A Middle Bronze Age Enclosure and Other Prehistoric to Early Medieval Activity at Nerrols Farm, Cheddon Fitzpaine, Somerset

Archaeological Excavation Report

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Nerrols Farm, Cheddon Fitzpaine, Somerset

Archaeological Excavation Report

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Summary

Excavations at Nerrols Farm, Cheddon Fitzpaine (ST 2415 2680), uncovered a middle Bronze Age enclosure measuring 44m by 38.5m. The enclosure had two phases and contained a roundhouse defined by a curving ditch surrounding pits and postholes. The associated pottery belongs to the Trevisker-related series primarily found in Somerset. Seven pits within the roundhouse and elsewhere within the enclosure were found to contain snugly fitting pottery vessels. No cremated remains were discovered, and these were probably used as sunken storage vessels. A programme of lipid analysis on the pottery demonstrates that dairying was an important element of the site economy. Another significant find was a fragment of a clay mould used for casting a bladed implement, possibly a rapier. A sequence of radiocarbon dates was taken through the enclosure ditch, demonstrating that it dated to the 14th century cal BC.

Other discoveries include a group of early Neolithic pits; an early Bronze Age ring ditch; two middle Iron Age roundhouses; and two early medieval pits, one containing an iron knife and the other producing a radiocarbon date in the 7th–8th century cal AD.

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1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology (OA) was commissioned by RPS on behalf of David Wilson Homes (South West) to undertake an excavation at Nerrols Farm, Cheddon Fitzpaine, Somerset (Fig. 1; ST 2415 2680). The work was undertaken as a condition of planning permission (Application Reference 08/10/0024) following consultation with Steve Membrey of South West Heritage Trust outlining the Local Authority's requirements for work necessary to inform the planning process. A written scheme of investigation was produced by RPS (CgMs 2019) detailing the methods by which OA proposed to meet the requirements of the brief. The fieldwork was undertaken between May and July 2019.

1.2 Location, topography and geology

1.2.1 The development site comprised an irregularly shaped field *c* 6.6 ha in extent on the north-east periphery of the urban extent of Taunton. The present development is the second stage (phase 2) of a larger development, and phase 1 is located to the south of the site. To the west the development site is bounded by woodland leading to a residential area along Bossington Drive and Nerrols Drive, and the north and east by agricultural fields. The excavation comprised an area of *c* 1.6 ha in the south-eastern part of the development site.

1.2.2 The excavation site lies on a gentle south-east facing slope, with the eastern side of the site lying at *c* 27m OD and the western side at *c* 31m OD. The site overlooks a stream running north-south called Maidenbrook, *c* 100m to the east, that drains into the River Tone *c* 1.1km to the south. The south-eastern edge of the Quantock Hills is *c* 2km to the north of the site.

1.2.3 The bedrock geology of the area is mapped as Triassic Mercia Mudstone. No superficial deposits are recorded (BGS 2020).

1.3 Archaeological and historical background

Previous work at the site

1.3.1 The present excavation is part of a more extensive package of works relating to housing development between the A3259 to the south, Bossington Drive to the west and Maidenbrook Lane to the east. The present excavation is part of the phase 2 works, with phase 1 located to the south. The phase 1 and 2 areas were subject to a *c* 19ha geophysical survey (Archaeological Surveys 2010) and trial-trench evaluation (Northamptonshire Archaeology 2010). An excavation in the phase 1 area encompassing *c* 2ha has also been undertaken (AC Archaeology 2018; Rainbird forthcoming).

1.3.2 Prior to any archaeological work, a rectilinear cropmark was identified within the site that corresponds to the enclosure detailed in this report (HER 26899). The geophysical survey identified this enclosure alongside a limited number of geophysical anomalies in the phase 2 area. These mostly weak signals were of linear, curvilinear and discrete

forms, and did not clearly appear to be archaeological in the survey (Archaeological Surveys 2010), although some were demonstrated to be of human origin during the present excavation. The evaluation also sampled the enclosure, producing pottery and flint of the same type that was discovered during the excavation. An evaluation trench also sampled the ring ditch later excavated as 1410, although no artefactual material was discovered. The evaluation investigated the penannular ditch belonging to roundhouse 1206 and the ditch later excavated as 1404. Small numbers of possible pits and postholes in the south-eastern part of the present excavation area were also discovered. Two undated pits identified as possible hearths were found outside of the enclosure to the south (Northamptonshire Archaeology 2010). Overall, the density and spread of archaeological features as shown in the geophysical survey and evaluation were demonstrated to be representative of those present by the excavation.

1.3.3 In the phase 1 area to the south, the geophysical survey identified few features of clear archaeological origin (Archaeological Surveys 2010). The evaluation identified an area of medieval settlement around a trackway *c* 300m to the south-east of the present excavation (Northamptonshire Archaeology 2010). An excavation of this area exposed a medieval farmstead and minor middle Bronze Age and Roman features (AC Archaeology 2018; Rainbird forthcoming).

Nearby excavations and finds

1.3.4 A stray find of a tanged bronze sickle of probable late Bronze Age date has been recorded from Nerrols Farm, though the precise findspot is unknown (Knight *et al*. 2015, 64 and pl. 30; Knight 2018, vol 2, 465 and pers. comm.).

1.3.5 Archaeological work was undertaken at Nerrols Farm (north-west) in the 1990s, *c* 200m to the west of the excavated area, prior to housing development. This consisted of an evaluation (HER: 44788), geophysical survey (HER: 44790), and excavations in 1992 (Hawkes 1992; HER: 44791), 1993 (HER: 12299), 1999 and 2000 (Cox and Samuel 2001; HER: 23347, 15020). The most significant discovery was a Roman settlement, although early Neolithic, early Bronze Age, possible late Bronze Age, Iron Age and Saxon finds and/or features were identified. A detailed summery of all the work is given in Cox and Samuel (2001).

1.3.6 Other archaeological work within 1km of the present excavation include evaluation and excavation at Maidenbrook Farm *c* 900m to the south-east of the site (Ferris and Bevan 1993). This mainly comprised a Roman settlement, although evidence of late Bronze Age and Iron Age activity was also discovered. A watching brief was undertaken *c* 400m to the south of the site (Wessex Archaeology 1998). No features were discovered although three flint flakes were found.

Neolithic (c 4000–2000 cal BC)

1.3.7 A linear ditch was discovered at Nerrols Farm (north-west). Some 9.5m of the ditch was exposed, with the feature measuring 0.5–0.9m wide and 0.45–0.75m deep. It was filled with material that was very similar to the natural and produced a coherent flint assemblage that probably dates to the early Neolithic. A small collection of early

Neolithic pottery was also recovered. It is not entirely certain which feature this corresponds to on the geophysical survey (Cox and Samuel 2001, 58). If the ditch does indeed date to the early Neolithic it is likely that it belongs to a funerary or other type of monument, the nature of which was not elucidated in the excavations. Several pits were also in the vicinity containing similar flintwork and pottery (Cox and Samuels 2001, 7–8, 58–9). Further flint of probable Neolithic or early Bronze Age date was discovered during fieldwalking and during excavation (Cox and Samuel 2001, 2).

1.3.8 An evaluation at Staplegrove (East) *c* 2km to the west of the site uncovered two areas of early Neolithic activity separated by *c* 600m (Cotswold Archaeology 2016). One area comprised a pit and a possible posthole, and the other a pit and a ditch. Finds were limited and the date of the ditch in particular is uncertain.

1.3.9 A ditch of more certain Neolithic date was found in another evaluation *c* 1.7 km to the east of the site at Monkton Heathfield (Oxford Archaeology 2004, 12). This was 1.28m wide and 0.70m deep and produced a reasonably sizable assemblage of Peterborough Ware, including a large sherd from a bowl and four refitting sherds from a cup. Due to the condition of the assemblage it is less likely that the material is residual.

1.3.10 Known late Neolithic and late Neolithic/early Bronze Age (Beaker) activity from the environs of the site is very limited.

Bronze Age (c 2000–800 cal BC)

1.3.11 Known early Bronze Age activity in the area is also limited. At Nerrols Farm (north-west), one feature produced Collared Urn sherds, and flintwork of Neolithic or early Bronze Age date was found during fieldwalking and excavation (Cox and Samuels 2001, 8). A probable ring ditch was found in the evaluation at Staplegrove (East). This was *c* 19m in diameter and two cremation burials had been cut into the partially filled ditch, probably representing secondary activity. Two further cremation burials were nearby (Cotswold Archaeology 2016, 9). Pottery from these contexts was limited to undecorated grog-tempered sherds probably from bucket-shaped vessels datable only to the early or middle Bronze Age.

1.3.12 There are few cropmarks that may represent ring ditches in the environs of the site. This is despite the presence of numerous cropmarks of other morphologies in the area. Possible examples within 2km of the site have diameters of 17m (HER 26905), 22m (HER 26906) and 30m (HER 44542), although none of these need to be early Bronze Age and may relate to activity of other dates. Neither the ring ditch detailed in this report nor that discovered at Staplegrove (East, above) were known from aerial photographs, demonstrating that these need not show as cropmarks on the local geology.

1.3.13 Secure middle Bronze Age evidence in the environs of the site is limited, although cropmarks showing rectilinear enclosures abound in the area to the north of Taunton, and many of these share a similar morphology to the middle Bronze Age enclosure detailed in this report. Excluding the cropmark excavated as part of the present report, there are at least 18 entries in the HER of rectilinear cropmark enclosures within *c* 2.5km of the site, accounting for at least two dozen enclosures. More are known beyond this catchment. While some of these entries are part of larger cropmark

complexes (eg HER 44178) or comprise multiple adjacent or overlapping enclosures (eg HER 44231; 44193; 44224), most appear broadly similar Nerrols Farm as they are discrete rectangular enclosures. The sizes of 10 of these are given in the HER, and all but one (HER 26898) are broadly comparable in size to the Nerrols Farm enclosure (see discussion). While at least some of these enclosures are almost certainly of other dates (Roman enclosures are known in the landscape, see below), it should be expected that others date to the middle Bronze Age. One of these enclosures, Hartnells Farm, has been recently excavated and dates to the middle Bronze Age (Andrew Mudd pers. comm.).

1.3.14 Two undated cropmark enclosures are very close to the site. An enclosure *c* 230m to the north measures 34m by 28m (HER 44519), and another *c* 95m to the north of that measures 48m by 25m (HER 44451). In similarity with the middle Bronze Age enclosure described in this report, both of these undated cropmarks are oriented broadly north-south.

1.3.15 Two postholes dating to the middle Bronze Age and an adjacent gully were found during the phase 1 excavations *c* 350m to the south-west of the site (AC Archaeology 2018, 3). These were on the edge of the excavation area and the interpretation of the features is difficult, although the preceding evaluation did not uncover any middle Bronze Age finds or features in the phase 1 area suggesting activity was limited.

1.3.16 The cremation burials and possibly the ring ditch found during the evaluation at Staplegrove (East) and described above might date to the middle Bronze Age (Cotswold Archaeology 2016, 9).

1.3.17 A little further away, 4.5km to the west of the site, is the Norton Fitzwarren middle Bronze Age hilltop enclosure. This significant site has a ditch measuring *c* 4–5m wide and *c* 2.3–3m deep (Ellis 1989). A Taunton phase ornament metalwork hoard was found adjacent to the enclosure ditch and this appears to be contemporary with the site.

1.3.18 Excavation at Nerrols Farm (north-west) revealed an area of settlement that may have a late Bronze Age origin although is best dated to the Iron Age. Possible late Bronze Age pottery was discovered and a late Bronze Age radiocarbon date was obtained (1130–790 cal BC at 94% probability), although the bulk sample included significant proportions of oak and the date may be somewhat earlier than the contexts dated (Cox and Samuel 2001). Limited late Bronze Age activity was also found during excavations at Maidenbrook Farm (Ferris and Bevan 1993).

