall within the Type 3 category (*ibid.*, 173). Radiocarbon dating on samples of human bone from graves 11231 and 11258 and cremation-related deposit 11203 have been modelled with the results shown in Figures 14 and 15 and Table 4 suggesting that the vessels were in use during the 15th century cal BC.

Given the small size of the assemblage (just three vessels), the potential for further interpretation or discussion is limited, although it clearly reflects the broader patterns of Middle Bronze Age ceramic deposition documented for the region. Larger assemblages of comparable date have been found at Twyford Down (Woodward 2000), Locks Heath, Fareham (McSloy & Ellis 2016), Dairy Lane, Nursling (Morris 1997) and Easton Lane, Winchester (Ellison 1989), for example, while small quantities have also been recovered from Bowden Lane, Portswood (Leivers 2013), Chandler's Ford (Entwistle 2001), Southampton Airport (Sulikowska 2010) and Lovedean (Nichol 2016).

Illustrated Middle Bronze Age pottery (Fig. 9. 1–3)

1. Bucket Urn, neutral profile, flattened rim, slightly inturned and internally expanded (form R1); flint-tempered ware (fabric F1); context 11264, cremation-related feature 11203, ON 102, PRN 2
2. Bucket Urn, neutral profile, variable rim, slightly inturned (form R2); flint-tempered ware (fabric F1); context 11262, grave 11231, ON 103, PRN 1
3. Globular Urn, plain upright rim (form R3); fine flint-tempered ware (fabric F2); context 11263, grave 11258, ON 104, PRN 3

Late prehistoric

Twenty-one abraded sherds could only be allocated a broad late prehistoric date. Twenty pieces are in coarse, flint-tempered fabrics including one small rounded rim fragment found in ditch 11219. This sherd has possible fingernail impressions below the rim and may be Bronze Age in date. A single abraded sandy ware body sherd, found in subsoil 11001, could be of either Iron Age or Late Iron Age/early Romano-British date.

Late Iron Age/early Romano-British pottery

Late Iron Age/early Romano-British pottery accounts for approximately 33% of the assemblage (by sherd count; 44% by weight) and largely appears to date from the 1st into the 2nd centuries AD. It is dominated by a broad range of 'local' coarse wares with a very small quantity of imported ware.

The plain body sherd of Central Gaulish samian came from ditch 11056 and is likely to date to the 2nd century AD. This ditch also contained five sherds of unsourced amphora, in a very soft, abraded fabric. Other imported wares include five sherds of probable North Gaulish White ware and four sherds from Baetican Dressel 20 amphora, including one handle fragment. The latter was the most

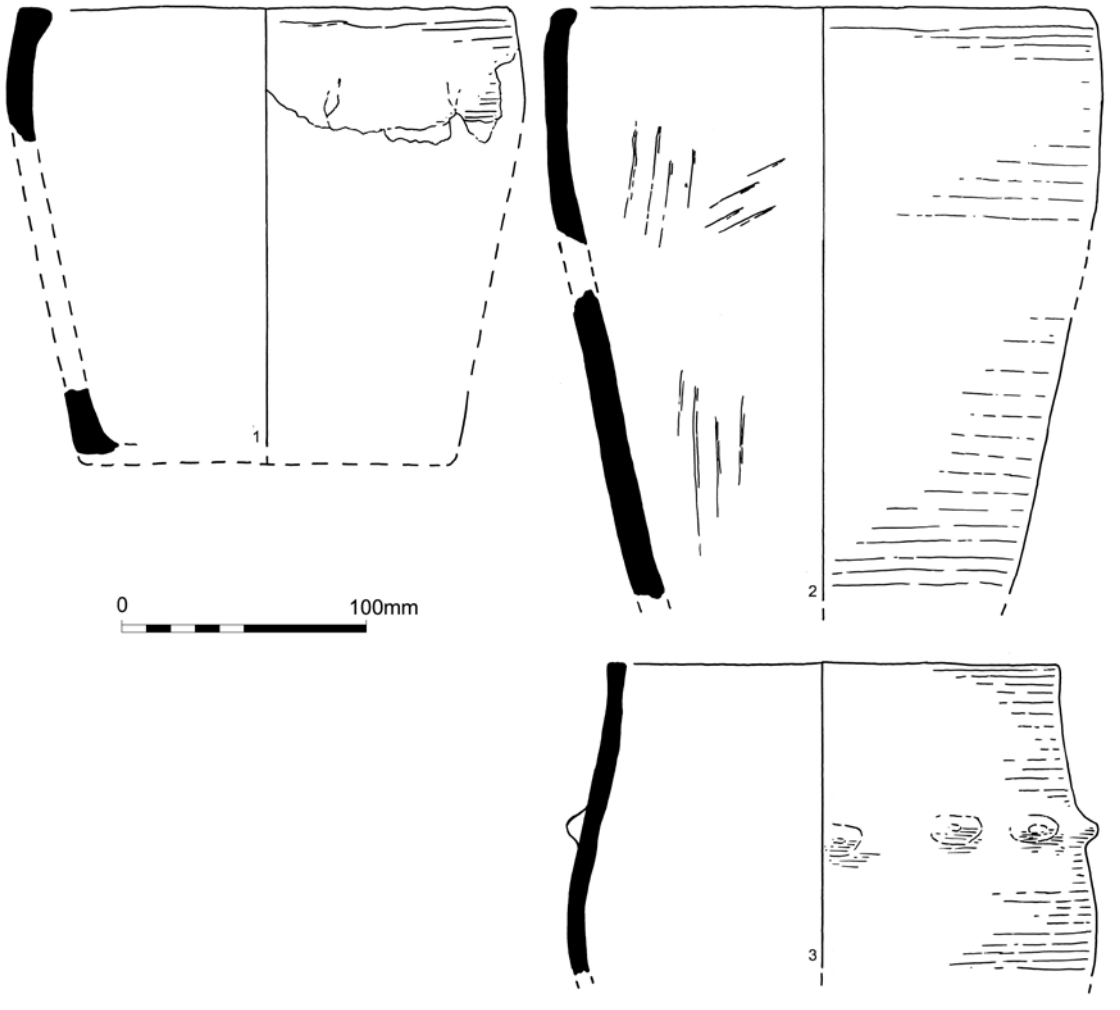

Fig. 9 Middle Bronze Age pottery: 1 and 2) Bucket Urns; 3) Globular Urn

common amphora type imported into Britain throughout the late 1st to early 3rd centuries AD (Peacock & Williams 1986, 136). Regional imports are represented by just eight sherds of South-east Dorset Black Burnished ware including the rim of a jar (see below).

