Shinfield West

Post-Excavation Assessment and Updated Project Design

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Shinfield West

Post-Excavation Assessment and Updated Project Design

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Summary

Oxford Archaeology (OA) was commissioned by CgMs Heritage to undertake an archaeological excavation of the site of a proposed housing development at Shinfield West, Berkshire, centred on SU 72871 67714. The excavation took placed between May and September 2016. Four areas were opened totalling 4.5ha.

The excavation revealed a palimpsest of activity that spanned prehistory to the late post-medieval periods. A landscape of field systems, waterholes, pit clusters, post structures, and a ring ditch were revealed.

The earliest features included a ring ditch of a Bronze Age barrow (burial mound) measuring 11m in diameter. At the base of the ditch a significant amount of charred oak wood was found. Cremated human remains of a probable male were discovered in a pit cut into a tree-throw hole, centrally placed within the ring ditch. A complete upturned Collared Urn was found immediately above the cremated remains, although no further grave-goods were discovered. A second cremation burial was found 6m to the north of the outer edge of the ring ditch. Bone from both of the cremations was submitted for radiocarbon dating, and almost identical dates in the 19th- to 18th-centuries cal BC were returned. A few possible Grooved Ware and Beaker sherds associated with the ring ditch hint at earlier phases of activity on the site, and flint dating to the Mesolithic period was found in later contexts.

A solitary pit containing a very small amount of burnt bone and a fired clay perforated block or loomweight was the only evidence belonging to the middle Bronze Age. Two clusters of intercutting pits dating to the early Iron Age were found, alongside a dispersed arrangement of four-post structures, at least one also dating to the early Iron Age. No certain roundhouses were discovered. An unusual find from an early Iron Age pit was a pottery sherd impressed with an animal paw print, possibly from a cat.

A large number of linear ditches were excavated, representing at least four separate field systems. Dating evidence for these was meagre, although two of these systems belong to the post-medieval period. The remaining two are undated, although one stratigraphically post-dates the early Bronze Age, and the other is later than the early Iron Age. Also uncovered were a 17th- to 18th-century barn and a 19th-century outbuilding.

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The fieldwork was undertaken by Mariusz Gorniak, Dana Chard, BJ Ware, James Green, John Carne and Bernadeta Rzadek under the management of Carl Champness. The publication was managed by Leo Webley.

1 INTRODUCTION

1.1 Background

1.1.2 Oxford Archaeology (OA) was commissioned by CgMs Heritage to undertake an archaeological excavation of the site of a proposed housing development at Shinfield West, Berkshire. The work was undertaken in accordance with a written scheme of investigation (CgMs 2016). This assessment of the excavation results has been conducted in accordance with the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment,* specifically *The MoRPHE Project Manager's Guide* (2006) and *PPN3 Archaeological Excavation* (2008).

1.2 Geology and topography

1.2.1 The site comprises a series of fields situated immediately south-west of the village of Shinfield, centred at NGR SU 72871 67714 (Fig. 1). It is bounded to the west by open fields east of Ryeish Green, to the south by High Copse Farm, and to the east by Hyde End Road.

1.2.2 The site slopes gently downward from north-west to south-east, from a minor ridgeline toward the adjacent floodplain of the River Loddon. The ridge runs from Ryeish Green to Shinfield and lies at 55-60m OD, and the south-eastern limit of the site roughly corresponds with the 45m contour.

1.2.3 The solid geology of the site is mapped as London Clay Formation, which comprises clay, silt and sand (BGS 2017). Drift geology, consisting of sand and gravel of the third terrace, covers the south-eastern half of the site and a discrete area of fourth terrace deposits are present at the north-western extent.

1.3 Archaeological background

1.3.1 A number of archaeological investigations have been undertaken within and close to the site prior to the present excavation.

1.3.2 The Loddon Valley fieldwalking survey included the majority of the area of the site (Ford 1997). Survey fields 40, 84 and 85, approximately corresponding to the excavated areas, produced a small amount of undated pottery alongside two flint cores and 15 flakes (Ford 1997, table 7, fig. 6a). This indicates archaeological activity on the site, although the quantities of material recovered were too limited to define its nature. A small concentration of Roman pottery was found just to the north-west of the site in survey field 73. This coincided with linear cropmarks, leading to the suggestion that this might be a small settlement (Ford 1997, 22). Further fieldwalking was carried out in 2010 in a field that extends into the south-western part of the site; a small amount of worked flint and post-medieval pottery was recovered (Ford 2010).

1.3.3 An aerial photographic assessment of the site mapping the location of cropmarks has been included in the desk-based assessment (CgMs Consulting 2010). Linear features thought to be related to a possible Iron Age/Romano-British settlement and a circular feature identified as a possible round barrow were present on the site.

1.3.4 A geophysical survey of the site was undertaken in 2015. This identified a number of features of probable archaeological origin, including the circular feature also seen in the aerial photographic assessment (Bartlett Clarke 2015).

1.3.5 An archaeological evaluation of the site took place in 2016. A total of 149 trenches were excavated, and four areas of archaeological remains were identified (OA 2016). The most significant features were discovered in Area 1 of the present excavation and included a probable barrow comprising a ring ditch and central feature interpreted as a burial pit, alongside ditches of probable agricultural function. Other features encountered during the evaluation included further field system ditches, a limited number of postholes and pits, a hearth and a tree-throw hole. Very few features produced artefactual material.

1.3.6 Other fieldwork in the near vicinity includes an evaluation at Hollow Lane, Shinfield, 350m north-east of the site (Pine 2002). A small number of archaeological features were recorded, producing worked flint, a pottery sherd of possible early prehistoric date, and another of possible Iron Age date.

1.3.7 Early cartographic sources including the Earl of Fingall's estate map of 1756, the Shinfield tithe map of 1836, the enclosure map of 1856 and the Ordnance Survey 1st edition map of 1874 indicate that the site was under agricultural use (CgMs Consulting 2010). The tithe and enclosure maps label the field containing excavation Areas 1-3 as 'Ryeish Field'.

1.4 Original research aims and objectives

1.4.1 The aim of the programme of archaeological works was to record and advance our understanding of the significance of any archaeological remains within the site before this was lost in the site's development.

1.4.2 The research objectives defined by the written scheme of investigation (CgMs Consulting 2016) were to:

- Establish the spatial extent of the archaeological activity in Areas 1-4.
- Recover information relating to the date, nature and function of past human activity represented by the surviving archaeological remains.
- Interpret the nature of human activity at the site and to place the site within its local, regional and national contexts as appropriate.
- Assess the site formation processes and the effects that these may have had the survival and integrity of the archaeological features and deposits.
- Produce a site archive for deposition with an appropriate museum and to provide information for the local HER to ensure the long-term survival of the excavated data.

1.5 Fieldwork methodology

1.5.1 Four areas were opened, totalling *c* 45,350m^2 (Fig. 2). Topsoil and overburden were removed by a 360^o mechanical excavator using a toothless ditching bucket under continuous archaeological supervision. Mechanical excavation ceased at undisturbed

natural deposits. No archaeologically significant horizons were encountered above the natural. Once the initial areas were stripped of topsoil all archaeological features encountered were plotted.

1.5.2 Archaeological features were investigated by hand. Levels of sampling were as outlined within the WSI (CgMs 2016) and based on achieving the research objectives of the project. Junctions of linear features were investigated to determine stratigraphic relationships, and all terminals were excavated.

1.5.3 All structures or zones of specialist activity were fully or extensively excavated, and all relationships recorded. All burials were 100% excavated. Vessels containing burials were lifted whole for excavation off site once their context had been recorded.

2 FACTUAL DATA

2.1 Stratigraphy

General

2.1.1 The following stratigraphic records were created:

Record type	Number
Site journal	73
Context records	1196
Plan register	8
Plans A4	195
Plans A1	10
Section register	12
Sections A4	225
Small finds register	1
Digital photo register	24
Environmental sample register	16

2.1.2 Archaeological features were uncovered in all four excavation areas (Figs 3-5). The following phases of activity have been identified at the site:

Phase 1: Mesolithic

Phase 2: Late Neolithic

Phase 3: Early Bronze Age

Phase 4: Middle Bronze Age

Phase 5: Early Iron Age

Phase 6: Medieval

Phase 7: Post-medieval

2.1.3 Phases 1 and 2 are represented only by artefactual finds, which may all be residual in later deposits. The dated features all belong to Phases 3 to 7. A number of other features are currently undated.

Phase 1: Mesolithic

2.1.4 The worked flint assemblage includes a few diagnostic artefacts of Mesolithic date. These are predominantly late Mesolithic, although some blades could be early Mesolithic or even late Upper Palaeolithic. No scatters were identified, and the majority of the probable Mesolithic flint was discovered redeposited in later contexts. The only features which could possibly be contemporary with the knapping activity are two tree-throw holes in Area 1. Tree-throw hole 774 (located within an early Bronze

Age ring ditch: see below) contained four pieces of worked flint, and tree-throw hole 1101 produced two pieces, including a probable Mesolithic blade. Given the small amounts of flint from these two features, it is very possible that the material is residual.

Phase 2: Late Neolithic

2.1.5 During the evaluation a single sherd of pottery was found in context 14507 on the surface of pit 778. The pit was not excavated during the evaluation, but was later found to contain an early Bronze Age cremation burial and Collared Urn. The sherd of pottery found during the evaluation has herringbone decoration with a soapy, slightly micaceous fabric with probable grog and red ferrous pieces. It is most likely that the sherd is from a late Neolithic Grooved Ware vessel, making it significantly earlier than the Collared Urn and burial. Although the fabric is most suggestive of Grooved Ware, it is possible that the sherd belongs to a Beaker, Food Vessel or even possibly a Collared Urn as similar decorative techniques are known on these later vessels (Gibson 2002, figs. 40.4, 42, 45.7).

2.1.6 It is possible that a small element of the flint assemblage from the site dates to the Neolithic; however, there is nothing to specifically indicate a Neolithic date. The material discovered from the early Bronze Age ring ditch includes all of the probable Neolithic-early Bronze Age tools from the assemblage.

Phase 3: Early Bronze Age

2.1.7 Early Bronze Age activity comprised a ring ditch with a central cremation deposit and Collared Urn, as well as a satellite cremation deposit 6m to the north-east of the edge of the ring ditch.

2.1.8 Ring ditch 527 was discovered in the central section of Area 1 and had an outer diameter of 10.30-11m. The ditch was 1.8-2.2m wide and 0.48-0.70m deep. The ditch varied in profile but was usually flat bottomed with gently sloping sides, although section 297 shows that the ditch in the northern area was V-shaped. The ring ditch was excavated in alternate slots in the first instance, with the remaining slots removed later (Plate 1).

2.1.9 During the evaluation, a layer of gravelly material (14506) up to 0.18m thick was observed within the area enclosed by the ring ditch, and this was suggested to represent the plough-levelled remains of a barrow mound. The central burial pit (see below) appeared to be cut into this layer. The gravelly deposit was not observed in the excavation.

2.1.10 At the base of the ditch or sitting on the basal fills, substantial quantities of burnt wood and charcoal were found in two locations (Plates 2 and 3). The first mass was found in the WSW-SSE section between slots 641 and 725; the other mass was found in the NNE-NE section between slots 1013 and 1048. No clear toolmarks were evident, although the poor condition of much of the material may have hindered identification.

Assessment of the charcoal identified all of the material as oak. A single sherd of pottery was recovered from the layer containing the burnt material. This has been identified as a possible Beaker sherd, raising the possibility that the ring ditch could have originated in the late 3rd millennium BC.

2.1.11 Following the deposition of the burnt wood, the ditch appears to have infilled relatively quickly, possibly from erosion of the feature edges and natural silting processes (see Stafford below). A few sherds of early Bronze Age pottery were recovered from these fills. Three small pieces of bone (one of them calcined) were found in middle fill 981 on the south-east side of the ring ditch. It is unclear if the bone is human or animal.

2.1.12 Ninety-seven pieces of worked flint were discovered in the ditch, and although some of this was residual Mesolithic material there were also a small number of tools suggestive of a Neolithic to early Bronze Age date. Barrows often become the focus for Bronze Age knapping activity, and it is likely that some of the flint is broadly contemporary with the use of the barrow.

2.1.13 Three features, 774, 776 and 778, were located in the centre of the ring ditch. The stratigraphic relationship between 774 and 776 is uncertain. These appear to have been tree-throw holes, although they may have been pits. Both contained worked flint (including probable Mesolithic pieces), and 776 also produced a very small fragment of prehistoric pottery, possibly an intrusive early Iron Age sherd. Pit 778 was cut into the larger tree-throw hole/pit (774), and contained a small but complete Collared Urn placed almost upside-down (Plate 4 and see cover illustration). Although no cremated remains were found within the urn itself, burnt bone was found beneath the opening of the inverted vessel in fills 779 and 831. It is likely that these remains were originally within the urn and fell out when it was turned upside-down, and it is reasonable to assume that both the urn and the cremated remains were part of the same deposit. The bone possibly belongs to an adult male (see McIntyre below). A radiocarbon date was obtained from the cremated bone (SUERC-72660), returning a date of 3465±33 (1884-1729 cal BC at 83.4% probability).

2.1.14 Collared Urns appear as a widespread phenomenon in the British and Irish ceramic repertoire at about 2200 BC and appear, on current dating, to have gone out of use by 1400 BC. However, a recent Bayesian dating program on English Collared Urns suggests a much more restricted currency, with the vessels beginning *1920-1760 cal BC (95% probability)* and ending *1870-1680 cal BC (95% probability)*. The study included 11 radiocarbon dates primarily from northern England (Wilkin 2013, table 2.6, 377). The measurement returned from the cremated bone associated with the Shinfield Collared Urn is entirely consistent with this recent program of Bayesian analysis.

2.1.15 A second cremation comprising 29g of burnt bone was found in pit 747, 6m to the north-east of the edge of the ring ditch. The pit was *c* 0.5m in diameter and 0.07m deep, and was likely to have been substantially truncated. A radiocarbon date was obtained (SUERC-72659), returning a date of 3495±33 (1905-1740 cal BC at 93.4% probability). This determination is very similar to the central cremation, and there does not need to have been a significant period of time between the death of the two individuals.

Phase 4: Middle Bronze Age

2.1.16 A single pit, 207, has been phased to the middle Bronze Age. This was 0.60m in diameter and 0.07m deep. The pit contained a very small amount of burnt bone, just 0.2g, which may be either human or animal. The pit also contained 57 sherds of pottery, the majority belonging to a Deverel-Rimbury vessel, alongside fragments of a cylindrical or pyramidal perforated fired clay block, a possible perforated disc fragment, charred grains of barley, hazelnut shell fragments and seeds. The pit had clearly been truncated, and it is uncertain if the deposit represents the remains of an urned cremation associated with two fired clay objects, or if it was not considered a burial at the time of deposition given the very small amount of bone recovered. Some of the pottery sherds show signs of secondary burning, and this may have some connection to the burnt bone. The inclusion of a possible loomweight in a middle Bronze Age cremation would be highly unusual. The pit was on the north-eastern edge of Area 4, and no other features were discovered in the vicinity. Other middle Bronze Age remains may be present to the north and east, outside of the excavated area.

Phase 5: Early Iron Age

2.1.17 The majority of the phased archaeological features and finds date to the early Iron Age. Features containing early Iron Age material include two pit clusters, four further pits, four ditches and a four-post structure. It is likely that a number of other features that did not contain material culture also date to the early Iron Age. This includes a further five four-post structures, a number of other pits and a scatter of postholes. A possible roundhouse was also identified.

2.1.18 Intercutting pit group 1276 was found in the south-east of Area 1. Up to 32 pits and a posthole were identified during excavation, although the group continued beyond the limit of excavation to the east. The exposed group appears to form a roughly circular cluster *c* 7.50m in diameter. A relatively large amount of early Iron Age pottery was retrieved from the pit group, comprising 863 sherds weighing 6493g. The vast majority of the early Iron Age pottery from the site came from this group; some 75% of the sherds and 88% of the pottery in terms of weight. A number of layers within the pit group are dark and organic-rich, possibly comprising midden material (e.g. context 1250).

2.1.19 The second pit group, 1503, was located 35m to the south-west of 1276 and comprised eight pits and a posthole. This was more usual in form as the group comprised fewer pits in a less concentrated area. Along with group 1276, these pits might be related to a settlement that had a focus to the south and/or east of the excavated area.

2.1.20 Three or four further pits produced early Iron Age pottery. Pit 787 was located at the south-western end of Area 1, some 80m to the north-west of the nearest four-post structure, and 180m to the north-west of the nearest pit cluster. The pit was 1.3m wide and 1.6m deep and had a flat base. One of the middle fills, 840, produced 96 abraded

sherds from an almost complete early Iron Age carinated bowl (Plate 6). The pit also contained a concentration of five squat flint flakes. These are usually viewed as dating to the middle or late Bronze Age, although an Iron Age date is also possible, especially in view of the associated pottery. The pit was cut by ditch 492 (see below).

2.1.21 Pit 1019 was located in the south of Area 1 near the southern area of four-post structures. This produced 34 sherds of early Iron Age pottery. Oval pit 856 was near four-post structure 906, and also produced early Iron Age pottery. Pit 223 contained prehistoric pottery that could not be closely dated.

2.1.22 Six four-post structures (804, 830, 906, 1126, 1154 and 1308) were discovered within a 100m spread on a NE-SW alignment within Area 1 (Plate 6). Posthole 1124 from four-post structure 1126 produced a single sherd from an early Iron Age bowl. Given the lack of other later prehistoric material from the site, and that these structures form a loose group, it is reasonable to assume that all of the four-post structures at the site date to the early Iron Age.

2.1.23 A possible roundhouse, 1500, was located to the north of the most northerly four-post structure. This comprised up to ten postholes and was *c* 10m in diameter. Only three of the possible postholes, 1236, 1238 and 1240, were believed to be real as the remainder were thought to have been natural features. Feature 1240 was recorded as a possible tree-throw hole. It is therefore uncertain if this represents a roundhouse.

Phase 6: Medieval

2.1.24 A single sherd of medieval pottery was discovered, dating to *c* 1350-1500. This was found in probable quarry pit 734 immediately north of the ring ditch. This is the only feature dating to the medieval period. A number of large, sterile circular pits may also have been dug for quarrying purposes.

Phase 7: Post-medieval

2.1.25 Rectangular structure 410 was found in the northern section of Area 4. The structure was orientated E-W, measuring 16m by 13.5m, and was probably a barn or other agricultural outbuilding. Twenty-two postholes defined the edges of the structure, and a further 17 postholes within the structure followed the same orientation (Plate 7). Two sherds of stoneware dated *c* 1670-1800 were discovered in postholes, alongside fragments of roof tile and bricks of similar date, and iron nails. The building was on the same alignment as two perpendicular ditches in Area 4 (242 and 204). These did not produce finds, although ditch 204 cut ditch 237 probably belonging to undated field system A. Neither structure 410 or ditches 242 and 204 are shown on the detailed estate map of 1756. A single field is depicted in this area; however, the unmarked ditches and barn followed the prevailing orientation of the mid-18th century field system (CgMs Consulting 2010, fig. 3). This evidence suggests that building 410 was

destroyed prior to 1756, and the fields defined by the two ditches were subsumed into a larger field by this time. It is therefore likely that the building dates to the earlier part of the span suggested by the pottery, between *c* 1670-1750.

2.1.26 A series of furrows and ditches in Area 1 were aligned on a NNW/SSE axis. These features correspond to the boundaries of a series of strip fields shown on the 1756 estate map. All of the ditches in Areas 2 and 3 are also present on the 1756 map. Ditch 1133=1159 in Area 1 was the easternmost boundary of the fields, and remains a field boundary until the present. The ditch contained a sherd of stoneware dated *c* 1670-1800 and a fragment of roof tile dated from the late 15th to early 17th century. Ditch 1133=1159 also cut pit 1157, containing a sherd of post-medieval pottery. These series of ditches were in use in the middle of the 18th century, although they probably had earlier origins. There is no positive evidence to suggest a medieval date for the inception of any of the field systems.