Iron Age (c 800 cal BC–AD 43)

1.3.19 Iron Age settlement evidence was found *c* 200m to the west of the site at Nerrols Farm (north-west). This included pits, postholes, a possible post-built roundhouse, and at least two penannular gullies probably also representing houses (Cox and Samuel 2001). A small amount of Iron Age pottery was recovered. The settlement may have late Bronze Age beginnings, detailed above.

1.3.20 An area of Iron Age settlement was found in an evaluation at Monkton Heathfield *c* 1.75km to the east of the site (Oxford Archaeology 2004). Features included a series of curvilinear ditches, at least some of which probably represent houses.

1.3.21 Iron Age activity was discovered during an evaluation and excavation north-east of Aginghill's Farm *c* 1.2km to the east of the site (HER 30258; 31548). The Roman settlement at Maidenbrook Farm was established in the late Iron Age (Ferris and Bevan 1993).

Roman (c AD 43–410)

1.3.22 Evidence for limited Roman activity was discovered during the phase 1 excavations (AC Archaeology 2018). These comprised a penannular gully that cut a deposit containing a Roman brooch, and a small amount of residual pottery in medieval features (AC Archaeology 2018, 3).

1.3.23 Roman settlements have been excavated at Nerrols Farm (north-west) and Maidenbrook Farm (Cox and Samuel 2001; Ferris and Bevan 1993). Stone buildings are present, indicating an area of some status. The settlement at Maidenbrook Farm and probably that at Nerrols Farm (north-west) was within rectilinear enclosures, suggesting that the numerous cropmarks of this form in the vicinity might date to either period (see above).

1.3.24 Roman ditches were found at Aginghill's Farm (HER 30258; 31548).

Early medieval (c 410–1066)

1.3.25 Early medieval settlement is usually difficult to identify in Somerset as the early and middle Saxon periods appear to be almost entirely aceramic, except for the occasional presence of exotic imported ware on a few sites (Webster 2000, 79–80; 2007, 173). Demonstrable early medieval activity in the area around the site is limited to radiocarbon samples that often unexpectedly return dates from this period. This includes dates of cal AD 425–645 at Nerrols Farm (north-west; Cox and Samuel 2001, 56), and cal AD 890–985 at Nerrols Farm phase 1 (Rainbird forthcoming). It is highly likely that undated features in the vicinity of these dated features are also early medieval, although these features do not form patterns that can be interpreted as forming specific buildings or other recognisable elements of settlement. The evidence in the vicinity of the site suggests early medieval settlement was present but extremely archaeologically ephemeral.

Medieval (c 1066–1550)

1.3.26 A farmstead dating to the 11th–13th century, possibly with late Saxon origins, was excavated during the Phase 1 works. The excavation report includes a detailed discussion of the area around the site during the medieval period (Rainbird forthcoming).

Post-medieval (c 1550 onwards)

1.3.27 The area of the site is depicted as farmland on the 1837 tithe map of Cheddon Fitzpaine and subsequent Ordnance Survey maps.

2 EXCAVATION AIMS AND METHODOLOGY

2.1 General aims

2.1.1 The general aims and objectives were as follows:

i. To mitigate the effect of the development on the surviving buried archaeological remains.
ii. To establish a relative and absolute chronological framework for the site and establish a clearer understanding of the date, form, function, evaluation and economics status of the activity previously identified on the site.
iii. To establish an overall plan of the site and determine the various phases and sub-phases of activity.

2.2 Site-specific research objectives

2.2.1 The specific aims and objectives were as follows:

iv. What is the evidence for Bronze Age occupation activity on the site, at what date did it commence and how does it develop? How and when did it fall into disuse?
v. To what extent do any structural remains survive on the site, what is their form and function, how do they develop and when did they fall out use?
vi. What is the evidence for the economy of the settlement, and does this alter? Can the deposits and features excavated tell us anything about the surrounding landscape?
vii. Was the Bronze Age occupation entirely domestic/agricultural in character or is there evidence for industrial activity, and if so, what industries were taking place?
viii. Is there any evidence for how and where the occupants of the enclosure buried their dead? If human remains are encountered, what can these tell us about the inhabitants? What can we determine about their origins, their diet, health and funerary rites?
ix. If purely agricultural, how was the landscape structured and how does this develop overtime? Is there any evidence to suggest a change in agricultural practices? How does this evidence fit with the pattern of settlement and land use in the region in this period?
x. Is there any evidence for continuity in use of the site into the Iron Age?
xi. A number of similar sites have been excavated in Somerset in recent years. How does this one compare in terms of form, layout, location and economy?

2.3 Fieldwork methodology

2.3.1 The methodology used followed that detailed in the written scheme of investigation (CgMs 2019). Machine excavation was carried out by a JCB 360° type tracked excavator with a 1.5m to 2m wide flat-bladed ditching bucket under constant supervision of a suitably qualified and experienced archaeologist. All undifferentiated topsoil or overburden of recent origin was removed down to the first significant archaeological horizon. All areas requiring examination or recording were cleaned with hand tools. All archaeological features and deposits were recorded using OA's pro-forma sheets.

Plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

3 RESULTS

3.1 Introduction

3.1.1 The results of the excavation are presented below, and include a stratigraphic description of the archaeological remains. An overall plan of the site, showing all features and excavated slots, is provided in Figure 2.

3.1.2 Activity of the following phases was found:

Early Neolithic

Early Bronze Age

Middle Bronze Age

Middle Iron Age

Early medieval

Post-medieval

3.2 General soils and ground conditions

3.2.1 The natural geology of reddish-brown sandy clay was overlain by subsoil *c* 0.20–0.30m thick, which in turn was overlain by topsoil with an average thickness of *c* 0.10–0.20m.

3.2.2 Ground conditions throughout the excavation were generally good, and the site remained dry throughout. Some difficulty was experienced in identifying archaeological features due to hot weather baking features and obscuring colour changes.

3.3 Early Neolithic

3.3.1 Seven pits could be confidently dated to the early Neolithic, and three further pits were less securely of this date. The securely dated pits were in the north-western part of the site, arranged in a tight group (1411; Fig. 3).

Pit group 1411

3.3.2 Six of the seven pits forming pit group 1411 were arranged in two parallel lines of three pits, *c* 1.5m apart over a distance of *c* 2.30m. The seventh pit was in the middle of the lines. The outer six pits were half sectioned, and the inner pit was excavated in its entirety. The pits formed a homogeneous group as they were all broadly circular, measuring 0.42–0.82m diameter and 0.06–0.20m deep, with a bowl-shaped profile. All but one of the pits had single fills, with the deepest pit containing two fills. The fills were all dark brown-black containing moderate to frequent charcoal. An environmental sample from pit 1242 (Plate 1) produced abundant hazelnut shells and alder charcoal. Despite the presence of charcoal, none of the pits had evidence for *in situ* burning. Worked flint and/or chert was found in five of the pits, and three contained small amounts of pottery. The pits are detailed in Table 1.

Pit	Diameter	Depth	Finds
1240	0.46m	0.08m	Flint flake
1242	0.62m	0.10m	-
1244	0.58m	0.20m	Flint blade and Portland chert flake
1248	0.52m	0.12m	Pot – 3/7g; Portland chert flake
1250	0.42m	0.08m	Pot – 2/11g; flint flake and two Greensand chert flakes
1252	0.82m	0.06m	Flint waste piece
1254	0.82m	0.19m	Pot – 1/17g; flint flake and microdenticulate

Table 1: Details of early Neolithic pit group 1411

Other pits

3.3.3 Three further pits have been tentatively dated to the early Neolithic due to the presence of small amounts of pottery that may be residual.

3.3.4 Pit 1219 was 33m to the south-west of group 1411 and was away from features dated to other periods (Plate 2). This measured 0.95m by 0.80m and was 0.28m deep. The pit contained three fills with frequent pieces of burnt stone, burnt unworked flint and charcoal. The middle fill contained a charcoal lens that appeared to represent *in situ* burning. A single highly abraded sherd of early Neolithic pottery weighing 3g was found in this fill.

3.3.5 Two pits in the eastern part of the site might also date to the early Neolithic (Fig. 6). These were within 14m of one another, and in the area of Iron Age and early medieval activity. Pit 1044 measured 1.18m by 0.78m and was 0.41m deep; it contained two fills that appeared to be redeposited natural. The lower fill contained a single small highly abraded sherd of early Neolithic pottery. Pit 1166 was 0.40m in diameter and 0.06m deep. Its only fill appeared to comprise natural silting and contained two sherds (6g) of early Neolithic pottery. It was cut by a larger undated pit.

Residual material

3.3.6 A small amount of early Neolithic pottery was discovered in later features, including early Bronze Age ring ditch 1410 and a middle Bronze Age pit.

3.4 Early Bronze Age

3.4.1 Ring ditch 1410 was the only feature dated to the early Bronze Age. This had a diameter of *c* 6.70m. Four 1m slots were excavated, showing that the ditch was 1.02–1.22m wide and 0.25–0.37m deep. Three of the slots contained single fills, interpreted as natural silting. Two fills were observed in slot 1338. The lower fill appeared to have formed from slumping from an internal mound (Fig. 3). An environmental sample from the upper fill produced only a single barley grain and a small amount of charcoal. A piece of Maloideae charcoal from this sample was radiocarbon dated to 1895–1745 cal BC (SUERC-92054; Table 2). A posthole was found under the north-east slot of the ring ditch, although its relationship to the ring ditch was not established.

3.4.2 A total of five pieces of worked flint were recovered from two fills (1353, 1349), and burnt stone from one (1353). Two sherds (1g) of residual early Neolithic pottery were the only ceramic material discovered. No bone was discovered, but preservation on the site was extremely poor. No associated features were identified, although a post-

medieval ditch cut across the middle of the ring ditch obscuring any possible internal features.

3.4.3 A probable late Neolithic and/or early Bronze Age element has also been identified in the flint assemblage recovered from later features elsewhere on the site.

3.5 Middle Bronze Age

3.5.1 The subrectangular enclosure previously identified on aerial photographs and in the evaluation was demonstrated to be of middle Bronze Age date (Fig. 4). The enclosure contained a roundhouse defined by a partial curving gully surrounding a series of pits and postholes, and four further pits. Seven pits contained snugly fitting pottery vessels, and none contained cremated remains. A programme of lipid analysis was undertaken on the pottery, demonstrating the dairying was an important element in the site economy and diet. Other notable finds include the fragment of a clay metalworking mould.

Enclosure 1413/1414

3.5.2 The enclosure had two phases. The first phase (1413) could only be identified in plan by an L-shaped ditch, measuring 45.50m north-south and 22m east-west (Plate 3). The southern length of the ditch was seen in one of the sections, being cut by enclosure ditch 1414 (Fig. 4). The eastern return was not present in any of the sections and may have been entirely truncated by enclosure ditch 1414. Enclosure ditch 1413 was *c* 1.30m wide and 0.52–0.80m deep, and had two to three fills (Fig. 4). Primary fills in two of the three interventions suggest that the ditch was filled from outside of the enclosed area, possibly suggesting an accompanying bank was outside the enclosure. The early enclosure phase produced a single sherd of pottery (7g).

3.5.3 The second enclosure phase, 1414, comprised a north-south rectilinear enclosure measuring 44m by 38.50m. Entrances were present in the north-east and south-west corners, and these were 2–2.50m wide. The enclosure ditch was generally V-shaped, measuring 1.85–3.20m (mean 2.60m) wide and 1.0–1.8m (mean 1.5m) deep. The ditch had four to eight fills.