The remainder of the assemblage comprises coarsewares probably of more local manufacture. Seventeen sherds in coarse, flint-tempered fabrics are potentially the earliest, belonging to a ceramic tradition of Late Iron Age origin which continued in use into the early Romano-British period. With the exception of one unstratified jar rim fragment, no featured sherds are present. The six undiagnostic grog-tempered sherds are likely to be of comparable date. However, the majority of the assemblage (51% by sherd count) consists of a wide range of unsourced, sandy fabrics of varying degrees of coarseness. These include 39 oxidised ware sherds, 31 of which derive from a single bowl (pit group 11076) of early Romano-British date.

Identifiable forms amongst the unoxidised sandy coarsewares include bead rim jars, a necked cordoned jar with grooved shoulder and a possible beaker rim. Small quantities of Romanised greywares, including fragments from two bead rim jars, were also recovered, indicating that occupation extended into the later 1st and 2nd centuries AD.

In terms of its distribution, 94% (by sherd count, 96% by weight) of the Late Iron Age/Romano-British pottery came from three features in the eastern part of Area 1 with the largest group (113 sherds, 1688g) being from ditch 11056. Continental imports consist of the one fragment of Central Gaulish samian, five pieces of unsourced amphora and one body sherd of Baetican Dressel 20 amphora. The sandy coarsewares include two bead rim jars, one with a high, angular shoulder (Fig. 10.1) similar to types 101 and 102 at Twyford Down (Seager Smith 2000, 63), whilst a necked, cordoned jar with grooved shoulder is comparable to form 23 at Winnall Down (Fig. 10.2; Hawkes 1985, 69, fig. 58, 106–18). A thinner walled, flared rim may possibly be from a beaker. Ditch 11058 contained 36 sherds (562g). Diagnostic pieces are limited to rims from two greyware bead rim jars and a South-east Dorset Black Burnished ware jar rim (Fig. 10.3); Seager Smith & Davies 1993, type 47) dating from the later part of the 1st century AD onwards. In addition to the unoxidised coarsewares, the group also contains a small quantity of oxidised wares (4 sherds, 16g). A total of fifty sherds (685g) were recovered from pit group 11076. However, 31 pieces derived from a fragmentary, oxidised ware flanged rim bowl (Fig. 10.4) with rouletted decoration on the interior imitating samian rouletted forms. It is comparable to a bowl found in early Romano-British deposits at Winnall Down (Hawkes 1985, fig. 58, 116). Continental imports include fragments from a probable North Gaulish White ware flagon with a collared rim of early Romano-British date and a handle fragment of Baetican Dressel 20 amphora which had been deliberately cut at one end indicating a change in use or re-use of vessels.

Overall, the presence of small quantities of imports and the more Romanised fabrics (such as oxidised wares and greywares) combined with the dominance of sandy wares indicate that these three groups span the pre-conquest period through to the 2nd century AD. Given the relatively small proportion (8% by sherd count), of flint-tempered wares in the assemblage, it is likely that this material is slightly later in date than that from Dowd's Farm, Hedge End (Clelland 2012, 154) or Twyford Down (Seager Smith 2000, 65), for example, where flint-tempered fabrics dominated the collections. Other sites in the area with comparable Late Iron Age-early Romano-British material include Dairy Lane, Nursling (Seager Smith 1997) and sites along the Broughton to Timsbury Pipeline (Brown 2009, ceramic phases 5 and 6). In general, the assemblage is typical of small-scale, rural farming communities of this period seen across southern Britain.

List of illustrated Late Iron Age/early Romano-British pottery (Fig. 10.1–4)

1. High-shouldered, bead rim jar; sandy ware, context 11033, ditch 11056
2. Necked, cordoned jar; sandy ware, context 11054, ditch 11056
3. Jar; South-east Dorset Black Burnished ware, context 108, ditch 11058
4. Flanged rim bowl; oxidised ware, context 11083, pit group 11076

Medieval

The 15 undiagnostic body sherds of medieval date have been broadly divided into coarsewares and glazed sandy wares. The 13 coarseware sherds (ditch 11056 and gully 11087) are all of Laverstock-type ware. The two finer, green glazed sandy ware fragments (subsoil 502 and ditch 11219) are of uncertain origin, but are likely to date to the 13th–15th centuries.

Post-medieval and modern

Nineteen sherds are post-medieval/modern; all were recovered from the subsoil 11001. They include one glazed redware fragment, a single moulded body sherd of 18th-century white salt glazed ware, 19th/20th-century stoneware (two sherds) and 15 sherds of refined white wares, among which are at least two rims from plates/dishes.

