

T H A M E S V A L L E Y

ARCHAEOLOGICAL

S E R V I C E S

**Bronze Age Funerary Monuments at Downton Manor Farm,
Downton, Milford on Sea, Lymington, Hampshire**

Archaeological Excavation (Phase 4a)

by Will Attard, Jamie Williams and Richard Tabor

Site Code: DMD03/20

(SZ 2755 9300)

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for New Milton Sand & Ballast

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Thames Valley Archaeological Services Ltd

Site Code DMD03/20ex

September 2021

Summary

Site name: Downton Manor Farm, Downton, Milford on Sea, Lymington, Hampshire

Grid reference: SZ 2755 9300

Site activity: Excavation

Project Dates: 4th October to 2nd December 2019

Project Coordinator: Danielle Milbank

Site supervisors: Will Attard, Kyle Beaverstock, Jamie Williams

Site code: DMD03/20ex

Summary of results: The excavation revealed a variety of features ranging in date from Bronze Age to post-medieval and modern. The most significant results are three round barrows with an associated cremation cemetery, firmly dated to the 15th to 13th centuries BC, with a substantial pottery assemblage and a chronology supported by a radiocarbon dating programme. Unfortunately the cremated bone was in general very poorly preserved and provided very little information on the population that was buried here. Other finds were also very few. The results add considerably to previously published work on archaeological remains in the quarry. Further reports will cover the remaining aspects of the archaeology of this site.

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Report 03/20d

Introduction

This report details the results of archaeological excavation carried out on 3.5ha of land at Downton Manor Farm Quarry (SZ 2755 9300) (Fig 1). The total area of the quarry will eventually be *c.*18ha, with the extraction occurring over several years. The work was commissioned by Mr Darren Hazell of New Milton Sand and Ballast, Caird Avenue, New Milton, Hampshire, BH25 5PX.

Planning permission (App/Q1770/A/06/2014823) has been granted from Hampshire County Council to extract minerals from the site. The consent is subject to a condition (15) relating to archaeology, which requires a programme of archaeological works to excavate and record any archaeological deposits prior to extraction or other invasive groundworks. Excavations on previous phases (areas) of extraction within the overall site have already been published (Beaverstock *et al.* 2017), and a separate report will be prepared for Phases 3 and 4b. Most of the other features revealed in Phases 3 and 4b were field boundary ditches: this report focuses on the more significant results from an area referred to as Phase 4a. All of the previously published work (itself undertaken in several phases) will be referred to below as ‘Phase 1’ for simplicity.

The field investigation was carried out to a specification approved by Mr David Hopkins of Hampshire County Council. The fieldwork was supervised by Will Attard, Kyle Beaverstock & Jamie Williams. The excavation was carried out by the above, and Cosmo Bacon, Fergus Beckerleg, Daniel Broadbent, Camila Carvalho, Luciano Cicu, Richard Dewhurst, Maisie Foster, Michael Murray, Michael Paine, Sophie Peng, David Sanchez, Tom Stewart, Benedikt Tebbit, and Beth Tucker.

Location, Topography and Geology

The site is located on the south coast, south of the New Forest National Park (Fig. 1), and south of the A337 Lymington to New Milton Road. It lies to the east of the small village of Downton and north-west of Milford-on-Sea. The overall site comprises four fields to the south-east of Downton Manor Farm, and a single field to the south-west. The site is bounded by a farm track to the west, and the remains of Blackbush Copse and the Danestream to the south and east. The topography slopes down gently from 25m above Ordnance Datum (aOD) in the north/north-west towards the Danestream, with the land dropping to around 15m aOD where it reaches the

watercourse. This slope may have been exaggerated by modern aggregate extraction for farm use close to the stream. The excavation areas of Phases 3 and 4 were formerly arable farmland. The underlying geology is recorded as Quaternary River Terrace Deposits (undifferentiated) which overlie Palaeogene Headon Beds and Osborne Beds (undifferentiated Clay, Silt and Sand) (BGS 2014). Phase 4 lies at approximately 19m aOD.

Archaeological Background

The overall site has been subject to several phases of archaeological investigation. An archaeological desk-based assessment highlighted the importance of the site (WA 2002) before a series of fieldwork investigations, of which this report documents the latest. Prior to this work, a variety of prehistoric finds was already known from the vicinity, indicating widespread human activity from the lower Palaeolithic onwards. The recovery of lower Palaeolithic twisted ovate handaxes from the Old Milton gravels is of particular interest (McNabb 2007, 160–1). The gravels underlying the site are known to be rich in archaeological material. Only stray evidence thus far exists for the Roman period in the area, and none for the Saxon period. The absence of the latter is curious, as the hamlet of Downton is first mentioned in 1160 as a 'new place'. Downton Manor Farm does not appear on maps until the 2nd Edition of the Ordnance Survey (1898).

The proposed area of Field 3 was evaluated by fieldwalking (Anthony 2003), by geophysical survey (Mercer 2003), and by trial trenching. These phases of work produced only a few prehistoric flints, with trial trenching identifying only a handful of undated features.

Previous phases of excavation revealed large areas with little or nothing of archaeological interest, but with a notable exception in the north-eastern portion of the overall site (Beaverstock *et al.* 2017) (Phase 1, Area 1). In this area, two Bronze Age barrows were discovered (as ring ditches), and urned cremation burials of Bronze and Iron Age date were associated with the monuments. Immediately to the south and east of the barrows, evidence of Iron Age occupation was revealed, with various discreet pits and post holes, a ditched enclosure and round houses. To the west of this occupation area, a series of ditches with rectilinear plan are thought to represent a Bronze Age organized landscape. A large field system at the south of the site (Field 4) was possibly medieval but much more probably late post-medieval or modern.

Aims, Objectives and Methodology

The general objectives of the project were to:

Excavate and record all archaeological deposits and features within the area threatened by the proposed aggregate extraction;

Produce relative and absolute dating for deposits and features recorded on the site;

Establish the character of these deposits in attempt to define functional areas on the site such as industrial, domestic, agricultural, etc.

Specific objectives for the excavation were to answer the following questions:

When was the site first utilised; when was it abandoned?

What activities were taking place on the site?

Are there any prehistoric occupation sites which relate to the surface finds recovered during fieldwalking?

What is the date of the ditch and post holes found during evaluation trenching?

If, when and how the site was used in prehistoric, Roman and medieval times for occupation, burial, agricultural or other purposes?

Is there any medieval activity on the site?

What is the palaeoenvironmental setting of the area?

All archaeological features were to be planned and sectioned as a minimum objective, with provision for further excavation and/or sampling according to an agreed strategy based on the nature and significance of the feature. Excavation and recording followed the procedures of the TVAS Fieldwork manual. Top and subsoil were stripped under constant archaeological supervision by a 360° type excavator fitted with a toothless ditching bucket. Spoil heaps were monitored periodically for stray finds.

Excavation Phase 4a (Fig. 2)

Phase 4 was excavated in two stages (4a and 4b – see Fig. 2). The excavation of Phase 4a is reported here, with a report for Phase 4b in preparation. A variety of archaeological features and horizons were encountered in Phase 4a, including the remains of three middle Bronze Age round barrows with internal cremations, and an associated middle Bronze Age cremation cemetery (Pl. 1). Cremation burials contained in cinerary urns were, where possible, block-lifted and removed for excavation under controlled conditions (Pl. 2). Where the state of preservation was too poor to safely block lift, cremations were carefully excavated on-site in 20mm spits - first half-sectioned then 100% excavated - with all excavated material retained (Pls 3 and 4). After excavation, all cremations (or suspected cremations: some in fact produced no bone) were processed via flotation and sieved through a 2mm steel mesh.

Results (Fig. 2)

All the excavated features for this phase of work are listed in Appendix 1. Possible features investigated and shown to be natural are listed in *italic* script. Plough scarring on at least two distinct alignments was prominently noticeable across many of the features, and will have contributed to their extreme shallowness.

Phase 1: Bronze Age

Barrow 1 (Figs 5 and 6; Pl. 5)

Barrow 1 consisted of an unbroken ring ditch, 4000, with interior features including pits and cremation burials (Pl. 6). All features were 100% excavated by hand.

Ring ditch 4000 had a circumference of approximately 29.22m and a diameter of approximately 9.30m from the interior edge, and the cut ranged in width from 1.03m – 1.80m and in depth from 0.39m – 0.56m. It was investigated in 16 slots, each measuring 1.5m in length (820-825; 827; 834; 836-837; 903; 905-6; 910-911; 916). Slots were separated by baulks measuring 0.5m. Following excavation and recording, all baulks were removed to maximize finds recovery and facilitate 100% excavation of the ditch. Particular attention was paid to the possibility of cremation burials or later cut features truncating the ditch fills, though none were encountered.

Ring ditch 4000 contained between one and four fills, though predominantly two: a dark brown-grey clay silt overlying a lighter sandy silt (Pl. 7). The former produced occasional sherds of Middle Bronze Age pottery and a handful of struck flints, the latter produced no finds. One slot (916-7) contained a clear re-cut of the barrow ditch (Pl. 8) which might also be implied in others around the south side (836, 837, 911). Five slots (820, 821, 822, 825, 834) contained thin deposits angled roughly along the inner edge of the ditch (Pl. 9). These are interpreted as mound material which has slumped into the surrounding ditch from the now levelled barrow mound.

Seven cremation burials (828, 833, 912, 913, 914, 918, 919), a charcoal rich pit which might have contained pyre debris (829), two small pits (832, 915) and an irregular natural (cryogenic) feature (1123) were present within the circuit of the ring ditch. The cremation pits were arranged primarily in an arc along the western interior edge of the ditch, with a cluster located in the south-east. Cuts 912, 913, 914, 918 and 919 contained cinerary urns; the fills of cuts 828, 829, 833 and 915 contained no urns, although in the case of the latter badly degraded, substantial wall sherds, some refitting, formed a flaring border to a hollow circle lacking rim or base sherds (Pl. 10). Pit 913 appeared to have been cut into and all but removed the contents of another pit, 1136, from which a few small rim and base sherds were recovered but no bone. No pottery was recovered from pits 828, 829, 832 and 833, and only two very small indeterminate sherds were found in 915. No bone

came from pit 829 but it was charcoal rich and might represent redeposited pyre debris. Pit 832 produced no finds of any sort.

The irregular possible feature was identified located along the north-eastern edge of the interior of Ditch 4000. It was also noted within Trench 23 of the evaluation. It was investigated initially in two slots (1123; 1124), and then 100% excavated to ensure no finds or other material were missed. Due to its location within the bounds of the ring ditch, a sample was taken and processed to check for smaller organic remains or finds. No anthropogenic or organic material was present within the single fill of pale sterile clay-silt (Pl. 5). This is in contrast to the dark silt fills of all cut features present within Barrow 1. This feature closely matched the form, character and types of fill seen in cryogenic features investigated elsewhere on site. Feature 1123 lay . It measured 3.25m long and 0.32-0.96m in width. The fill of this feature continued underneath the natural gravel deposits at both ends. The stripped area of Phase 4a was heavily disturbed by ice wedges and fissures and this feature is confidently interpreted as being cryogenic in origin.

The excavation of Barrow 1 revealed hints of stratigraphic complexity and monument development over time. Aside from the re-cut of the barrow ditch detailed above, post holes 838, 839 and 1128, and pit 943 (Pl. 11) were arranged along the interior perimeter of and underlying ring ditch 4000 (Fig 6). Each was filled with a single fill of mid brown-grey clay-silt, and no finds were recovered from these features. A fourth post hole (904) was located just outside the ring ditch in the north-east. Cremations 912 and 914 cut a deposit of grey-brown clay-silt (1082) that lay between the subsoil and the natural geology and sealing pit 915 (Pl. 12): this could be relict barrow mound material but is more probably a pre-barrow soil layer.

Barrow 2 (Figs 7 and 8; Pl.13)

Barrow 2 was located directly south of Barrow 1. It consisted of two concentric ring ditches (**4001; 4002**) and a series of cremation burials both in between the ditches and within the inner ditch (Pl. 14). Outer ditch **4002** had an interior diameter of 14.75m, and inner ditch 4001 an interior diameter of 7.75m, and circumferences of approximately 46.3m and 24.4m respectively.

Ring ditch 4001 was investigated in 10 slots (1027; 1029; 1030-2; 1034-5; 1038-9; 1046; 1048), with 0.30m baulks separating each slot. Following excavation and recording of the slots, the baulks were removed by hand to maximize finds recovery. Ditch 4001 varied in depth from 0.37m - 0.58m and in width from 0.72m to 1.15m. Ditch 4001 was filled predominantly with a brown-grey clay silt with frequent flint gravel inclusions, and from which occasional sherds of pottery were recovered. Cremation burials 835, 946-949, 1000-1002 and 1016, and shallow pit 1015 were placed within the bounds of this ditch. Two deposits of burnt bone without discernible cuts (1276; 1462) were also discovered, and are interpreted as the remnants of un-urned cremation

burials. A charred cereal grain recovered from within cremation 949 was dated to the Iron Age (UBA44716, Appendix 6). Given the Middle Bronze Age date of the pottery recovered and the context of recovery from beneath the remains of a barrow mound, this late date is likely the result of intrusive material introduced during later agricultural activity and must be discounted.

Outer Ring ditch **4002** was investigated in 19 slots (1017; 1013-4; 1019; 1021-2; 1024-6; 1037; 1040-5; 1047; 1049; 1101; 1104) each measuring 2m in length and separated by a 0.30m baulk. Width ranged from 0.52m – 1.03m and depth from 0.25m – 0.48m. This ditch was filled between one and three silty clay deposits. Five slots (1013; 1017; 1019; 1040; 1042) contained angled fills characteristic of material slumping into the ditch from a central mound or surrounding bank (Fig. 8). The latter seems likely in this case based on the direction from which material has slumped into the ditch cut. Slot 1017 partially overlay a large ice fissure (1018), and the slot was extended after recording to better characterise this natural feature (Fig 7).

As seen in Barrow 1, patches of preserved ancient subsoil or relic barrow material (1286; 1287) were present within the interior ring ditch of Barrow 2.

Three post holes underlying the ring ditches were discovered (Pl.15) - 1028 and 1035 underlying outer ditch 4001 and 1109 under inner ditch 4002. No finds were recovered from these features, and each contained just a single sterile fill of mid brown-grey clay silt, similar to that seen in the post holes underlying Ring Ditch 4000.

Barrow 3 and Cremation Cemetery (Figs 9 and 10; Pl.16)

To the south of Barrow 2 the excavation revealed a cremation cemetery aligned roughly East-West, and measuring approximately 20m by 4m. In all, some 28 cuts to receive cremation burials were exposed in this area, with a mixture of urned and un-urned burials present (Pl. 17). Cut 936 contained two urns, with a smaller vessel placed inside a larger (Pl. 18) whilst cut 937 contained remains of a probable four vessels (Pl. 19). Seven cremation pits (1107; 1010; 1011; 1012; 1130; 1006; 1111) at the western extent of the cremation cemetery partly overlay relict mound material (1460, 1461) or cut the upper fills of the causewayed or segmented ditch of the third barrow (Pl. 20). Where identifiable, all attitudes of cremation urns encircled by or over the ditch segments were upright as were the largest vessels within 2.5m of the southern end of the east segment (936, 937). This was a clear contrast to the inversion of all the other vessels in the cemetery whose attitude was identifiable, including pits 934 and 935 which were in close proximity to 936 (Pl. 18).