2.1.27 Rectangular structure 310 was found in the south-west section of Area 3. This was orientated NNW-SSE and comprised two parallel pairs of beam slots separated by two pairs of postholes (plate 8). This was also probably a small agricultural outbuilding. A single posthole was found in the center of the opening at the SSE side and four postholes at the structures NNW side. A single sherd of pottery dated *c* 1820-1900 was found in one of the four northerly postholes. The structure does not appear on any of the historic maps of the area.

Undated

2.1.28 A large number of ditches were exposed in all of the areas of the site (plates 9 and 10). These can be rationalised into at least four separate systems each following different alignments. Two of these date to the post-medieval period and are dealt with elsewhere. The remaining two are poorly dated, although a few useful stratigraphic relationships exist.

2.1.29 Field system A is predominantly aligned on a NW-SE, NE-SW axis. The majority of the ditches belonging to this system are found in Area 1, although a further segmented linear in Area 4 comprising groups 295, 151 and 237 may also be part of the system. At the south-west of Area 1, ditches 950 and 492 curve and change orientation to a NNE-SSW axis. In this area, ditch 545 runs parallel to 492, 4-6m to the south-west, forming a trackway. The ditches in the south-west of Area 1 are less regular than the straight examples in the northern-central area of the site and the linear in Area 4.

2.1.30 No artefactual material was found in the ditches belonging to field system A in Area 1. However, the northern terminal of ditch 492 cut early Iron Age pit 787. Ditch 545, forming the section of trackway with 492, was cut by ditch 780. Ditch 780 has been phased to the post-medieval period. These relationships show that the trackway and probably the entirety of field system A dates between the early Iron Age and post-medieval period. In Area 4, the segmented ditch that appears to form part of the same system was also cut by post-medieval ditch 204. The ditch also cannot be contemporary with post-medieval structure 410, although no stratigraphic

relationship exists between the features. The segmented ditch in Area 4 produced four small sherds of early Iron Age pottery. As this is the only material culture from the field system, it would be incautious to phase the system to the early Iron Age on such meagre evidence, especially given the rarity of linear boundary features in this period. It is instead best to regard the sherds as intrusive.

2.1.31 Undated field system B followed a NE-SW, NW-SE alignment, and comprised six ditches in Area 1. Ditch 1072 produced two sherds of probable Iron Age pottery. This was immediately to the north-west of possible roundhouse 1500. This was the longest ditch of the group, and may have been aligned to the ring ditch. The line of the ditch is continued by 851, cutting the southern side of the ring ditch. The system therefore dates to after the early Bronze Age. In common with undated field system A, the two small sherds of pottery discovered in the ditch 1072 is insufficient to place the system in the early Iron Age.

2.1.32 There is no artefactual material from the site datable to the later Iron Age or the Roman period, other than a single fragment of possible Roman tile. Despite this dearth of material, it remains possible that both of the undated field systems date to the later Iron Age or Roman period. A number of the ditches are visible as cropmarks, and these may be part of a wider, although segmented, system extending *c* 500m to the north-west and south, and *c* 1km to the east of the site (CgMs Consulting 2010, fig. 9). During the Loddon Valley fieldwalking survey, a scatter of Roman pottery was found in the same area as the cropmarks *c* 500m to the north-west of the site, and it was suggested that this was a settlement (Ford 1997, 22). An evaluation over the complex of cropmarks *c* 1km to the east of the site found 121 sherds of late Iron Age and early Roman pottery from one of the ditches (OA 1999, 15). It is possible that these features, as well as the undated field systems at Shinfield West, all belong to the same broad group of features. However, phasing the ditches from this evidence is highly tenuous.

2.1.33 A number of pits of considerable proportions were discovered, setting them apart from the majority of the isolated pits on site. For example, pit 588 was 2.90m in diameter and at least 1.20m deep. No artefactual material was recovered, and the group remains undated. These may have been waterholes, possibly associated with one or both of the undated field system or the early Iron Age activity. Alternatively, the features may have been quarry pits similar to medieval quarry pit 734.

2.2 Artefacts

General

2.2.1 The following finds were recovered:

Material	Number	Weight (g)
Prehistoric pottery	1148	9030
Medieval pottery	1	2
Post-medieval pottery	6	75
Flint	268	1150
Ceramic building material	23	1165

Fired clay	37	276
Copper alloy	1	
Iron	5	
Glass	18	396

2.2.2 The artefact assemblages are assessed below; the full assessment reports on the pottery, flint, fired clay and ceramic building material are provided in Appendix A.

Pottery by Lisa Brown, with John Cotter

2.2.3 The earliest pottery discovered includes a single possible Grooved Ware sherd and a single possible Beaker sherd, both associated with the ring ditch. Neither identification is certain, as the possible Grooved Ware sherd might instead belong to an early Bronze Age vessel, and the possible Beaker sherd might be intrusive in the context and originally from an early Iron Age vessel.

2.2.4 A small but complete Collared Urn in a grog-tempered fabric with sparse white flint inclusions was discovered in the central burial pit within the ring ditch (see cover illustration). The internal rim bevel is decorated with twisted cord impressions applied in a continuous single chevron. The collar is decorated with vertical lines of twisted cord, generally straight, but on one side curving slightly, where it appears the run was modified in order to avoid or accommodate a short length of a chevron that mirrors the inner rim design. The ornamentation overall is somewhat haphazard and poorly executed. The body of the pot is entirely plain. Associated cremated human remains returned a radiocarbon date of 1884–1729 cal BC (83.4% probability). This date is entirely consistent with the accepted chronology of Collared Urns.

2.2.5 A single pit, 207, contained sherds from a middle Bronze Age Deverel-Rimbury vessel.

2.2.6 The majority of the pottery, some 1062 sherds weighing 7579g, belongs to the early Iron Age. Most of this was recovered from intercutting pit group 1276. This assemblage is dominated by a range of flint-tempered fabrics, and the predominant vessel forms are fineware carinated bowls. Very similar material was discovered at nearby Moores Farm, Burghfield, including a slightly unusually decorated jar that bears remarkable similarities to a vessel from Shinfield. It is reasonable to consider whether both were the work of the same potter.

2.2.7 Within the pottery assemblage from 1276, a basal sherd was discovered with an imprint of a paw from a small mammal. This was made when the vessel was newly formed and left to dry in an inverted position. The species is uncertain, although the most likely candidate is a cat. It is unknown whether it was a wild, domestic or semi-domesticated cat, although the probable domestic location of the drying pot and the small size of the print suggests that a wild cat is unlikely.

2.2.8 Pit 787, away from the cluster, contained 96 sherds belonging to a near-complete and distinctive early Iron Age carinated bowl. The sherds were abraded, and so had clearly been exposed to weathering prior to their deposition in the pit, perhaps within an above-ground midden.

2.2.9 Seven post-Roman sherds were also discovered. This included a late medieval sherd from quarry pit 734, two sherds of 17th-18th century stoneware from barn 410, and a 19th-century yellow-ware sherd from structure 310.

Flint by Mike Donnelly

2.2.3 The assemblage of struck flint comprised 268 pieces, 113 of which were sieved chips. The assemblage as a whole is distinctively early in character with a high blade index (41.67%), including diagnostic Mesolithic artefacts. This suggests that much of the assemblage comprises redeposited late Mesolithic material. A few earlier objects are present, including several large blades. Later pieces including Neolithic-early Bronze Age tools in the ring ditch, as well as later prehistoric flakes in Iron Age pit 787. This indicates that some of the flintwork is contemporary with the excavated prehistoric features.

Ceramic building material and fired clay by Cynthia Poole

2.2.5 The assemblage is small, comprising 23 fragments (1165g) of ceramic building material (CBM) and 37 fragments (276g) of fired clay. The ceramic building material is almost entirely post-medieval apart from a single possible Roman tile fragment. The fired clay fragments are suggestive of diagnostic forms of later Bronze Age-early Iron Age date.

2.2.6 Much of the CBM relates to the footprint of a barn of 17th- to 18th-century date and provides primary evidence for the use of tile and brick in the construction or repair of the building. The single possible Roman tile fragment is the only material culture possibly dating to the Roman period on the site, and was discovered in a post-medieval ditch.

2.2.7 The fired clay was discovered in a pit also containing middle Bronze Age pottery and cremated remains. The identification of the fired clay as a cylindrical perforated block and perforated discs is tentative though the characteristics of the fragments are consistent with these diagnostic artefacts.

Metals by Ian Scott

2.2.10 The metal finds are very limited and comprise an undiagnostic copper alloy fragment from the subsoil (context 101), two possible horseshoe nails fused to a pebble (context 220 from barn 410), two nails (one each from contexts 232 and 280, barn 410), and part of a tanged modern sickle (context 973, a modern ditch).

2.2.11 The materials recovered from sieving (contexts 783 and 789) appear to be concretions rather than metallic iron and there are no recognisable objects. Some very small flakes were recovered from sieving of a sample from deposit 887; these could be hammerscale, though if so they must be intrusive due to their context (lower fill of the early Bronze Age ring ditch).

Glass by Ian Scott

2.2.12 The only glass is from a single cylindrical wine bottle (18 sherds) from context 973 (modern ditch). The bottle was made in a dip mould and has very regular conical pushup formed by a purpose made tool. The bottle almost certainly dates to the second quarter of the 19th century or a little later.

2.3 Environmental and osteological evidence

Human remains by Lauren McIntyre

2.3.1 Cremated bone was found in five contexts (208, 748, 779, 831, 981). All of the contexts except 208 have been dated to the early Bronze Age and are associated with the barrow; context 208 dates to the middle Bronze Age.

2.3.2 Contexts 779 and 831 are both fills of pit 778. This pit also produced a complete Collared Urn. Although no cremated bone was recovered from the vessel, it is likely that the urn, alongside both deposits of cremated bone, relate to the same deposition. Context 748 was the fill of pit 747, and is likely to have been heavily truncated by ploughing due to its shallow depth. This appears to have been a satellite burial to the ring ditch and burial in pit 778. Context 981 was one of the middle fills of the ring ditch. Context 208 was from isolated pit 207 and is likely to have been heavily truncated by ploughing.

2.3.3 Bone from contexts 208 and 981 was found to be lacking in diagnostic features and could not be determined as either human or non-human animal. This material has therefore not been described further in this report, but details are available in the archive.

2.3.4 Pits 778 and 748 each contained the remains of one individual, indicating the assemblage likely comprises a minimum number of two individuals. Pit 778 contained the remains of a possible adult male aged over 18 years.

2.3.5 Bone weights recovered from the two pits were well below the expected weight range for a cremated adult (1000-2400g; McKinley 2000a, 26; 600-900g for archaeologically recovered cremations; McKinley 2013). It is impossible to determine the amount of bone which may have been lost as a result of ploughing truncation. Alternatively, pits 747 and 778 may contain the remains of “token” burial deposits, where only a small quantity of cremated material was selected from the pyre for burial (McKinley 2000b, 42-3; 2004, 10). The deposits are unlikely to represent redeposited pyre debris as no evidence of fuel waste was found.

Animal bone by Lee G. Broderick

2.3.6 A total of 15 animal bones were recovered from the site, comprising three from the early Bronze Age ring ditch, one of which was calcined, and eight from features associated with post-medieval barn 410. None of these were identifiable. The remainder are from a caprine discovered in a modern pit.

Charred plant remains and charcoal by Julia Meen

2.3.7 A total of 81 bulk samples were taken. These samples have been assessed to establish the presence and range of plant macrofossils and charcoal, and to determine which samples are suitable for further analysis.

2.3.8 Many of the flots were small and often contained modern roots. Samples rarely contained more than a few cereal grains, which were often in a poor state of preservation. The presence of what appear to be kiwifruit seeds (*Actinidia deliciosa*) in several of the samples further suggests that at least some of the sampled contexts have been subject to intrusion of much more recent material.

Early Bronze Age

2.3.9 A total of 29 samples were taken from the fills of barrow ring ditch 577. The flots from these samples contained a high proportion of roots and other modern contamination, and where charred plant remains were present they were often limited to isolated cereal grains or hazelnut shell fragments. Samples 62 and 63, both from fill 1066, each contained a fragment of charred *Prunus* sp. (sloe/blackthorn) stone. Given the low numbers of plant remains none of the samples from this feature are recommended for further analysis.

2.3.10 It was noted during excavation that what appeared to be charred timbers were lying in the bottom of the ditch, and several sections of this wood were block lifted as samples 69-72. Assessment of the charred wood from this feature was primarily undertaken to ascertain whether these were structural timbers, perhaps from a palisade around the ditch, or from a tree growing on the feature that was subsequently burnt or caught fire. All examined items from these four samples were oak (*Quercus*), typically heartwood from mature tree(s), and a scan of the remainder of the charcoal suggested that most, if not all, was also oak. No evidence for branchwood or sapwood was noted, although much of the charcoal was fragmentary and/or mineral encrusted, making these characteristics more difficult to identify. Although charcoal was present to some extent in almost all of the samples of the ring ditch, it tended to be either highly abundant, with large fragments present (12 samples), or composed of small fragments in relatively low quantity (17 samples).

2.3.11 Cremation 778 was sampled as five vertical spits through main fill 779, plus an additional sample from 'burnt deposit' 831. With the exception of the uppermost spit, all samples contained swollen basal internodes and root fragments of onion couch grass *(Arrhenatherum elatius* var *bulbosus*). Several of the samples also contain charred seeds of plantain (*Plantago* sp.), with occasional other seeds present. All six samples contained charcoal, which was particularly abundant in the uppermost three spits. Although the charcoal was not fully examined at this stage most, if not all, was clearly oak (*Quercus*).

2.3.12 Two samples were taken from cremation 747. These proved to be devoid of charred plant remains. Both samples contained charcoal, though this was generally of small size.

Middle Bronze Age

2.3.13 A sample from pit fill 207 produced a small number of charred remains, including around 16 well preserved grains of barley (*Hordeum vulgare*). It also contained charcoal, mostly of small size.

Early Iron Age

2.3.14 A total of 15 bulk samples were taken from the fills of 13 early Iron Age pits. The nine sampled pits from pit cluster 1276 contained very few charred plant remains, and were limited to occasional poorly preserved cereal grains and small fragments of hazelnut shell. All of the sampled pits from this cluster contained charcoal, with samples 76, 79, 80 and 82 in particular containing abundant remains. Although the range of taxa present has not been fully assessed at this stage, at least some of the samples – including 82, 83 and 85 – clearly include some non-oak charcoal.

2.3.15 The two sampled pits from pit cluster 1503 contained only a small number of poorly preserved cereal grains, including two grains of *Hordeum vulgare* (barley) from sample 22 and a charred seed capsule of *Raphanus raphanistrum* (wild radish) from sample 81. The charcoal in both samples is generally of quite small size.

2.3.16 None of the four samples taken from pits 787 and 1019 contained significant charred plant remains. While both fills of pit 787 contained very little charcoal of identifiable size, both samples from the fills of pit 1019 contained charcoal, and in particular sample 54, from fill 1021, contained abundant charcoal.

Post-medieval

2.3.17 A total of ten bulk samples were taken from structure 410. Nine samples were taken from postholes and one from a pit. All produced few or no charred plant remains but frequent charcoal. Four samples were taken from postholes forming part of rectangular structure 310. All samples contained evidence of modern contamination but no charred plant remains or charcoal.

Undated

2.3.18 Three samples were taken from ditch fills which remain undated. None of these samples contained identifiable charred plant remains. Charcoal was recovered from sample 1, from ditch 112, but little charcoal was present from samples 4 (ditch 315) and 27 (ditch 721).

2.3.19 Eleven samples were taken from currently undated pit fills. These were generally poor in charred plant remains, with remains either absent or limited to scarce cereal grains or small fragments of hazelnut shell. A fragment of fruitstone, probably sloe/blackthorn (*Prunus* cf *spinosa*) was recovered from sample 9 (fill of pit 446), and a grape pip (*Vitis vinifera*) was present in sample 2 (a burnt deposit in pit 192). The latter seed appears to be mineralised rather than charred, and would be a very unusual find in a prehistoric context. Since no other mineralised material was present in this or any other feature it is possible that the grape seed is intrusive – perhaps from later manuring. With the exceptions of sample 8 (pit 411) and sample 25 (pit 588) all sampled pits contained frequent to abundant charcoal.

Geoarchaeology by Elizabeth Stafford

2.3.20 One monolith sample was submitted for geoarchaeological assessment. The monolith was taken through the fill of a ring ditch 577 and included contexts 600, 581 and 580. The monolith measured 0.52m in length and contained a series of very loose mid brown fine very silty sands with varying amounts of poorly sorted gravel clasts. A higher proportion of gravel clasts was noted in context 581. Context 580 appeared to have higher proportion of silt and was greyer in colour. The contacts between the identified contexts was diffuse over *c* 40mm. The sediments were generally inorganic and no other inclusions such as shell fragments were noted. There was no obvious evidence of soil formation with vegetation growth within the fills and the feature appears to have infilled relatively quickly, possibly from erosion of the feature edges and natural silting processes. The deposit of charcoal identified in the base of the feature was not evident and/or sampled in the monolith, though it is likely from the silty character of 580 this was not deliberately buried following placement.

3 STATEMENT OF POTENTIAL

3.1 Stratigraphy

3.1.1 The stratigraphic sequence of the site has been largely resolved; however, there is further scope to refine the phasing of features belonging to both the early Bronze Age and early Iron Age.

3.1.2 Radiocarbon dating of the central and satellite cremations suggest that the burials were deposited at around the same time, although the presence of possible Grooved Ware and Beaker sherds associated with the central burial and ring ditch respectively suggest the monument could have had earlier origins. Further radiocarbon dating is needed to clarify whether the monument is single- or multi-phased.

3.1.3 It is stated in the regional research agenda that "[i]t has become apparent that early Bronze Age barrows are very complex, in terms of their contents and forms and the burial practices and other ritual activities associated with them… Further analysis of their chronology and function is needed and recognition of the ritual use of the sites" (Bradley 2014, 113). The monument and associated remains excavated at Shinfield supports this statement as there is evidence for multiple interment and ritual activity, shown by the deposit of charred timbers within the ring ditch. Further work is required to understand the nature of this deposit and the ritual activity associated with the material.

3.1.4 The presence of a large quantity of burnt wood within the initial fills of the ring ditch is of some interest. There are a variety of ways in which this deposit may have entered the ring ditch, although at present there is very little evidence for any of the speculations. For example, the tree that the wood is from may have derived from one of the possible tree-throw holes 774 or 776 that the central burial pit was cut into. The wood appears to belongs to a single species (oak), and this might support the interpretation. Alternatively, the wood may have been used in either one or both of the cremations, and deposited alongside the human remains. Another possibility is that the wood was burnt as part of the funerary rite, either *in situ* in the ring ditch or elsewhere prior to deposition. This may have been to heighten the experience of the burial rite, drawing attention to the barrow possibly by setting the ring ditch on fire, or using a fire to provide a focus for ceremonies. This may also have been to provide a link between the body and the monument as they were both subject to burning. Refining the chronological understanding of the burnt timbers, barrow construction and burials would help to elucidate the funerary ritual, in turn providing information on the social and political contexts of the monuments use.