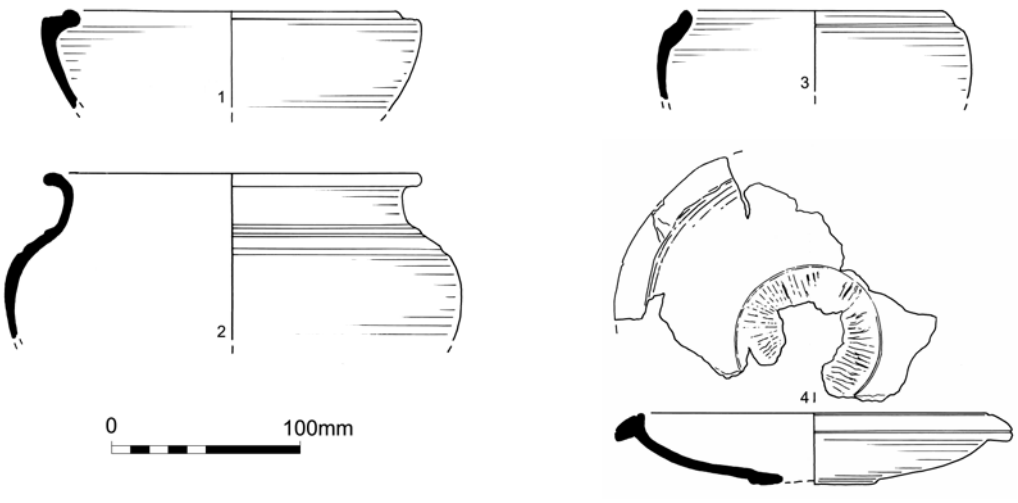

Fig. 10 Late Iron Age/early Romano-British pottery: 1) High-shouldered, bead rim jar; 2) Necked, cordoned jar; 3) Jar; 4) Flanged rim bowl

Other finds by Elina Brook

Ceramic building material

The ceramic building material (50 fragments, 3477g) came from 12 contexts. Fourteen pieces are of Romano-British date and include eight fragments from *tegulae* (ditches 11056 and 11058 and subsoil 302), four flat fragments (ditch 11056), and two featureless fragments from pit group 11076 and ditch 11056. With the exception of one post-medieval brick fragment (subsoil 11001), the remaining pieces are from medieval roof tiles, two of which have circular peg holes; these were found in the topsoil (11000), subsoil (11001) and the subsoil of trenches 3, 7, 18 and 27.

Fired clay

The eight fragments (486g) of fired clay were found in Late Iron Age/early Romano-British pit group 11076. All are in a predominantly oxidised sandy fabric with seven pieces containing sparse iron oxides/ferruginous pellets. The dating of all these pieces relies on associated material. One fragment, with two perpendicular flat surfaces and a partial circular perforation, may be part of a loomweight or oven brick, while a second piece has a possible withy impression (indicating the presence of structural debris). The remainder are featureless fragments.

Stone

Two pieces of stone were recovered. A small fragment from a sandstone saddle quern was found residually in Romano-British ditch 11058. The upper surface is worn smooth and has patches of polish indicating that it had been well used. The second piece, found unstratified, is of an unusual type for the area. It comprises a large, naturally waterworn granite boulder, of irregular pyramidal shape and has had a small circular depression (20mm in diameter, 15mm deep) in one face, possibly of anthropogenic origin. Granite is not local to the area but is known to have been imported as ballast into Southampton from the Channel Islands from the post-medieval period. The purpose, date and function of this object remain unclear.

Burnt flint

Approximately 40kg of burnt unworked flint was recovered from a range of feature types. This material is intrinsically undatable but is often taken as an indicator of prehistoric activity. In this instance, radiocarbon dating of cereal grain from pit 11110 which contained

Fig. 11 Burnt flint deposit 108 in Romano-British ditch 11058, evaluation slot 106, viewed from the south-west

41 pieces of burnt flint (305g) indicates a Late Bronze Age date (see *Radiocarbon dating*, below) whilst associated pottery suggests a late prehistoric date for the burnt flint from ditch 11219 (six pieces, 188g), and a Late Iron Age/early Romano-British dates for that from ditch 11056 (30 pieces, 776g) and quarry pit 11076 (10 pieces, 492g). By far the largest quantity (378 pieces, 36,898g) came from Late Iron Age/early Romano-British ditch 11058 (Fig. 11). However, it is notable that the majority (36,850g) of this was recovered from a slot excavated during the evaluation, with only a relatively small quantity (48g) found during the subsequent excavation, suggesting this was a relatively discrete, deliberate backfill of material deposited into the ditch. The average fragment size (98g) in this deposit is also far greater than for the remainder of the burnt flint assemblage (7g–49g) indicating it may have resulted from different burning processes.

Miscellaneous

Objects of other materials include a modern coin (George V penny, 1918) found unstratified, and two pieces of iron; one is a flat, round-headed nail with a tapering shank (pit 11097), while the other is a square-sectioned nail shank fragment found in Late Iron Age/early Romano-British ditch 11056. Subsoil layer 11001 contained two pieces of modern glass – a clear bottle rim and a green bottle base fragment.

Human bone by Jacqueline I McKinley

Cremated bone was recovered from five Middle Bronze Age contexts including the remains of two urned burials and a probable 'cenotaph' deposit, also made urned. All the vessels had been placed in the ground inverted. Very small quantities of bone were recovered from the backfills of the two graves (11231 and 11258),

Fig. 12 Sample excavation of intercutting pit group 11076, viewed from the south-west

both of which also contained small quantities of fuel ash; the latter comprised a more common component in the backfill of feature 11203. The two graves, and feature 11203 containing the 'cenotaph' deposit, formed an isolated, compact group (within 2m diameter area) in Area 2 (Figs 3 & 6). Bone samples from all three features were submitted for radiocarbon analysis to help refine the broad dating evidence provided by the vessels themselves and returned a close group of Middle Bronze Age dates (see *Radiocarbon dating*, below).