The preservation of Barrow 3 is significantly poorer than the ditches associated with barrows 1 and 2, and excavation of the segments revealed hints of a markedly different construction process. The natural geology

underlying Barrow 3 was softer and richer in silt and clay than the gravels underlying Barrows 1 and 2. This likely contributed to the poor preservation.

The enclosing ditch of Barrow 3 was formed of three segments, and an elongated pit underlying the terminus of the northern end of the eastern segment. The western segments (4005; 4006) almost certainly originally formed a continuous ring, as the gap between them is extremely narrow. The separation is likely caused by the near complete loss of the monument to later ploughing and land use.

Charcoal from cremation 1010, which cut the barrow ditch in its south-eastern segment, was radiocarbon dated to 1447–1277 cal BC, very much in line with the other radiocarbon dates for the rest of the site (UBA 44717, Appendix 6.).

Cremations 1007 and 1004 lie outside the general line of the cremation cemetery but may have been placed respecting the segmented gully, whilst the intercutting un-urned cremation pits 920 and 921 are set to the north of the putative cemetery line and well beyond the ditches of barrows 2 and 3 but between the two. Although no material suitable for radiocarbon dating was recovered from these burials, 1007 cut what was presumed spread from the mound. A similar pre-barrow palaeosol or relict barrow mound (1416) at the southern end of Barrow 3 was cut by cremations 1011, 1012 and 1130, and tree throw 1110.

Eastern gully segment **4004** overlay elongated pit **4003** investigated in two slots (1117; 1113). During excavation and initial post-excavation analysis, it was considered that Barrow 3 might originally have been a so-called Hengiform Monument - an enigmatic but relatively well-attested later Neolithic monument type encountered from time to time across the south of England. These tend to feature more substantial boundary ditches composed of segmented pits, and are predominantly aligned north-east/south-west, in contrast to the North-South alignment of the breaks in the gully surrounding Barrow 3. Hengiform monuments also tend to be larger than Barrow 3, further suggesting that it is indeed a somewhat poorly preserved causewayed barrow.

Post holes **1118**, **1008** & **1114** cut north-eastern terminal Pit 4003 (Pl. 21).. They varied in width from 0.33-0.37m and in depth from 0.10-0.27m. Each had a single fill of mid brown-grey sandy clay. No finds were recovered from these features, and they were very similar in character and size to those underlying the ring ditches of barrows 1 and 2.

Tree throw 1110 was located inside the bounds of Barrow 3, in the south-west near the ditch. The fill of this feature was different to that seen in other tree throws on site, being similar to some of the pits and post holes seen in Barrow 3. As such, it was fully excavated, although no finds or anthropogenic material were present within. It is worth noting that barrows and similar monuments sometimes seem to be situated deliberately around trees, though these are usually more substantial and/or centrally located.

Dating the barrows and cremation cemetery

The dating of the barrows and cemetery is derived from the direct evidence provided by radiocarbon assays and pottery morphology and also by inferred association based on stratigraphy and the particular characteristics of deposition. Five samples suitable for radiocarbon dating were obtained from the excavation of four cremations within the spaces enclosed by the barrows and one from the cremation cemetery beyond those limits (Appendix 6). All samples but one returned a Middle Bronze Age date. Two of these four Middle Bronze Age dates were from cremations including pottery forms diagnostic of the period whilst a third was a lower wall and base with thickness and fabric highly consistent with it. The anomalous earlier Middle Iron Age date was for cereal grain which had intruded upon a cremation, 949, associated with an urn of reliably earlier Middle Bronze form.

The earliest date of 1497-1320 cal BC (UBA-44715) at 95% probability was obtained for Barrow 1's southern group urned cremation 913. In contrast the relatively isolated un-urned cremation 833 inside the north perimeter of the ditch returned an overlapping latest range of 1360-1130 cal BC (UBA-44714). The Barrow 1 dates bracket the ranges for the unurned cremation 1010 (1489-1277 cal BC: UBA-44717) within the south-west arc of Barrow 3's ditch 4004 and for possibly urned cremation 1129 (1442-1295 cal BC: UBA-44718) which forms part of the open cemetery's east group. Cremation 1010 lay just within the ditch for Barrow 3, but on the same alignment and part of the spread of cremations in the cremation cemetery.

The presence of an intrusive cereal grain in 949 along with plough damage to the cremations within the bounds of the barrow ditches may indicate that the mounds were much reduced or levelled by or during the Iron Age. All pottery recovered from the three barrows and cremation cemetery is dated broadly to the Middle Bronze Age but on the fringes of that ambit a few vessels have traits which would allow dates prior to 1500 cal BC whilst a few others might post-date 1150 cal BC. A full analysis and discussion of the pottery from Phase 4a is included below.

There are no direct stratigraphic relationships between the barrows but there are traces of developmental sequences within each of them. The arc of three apparently related postholes and a pit with a similar fill cut the ditch of barrow 1 implying that the area occupied by the barrow was a designated space prior to the excavation of the ditch hence also of the use of its upcast for the mound. Given that the cremation pits penetrate natural it is likely that despite their severe truncation they were covered by the mound, so that the deposit (1082), which is cut by at least two cremation pits, is best interpreted as a pre-barrow soil sealing an enigmatic earlier pit 915. There are signs of subsequent limited refurbishing of at least part of the southern side of barrow 1's ring ditch so that space may have remained designated for some time after the last cremation had been added.

It is noteworthy that where their attitudes were identifiable all of the potentially earlier cinerary vessels were inverted and that all vessels in the east and central groups of the unenclosed cemetery share that attitude. By extension it might be argued that burials 934 and 935 form part of the earlier group and that close to the centre of barrow 2 the inverted urn with early traits in pit 949 was a foundation burial. However, neither ceramic typology nor the location of the inverted urn deposit in pit 914 encourage similar extrapolation for barrow 1.

Phase 2: Iron Age

No conclusively Iron Age features were present in Phase 4. Iron Age settlement was discovered during the first phase of archaeological excavation at Downton, some 370m to the north of the phase reported on here (Beaverstock *et al.* 2017). A handful of features are however considered to be of potential Iron Age date, and are discussed below. Equally, the presence of an intrusive charred Iron Age cereal grain in cremation 949 in Barrow 2 suggests nearby Iron Age activity, even if only ploughing of the land. It is not impossible that at least this one barrow had already been ploughed down by the middle Iron Age.

Segmented gully 4007 (Pl. 22)

To the east and south of the round barrows, six shallow gully segments were aligned NNW–SSE. They ranged in individual length from 1.2m to 9.4m, in width from 0.58m to 1.2m and in depth from 0.06 to 0.30m, although the wet conditions in which it was excavated mean the latter measurement may be greater than the reality. In total, this feature stretched for 28.4m. The segments were investigated with a total of 11 slots; following recording each segment was 100% excavated for finds recovery, though no anthropogenic material was present. Despite the lack of dating evidence, segmented gullies are generally associated with the early Iron Age. The overall feature would have passed 16.5m east of barrow 2, although it is unclear if this implies that it was created in the knowledge of the existence of the barrow.

Shallow gully 4021 (708; 1102; 1104)

Gully 4021 formed a right-angle that appears to respect gully 4030 (underlying the Roman enclosure) and Barrow 1 (Fig. 3). Gully 4021 was investigated in three slots, with each containing a single sterile fill. This feature is not connected to nor closely aligned with the probable Bronze Age organized landscape to the north and may, along with ditches 4030 and 4031, be part of a pre-Roman or Iron Age enclosure system. This will be discussed in the forthcoming report on the rest of the site.

Phase 3: Roman

The northernmost extent of Roman enclosure **4022-4023** was exposed in Phase 4a. The majority of this enclosure, however, was excavated as part of Phase 4b and will be treated in more detail in that report.

Similarly, ditches 4030 and 4031, which underlay the Roman enclosure ditches are also left to be discussed in the Phase 4b report.

Phase 4: Post-Medieval and later

Late post-medieval field boundary 4015

Boundary ditch 4015 formed three sides of an enclosure or field in the east of the Phase 4a area, extending into the former Field 4 at both north and south ends, where it was interpreted as being a late post-medieval or modern field boundary (Beaverstock *et al.* 2017). It was investigated in 17 slots, each containing between 1 and 3 cuts (Fig 2; Pl. 23). The only artefactual evidence recovered from this feature was a large chunk of ceramic building material that could only be broadly dated to the late Medieval/post-medieval periods, in line with the dates given from previous work.

A short portion of ditch re-cut 4020 extended south from the south-western corner of the main enclosure. This cut the fills of 4015 and thus can be dated as no earlier than the latter. No finds were recovered from this feature.

Gullies 4016 and 4017

These were both located along the eastern edge of Phase 4, aligned ENE-WSW and both extending into Field 4 investigated in Phase 1, where several features were interpreted as part of the same large post-medieval field system as 4015 (Beaverstock *et al.* 2017). Gully 4016 ran for 28.4m in Phase 4a and was investigated in two slots. It measured 2.4m in width and had a depth range of 0.27m-0.60m. It contained a single fill of sandy clay, from which no finds were recovered.

Gully 4017 was parallel to 4016, aligned ENE-WSW. 33.2m was exposed during the excavation of this phase. It measured 1.36m wide by 0.60m deep and contained a single fill of mid brown-grey sandy clay. No finds were recovered from this feature, but it lines up (approximately) with ditches recorded during the watching brief in Field 4.

Modern and Undated

Modern field boundary **4014** (749; 802); (Fig 2); (Pl. 24) was present within Phase 4; details of this and other modern/undated features will be presented in the report on the rest of the site and in archive,

Pleistocene gravel monitoring & geological features

Periodic monitoring of the underlying Pleistocene gravels at Downton was undertaken over the course of the fieldwork to assess potential for surviving Pleistocene archaeological remains. Monitoring of the active quarry face and active quarry area revealed thick, fairly homogenous fluvial gravels, with no evidence of low energy

deposits, channel edges or preserved collapsed river bank sections which may have contained archaeological or faunal remains. All gravels observed were typical of deposition under moderately-high to high energy conditions. Monitoring of the oversize piles and periodic monitoring of the gravel extraction also produced no archaeological or faunal remains. Examination of the active quarry face proved to be of value to the Upper Archaeology in that an ice wedge was visible in section, demonstrating that the irregular linear features encountered in all previous phases were of cryogenic origin as suspected. The ice wedge in question here is large, and was visible extending below the then lower limit of extraction (approx. 3m from the surface of the natural) (Pl. 25).

Finds

Pottery by Richard Tabor

A total of 4615 sherds weighing 31002.5g were recorded according to vessel part, weight and fabric (Appendix 2). The assemblage is dominated by the remains of middle Bronze Age vessels associated with cremations (4578 sherds, 3906g) with only 22 other sherds (72g) of similar date having no demonstrable mortuary association. A thin scattering of later prehistoric pottery amounted to only 15 sherds (25g).

The sherds were allocated to fabric groups based on the material, size and sorting of the principal inclusions. Vessel forms were grouped classified by characteristic profiles, where reconstruction was possible, or by rim or other diagnostic features, including surface treatments in accordance with guidelines for the recording and analysis of prehistoric pottery (PCRG 2010).

The earlier to middle Bronze Age pottery

The diagnostically middle Bronze Age pottery comprised upper wall and rim sherds or lower wall and base sherds from cremation pits, the former indicating respectively inversion and upright placement on interment, as was the case during the phase 2 excavations (Tabor 2017, 19). Despite the significantly greater number of vessels retrieved from the current phase the ranges of forms and fabrics is closely comparable, although there is a potentially significant shift in the balance of fabrics.

Fabrics

Grog tempered sherds, usually with comparatively few inclusions, made up 59.5% of the assemblage by weight and grog with a more equitable distribution of flint accounted for 16.8%. Two fabrics dominated by flint made up a further 17.2% and a single mainly vesicular fabric accounted for the remaining 6.4% (Appendix 2, Table A2.1). All but fabrics feG1 and G3 (amounting to only 72g) are associated with cremation urns and accompanying vessels and all had been identified during excavation Phase 1, excepting the micaceous grog

fabric G3. A minimum of 40 vessels were associated with cremations and counting the fabrics by vessels gives broadly comparable respective percentages of 50%, 17.9%, 21.4% and 10.7%. This is in marked contrast to six cremation urns identifiable to form from the previous excavation phase in five of which flint was the dominant inclusion whilst the remaining vessel was vesicular (Tabor 2017, table 17). There appears to be patterning in the distribution of fabrics across mortuary features of the present phase (Table A2.2). Barrows 1 and 2 are restricted to grog fabrics, significant flint inclusions occurring only as GF1 and a vesicular fabric fgV1 in barrow 2. Barrow 3 lacks pottery in GF1 but there is near balance in the range of grog and flint fabrics in the cremation cemetery, as well as sherds in fgV1.

Early to middle Bronze Age: grog mixtures

- feG1** (Fine/medium) Moderately hard dark grey fabric with buff orange exterior and dark grey interior surfaces including moderate fine (<1mm), medium (<2mm) to sparse coarse (<4mm) mainly sub-angular grog and sparse fine (<1mm) reddish brown iron oxides.
- G3** (Medium) Moderately hard, grey, slightly soapy, slightly micaceous silty fabric with buff brown to buff red surfaces including moderately well-sorted common to abundant fine (<1mm) to medium (<2mm) and sparse medium/coarse (<3mm) grog, sparse very fine (<0.2mm) to rare fine (<0.5mm) sub-rounded quartz, rare to sparse fine (<1mm) to medium (<2mm) iron oxides and rare fine (<1mm) to medium (<2mm) sub-angular and/or sub-rounded flint.
- G1** (Medium) Soft to friable grey fabric with buff orange to grey surfaces including moderate fine (<1mm) to medium (<2mm) and sparse medium/coarse (<4mm) grog.
- fG1** (Medium) Friable to moderately hard grey fabric with buff exterior and dark grey interior surfaces including moderately well-sorted moderate to common fine (<1mm) to sparse medium (<2mm) grog and sparse angular calcined fine (<1mm) to medium (<2mm) burnt sub-angular flint.
- fG2** (Coarse) Moderately hard grey fabric with buff orange exterior and buff brown to dark grey interior surfaces including moderate medium (<2mm), sparse to moderate medium/coarse (<4mm) and rare to sparse very coarse (<10mm) poorly sorted mainly sub-angular grog, rare fine (<1mm) to medium (<2mm) sub-angular calcined flint and rare fine (<1mm) to medium (<2mm) iron oxides.
- GF1** (Medium) Soft to friable buff fabric with buff red to brownish grey surfaces including moderate fine (<1mm), sparse to moderate medium (<2mm) to medium/coarse (<3mm) and rare to sparse coarse (<6mm) burnt sub-angular flint, and sparse to moderate medium (<2mm) and rare to sparse medium/coarse (<3mm) mainly sub-rounded grog. The grog is difficult to detect in section but is clearly apparent on the surfaces, which may be smoothed.
- gvF2** (Medium/coarse) Soft, friable grey fabric with buff orange surfaces pitted sparsely to moderately with sub-angular and sub-rounded voids and including moderate to common fine (<1mm) sparse medium (<2mm) and rare medium/coarse (<3mm) burnt sub-angular flint and sparse grog (<3mm). Voids probably due to the weathering of calcareous inclusions. Sub-angular possibly calcite, sub-rounded possibly shell.
- fgV1** (Coarse) Soft to friable grey fabric with buff orange to grey surfaces with abundant fine to medium (<2mm) and sparse to moderate medium/coarse (<4mm) mainly sub-angular voids and including sparse amounts of grog (<3mm) and rare fine to coarse burnt sub-angular flint (<5mm). Voids probably due to the weathering of calcareous inclusions. Sub-angular possibly calcite, sub-rounded possibly shell.
- F2** (Medium/coarse) Friable grey to buff red fabric with grey to orange buff exterior and grey, brown or buff orange interior surfaces including moderately well sorted common to abundant fine (<1mm), sparse medium (<2mm) and rare to sparse medium/coarse (<4mm) burnt sub-angular flint.