3.1.5 Initial research has highlighted a number of examples of burnt timber, quantities of charcoal or ash deposited in round barrows, and the use of fire in rites associated with barrows (e.g. Bristow 2001, 6.12-3). For example, at Bulford 3 on Salisbury Plain, a 2m deep mass of wood ash was encountered below an outer layer of chalk (Hawley 1910, 618-20; Parker Pearson 2004, 80). Within the 'tons' of ash were charred logs and vertical ash and oak timbers of a rectangular structure, alongside cremated remains and 'portions of an urn with a dotted vandyke pattern' (Hawley 1910, 619). It was noted that a huge amount of wood must have burnt for a considerable period of time

to account for the substantial mass of ash. Burning events at round barrows have also been recorded within the Thames Valley, and it has been noted that most of the well documented examples date to after 1750 BC (Morigi *et al.* 2011, 425). The majority of the instances of burning at barrows in the Thames Valley are associated with burials with grave goods (*ibid*, 425), in contrast to the situation at Shinfield.

3.1.6 It has been suggested that layers of charcoal or burnt material in ring ditch fills are particularly characteristic of the Middle Thames and Kennett Valleys, and are less common in the Upper Thames Valley (Bradley and Richards 1980, 6). A review of the literature is needed to establish whether this still holds true. A local site of particular interest is ring ditch 417 at Field Farm, Burghfield, one of a group of excavated barrows 5.8km to the north-west of Shinfield (Butterworth and Lobb 1992). The ring ditch was much larger than the Shinfield example, and was a focus for burial for an extended period of time including a number of cremations associated with Collared Urns and Deverel-Rimbury vessels. A dense lens of charcoal was discovered just above the primary silts of the ring ditch, representing *in situ* burning, and may provide a nearby parallel to the charred timbers in the Shinfield ring ditch. A radiocarbon date of 2024-1779 cal BC (68% probability) is very similar to the dates returned for the Shinfield cremations, and the deposits may be contemporary. One of the central Collared Urn burials was associated with a number of grave goods, including amber and faience beads, a shale object, and copper alloy awls. A number of similarities and contrasts can be drawn between Field Farm and Shinfield. Further research would place the deposition at Shinfield within its local and regional setting, and has the potential to enhance understanding of the social setting of the monument.

3.1.7 There has been a noted association in the region between females and Collared Urn burials (Morigi *et al.* 2011, 429). It is therefore of interest that the cremation associated with a Collared Urn at Shinfield is a possible adult male.

3.1.8 The middle Bronze Age pit appears to be an isolated feature. It contained sherds from two vessels, one of which showed signs of burning, a possible perforated block or loomweight, and a single piece of cremated bone. Unfortunately, too little survives to be certain if this was human or animal, and it is also unclear whether it should be regarded as a deliberate placed deposit or an incidental inclusion in the pit fill. The presence of small fragments of human bone in pit fills has been noted at other middle Bronze Age sites in the region (eg AWE Burghfield: Booth 2013).

3.1.9 If the bone were to be regarded as a deliberate funerary deposit, its association with the artefacts in the pit is potentially significant. The presence of a loomweight is of particular interest, given the potentially gendered nature of this item. An initial search has only found a single Bronze Age example in the Thames Valley of human remains associated with a loomweight. This was at Reading Business Park/Green Park, where a fragment of a human skull was found with worked wooden objects at the base of a waterhole. In the upper fills, large quantities of late Bronze Age pottery, a smoothed sarsen fragment and 12 loomweight fragments were discovered (Brossler *et al.* 2004, 30). This is quite different to the Shinfield deposit given the later date and uncremated nature of the human bone. Further work is required to search for examples that are similar to the deposit at Shinfield.

3.1.10 Further work is also required to elucidate the nature of early Iron Age intercutting pit group 1276. Although early Iron Age intercutting pits are common on long-lived sites, these pits form an unusual group given the concentration of features in an otherwise apparently isolated location. Indeed, the extent to which these are all distinct intercutting features needs to be further explored. An alternative scenario is that each pit was not fully filled before another pit was dug. If these were only partially filled, the group might form something closer to a pitted hollow. A more detailed assessment of fills from adjacent pits would help to qualify this, as well as a study of pottery sherd joins or vessel joins. This would provide evidence for the sequence of pit digging, and would help to further understand the feature.

3.1.11 Although pit group 1276 appears unusual, a few similar examples are known in the region. At Moores Farm, Burghfield, 3.8km to the north-west of the site, a similar group of apparently intercutting pits are known (Brossler *et al.* 2013, 65-9). Here, 54 pits were identified covering a broadly elliptical area over 9x7m. The excavated area extended well beyond the edge of the cluster, demonstrating the relatively isolated position of the pits. A large amount of pottery, some 9.5kg, was also retrieved from this cluster. It was noted that much of the pottery came from a dark deposit forming the upper fill of several pits. This site is of particular interest as a vessel with slightly unusual fingertipping decoration (Brown 2013, fig. 4.38.16) shares significant similarities with a vessel from Shinfield and it is possible both were made by the same potter. Other elements of the pottery assemblages from both sites are closely comparable. This suggests that the intercutting pit groups at Moores Farm and Shinfield were contemporary.

3.1.12 Another possible parallel is the intercutting pit hollow at Chinnor, measuring 19x8m (Richardson and Young 1951). A large amount of pottery as well as metal and bone artefacts were also retrieved from the features forming this group. It is perhaps relevant that artefacts were retrieved from a number of layers that comprised dark earth. It is possible that at Moores Farm and Chinnor, the pit hollows were filled at least partially with midden material, and this may also have occurred at Shinfield. Further work comparing the nature of the fills with other midden features is needed to further clarify the nature of pit group 1276.

3.1.13 Pit group 1276 and the cluster at Moores Farm are very similar to one another, but stand in contrast to the majority of other pit groups at early Iron Age settlements given circular shape of group as a whole and the concentration of activity in an apparently isolated location. However, the possibility that pit group 1276 represents the edge of a larger settlement that had a focus to the east beyond the area of excavation should not be discounted. Further work is required to understand the extent that pit group 1276 should be regarded as unusual.

3.1.14 The remaining early Iron Age evidence, comprising further pits and a series of four-post structures, is of only local significance. However, the early Iron Age of the lower Kennett and Loddon Valleys is not as well represented than elsewhere in the region (Davies 2016, map 5.1), and the evidence from Shinfield adds understanding to this area.

3.1.15 A number of pits were of considerable proportions and this appears to set them apart from the majority of the isolated pits on site. These remain undated, and their function is unknown. Further analysis of these pits may provide information on these features.

3.1.16 The linear ditches found across the site belong to four separate field systems. These are of very limited significance. Two of the systems are poorly dated, and the other two date to the post-medieval period. Of the poorly dated systems, one post-dates the early Bronze Age, and the other post-dates the early Iron Age. There is little scope to further refine the phasing of these. An environmental sample taken from the segmented linear ditch in Area 4, cut 112 (sample 1), does not contain charred plant remains and modern contaminants were present, meaning material from the sample is not suitable for radiocarbon dating.

3.1.17 The remains of two post-medieval agricultural structures were excavated, including a probable 17th- to 18th-century barn, and a smaller 19th-century structure. These are of local interest as neither appear on historic maps, although their significance does not extend beyond this. No further work is required on the post-medieval features.

3.2 Pottery

3.2.1 Further work is required to more positively identify the possible Grooved Ware and Beaker sherds associated with the ring ditch and to understand the significance of the finds. If more evidence for this early dating is acquired, this could suggest that the monument had earlier origins than indicated by the Collared Urn and radiocarbon dates.

3.2.2 Assessment has identified strong similarities between the early Iron Age assemblage at Shinfield and the assemblage at nearby Moores Farm, Burghfield. Indeed, it is considered possible that some of the vessels at both sites were made by the same potter. This suggests that both sites were occupied at the same time. The positive identification of contemporary early Iron Age sites is rare due to the radiocarbon plateau covering the period, also hampering a more detailed understanding of pottery chronology. Further analysis of pottery fabrics and forms including a comparison with the Moores Farm assemblage will provide more evidence for the possible contemporaneity of the two sites. Understanding the relative chronology is of particular interest given the otherwise unusual isolated intercutting pit groups that were found at both sites.

3.2.3 Further work to assist the interpretation of the unusual intercutting pit group 1276 may be undertaken via analysis of the pottery to investigate the circumstances of deposition.

3.2.4 The paw print on the early Iron Age pottery sherd is of some interest. At present, it is thought that the most likely species this belongs to is a semi-domesticated or domestic cat; however, a positive identification by an appropriate expert is required. Evidence for cats in Iron Age contexts is uncommon but not unknown, and a number have been interpreted as domestic (Cunliffe 1984, 525; Maltby nd, 521; Wainwright 1979, 152-4). However, these appear to date from the middle and late Iron Age. As such, if the paw print was left by a semi-domesticated or domestic cat, this might be amongst the earliest evidence for their presence so far recorded in Britain. Further research is

needed to more precisely identify the species to understand the significance of this find.

3.2.5 The small assemblage of medieval and post-medieval pottery is unremarkable, and has no potential for further analysis.

3.3 Flint

3.3.1 The majority of the flint assemblage appears to be late Mesolithic. As virtually all of this material is redeposited and the assemblage relatively small, no further detailed level of analysis is needed. Berkshire has a rich tradition of Mesolithic archaeology, most notably along the river Kennet (Ellis *et al* 2003; Froom 2012), and Shinfield adds to this growing corpus of sites in the region. The early prehistoric element of the assemblage should be more fully incorporated into the regional Mesolithic framework.

3.3.2 The post-Mesolithic component of the assemblage is quite poor with only a few tools, one Levallois core and a set of later prehistoric flakes from pit 787. The clustering of Neolithic or early Bronze Age flints from around the ring ditch is to be expected. Barrows can often become a focus for Bronze Age knapping activity. Perhaps of more importance is the small set of flakes from pit 787 found in association with an Iron Age vessel. Iron Age flintwork is often very hard to identify since it is practically identical to mid-late Bronze Age flintwork and flint assemblages from Iron Age features are often viewed off as being residual (Humphrey and Young 1999; McLaren 2008; Saville 1981). Here, however, this seems unlikely given the scarcity of flint (away from the two main early concentrations) and the near lack of typically later prehistoric debitage, and it would appear far more likely that these flakes should be viewed as being Iron Age in date. As such, the flints from the Iron Age pit merit more detailed reporting and illustration.

3.4 CBM and fired clay

3.4.1 The fired clay fragments are suggestive of diagnostic forms of later Bronze Age-early Iron Age date. The identification of the fired clay as a cylindrical or pyramidal perforated block and perforated discs is tentative though the characteristics of the fragments are consistent with these diagnostic artefacts contemporary with the middle Bronze Age phasing of the feature in which they were found. The fired clay can, to a limited extent, add to the interpretation and understanding of domestic or craft activities during this period. However, the feature in which the fired clay was discovered is the only middle Bronze Age feature on the site. The association with a possible cremation is unusual, and warrants further consideration.

3.4.2 Aside from one possible Roman piece, all of the CBM dates to the post-medieval period. The assemblage has been fully recorded and has no potential for further analysis.

3.5 Metal and glass

3.5.1 The metal and glass has been fully recorded. This comprised solely post-medieval material, and no further work is required.

3.6 Human bone

3.6.1 The human bone has been fully recorded, and as such the potential of the assemblage has been realised. A summary of the report will be included in the publication.

3.7 Animal bone

3.7.1 Very little faunal material was recovered, and the assemblage is poorly preserved and (except in the case of a modern pit) unidentifiable. The bone has been fully recorded and has no potential for further analysis.

3.8 Charred plant remains and charcoal

3.8.1 Several of the samples contained small numbers of barley (*Hordeum vulgare*) grain, including early Bronze Age ditch sample 43, middle Bronze Age pit sample 3 and early Iron Age pit sample 22. Single grains of wheat (*Triticum* sp.) were found in samples 81 and 54 while a single wheat glume base (*T. dicoccum/spelta*) was recovered from sample 82; all three are early Iron Age in date. Although there is the possibility that this sparse material may be intrusive, as seen with other material from the site, the crop species present match those present from other prehistoric sites in the Kennet Valley (eg Carruthers 1992) and there is no immediate reason why they cannot be contemporary with the deposits. It has been suggested that the Kennet Valley was slower to adopt cultivation of spelt wheat in comparison to sites in the Thames Valley, and that this is linked to a comparative lack of access to long distance trade in the later Bronze Age (Campbell and Straker 2003). However, there is little potential for the majority of these samples to be further analysed for charred plant remains in order to further investigate cultivation trends.

3.8.2 The central cremation burial from the early Bronze Age ring ditch has potential for further analysis of charred plant remains. Apart from the uppermost spit, all samples from this cremation contained swollen basal internodes and root fragments of onion couch grass *(Arrhenatherum elatius* var *bulbosus*), as well as small numbers of other charred seeds. Tubers of onion couch grass are commonly recovered from cremation graves in Central and North-West Europe (Roehrs *et al.* 2013). Several examples were recovered from a middle Bronze Age cremation at Field Farm, Burghfield, around 5km to the west (Carruthers 1992). It is recommended that samples 33, 34, 36, 37 and 73 be fully analysed; however, most of the identifiable charred plant remains from the cremation samples have already been extracted during the assessment stage and further sorting and identifications should be relatively quick to carry out.

3.8.3 Charcoal is preserved in the majority of the samples from the site. It was noted during excavation that what appeared to be charred wood was lying in the bottom of the early Bronze Age ring ditch. A selection of the charcoal from five of the richest concentrations of burnt wood revealed that all identifiable pieces were oak (*Quercus* sp.), in many cases identifiable as heartwood, suggesting the use of timbers from mature trees. As many of the samples from the ring ditch are highly homogeneous, it would not be appropriate to analyse charcoal from a large number of samples. It is suggested that one of the rich samples be fully analysed (ie identifications of 100 items) in order to provide a record of the main charred deposit in the base of the ring ditch, looking specifically to identify whether any roundwood or bark is present which

may be used to distinguish between natural or structural wood. A more limited analysis (*c* 50 items) is recommended for up to three of the sparser charcoal deposits from other areas of the ditch, to ascertain if this material derives from a different source.

3.8.4 All six samples from the central cremation contained charcoal, which was particularly abundant in the uppermost three spits. Although the charcoal has not been fully examined at this stage most, if not all, is clearly oak. Consequently, full analysis (100 items) of one of the richest samples (32 or 33) is recommended, with more limited scanning of the other spits to record whether any additional taxa are present. The identification of charcoal from cremation deposits can potentially provide information about fuel selection preferences and also allow the identification of pyre furniture and grave goods, as well as revealing any spatial variation within the cremation fill.

3.8.5 The archaeology at Shinfield spans a period in which the British landscape underwent dramatic reorganisation, with the emergence of large-scale land division and the development of field systems prompting widespread woodland clearance. Research agendas for the region highlight the need to establish the extent and timing of this clearance, and the location and nature of the remaining woodland (Lambrick 2014). Well preserved charcoal was recovered from many of the early Iron Age pits at Shinfield, and it is suggested that several of these samples should be fully analysed for charcoal in order to better understand woodland resource availability and utilisation at this period.

3.9 Geoarchaeology

3.9.1 No further analysis is merited. A summary of the assessment report will be included in the publication.

4 UPDATED PROJECT DESIGN

4.1 Revised research aims

4.1.1 As well as providing an overall account of the archaeological sequence at the site, the analysis and publication will address the following revised research aims:

Early Bronze Age

4.1.2 What is the chronological relationship between the initial construction of the funerary monument, the deposit of the charred wood, and the two cremation burials? Do the possible Grooved Ware and Beaker sherds relate to an initial phase of the monument pre-dating the cremation burials?

4.1.3 What is the significance of the charred wood found on the base of the ring ditch? How does this deposit relate to the ritual activity associated with the barrow?

4.1.4 How does the monument fit within the regional pattern in terms of its form, chronology, associated material and burials?

Middle Bronze Age

4.1.5 How does the apparently isolated pit compare to patterns of contemporary settlement in the wider region?

4.1.6 Initial research has highlighted the unusual nature of the association between the middle Bronze Age cremated remains and possible perforated block/loomweight in pit 207. Is this deposit unique, and how can it help answer questions about the symbolism surrounding middle Bronze Age cremation burials?

Early Iron Age

4.1.7 How does the character and layout of the early Iron Age settlement compare to other contemporary sites in the region?

4.1.8 What absolute date can be ascribed to pit group 1276?

4.1.9 What is the sequence and longevity of pit group 1276? Was each pit filled prior to the digging of adjacent pits? Could the group be better described as a pitted hollow, rather than a sequence of independent intercutting pits?

4.1.10 What is the purpose of pit group 1276, and does this purpose differ substantially to other pits found on settlements? Were the pits used for the deposition of midden material, and what significance might this have had? Along with the example at Moores Farm (Brossler *et al.* 2013, 65-9), does pit group 1276 stand out as an unusual early Iron Age feature when compared to intercutting pits at other sites?

4.1.11 Are the large pits set apart from the majority of smaller examples? What was their function?

4.1.12 Is the animal that left the print on the early Iron Age pot base a domestic cat?

4.1.13 Is the flintwork in pit 787 Iron Age? If so, how does this enhance our understanding of the use of flint in the Iron Age?

4.2 Methods statement

Stratigraphy

4.2.1 The phasing will be refined and a stratigraphic narrative written, incorporating the results of the further scientific dating and the finds and environmental reports.

4.2.2 To help understand the nature of pit group 1276, a detailed study of the fills from adjacent pits will be carried out, incorporating evidence from pottery sherd joins (see below).

4.2.3 An analysis of the isolated early Iron Age pits will help further define the number of larger pits and assist the interpretation of the features. This work will include comparing the sizes, distribution and fills of the pits.

4.2.4 The evidence from other early Bronze Age to middle Bronze Age and early Iron Age sites in the region will be reviewed, in order to place the evidence from Shinfield within its context and aid its interpretation.

4.2.5 A study of early Iron Age settlements in the region is needed to search for further examples of circular intercutting pit clusters.

Scientific dating

4.2.6 Three further radiocarbon dates will be obtained.

4.2.7 One date will be obtained from the lower fill of the ring ditch, to help clarify whether the monument was constructed earlier than the deposition of the cremation deposits. Assessment of the burnt wood deposit identified only oak heartwood, which is not suitable for dating due to potential issues with the 'old wood effect'. If suitable material (eg sapwood) can be identified within the burnt wood, then this will be used for dating. Otherwise, a date will be obtained on a charred seed or hazelnut shell from an environmental sample from the lower fill.

4.2.8 Two radiocarbon dates will be obtained from early Iron Age pit group 1276. The samples will comprise charred plant material from environmental samples from contexts containing good pottery groups. This will ensure that the dates inform understanding of the regional pottery sequence, as well as dating the feature group itself.

Pottery

4.2.9 The prehistoric pottery assemblage will be fully recorded. This will involve classifying fabrics by principal inclusion types according to the guidelines of the Prehistoric Ceramics Research Group (PCRG). Sources for the raw materials will be investigated. Vessel types and decoration will be classified as far as is possible considering the fragmentary nature of this collection and analysis will include a detailed consideration of the pit assemblages to investigate the circumstances of deposition, how the pottery might have ended up in specific deposits, whether there are joins between features, and whether there is evidence for special deposition – whether of selected fragments or of midden material. A more detailed search of affinities with assemblages from other sites in the locality and the wider region will also be undertaken. Twelve sherds have been selected for illustration and/or photography.

4.2.10 The animal paw print will be referred to an appropriate expert for species identification.

Flint

4.2.11 The early prehistoric element of the assemblage will be incorporated into the regional Mesolithic framework. Additionally, the flints from the Iron Age pit will be reported in more detail. A small number of flints will be illustrated. This will include the key tools and core, and examples of the putative Iron Age flintwork.

Fired clay

4.2.12 The fired clay report will be edited for publication, incorporating parallels from other sites in the region.

Charred plant remains and charcoal

4.2.13 Based on a rapid scan of the charred flots, five samples have been selected for further analysis of charred plant remains and up to 13 samples are recommended for charcoal analysis (six full analyses, seven rapid style of analysis). This will comprise the sorting of flots, identification of macrofossils, tabulation and reporting.