All three vessels were lifted *en masse* for excavation under laboratory conditions by the writer to allow details of the burial formation processes to be ascertained. The context subdivisions created (quadranted spits of 20mm depth) were maintained throughout analysis; the overall context data is presented in the summary Table 2, full details by subdivision are held in the archive. Recording and analysis of the cremated bone followed the writer's customary procedures (McKinley 1994a, 5–21; 2004a). The age and sex of individuals was assessed using standard methods (Beek 1983; Brothwell 1972; Buikstra & Ubelaker 1994; Gejvall 1981; Scheuer & Black 2000; Wahl 1982). Interpretation of deposit type was undertaken with consideration the of various criteria of influence – contextual, taphonomic and osteological – outlined elsewhere by the writer (McKinley 1997a; 2000a; 2013a).

Results and discussion

The two graves and feature 11203 had survived to depths of between 0.13m and 0.25m, but in each case, although the vessels had been truncated to some degree (Fig. 3), the remains of the original deposits within them were

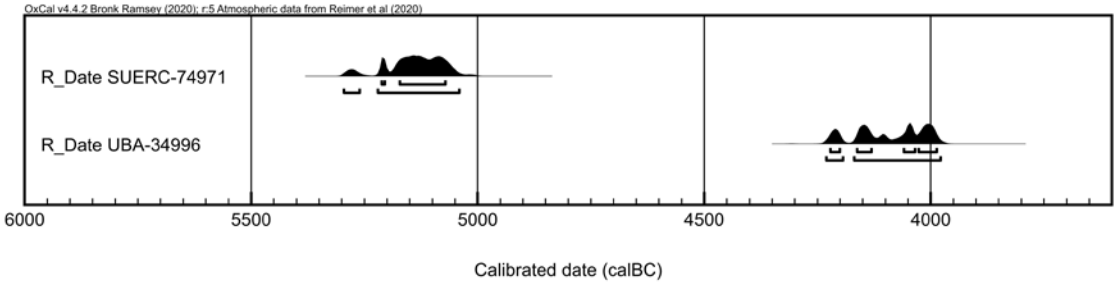

Fig. 13 Calibrated radiocarbon dates from Late Mesolithic pit

undisturbed and no bone had been lost via this mechanism.

All the bone is slightly worn/eroded and of a chalky appearance, that from feature 11203 particularly so. Very little or no (in the case of feature 11203) trabecular bone was recorded in analysis and, with the exception of burial 11263, none was observed during excavation. In the latter case the small amount of *in situ* trabecular bone crumbled to 'dust', fraction-size, on lifting. These relatively fragile skeletal components are generally subject to preferential destruction in an aggressive burial environment such as at this site – predominantly a sandy silt – due to weakening of the open trabecular structure (McKinley 1997a, 245; Nielsen-Marsh *et al.* 2000), and it is probable that additional bone to that recorded in Table 2 will have been lost due to taphonomic effects. This effect is further illustrated by the relatively substantial quantity of bone amongst the predominantly unweighed small fraction residues (<5mm) from the two burial deposits shown in italics in Table 2 (this fraction is usually not weighed as it generally contains a high proportion of intrusive coarse components). The total weight of bone would have been around 30% greater were this small-fraction material to have been included. The cenotaph deposit contained little bone in this fraction and loss via this mechanism is likely to have been negligible.

A minimum of two individuals are represented, one from each of the two graves, together with a probable third from the cenotaph. Cenotaph features/deposits have the characteristic appearance of graves, but are either devoid of or contain very little cremated bone (often less than 10g; McKinley 2000b; 2004b; 2013a). Toynbee (1996, 54) noted that the Romans created cenotaphs 'if a person's body was not available for burial' or 'for some person whose remains were buried elsewhere'. The presence of redeposited pyre debris in feature 11203, and in similar features found elsewhere (e.g. nine of the 84 Middle Bronze Age cremation-related deposits from Longham Lane, Dorset, were interpreted as 'cenotaphs'; McKinley 2013b), suggests a *memento mori*/token deposit was made close to the pyre site but that the majority of the bone was removed for burial/disposal elsewhere. The implication is that the individual whose remains were recovered from feature 11203 is not represented elsewhere within the assemblage, despite the similarity in the suggested age range of the individuals identified and the absence of duplicate skeletal elements (the latter in itself is unsurprising given the small quantity of bone recovered and poor condition of the bone from feature 11203).

Singletons or small groups of mortuary features such as these are characteristic of the period (though larger cemeteries also occur in some locations) and were probably associated with individual farmsteads situated in close proximity. Given the small size of the group no confident significance can be attributed to the apparently limited age range and singularity of females; although similar seemingly single-sex small groups have been found elsewhere such exclusivity is not consistent within the period.

Fine grained (active) periosteal new bone was observed on one side of a small fragment of tibia shaft from feature 11203. The lesions

form in response to infection of the periosteal membrane covering the bone; in many examples – as here – the aetiology of the infection cannot be deduced. Were the changes to have been discrete they may signify a connection with an overlying soft tissue infection, but a potential systemic cause cannot be excluded in this instance.

No pyre goods – artefactual or animal remains – were recovered; however, slightly blue/green 'spot' staining was observed on several fragments of femur shaft from grave 11258. Such staining is suggestive of the presence of some form of copper alloy object(s) overlying one or both thighs (the bone fragments could not be sided) during cremation. This type of staining to cremated remains has been observed from both the Bronze Age and other periods, often where no remains of copper alloy pyre goods were found, indicating they were either accidentally overlooked or deliberately excluded from inclusion in the burial (pers. obs.).

Almost all of the bone is white in colour, indicative of full oxidation (Holden *et al.* 1995a; 1995b), with only one or two fragments of femur from both graves being of a slight grey or blue hue illustrating incomplete oxidation. This suggests the cremations were thoroughly executed with no shortage of fuel, insulation of the corpse by extraneous materials (cutting off oxygen supply), or curtailment of the process (accidental or deliberate) prior to full oxidation of the bone. Greater levels of variability in oxidation have been observed in remains of this date elsewhere, particularly from some of the larger cemeteries such as Twyford Down, Hampshire (McKinley 2000c), Simons Ground and Knighton Heath, Dorset (Denston 1981; Hazzledine 1982), but whether the size of the cemetery was a significant factor here has not yet been sufficiently explored.