The preference for grog in the present phase is unusual whereas the prevalence of flint tempered pottery recovered during the Phase 1 excavations was typical of central southern and eastern England middle to late Bronze Age assemblages (Sheppard 1975; Cotton 1981, 20; Seager Thomas 2010, 2; Ellison 1981, tables 1-5; Ellison 1989, table 8; Calkin 1964, 19; Tabor 2017, 20-2). However, in east Dorset grog, sometimes mixed with flint or other materials, featured in Deverel-Rimbury cremation groups from Simons Ground near Wimborne,

although flint was prevalent, and especially at Bestwall Quarry, where 63% of the pottery included grog, and Wytch Farm, respectively on the western and southern fringes of Poole Harbour (White 1982, appendix 4; Woodward 2009, 213, fig. 141; Cleal 1991, 100-1, table 7). Vesicular fabrics were rare in the middle Bronze Age Bestwall assemblage (3%) but featured strongly in late Bronze pottery, often with grog (Woodward 2009, 213; 244-5, fig. 162).

General character of the cremation assemblage (Table A2.8)

A minimum of 42 cuts were made to receive 55 deposits of cremated (or at least burnt) bone. Ten appear not have had an accompanying urn and while pottery was present the evidence that these were urns was inconclusive in a further ten instances. Forty urns were divided between 35 cremation pits, with some single pits in the cremation cemetery each receiving two urns, and a possible four vessels from a single pit in the cemetery. Where it could be ascertained most vessels associated with the barrows were placed in an upright position although it should be noted that it was not possible to determine the positions of 7 vessels from these areas (Table A2.5). This contrasts with a marked preference for inversion in the cremation cemetery where the only demonstrable examples of upright urns were exclusive to multiple urn deposits in pits 936 (Pl. 26) and 937. In pit 936 the lower portion of a jar was set over a charcoal and human bone-rich deposit 1098 (spit 5) filling the surviving lower part of the larger vessel and the arrangement may have been similar in Barrow 3's 1006 (Pl. 27). The smaller vessel in 1006 was an ovoid cup, the rim of which had collapsed inwards and downwards. Pit 937 was identified by the excavator as a double cremation. The pottery was in very poor condition and there was mixing of sherds. Fragments of lower and simple-rimmed upper profiles survived from a small, plain bucket form (Fig. 11, V10) but an outwardly expanded rim with a row of fingertip impressions on the outer edge set over a short concave neck and a bossed wall sherd were clearly from two further vessels. Small sherds in pit 1136 may be the only traces of an upright urn almost entirely removed by the cutting of cremation pit 913.

Vessel forms (Fig. 11, 1-10)

In the discussion of forms below some of the terminology is at odds with that used elsewhere. The terms 'barrel' and 'bucket' are applied according to common language usage, much as they were at the Simons Ground cemeteries and at Milldown School, Blandford in east Dorset (Watling and White 1982, fig. 18B; McSloy 2016, 226, table 1), and the words 'form' and 'jar' replace 'urn'. Thus, a barrel form has a rounded girth which exceeds the diameter of both rim and base whilst a bucket form is straight-sided, sometimes curving gently inwards in the lower half, and the rim has a diameter equal to or exceeding that at any point below it. According to this scheme certain vessels from Kimpton cemetery, Hampshire, described as 'barrel urns', including an

example of South Lodge type, would be described as bucket form jars (Ellison 1981, 174, C10, C13; figs 10 and 11). The terms ‘biconical’ and ‘sub-biconical’ are reserved for bipartite jars with clearly defined shoulders, and ‘ovoid’ is applied to rounded bipartite vessels which at Simons Ground were included in the barrel class. The term ‘barrel’ is reserved for jars with rim diameters less than the girths which are decorated with fingertip-impressed cordons. Under the revised scheme the illustrated vessels from Phase 1 would be 1, bucket; 2, barrel; 3, biconical; 5, ovoid; and 6, bucket (Tabor 2017, fig. 16). Globular jars which form significant parts of assemblages at Kimpton, Bestwall and Simons Ground are a not demonstrable component of the cinerary pottery at Downton Manor (Ellison 1981, tables 2 - 5; Woodward 2009, table 65; White and Whatling 1982, appendix IV). It is possible that there were globular forms amongst the upright vessels but it is unlikely given the lack of stray sherds with characteristic incised or furrowed decoration. Bucket forms are most common and occur in the full range of general wares but no conclusions can be drawn about fabric preference in relation to form as there is only one example of each of the other forms (Table A2.3).

The individual profiles and sherds associated with cremation pits are described summarily in Appendix 2, Table A2.1. They show little preferential choice of fabrics for particular forms. Bucket jars and B5.1 bases are the most common forms so it is unsurprising that they have the greatest range (Table A2.4). For similar reasons it is unsurprising that the cemetery had the greatest range of vessel forms although it had only one barrel form compared with two in Barrow 2 which lacked other identifiable forms. No barrels were present in either of Barrows 1 or 3 (Table A2.5). Two upper profiles from the cemetery stand out from the general assemblage. The bevelled rim of a concave necked jar in fabric gvF2 which appears to have had a distinct shoulder angle had a fingertip-impressed straight external bevel (Fig. 11, V1). The fingertip decoration is typically Deverel-Rimbury but the rim form has roots in Neolithic traditions which persisted via Food Vessel Urns. The second profile is Sub-biconical and also has a slightly concave neck over a pronounced shoulder emphasized by a cordon with single rows of fingertip impressions on its upper and lower sides (Fig. 11, V2). The rims of bucket forms are usually flattened and either outwardly expanded (Fig. 11, V4), outwardly extruded (Fig. 11, V6, V8) or thickened (Fig. 11, V3, V5, V9). A single example from a plain jar had a simple rounded rim. There are two instances of short concave necks, one formed by moulding over a thickened shoulder, the other by the addition of a cordon a little below the rim (Fig. 11, V4, V8). All but one upright rim are flared in varying degrees. Rim decoration is restricted to one example each of fingertip and fingernail impressions on the outer edge (Fig. 11, V4, V6). Other bucket jars have fingertipped cordons applied to straight walls a little below the rim (Fig. 11, V3), sometimes with a second impressed cordon lower on the wall (Fig.11, V5). Three near straight-walled cordoned sherds from within the lower part of a jar with a simple acute angled base in cremation pit 1007 imply

an open bucket form. Their surfaces were abraded but enough survives to show impressed staggered opposed diagonal linear decoration on the cordon which appears, unusually, to have been made with a 4mm diameter cord (Fig. 11, V7).

There were two profiles from barrel form jars. A small example from cremation pit 925 in the cemetery had a broad flattened rim formed by the addition of a fingertip cordon impressed on its outer edge. It was set on a long upright neck at the base of which was fingertip impressed cordon marking the transition to an ovoid body (Fig. 11, V11). The other was from a much larger high-girthed jar with a marked inward curve to a broad, flattened rim with an intermittent row of fingertip impressions on its outer edge. Its high horizontal cordon overlapped by vertical cordons, all fingertip impressed, are typical of South Lodge type barrel urns (Fig. 12, V12). Plain ovoid jars varied in size from medium to a cup set within a larger lower wall and base in pit 1006 (Fig. 12, nos. 13–15). A single bossed wall sherd from pit 937 (Fig. 12, 16) is in the same fabric as the bucket form V4 but is clearly from a different, probably ovoid jar.

The pottery from the previous excavation phase was almost exclusively cinerary and had parallels with the material from the Simons Ground cemetery assemblages (Tabor 2017, 27). This remains true and the links to Simons Ground have been strengthened. The bevelling and fingertipping of the outer rim of V1 and a discernible high shoulder strongly resemble a large flint-tempered jar from that site's earliest group of cremations which was described as having a 'pointed everted rim' (Watling and White 1982, 34; fig. 21, 1). The jar was one of the closest of a large group south of a barrow ring ditch. Calibrations of a radiocarbon date for the centre of the barrow were focussed appropriately on the mid-2nd millennium BC although doubts have been expressed about the trustworthiness of all the dates from the site (White 1982, 41; Needham 1996, 135). The profile can be related to Tomalin's form 3 Food Urns which he considered to be a co-existing contributor to his form 3 Biconical Urns although the flint-temper is more characteristic of classic Biconical Urns (Tomalin 1988, 212-4, fig. 6). Attribution either to Barrel or Biconical forms was considered for a grog tempered jar with a similar profile but a thickened, flattened rim associated with a probable cemetery at Wytch Farm, deemed short-lived, for which a charred stake gave a most likely radiocarbon date of 1459-1254 cal BC (Cleal 1991, 111, fig. 54, 7). The neck of the Sub-biconical jar from pit 924 is similarly concave but the rim is upright and resembles the neck profile of a jar with an internally bevelled rim from the same site which was classified with greater confidence as a Biconical Urn (Cleal 1991, 111, fig. 54, 4). The application of fingertip impressions on either side of the cordon is rare but paralleled occasionally on bucket and barrel forms in south-east Dorset, south-east Somerset and Wiltshire (Calkin 1964, 45, fig. 16, 1; Tabor 2020, 19, fig. 6, 70; Annable and Simpson 1964, 63, 125, no. 563). The wedge-profiled thickening of its rim and those of bucket forms V3, V5 and V9 are, despite

their differing attitudes, comparable with biconical and ovoid jars from Kimpton's early to early-middle Bronze Age phase C (Ellison 1981, 174, figs 10 and 13, C1 and C20) and strong inward and outward expansion on barrel and bucket forms was exclusive to the phase, those of the later phases being generally simpler and lighter (Ellison 1981, figs 10-3). The long upright neck, ovoid body, location of cordons and application of fingertipping on barrel form V11 are typical of Deverel-Rimbury pottery and occur as minor elements in Hampshire and east Dorset cemeteries at Kimpton phase C, and Latch Farm as well as in the earlier excavations at Downton Manor (Ellison 1981, fig. 13, C16; Calkin 1964, fig. 16, 2; Tabor 2017, fig. 16, 2). The high incurved rim of the second barrel is less common and the combination of cordoned and uncordoned rows of fingertipping is unusual. The decoration is broadly 'South Lodge' in character but lacking a second horizontal cordon (Calkin 1964, 20, fig. 7; Barrett 1991, fig. 8.5, 4). The high incurve of the rim features on Dorset sites, notably at Handley Barrow 24, but in all those cases the outer rim was thickened or cordoned (Calkin 1964, fig. 7, 2 and 5; Barrett 1991, fig. 8,10, 40; Tomalin 1993, fig. 10). The intermittent fingertipping of the rim exterior gives the uppermost area of the vessel an unfinished, improvised appearance.

The application of fingertipped and plain cordons slightly below expanded or thickened rims such as V3-5 and V8 featured most prominently on bucket forms and a bowl from the linear urnfield at Simons Ground which show clear affinity with Avon-Stour Deverel-Rimbury traits (Watling and White 1982, 33, fig. 20, nos. 2, 4 and 13). The bowl rim closely resembles that of V4 the straight wall of which has a pronounced inward trajectory allowing the possibility that it, too, is a bowl, although the rim diameter would be unusually large (Watling and White 1982, fig. 20, 15). The linear impressions on the cordon of wall sherds from 1007 are unusual, whether executed by cord or other means. The use of cord would imply an earlier Bronze Age date. The plain ovoid jars found in this and the previous excavation phase (Fig. 12, V13-5; Tabor 2017, fig. 16, 5) have limited diagnostic potential but the presence of a thick inturned rim in Kimpton phase C is noteworthy (Ellison 1981, fig. 13, C20). Plain hemispherical boss' such as V16 appear only to have occurred in that site's later phases and it is possible that the sherd and possibly plain bucket V10 were significantly later insertions into the cremation pit. A plain bossed bucket from the earlier phase at Knighton Heath near Dorchester was dated to 1470 ± 112 cal BC (using the calibration curve of Clark 1975: BM-872 would recalibrate using OxCal 4.4.4 to 1420–1207 cal BC at 2-sigma confidence) and similarly bossed medium and small buckets persisted into the later phase (Petersen 1981, 100, figs 20 and 23, nos. 54, 15 and 33).

Discussion of the Middle Bronze Age assemblage

The middle Bronze Age pottery from the site shows that it lies on the south-eastern periphery of the circulation of the Avon/Stour style. The fabric and decoration of the cordon sherds from Barrow 3 would allow an earlier dated vessel and the concave necked vessels may imply a pre- or early Deverel-Rimbury inception for the cremation cemetery. The apparent absence of Globular Urns is shared with Kimpton's early to middle Bronze Age phase C assemblage which was characterized by thickened and expanded rims, as well as heavy cordons. Much of the other pottery from the cemetery and Barrow 2 phase may be broadly contemporary with it, contrasting with predominantly fairly lightweight rims and cordons of potentially later vessels recovered during the phase 1 excavations (Ellison 1981, 165-9; Tabor 2017, 22). Overall the assemblage is entirely consistent with the fully developed Deverel-Rimbury style for which a date range of 1500 BC to 1150 BC is widely accepted (Needham 1996, 133-4), although a few vessels have earlier traits (notably Fig. 11: V1, V2 and to a lesser extent Fig.12: V12).

The later prehistoric pottery (Table A2.7)

The 15 later prehistoric sherds lack diagnostic features but are datable broadly by their fabrics which consistent with those from the previous excavations. The flint fabric feF1 and grog fabric G2 were associated with earlier middle Iron Age and middle to late Iron Age forms, although in the wider area similar flint fabrics were current throughout the late Bronze Age and Iron Age (Tabor 2017, 22-3, tables 4 and 6). The sparsely flint-gritted sandy fabric fS1 occurred in association with other fabrics dated by middle to late Iron Age forms (Tabor 2017, 25). The quartz content of two small heavily vitrified sherds implies a later Iron Age date.

feF1 (Medium) Hard grey, micaceous sandy fabric with grey to buff grey surfaces including common to abundant moderately sorted fine (<1mm), sparse medium (<2mm), and rare to sparse medium/coarse (<4mm) sub-angular flint and sparse to moderate reddish brown iron oxides (<2mm). May be smoothed or burnished.