3.5.4 Primary fills of enclosure 1414 did not usually show the direction of slumping, although in three of the ten interventions the primary fills indicated accumulation from outside of the enclosure (Fig. 4). One of the primary fills at one of the entrances suggests that the material slumped from inside the enclosure. The direction of accumulation was less clear in the middle and upper fills. This might suggest the presence of an external bank eroding to form the primary fills of the ditch, with the remaining fills not as clearly deriving from the possible associated bank.

3.5.5 Three radiocarbon dates were taken in a sequence through slot 1066, sampling short-lived charcoal or grain from primary (1069), middle (1071) and upper (1072) fills. Bayesian modelling of the radiocarbon dates suggests that the enclosure ditch probably filled in the 14th century cal BC, although may have begun slightly earlier, at the end of the 15th century cal BC (see below)

3.5.6 Finds from enclosure ditch 1414 include a fragment of a clay mould, probably for casting a bladed implement such as a rapier, found in the same context as a fired clay

block. Other structural fired clay was found, and one of the pieces was vitrified. The mould provides the only certain evidence of metalworking, although some of the other pieces of fired clay might have been associated with this activity. The majority of the pottery was found in enclosure ditch 1414. The material tended to be in better condition the further up the fill sequence, and this might suggest deliberate infilling of the enclosure ditch with fresh midden material and/or recently broken pottery.

3.5.7 A possible palisade, 1415, formed from six postholes and with a total length of *c* 4.5m, was found *c* 0.70m to the north of the northern ditch. Two further postholes were found *c* 12m to the west, both cutting phase 1 enclosure ditch 1413. If the postholes did form a palisade it is uncertain why the feature was so partial. The relationship between the possible palisade and any external bank is also uncertain.

Roundhouse 1416

3.5.8 The middle Bronze Age roundhouse was defined by a C-shaped gully with a projected diameter of *c* 9.5m (Fig. 5). The gully was *c* 0.45m wide and 0.15m deep. Most of the features within the enclosure were also within the area of the roundhouse. These comprised 11 pits/pottery settings and five postholes. None of the features could be clearly assigned a structural function. Five of the pits within the roundhouse contained the bases and/or lower parts of pottery vessels (pottery settings), all fitting snugly within the features.

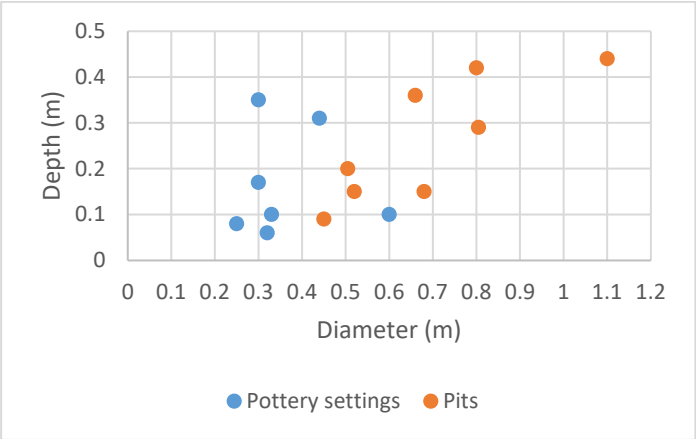
3.5.9 There were three sets of relationships between the pits in the roundhouse. Pottery settings 1312 and 1333 were intercutting but the relationship was not established. They were both cut by pit 1362. Pits 1381 and 1396 were intercutting without a clear relationship, both cut by pottery setting 1359. Two further pottery settings were intercutting, 1386 cut by 1375. The pottery settings in the roundhouse had diameters of 0.30–0.60m (mean 0.48m) and depths of 0.06–0.35m (mean 0.21m). The pits had diameters of 0.45–0.80m (mean 0.59m) and depths of 0.09–0.42m (mean 0.24m).

3.5.10 The pot in setting 1375 was filled with stones, a number of them burnt and cracked from thermal shock (Plate 4). At least one piece of a saddle quern was also in the vessel, made from imported stone probably from Devon or Cornwall. Fragments of fired clay with wattle impressions were also found in the pot, and the vessel was decorated with a fingertipped cross cordon on the inner side of the base (Plate 8).

Pits outside the roundhouse

3.5.11 Three pits and two further pottery settings (1116 and 1303) were found within the enclosure outside of roundhouse 1416. These pits were more oval in shape rather than circular, with lengths between 0.86–1.56m, widths 0.46–0.64m, and depths 0.15–0.44m. Pottery setting 1116 was 0.32m diameter and *c* 0.18m deep, and the vessel also contained heat cracked stone and burnt fragments of stone of the same lithology as the imported quern. Pottery setting 1303 was 0.26m diameter and 0.08m deep.

3.5.12 The sizes of all the pits and pottery setting are shown on Graph 1.



Graph 1: Sizes of pottery settings and pits

3.6 Middle Iron Age

3.6.1 A small middle Iron Age settlement was found in the eastern part of the site, comprising two roundhouses defined by penannular ditches with south-east facing entrances (Fig. 6). Roundhouse 1206 was 13m in diameter with the ditch measuring 0.46–0.87m (mean 0.59m) wide and 0.16–0.33m (mean 0.25m) deep. Middle Iron Age pottery was recovered, including a vessel of Glastonbury Ware (South-Western decorated) type. Roundhouse 1409 was 12m diameter with the ditch measuring 0.71–1.00m (mean 0.87m) wide and 0.14–0.32m (mean 0.26m) deep. It cut the middle Bronze Age enclosure, and its eastern side had been truncated by a post-medieval ditch. Roundhouse 1409 is assumed to be broadly contemporary with roundhouse 1206, although no dating evidence was recovered. Environmental samples from roundhouses 1206 and 1409 produced no remains other than very sparse amounts of charcoal.

3.6.2 There were seven postholes and one small pit within roundhouse 1206, and two postholes were up to 3m outside of the penannular ditch. At least some of these features were probably associated with the roundhouse, although none contained artefacts and they did not form an obvious structure. Two undated pits were found cutting the roundhouse ditch, and two further undated pits were up to 3m outside of the roundhouse.

3.7 Early medieval

3.7.1 Two features were dated to the early medieval period (Fig. 6). Pit/posthole 1030 was 0.74m diameter and 0.63m deep. The main fill, 1031, contained an iron knife of early medieval form. An environmental sample from the same context produced a moderate amount of charcoal, including oak. Pit 1033 was 10.6m to the south-west and was 1m diameter and 0.52m deep. Fragments of vitrified ceramic lining were found in its only fill, possibly deriving from a domestic hearth although metalworking should not be discounted. An environmental sample yielded a small quantity of charcoal, including *Betula* charcoal that produced a radiocarbon date of cal AD 665–770 (SUERC-92053; Table 2). The radiocarbon date could be contemporary with the knife. To the west of

these features, pit 1098 contained vitreous material similar to that found in pit 1033, along with an iron nail, and could possibly be of similar date.

3.8 Post-medieval

3.8.1 Two post-medieval ditches ran across the site on broadly north–south and east–west alignments (Fig. 2). The north–south ditch corresponds with a field boundary on the 1837 tithe map of Cheddon Fitzpaine, which had been removed by the time of the 1889 Ordnance Survey first edition 25-inch map (Somerset LXX.8). It cut Iron Age roundhouse 1409 (Fig. 6) and produced pottery dating to *c* 1760–1830 as well as fragments of bottle glass, brick, tile and unmarked clay tobacco pipe stems. The east–west ditch was not excavated and does not appear on any historic maps, but its perpendicular arrangement to the north–south ditch indicates that it was an associated field boundary, that presumably went out of use before the 1837 tithe map. The ditch cut early Bronze Age ring ditch 1410 (Fig. 3).

3.9 Undated

3.9.1 Undated features included 29 pits and 24 postholes in the south-western part of the site, between the two middle Iron Age roundhouses and in the general area of the two dated early medieval features. Finds from the pits and postholes in the eastern part of the site included fired clay from two features, including some from an oven or hearth. Pit 1102 and possible tree-throw hole 1213 contained a greensand chert flake and a flint blade respectively and could perhaps be of prehistoric date (Fig. 6).

3.9.2 Four sterile undated ditch lengths were found in the eastern part of the site (Fig. 2). None of these share a similar alignment to the middle Bronze Age enclosure or the post-medieval field boundaries, leaving their date unclear.

3.10 Radiocarbon dating

3.10.1 The aims of the radiocarbon dating programme were to date ring ditch 1410 as this was poorly dated by artefactual material, construct a Bayesian model for the middle Bronze Age activity, and confirm the existence of an early medieval phase of activity otherwise only represented by a single find (iron knife). These aims were successfully met. The radiocarbon dates are detailed in Table 2. All of the radiocarbon samples were taken on short-lived charcoal, except SUERC-92055 from the middle Bronze Age enclosure ditch which was charred grain.

3.10.2 Sample SUERC-92054, dating to 1895–1725 cal BC (95% confidence), confirmed an early Bronze Age date for ring ditch 1410. The sample is imperfect as it is from an upper fill, and it is assumed that the charcoal derived from the construction or use of the monument even if it is residual in a post-abandonment fill.

3.10.3 Sample SUERC-92053, dating to cal AD 665–770 (95% confidence), confirmed the presence of ephemeral early medieval activity.

3.10.4 Three dates were taken in a sequence through slot 1066 of enclosure ditch 1414. The unmodelled calibrated dates are very similar. Modelling these dates suggest that the enclosure started *1655–1295 cal BC (95% probability)* and ended *1410–1040 cal BC (95% probability)*. Due to the limited number of radiocarbon dates in the model, the

distribution at 95% probability has long tails of low probability, and the peaks in the posterior density estimates are of more use (Fig. 7). These suggest that the enclosure probably started *1445–1320 cal BC (68% probability)*, and ended *1385–1300 cal BC (68% probability)*. The enclosure most likely dates to the 14th century cal BC. The enclosure spanned *0–545 years (95% probability)*, probably *0–155 years (68% probability*; Fig. 8). The long tails of low probability are again reflective of a limited number of dates. The median span value is *90 years*. The model has good overall agreement ($A_{overall}$=111.3), although the number of radiocarbon dates is limited. No dates were taken from the phase 1 enclosure as suitable material was not present, and this phase of activity was not sampled in the model. The model can be regarded as being an accurate reflection of the date of the pottery assemblage as the majority of this was found in enclosure ditch 1414.

3.10.5 The calibrated age ranges and Bayesian model were determined in OxCal v.4.3 (Bronk Ramsey 2009) using the IntCal13 curve.

Lab. no.	**Material**	**Context/ Feature**	**$\Delta^{13}C$ ($^0/_{00}$)**	**Radiocarbon Age BP**	**Calibrated Age 95% confidence**	**Calibrated Age 68% confidence**
SUERC-92053	Charcoal: *Betula*	1034 Pit 1033	-26.7	1285 ± 27	Cal AD 665-770	Cal AD 680-715 (41% confidence) Cal AD 745-765 (27% confidence)
SUERC-92054	Charcoal: Maloideae	1353 Ring ditch 1410 (upper fill)	-27.3	3500 ± 27	1895-1745 cal BC	1880-1865 cal BC (11% confidence) 1850-1775 cal BC (57% confidence)
SUERC-92055	Charred grain: *Triticum* sp.	1071 Enclosure ditch 1414 (middle fill)	-23.6	3078 ± 27	1415-1270 cal BC	1400-1370 cal BC (21% confidence) 1360-1300 cal BC (47% confidence)
SUERC-92056	Charcoal: cf. *Alnus*	1072 Enclosure ditch 1414 (upper fill)	-26.6	3079 ± 27	1415-1270 cal BC	1400-1370 cal BC (21% confidence) 1360-1300 cal BC (47% confidence)
SUERC-92057	Charcoal: *Prunus*	1069 Enclosure ditch 1414 (basal fill)	-24.9	3103 ± 27	1430-1290 cal BC	1415-1380 cal BC (34% confidence) 1345-1290 cal BC (34% confidence)

Table 2: Radiocarbon dates

4 FINDS AND ENVIRONMENTAL EVIDENCE

4.1 Flint and chert *by Mike Donnelly*

Introduction and methodology

4.1.1 The excavations brought to light an assemblage of 131 lithics and 11 very small fragments of burnt unworked flint weighing just 5g (Table 3). The lithic material was dominated by flint but there were numerous pieces of Greensand chert and small amounts of Portland chert in the assemblage. The lithics were recovered from a wide range of contexts of varying date, with a noticeable concentration in and around a group of early Neolithic pits. However, the majority of the lithics originated from the middle Bronze Age enclosure, particularly its north-east corner. The likelihood is that many of the flints recovered from this area would have been residual finds occupying some form of surface spread or buried soil. However, there is also a strong likelihood that many of these pieces relate to lithic use during the middle Bronze Age.