4.2.14 It is recommended that five of the six samples from cremation 778 should be sorted, fully recorded and analysed: samples 33, 34, 36, 37 and 73. However, most of the identifiable charred plant remains from these samples have already been extracted during the assessment stage and further sorting and identifications should be relatively quick to carry out.

4.2.15 It is recommended that one sample from the charcoal-rich samples from ring ditch 527 should be fully analysed for charcoal (100 items), and that up to three further samples from the less rich samples should have a more limited analysis (*c* 50 items) to provide a comparison.

4.2.16 It is recommended that one richer spit from cremation 778 should be fully analysed (*c* 100 items), and that the charcoal from the remaining spits should be scanned and any additional taxa recorded.

4.2.17 It is suggested that up to four of the samples from the early Iron Age pits should be fully analysed.

4.3 Dissemination of results

4.3.1 The final report will be submitted to the *Berkshire Archaeological Journal*. The journal is currently receiving submissions for the next volume, which is due for publication in early 2019.

4.3.2 To bring the site to the attention of a national specialist audience, a brief summary of the results will also be submitted to *Past*, the newsletter of the Prehistoric Society.

4.3.3 This assessment report, along with any specialist data tables that are not included in the journal publication, will be disseminated via the OA Library (https://library.thehumanjourney.net/)

4.4 Retention and disposal of finds and environmental evidence

4.4.1 Given the absence of a receiving museum, it is not recommended that any decisions on disposal are made at present. Once arrangements have been made for the long-term curation of the archive, the post-medieval and modern material could be considered for disposal.

4.5 Ownership and archive

4.5.1 OA will retain copyright of all reports and the documentary and digital archive produced by this project.

4.5.2 OA will maintain the archive to the standards recommended by the Chartered Institute for Archaeologists (CIfA 2014) and the Archaeological Archives Forum (Brown 2011). The documentary archive has been security copied.

4.5.3 As there is currently no museum accepting archaeological archives from Wokingham district, the finds and documentary archive will be retained by OA until a suitable long-term repository can be identified. The landowner's permission to donate the finds to this repository will be sought.

4.5.4 The digital archive will be deposited with the Archaeological Data Service.

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APPENDIX A DETAILED ARTEFACT ASSESSMENTS

A.1 Pottery *by Lisa Brown, with a contribution from John Cotter*

Introduction

A.1.1 The site produced 1148 sherds of prehistoric pottery weighing 9030g. The pottery was recovered from several ditches and pits, a posthole that formed part of a four-post structure, a tree-throw hole, a ring ditch, and a cremation burial. The bulk of the assemblage dates to the early Iron Age, but a small number of early and middle Bronze Age sherds were also identified, which includes a complete Collared Urn weighing 965g.

Methodology

A.1.2 The pottery was sub-divided by broad fabric type and quantified by sherd count and weight within these sub-classes, and by context, feature and group. Where possible, vessel forms, surface finish, decoration and levels of abrasion were also recorded, and a spot-date assigned. Additional information on sherds or sherd groups was noted where relevant.

Late Neolithic

A.1.3 A single small sherd of pottery found during the evaluation in context 14507 (later discovered to be the surface of cremation pit 778) may be a small fragment of Grooved Ware. The slightly micaceous fabric contains grog and red ferrous inclusions, and there are traces of incised herringbone decoration. Although this is a motif applied to Grooved Ware the sherd could belong to a Beaker, Food Vessel, or even a Collared Urn as similar decorative techniques are known on these later vessels (Gibson 2002, figs 40.4, 42, 45.7).

Late Neolithic/early Bronze Age

A.1.4 Ring ditch 527 produced seven sherds (24g) from fills 723, 731 and 941. These were all undecorated body sherds incorporating medium to course calcined flint. The single sherd from context 731 contains very fine flint in an iron-rich fabric, more closely resembling many of the early Iron Age flint-tempered wares, and this fragment may be intrusive. The other sherds from this feature are generally coarser, the clay more friable, and the surface treatment less meticulous than the later material. An 8g sherd in a distinctive sandy fabric containing ferrous pellets was recovered from the same ditch (fill 1051) during the evaluation. This could be a Beaker fragment, but has no clear diagnostic features, and since the ferrous clay is also present in the early Iron Age assemblage, it may also be intrusive.

Early Bronze Age

A.1.5 A complete Collared Urn was found in an inverted position in a pit (778) centrally located within the ring ditch. The urn is at the shorter end of the *c* 10–55cm height range of these vessels at 20cm high. It is made in a grog-tempered fabric with sparse white flint inclusions, and fired to a fairly uniform pale orange colour. The internal rim bevel is decorated with twisted cord impressions applied in a continuous single chevron. The collar is decorated with vertical lines of twisted cord, generally straight,

but on one side curving slightly, where it appears the run was modified in order to avoid or accommodate a short length of a chevron that mirrors the inner rim design. The ornamentation overall is somewhat haphazard and poorly executed. The body of the pot is entirely plain.

A.1.6 Collared Urns appear as a widespread phenomenon in the British and Irish ceramic repertoire at about 2200BC and appear, on current dating, to have gone out of use by 1400BC. Although once thought to have derived from the flat-based, heavy-rimmed Fengate Wares of the Neolithic Impressed Ware tradition, because of morphological similarities, recent programmes of radiocarbon dating indicate that Fengate Wares were fully developed by 3000BC, which suggest the gap between the currencies of the two traditions is problematically wide (Gibson 2002, 96*, inter alia*). Earlier stage production of Collared Urns did, however, overlap with Food Vessels, which share some stylistic traits.

A.1.7 Cremated bone belonging to a single individual (probably a young adult male) was discovered around the vessel rim. This can be reasonably assumed to have been contained within the pot, demonstrating that this was a cremation burial of a single individual – one of a diverse range of funerary rituals accompanied by Collared Urns, which can include multiple cremation, (rarely) inhumation, or a combination of the two (Longworth 1984, 47; Woodward and Hunter 2015, 515). It is often apparent in the case of urned cremation burials that where a ceramic vessel has been used as a container for the cremated bone, the vessel had the capacity to hold far more than was inserted, suggesting a lack of correlation between the quantity of bone (size of individual) and the size of the vessel (McKinley 1997, 139; Woodward 1995). Frequently only part of the cremated bone was deposited in the urn, and it may have been the case that the original contents included organic material that subsequently decomposed, leaving voids in the vessel fill (ibid., 142). In the case of the inverted Shinfield urn, the quantity of cremated bone recovered would not have come close to the capacity of the vessel.

A.1.8 A radiocarbon date of 1884–1729 cal BC (83.4% probability) obtained on the cremated bone provides a date range for the burial event, and although this determination does not specifically date the vessel itself, it is entirely consistent with the currently understood currency of Collared Urns, even taking into account the possibility of reuse of a curated vessel. Indeed, a recent Bayesian dating program on English Collared Urns suggests a much more restricted currency than is usually agreed, suggesting the vessels began between *1920-1760 cal BC (95% probability)* and ended between *1870-1680 cal BC (95% probability)*. The study included 11 radiocarbon dates primarily from northern England (Wilkin 2013, Table 2.6, 377). The measurement returned from the cremated bone associated with the Shinfield Collared Urn is entirely consistent with this recent program of Bayesian analysis.

Middle Bronze Age

A.1.9 Fill 208 of badly truncated pit 207 produced 57 sherds (395g) of middle Bronze Age pottery, associated with a cylindrical or possibly pyramidal fired clay weight. In addition to the small collection of pottery and the weight it produced a piece of cremated human or animal bone. The inclusion of a loomweight and the cremated

bone suggests selection of material for deliberate deposition, although the pottery alone would not highlight such an event.

A.1.10 Most of the sherds belong to a thick-walled vessel in a fabric incorporating coarse, ill-assorted crushed calcined flint inclusions, resembling flint-tempered fabrics described at Prospect Park, Harmondsworth and Hurst Park, East Molesey (Andrews 1996, 30; 83), Green Park (Morris 2004, 58–90), and Moores Farm, Burghfield (Morris 2013, 24–34; 85-92) and other sites in the Middle Thames Valley. Although this vessel is lacking otherwise diagnostic features, it is consistent with the Deverel-Rimbury tradition of large coarse jars that have an ancestry in the 'urn' traditions of the earlier Bronze Age (Ellison 1975; 1981; Gibson 2002, 104–08). These vessels are often, but not by any means exclusively, associated with cremation burials. Some of the sherds show signs of secondary burning (re-firing), which may have some connection to the burnt bone or pyre remains.

A.1.11 A second middle Bronze Age vessel is represented by four fragments (45g) of a vessel with a simple, slightly incurving rim in a micaceous sandy fabric with fine flint temper and smoothed surfaces. Albeit too small to be certain, this is likely to be the rim of a Globular Urn, the 'fineware' component of the Deverel-Rimbury range, perhaps developed to serve a domestic function on the growing number of settlement sites that were being established during this period.

Early Iron Age

A.1.12 Some 1062 sherds weighing 7579g has been classified at this stage as early Iron Age, and another 18 sherds (50g) as generic Iron Age or 'prehistoric'. This material was almost entirely confined to pit deposits (1068 sherds/7630g), with a single fineware bowl sherd recovered from posthole 1124 associated with four-post structure 1126, and a single 2g sherd from a feature described as a 'tree-throw hole'. Ten sherds (43g) came from ditch fills, where they occurred in groups of one to three highly abraded body sherds that are of negligible use in dating these features.

A.1.13 The pits were therefore the key catchment features during this period. Most of the early Iron Age pottery (863 sherds/6493g) came from 14 pits making up pit complex 1276. Another 31 sherds (127g) were recovered from five pits of a second pit complex, 1503. Five isolated pits (223, 787, 1019, 1242 and 1250) produced the remaining 168 sherds (959g).

A.1.14 This assemblage is dominated by a range of flint-tempered fabrics. Only 84 sherds (235g), just about 3% of the total by weight are in other fabrics, these characterised by glauconitic sands, some in combination with iron oxides. Many of the flint-tempered sherds also have a glauconitic sandy matrix, so the clay sources may be related. In contrast to the coarse flint inclusions of middle Bronze Age pottery, most of the early Iron Age sherds incorporate fine or medium grade crushed flint, some of these again in concert with ferrous inclusions. Specific proportions will be determined during analysis, when full fabric identification and quantification is undertaken. The early Iron Age fabrics resemble the published descriptions of some fabrics identified by Kayt Brown at Moores Farm, Burghfield (Brown 2013, 92), especially BF2 and finewares AP2, APM1, and PFA1. This site lies a short distance (*c* 3km) from Shinfield,

and the two settlements have some shared features, most notably shallow pit complexes that produced most of the recovered pottery.

A.1.15 The predominant vessel forms from Shinfield are fineware (and somewhat fewer coarser) carinated bowls. Where profiles are most complete these bowls have long necks and flaring rims, and a few are decorated with shallow-tooled lines or furrows. This type has close parallels at Moores Farm (Brown 2013, 93–7), and the carinated bowl range also resembles some later vessels from Potterne (Gingell and Morris 2000).

A.1.16 Substantial featured sherds of coarseware jars of the type also found at Moores Farm (Ibid.) are rarer, and were identified mostly as thick-walled body sherds and large bases as other diagnostic traits are largely lacking. One slightly unusual jar with a double row of fingertipping on the rim front and neck has a parallel at Moore's Farm that is so close it is reasonable to consider whether it was the work of the same potter (Brown 2013, 96–7, fig. 4.38, 16).

A.1.17 The pit assemblages will be considered in more detail during the analysis stage, but some specific examples merit mention at this stage. Pit 787, which lay in the western part of Area 1, was cut by an otherwise undated and aceramic field ditch, 492. The pit contained 96 sherds (430g) belonging to a near complete and distinctive early Iron Age carinated bowl. The sherds were abraded, and so had clearly been exposed to weathering prior to their deposition in the pit, perhaps within an above-ground midden. This deposit provides a *terminus post quem* for the construction of the field ditch.

A.1.18 A particularly interesting aspect of the assemblage from pit complex 1276 is the discovery of an imprint of a small mammal paw on the basal sherd of a coarseware jar, made when the vessel was drying in an inverted position prior to firing. Clearly the animal had jumped onto the pot base when the clay was still in a very plastic condition. Although the species of the animal is uncertain at this point, it seems most likely to be that of a domestic cat (*Felis catus*) or wild cat (*Felis silvestris*). If the former can be demonstrated to be the case it has significant implications for the dating of the earliest recorded evidence of domestic cats in Britain, at this point thought to be middle Iron Age.

A.1.19 Two radiocarbon determinations from Pit Group 2042 at Moores Farm produced dates of 760–410 cal BC and 760–400 cal BC, which confirm a date in the early Iron Age for the organic material in the deposit that produced much of the pottery. This pit complex yielded flaring neck bowls and shouldered jars (Brossler *et al*. 2013, 65–9; Brown 2013, 94-7) that are so closely paralleled at Shinfield that it would not be unreasonable to suppose that the two sites were occupied contemporaneously, and that they shared a common function and status within the region.

Post-Roman by John Cotter

A.1.20 Seven post-Roman sherds were also discovered (Table 1). This included a late medieval sherd from quarry pit 734, two sherds of 17th-18th century stoneware from barn 410, and a 19th century yellow-ware sherd from structure 310. All of the sherds appear to date the features they were discovered in.

Table 1: Post-Roman pottery

Context	Spot-date	Fabric	No.	Weight	Comments
220	c1670-1800	ENGS	1	1	English stoneware. Small thin-walled body sherd (bo) in light grey stoneware with clear external salt glaze. From a small globular vessel
254	c1820-1900	YELL	1	3	Yellow ware (Midlands source). Bo from ?jug with traces of dark brown and blue slip decoration ext. Interior covered with thin white slip
384	c1670-1800	ENGS	1	7	English stoneware (London)? Or possibly German Frechen stoneware (FREC)? Body sherd from the neck of a Bellarmine-sized jug or bottle. Grey stoneware with mottled brown external salt glaze and pale grey internal glaze
735	c1350-1500	CBW	1	2	Coarse Border ware (Surrey/Hampshire border). Worn body sherd from fairly thin-walled curved vessel - possibly a pipkin or skillet (cooking vessels)? Fine cream fabric with moderate coarse red quartz inclusions. Light copper-stained green glaze allover int. Unglazed and sooted ext.
839	c1750-1900	PMR	1	48	Post-medieval red earthenware. Smooth late-looking fabric with glossy brown/amber glaze int. Bo from a very large thick-walled vessel (eg. bowl or bread crock).
1134	c1670-1800	ENGS	1	8	English stoneware (London)? Or possibly German Frechen stoneware (FREC)? Body sherd from the neck of a Bellarmine-sized jug or bottle. Light grey stoneware with mottled brown external salt glaze and pale grey internal glaze
1158	c1550-1900	PMR	1	8	Post-medieval red earthenware? Or tile? Very worn flat sherd (7mm thick). Probably pottery. Possibly from the flat base of a vessel. No trace of glaze surviving. Some vegetation impressions on one side
TOTAL			**7**	**77**	

A.2 Flint *by Mike Donnelly*

Introduction

A.2.1 The excavations yielded an assemblage of 268 struck flints, numerous natural fragments and 2431 pieces of burnt unworked flint weighing 13,617g. The assemblage is distinctly early in character with a high blade index (41.67%). Diagnostic artefacts are rare but all those identified date to the Mesolithic period. Some less period-specific tools suggest limited Neolithic or early Bronze Age activity, focused around the central ring ditch burial area, and there is a small number of flakes that are typical of later prehistoric knapping strategies that may well be early Iron Age in date.

Table 2: The flint assemblage

CATEGORY TYPE	
Flake	70
Blade	31
Bladelet	19

Blade index	41.67% (50/120)
Irregular waste	3
Microburin	2
Sieved chip	113
Core rejuvenation flake	1
Crested piece	5
Core single platform blades	1
Core opposed platform blades	3
Core other blades	1
Core single platform flakes	1
Core Levallois flake	1
Scraper end	6
Microlith	3
Denticulate	2
End truncation	1
Retouched blade	3
Retouch miscellaneous	1
Retouch other	1
Total	**268**

No. burnt (%)	15/268 (5.60%)
No. broken (%)	60/155 (38.71%)
No. retouched (%)	17/155 (10.97%)

Methodology

A.2.2 The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type (Anderson-Whymark 2013; Bradley 1999), general condition noted and dating was attempted where possible. The assemblage was catalogued directly onto an Open Office spreadsheet. During the assessment additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (e.g. Bamford 1985, 72-77; Healy 1988, 48-9; Bradley 1999). Technological attribute analysis was initially undertaken and included the recording of butt and termination type (Inizan *et al.* 1999), flake type (Harding 1990), hammer mode (Onhuma and Bergman 1982), and the presence of platform edge abrasion.

Provenance

A.2.3 The assemblage was heavily concentrated in two areas of complex archaeology. A ring ditch of early Bronze Age date accounted for 97 flints, while early Iron Age pit cluster 1276 contained 60 flints, with a further 41 from other pits on site. The remaining flints were heavily dispersed over various features such as postholes, ditches, gullies and quarry pits. In most instances, it would appear as if the bulk of the material was clearly residual, although two tree-throw holes may be contemporary with their flint assemblages. Away from the two main concentrations, flint was usually found in very small amounts, often consisting of just fine knapping shatter, some of which may be natural in origin.

Table 3: The flint assemblage by context type

CATEGORY TYPE	Total	Percentage
pits	101	37.69
ring ditch	97	36.19
other		
ditches/gullies	21	7.84
postholes	13	4.85
tree-throw holes	7	2.61
topsoil/subsoil	4	1.49
misc features	25	9.33
Total	268	[100]

Raw material and condition (Table 4)

A.2.4 The assemblage was in relatively good condition with very few heavily damaged or rolled pieces. Flints tended to have lightly damaged or fresh edges and usually displayed low levels of cortication. The assemblage had quite low levels of burning (5.6%) with moderate levels of breakage (38.71%) slightly heightened by the frequent occurrence of blade forms that are usually thinner than flakes and more susceptible to breakage.

A.2.5 The knapped flint was generally of good quality. Where present, cortex type was recorded and showed considerable variety, with a mix of weathered chalk (43.06%), weathered (23.61%), chalk (5.56%), thermal (11.11%), rolled (9.72 %) and indeterminate surfaces (6.94%). This indicates that most of the flint was recovered from secondary sources. Some of the flint does display thermal/re-used surfaces that may suggest later prehistoric scavenging of flint, possibly from the barrow mound or barrow ditches.

Table 4: Flint by condition and cortication

Condition	**Total**	**%**	**Cortication**	**Total**	**%**
Fresh	49	31.61%	None	1	0.68%
Light	86	55.48%	Light	131	88.51%
Moderate	16	10.32%	Moderate	16	10.81%
Heavy	1	0.65%	Heavy		
Rolled	3	1.94%			
	155			**148**	

The assemblage

A.2.6 The assemblage can be categorised as early prehistoric in character. This is readily evident in its blade index (blade forms as a % of all blade and flake blanks) of 41.67%. Ford (1987) states that figures in this region are likely to represents Mesolithic (or Upper Palaeolithic) assemblages. Several of the blades are very large including one 10.5cm example from the northeast corner of the evaluation area so a Late Upper Palaeolithic date for some of the pieces is not entirely out of the question. In addition to this, the assemblage also contained a relatively high percentage (8.39%) of cores and related debitage (core rejuvenation pieces and crests), most of which consisted

of blade cores or other early forms. Crested pieces are very common and these are nearly always early prehistoric in date. Some of the blade cores are very typical of Mesolithic industries with conical or semi-conical examples. One more complex blade core is more typical of early Neolithic assemblages but these can also occur in the Mesolithic.