G2 (Medium) Soapy grey fabric with brown to grey exterior and grey to pale brown interior surfaces including moderate to common fine (<1mm) and sparse medium (<2mm) to medium coarse (<3mm) sub-rounded grog.

fS1 (Medium) Moderately hard grey silty sand fabric with grey surfaces including sparse angular flint (<2mm). Surfaces may be smoothed.

Qun (Medium) Moderately hard fabric including abundant fine (<0.5mm) to medium (<1mm) quartz with extensive vitrification.

Struck Flint by Will Attard

A small assemblage of just 11 pieces of struck flint were recovered during Phase 4a excavation. The raw material appears to have been sourced locally from the fluvial gravel deposits underlying the site and its environs. The raw material is generally of fairly poor quality. The core and core fragments recovered all display a mixture of deliberate flake removals, thermal fractures and significant internal flaws. The assemblage exhibits

a range of colours from pale yellow-grey through to darker browns and greys. The flints recovered are generally in moderately fresh to fresh condition, with only minor post-depositional damage.

Four retouched pieces were present, all scrapers of varying shapes and sizes.

Table 1. Summary of Struck Flint

Type	No.
Intact Flake	2
Core Fragment	4
Core	1
Scraper	4

Metalwork by Aidan Colyer

A single item of metalwork was recovered from this phase of the excavations (plus a single iron nail from a Roman ditch which will be covered in the Phase 4b report).

A very degraded copper alloy object was recovered from spit 6 of deposit 1094 in Urn 934. It has a circular cross section and may have been part of a brooch, however this is far from certain. The pin is heavily corroded and has broken into multiple pieces. The original object would have been around 70mm in length.

Burnt Bone by Ceri Falys

Varying amounts of burnt bone were recovered from 55 contexts within the investigated area (Appendix 3). The majority of bone was located within pottery vessels. Deposits of bone not associated with urns, or with fragmentary pottery vessels were whole-earth recovered on site in a series of 0.02m thick spits. Those urns that were intact, were excavated off-site, also in 0.2m thick spits. During post-excavation processing, the surrounding soil and bone were floated and wet-sieved to a 1mm mesh size, with all burnt bone and other associated artefacts separated for further analysis. All pieces of bone were subjected to osteological analysis following the procedures suggested by Gejvall (1969), Brickley and McKinley (2004), and Mitchell and Brickley (2017).

Prior to osteological analysis the bone from each spit of each context was sorted using a sieve stack comprising 10mm, 5mm, and 2mm mesh sizes. The relative weights from each of the sieves was recorded, along with the colour(s) and overall preservation of the burnt bone, in addition to the maximum post-excavation fragment measurement of cranial and post-cranial elements, and the maximum thickness of the bones of the cranial vault, whenever present (Appendix 3 Tables A3.3 and A3.4).

The quantity of bone recovered varied greatly between deposits, with total weights of bone present for analysis ranging from just 0.2g (deposit 1078) to a maximum of 2049.0g (deposit 1275). Of the 55 contexts with

burnt bone, the majority contained less than 50g (n=28, 50.9%) (Table A3.1). Just three deposits (5.5%) contained 1000g or more of bone at the time of analysis (deposits 1098, 1275, and 1398).

Based on the results of a study of remains from modern crematoria, McKinley (1993) found the expected amount of bone from the cremation of a complete, adult individual to range between 1001.5g-2442.5g, with an average of 1625.9g. The reduced quantities of bone recovered in this assemblage may reflect the practice of burying only some of the calcined bone of the cremated individual, representing a symbolic or token internment (McKinley 2006), disturbance of the burials after internment (plough damage was noted across the site and may even have occurred in prehistory), the age of the individuals(s) (i.e. the collected bone was of non-adult individuals), or the result of poor preservation of the skeletal remains.

Preservation

The following classifications were employed to describe the preservation of the burnt bone:

poor: the fragments have chalky, fragile textures. A significant amount of weathering is noted, which results in all pieces of bone demonstrated rounded morphologies. Ultimately, all surface features and diagnostic details are masked or altered, and renders fragments non-descript in appearance.

fair: fragments have generally dense textures, with some evidence of weathering. Edges are sharp, not rounded. Some detail of the elements of origin are retained.

good: fragments are dense with sharp edges, and the majority of surface features retained.

Of the 55 contexts of burnt bone, the majority were of “poor” preservation (n=38, 69.1%), and 17 deposits were of “fair” preservation (30.9%). No contexts contained bone of “good” preservation.

A general state of poor preservation was also reflected by the maximum post-excavation fragment sizes of the recovered elements. Long bone shaft fragments were collected from all contexts, with maximum lengths recorded between 3.6mm (deposit 1151-2) and 67.5mm (deposit 1070). Cranial remains were identified in 56.4% (n=32) of the 55 deposits, which had recorded maximum lengths between 7.7mm (1496) and 59.8mm (1070). As demonstrated by Table A3.2, the overall fragment size was relatively small, with the majority of contexts containing maximum post-excavation measurements less than 21.0mm in length for both cranial (n=19 contexts, 59.4%) and post-cranial fragments (n=30 contexts, 54.5%).

Colour of the Bone

Burnt bone fragments can display a variety of colours, as a result of the efficiency of the cremation process. Conditions such as the quantity of fuel used to build the pyre, the temperature and oxidizing/reducing conditions attained in various parts of the pyre, and length of time over which the cremation was undertaken are reflected in the resultant bone colour (McKinley 2004:11). Holden and colleagues (1995a and b) suggest that temperatures up to c.300°C produce charred (black) bone, while hues of blue and grey indicate the incomplete oxidation of the organic components of the bone, obtained by reaching temperatures up to 600°C. In comparison, white

coloured bone is produced through exposure to temperatures in excess of 600^oC, as the organic components of the bone are completely oxidized.

A total of 40 contexts (72.7% of this assemblage) contained uniformly white coloured bone, and 13 deposits (23.6%) were buff-white (Table A3.3). Two contexts (deposits 975, spit 3 and 1095-96, spit 4) contained a predominantly white bone, however, a few fragments also displayed patches of blue. It was not possible to identify the affected skeletal elements in order to assess any patterns of burning within the body on the pyre.

It is interesting to note, the colour of bone was closely correlated with the overall preservation of the remains, as a white colour was almost always recorded for those contexts of “poor” preservation, while bones with buff-white colourings were most commonly of “fair” preservation.

Osteological Analysis

The purpose of osteological analysis is to determine the nature of the burnt bone (i.e. human or animal). If human, a demographic profile of skeletal assemblages can be investigated through the assessment of age-at-death and sex of the individual(s) present, in addition to pathological conditions that have affected skeletal elements. The minimum number of individuals (MNI) represented within each context is determined through the identification of duplication of the same skeletal element, or by the presence of age-related development of teeth and/or skeletal elements.

Inventory

Initial osteological analysis initially divided fragments into five main areas of the body: cranial, axial, upper limb, lower limb and non-descript long bone (unidentifiable to specific limb). A more detailed identification of fragments to specific skeletal element and side was also undertaken, where possible. The most frequently identified fragments in the deposits were non-descript portions of the cranial vault and long bone shafts.

Due to the poor preservation and non-descript appearance of all pieces of bone, it was not possible to identify the majority of fragments to specific skeletal element or often even species of origin. A total of 22 deposits (40.0% of the 55 deposits) could not be identified as human or animal (Table A3.3). These were primarily the deposits containing the smallest quantities of bone and fragment size, and also lacked evidence of cranial remains. For these contexts, no further information could be retrieved, beyond the quantification of the amount of bone present, the measurements of maximum post-excavation long bone shaft fragment size, the preservation and colour of bone.

Of the 55 contexts, 25 (45.5%) contained human bone, based on the identification of specific long bone shafts and cranial vault fragments. However, few additional identifiable elements were present (i.e. the

proximal/distal ends of the long bones, or portions of the post-cranial axial skeleton). As a result, it was not possible to retrieve demographic or palaeopathological data from the remains beyond suggestions of possible adult status (based on the overall thickness of cortical bone displayed on the long bone shafts, and thickness of the cranial vault). These deposits contained larger quantities of bone of larger size, although also of primarily “poor” preservation.

The remaining eight contexts (14.5% of the assemblage) contained human remains which were of “fair” preservation, and provided sufficiently preserved fragments to assess broad ranges of age-at-death and/or sex. These deposits contained the largest quantities of bone, fragment sizes, and range of identifiable skeletal elements beyond cranial vault and portions of long bone midshaft (e.g. aspects of the facial skeleton, tooth crowns and roots, portions of vertebrae, and phalanges).

Minimum Number of Individuals

It was not possible to make accurate assessments of the number of individuals present within each deposit, due to the large number of fragments that were not able to identified to specific skeletal region.

Assessments of Age-at-death and Sex

The accuracy of osteological methods to identify the biological aspects of the human skeleton, such as estimations of age-at-death and biological sex, greatly reflect the quantity and quality of observable standard traits. Unfortunately, with respect of age-at-death estimation, and with the exception of identifying the completing of root development of the third molar in (1070), standard ageing methods could not be applied in any context. Tentative suggestions of “adult” age (i.e. 18+ years) were made based on the overall thickness of the cortical bone of the long bone shafts and thickness of portions of the cranial vault. A total of 17 of the 33 contexts (51.5%) of human bone were suggestive of “adult” individuals. The remaining 16 deposits (48.5%) contained the remains of individual(s) of indeterminate age.

Similarly, the majority of skeletal regions relied upon to assess the sex of the individuals present were also absent or lacked suitable preservation (i.e. portions of the cranium, pelvis, and distal humerus). Small segments of the supraorbital rim were recovered in two burials (6.1% of those containing human bone), deposits (1091-92 and 1269), which were scored as probable female (sharp margin) and probable male (rounded margin), respectively, based on Buikstra and Ubelaker (1994: 20, fig. 4). All other cremation burials containing human bone (n=31, 94.9%) were of indeterminate sex.

Sexing of the remains was also attempted following methodology by Gejvall (1969). The maximum thickness of the bones of the cranial vault were recorded, where possible. Values ranged between 2.3mm (1469) and 5.4mm (1275). Unfortunately, a wide range of additional sexually dimorphic characteristics were not present to aid in the calibration of cranial vault thickness with sex. However, tentative designation of “possible

male (M?)” was made for six burials that displayed maximum cranial vault thickness of 5.0mm or larger (Appendix 3). Possible male status was based on the assumption that males are generally more robust than females, and the correlation of a male supraorbital rim in burial (1269) with maximum cranial vault thickness of 4.9mm.

Pathology

The poor preservation masked the majority of surface features of the fragments, and as a result, it was not possible to identify any pathological alterations to the bones present.

Conclusions

In conclusion, the osteological analysis of this assemblage of burnt bone was severely limited by the condition of the bone. The small fragment sizes reflected the poor preservation of the burnt bone. The majority of fragments were generally weathered and rounded in appearance, with chalky and fragile textures. Although all deposits of bone were quantified (weight and fragment size), and investigated for demographic and pathological data, minimal information was could be retrieved, beyond that is likely both males and females were interred in the cemetery. Given the limited information recovered, comparisons have not been made with similar cremation cemeteries.

Burnt Flint

Unworked but burnt flint was recovered from some 20 contexts, mainly cremation-related (Appendix 4). Quantities were mostly tiny (especially considering that these deposits were fully sampled) with only the 674g from deposit 1275 (cremation 949, barrow 2) reaching above 500g in any one context. Flint is abundantly available locally and can become burnt by any number of processes, including naturally. It may be burnt deliberately for use as a temper in pottery, for example, but there is no suggestion of that here, nor is it likely to derive from a ploughed-out burnt mound, which would have generated quantities measurable in tonnes. Most probably the burning was an accidental by product of the cremation process and the flint accidentally included with the bone collected for deposition.

Environmental Evidence by Elspeth St John-Brooks

Numerous samples were taken during the excavation of Phase 4a. This report concentrates only on those from the ring ditches and cremation cemetery. (sample numbers 145 - 304). The three barrow ditches were 100% excavated, with at least 5 litres taken from each slot. Most of the samples taken during this phase were from the Cremation burials discovered in association with the barrows. Cremation burials were excavated in 20mm spits

(up to 8 spits in some cases). As a result, these samples have multiple distinct Spit numbers (Appendix 5). This programme of sampling achieved a complete and thorough investigation of the cremations and associated features. The samples were floated and wet-sieved using a 0.5mm sieve, the air dried. All floated material was retained. The cremations and associated contexts were sieved using a 0.1mm mesh. Identification of seeds and charcoal was carried out using online resources (<http://www.plantatlas.eu/za.php> and <http://www.woodanatomy.ch/>). Identification was also aided using text sources Jacomet (2006), Schweingruber (1978), Stace (1997) and Hather (2000). See in Appendix 5 for detail.

Only 4 of the samples processed contained identifiable seeds. A total of 13 seeds were found, all in a poor state of preservation, and all identified as indeterminate cereal grains. All were recovered from cremations associated with Barrows 1 and 2. These seeds are likely to have been introduced during the burning process of the cremations as cereal waste (i.e. stems & leafy material) is an effective fire-starting material. Unfortunately, due to the small number of seeds and their poor condition, very little can be interpreted from this assemblage in relation to site activities. Furthermore the radiocarbon date on the grain from cremation 949 strongly suggests that this material was a much later intrusion. No seeds or other environmental evidence were recovered from any other deposits.

It was evident during the excavation of Phase 4 that charcoal preservation was poor, with only small fragments reported in context records. It is noted that no bone, except for highly burnt and calcined (cremated) remains survived across the site, and that pottery recovered was severely degraded by burial in the highly acidic geology. This acidic geology has also significantly affected the charcoal remains. Many fragments were internally deformed, displaying cell degradation that made identification impossible. A total of 94 samples contained charcoal; 64 samples contained material identifiable to a species level.

Two species were present among the identifiable material – ash (*Fraxinus excelsior*) and oak (*Quercus*), with a consistently and markedly greater quantity of ash in almost every sample. Only 4 samples contained more oak than ash. This suggests that deciduous materials were used primarily in the burning activities happening at the site. Both ash and oak are good sources of fire wood, burn at a high temperature, have a rapid burn rate and are easier to ignite than most other trees, particularly wetland loving trees such as willow (*Salix*) (Gale and Cutler 2000, 120; 205). It is likely that ash and oak were used for their combustion properties, especially given the temperatures required in effective cremation, but the small overall assemblage size makes it impossible to say for sure.

Radiocarbon dating

Five samples (four of wood charcoal and one cereal grain) were submitted to the Chrono Lab at Queen's University, Belfast, for AMS radiocarbon dating (Appendix 6). Details of methodology are in the archive; in summary the lab considered the results reliable. The laboratory calibrated the results with Calib rev 8.2, used in conjunction with Stuiver and Reimer (1993), with data from Intcal20 (Reimer *et al.* 2020). The plot of the calibrated results (Chart 1) used Oxcal v4.4.4 (Bronk Ramsey 2021, also with data from Reimer *et al.* 2020). The two calibrations produce results that differ only by a single year in each case. The four results from charcoal are all remarkably consistent (with three of them almost precisely contemporary) while that from the cereal grain is so anomalous as to be discounted as being from intrusive material.