4.1.2 The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type (Anderson-Whymark 2013; Bradley 1999), general condition was noted and dating was attempted where possible. The assemblage was catalogued directly onto an Open Office spreadsheet. Additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (eg Bamford 1985, 72–7; Healy 1988, 48–9; Bradley 1999). Technological attribute analysis was initially undertaken and included the recording of butt and termination type (Inizan *et al*. 1999), flake type (Harding 1990), hammer mode (Onhuma and Bergman 1982) and the presence of platform edge abrasion.

Category type	Total
Flint	105 (79.55%)
Greensand chert	25 (18.94%)
Portland chert	2 (1.51%)
Flake	69
Blade	13
Bladelet	8
Blade index	23.33% (21/90)
Irregular waste	9
Chip	3
Core tablet	2
Crested blade	1
Core single platform flakes	2
Core multiplatform flakes	1
Core on a flake	1
Core bipolar flakes	2
Core fragment flakes	1
Scraper end+side	3
Scraper thumbnail	1
Scraper other	1
Awl	2
Piercer	1
Heavy borer	1

Microdenticulate	1
Notch	1
Backed knife	1
Other knife	1
Retouched bladelet	1
Retouched flake	1
Retouched other	3
Retouch miscellaneous	1
Total	131

Burnt unworked flint	11/5g
No. burnt (%)	9/131 (6.87%)
No. broken (%)	63/128 (49.22%)
No cores/related debitage	10/128 (7.81%)
No. retouched (%)	19/128 (14.84%)

Table 3: Flint assemblage

Provenance

4.1.3 The bulk of the assemblage was recovered from ditches, including several ring ditches. Pits also contained a sizable amount and there were single lithics from a tree-throw hole, posthole and the topsoil. The natural also yielded a small and dispersed background scatter of 17 lithics (Table 4).

4.1.4 The spread of lithics between the various structural elements of the site was far from even. Early Neolithic pit cluster 1411 and early Bronze Age ring ditch 1410 had ten and five lithics respectively, with no more than three pieces per intervention. Overall, these early Neolithic and early Bronze Age features averaged just 1.4 lithics per intervention compared to 6.1 from middle Bronze Age ditch group 1414, although these interventions were far more massive.

4.1.5 Middle Bronze Age enclosure 1414 contained the most lithic material (61 pieces) with pieces from nine of the ten interventions (up to 16 pieces per intervention). The earlier phase of this enclosure, 1413, did not contain any struck lithics. Roundhouse 1416 within the enclosure produced nine flints, of which five were recovered as background material in the natural immediately nearby.

4.1.6 The densest concentration of lithics came from the gully of Iron Age roundhouse 1409. Here, 18 lithics were found in slot 1371, while the remining two slots yielded three more pieces to give this very shallow feature 21 lithics. It is quite probable that at least a considerable portion of the concentration of lithics in group 1409 are residual and probably date to the Neolithic and/or early Bronze Age phase of activity, most probably representing a surface spread or midden away from the features dated to these periods. The other Iron Age roundhouse, 1206, was associated with eight flints, although one piece was recovered as background material in the natural immediately nearby.

Category type	Total	Percentage
Ditches	66	50.38
Ring ditches	30	22.90
Pits	15	11.45
Postholes	1	0.76
Treethrow	1	0.76
Topsoil/subsoil	1	0.76
Natural	17	12.98
Total	131	[100]

Table 4: The flint assemblage by context type

Raw material and condition

4.1.7 The assemblage utilised various raw materials including flint (79.6%), Greensand chert (19.0%) and Portland chert (1.5%). Both pieces of Portland chert came from the early Neolithic pit group 1411 and made up 22.2% of the total from that group, a figure matched there by the Greensand chert. Ring ditch 1410 contained just flint but was only represented by five pieces. Greensand chert was more common in middle Bronze Age contexts, especially ditch enclosure 1414 where it made up 31.2% of the assemblage, but it was rare in Iron Age ring ditch 1409's assemblage accounting for just 9.5% of the lithics. This supports the view that much of the lithics from ring ditch 1409 are earlier and residual in that feature.

4.1.8 The lithics were in slightly poor condition with more lightly damaged than fresh pieces and significant amounts that were either moderately or heavily damaged (Table 5). This suggests a mix *of in situ* contemporary material alongside a residual component that may have spent a considerable period of time in a midden deposit or sub-surface layer.

Condition	Total	%	Cortication	Total	%
Fresh	41	33.61%	None	6	4.92%
Light	57	46.72%	Light	112	91.80%
Moderate	22	18.03%	Moderate	2	1.64%
Heavy	2	1.64%	Heavy	2	1.64%
	122			122	

Table 5: Condition and cortication of flint

The assemblage

4.1.9 The assemblage was moderate in size but could be considered a large assemblage for sites in Somerset that date to the middle Bronze Age (eg from Bridgwater Gateway where a larger site of the same period yielded just 44 pieces: Donnelly in prep.). The assemblage contained a sizeable blade component of 23.3% indicative of early Neolithic industries (Ford 1987), but this figure was actually lower for the early Neolithic groups than for the middle Bronze Age groups and the background material. However, the figure for the Neolithic element was still high at 16.7% and would be acceptable in early Neolithic contexts. This also probably confirms that a significant part of the reminder of the assemblage is likely to be residual material of early date, supporting the view that most of the flints from groups 1409 and perhaps 1414 are

residual. However, variations in raw material selection such as the increase on a flake-based Greensand chert industry in group 1414 suggest that it is probably contemporary with the use of that enclosure.

4.1.10 There were numerous core forms (7.8%) and even more numerous tool forms (14.8%) in the assemblage. While this might indicate recovery bias, it could also be a feature of an assemblage from an area in which good flint was more intensively exploited due to a lack of readily accessible quality material. This is also supported by the presence here of material such as Portland chert and by the occasional use of very inferior-quality Greensand chert in some middle Bronze Age contexts alongside some very high-quality Greensand chert in certain areas, such as a fine and very dark bladelet form from the south-west corner of the site. All the cores related to flake technology but most were very heavily worked out including two that had their final phases of use as bipolar anvil-knapped cores that are a classic feature of lithic reduction in areas that lack good sources of flint. Some of the flake cores are quite formal and could easily represent exhausted bladelet cores of early Neolithic date. Two core tablets were also present as was a crested bladelet, generally seen as being part of a Mesolithic or early Neolithic blade reduction strategy. In addition to this, there were no specialist flake cores (other than the bipolar cores) that typify later Neolithic or early Bronze Age industries. All of this indicates a mix of cores from the two main phases of activity noted on site: the early Neolithic and middle Bronze Age.

4.1.11 Tools were very common with very similar figures for the main flint-rich groups. Early Neolithic and early Bronze Age groups 1410 and 1411 between them contained 13.3% tools, while middle Bronze Age group 1414 and Iron Age group 1409 had 14.8% and 15.8% respectively and the remainder of the assemblage had 15.2%. The early Neolithic features contained a classic early Neolithic tool in the microdenticulate from pit 1254 (fill 1255), while the piercer from early Bronze Age ring ditch group 1410 was atypical of early industries, being fashioned on a fairly squat flake. All the tool forms from Iron Age group 1409 looked to be earlier in date, with a retouched bladelet as well as two refitting pieces from a combination side scraper-awl on a quite regular flake that would be very much at home with a Neolithic or early Bronze Age date. However, such finer tools can be found in middle Bronze Age contexts and perhaps this piece is a genuine example of a slightly higher standard of flint working than is typically accepted as being middle Bronze Age. Middle Bronze Age group 1414 had the largest group of tools at nine examples, most of which would appear to be typically earlier in date than the group they belonged to, while others where wholly undiagnostic (such as the simple retouched flakes). This may again represent the issue mentioned above for tools dated to the middle Bronze Age but, equally, many could belong to an earlier spread of material associated with the Neolithic phase of activity here. The early tools comprised a backed knife on a blade, a thumbnail scraper, an atypical miniscule and complex scraper and two side-and-end scrapers, while the potentially contemporary finds comprised an end scraper-denticulate, a heavy borer, a retouched flake and possibly the two side-and-end scrapers. The remainder of the assemblage's five tools included four that were undiagnostic (an awl, a notch, a miscellaneous fragment and a side-and-end scraper). The final piece was a fine knife

on an inner flake from the natural and was a rare find of probable Neolithic or early Bronze Age date.

Category type	Early Neolithic 1411	Early Bronze Age 1410	Middle Bronze Age 1414	Iron Age 1409	Remainder
Flint	12 (75%)	5 (100%)	42 (68.85%)	19 (90.48%)	32 (94.12%)
Greensand chert	2 (12.5%)		19 (31.15)	2 (9.52%)	2 (5.88%)
Portland chert	2 (12.5%)				0
Flake	6	4	32	10	17
Blade	2		6	2	3
Bladelet	0		4	1	3
Blade index	25% (2/8)	0%	23.81% (10/42)	23.08% (3/13)	6/23 (26.09%)
Irregular waste	1		5	1	2
Chip				2	1
Core tablet			1	1	
Crested blade			1		
Core single platform flakes			2		
Core multiplatform flakes					1
Core on a flake				1	
Core bipolar flakes			1		1
Core fragment flakes					1
Scraper end+side			2		1
Scraper thumbnail			1		
Scraper other			1		
Awl			1		1
Piercer		1			
Heavy borer			1		
Microdenticulate	1				
Notch					1
Backed knife			1		
Other knife					1
Retouched bladelet				1	
Retouched flake			1		
Retouched other			1	2	
Retouch miscellaneous					1
Total	10	5	61	21	34

Burnt unworked flint	11/5g				
No. burnt (%)	2/10 (20%)	0/5 (0%)	4/61 (6.56%)	0/21 (0%)	3/34 (8.82%)
No. broken (%)	4/10 (40%)	3/5 (60%)	27/61 (44.26%)	11/19 (57.90%)	18/33 (54.54%)
No cores/related debitage	0/10 (0%)	0/5 (0%)	5/61 (8.20%)	2/19 (10.53%)	3/33 (9.09%)
No. retouched (%)	1/10 (10%)	1/5 (20%)	9/61 (14.75%)	3/19 (15.79%)	5/33 (15.15%)

Table 6: The flint assemblage by major groups

Discussion

4.1.12 The lithic material from this site fall into three broad categories. Firstly, there was a blade-based element most likely contemporary with the early Neolithic pit group 1411. There was also a middle Bronze Age element contemporary with the bulk of the archaeological remains. Finally, there was also probably a late Neolithic/early Bronze Age group represented by ring ditch 1410 some of the tools found as stray finds and in middle Bronze Age groups such as enclosure 1414, that suggests a continuity in activity connecting the two main phases of surviving features.