The weights of bone recovered from the two graves represent approximately 23–26% of the average expected from an adult cremation (McKinley 1993), increasing to 33–37% if the approximated weights from the small fraction residues are included (Table 2). Both sets of weights place these remains in the lower range (excluding small fraction) or middle range (inclusive of) of those recovered from other Middle Bronze Age burials (McKinley 1997a; 1997b; 2000c; 2013b). Currently it is unclear why there should be such variations in weights of bone for burial; taphonomic factors clearly have a role but would not fully account for the observed diversity.

The majority of the bone from all three features was recovered from the 5mm sieve fraction (47–52%), with relatively small maximum fragment sizes of 25–51mm (those from the cenotaph deposit falling at the lower end of the range). By including the approximate weights from the unweighed small fraction residues (see above) the proportion of bone in the 2mm and lower fractions increases markedly, attaining similar or higher status between this and the 5mm fraction amongst the material from both graves (11231 – 5mm/33%, 2mm/< 32%; 11258 – 5mm/36%, 2mm/< 42%). At face value these figures fall in the lower ranges recorded from Middle Bronze Age burials elsewhere; maximum fragment sizes of 125mm, 94mm and 77.5mm were recovered from Twyford Down, Handley Barrow (Dorset) and Simons Ground, with a mean of 96mm for the undisturbed burial remains at the former, and most fragments from the Dorset sites falling between 20–25mm and 'under 30mm', respectively (Hazzledine 1982; McKinley 2000c; Rogers 1991). A closer figure to those from this site was recorded from the undisturbed adult burials from Longham Lakes, at 46mm (McKinley 2013b).

Data recorded in post-excavation can, however, be misleading, and the potential taphonomic effects of the burial environment (soil texture) and disturbance need to be considered in the interpretation of these data (McKinley 1993; 1994b). In the course of excavation of these three vessels the writer observed that much fragmentation occurred along dehydration fissures formed during cremation resulting in a 30–77% reduction in the size of at least some bone fragments from grave 11262, and 42–75% reduction in grave 11263, the maximum fragment size pre-excavation in the former being 80mm and in the latter 90mm. Taken together, there is no evidence to support the likelihood of any deliberate fragmentation of remains prior to burial.

At 39–49%, the proportion (by weight) of

bone from the two graves identifiable to skeletal element lies at the upper end of the average range of 30–50% (pers. obs.); that from the cenotaph fell well below at only 26%. As is commonly observed, identifiable elements from all four skeletal areas were present (skull, axial skeleton, upper and lower limb). The taphonomic bias against the preservation of the axial skeleton, in contrast to the benefits of the ease of identification of even small fragments of the skull, was also evident, with the often observed over-representation of the latter and paucity of the former amongst the identifiable elements (McKinley 1994a); no axial elements were recorded from the cenotaph deposit. There is no evidence to suggest preferential selection of specific skeletal elements for burial or curation elsewhere.

Middle Bronze Age burial remains generally include in the region of between 5 and 20 of the smaller skeletal elements comprising lone tooth roots (i.e. without the associated supportive structure) and the small bones of the hands and feet (pers. obs.). No lone tooth roots were recovered, and only 3–9 small bones were identified (graves 11263 and 11262, respectively; none from the cenotaph). The relative paucity of these elements suggests that recovery of the bone from the pyre site for burial was undertaken by hand-collection of individual bone fragments, which would reduce the ease of recovery of such small bones, compared with collection by raking and winnowing of the remains (McKinley 2000d; 2004b, 299–301).

Micro-excavation of the vessels revealed some details of the formation process of the deposits. The cremated remains from grave 11231 and feature 11203 both appear to have been placed in some form of organic bag (?textile) prior to being put in the vessels from which they were recovered. Over half the bone in burial 11262 was found in a 40mm deep central concentration with an equal division of material between the quadrants. Much fine-particle bone 'dust' was seen in the lower half of the deposit, doubtless having filtered down over time. The various skeletal elements were mixed throughout with no indication of a ordered deposition. The inverted vessel had been pressed into the base of the grave by 30–40mm, possibly deliberately or due to pressure from above over time. Only a few fragments of pottery overlay the bone within the vessel indicating soil had infiltrated to some depth before the inverted base was truncated and removed. Within the cenotaph deposit, over half the bone was again concentrated in a 40mm depth, but in this case 76% lay in the southern half, the remains forming a 'cone'. In the case of grave 12258, there is no evidence to suggest the bone was bagged, but the recovery of most of the mandible from one discrete area of the vessel fill (40mm depth, one half) suggests some complete/near-complete skeletal elements, or a handful of bone from one part of the pyre, was collected and added to the vessel together.

Wood charcoal by Dana Challinor

Six samples from two urned cremation deposits and a possible cenotaph (graves 11231 and 11258) in feature 11203 of Middle Bronze Age date were analysed, along with a single sample from a Late Bronze pit (11110). Standard identification procedures were followed. The charcoal was fractured and sorted into groups based on the anatomical features observed in transverse section at x7 to x45 magnifications. Representative fragments from each group were then selected for further examination using a Meiji incident-light microscope at up to x400 magnification. Identifications were made with reference to Schweingruber (1990), Hather (2000) and modern reference material. Classification and nomenclature follow Stace (1997). Identifications are provided to the highest taxonomic level possible according to the native British flora, i.e. where there is only a single native species, this is named, but where there are several native species, the genus or subfamily is given, unless species identification was possible on anatomical characteristics. Observations on maturity and the character of the wood were recorded where visible.