Conclusion by Richard Tabor

The archaeological investigations at Downton have revealed Middle Bronze Age funerary spaces, with multiple monuments and associated cremation burials. The Phase 4a excavation, reported here, of the remains of three Middle Bronze Age barrows recorded hints of earlier construction and maintenance phases, with underlying post holes and re-cutting of ditches. They follow the earlier discovery of two barrow cremation cemeteries to the north within the same quarry site which taken together extend from north to south for just over 400m along the eastern slope of a low spur formed by the confluence of Danes Stream and an unnamed brook. The overall span of 1497 to 1130 cal BC for the five reliable radiocarbon dates from funerary contexts is probably an apposite indication of the cemeteries' period of most intensive use although at least two vessels from pits 927 and 924 of the unenclosed cemetery may predate 1500 cal BC, whilst some plain ovoid vessels may be of later Middle Bronze Age date (above and Beaverstock *et al.* 2017, 5, table 17). No direct evidence has been found for contemporary settlement and despite the thorough burning of most of the bone and the presence of suitable charred wood on site there were no features with traces of intense *in situ* burning indicative of pyre sites. However, sparse pottery and an earlier Middle Bronze Age radiocarbon date of 1696–1528 cal BC from ditches forming a coherent pattern over much of Field 1 in the earlier phase of investigation imply that the cemeteries may have developed within an existing field system (Beaverstock *et al.* 2017, 18, fig. 14 and this report, Fig. 2). It has been suggested that a large but badly truncated pit off the centre of ring ditch 96, closest to the surviving elements of the field system, had received a primary burial and that pottery from at least one of the cremation pits within the circuit of that ring ditch may have pre-dated the material from the northernmost barrow (889) (Beaverstock *et al.* 2017, 5; Tabor 2017, 22).

Where they were present there is potentially significant variation in treatment of pottery vessels associated with the burials including an unusually flared arrangement of slabs, inversion and upright positioning. There is some evidence that the preference for inversion in much of the south cremation cemetery is an earlier trait although this is undermined by the squarely Middle Bronze Age radiocarbon date of 1401–1209 cal BC associated with an upturned vessel from a cremation burial (894) within northernmost ring ditch 889 (UBA-33080: Beaverstock *et al.* 2017, table 17). It is also notable that only one of six urns was inverted from within ditch 96, for which an earlier inception was posited (Beaverstock *et al.* 2017, 5). At Kimpton slab burials were exclusive to and predominant in the Late Early to Early Middle Bronze Age phase during which inversion was the only other identified practice. However, although upright setting of vessels was introduced only in the following phase and featured throughout the remaining duration of the cemetery's use into the Late Bronze Age inversion was predominant in the later phases after a perceived relative hiatus during the Early Middle Bronze Age (Dacre and Ellison 1981, table 9). At Ibsley urns in burials set into the secondary silts of a ring ditch were both upright and inverted with no apparent regard for vessel form. There were single biconical urns in each attitude and a single upright South Lodge type barrel urn (Coles and Ford 2005, 12-7). Two overlapping radiocarbon dates for single upright globular and barrel urns there spanned 1507 to 1367 cal BC (Coles and Ford 2005, 16).

The several burials with more than one urn represented from this phase of excavation may have included the remains of more than one person as may un-urned or single urned burials but the condition of the bone has prohibited identification of any demonstrable examples at Downton and it should be borne in mind that only 25 of the 55 deposits of cremated bone are even definitely human (Falys, above). The inclusion of more than a single human individual in a cremation burial is relatively rare, amounting to only 3% of a recent survey's sample (Caswell and Roberts 2018, table 2). At Kimpton discernible burials of bone from more than one individual did not feature before the later Middle Bronze Age phase, although it was noted that difficulties of identification may have distorted the data (Everton 1981a and b, 188-9, 197). The presence of multiple vessels in a burial pit does not warrant the assumption that more than one individual was interred in it and the evidence from the current work is inconclusive. However, the morphology of pottery sherds associated with multiple vessel deposits may allow their attribution to a later phase in the cemetery sequence although at Kimpton, two deposits incorporating three vessels were attributed to that site's Early Middle Bronze Age phase, including one example of a vessel within an urn. There were no instances from other phases at Kimpton (Dacre and Ellison 1981, 168-9).

The setting with respect to a watercourse at Downton compares readily with other cemetery groups close to the east Dorset and west Hampshire coastline. They include benchmark sites discovered in the first half of the 20th century at Pokesdown, set on a low north-easterly scarp overlooking the River Stour, and Latch Farm, on a low easterly scarp overlooking the River Avon, both north of Christchurch and around 12km to the west of Downton (DC 2021). Similar relationships to watercourses appear to be preferred by comparably prolific cremation cemeteries further away from the coast. The most fully explored is further inland, 11km north-west of Christchurch at Simons Ground, Hampreston, which comprised at least five barrows and associated cremation burials, as well as two further sites destroyed without archaeological investigation but from which Middle Bronze Age pottery survives. They are strung out close to the edge of the River Stour's northern scarp over a distance of just under 400m (Watling and White 1982, fig. 1). However, the thoroughly investigated and reported inland site at Kimpton is more remote from two water courses to its north-east and south-west. It is roughly equidistant with both at around 1.6km but is intervisible with neither.

Middle Bronze Age cremation burial sites are found throughout Britain and vary from isolated single burials to a very few groups where burial numbers extend well into three figures. There are now least 20 sites with over 50 burials each (Caswell and Roberts 2018, 332; fig. 2). Some appear to have developed in conscious proximity to earlier Bronze Age or Beaker inhumations or cremation burials, and remain in use into the later Bronze Age, but in the great majority of cases the full period of use has not been determined. Over the past four decades discussion of many cremation cemetery sites has been framed by models which treat their source population as extended family groups (Ellison 1980, 122) typically set within 700m of their settlements, and most commonly within 300m (Bradley 1981, 100). Caswell and Roberts' recent study setting out to test these assumptions identified nearly 1700 potentially Middle Bronze Age cremation cemeteries from Britain and analysed 378, with a total of 3133 cremation burials, those which were dated reliably by either pottery or radiocarbon falling in a 450-year span from 1600 to 1150 cal BC (Caswell and Roberts 2018, 332). Negative evidence forms a cornerstone of their critique, notably the lack of identified nearby settlements, the relative paucity of cremation burials in relation to the reasonably assumed much greater population, and the scarcity of *in situ* pyres at mortuary sites. The relatively small burnt bone weights recovered from individual cremation burials in relation to that generated by experiment (or known weights from modern crematoria), is interpreted as a sign of bone selection (Caswell and Roberts 2018, 339). They consider that even 'multiple taphonomic issues' could not account for perceived shortfalls in all of these areas. With regards to proximity they note that only 37% of their cemetery sample were found within 700m of a settlement and that 54% were over 1km away (Caswell and Roberts 2018, 343). This reasoning fails to take into account the extent of the area investigated and

treats the nearest *discovered* settlement as the nearest settlement. It fails also to take into account the depth of modern ploughing which is capable of erasing shallow features. It is notable that many of the principal sites with deeper levels of preservation predate modern deep ploughing practices (Piggott 1938; Dacre and Ellison 1981; Petersen 1981; Watling and White 1982). An absence of convincing settlement evidence surviving below ground for the period is commonly remarked even where huge areas have been subjected to modern investigation and cannot be strong evidence in favour of a real absence of local settlements.

Modelling of pyres has generally assumed that their need for ample oxygen commensurate with the thorough burning of bone from most Middle Bronze Age burials would have dictated building of a surface structure (McKinley 1997, 132-6) which with or without 'cleaning' is rarely likely to have survived even the simplest natural erosion processes (wind and rain) without the effects of subsequent human activities on the site. Plough scars across the barrows and the cremation cemetery here indicate deep destruction which, based on the radiocarbon date for a cereal grain found within Barrow 2's cremation burial 949, may go back as far as the earlier Middle Iron Age, implying that the barrow mounds might already have been levelled by that time. This destruction may account in part for the 'generally weathered and rounded... chalky' appearance (Falys, above) of some of the bone recovered but in this case taphonomy following interment is unlikely to provide a full explanation as many of the collected fragments from low in the deposit would have been undisturbed. This at suggests that at least several weeks had elapsed before the material was collected for burial or that there was an intermediate stage where bone was exposed prior to deposition. However, it provides very slight evidence in favour of an assertion that 'human cremated bone was 'created' in a different location to final burial place' even though the bulk of it is 'no longer archaeologically visible' (Caswell and Roberts 2018, 345). On the other hand, where substantial flint platforms afforded some protection at Kimpton there was evidence for use of at least single on-site pyres during the late Early to Early Middle and later Middle Bronze Age phases. The earlier pyre 'incorporated a series of pits' (Dacre and Ellison 1981, 159, 170). It was noted that there was very little bone associated with the pyres (Dacre and Ellison 1981, 162). Bone goes unremarked from a particularly well-preserved charcoal-rich deposit not designated as a pyre at Simons Ground which was protected by a layer of clay sealed by the surviving barrow mound. The mound had been cut by a later urn pit (Watling and White 1981, 8-10, 43). 'Pyre-related' deposits associated with a cemetery set in the upper fills of a ring ditch at Ibsley may be regarded as a further indication of on-site cremation.

At present it is difficult to determine kinship within burial groups as DNA does not survive thorough cremation. There is not enough evidence to support or contradict Ellison's proposed kin groups in cemeteries and given the small number of total cremations of the period identified in Britain in relation to some 8000

known settlements and that a substantial proportion of the cremations are in isolation it may be argued the cremation was not the only practice during the ‘cremation horizon’ and that the distribution was not necessarily in kin groups. Nonetheless, the apparent association of the Downton group with a field system with an inception contemporary with or earlier than the cemetery surely implies nearby settlement and the use of the cemetery by its community.

Acknowledgements

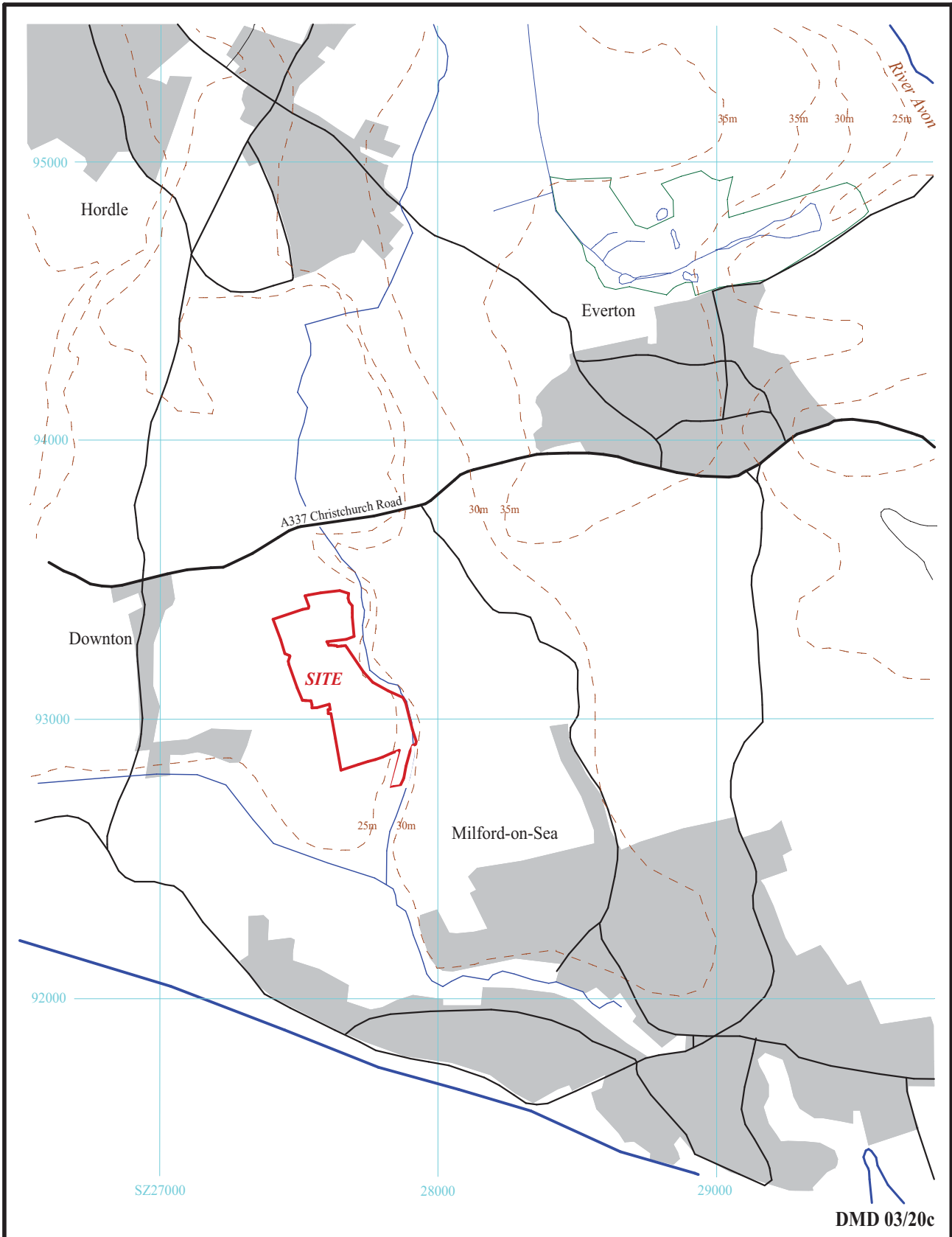
The excavation was funded by New Milton Sand and Ballast. Human remains were excavated under the terms of Ministry of Justice licence number: 19-0255. On completion of all remaining fieldwork, it is anticipated that the archive will be deposited with Hampshire Cultural Trust.