4.1.13 There is clear evidence of early activity as evidenced by many of the tool forms, the blade-core curation pieces (core tablet and crested blade) and the high blade count, and it would appear highly likely that this is contemporary with the early Neolithic pit cluster and ring ditch. Some material could be earlier in date but there are no unequivocal Mesolithic artefacts in the assemblage and the simpler explanation would appear to be more prudent. Elsewhere in Somerset, blades are rarely found in middle Bronze Age contexts, reflected in the very low figure of 2.1% for Brean Down (Saville 1990). These assemblages are all remarkably small in scale but are consistently early in character. It is likely that they formed part of a wider spread of artefactual material, most likely a midden deposit, and this would explain many of the residual finds in later features. The early component reflects a wide range of activities such as plant processing and hide working as well as possibly butchery. In terms of hide working, both scrapers and awls were present suggesting the production of items such as clothing rather than the simple preparation of hides.

4.1.14 The presence of several tools of probable late Neolithic or early Bronze Age date suggests a degree on continuity in the use of this landscape, most likely deposited as part of a continued phase of middening. This material could simply represent some early elements and some well-made middle Bronze Age material, but there are numerous pieces that are more typically dated to this phase including one thumbnail scraper and a second possible example, as well as quite fine knives. These pieces do suggest a more limited range of activities, most likely butchery and hide preparation.

4.1.15 Lithic use during the later periods on site is difficult to fully assess due to issues with potentially residual material and also with our concepts about the quality of later flintwork and our tendency to suggest that any fine flintwork must be residual. That said, it does appear as if lithics were frequently utilised here, with a clear shift in materials diversity towards encompassing more Greensand chert – often of low quality – whereas the earlier assemblages tended to stray from using flint only where high-quality substitutes were available. The use of low-quality Greensand Chert was especially prevalent within enclosure 1414. This shift to Greensand chert may be a very local phenomenon as at other places in Somerset the opposite happens with chert dominating early assemblages but becoming rarer from the Neolithic onwards (Bayer 2020).

4.1.16 This increase in the use of lithic material is not typical of many sites on Somerset although it was apparent at Brean Down where the Bronze Age saw the highest occurrence of lithic use (in Unit 6 at that site). Very often sites of this period contain very few lithics but here there are very rich assemblages from ditch fills and given the

very partial nature of investigations it is perhaps simply luck that yielded a much larger flint assemblage (Brean Down was extensively excavated) than is typical for middle Bronze Age Somerset. Moreover, many of the sites where flint is common involve large pit assemblages that are absent here. Sites typically yield few lithics, as at Bridgwater Gateway (Donnelly in prep.) and at Cannington where large-scale works recovered just 31 flints compared to 922 sherds of Bronze Age pottery (Hart and Mudd 2018). This may indicate that the site of Nerrols Farm performed an atypical role in the settlement hierarchy during the middle Bronze Age, or it may relate to individuals making dynamic choices about what resources to utilise for their everyday needs.

4.2 Prehistoric pottery *by Alex Davies*

Introduction

4.2.1 The excavations produced 1673 sherds of prehistoric pottery weighing 21,612g, representing the early Neolithic, middle Bronze Age and middle Iron Age. The assemblage was dominated by middle Bronze Age material. The prehistoric pottery is summarised in Table 7.

Methodology

4.2.2 The pottery was recorded following the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). Individual vessels were separated out from each context, weighed, and body, rim and base sherds counted. The major inclusion and up to two different minor inclusions in the fabric were noted, recording the grade (1–5; from very fine to very coarse), frequency (1–5; from rare to abundant), how well-sorted the inclusions are (1–4; from very well-sorted to poorly sorted), and the level of abrasion (1–3; from fresh to highly abraded). All vessels were inspected with the aid of a hand lens, and a microscope with a magnification of x20 was used where necessary. Each vessel was assigned a working fabric number, and this was rationalised into a final site fabric code. The code starts with two letters indicating the major inclusion, followed by another pair of letters indicating the minor inclusion. No fabric was defined that included three inclusion types of note. This is followed by a number where multiple fabrics were present that comprised the same inclusions. This was recorded onto an Excel spreadsheet, available in the archive. The pottery from the environmental samples was fully recorded.

Early Neolithic

4.2.3 Some 13 sherds of undecorated early Neolithic pottery were discovered, weighing 47g, probably belonging to the Plain Bowl tradition. A maximum of eight vessels were recorded from eight contexts. The low mean sherd weight (MSW) of 3.6g suggests the pottery was subjected to a significant degree of attrition prior to deposition, and was perhaps stored in an above-ground midden before reaching subsoil features. Just over half of the pottery is heavily abraded, the remainder recorded as moderately abraded. There are single squared and a slightly rolled rims (Fig. 9).

4.2.4 All of the material has poorly sorted angular vein quartz inclusions, usually *c* 2mm in size but up to *c* 5mm. Wall thickness ranges from 5–9mm.

4.2.5 Three of the contexts are from pit group 1411 in the northern part of the site. The largest and least abraded material was from this group, including a sherd that weighed 17g. The adjacent ring ditch, dated to the early Bronze Age, also produced two very small sherds of early Neolithic pottery. Two pits in the eastern part of the site and one in the western part of the site also produced similar material and have been tentatively phased to the early Neolithic. A small early Neolithic sherd was found in a middle Bronze Age pit located inside the middle Bronze Age roundhouse.

Middle Bronze Age

4.2.6 The middle Bronze Age pottery accounted for almost the entire assemblage, consisting of 1632 sherds weighing 21,349g, with an MSW of 13.1g. This MSW quantification is misleading as it derives from the number of sherds finally accounted for after excavation. The lower parts of seven large vessels were found set into pits, and all of these crumbled into many sherds upon excavation. Considering this, the sherd count 'upon discovery' would instead be 352, counting each of these seven pots as a single sherd, giving a drastically different MSW of 60.6g. The rest of the report and Table 7 follows the larger sherd count. Excluding the freshly broken pots set into the ground, some 9% of the assemblage by weight was recorded as freshly broken, 80% moderately abraded, and 11% highly abraded.

4.2.7 A maximum of 74 vessels were found in 48 contexts. No attempt at cross-context joins was made, and it is very likely that the same vessels have been counted multiple times in the total.

Fabric

4.2.8 Six middle Bronze Age fabrics were defined, three containing grog of different grades and frequency (Gr1–3). These accounted for *c* 98% of the assemblage. The minor fabrics consist of vein quartz and grog (Qt2), and an almost inclusion-free fabric containing rare amounts of quartz sand (Qs). These basic fabric descriptions are of little help in sourcing the clay and provenancing the vessels. There is nothing to suggest a non-local source, although there is little evidence for the origin of the clays. No inclusions that may have been geologically distinct were visible at x20 magnification level.

Form

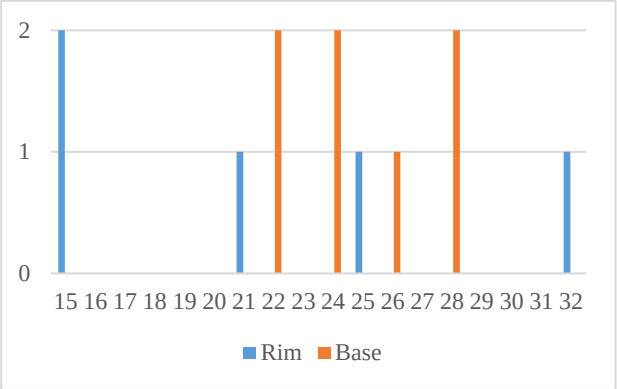
4.2.9 Most of the vessels appear to be broadly bucket shaped with straight or near-straight sides. The possible exceptions are five incurving rims, some of which might have belonged to more barrel-shaped vessels. One of these incurving rims belongs to a small pot with two closely set, poorly formed bosses (Fig. 11.8); the vessel is near-straight sided. The rims from 12 vessels were discovered: two are simple, five incurving, three everted and two rims are squared. None of the rims have bevels.

Size

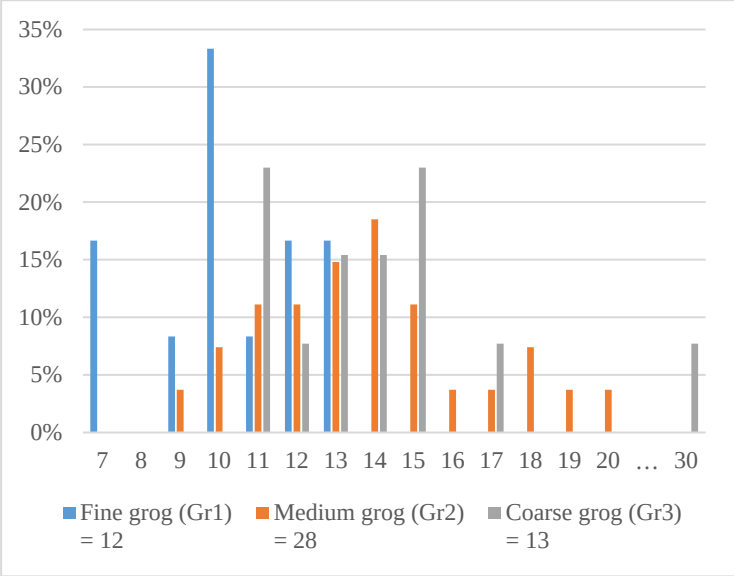
4.2.10 No complete profiles were discovered, but the rim diameters of five vessels can be measured with reasonable confidence, and the base diameters of seven. The rims display much greater variation than the bases, with a range between 150–320mm (Graph 2). The bases are all between 220–280mm diameter. These figures are,

however, biased as the rims from larger vessels are more difficult to confidently measure from small sherds, making them less likely to be represented. Six of the seven bases are from vessels set into pits, biasing these vessels with a (presumably) shared functional and depositional history. Vessel diameters do not clearly correlate with fabrics, although the sample is small.

4.2.11 Wall thickness is measurable on 58 vessels and ranged between 7–30mm. There is a correlation between the grade of the fabric and wall thickness: the larger the grog inclusions, the thicker the vessel walls tend to be. Fabric Gr1 had a mean wall thickness of 10.3mm, compared to a mean of 13.8mm for Gr2, and 14.7mm for Gr3. There is, however, significant overlap between the fabrics (Graph 3). This may simply represent a functional requirement of smaller inclusions needed for small pots. Comparing the wall thickness diachronically, unsurprisingly the middle Bronze Age material is generally much thicker than the early Neolithic and middle Iron Age vessels, although the sample size of these other periods is very small.



Graph 2: Rim and base diameters of the middle Bronze Age pottery (cm)



Graph 3: Wall thickness (mm) of middle Bronze Age vessels comparing grade of grog temper

Decoration

4.2.12 Eighteen vessels are decorated (24% of all vessels), and virtually all of the motifs are incised chevrons (Plate 5). Where identifiable, all the chevrons were vertical. There are two examples of wall cordons decorated with chevrons (Figs 10.2 and 12.13); there are no undecorated cordons), and one with chevrons on the outer part of the rim (Fig. 10.5). Apart from these, where identifiable the chevrons are located on the wall below the rim.

4.2.13 One vessel has fingertip decoration on an internal base cross cordon (the vessel was also externally decorated with a chevron pattern; v.69, frontispiece; Plates 4 and 8). Two small sherds have stabbed dots, although the pattern these were part of cannot be understood (Fig. 10.3). There are no examples of cord decoration.

Pots set into the ground

4.2.14 The most notable element of the context of the pottery assemblage was seven vessels that were set into the ground, placed snugly within pits. Two pairs of these intercut (vessels 62 and 53; vessels 69 and 74). These pairs were within the roundhouse, and one other pot set into the ground was within the roundhouse (vessel 65). The other two vessels (23 and 46) were not clearly associated with any other feature. All of the vessels crumbled into many fragments upon excavation, and none contained cremated bone.