Results

The charcoal from the cremation deposits tended to be sparse, with small fragment sizes, and exhibited low diversity (Table 3). In contrast, the assemblage from pit 11110 produced abundant charcoal, with a high

diversity of taxa. All of the eight taxa identified were consistent with native species: *Quercus* sp. (oak), *Betula* sp. (birch), *Alnus glutinosa* (alder), *Corylus avellana* (hazel), *Prunus spinosa* (blackthorn), Maloideae (hawthorn, apple, service etc.), *Acer campestre* (field maple) and *Fraxinus excelsior* (ash). Several fragments exhibited moderate or strong ring curvature, but no complete stems with both pith and bark were observed. Most of the alder from sample 107 derived from roundwood, but the ring curvature was slight to moderate, suggesting a relatively wide diameter. The oak from pit 11110 was from both mature trunkwood and narrow roundwood, with some of the heartwood pieces exhibiting slow growth of >20 years. The oak from cremation grave 11231 was also mature, with both heartwood and burrwood recorded.

Discussion

In common with other Middle Bronze Age cremation deposits, these assemblages exhibit low diversity, with an average of 1.7 taxa. Although the charcoal represents redeposited pyre debris and the paucity of material can be partly attributed to deposition (accidental or deliberate small inclusions with the human bone burial), low diversity in cremation-related assemblages is a recurrent characteristic of Bronze Age burials: e.g. Burghfield, Berkshire (Gale 1992), Rollright Stones, Oxfordshire (Straker 1988), Barrow Hills, Oxfordshire (Thompson 1999), Raunds, Northamptonshire (Campbell 2007), Heathrow (Challinor 2010a) and Cotswold Community, Gloucestershire (Challinor 2010b).

The cremation deposit in grave 11231 was clearly dominated by oak, including mature wood, whereas the assemblage from grave 11258 was dominated by alder. The deposit in feature 11203 was less clear-cut, containing three positively identified taxa, including alder, hawthorn group and a trace of oak. However, the human bone from this deposit was markedly worn and the low quantity suggested that it may have been from the same pyre as one of the other burials (see *Human bone*, above). If so, the charcoal assemblage would suggest it has more in common with 11258 than 11231. It is also interesting that feature 11203 contained the (scant) remains of an adolescent individual, but the other burials were of adults, suggesting that differences in fuel types and diversity may be attributed to age, as suggested at Raunds (Campbell 2007, 31). The use of alder in cremations is generally less frequent, possibly because it is considered an inferior fuelwood (Edlin 1949). On this point, it is notable that all of the human bone from all of the burials was well calcined, indicating that cremation had been efficient, whichever wood types had been utilised for fuel.

Pit 11110 produced a more diverse charcoal assemblage than the cremation assemblages, indicating a broader range of wood types was available for fuel exploitation. Since this feature was dated to the Late Bronze Age, it is not contemporary with the cremations. The likelihood is that these taxa were also available in the earlier period, but were not selected for deliberate reasons relating to pyre practices and burial rites. The higher diversity of the pit deposit is typical of domestic type fires (cooking hearths, crop processing etc.).

Radiocarbon dating by Alistair J Barclay and Inés López-Dóriga

Nine samples were submitted for radiocarbon dating for the purpose of confirming the chronology of a Mesolithic pit, Bronze Age funerary activity and early agricultural practices (Table 4).

Two samples of charred hazelnut shell were taken from a pit containing a probable Mesolithic core tool, possibly a tranchet axe. Three samples (each replicated at a second laboratory) of cremated human bone were taken from prehistoric mortuary deposits in order to give a more precise date for the burials, as it was uncertain whether the fragmentary vessels from which the human remains were recovered were Middle Bronze Age Bucket and Globular Urns or of transitional Middle/Late Bronze Age date. The sample of cereal grain was taken from a late prehistoric pit in order to confirm the date of the feature, since only very fragmentary pottery was recovered together with a plant remain assemblages composed of a few distorted cereal grains, which could be evidence for early agriculture, and a moderate amount of wood charcoal.