A.2.7 Tools are also common (10.97%) including many formed on blades, such as simple retouched blades (one of which was also crested), an end truncation, end of blade scrapers and most obviously, the microliths and associated microburins. The microliths consist of two backed bladelets and one scalene triangle. One of the backed bladelets has ventral retouch along its opposite, leading edge and is lacking its tip so its final form is not known. However, the other two examples are both narrow blade in character and are late Mesolithic in date. One Krukowski microburin may have spalled off of an early obliquely blunted microlith but the other microburin cannot be dated any more closely than to simply say it is Mesolithic. Taken as a whole and when examining the cores, blade debitage and tools, the suggestion could be made that the site contains both early and late Mesolithic material. Alternatively, it may simply be the case that the assemblage is very largely late and includes some slightly outsized pieces.

A.2.8 In addition to the early prehistoric/Mesolithic component, a small number of pieces date to later periods. This includes a number of tools of probable Neolithic-early Bronze Age date, all of which originated from ring ditch group 527. They consisted of a fine Levallois core recovered from the ditch during the evaluation, a small horseshoe end scraper from ditch slot 556 and an end scraper-knife from ditch slot 978. In addition to these three pieces, a probable heavy denticulate (or alternatively a crude biface attempt) was also recovered from the ring ditch in slot 556 and may also be of the same date. Debitage from these periods would be largely indistinguishable from early prehistoric flakes without recourse to more detailed metric analysis.

A.2.9 There was a very limited later prehistoric presence in this assemblage amounting to no more than six or so flakes with typical hard-hammer bulbs, squat profiles and little or no platform preparation. Several pieces displaying thermal cortex may indicate that the later prehistoric component may be larger and may reflect the scavenging of older pieces from any mound associated with ring ditch 527. Like most periods, single pieces of flake debitage can be largely indistinguishable from each other even when separated by thousands of years of flint technology. One concentration of typically squat flakes was recovered from pit 787, fill 789. This feature may well represent a contemporary feature with its flint assemblage of five unmodified flakes. Such an assemblage would typically be viewed of as dating to the mid-late Bronze Age although an Iron Age date should not be entirely ruled out.

Flint assemblages by excavation area (Table 5)

Ring ditch 527

A.2.10 The ring ditch was excavated in its entirety and most interventions yielded flint assemblages. In contrast to this, most ditch interventions from outside of this location did not contain flint and this most probably indicates that a barrow was present and that it was built from, or located over a buried soil containing many flints. The assemblage from this feature comprised 97 flints as well as limited amounts of burnt unworked flint (15 pieces weighing just 28g). These flints had a high blade index of 36.36% and including large numbers of fine sieved chips (55). It also included two microliths and several other tools, two of which may be contemporary with the central burial. These consisted of the end scraper-knife combination tool and the horseshoe scraper described above. Cores were rare here but the sole example recovered from the ring ditch was very typically Mesolithic in character, while another core of probable late Neolithic-early Bronze Age date was recovered from here during the evaluation and is probably contemporary with the construction of this monument. Finally, there may have been some scavenging of flint from any assumed mound. Such a practise was quite common with barrows especially on the chalk or other areas where they would likely contain natural flint nodules but, it could also have occurred here, where the barrow mound was very probably rich in earlier flintwork.

Pit cluster 1276

A.2.11 This large group of intercutting features yielded an assemblage of 60 flints as well as 745 pieces of burnt unworked flint weighing 4519g. The assemblage also appeared to be largely residual and early in date (except for the burnt material that was very strongly concentrated in pits 1205, 1288 and 1294). The assemblage had a very high blade index of 52.78% and also contained several Mesolithic or early prehistoric core forms, crested blades and early prehistoric tools including a microlith and associated microburin (both from pit 1280). Also present were an end of blade scraper (also pit 1280), an end of flake scraper (1272) and an end truncation (1205). Blade cores, crested pieces and blades were dispersed over numerous pits but there was a concentration of several blades in pit 1205 and two crested pieces in pit 1244. The dispersed nature of the assemblage and the context of recovery makes it very unlikely that this is a contemporary Mesolithic assemblage and it is very likely that the flints are residual in later prehistoric pits that were cut through soil horizons containing a flint scatter of Mesolithic date.

Pit cluster 1503

A.2.12 Pit cluster 1503 was located to the south of cluster 1276 and contained a small assemblage of just five flints. These included one opposed platform bladelet core and a bladelet as well as three sieved chips. A nearby ditch also contained a flake and a broken denticulate of uncertain date. Overall, this small assemblage appears to share much in common with pit cluster 1276, albeit at much reduced intensity.

Evaluation material

A.2.13 Several flints were recovered during the evaluation phase of this project and have been reported on elsewhere (Crann 2016). However, it is worth mentioning several flints

from that assemblage that were from areas that were not subjected to open area excavation. Trenches 53 and 88 were located around 400m away in the northeast corner of the evaluation area. These trenches contained more early material including a very large distal trimming blade measuring 105mm in length from trench 53 and three flints including a retouched crested blade and core rejuvenation flake from a pit in trench 88. The northwest corner of the evaluation area also had early forms including an end scraper of probable Neolithic date from the edge of the evaluation in trench 116 and a large opposed platform blade core from trench 123 around 300m to the north-northwest.

Table 5: flint assemblage by area

CATEGORY TYPE	Ring ditch 527	Pit cluster 1276	Pit cluster 1503	Remainder
Flake	21	17	2	30
Blade	8	10		13
Bladelet	4	9	1	5
Blade index	36.36% (12/33)	52.78% (19/36)	33.33% (1/3)	37.5% (18/48)
Irregular waste	1	1		1
Microburin		1		1
Sieved chips	55	12	3	43
Core rejuvenation flake				1
Crested blade		3		2
Core single platform blades		1		
Core opposed platform blades	1		1	1
Core other bladelets		1		
Core single platform flakes		1		
Core levallois flake				1
Scraper end	2	2		2
Microlith	2	1		
Denticulate	1			1
End Truncation		1		
Retouched blade	1			2
Retouch misc				1
Retouch other	1			
Total	**97**	**60**	**7**	**104**

No. burnt (%)	5/97 (5.15%)	2/60 (3.33%)	0/7 (0%)	8/104 (7.69%)
No. broken (%)	14/42 (33.33%)	18/48 (37.5%)	1/7 (14.28%)	27/61 (44.26%)
No. retouched (%)	7/42 (16.67%)	4/48 (8.33%)	0/7 (0%)	6/61 (9.84%)

Discussion

The flint assemblage is largely early prehistoric in date and may in fact be almost entirely Mesolithic. Numerous blade forms display very soft-hammer bulbs and heavy platform abrasion that is very typical of Mesolithic industries. The tools recovered support this view as these are also largely late Mesolithic in date where diagnostic or are forms that are readily acceptable in assemblages from this period. There is some possibility that the Mesolithic component of the assemblage may be mixed with several very large blades or blade segments that could be early Mesolithic in date.

A.2.14 Berkshire has a rich tradition of Mesolithic archaeology, most notably along the Kennet, a tributary of the river Thames (Ellis *et al.* 2003; Froom 2012). In many instances these sites are early in date but late Mesolithic sites are also known such as at Avington (Barton and Froom 1986), Thatcham and many sites in east Berkshire (Chisham 2009). Here, the heavily disturbed nature of the assemblage prevents us saying much about this location's importance but it certainly adds to the growing corpus of such sites in this region and is another example away from the edges of the major river valleys where most research work has been undertaken.

A.2.15 The post-Mesolithic component of the assemblage is quite poor with only a few tools, one Levallois core and a set of later prehistoric flakes from pit 787. However, as was mentioned earlier, much of the flake debitage is undated and these periods may well be better represented than at first appears. The clustering of Neolithic or early Bronze Age flints from around the ring ditch is to be expected. Barrows can often become a focus for Bronze Age knapping activity. Perhaps of more importance is the small set of flakes from pit 787 found in association with an Iron Age vessel. Iron Age flintwork is often very hard to identify since it is practically identical to mid-late Bronze Age flintwork and flint assemblages from Iron Age features are often viewed off as being residual (Humphries and Young 1999; McLaren 2008; Saville 1981). Here, however, this seems unlikely given the scarcity of flint (away from the two main early concentrations) and the near lack of typically later prehistoric debitage, and it would appear far more likely that these flakes should be viewed as being Iron Age in date.

A.3 Ceramic building material and fired clay *by Cynthia Poole*

Introduction and methodology

A.3.1 The assemblage comprises a small quantity of ceramic building material (CBM) amounting to 23 fragments (1165g) and a small quantity of fired clay (13 fragments, 217g) including a few scraps (24 fragments, 59g) from sieved samples. The ceramic building material is composed of post-medieval material, except for a single piece of possible Roman tile. The assemblage is quantified and summarised by context in table 6. The assemblage has been recorded in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007) and a spot date assigned. Spot dates are necessarily imprecise covering fairly broad periods rather than short time spans. No complete items survived and the only measurable dimension was thickness. In general, the assemblage is quite fragmented reflected in the low mean fragment weight of 51g, and abrasion was moderate to high on most pieces. Fabrics were characterised on the basis of macroscopic features and with the aid of x20 hand lens.

Description and provenance of the CBM

A.3.2 The assemblage consisted mainly of flat roof tile of post-medieval date, ranging from late 15th-19th century. Flat rectangular roof tile, probably all peg tile, was the dominant form. Three fragments had evidence of peg holes. All were made in a red-

orange sandy fabric, sometimes containing red ferruginous grits or cream streaks and argillaceous pellets.

A.3.3 Several pieces of unfrogged brick were found made in orange-red fine and coarse sandy fabrics. Only one had a complete thickness of 51mm and is of late 15th to early 17th century date.

A.3.4 A single tile measuring 25mm thick may be Roman; its characteristics are not distinctly Roman and alternatively it may be a rough floor tile, though the rough edge is not typical of floor tile. It was found in undated ditch 697 belonging to the post-medieval field system.

A.3.5 A high proportion of this small assemblage was found in postholes that formed barn 410, dated to *c* 1670-1800. Most of the pieces were roof tile and may indicate the barn had a tiled roof. Later post-medieval to modern CBM was found in ditches or modern features. The remainder was found in ditches, a pit and a tree-throw hole.

Description and provenance of the fired clay

A.3.6 None of the fired clay can be positively identified as recognised diagnostic forms, though certain types are hinted at by the surviving characteristics. From the fill 208 of middle Bronze Age pit 207 came two objects. One is possibly the end of a cylindrical or pyramidal perforated block, but with no perforation surviving it is impossible to be certain of the identification. The second is a small piece of flat slab 23mm thick made in a fabric containing coarse angular quartzite grits up to 4mm, which could be a fragment of a small later Bronze Age perforated disc, but without evidence of the edge form or any perforations it is impossible to verify the identification. Another small scrap, found in an early Iron Age pit 1169, from a flat slab 19-21mm thick and made in a coarse sandy fabric with quartzite grits up to 2mm may be a fragment of another such disc.

Discussion/Potential

A.3.7 The quantity and quality of both materials inevitably limits their potential, but to some extent they can add to the understanding and interpretation of the site, but they do not warrant analysis in relation to the wider region. Much of the CBM relates to the footprint of a barn of 17th-18th-century date and provides primary evidence for the use of tile and brick in the construction or repair of the building.

A.3.8 The identification of the fired clay as a cylindrical perforated block and perforated discs is tentative though the characteristics of the fragments are consistent with these diagnostic artefacts contemporary with the middle Bronze Age phasing of the feature in which they were found. The fired clay can, to a limited extent, add to the interpretation and understanding of domestic or craft activities during this period. However, the feature in which the fired clay was discovered in is the only middle Bronze Age feature on the site. The association with a possible cremation is unusual, and warrants further consideration.

Table 6: Quantification and summary of ceramic building material and fired clay by context

Cntxt	Material.	Nos	Wt (g)	Spot Date	Form	Comments
166	CBM	1	36	17-19thC	Roof	
170	CBM	1	33	17-19thC	Roof	
280	CBM	1	20	Pmed	Brick	
282	CBM	1	54	Pmed	Roof	
394	CBM	1	49	C16-C18	Roof	
398	CBM	1	23	C16-C18	Roof: peg tile	Diamond peg hole
405	CBM	1	10	LC17-C19	Roof	
463	CBM	1	18	LC17-C19	Roof	
683	CBM	1	12	LC17-C19	Brick	
698	CBM	1	137	RB?	Flat Tile	
700	CBM	6	219	Pmed	Brick	
839	CBM	1	139	C16-C18	Roof	
973	CBM	1	63	LC15-EC17	Brick	51mm th
1134	CBM	4	351	LC15-EC17	Roof: peg tile	2 circular peg holes; smeared finger print.
280	CBM	1	1	Pmed	Indet	
	Total	23	1165			
1172	Fired clay	2	13	Roman?	Disc or plate	Flat slab 19-21mm th
1191	Fired clay	2	12	undated	Oven floor?	Flat surface; fired black
208	Fired clay	32	244	LBA-EIA?	Oven furniture	cylindrical block? No perforation surviving.
208	Fired clay	1	7	LBA?	Oven furniture	Possible LBA type disc, but no perforations present
	Total	4	25			

APPENDIX B DETAILED ENVIRONMENTAL ASSESSMENTS

B.1 Human remains *by Lauren McIntyre*

Introduction

B.1.1 This report details the results of osteological analysis of burnt human bone recovered from five contexts (208, 748, 779, 831, 981). All of the contexts except 208 have been dated to the early Bronze Age; context 208 dates to the middle Bronze Age.

B.1.2 Cremated bone was recovered from four contexts in three earth-cut pits. Context 208 was the fill of pit 207: the shallow depth indicates this pit is likely to have been heavily truncated by ploughing and root action. Context 748 was the fill of pit 747, and again is likely to have been heavily truncated by ploughing due to its shallow depth. Pit 747 may be a satellite burial to the burial in pit 778. Context 779 was a fill within pit 778: fill 779 also contained an urn, but this did not contain any cremated bone. Context 831 was also a fill within pit 778, comprising the majority of the cremated bone. Pit 778 was located in the centre of ring ditch 527, and was cut into an earlier pit or tree-throw hole. It is possible that cremated bone from 779 and 831 are part of the same cremation burial. Finally, context 981 was one of the middle fills of ring ditch 527, from cut 978. This context was sealed and undisturbed.

B.1.3 Bone from contexts 208 and 981 was found to be lacking in diagnostic features and could not be determined as human or non-human animal. This material has therefore not been described further in this report; note that it has also been included in the animal bone quantification (see Appendix B.3).

Methodology

B.1.4 All contexts containing cremated bone were subject to whole earth recovery, then processed by flotation and wet sieving which sorted them into >10mm, 10-4mm, 4-2mm and 2-0.5mm fractions. Floated residues were retained in a 250µ mesh. Once dried, the extraneous material (e.g. stones) from the >10mm and 10-4mm fractions was separated from the cremated bone and discarded. All cremated bone was examined in accordance with national guidelines (Brickley and McKinley 2004; McKinley 2004).

B.1.5 As all 4-2mm fractions weighed in excess of 100g, a 20g sample was sorted and an estimation of the total bone weight calculated for the entire fraction. The estimated weights are included in the total weights presented below.

B.1.6 The smallest fraction sizes (2-0.5mm) were not sorted but were rapidly scanned for identifiable skeletal remains and artefacts. Estimations of the proportions of bone present within the 2-0.5mm fractions were made and recorded in the archive. The unsorted 2-0.5mm residues were not included in the total bone weights, as they were not deemed significant enough to alter them substantially in any of the cremation deposits.

B.1.7 Analysis of each cremation deposit involved recording its colour, weight and maximum fragment size. These observations can provide information on factors such as efficacy

of cremation (effectiveness of cremation, i.e. how well burnt the body was), relative quantity of fuel used, attained temperature within the pyre, length of time over which the cremation took place, degree of bone oxidation, and how well collected the burnt remains were from the pyre site (McKinley 2004, 10-11).

B.1.8 Each deposit was also examined for identifiable bone elements and the minimum number of individuals (MNI) was estimated. The MNI was determined based on the presence/absence of repeated skeletal elements and on the comparative size of bones (e.g. adult versus juvenile size: Buikstra and Ubelaker 1994). Where possible, estimation of age and sex was attempted following published methods (Buikstra and Ubelaker 1994; Scheuer and Black 2000), though it was not possible to assign an age at death beyond adult (>18 years) for any of the remains. Fragments were examined for evidence of normal morphological variation (non-metric traits), but none were observed. Any lesions of pathology were recorded and diagnoses explored with reference to standard texts, using standard terminology (for example, Aufderheide and Rodríguez-Martín 1998; Ortner 2003).

Results

B.1.9 A summary of the osteological findings is presented in Table 7. It was unclear whether cremated bone fragments from contexts 208 and 981 were human or animal. Therefore, these will not be discussed further in this report, though details will remain recorded in the archive. No evidence of pyre goods or debris was found.

Bone weight

B.1.10 Summaries of bone weights are presented in Tables 8-9. Only 29.49g of bone was recovered from pit 747. A total of 444.56g of cremated bone was recovered from pit 778, with the majority of this from context 831 (342.0g). These bone weights are all considered to be low, being substantially below the range of modern adult cremations (1000-2400g; McKinley 2000a: 26), and archaeologically recovered cremations (600-900g; McKinley 2013). This is unsurprising considering that both features are likely to have been substantially truncated: pit 747 was only 0.07m in depth, while pit 778 was a maximum of 0.25m in depth. These low bone weights are therefore unlikely to represent the full amount of bone deposited within the features after cremation had taken place.

Fragmentation

B.1.11 A summary of fragmentation per cremation is presented in Table104. Fragment size ranged from 19.3mm (a fragment of fibula shaft; 748) to 51.5mm (a tibia shaft fragment; 831). The largest proportion of bone came from the 10-4mm sieve fraction in two contexts (748 and 831). No cremated bone was recovered from the >10mm sieve fraction from context 748. A further 128.7g was recovered from the >10mm fraction from context 831. This is unsurprising considering the small size of the total bone weights for these contexts.

B.1.12 The largest proportion of bone from context 779 came from the 4-2mm fraction (47.96g, 46.76% of the total bone weight for this context), although it should be noted that this weight was estimated (based on the proportion of cremated bone found in a 20g sample of material from this sieve fraction). A further 36.3g of cremated bone was

recovered from the 10-4mm fraction, and 18.3g from the >10mm fraction. Therefore, almost half of the cremated bone from context 779 was from smallest sieve fraction, indicating high levels of fragmentation.

Skeletal representation

B.1.13 Summaries of skeletal representation are presented in Tables 8-9. Overall, of the identified fragments, bone from the skull was most frequently observed in contexts 779 and 831 (9.1g, 8.87% of the bone weight for this context; 91.6g, 26.78% of the bone weight for this context). A high proportion of skull fragments is a pattern often noted in cremation analysis reports because the skull vault is more easily identified than other bones, even within the smaller fractions. Bone from the lower limbs was most frequently identified in context 748 (1.6g, 5.4%).

B.1.14 The majority of recovered bone was unidentified. In all three contexts, smaller proportions of unidentified bone pertained to the upper and lower limbs and hands/feet, but the majority of unidentified bone could not be assigned to an anatomical region (18.89g/64.06% of bone from context 748; 62.96g/61.39% of bone from context 778; 143.4g/41.93% of bone from context 831). The majority of unidentified bone came from the 4-2mm fractions. The 4-2mm fractions were extremely large: only a 20g sample of each of these was sorted, and an estimated weight calculated based upon the proportion of bone found in the 20g sample (Table 11). No identifiable bone fragments were found in the sorted 20g samples. Larger proportions of unidentified bone may be expected where fragmentation is high, as a result of difficulty in identifying smaller bone fragments to a specific bone.