4.2.15 The pots set into the ground are as follows:

Vessel 23 (ctx 1175, cut 1116). Base of vessel 0.26m in diameter and lower part of wall, surviving to a height of 55mm. Two sherds are chevron decorated. Gr3. 1788g.

Vessel 46 (ctx 1301, cut 1303). Base of a vessel 0.20m diameter and lower part of wall, surviving to a height of *c* 20mm. All of the sherds appeared to be from the base or junction of the base and wall. Gr2. 623g (Plate 6)

Vessel 53 (ctx 1313, cut 1312). Part of the base of a vessel too fragmentary to measure. Two body sherds, one chevron decorated. Intercutting with pit 1333 (containing vessel 62), and pit 1362. The relationship between 1312 and 1333 was not established, although both were cut by pit 1362. Pit 1312 also contained a sherd from a different vessel. Gr3. 564g.

Vessel 62 (ctx 1334, cut 1333). About 60% of base and joining wall of vessel. Base 0.24m diameter, *c* 70mm of wall surviving. About half of the sherds are from the base, and half the wall. Chevron decoration on external cordon. Intercutting with pit 1312 (containing vessel 53). The relationship between pits 1312 and 1333 was not established, although both cut by pit 1362. Pit also contained sherds from a different vessel. Gr3. 767g.

Vessel 65 (ctx 1360, cut 1359). Complete lower circuit of vessel, missing its base. Base 0.22m diameter, *c* 50mm of wall surviving. About 65% of junction between vessel wall and base surviving, demonstrating this was the lower part of the pot placed upright, but without the base. Cuts two other pits, but no pottery retrieved from them. Gr3. 754g. (Plate 7)

Vessel 69 (ctx 1376, cut 1375). Complete base and wall surviving up to *c* 0.31m. Base diameter 0.28m. Applied fingertipped cross cordon on base. Three sherds decorated with parallel lines, possibly chevrons. Filled with stones and fired clay. Cut pit 1386, containing vessel 74. Gr1. 8139g. (cover image; Plates 4 and 8)

Vessel 74 (ctx 1387, cut 1386). Complete base and about half of circumference of wall, surviving up to *c* 0.25m. Base diameter 0.24m. Other side of wall was truncated by pit 1375. One everted rim sherd. Decorated with four near parallel lines, possible leading to large chevrons, and stabbed dots. Cut by pit 1375, containing vessel 69. Gr2. 4747g. (Plate 9 and Fig. 10.3)

Site provenance

4.2.16 Excluding the seven pots set into the ground, 73% of the pottery by weight was found in the main enclosure ditch (1414), 18% in features inside roundhouse 1416, 3% in roundhouse ditch 1416, and just 6% in other features inside the enclosure. No middle Bronze Age pottery was found outside of the enclosure.

4.2.17 The MSW of the material in features associated with the roundhouse was 7.4g, compared to 14.3g MSW of the material in the enclosure ditch. More of the vessels from the enclosure ditch were also recorded as freshly broken compared with the roundhouse. The MSW across different levels of the ditch was, however, quite different, and suggests different processes surrounded the filling of the feature during its life.

4.2.18 The fills of the enclosure ditch were spilt into basal, lower, middle and upper levels. Some 46% of the pottery was from the upper fills, 40% from the middle fills, and much less from the lowest fills. This in part reflects the tendency for basal and lower fills to comprise less soil. The MSW went up the higher in the ditch fill: MSW was 8.5g from the basal/lower fills, 12.7g from the middle fills, and 20.5g from the upper fills. Furthermore, over twice the percentage of vessels in the basal and lower fills were recorded as highly abraded compared to the material from the middle and upper fills, and nearly a third of the vessels in the upper fills were freshly broken, whereas none were freshly broken in the basal/lower fills. This shows that the pottery in the lower parts of the ditch were subject to more intensive processes of attrition compared to that from the upper parts of the ditch. Why this might have happened is not certain, although presumably the pottery in the lower parts of the ditch was deposited when the settlement was in use, whereas the material from the upper parts of the ditch was deposited at or after abandonment. The presence of larger, fresher sherds in the upper part of the ditch might suggest that the ditch was purposefully backfilled at abandonment, with fresh sherds becoming incorporated from either relatively fresh midden material, or even purposefully buried as part of an abandonment rite. If the upper part of the ditch silted naturally after abandonment, pottery might be expected to be more broken and abraded due to quite long periods on the surface prior to deposition.

4.2.19 Ten interventions were made into the enclosure. Two of these produced about half of the material. These were 1264, the southern terminal belonging to the eastern entrance, and 1322 along the eastern length. The other three terminals each produced

between 4–7% of the material from the enclosure. This overall suggests that terminals were not favoured for the deposition of pottery.

Discussion

4.2.20 The middle Bronze Age assemblage was generally rather homogeneous, with form and decoration being reasonably consistent although vessel sizes did vary. The assemblage belongs to the Trevisker-related series centring in Somerset but also found in Devon, Cornwall and South Wales. The main features of the assemblage are the predominance of straight- or near-straight-sided vessels, rims that are essentially plain but can be slightly incurving, everted or squared, the prevalence of incised chevron decoration, and the dominance of grog temper. In these respects, the assemblage significantly diverges from 'true' domestic Trevisker ware centring in Cornwall as it entirely lacks the cord decoration, bevelled rims and clear round-bodied jars that form substantial components of the style (eg ApSimon and Greenfield 1972; Woodward and Cane 1991; also Quinnell 2012, 147–8). While many of the vessels could uncomfortably fit in Parker Pearson's (1990; 1995) Trevisker Styles 3 and 4, due largely to the presence of incised decoration, this typology is overall not appropriate for the assemblage, although the scheme is suitable for one vessel (v.10) of Style 6 as it is small, undecorated and displays small bosses.

4.2.21 Analysis of the Nerrols Farm assemblage and the recognition that the pottery was significantly different to 'true' domestic Trevisker ware occasioned the reassessment of middle Bronze Age pottery in this region (Davies in prep.). In summary, two overlapping but distinct middle Bronze Age pottery styles were identified in the South-West: Trevisker, and Trevisker-related. Trevisker ware is well-known, found throughout much of the 2nd millennium BC, originating in Cornwall but also found in Devon and occasionally in Somerset in the middle Bronze Age. Trevisker-related ware was coined to describe material from Somerset, originally thought to date to a late stage in the Trevisker sequence (Quinnell 2018; Woodward 1989; 1990). The reassessment found that Trevisker and Trevisker-related assemblages both began on domestic sites probably in the 15th century cal BC: as a group, Trevisker-related assemblages do not succeed Trevisker as they are contemporary for a significant period of time. Trevisker ware ends before Trevisker-related assemblages, probably in the first half of the 12th century cal BC. Trevisker-related assemblages ended at the end of the 11th or in the 10th century cal BC when it was succeeded by post-Deverel-Rimbury pottery. These late Trevisker-related dates are, however, all from Cornwall, and it is uncertain when the transition from Trevisker-related to post-Deverel-Rimbury took place in Somerset and Devon. It was also found that assemblages dominated by incised decoration need not be earlier than those dominated by cord techniques. Both were contemporary between *c* 1500–1300/1250 cal BC when cord decoration ceased being an important decorative technique. Incised decoration continued into the 11th century cal BC.

4.2.22 One interesting aspect of the pottery assemblage was one of the vessels set into the ground, vessel 69, had fingertipped cross cordons on the internal side of the base. Basal cross cordons are infrequent features of Trevisker and Deverel-Rimbury pottery with examples from Cornwall (ApSimon and Greenfield 1972, fig. 15.10; Quinnell forthcoming b), Devon (Raymond 2008, 54; 2012, 76), Dorset (Pitt-Rivers 1898, pl. 301.4; Watling and White 1982, fig. 22.13) and Essex (Brown 1999, fig. 64.89).

Fingertipped cross cordons are known from Topsham Road (Devon; Raymond 2008, 54) and Ardleigh (Essex; Brown 1999, fig. 64.89). The function of these is uncertain, although the Nerrols Farm example was from a pot set into the ground so it appears unlikely that the cross cordons were designed to strengthen the base of the vessel, at least during its use. Given the context of the vessel, the decorative fingertipping on the internal cross cordons would be more visible than any external decoration, even if this was only seen when the pot was empty.

4.2.23 The pots set into the ground are part of a non-funerary middle Bronze Age tradition further explored in the site discussion below. The possibility that pottery in the middle and upper fills of the main enclosure ditch was incorporated as part of an intentional abandonment rite is also discussed below.

Middle Iron Age

4.2.24 Some 28 sherds of middle Iron Age pottery probably from two vessels weighing 216g was found in the penannular ditch belonging to roundhouse 1206. This includes sherds probably all from the same Glastonbury style (South-Western) necked jar with a slight foot ring (Fig. 13). The decoration on the jar could only be very partially understood, although a lower band of parallel diagonal lines on the body and another band of parallel vertical lines on the shoulder can be seen. A decorated sherd has straight and probably curvilinear lines. The fabric is predominantly quartz sand and has white crystalline inclusions, probably calcite. This appears to belong to Peacock's (1969) Group 3, where a Mendip limestone source was suggested.

4.2.25 The other vessel was in a vesicular fabric and was abraded. The voids where often rhomboid but sometimes rounded, suggesting that the leached inclusion was calcite and/or limestone.

Catalogue of illustrated pottery (Figs 10–13)