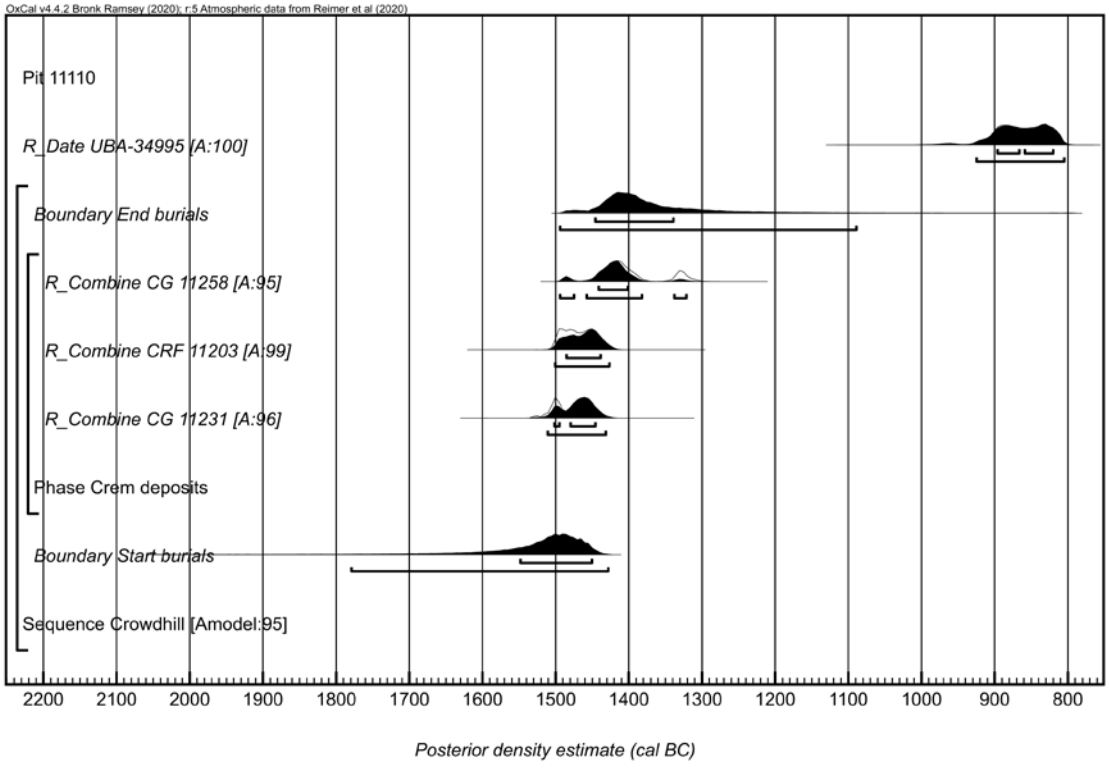

Fig. 14 Modelled radiocarbon dates from Bronze Age features

The samples were submitted to the ^{14}CHRONO Centre, Queen's University, Belfast, to the SUERC Radiocarbon Laboratory, The University of Glasgow and BRAMS, The University of Bristol. All the chosen samples were from short-lived material with the purpose of avoiding large uncertainties (Waterbolk 1971). The dates have been calculated using the IntCal20 calibration curve (Reimer *et al.* 2020) and the computer program OxCal (v4.4.1) (Bronk Ramsey 2020) and cited at 95% confidence and at 95% probability. The degree of reliability of the radiocarbon date and the event which is aimed to be dated is assessed following Waterbolk (1971) and Pelling *et al.* (2015). The radiocarbon dates from the three cremation deposits have been subjected to Bayesian modelling with the results presented as posterior density estimates and, following convention, italicised in the text.

The two results from pit 11150 have provided confirmation for Late Mesolithic activity on the site. Although the two radiocarbon dates are statistically inconsistent (SUERC-74971 and UBA-34996) and are a millennium apart, falling at the end of the 6th and the end of the 5th century respectively, they do, however, support a Late Mesolithic date (Fig. 13). This difference in their ages suggests either a technical inconsistency or that one or both are residual.

The results obtained for the cremation deposits place the mortuary activity in the Middle Bronze Age (15th century cal BC, Fig. 14). Each sample of cremated bone was measured at two different laboratories and the results subjected to a chi^2 test to demonstrate their statistical consistency and then combined. Each pair is consistent, although the overall group is not. The latest pair (CG11258) are

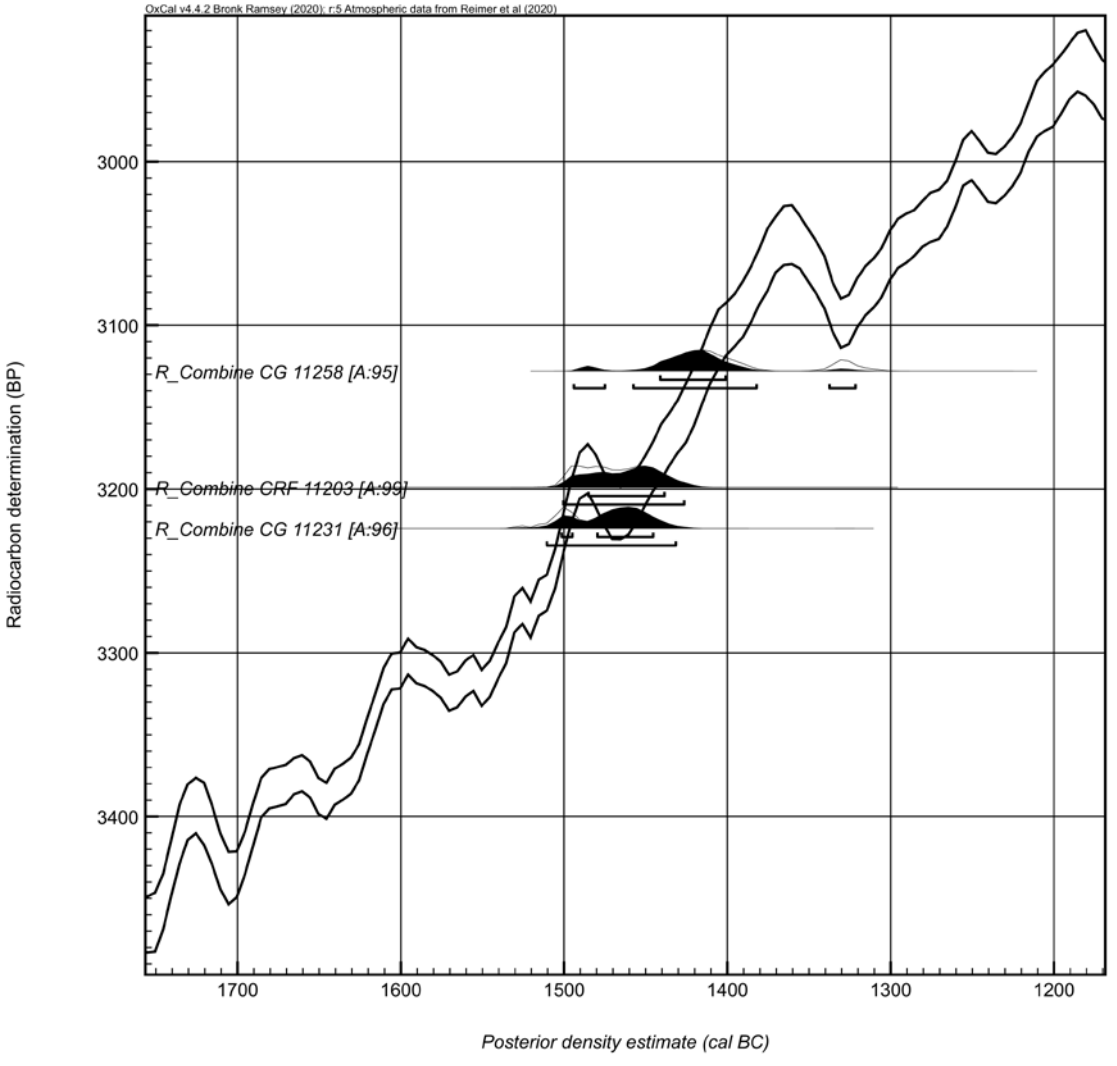

Fig. 15 Modelled radiocarbon dates from the Bronze Age cremation deposits plotted against the calibration curve