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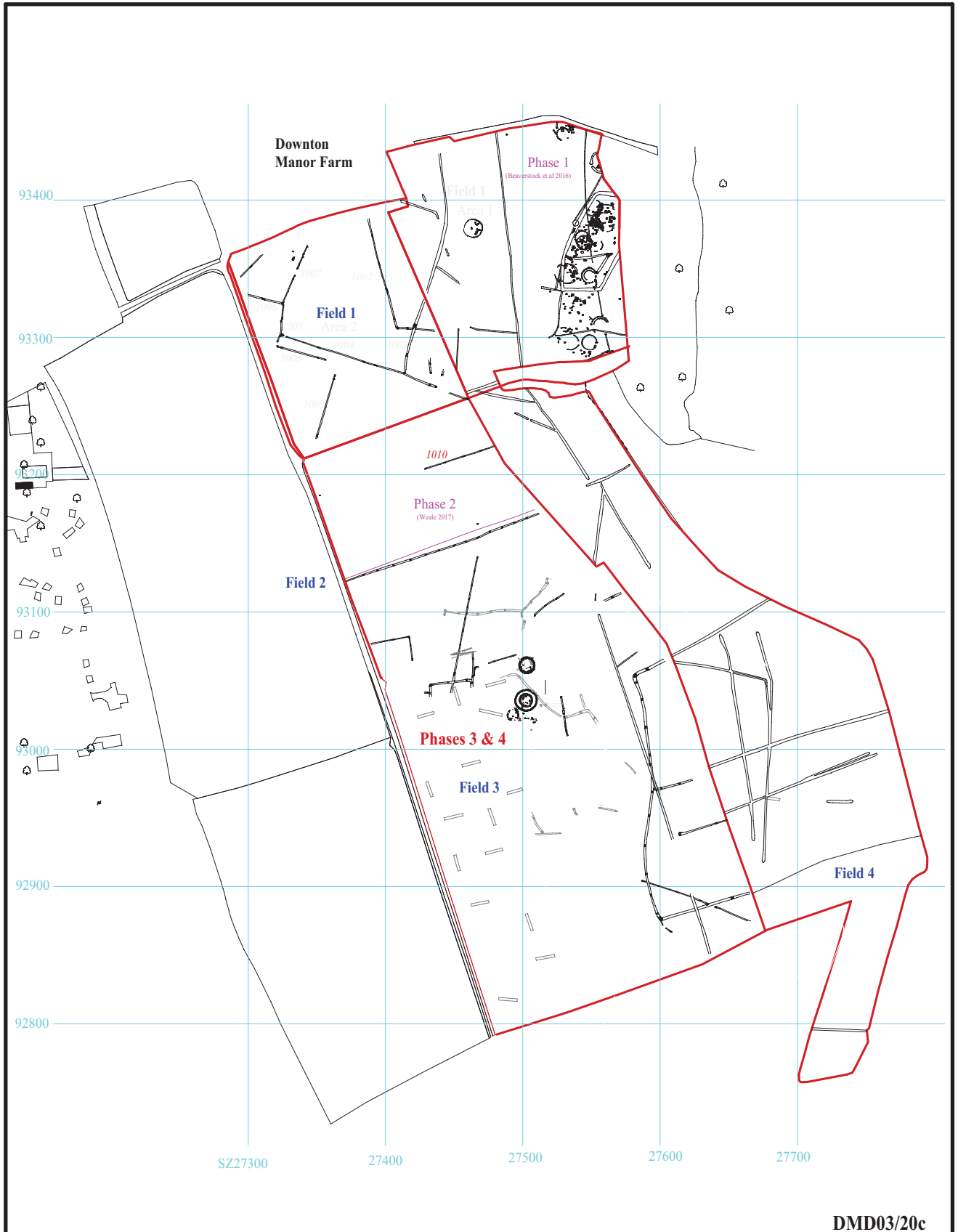


**Downton Manor Farm, Downton, Milford-on-Sea,
Hampshire
Archaeological Excavation**

Figure 1. Location of Downton Quarry and its environs.



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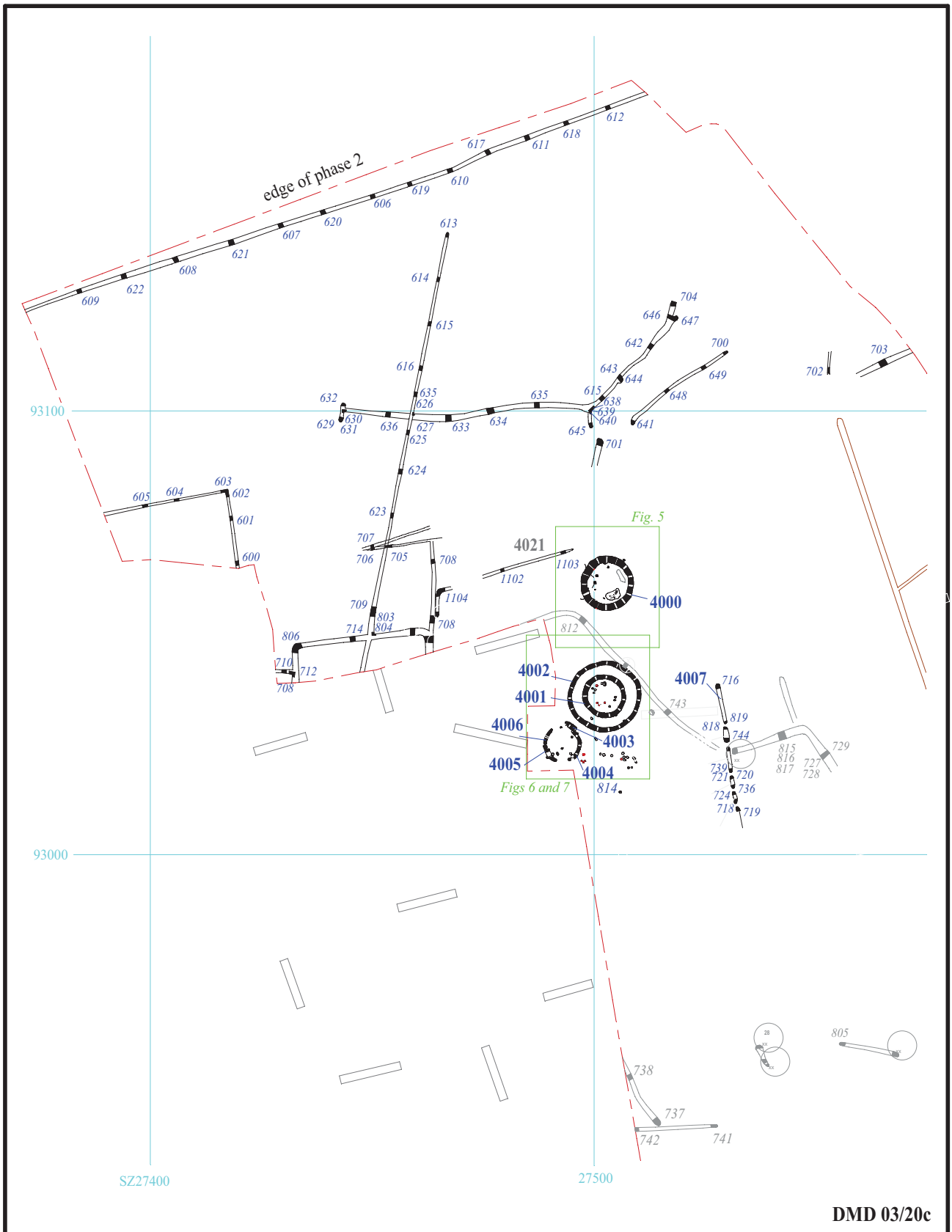
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Figure 2. Overall plan of areas investigated.



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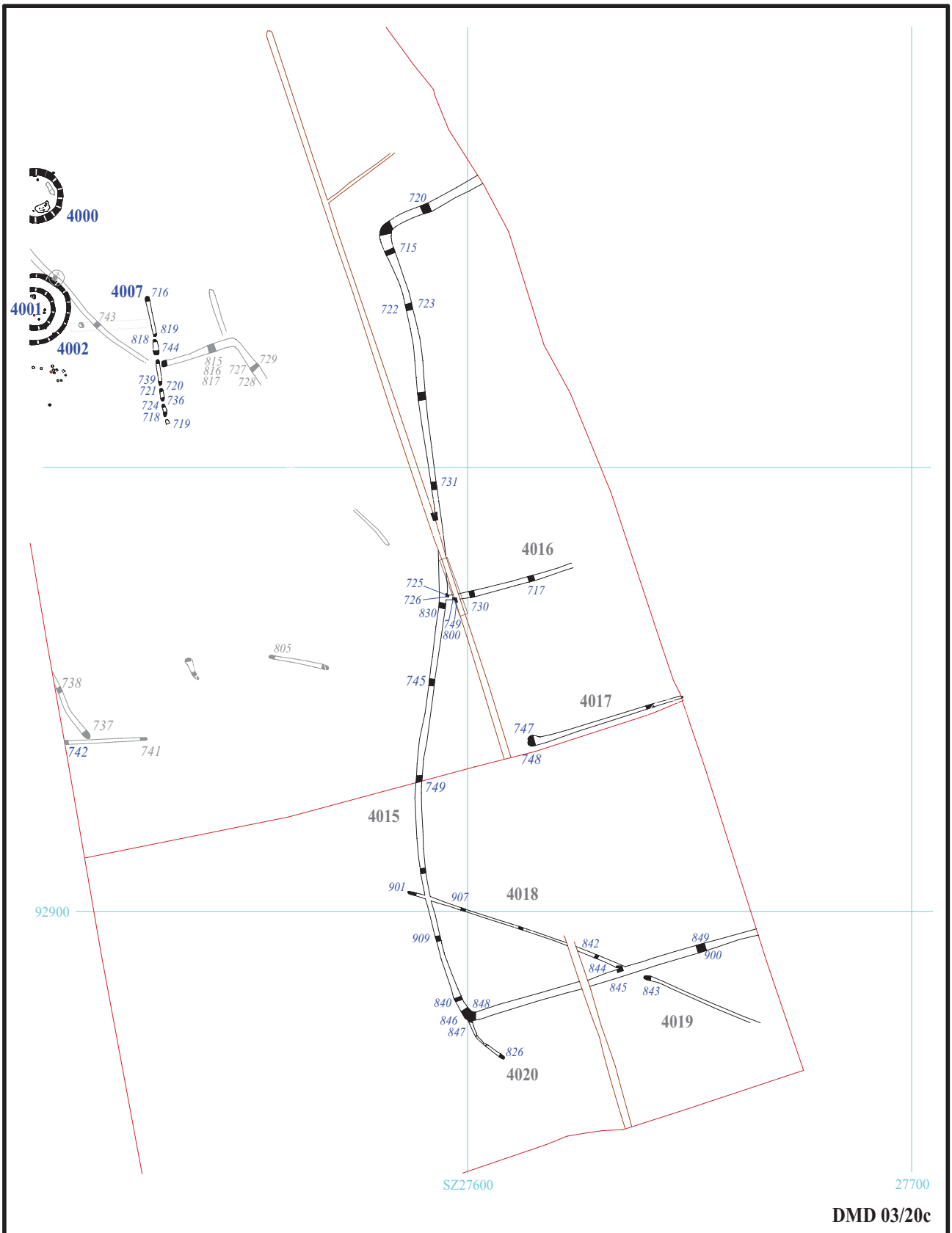
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Figure 3. Northern phase of excavation.



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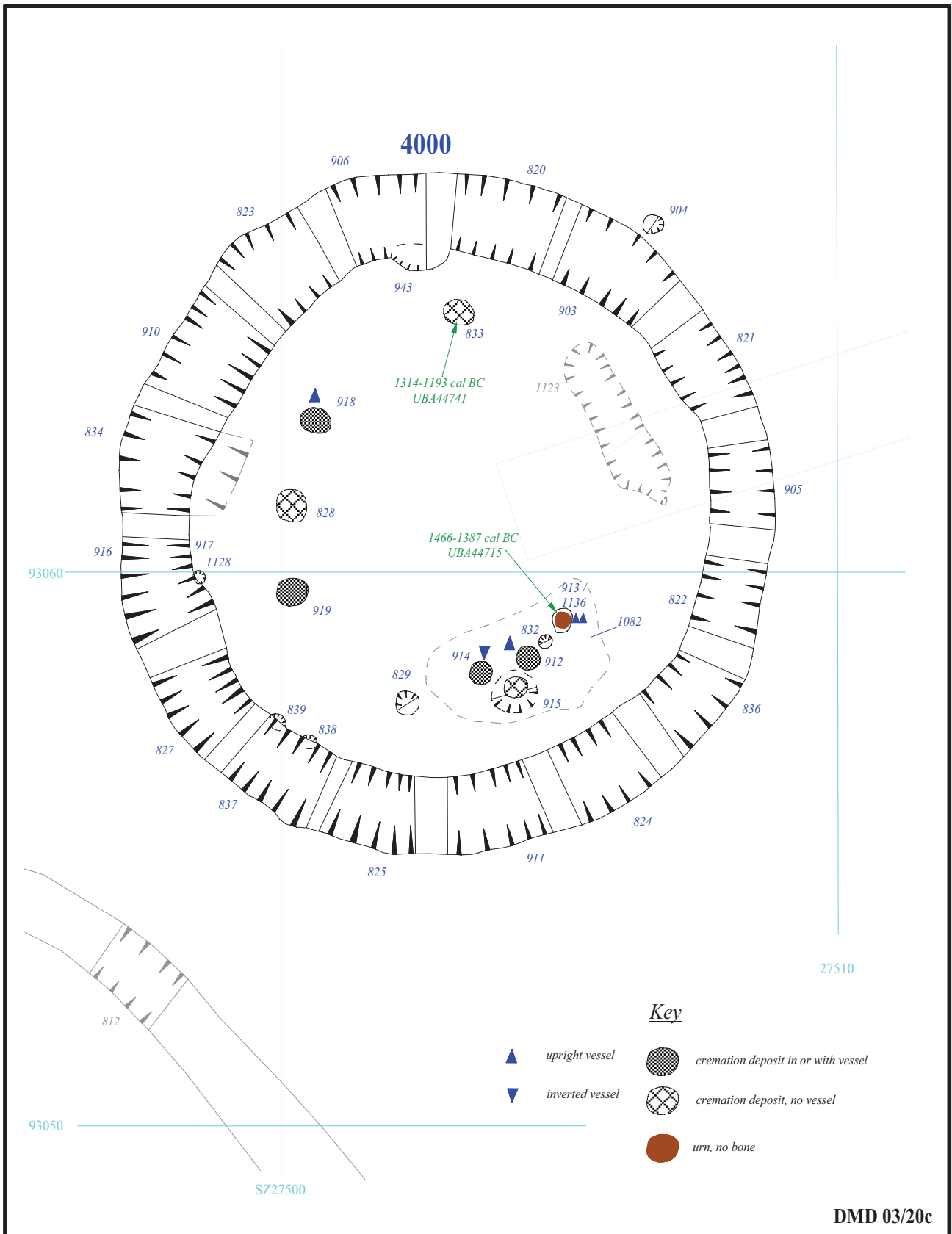
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Figure 4. Southern phase of excavation.