Early Neolithic

1 Pit group 1402, pit 1166, fill 1167. Qt1.

Middle Bronze Age

2 Pottery setting 1333, fill 1334, inside roundhouse. Gr3

3 Pottery setting 1386, fill 1387, inside roundhouse. Gr2

4 Pottery setting 1116, fill 1175, inside roundhouse. Gr3

5 Surface find 1143 next to pottery setting 1116. Gr3

6 Pit 1362, fill 1363, inside roundhouse. Gr3

7 Enclosure ditch 1414, cut 1264, lower fill 1266. Gr3

8 Enclosure ditch 1414, cut 1073, lower fill 1074. Gr2

9 Enclosure ditch 1414, cut 1264, middle fill 1269. Gr2

10 Enclosure ditch 1414, cut 1264, middle fill 1269. Gr1

11 Enclosure ditch 1414, cut 1264, middle fill 1268. Gr2

12 Enclosure ditch 1414, cut 1264, middle fill 1268. Gr1

13 Enclosure ditch 1414, cut 1257, upper fill 1259. Gr2

14 Enclosure ditch 1414, cut 1257, upper fill 1258. Gr2

Middle Iron Age

15 Roundhouse penannular ditch 1206, cut 1064 fill 1065, and cut 1118 fill 1119. QsCa

Table 7 (overleaf): Summary of the prehistoric pottery

	Sherds	*Weight (g)*	*Vessels (Max)*	*Contexts*	*Description*	*Forms, features and decoration*
					Early Neolithic	
Qt1	13 *100%*	47 *100%*	8 *100%*	8 *100%*	Vein quartz (angular, medium to coarse – usually *c* 2mm, but up to 5mm). Usually moderately frequent, but occasionally sparse. Poorly sorted.	Plain Bowl. 1 ?rolled rim. 1 small cup. Mainly small body sherds.
TOT EN	**13**	**47g**	**8**	**8**		
					Middle Bronze Age	
Gr1	406 *25%*	8331 *39%*	14 *19%*	13 *27%*	Fine grog, up to 1.5mm. Sparse to moderate frequency, well sorted.	1 jar set into ground. 2 incurving and 1 everted rim. 1-2 chevron decorated. 1 fingertipped cordon cross on internal base. 1 stabbed dots.
Gr2	707 *43%*	8096 *38%*	35 *47%*	29 *60%*	Medium grog, 2-4mm. Moderate frequency, well to moderately well sorted. Two vessels: small quantities of white crystalline inclusions (Calcite?). One vessel: frequent quartz sand.	2 jars set into ground. 1 simple, 2 incurving, 2 everted and 1 squared rim. 7 chevron decorated.
Gr3	499 *31%*	4700 *22%*	17 *23%*	16 *32%*	Coarse grog, 4-11mm. Frequent, quite poorly sorted.	4 jars set into ground. 6 chevron decorated. 1 everted rim
Qt2	10 *1%*	131 *1%*	3 *4%*	3 *6%*	Vein quartz (rare, fine/medium sized) and grog (medium sized). Quite well sorted.	1 light parallel linear decoration
Qs	8 *0.5%*	90 *0.5%*	4 *5%*	4 *8%*	Quartz sand (rare, fine). Well sorted.	Small body sherds
?	2 *<1%*	1 *<1%*	1 *1%*	1 *2%*	Unknown	Small body sherds
TOT MBA	**1632**	**21349g**	**74**	**48**		
					Middle Iron Age	
QsCa	10 *38%*	172 *80%*	1 *67%*	2 *67%*	Quartz sand (fine/medium, moderately frequent) and white crystalline inclusions (Calcite?; fine rare/moderately frequent). Glastonbury Ware, probably similar to Peacock's (1969) Group 3, where a Mendip Limestone source is suggested.	1-2 Glastonbury necked jars. Band of vertical lines below neck, and band of diagonal lines on body. Burnished.
Vo	18 *64%*	44 *20%*	1 *32%*	1 *32%*	Vesticular, 'corky'. Frequent voids, usually less than 1.5mm but up to 4mm. Often rhomboid, sometimes rounded. Leached calcite and/or limestone?	Small body sherds
TOT MIA	**28**	**216g**	**2**	**2**		
TOT	***1673***	***21612g***	***85***	***57***		

4.3 Post-medieval pottery *identified by John Cotter*

4.3.1 Three contexts produced post-medieval pottery, comprising five sherds weighing 14g. Sherds of developed creamware dating to *c* 1760–1830 were found in the north-south post-medieval ditch. A sherd of local pink-buff glazed earthenware with traces of white slip decoration, possibly Donyatt slipware, was found in a tree-throw hole.

4.4 Stone *by Ruth Shaffrey*

4.4.1 A total of 114 items of stone was retained and submitted for analysis. These were examined for signs of working or exposure to heat and details were entered into a Excel spreadsheet, which can be found in the archive.

4.4.2 The only item of worked stone is a saddle quern, neatly broken into about two-thirds during antiquity and more recently at the other end (Plate 10). It has been shaped with neat pecking all over and has a flat grinding surface with a rounded base. The grinding surface is worn very smooth and the base and one side of the quern are smoothed with some polish – either a deliberate polish or a result of movement during use. It is made from a coarse granite with small feldspar phenocrysts and black tourmaline (schorl). These rocks outcrop in a number of localities in Cornwall, and the quern has certainly been transported at least 50km from Dartmoor or further (identification by Roger Taylor).

4.4.3 The saddle quern was recovered from the top of the fill of a vessel placed in cut 1375 (ctx 1383) where it was positioned at a slight angle but inverted with the grinding surface facing approximately downwards (Plate 4). Around and under the saddle quern, but still within the vessel, were a number of burnt stones, which show the cracking effects of exposure to rapid heating and cooling (Plate 11). Most of these (38 fragments weighing 3.6kg) are of quartz, mainly white with some red and grey examples. There are also two fragments of burnt unworked stone of the same lithology as the saddle quern. They are rounded and not obviously from the quern, but since the quern has been transported some distance it seems likely that they were originally part of this quern (or another).

4.4.4 Some 25 fragments (2kg) of burnt stones including a mixture of heat cracked quartz and fragments of the same lithology as the saddle quern, but more highly burnt and degraded, was found in the fill of a vessel in cut 1116 (ctx 1117).

4.4.5 Burnt stones were also recovered in small quantities from fills of enclosure ditch 1414 (1264; 1304), roundhouse ditch 1416 and undated pit 1231.

4.4.6 Saddle querns are unusual finds from features of Bronze Age date in Somerset and this quern is particularly striking because it is made of igneous stone imported from the outcrops of Cornwall. A fragment of rubber of micro-granite of similar provenance was recently found in a Bronze Age feature in Yeovil (Cheryl Green pers. comm.), but otherwise there is little evidence for the movement of querns (or the raw materials for querns) from the South-West Peninsula into Somerset at this time.

Catalogue of worked stone

Saddle quern. Coarse granite with small feldspar phenocrysts and black tourmaline (schorl). Central fragment of neatly finished quern with flat/very slightly dished grinding surface. The grinding surface has traces of pecking and is worn smooth across most of the face. It has a deep rounded profile with neatly pecked finish, now smoothed and polished across the back and one side of it. The other side is less polished. One end has a recent break and may have been damaged by the machine that found the pit. The other end is a clean break at a point that suggests the quern was broken into one third and two thirds. Fragments of the same stone type were also found in the fill of this vessel and another one (1116) but none of these retain any worked surfaces and most are very worn. It is possible that some were part of this quern, but if so, the quern would need to have been broken sometime previously given the very worn state of the other fragments. Measures >195 x 160mm max width x 96mm thick. Weighs 3.6kg. Ctx 1383. Fill of vessel 69 in cut 1375 inside roundhouse 1416. Middle Bronze Age.

4.5 Fired clay *by Cynthia Poole*

Introduction and methodology

4.5.1 A modest assemblage of fired clay amounting to 50 fragments weighing 646g were recovered predominantly from middle Bronze Age features, in particular the rectangular enclosure ditch 1414. A small quantity was also recovered a middle Iron Age penannular ditch and from undated pit and posthole fills. The fired clay is not intrinsically dateable and is reliant on other dateable artefacts for its phasing.

4.5.2 The assemblages of fired clay and ceramic building material have been fully recorded together on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007), which whilst not specifically designed for fired clay provide appropriate guidance. The record includes quantification, fabric type, form, surface finish, organic impressions, dimensions and general description. Fabrics were characterised on macroscopic features and with the aid of x20 hand lens.

Fabrics

4.5.3 The fired clay is all made in an identical fine sandy micaceous clay containing variable quantities of medium and coarse quartz sand and occasional grits up to 8mm in size of slate, sandstone or an unidentified black rock. The clay fabric generally fired to red, pinkish red and light orange-red, sometimes with a buff surface. The fabric clearly originates from the weathering and mixing of locally outcropping geological Triassic and Devonian bedrocks including the Mercia Mudstone Group, the Morte Slates Formation and Helsby Sandstone Formation.

4.5.4 The only variation was one early medieval sample (ctx 1034, pit 1033), which had the addition of organic temper in the form of coarse impressions of straw/grass up to 13mm long by 3mm wide in the surface and finer inclusions/voids within the fabric.

Middle Bronze Age

4.5.5 The assemblage consists primarily of material that can be interpreted as structural together with one item of portable furniture and a fragment of metalworking mould.

Structural fired clay

4.5.6 The structural fired clay is composed of fragments 15–33mm thick that had a single moulded surface or were entirely amorphous. Those where some surface survives are mostly roughly shaped with an irregular undulating flat or curving surface. In a few cases the surface has been fired to a light buff colour, which is most typical of ovens. These pieces probably represent the interior fired surface of ovens, or possibly an open hearth or fire pit in the form of a clay-lined hollow. The intensity of firing does not indicate high-temperature activity, in that there is no evidence of vitrification or cindering of the type that that occurs on iron working furnaces or smithing hearths in the material assessed for this report. Vitrified materials are dealt with in a separate report (Dungworth, below).

4.5.7 In addition to this a small number of fragments were recovered from the fill of middle Bronze Age vessel 69 (1383, cut 1375) that had clear evidence of interwoven wattle impressions. These pieces were 25–40mm thick and had a rough flat moulded exterior surface with finger grooves and depressions and impression of wattles from interwoven framework on the other side. The wattles comprised six interwoven rods measuring 15, 16 x2, 18, 21, 22mm in diameter and two sails in the form of split poles: one *c* 18mm with a partly split end and a second over 20mm wide. Wattle supported structure is a rare occurrence from Bronze Age deposits, though it became increasingly common from the Iron Age.

Portable furniture

4.5.8 The portable item takes the form of an oblong block measuring 51mm thick by over 48mm wide and over 70mm long. It has a roughly moulded curving surface, forming two sides of a rod or bar with sub-rectangular cross section with rounded corners and possibly part of a third side, though this area is damaged. The end of a shallow groove on one side could be finger mark from shaping the clay. This is not a standardized form and probably represents an *ad hoc* piece made to serve a particular purpose on a single occasion. At later periods rods or firebars are associated specialised activities such as pottery production or salt working. It was found in a middle fill of enclosure ditch 1414 with a fragment of mould.

Mould

4.5.9 A single fragment measuring 18mm thick comes from the edge of a mould for a bladed implement (Plate 12). Terminology used in describing the mould follows Needham (1980), where more detailed explanation of the technology may be found. The fragment derives from one valve of a bivalve mould assembly and has a well smoothed and convex exterior surface fired light grey. A patchy light yellowish brown clay veneer over the exterior surface represents remains of the outer wrap and faint linear marks through this on the outer surface might represent a cord binding holding the two mould valves in place. The valve has a narrow flat contact surface 9mm wide that is slightly bevelled and sloping outwards and fired dark grey the same as the core. From

the contact surface, the step to the casting surface is barely perceptible; the casting surface slopes at an angle forming a shallow bevelled surface 8–10mm wide joining to a flat or barely concave central section over 12mm wide. The inner valve surface is fired mid grey. The mould is made in a fine sandy clay containing a high density of fine–medium well sorted quartz sand, a low density of mica and common fine black inclusions/voids, which may be burnt organic inclusions. It was found in the same middle fill of enclosure ditch 1414 as the item of portable furniture.

Middle Iron Age and undated

4.5.10 This material consisted entirely of structural fired clay with a single smooth even, flat or curving moulded surface fired to buff or pale greyish brown on several pieces. One had stone gravel impressions on the underside suggesting the clay had been laid over a stone foundation or stony natural. They are likely to have formed the surface of hearths or possibly ovens. This material is similar to the Bronze Age structural pieces and there is nothing to distinguish the Iron Age and undated fired clay from the earlier assemblage.

Discussion

4.5.11 The middle Bronze Age fired clay assemblage is atypical in that the most commonly found objects from assemblages of this period – the perforated cylindrical blocks – are absent. The most significant item is the fragment of a mould for a bronze object, some form of bladed implement, probably a rapier or sword. The date of the enclosure, probably in the 14th century cal BC, suggests that the mould is contemporary with the Taunton metalworking period (Needham *et al*. 1997, 82), making it more likely that this is a rapier mould. The mould was found in the corner of the rectangular enclosure ditch (1414) associated with the fired clay portable rod or firebar. No other fired clay was found, or other debris associated with metalworking, but excavation in the area was limited to the ditch intervention as no other features occurred in the vicinity. The structural fired clay was found mainly concentrated in the upper fills of one of the terminals of the ditch and arguably is not related to the metalworking but may of be purely domestic origin. However, at this period specialised hearths were probably not necessary for bronze casting and temperatures reached would be insufficient to differentiate them from domestic structures. At Cotswold Community (Gloucestershire), mould fragments for Bronze Age palstaves were found in a shallow pit with *in situ* burning that was interpreted as the hearth used for the casting (Poole 2010, 143–5). The clay did not exhibit the intense firing and vitrification such as is associated with later iron working. It is possible that the structural oven/hearth debris found in the terminal of the enclosure ditch could relate metalworking, albeit deposited in a different section of the ditch to the mould fragment.