Efficiency of cremation

B.1.15 The vast majority of cremated bone fragments were white in colour; at least 85% of bone being coloured white in all three contexts. This indicates a generally efficient cremation process with the majority of bones being burnt at a temperature in excess of 600ºc. This is a common observation in most archaeological cremation burials (McKinley 2006, 84). This may indicate that in the cases presented here, the majority of the corpse was placed in a location on the pyre where maximum and consistent heat and oxygen supply were available (McKinley 2013, 158). However, this is a tentative assumption as all the recovered bone weights were low: a large proportion of each of the ashes were absent and unavailable for examination. The remainder of the bone was coloured grey. None of the grey fragments could be identified in terms of skeletal element or anatomical region.

Demography

B.1.16 Cremated bone from context 748 comprised a minimum number of one individual, based upon the number of identifiable skeletal elements. No identified skeletal elements were repeated. No indication of the age or sex of this individual was found.

B.1.17 Although bone in pit 778 was found in two separate contexts (779 and 831), no evidence of repeated skeletal elements was found across the contexts. The minimum number of individuals interred in pit 778 was therefore one. Osteological indicators of age and sex were very limited in contexts from pit 778. The size and morphology of the identified bone fragments in contexts 779 ad 831 were in keeping with those of an

adult aged over 18 years (Scheuer and Black 2000). A single fragment of right orbital margin was found in the 10-4mm fraction from context 831. This margin was rounded, which is consistent with a male sex estimation.

B.1.18 Sexing methods must be employed with caution to burnt human bone. In unburnt adult skeletons, typical accuracy for sex assessment from morphological traits is 90-95% when using the pelvis, and 80% when using the skull (Krogman and Işcan, 1986). Therefore, sexual dimorphism in the cranium is more variable than in the pelvis, and sex determination more accurate when utilising multiple traits, preferably from the pelvic bones. When applying these observations to burnt material, there is the added complication of potential for bone shrinkage and warping as a result of dehydration, which may influence the size and morphology of sexually dimorphic traits. Only one cranial trait was available for sex determination in this study, hence the estimation is tentative.

Pathology

B.1.19 Very little evidence for pathology was observed, with the only pathology comprising slight marginal osteophytes and porosity on the superior/inferior articular facets of one vertebral fragment (context 779, sample 37). Osteophytes are reactive new bone formation on or around a joint surface. They are extremely common in any skeletal population and are frequently found in adult individuals aged in excess of 50 years (Rogers and Waldron 1995, 20). However, when found in conjunction with porosity/pitting of the joint surface, this may be indicative of osteoarthritis (Ibid, 45). The presence of osteoarthritis may suggest that the affected individual was an older adult, although it must be noted that these lesions are not exclusive to older individuals, and can be observed in adult individuals aged less than 50 years.

Discussion

B.1.20 Pits 778 and 748 each contained the remains of one individual, indicating the Shinfield assemblage likely comprises a minimum number of two individuals. Pit 778 contained the remains of a possible adult male aged over 18 years.

B.1.21 Bone weights recovered from the two pits were well below the expected weight range for a cremated adult (1000-2400g; McKinley 2000a, 26; 600-900g for archaeologically recovered cremations; McKinley 2013). It is impossible to determine the amount of bone which may have been lost as a result of ploughing truncation. Alternatively, pits 747 and 778 may contain the remains of “token” burial deposits, where only a small quantity of cremated material was selected from the pyre for burial (McKinley 2004, 10; McKinley 2000b: 42-3). The deposits are unlikely to represent redeposited pyre debris, as no evidence of fuel waste was found.

B.1.22 The majority of bone fragments were white in colour, indicating a generally efficient cremation process where bone has become fully oxidised and the burning temperature was in excess of 600˚c (McKinley 2004, 11). The small proportion of grey fragments may pertain to anatomical regions of the body that were placed more peripherally on the cremation pyre, where temperature fluctuation is greatest, and full oxidation of the bone not always possible (McKinley 2013, 158).

B.1.23 Sufficient data has been obtained from these cremation deposits. Where possible, observations have been made regarding bone weight, fragmentation, skeletal representation, demography, palaeopathology, pyre technology, and funerary rite. If further burials are recovered from this site in the future, the human bone from this site should be considered as part of the wider burial landscape, with a review of similar burials in type and date, within the region.

Table 7: Osteological summary

Context	Cut	Total weight	Colour	Age	Sex	Non-metrics/ pathology/ other comments
208	207	0.2g	White 100%	U	U	Unclear whether animal or human
981	978	0.7g	White 100%	U	U	Unclear whether animal or human
748*	747	29.39g	White 90% Grey 10%	U	U	-
779*	778	102.56g	White 95% Grey 5%	U	U	1x fragment, superior/inferior vertebral articular facets (cervical?) with osteophytosis and porosity – possible osteoarthritis
831*	778	342.0g	White 95% Grey 5%	Adult >18 yrs	M??	

Key: M?? = possible male; U = Unknown. Note: Where indicated with *, total weights include estimated weights from the 4-2mm fractions

Table 8: Context 748 (pit 747) - summary of bone weights

	Skeletal Element (g)								
Sample Number	***Skull***	***Axial***	***Upper Limb***	***Lower Limb***	***Unid. Long Bone***	***Unid. Hand/ Foot***	***Unid. Joint Surface***	***Unid. Other***	**TOTAL**
28	0.7	0.5	0	1.6	6.2	0.1	0.6	13.83*	**23.53g* (79.79%)**
29	0.1	0	0	0	0.7	0	0.1	5.06*	**5.96g* (20.21%)**
TOTAL	**0.8g (2.71%)**	**0.5g (1.70%)**	**0g (0%)**	**1.6g (5.4%)**	**6.9g (23.40%)**	**0.1g (0.34%)**	**0.7g (2.37%)**	**18.89g* (64.06%)**	**29.49g* (100%)**

Note: Where indicated with *, weights include estimated weights from the 4-2mm fractions. Context 748 was recovered in two spits, which were assigned sequential sample numbers.

Table 9: Contexts 779 and 831 (pit 778) - summary of bone weights

		Skeletal Element (g)								
Context Number	**Sample Number**	***Skull***	***Axial***	***Upper Limb***	***Lower Limb***	***Unid. Long Bone***	***Unid. Hand/ Foot***	***Unid. Joint Surface***	***Unid. Other***	**TOTAL**
779	**33**	0	0.1	0	0	0	0	0	3.36*	**3.46g* (0.78%)**
779	**34**	0	0	0	1.5	0	0	0	3.95*	**5.45g* (1.22%)**
779	**36**	4.0	1.6	0.5	1.2	10.0	0.7	0.7	19.93*	**38.63g* (8.68%)**
779	**37**	5.1	3.1	1.2	2.6	6.8	0.1	0.4	35.72*	**55.02g* (12.38%)**
831	**73**	91.6	19.0	9.5	29.5	39.2	4.0	5.8	143.4*	**342.0g* (76.93%)**
	TOTAL	**100.7g (22.65%)**	**23.8g (5.35%)**	**11.2g (2.52%)**	**34.8g (7.83%)**	**56.0g (12.60%)**	**4.8g (1.08%)**	**6.9g (1.55%)**	**206.36g* (46.42%)**	**444.56g* (100%)**

Note: Where indicated with *, weights include estimated weights from the 4-2mm fractions. Context 779 was recovered in four spits, which were assigned sequential sample numbers.

Table 10: Summary of fragmentation

Cut	***Context***	***Total weight***	***>10mm***	***10-4mm***	***4-2mm***	***Max. frag. size***
747	**748**	29.49g*	0g	19.7g	7.63g*	19.3mm, fibula shaft
778	**779**	102.56g*	18.3g	36.3g	47.96g*	36.2mm, rib shaft
778	**831**	342.0g*	128.7g	131.7g	81.6g*	51.5mm, tibial shaft

Note: Where indicated with *, weights include estimated weights from the 4-2mm fractions

Table 11: 4-2mm fraction summary

Cut	***Context***	***Sample***	***Total 4-2mm fraction weight (g)***	***Bone Weight from Sorted 20g Sample (g)***	***Proportional Bone Content of 20g Sample***	***Estimated Bone Weight for Total 4-2mm Fraction (g)***
747	**748**	28	218.0	0.7	3.5%	7.63
747	**748**	29	431.0	0.1	0.5%	2.16
778	**779**	33	672.3	0.1	0.5%	3.36
778	**779**	34	789.7	0.1	0.5%	3.95
778	**779**	36	1422.7	0.2	1.0%	14.23
778	**779**	37	1056.7	0.5	2.5%	26.42
778	**831**	73	354.8	4.6	23.0%	81.6

B.2 Charred plant remains and charcoal *by Julia Meen*

Introduction

B.2.1 A total of 81 bulk samples were taken. These samples have been assessed to establish the presence and range of plant macrofossils and charcoal, and to determine which samples are suitable for further analysis.

B.2.2 The most significant archaeological remains from the site are prehistoric in date – mostly early Bronze Age or early Iron Age – and almost half of the bulk samples were recovered from the early Bronze Age ring ditch and its associated cremations. Table 12 shows the distribution of samples from the site by phase and feature type.

Table 12: Distribution of samples by phase and feature type

	Early Bronze Age	Middle Bronze Age	Early Iron Age	Post-medieval	Undated
Ring ditch	29				
Cremation	6				2
Pit		1	15	1	11
Posthole				13	
Ditch					3
TOTAL	**35**	**1**	**15**	**14**	**16**

B.2.3 Each bulk sample was processed by water flotation using a modified Siraf style flotation machine. Processed volumes are shown in Tables 13-16. Where sample volumes were small (less than 5L) they were floated by hand using the 'wash-over' technique. Each flot was collected on a 250µm mesh and the heavy residues were sieved to 500µm, after which both flots and residues were dried in a heated room. The residues were sorted by eye for artefacts and ecofactual remains (plant remains, bones, snails etc).

B.2.4 Flots were examined using a LEICA EZ4D stereo microscope at x10-40 magnification. For the charred material, five main categories of charred macrofossils (cereal grain, cereal chaff, legumes, weed seeds and fruit/nut stones) were characterised. Assessment was made of the quantity and preservation of charcoal. An assessment of the range of wood taxa was made only for key samples (ie a selection of those from the ring ditch) and was mainly concerned with identifying material suitable for radiocarbon dating. However, where flots were dominated by oak, this was often clear from a preliminary scan alone; conversely where non-oak charcoal was obviously present this was noted.

B.2.5 Material was scored using the following system:

* 1-10 items
** 11-24 items
*** 25-49 items

**** 50-99 items
***** 100 or more items

B.2.6 Charred plant remains and charcoal were then rated A to D using the following criteria:

A – High potential on archaeobotanical grounds, i.e. rare or interesting plant taxa and range of material, or exceptional preservation; or high potential of archaeological grounds due to scarcity of information from this type of material or deposit and period.

B – Good potential due to the quantity and range of material present and its reasonable preservation; i.e. the assemblage can provide a useful amount of information.

C – Some identifiable plant material but in low concentrations or very poorly preserved.

D – No identifiable material or so little that this has already been fully identified/recorded (e.g. a few cereal grains/seeds, or where wood charcoal is from a single taxon such as oak [*Quercus*]).

B.2.7 Plant identifications were made with reference to the comparative collection held at OAS and with reference to published guides. Plant nomenclature follows Stace (2010).

Charred plant remains

Early Bronze Age

B.2.8 A total of 29 samples were taken from the fills of ring ditch 577. The flots from these samples contained a high proportion of roots and other modern contamination, and where charred plant remains were present they were often limited to isolated cereal grains or hazelnut shell fragments. Samples 62 and 63, both from fill 1066, each contained a fragment of charred *Prunus* sp. (sloe/blackthorn) stone. Given the low numbers of plant remains none of the samples from this feature are recommended for further analysis.

B.2.9 Cremation 778 was discovered in a pit in the centre of the ring ditch. The cremation was sampled as five vertical spits through main fill 779, plus an additional sample from 'burnt deposit' 831. With the exception of the uppermost spit, all samples contained swollen basal internodes and root fragments of onion couch grass (*Arrhenatherum elatius* var *bulbosus*). Several of the samples also contain charred seeds of plantain (*Plantago* sp.), with occasional other seeds present.

B.2.10 Two samples were taken from cremation 747. These proved to be devoid of charred plant remains.

Middle Bronze Age

B.2.11 A sample from pit fill 207 produced a small number of charred remains, including around 16 well preserved grains of barley (*Hordeum vulgare*). This material is worthy of reference in the final report.

Early Iron Age

B.2.12 A total of 15 bulk samples were taken from the fills of 13 early Iron Age pits.

B.2.13 None of the four samples taken from pits 787 and 1019 contained significant charred plant remains.

B.2.14 The nine sampled pits from pit cluster 1276 contained very few charred plant remains, and were limited to occasional poorly preserved cereal grains and small fragments of hazelnut shell.

B.2.15 The two sampled pits from pit cluster 1503 contained only a small number of poorly preserved cereal grains, including two grains of *Hordeum vulgare* (barley) from sample 22 and a charred seed capsule of *Raphanus raphanistrum* (wild radish) from sample 81.

Post-medieval

B.2.16 Ten bulk samples were taken from structure 410, provisionally thought to be a barn dating to AD 1670-1800. Nine samples were taken from postholes and one from a pit. All produced small flots containing few or no charred plant remains.

B.2.17 Four samples were taken from postholes forming part of rectangular structure 310, dated to AD 1820-1900. All samples contained evidence of modern contamination but no charred plant remains.

Undated

B.2.18 Three samples were taken from ditch fills which remain undated. None of these samples contained identifiable charred plant remains.

B.2.19 Eleven samples were taken from currently undated pit fills. These were generally poor in charred plant remains, with remains either absent or limited to scarce cereal grains or small fragments of hazelnut shell. A fragment of fruitstone, probably sloe/blackthorn (*Prunus* cf *spinosa*) was recovered from sample 9 (fill of pit 446), and a grape pip (*Vitis vinifera*) was present in sample 2 (a burnt deposit in pit 192). The latter seed appears to be mineralised rather than charred, and would be a very unusual find in a prehistoric context. Since no other mineralised material was present in this or any other feature it is possible that the grape seed is intrusive – perhaps from later manuring.

Charcoal

Early Bronze Age

B.2.20 It was noted during excavation that what appeared to be charred timbers were lying in the bottom of the ring ditch, and several sections of this wood were block lifted as samples 69-72. Assessment of the charred wood from this feature was primarily undertaken to ascertain whether these were structural timbers, perhaps from a palisade around the ditch, or from a tree growing on the feature that was subsequently burnt or caught fire.

B.2.21 The charcoal from samples 26, 69, 70, 71 and 72 was previously examined to determine whether short-lived material suitable for radiocarbon dating was present. All examined items from these four samples were oak (*Quercus*), typically heartwood from mature tree(s), and a scan of the remainder of the charcoal suggested that most, if not all, was also oak. No evidence for branchwood or sapwood was noted, although much of the charcoal was fragmentary and/or mineral encrusted, making these characteristics more difficult to identify. Although charcoal was present to some extent in almost all of the samples of the ring ditch, it tended to be either highly abundant, with large fragments present (12 samples), or composed of small fragments in relatively low quantity (17 samples).

B.2.22 All six samples from cremation 778 contained charcoal, which was particularly abundant in the uppermost three spits. Although the charcoal was not fully examined at this stage most, if not all, was clearly oak (*Quercus*).

B.2.23 Both samples from cremation 747 contained charcoal. While this was generally of small size, there is sufficient for further work to be undertaken as a radiocarbon date has been obtained from the cremation. Analysis of the charcoal could be undertaken in order to better understand pyre composition and as a comparison to cremation 778.

Middle Bronze Age

B.2.24 A sample from pit fill 207 contained charcoal, mostly of small size but in sufficient quantity for further analysis to be possible.

Early Iron Age

B.2.25 While both fills of pit 787 contained very little charcoal of identifiable size, both samples from the fills of pit 1019 contained charcoal, and in particular sample 54, from fill 1021, contained abundant charcoal with sufficient available for further analysis. Assessment of the range of taxa present was not made at this stage.

B.2.26 All of the sampled pits from pit cluster 1276 contained charcoal, with samples 76, 79, 80 and 82 in particular containing abundant remains. Although the range of taxa present has not been fully assessed at this stage, at least some of the samples – including 82, 83 and 85 – clearly include some non-oak charcoal.

B.2.27 The charcoal in both samples from pit cluster 1503 is generally of quite small size, but is potentially identifiable and particularly in the case of sample 81 could be usefully compared to that from the other features.

B.2.28 The prehistoric archaeology at Shinfield spans a period in which the British landscape underwent dramatic reorganisation, with the emergence of large-scale land division and the development of field systems prompting widespread woodland clearance. Research agendas for the region highlight the need to establish the extent and timing of this clearance, and the location and nature of the remaining woodland (Lambrick 2014). Further analysis of the well preserved charcoal recovered from many of the early Iron Age pits at Shinfield would provide further information about woodland resource availability and utilisation at this period, and it is suggested that up to four of these samples should be fully analysed.

Post-medieval

B.2.29 The four samples from structure 410, sample 6 (posthole 17), 7 and 11 (both from posthole 380), and 16 (posthole 377), contained frequent, well preserved charcoal. The material was not examined in detail for this assessment, but on superficial inspection most, if not all, appears to be oak. It is quite likely that this charcoal is structural and represents the remains of the barn itself. Together with the late date of the samples, little useful information could be gained from analysing this charcoal further and no further work is recommended on these samples.

B.2.30 No charcoal was present in any of the four samples taken from rectangular structure 310.

Undated

B.2.31 Little charcoal was present from samples 4 (ditch 315) and 27 (ditch 721). Charcoal was recovered from sample 1, from ditch 112, but, as an undated, secondary deposit, this sample is not of high priority for further analysis.

B.2.32 With the exceptions of sample 8 (pit 411) and sample 25 (pit 588) all sampled pits contained frequent to abundant charcoal. However, unless subsequently dated, with no way of placing the material within the context of other activity at the site, the material is of little value and is not recommended for further analysis.