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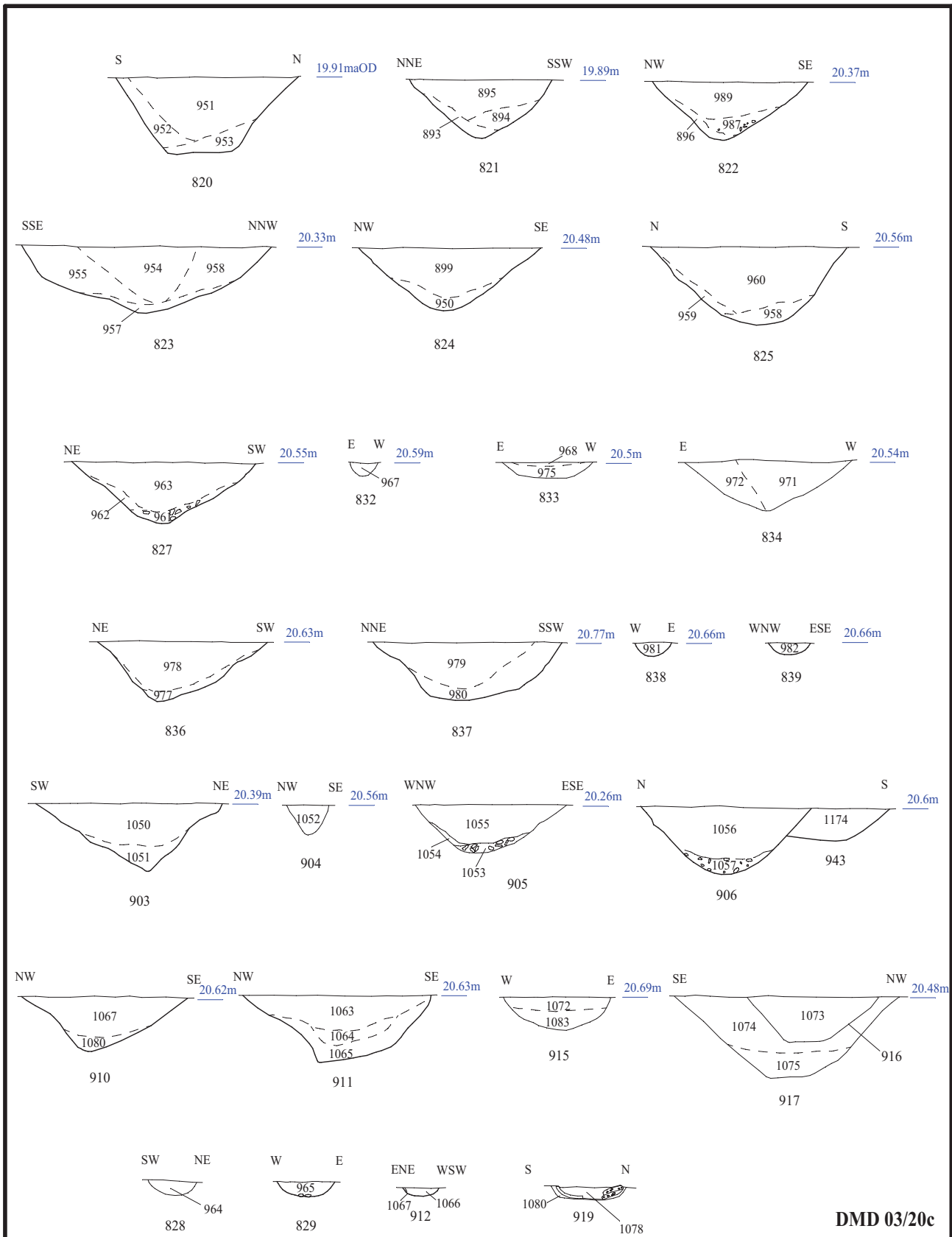


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Archaeological Excavation**

Figure 5. Barrow 1.





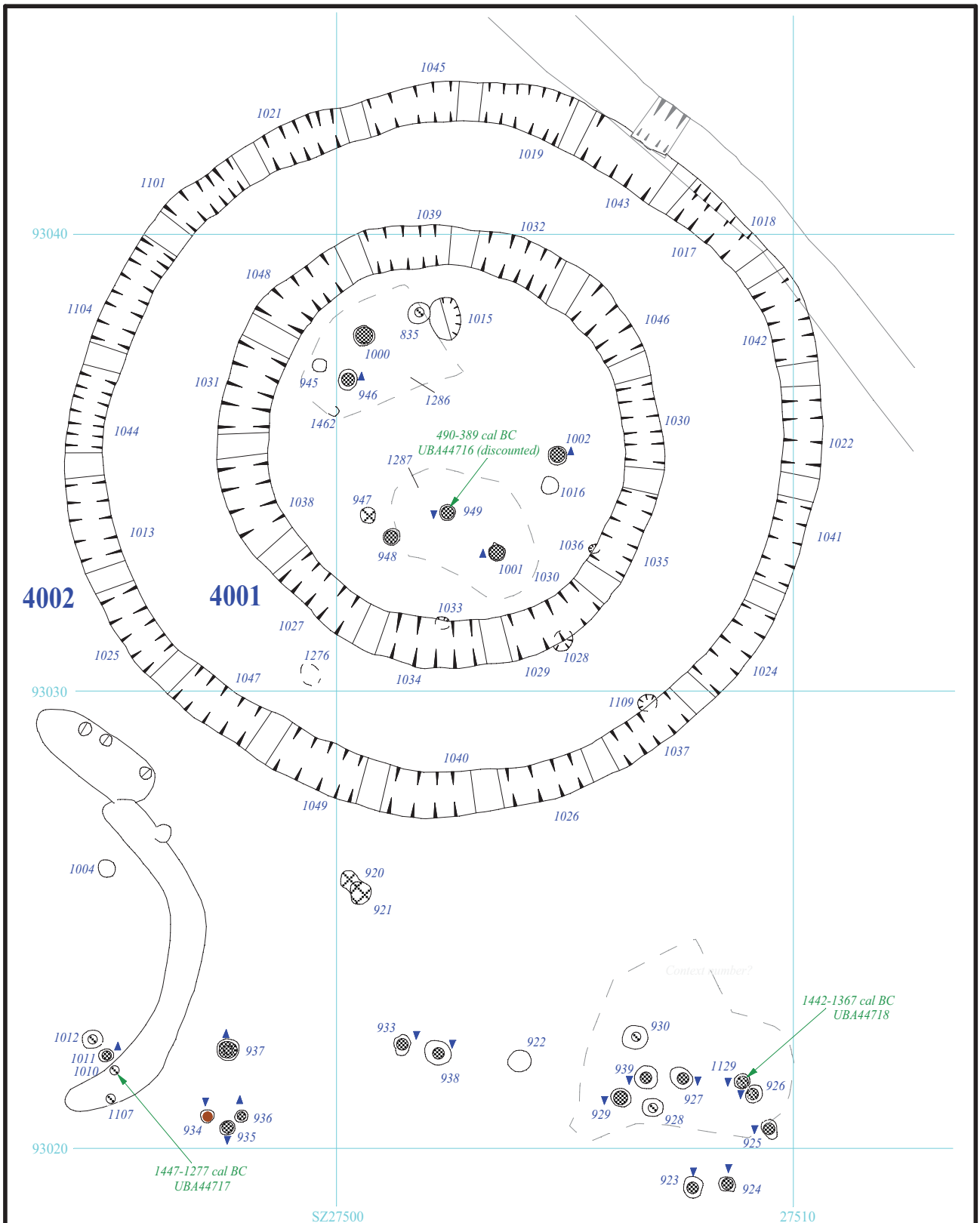
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Figure 6. Sections from Barrow 1.



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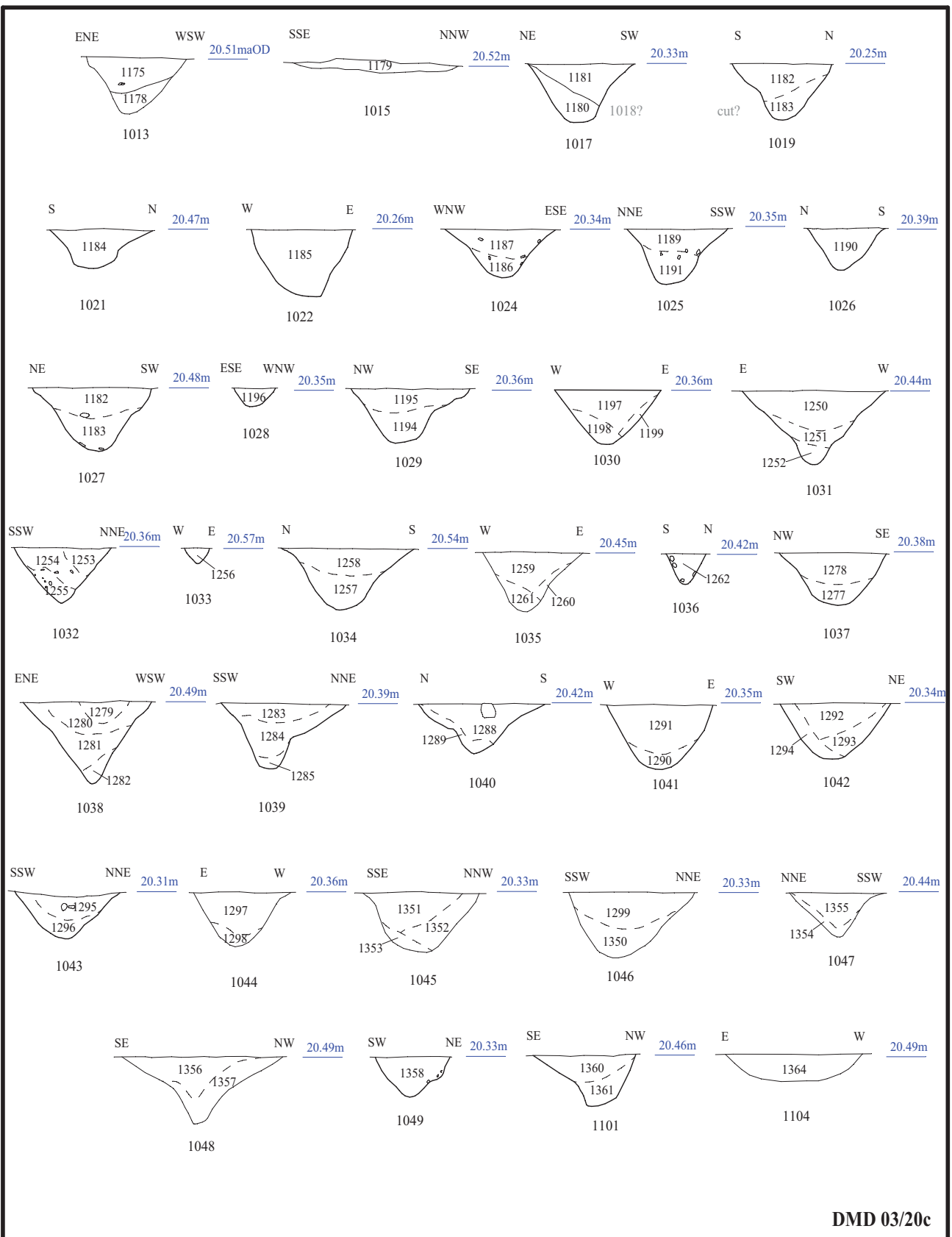
Key cremation deposit, with or in vessel upright vessel inverted vessel cremation deposit, no vessel urn, no bone **DMD 03/20c**

**Downton Manor Farm, Downton, Milford-on-Sea,
Hampshire, 2019
Archaeological Excavation**

Figure 7. Barrow 2.



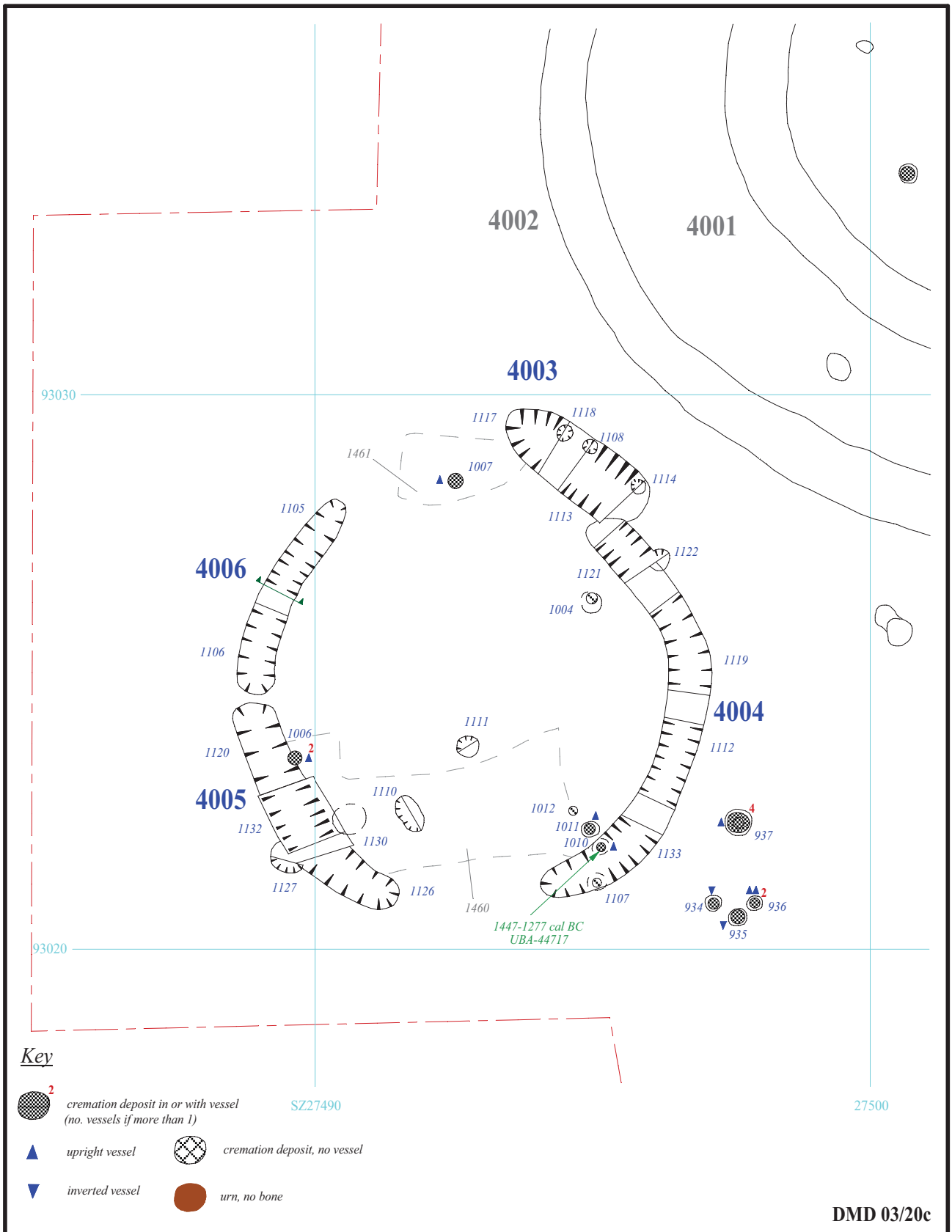
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Archaeological Excavation**

Figure 8. Sections from Barrow 2.