measurably younger than the other two by up to four human generations (measured as the *difference between R-Combined CG 11231 and CG 11258 as 18 to 84 years at 64% probability*). It is possible that the dates are artificially and heterogeneously aged due to the use of old wood in the pyre (e.g. Olsen *et al.* 2013; Snoeck *et al.* 2014; Zazzo *et al.* 2009). In fact, analysis of the wood charcoal recovered from the cremation deposits (see Challinor, above) suggests this may be the case: the fuel employed in deposit (11262, feature 11231), which gave the older date (SUERC-70575 and BRAMS-2071, *1520–1430 cal BC*), was predominantly mature oak, which would certainly contribute to an old-wood effect (often stated as between 200 and 300 years), whilst the slightly later date (deposit 11263, feature 11258) is likely to have had a lower offset (only 50–100 years) since the fuel was from relatively short-lived tree species

such as alder or Maloideae (SUERC-70576 and BRAMS-2072, *1500–1320 cal BC*). If the two early combined measurements are assumed to be more affected by an old wood offset then the highest probability or more precise date for the funerary activity in the Middle Bronze Ages may concentrate on the late rather than the early half of the 15th century (Fig. 15: with the three results plotted against the curve). However, it can be noted that the remaining pair of dates (SUERC-74087 and BRAMS 2073) associated with the younger wood gives a similar combined date to the older pair of measurements.

The reasons for differences in measurements could be complex and whilst there is increasing evidence for age offsets in cremated bone it is likely that this is not the only explanation. Unfortunately, at present there is no way of accurately determining the scale of each offset. Rose *et al.* (2020) suggest offsets are likely to be within a few human generations. Where the opportunity arises, obtaining additional dates on associated short-lived plant remains within pyre material and/or directly dated food residue lipids within cremation urns provide possibilities for measuring offsets in contextually associated pairs of measurements.

DISCUSSION

The recovery, from the subsoil in evaluation trench 14 and a later context 2–3m to its north, of three flints that may have formed part of a single Long Blade assemblage dating to the end of the Last Glaciation, is a significant find. The backed blade was considered during the evaluation to be an isolated find, and although the subsequent excavation of Area 2 encompassed the area around the trench, the surrounding subsoil (recorded during the evaluation as 0.32m deep) was not systematically sampled. The fact that two other pieces of flint, recovered from a later feature but probably eroded out of the subsoil, are likely to be contemporary with the original find, was only recognised during the post-excavation analysis of the site-wide flint assemblage. Given the proximity of the pieces and their very fresh condition, it is possible that point to the presence of a more extensive flint scatter within the subsoil at this location. The discovery of a largely *in situ* Final Upper Palaeolithic flint scatter at Nea Farm, Somerley, on the western flank of the Avon valley (Barton *et al.* 2009), indicates the potential significance of such apparently isolated finds lying well preserved within the subsoil.

The Mesolithic core tool rough-out possibly for a tranchet axe is also a significant find, due first to its recovery from a pit in which it was associated with charred hazelnut shells, and secondly because of the radiocarbon dates obtained on the shells. Although the distribution of later Mesolithic sites in Hampshire and the Isle of Wight shows a marked concentration on the coast and in the river valleys (Hey 2014, 74), the latest Mesolithic is a period for which there is a considerable lack of knowledge. Pits are frequently found on Mesolithic sites, varying in form and fulfilling different functions, including site clearance and refuse disposal, deposition and possible caching (Blinkhorn *et al.* 2017), but the absence of a wider site context for pit 11150 makes it hard to interpret this feature and the activity it represents. Six sites in England are recorded as having pits with axes in their fill (*ibid.*, 215) although, as here, none of the objects could be shown to have been deliberately deposited; it is possible, given that the pit was only half-sectioned, that it contained other finds not recovered. Nonetheless, the potentially late date for this feature is of particular interest when considered in light of the rich tradition and significant role of pit digging and deposition during the following Neolithic and later periods.

The small group of three Middle Bronze Age cremation-related mortuary features provide significant new information about the prehistoric occupation of the landscape, although without any contemporary non-mortuary features their domestic and economic contexts remain unknown. It is not until the Late Bronze Age, with the recovery of charred cereal grain from a pit containing flint-tempered pottery, worked flint and burnt flint, that there was any clear indication of settlement activity within the site.

While there are suggestions of other late prehistoric activity, it is only around the start of the Romano-British period that further

settlement and economic activity on the site is confirmed, the Late Iron Age/early Romano-British and Romano-British pottery having a date range of 1st–early 3rd centuries AD. The ditches and intercutting pits, and the material from them – pottery (largely local coarse ware), CBM, pieces of saddle quern and fired clay – may indicate the presence of a small rural farmstead close to the site, although no animal bone survived in the soil conditions, and no cereal remains were recovered from the features. There was also no context for the small assemblage of 13th–15th-century medieval pottery, and most of the later features relate to mapped or existing features in the landscape.

The fieldwork at this site has therefore provided significant new evidence, relating to a number of periods, for this part of the landscape – the Late Glacial Epipalaeolithic and the Late Mesolithic, and for later Bronze Age mortuary and settlement activity, and early Romano-British settlement. These are all periods for which there has previously been little information for this area.

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The archive is currently stored at the offices of Wessex Archaeology under the project codes 87712–3, but in due course it will be deposited with Hampshire Cultural Trust under the accession code A2015.27.

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