Table 13: Bronze Age samples

						Charred Plant Remains					Charcoal						
Sample No.	Context	Cut	Description	Floated Vol.	Mesh size	Grain	Legume	Seed	Chaff	Fruit/nut	Flot charc. > 4mm frags	Flot charc. 2-4 mm frags	Res charc. >4 mm frags	Comments Flot/CPR/MPR	Comments on charcoal (highlighted samples to be assessed)	Potential CPR	Potential Charcoal
Barrow Ring Ditch 527 Early Bronze Age																	
23	580	577	Lower	40	250	*	*				1000	1000	50	One poorly preserved cereal grain, one Vicia/Lathyrus. Much charcoal was retained within the heavy residue due to mineral encrustation; the 10-4mm and 4-2mm fractions produced highly abundant additional charcoal but no additional CPR.	Abundant charcoal. Quite well preserved. Not examined further at this stage.	D	B
26	627		Same as 1105?	3.5	250									No charred plant remains	Charcoal examined at earlier stage; only Quercus heartwood identified	D	B
69	1105		Block lifted wood. Same as 627?	30	250						1000	10000		"CPR" extracted from heavy residues is actually just charcoal. No charred plant remains	Highly abundant charcoal. 7 items of charcoal examined - all Quercus heartwood. No obviously non-oak charcoal noted during scan of remainder of material	D	B
70			Block lifted wood. Same as 627?	30	250						1000	10000		No charred plant remains.	Selection of charcoal fragments examined: all oak, often heartwood	D	B
71			Block lifted wood. Same as 627?	22	250						1000	10000		No charred plant remains.	Selection of charcoal fragments examined: all oak, often heartwood	D	B
72					250						1000	10000		Includes spot collected fragments as well as floated block sample.	A number of fragments were hand selected from different parts of the block lifted sample: all examined items were Quercus (mostly heartwood)	D	B
41	887	886	Basal/Lower/Middle. Same as 625 and 614	36	250						9	187		Abundant modern root. Single seed cf Actinidia deliciosa (kiwi fruit)	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
42	888		Upper. Same as 615 and 626	40	250						2	76		Abundant modern root. No identifiable charred plant remains.	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
43	890	889	Basal/Lower. Same as 584	40	250	*					2	42		Abundant modern root. One grain Hordeum vulgare and one fragment indet cereal.	Small quantity of charcoal, of small size.	D	D
44	891		Middle. Same as 593 and 625	40	250							73		Small flot, predominately composed of modern root. One poorly preserved indet cereal grain.	Small quantity of charcoal, of small size.	D	D
45	892		Upper. Same as 594 and 626	40	250						1	39		Flot predominately composed of modern root. No identifiable charred plant remains	Small quantity of charcoal, of small size.	D	D
46	940	939	Basal/Lower. Same as 643 and 722	40	250		*			*	43	200		Frequent modern root. Fragment nutshell and 3 2mm legumes	Frequent charcoal, not further examined at this stage but sufficient is available should further analysis be required	D	B/C
47	941		Middle. Same as 644 and 723	40	250		*					20		Flot predominately composed of modern root. 2 2mm legumes.	Little potentially identifiable charcoal present.	D	D
48	942		Upper. Same as 645 and 724	40	250		*				2	28		Flot predominately composed of modern root. One 2mm legume and one fragment charred root	Little potentially identifiable charcoal present.	D	D
49	943		Upper	40	250	*					1	52		Flot predominately composed of modern root. Two poorly preserved indet cereal grains.	Little potentially identifiable charcoal present.	D	D
50	981	978	Middle. Same as 724 and 565	40	250						7	91		Flot predominately composed of modern root. No identifiable charred plant remains	Charcoal present in fairly low quantity.	D	D
51	982		Middle/Upper. Same as 566 and 730	40	250						2	96		Flot composed predominately of modern roots. No identifiable charred plant remains.	Charcoal present in fairly low quantity.	D	D
58	979		Basal/Lower. Same as 564 and 727	40	250						6	36	1	No charred plant remains present.	Little charcoal of identifiable size.	D	D
59	980		Lower. Same as 728 and 562	40	250						21	180		Abundant modern root and modern seeds. One poorly preserved cereal grain, no other charred remains.	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C
55	1053	1048	Upper. Same as 551 and 600	40	250	*				*	26	200	6	Flot predominately composed of modern roots and other modern contamination. One fragment hazelnut shell and one partial, poorly preserved cereal grain	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
56	1052		Middle. Same as 581 and 550	40	250	*					16	111		Flot predominately composed of modern root. One poorly preserved cereal grain cf Triticum	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C
57	1051		Lower. Same as 580 and 549	40	250						500	5000	200	No charred plant remains present.	Abundant charcoal, not further examined at this stage	D	B
60	1049		Basal. Same as 579 and 548	40	250	*					16	155		Flot predominately composed of modern roots. Single poorly preserved grain Triticum sp.	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C

Table 13: Bronze Age samples

						Charred Plant Remains					Charcoal						
Sample No.	Context	Cut	Description	Floated Vol.	Mesh size	Grain	Legume	Seed	Chaff	Fruit/nut	Flot charc. > 4mm frags	Flot charc. 2-4 mm frags	Res charc. >4 mm frags	Comments Flot/CPR/MPR	Comments on charcoal (highlighted samples to be assessed)	Potential CPR	Potential Charcoal
Barrow Ring Ditch 527 Early Bronze Age																	
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26	627		Same as 1105?	3.5	250									No charred plant remains	Charcoal examined at earlier stage; only Quercus heartwood identified	D	B
69	1105		Block lifted wood. Same as 627?	30	250						1000	10000		"CPR" extracted from heavy residues is actually just charcoal. No charred plant remains	Highly abundant charcoal. 7 items of charcoal examined - all Quercus heartwood. No obviously non-oak charcoal noted during scan of remainder of material	D	B
70			Block lifted wood. Same as 627?	30	250						1000	10000		No charred plant remains.	Selection of charcoal fragments examined: all oak, often heartwood	D	B
71			Block lifted wood. Same as 627?	22	250						1000	10000		No charred plant remains.	Selection of charcoal fragments examined: all oak, often heartwood	D	B
72					250						1000	10000		Includes spot collected fragments as well as floated block sample.	A number of fragments were hand selected from different parts of the block lifted sample: all examined items were Quercus (mostly heartwood)	D	B
41	887	886	Basal/Lower/Middle. Same as 625 and 614	36	250						9	187		Abundant modern root. Single seed cf Actinidia deliciosa (kiwi fruit)	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
42	888		Upper. Same as 615 and 626	40	250						2	76		Abundant modern root. No identifiable charred plant remains.	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
43	890	889	Basal/Lower. Same as 584	40	250	*					2	42		Abundant modern root. One grain Hordeum vulgare and one fragment indet cereal.	Small quantity of charcoal, of small size.	D	D
44	891		Middle. Same as 593 and 625	40	250							73		Small flot, predominately composed of modern root. One poorly preserved indet cereal grain.	Small quantity of charcoal, of small size.	D	D
45	892		Upper. Same as 594 and 626	40	250						1	39		Flot predominately composed of modern root. No identifiable charred plant remains	Small quantity of charcoal, of small size.	D	D
46	940	939	Basal/Lower. Same as 643 and 722	40	250		*			*	43	200		Frequent modern root. Fragment nutshell and 3 2mm legumes	Frequent charcoal, not further examined at this stage but sufficient is available should further analysis be required	D	B/C
47	941		Middle. Same as 644 and 723	40	250		*					20		Flot predominately composed of modern root. 2 2mm legumes.	Little potentially identifiable charcoal present.	D	D
48	942		Upper. Same as 645 and 724	40	250		*				2	28		Flot predominately composed of modern root. One 2mm legume and one fragment charred root	Little potentially identifiable charcoal present.	D	D
49	943		Upper	40	250	*					1	52		Flot predominately composed of modern root. Two poorly preserved indet cereal grains.	Little potentially identifiable charcoal present.	D	D
50	981	978	Middle. Same as 724 and 565	40	250						7	91		Flot predominately composed of modern root. No identifiable charred plant remains	Charcoal present in fairly low quantity.	D	D
51	982		Middle/Upper. Same as 566 and 730	40	250						2	96		Flot composed predominately of modern roots. No identifiable charred plant remains.	Charcoal present in fairly low quantity.	D	D
58	979		Basal/Lower. Same as 564 and 727	40	250						6	36	1	No charred plant remains present.	Little charcoal of identifiable size.	D	D
59	980		Lower. Same as 728 and 562	40	250						21	180		Abundant modern root and modern seeds. One poorly preserved cereal grain, no other charred remains.	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C
55	1053	1048	Upper. Same as 551 and 600	40	250	*				*	26	200	6	Flot predominately composed of modern roots and other modern contamination. One fragment hazelnut shell and one partial, poorly preserved cereal grain	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
56	1052		Middle. Same as 581 and 550	40	250	*					16	111		Flot predominately composed of modern root. One poorly preserved cereal grain cf Triticum	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C
57	1051		Lower. Same as 580 and 549	40	250						500	5000	200	No charred plant remains present.	Abundant charcoal, not further examined at this stage	D	B
60	1049		Basal. Same as 579 and 548	40	250	*					16	155		Flot predominately composed of modern roots. Single poorly preserved grain Triticum sp.	Charcoal mostly of small size, but sufficient for further analysis if required. Much is mineral encrusted.	D	C

61	1050		Basal. Same as 578 and 547	40	250							46		Flot predominately composed of modern roots. No charred plant remains present	Charcoal mostly of small size and present in low quantity	D	D
62	1066	641	Charcoal deposit. Basal/lower?	20	250		*	*		*	300	1000	2	One legume (Vicia/lathyrus) and one charred seed. One fragment Prunus sp. stone recovered from residues	Abundant charcoal, not further examined at this stage	D	B
63			Charcoal deposit. Basal/lower?	40	250					*	1000	10000	100	2 flots produced (only one assessed, but charcoal nos doubed) Fragment of Prunus sp. stone	Highly abundant charcoal, not further examined at this stage.	D	B
64			Charcoal deposit. Basal/lower?	40	250						300	1000	62	Frequent modern root. No charred plant remains. The 'CPR' recovered from the residue is just a piece of charcoal	Abundant charcoal, not further examined at this stage	D	B
65	1067	918	No vertical info, but 'probably related to 1066 and 1068'	10	250						200	1000		No charred plant remains present.	Abundant charcoal, not further examined at this stage	D	B
66	1068	725	Charcoal deposit basal or lower fill. Inbetween basal 726/727, and lower 728	35	250						12	300	40	Abundant modern roots. Single poorly preserved cereal grain, no other charred plant remains.	Charcoal mostly of small size, but sufficient for further analysis if required.	D	B/C
Cremation 778 Early Bronze Age																	
32	779	778	Cremation (Spit 1)	20	250						1000	10000	100	No charred plant remians.	Highly abundant charcoal. Much, if not all, is clearly oak, but not examined further at this stage	D	B
33	779		Cremation (Spit 2)	20	250			*			1000	10000	50	Tuber of Arrhenatherum elatius var bulbosus plus several charred root fragments. Seed cf Plantago	Highly abundant charcoal. Much, if not all, is clearly oak, but not examined further at this stage	B	B
34	779		Cremation (Spit 3)	20	250			**			500	1000	50	Several tubers Arrhenatherum elatius var bulbosus plus numerous root fragments. Seeds Papaver sp. and Plantago sp.	Highly abundant charcoal. Much, if not all, is clearly oak, but not examined further at this stage	B	B
36	779		Cremation (Spit 4)	20	250			***		*	134	300	21	Frequent tubers, root fragments and stems of Arrhenatherum elatius var bulbosus. Seed Plantago, couple of other charred seeds, plus seed cf Actinidia deliciosa (kiwi fruit). Fragment hazel nutshell	Frequent charcoal, appears to be mostly oak but not properly examined at this stage	B	B
37	779		Cremation (Spit 5)	15	250			***			200	500	36	Frequent tubers and root fragments of Arrhenatherum elatius var bulbosus. Numerous Plantago seeds and occasional other seeds.	Frequent charcoal, appears to be mostly oak but not properly examined at this stage	B	B
73	831		Cremation "burnt deposit"	6	250	*		*			21	155		Swollen basal internode of Arrhenatherum elatius var bulbosus, plus several stem and root fragments cf this plant. Three very poorly preserved cereal grains	Charcoal mostly of small size, but sufficient for further analysis if required.	B	B
Cremation 747 Early Bronze Age																	
28	748	747	Cremation	10	250						43	200		Abundant modern roots. No charred plant remains.	Frequent charcoal, not further examined at this stage but sufficient is available should further analysis be required	D	B/C
29	748	747	Cremation	10	250			*			17	163		Abundant modern root. Single ?charred seed present, cf Actinidia deliciosa (kiwi fruit)	Small quantity charcoal, mostly of small size, but sufficient for further analysis	D	B/C
Pit 207 Middle Bronze Age																	
3	208	207	pit fill	20	250	**		**		*	12	100	2	16 grains Hordeum vulgare, quite well preserved. 3 fragments hazelnut shell. Piece cereal sized culm. One Poaceae seed, two Rumex seeds, several seeds cf Persicaria	Charcoal mostly of small size	C/D	C/D

Table 14: Early Iron Age samples

					Charred					Charcoal						
Sample No.	Context	Cut	Floated Vol.	Mesh size	Grain	Legume	Seed	Chaff	Fruit/nut	Flot charc. > 4mm frags	Flot charc. 2-4 mm frags	Res charc. >4 mm frags	Comments Flot/CPR/MPR	Comments on charcoal	Potential CPR	Potential Charcoal
Early Iron Age Pit [787]																
35	789	787	30	250						8	5	10	Small flot, predominately composed of modern roots, with other modern contamination. No charred plant remains.	Little charcoal of identifiable size.	D	D
39	840	787	8	250									Small flot, predominately composed of modern roots. No identifiable charred plant remains.	No charcoal of identifiable size	D	D
Early Iron Age Pit [1019]																
53	1020	1019	14	250						1	90		Flot composed predominately of modern roots. No identifiable charred plant remains.	Charcoal present in fairly low quantity.	D	C/D
54	1021	1019	20	250	*					200	1000	30	Two poorly preserved cereal grains, one of which is Triticum sp.	Abundant charcoal, not further examined at this stage	D	B
Pit Cluster 1276																
76	1247	1244	30	250						200	500	2	No charred plant remains, although a single seed of cf Actinidia deliciosa (kiwi fruit) present (probably not charred)	Frequent charcoal, sufficient for further analysis, although not further examined at this stage.	D	B
79	1206	1205	40	250	*					200	1000	17	Charred plant remains limited to 4 partial, very poorly preserved cereal grains.	Frequent charcoal, sufficient for further analysis, although not further examined at this stage.	D	B
80	1203	1202	40	250	*					107	500		Frequent modern roots and plant stems. 2 very poorly preserved cereal grains. One seed Euphorbia helioscopa, but probably not or only partially charred	Sufficient charcoal for further analysis, not further examined at this stage	D	B
82	1299	1298	40	250	*		*	*	*	300	5000	14	Small number of poorly preserved cereal grains. One glume base Tritcium spelta/dicoccum One seed Euphorbia helioscopia. One fragment hazelnut shell.	Abundant charcoal. Not properly examined at this stage, but can see that at least some is non-oak	D	B
83	1295	1294	10	250	*					85	300	1	Small flot. Single poorly preserved cereal grain, no other charred plant remains.	Sufficient charcoal for further analysis, not further examined at this stage but can see that at least some non-oak charcoal is present.	D	B
84	1281	1280	40	250					*	33	200	14	Four fragments nutshell, no other charred plant remains	Sufficient charcoal for further analysis	D	B
85	1289	1288	35	250					*	73	300	2	Small fragment hazelnut shell, no other charred plant remains.	Sufficient charcoal for further analysis, not further examined at this stage but can see that at least some non-oak charcoal is present.	D	B
86	1293	1292	26	250			*			11	97		Single seed Euphorbia helioscopia, possibly not charred. No other charred plant remains present.	Charcoal mostly of small size	D	C/D
87	1297	1296	26	250						5	118		No charred plant remains present	Charcoal mostly of small size	D	C/D
Pit Cluster 1503																
22	574	571	40	250	*				*	17	300	30	Frequent modern root. 2 grains Hordeum vulgare. Fragment hazelnut shell. Several amorphous items. Possible cone. Possible tree bud.	Charcoal generally of quite small size, but of sufficient size to be potentially identifiable. Charcoal often mineral encrusted.	D	C
81	1172	1169	40	250	*		*			8	90	20	Small number of poorly preserved cereal grains, including cf Triticum sp. Seed capsule Raphanus raphanistrum. 3 seeds Stellaria media, possibly not charred. Several fragments cf charred catkins, possibly alder?	Charcoal mostly of small size	D	D

Table 15: Post-medieval samples

						Charred					Charcoal						
Sample No.	Context	Cut	Description	Floated Vol.	Mesh size	Grain	Legume	Seed	Chaff	Fruit/nut	Flot charc. > 4mm frags	Flot charc. 2-4 mm frags	Res charc. >4 mm frags	Comments Flot/CPR/MPR	Comments on charcoal (highlighted samples to be assessed)	Potential CPR	Potential Charcoal
Barn 410 (1670-1800)																	
6	320	317	Posthole	20	250						43	500		No charred plant remans aside from charcoal	Charcoal in good condition, appears to be dominated by oak but not examined in detail at this stage	D	C
7	383	380	Posthole	30	250						108	500	11	No charred plant remains - frequent Veronica hederifolia but likely to be modern	Abundant well preserved charcoal - much appears to be oak but not properly examined at this stage.	D	C
10	280	279	Posthole	20	250						2	5		Flot very small, mostly roots and other modern contamination. Seed Polygonum aviculare recovered from residue and placed in tube is actually modern uncharred.	Very little charcoal of potentially identifiable size.	D	D
11	383	380	Posthole	20	250					*	55	200	14	Small fragment hazelnut shell; otherwise no charred plant remains	Abundant charcoal, much clearly oak but not properly examined at this stage.	D	C
16	390	377	Posthole	20	250						500	1000	17	No charred plant remians.	Abundant well preserved charcoal - most appears to be oak but not properly examined at this stage.	D	C
17	282	281	Posthole	10	250									Small flot, no charred plant remains.	Very little charcoal of potentially identifiable size.	D	D
18	220	217	Posthole	10	250							4		Small flot, frequent modern contamination. No charred plant remains.	Very little charcoal of potentially identifiable size.	D	D
19	170	169	Posthole	10	250									Small flot, frequent modern root and other modern contamination and modern seeds. No identifiable charred plant remains.	Very little charcoal of potentially identifiable size.	D	D
20	405	403	Pit	10	250									Small flot, frequent modern root. No charred plant remains.	Very little charcoal of potentially identifiable size.	D	D
21	184	183	Posthole	10	250			*						Small flot, frequent modern root and other modern contamination. Frequent modern seeds. Single charred seed of Anthemis cotula.	Very little charcoal of potentially identifiable size.	D	D
Rectangular Structure 310 (1820-1900)																	
12	256	255	Posthole	10	250							20		Small flot. Small fragment charred hazelnut shell. Frequent modern contamination including modern seeds.	Small quantity abraded charcoal, little of identifiable size.	D	D
13	307	306	Posthole	10	250									No charred plant remains. Modern contamination and seeds.	Very little charcoal of potentially identifiable size.	D	D
14	305	304	Posthole	10	250									No charred plant remains. Modern contamination and seeds.	Very little charcoal of potentially identifiable size.	D	D
15	262	261	Posthole		250									No charred plant remains. Modern contamination and seeds.	Very little charcoal of potentially identifiable size.	D	D

Table 16: Undated samples

					Charred					Charcoal						
Sample No.	Context	Cut	Floated Vol.	Mesh size	Grain	Legume	Seed	Chaff	Fruit/nut	Flot charc. > 4mm frags	Flot charc. 2-4 mm frags	Res charc. >4 mm frags	Comments Flot/CPR/MPR	Comments on charcoal (highlighted samples to be assessed)	Potential CPR	Potential Charcoal
Undated Ditch Fills																
1	123	112 (237)	3	250						25	80		Small flot, frequent root. Modern contamination, moss. No. identifiable charred plant remains.	Charcoal slightly encrusted and generally of quite small size	D	C
4	316	315	40	250							10	1	No identifiable charred plant remains. Small flot, frequent modern plant material and other contamination.	Very little charcoal present.	D	D
27	721	720 (742)	9	250						1	4		Small flot, mostly composed of modern roots. No charred plant remains.	Very little charcoal of potentially identifiable size.	D	D
Undated Pit Fills																
2	193	192	16	250	*				*	85	200	5	Couple of poorly preserved cereal grains. Three fragments nutshell/fruitstone. Grape pip - appears to be ?mineralised rather than charred - intrusive? Other charred item.	Charcoal generally well preserved, impression is that it is mostly oak although not properly examined.	D	C
30	760	755	40	250					*	75	300	1	One fragment charred hazelnut shell; no other charred plant remains.	Frequent charcoal, not further examined at this stage but sufficient is available should further analysis be required	D	C
31	783	782	10	250						20	100	5	Small flot. No charred plant remains.	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
74	1184	1183	10	250						105	300	2	Frequent modern root. No charred plant remains.	Sufficient charcoal for further analysis if required; charcoal not properly examined at this stage but from scanning appears to be mostly if not all oak	D	C
75	1191	1189	20	250						31	200		Frequent modern root. No charred plant remains.	Charcoal mostly of small size, but sufficient for further analysis if required	D	C
78	1255	1250	40	250	*			*		300	1000	14	Two very poorly preserved cereal grains and one small fragment barley rachis	Frequent charcoal, sufficient for further analysis, although not further examined at this stage.	D	C
5	362	361	40	250	*				*	200	1000	50	Flot almost entirely charcoal. 2 fragments nutshell, one poorly preserved cereal grain.	>4mm fraction of flot is entirely charcoal. Much of the charcoal is obviously oak, but not examined in detail at this stage to see if other taxa present	D	C
8	412	411	18	250									Contains roots and modern contamination only	No charcoal of identifiable size	D	D
9	447	446	20	250					*	500	1000	50	Large fragment Prunus cf spinosa fruitstone. No other charred plant remains observed.	Abundant charcoal, much clearly oak but not properly examined at this stage. Bark.	D	C
24	592	588	20	250						1000	1000	200	No charred plant remains	Highly abundant charcoal, often mineral encrusted. Charcoal not further examined at this stage.	D	C
25	590		40	250									Flot composed of modern roots and other modern contamination. No charred plant remains.	No charcoal present.	D	D
Cremation [747] Undated																
28	748	747	10	250						43	200		Abundant modern roots. No charred plant remains.	Frequent charcoal, not further examined at this stage but sufficient is available should further analysis be required	D	B/C
29			10	250			*			17	163		Abundant modern root. Single ?charred seed present, cf Actinidia deliciosa (kiwi fruit)	Small quantity charcoal, mostly of small size, but sufficient for further analysis	D	B/C

B.3 Animal bone *by Lee G. Broderick*

Introduction

B.3.1 A total of 16 animal bones were recovered from the site, associated with the early Bronze Age, post-medieval and modern phases (Table 17). Fourteen of the specimens were recovered by hand, with just 1 coming from environmental sampling (Table 18). The bones were generally in poor condition (Lyman, 1996, stage 3). Given the small sample size in each phase, NISP figures are used throughout as providing the most likely reflection of living animal proportions on the site.