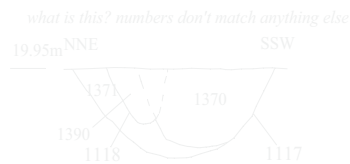
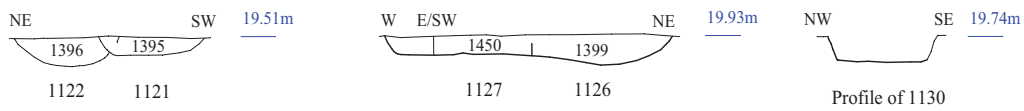
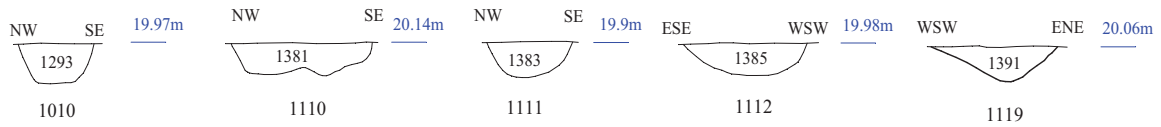
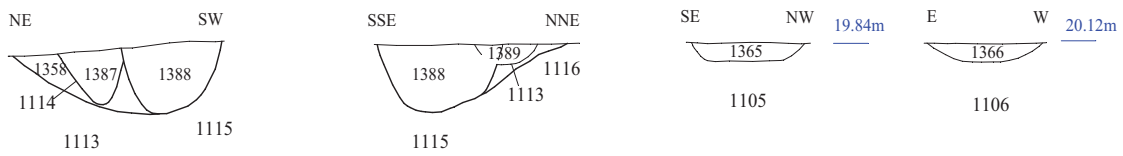
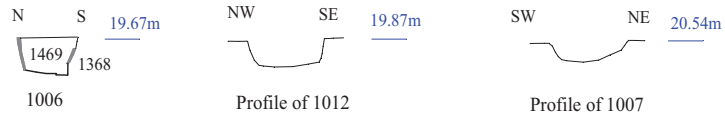
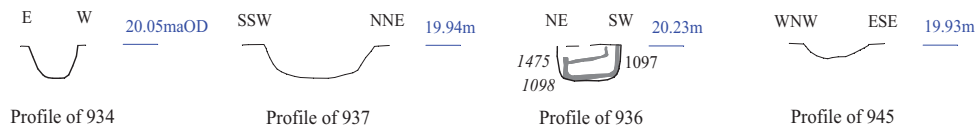




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Figure 9. Barrow 3.



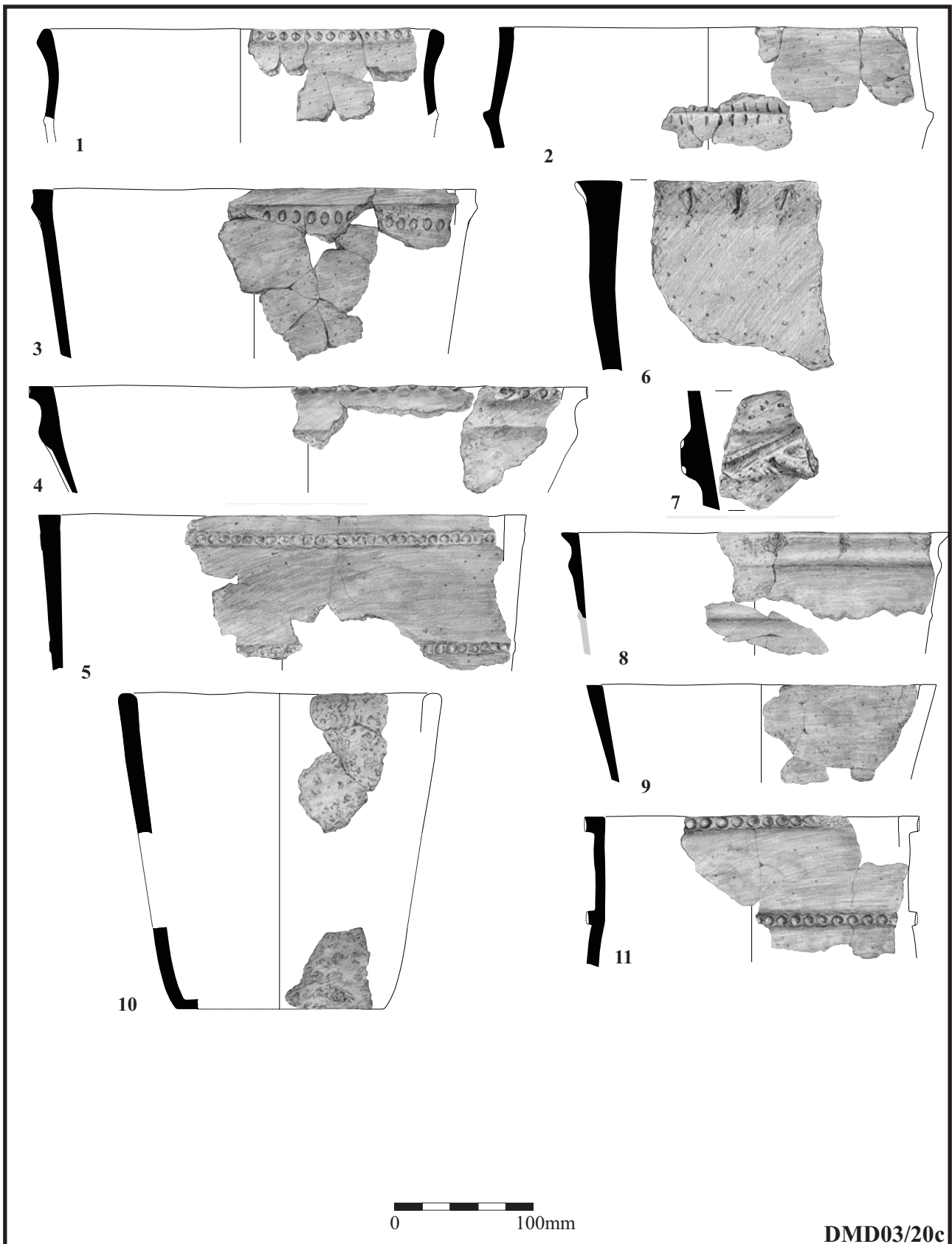


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Figure 10. Sections from Barrow 3.

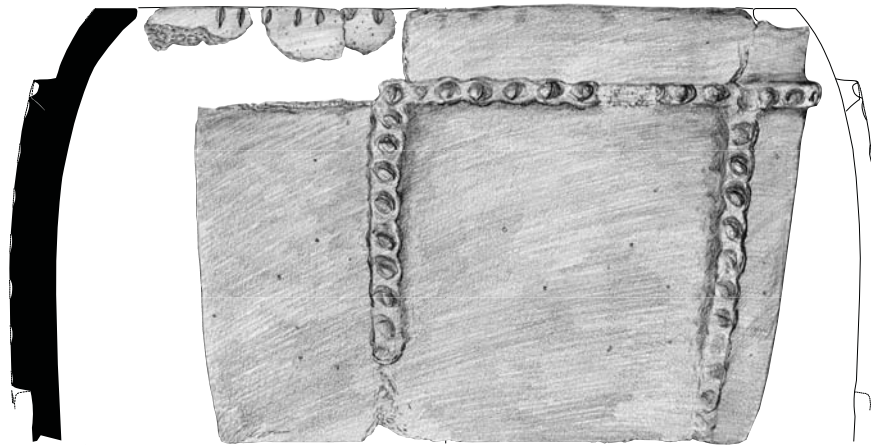




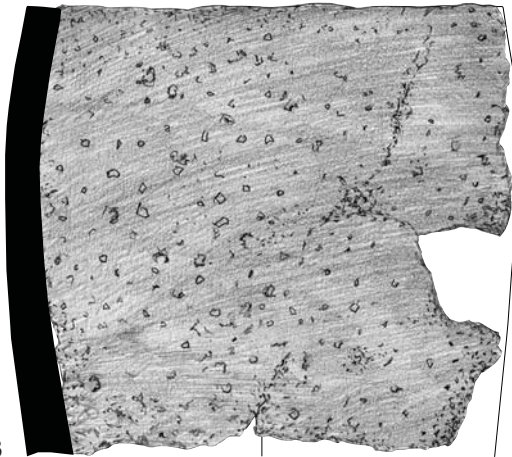
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 Figure 11. Pottery (see text for details).

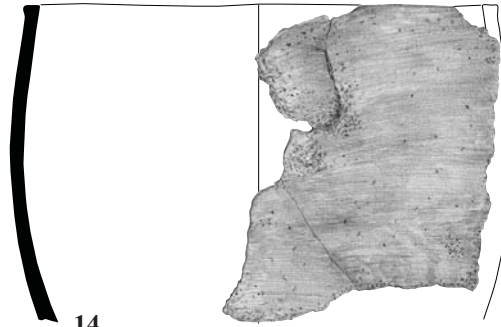




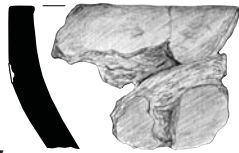
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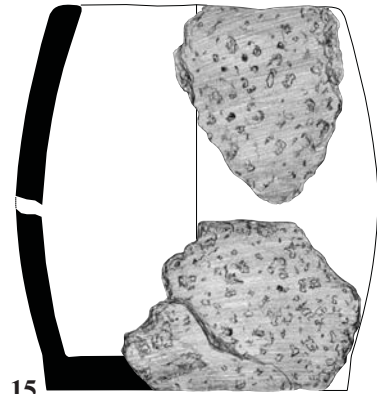
13



14



17



15

0 100mm

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Figure 12. Pottery (see text for details).

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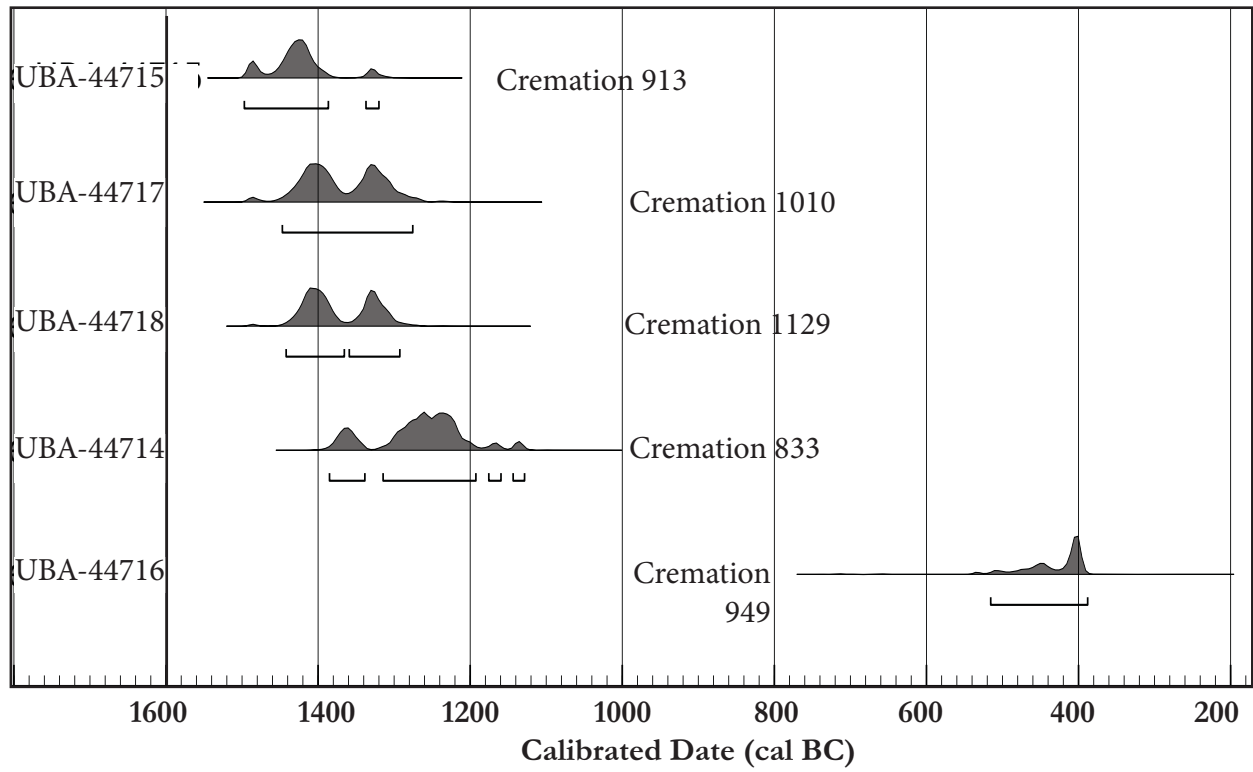


Chart 1. Plots of radiocarbon calibrations using OxCal 4.4.4 (Bronk Ramsey 2021) (data from Appendix 6)



Plate 1. Site stripping, barrow 1. Scales: 2m and 1m.



Plate 2. Cremation 949 urn under controlled (off-site) excavation.



Plate 3. Cremation 833, half sectioned, looking south. Scales: 0.5m and 0.1m.



Plate 4. Spit excavation of cremation on site.



Plate 5. Barrow 1 under excavation.



Plate 6. Barrow 1 aerial view.

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Plate 7. Barrow 1 slot 837, looking south-east. Scales: 1m and 0.3m.



Plate 8. Barrow 1 slot 916 with recut, looking south-east. Scales: 1m, 0.5m



Plate 9. Barrow 1 slot 821, showing slippage of mound material, looking north-west. Scales: 1m and 0.1m.



Plate 10. Cremation 919 with placed pottery, looking west. Scales: 0.3m, 0.05m.



Plate 11. Barrow 1, slot 903, looking east. Scales 2m, 0.5m, 0.1m.



Plate 12. Barrow 1 pit 915 below mound material, looking north-west. Scales: 0.5m, 0.1m

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Plates 7 - 12.

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Plate 13. Barrow 2 under excavation.



Plate 14. Barrow 2 aerial view



Plate 15. Barrow 2, post hole 1036 looking north-west.
Scales: 0.3m and 0.1m.



Plate 16. Barrow 2 and cremation cemetery, aerial view.



Plate 17. Cremation cemetery, looking north-east.
Scales 2m, 1m.



Plate 18. Double urns in cut 936 before excavation.

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Plate 19. Pottery in Cremation 937 before excavation, looking south.
Scales: 0.5m, 0.3m



Plate 21. Barrow 3, post hole 1114 cutting ditch looking south-east. Scales: 1m and 0.3m.



Plate 20. Barrows 2 and 3 overall view



Plate 22. Segmented gully, slot 721, looking south.
Scale: 1m.



Plate 23. Post-medieval ditch, slot 743, looking south.
Scales 2m, 1m.

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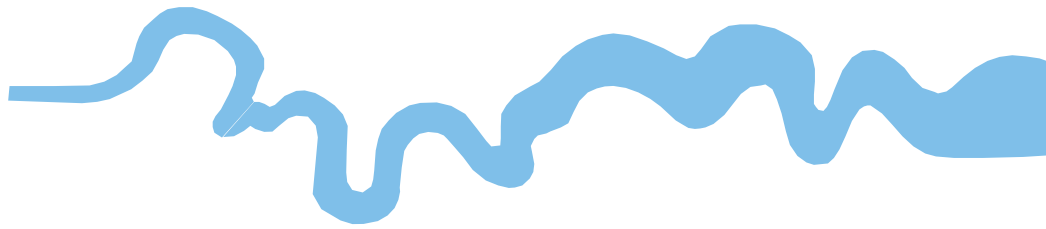
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Plates 19 - 23.**

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TIME CHART

	Calendar Years
Modern _____	AD 1901
Victorian _____	AD 1837
Post Medieval _____	AD 1500
Medieval _____	AD 1066
Saxon _____	AD 410
Roman _____	AD 43 AD 0 BC
Iron Age _____	750 BC
Bronze Age: Late _____	1300 BC
Bronze Age: Middle _____	1700 BC
Bronze Age: Early _____	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC





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