Methodology

B.3.2 The animal bone assemblage was recovered principally through hand-collection, although environmental samples were also taken and animal bone extracted from them. The whole assemblage was recorded at this assessment stage with the aid of the Oxford Archaeology reference collection and standard identification guides. Bones were recorded using the diagnostic zones described by Serjeantson (1996) for mammals, Strid (2012) for mammal mandibles and Cohen and Serjeantson (1996) for birds. Some further work is recommended, but is principally confined to analysis of the biometrical and ageing data together with the checking of tentative identifications. A report will be written for publication.

Results

Early Bronze Age

B.3.3 Three unidentified fragments were recovered from a ring ditch associated with this phase, one of which was calcined.

Middle Bronze Age

B.3.4 One unidentified calcined fragment was recovered from a pit.

Post-medieval (*c* 1670-1800)

B.3.5 A total of eight unidentified fragments were recovered from this phase, seven from a pit (including three calcined specimens) and one (through environmental sampling) from a posthole, both from the area of barn 410.

Modern

B.3.6 A total of four specimens were recovered from this phase of the site, all from the same pit context (1227). These were a humerus and maxilla of a caprine and the left and right mandibles of a sheep. The mandibles both had a wear stage of 11, suggesting an age at death of 8-12 months (Jones 2006). The humerus was a distal end which was still fusing, suggesting an age at death of 6-9 months (Moran and O'Connor 1994). It seems entirely possible that all four of these specimens are from the same individual.

Conclusions

B.3.7 The assemblage was both small and poorly preserved, with no specimens identifiable from any of the archaeological phases on the site. No further work on the assemblage is recommended.

Table 17: Total NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures per period from the site. Three most common species for each phase highlighted.

	Early Bronze Age	Middle Bronze Age	c.1670-1800	Modern
caprine				**2**
sheep				**2**
Total Mammal	0	0	0	4
Total NISP	0	0	0	4
Total NSP	3	1	8	4

Table 18: Specimens recovered from sieved environmental samples and hand-collected (unsieved samples). Higher proportion highlighted.

	Sieved	Unseived
Medium Mammal	0	4
Indet.	1	11
Total NISP	0	4
Total NSP	1	15

B.4 Summary of radiocarbon dates

Laboratory code	Material and context	δ 13C relative to VPDB	Radiocarbon age (BP)	Calibrated date (95.4% probability)	Calibrated date (68.2% probability)
SUERC-72659	Cremated human bone from satellite cremation (748)	-22.3‰	3495 ± 33	1905-1740 cal BC (93.4%) 1711-1699 cal BC (2%)	1880-1860 cal BC (13.2%) 1853-1771 cal BC (55%)
SUERC-72660	Cremated human bone from central cremation (831). Associated with Collared Urn	-26.0 ‰	3465 ± 33	1884-1729 cal BC (83.4%) 1723-1692 cal BC (12%)	1876-1841 cal BC (22.1%) 1821-1797 cal BC (13.3%) 1782-1741 cal BC (27.1%) 1711-1700 cal BC (5.8%)

APPENDIX C RISK LOG

The table below lists potential risks for the PX analysis work.

No.	Description	Probability	Impact	Countermeasures	Estimated time / cost	Owner	Date updated
1	Specialists unable to deliver analysis report due to over running work programmes/ ill health/other problems	Medium	Variable	OA has access to a large pool of specialist knowledge (internal and external) which can be used if necessary	Variable		
2	Non-delivery of full report due to field work pressures/ management pressure on co-authors	Medium	Medium-high	Liaise with OA management team	Variable		

APPENDIX D HEALTH AND SAFETY STATEMENT

All OA post-excavation work will be carried out under relevant Health and Safety legislation, including the Health and Safety at Work Act (1974). A copy of the OA Health and Safety Policy can be supplied. The nature of the work means that the requirements of the following legislation are particularly relevant:

- Workplace (Health, Safety and Welfare) Regulations 1992 - offices and finds processing areas
- Manual Handling Operations Regulations (1992) - transport: bulk finds and samples
- Health and Safety (Display Screen Equipment) Regulations (1992) - use of computers for word-processing and database work
- COSSH (1988) - finds conservation and environmental processing/analysis

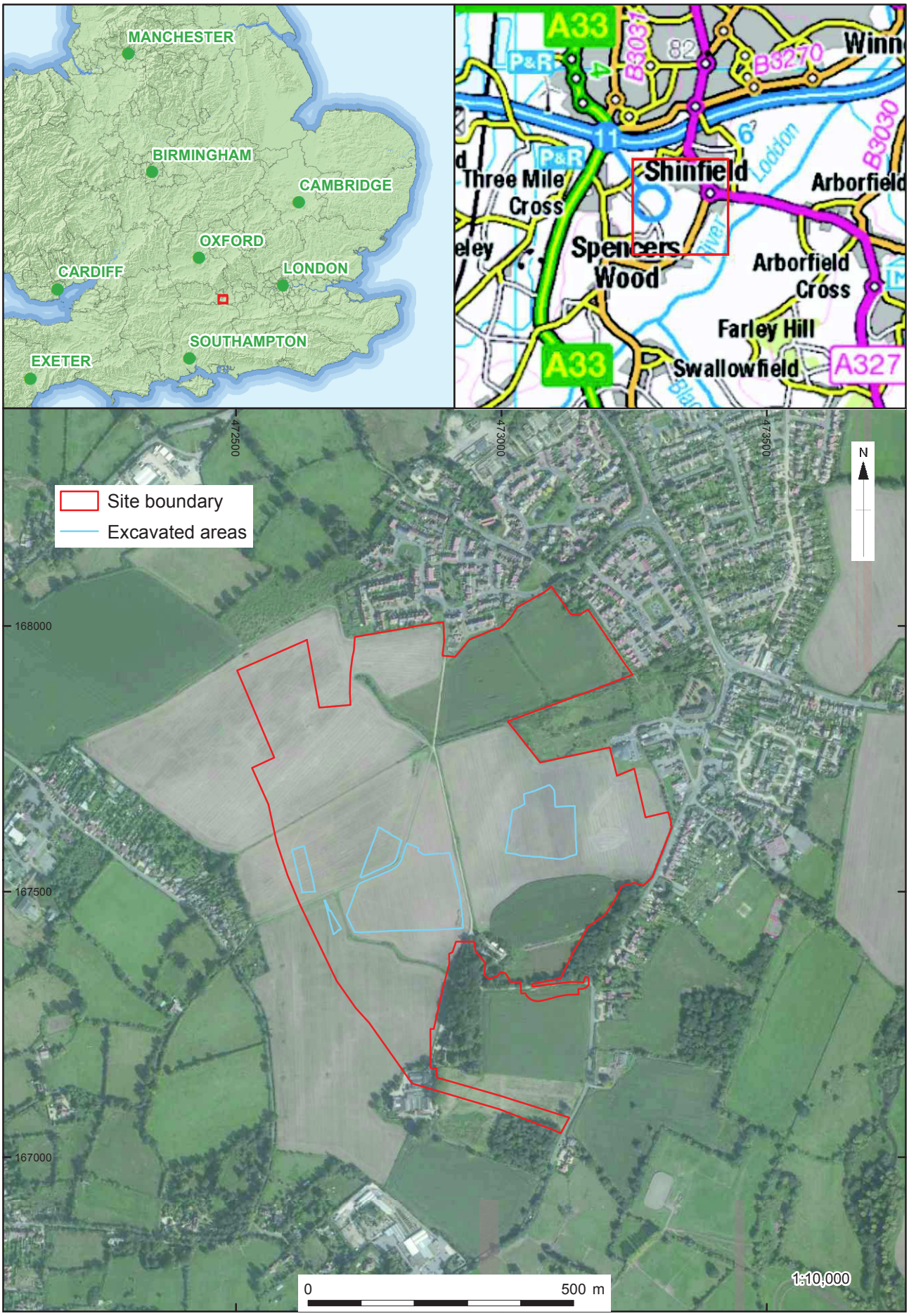

Figure 1: Site location

Figure 2: Site plan

Figure 3: Phased plan of Area 1 and 3

Figure 4: Phased plan of Area 4

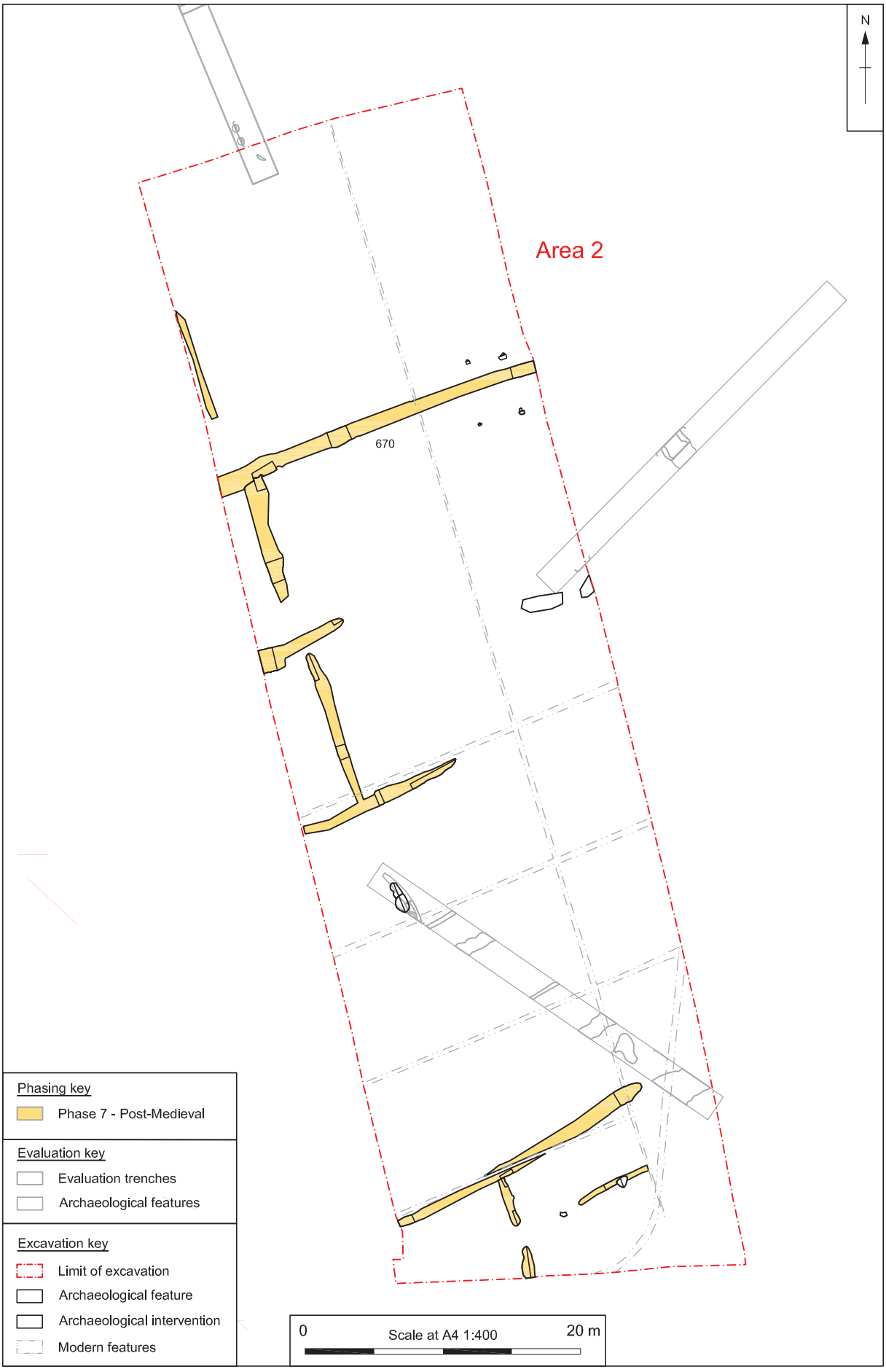

Figure 5: Detailed plan of Area 2

Plate 1: Excavation of the round barrow

Plate 2: Sample excavation of the burrow showing basal burnt deposits (Scale 1x2m and 1x1m)

Plate 3: Burnt wood within the base of the barrow ditch (Scale 1x1m)

Plate 4: Cremation vessel within the centre of the barrow (1x0.5m scale)

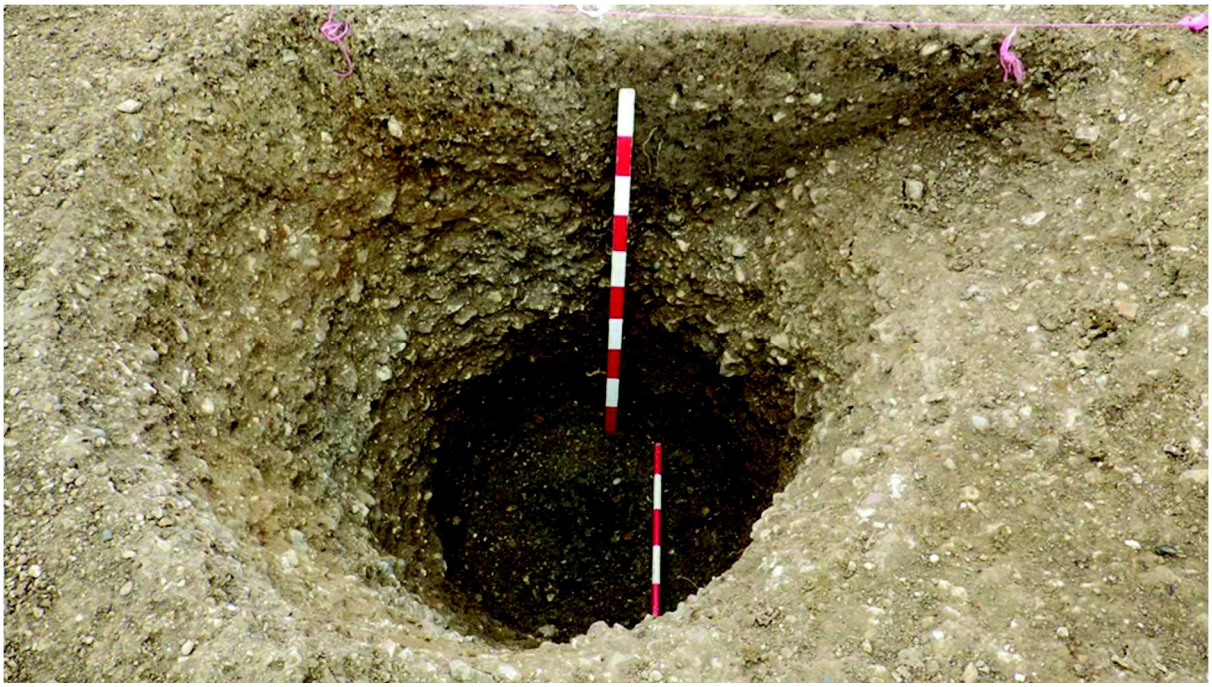

Plate 5: A deep pit/waterhole containing a complete Iron Age vessel at its base (Scale 1x1m and 1x0.5m)

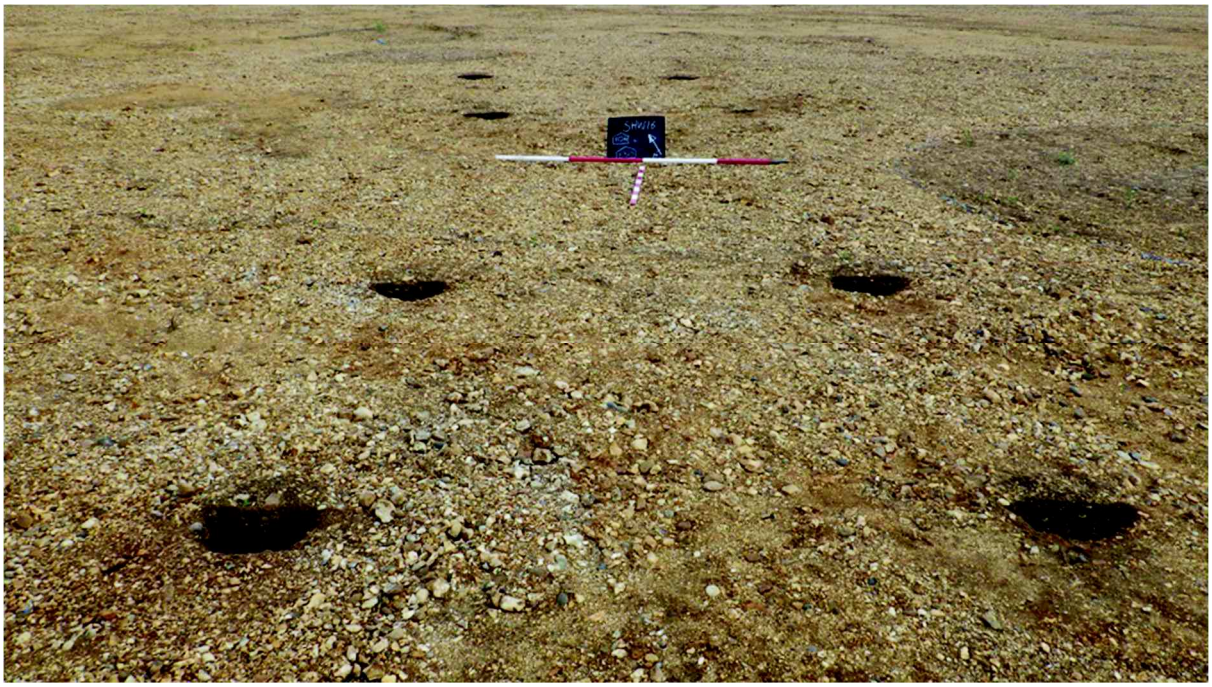

Plate 6: A series of early Iron Age four-post structures (Scale 1x2m and 1x1m)

Plate 7: Aerial view of 17th -18th century barn

Plate 8: 19th century farm structure (Scale 1x1m and 1x0.5m)

Plate 9: Undated field system ditches

Plate 10: Excavation of the field system ditches

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