4.6 Ceramic building material *by Cynthia Poole*

4.6.1 A fragment of brick (15g) and two fragments of roof tile (10g) were recovered from the north-south post-medieval field boundary. They were made in a red, fine sandy micaceous clay containing small black rock inclusions. The roof tiles are neatly finished with smooth surfaces and fine moulding sand on the underside and measure 12mm

thick. The brick had a rougher finish and no complete dimensions surviving. All the fragments are of post-medieval date, probably 18th–19th century.

4.7 Vitreous material *by David Dungworth*

4.7.1 All of the material submitted was examined visually and recorded following standard guidance (Historic England 2015). The assemblage is quite modest (Table 8) and includes no diagnostic metalworking slags.

4.7.2 Only two categories of material were recovered, and one of these is 'unidentified material'. A small amount of vitrified ceramic lining (VCL) was recovered from early medieval pit 1033 (ctx 1034); however, the absence of any certain metalworking slag leaves some doubt about the significance of the VCL. It is possible that the VCL derives from a domestic hearth; possibly one which was overheated at some stage. All of the remaining material has been classified at unidentified material (UID). It all shows some degree of vitrification as well as the incorporation of some ceramic material. This material shows some similarities with VCL; however, it lacks the clear transition from oxidised ceramic to reduced ceramic to vitreous 'slag'. The UID from Nerrol's Farm has colours (mostly shades of brown) which indicate an absence of either strongly oxidising or reducing conditions (in contrast with most VCL). The distribution of vitrified areas on the UID lacks the consistency that is usually seen in (metallurgical) VCL. None of the UID shows any signs of being associated with copper working (ie red vitreous regions or spots of green corrosion).

4.7.3 The material recovered shows that high temperatures were achieved but these do not appear to be associated with metalworking. It is possible that the vitreous material recovered is evidence for a destruction-conflagration event.

Context	Feature	Date	Sample	Type	Comment	Weight (g)
1034	Pit 1033	Early medieval		VCL		5.0
1034	Pit 1033	Early medieval		UID	Bloated and vitrified daub?	26.2
1099	Pit 1098	Undated		UID	Bloated and vitrified daub?	51.5
1099	Pit 1098	Undated	1010	UID	Bloated and vitrified daub?	1.4
1099	Pit 1098	Undated	1010	UID	Bloated and vitrified daub?	5.8
1099	Pit 1098	Undated	1010	UID	Bloated and vitrified daub?	1.4
1115	Enclosure 1414	MBA		UID	Bloated and vitrified daub?	13.4
Total						104.7

Table 8: Summary of vitrified materials
(VCL = 'vitrified ceramic lining', UID = 'unidentified material')

4.8 Metalwork *by Ian Scott*

4.8.1 Two iron objects were recovered.

1. **Whittle tang knife** (Fig. 14). Small whittle tang knife with a thick triangular-sectioned blade; the tang is incomplete. L: 93mm. Pit 1030, ctx 1031, small find 1000.

The small size and the form of the knife with the thick triangular section blade are distinctive features of Saxon knives.

2. **Nail** (*not illustrated*), possibly complete, comprising a tapered spike, possibly square in cross-section. L: 42mm. Pit 1098, ctx 1099, sample 1010.

4.9 Glass by *Ian Scott*

4.9.1 There are just two sherds of dark olive-green glass from wine bottles. The glass is probably of recent date but has no diagnostic marks to indicate how the bottles were formed. These are from context 1111, fill of post-medieval north-south ditch 1407.

4.10 Animal bone *by Lee G Broderick*

4.10.1 Just 15 animal bone specimens were recovered (7g), all from a single context belonging to middle Iron Age roundhouse gully 1409. These specimens are small, fragmented, burnt, highly calcined and unidentifiable.

4.11 Charred plant remains and charcoal *by Julia Meen*

4.11.1 Thirty bulk samples were processed for the recovery of charred plant remains and charcoal, using a modified Siraf style flotation machine. Flots were collected onto 250µm meshes and the heavy residues were sieved to 500µm, after which both flots and residues were dried in a heated room. The residues were sorted by eye for artefacts and ecofactual remains. Following initial assessment of the flots, two samples underwent further analysis for charred plant remains and five for charcoal (Tables 9 and 10).

4.11.2 The initial assessment showed that for the most part, macrofossils were sparse and charcoal tended to be of small size and in low quantity. A partial grain of barley (*Hordeum vulgare*) was recovered from fill 1353 of ring ditch 1410; hawthorn-type (Maloideae) charcoal from the same context was radiocarbon dated as early Bronze Age (3500±27BP, SUERC-92054). A very small number of cereal grains were recovered from the fills of enclosure ditch 1414, including a total of four wheat (*Triticum* sp.) grains. One of these, from fill 1071, was radiocarbon dated to 3078±27BP (SUERC-92055).

4.11.3 Pit 1242, part of early Neolithic pit group 1411, contains numerous fragments of charred hazelnut shell: a total of 472 pieces, weighing 2.26g. It has been suggested that wild foods, such as hazelnuts, would have continued to form a significant part of the diet in Neolithic Britain (Moffett *et al*. 1989; Robinson 2000), and the extent of early uptake of cereals has been debated (Stevens and Fuller 2012; 2015; Bishop 2015a; 2015b). At the nearby site of Bridgwater Gateway, abundant hazelnut shell was recovered from three early Bronze Age pits, while cereal remains were absent (Meen in prep.). However, the same site also contained a large cache of naked barley and emmer wheat from a Beaker-period context, demonstrating that cereal cultivation was practised in the area even at this early date, probably alongside collection of wild foods (ibid.).

4.11.4 Nevertheless, the paucity of charred plant remains from Nerrols Farm is more typical of prehistoric assemblages from Somerset. The lack of high-quality assemblages from

the county is partly due to prehistoric settlements themselves being more sparse compared to the rest of southern Britain, but Campbell and Straker (2003) note that, even where large sieving programmes are conducted, good assemblages are particularly rare from the South West region.

4.11.5 The only quantifiable remains from the main phase of activity at Nerrols Farm were recovered from one of the seven middle Bronze Age pots set into the ground within enclosure 1414. This was from context 1383, but these remains were generally poorly preserved: fragmented, distorted, and often coated with a mineral precipitate that made close identification difficult. The remains include a small number of grains of both wheat (*Triticum* sp.) and barley (*Hordeum vulgare*) and a little cereal chaff. While the wheat grains themselves were not diagnostic to species, a number of the better-preserved glume bases were identifiable as emmer wheat (*Triticum dicoccum*). This sample also produced a significant quantity of charcoal, which was examined to characterise the range of wood present. This comprised a mix of taxa, with around half of the assemblage blackthorn/cherry, followed by ash, oak and alder, as well as occasional hawthorn-type, hazel, field maple (*Acer campestre*) and probable spindle (cf *Euonymus europaeus*).

4.11.6 A further five samples had sufficient identifiable charcoal to justify further analysis (Table 10). This included the hazelnut-shell-rich Neolithic pit 1242, in which only alder (*Alnus glutinosa*) could be conclusively identified. Comparison of the charcoal assemblages from three of the fills from middle Bronze Age enclosure ditch 1414 shows that their composition differs. Lower fill 1074 was dominated by oak (*Quercus* sp.), with the remainder mostly blackthorn/cherry (*Prunus* sp.) and alder. Middle fill 1269, which out of the three fills contained the least charcoal, was more mixed, with blackthorn/cherry, ash (*Fraxinus excelsior*) and oak the most common. Upper fill 1258 was far richer in charcoal than the other two fills, and was predominately composed of hazel (*Corylus avellana*) and hawthorn-type charcoal (Maloideae; a group of closely related taxa which also includes apple and whitebeam).

		Sample No.	1016	1028
		Context No.	1243	1383
		Cut No.	1242	1375
		Feature Type	Pit	Pot fill
		Date	Early Neolithic	Middle Bronze Age
		Sample Volume	40L	15L
		Flot Volume	100ml	200ml
Triticum sp.	wheat	grain		3
cf *Triticum* sp.	cf wheat	grain		10
Triticum/Secale	wheat/rye	grain		1
Hordeum vulgare	barley	grain		7
Cereal	indet cereal	grain		48
Triticum dicoccum	emmer wheat	glume base		8
Triticum dicoccum	emmer wheat	spikelet fork		1
Triticum dicoccum/spelta	emmer/spelt wheat	glume base		33
Triticum dicoccum/spelta	emmer/spelt wheat	spikelet fork		7
Hordeum vulgare	barley	rachis		1
cf *Hordeum vulgare*	cf barley	rachis internode		1
Cereal	indet cereal	rachis internode fragment		2
Cereal	indet cereal	detached embryo		2
Vicia/Lathyrus/Pisum	large vetch/tare/pea 6x5mm	seed		2
Vicia/Lathyrus/Pisum	large vetch/tare/pea	seed fragment		3
Vicia/Lathyrus	vetch/tare 1-2mm	seed		1
Rubus sp.	bramble	seed		1
Corylus avellana L.	hazel	nutshell fragment	472 [2.26g]	2
cf Poaceae	cf small/medium grasses	seed fragment		8

Table 9: Charred plant remains

	Date	Early Neolithic	Middle Bronze Age			
	Sample No.	1016	1011	1017	1015	1028
	Context No.	1243	1074	1269	1258	1383
	Cut No.	1242	1073	1264	1257	1375
	Feature Type	Pit	Enclosure Ditch 1414			Pot fill
			Lower fill	Middle fill	Upper fill	
	Charcoal >4mm	43	106	32	500	151
	Charcoal 4-2mm	300	100	200	2000	500
Prunus sp.	blackthorn/cherry		18	17		51
cf *Prunus* sp.	cf blackthorn/cherry			2		
Prunus/Maloideae	blackthorn/cherry/ hawthorn type		3	4		1
Maloideae	hawthorn/whitebeam/apple			2	54	1
Quercus sp.	oak		68	9 (h)	9 (h)	9
Betulaceae	birch family		1			
Alnus glutinosa (L.) Gaertn.	alder	42	5	1		3
cf *Alnus glutinosa* (L.) Gaertn.	cf alder	1	1			1
Corylus avellana L.	hazel				36	
cf *Corylus avellana* L.	cf hazel					1
Corylus/Alnus	hazel/alder	3	1			3
cf *Euonymus europaeus* L.	cf spindle					2
Acer campestre L.	field maple					1
cf *Tilia* sp.	cf lime			1		
Fraxinus excelsior L.	ash		1	8		25
cf *Fraxinus excelsior* L.	cf ash			1		1
ring porous				2		
diffuse porous		1				
bark						1
indet		3	2	3	1	
TOTAL		50	100	50	100	100

Table 10: Charcoal identifications. h = heartwood

4.12 Organic residue analysis of middle Bronze Age pottery *by Julie Dunne, Toby Gillard and Richard P Evershed*

Introduction

4.12.1 Lipids, the organic solvent soluble components of living organisms, i.e. the fats, waxes and resins of the natural world, are the most frequently recovered compounds from archaeological contexts. They are resistant to decay and are likely to endure at their site of deposition, often for thousands of years, because of their inherent hydrophobicity, making them excellent candidates for use as biomarkers in archaeological research (Evershed 1993).

4.12.2 Pottery has become one of the most extensively studied materials for organic residue analysis (Mukherjee *et al*. 2005) as ceramics, once made, are virtually indestructible and thus are one of the most, if not the most, common artefacts recovered from archaeological sites from the Neolithic period onwards (Tite 2008). Survival of these residues occurs in three ways; rarely, actual contents are preserved in situ (e.g. Charrié-Duhaut *et al.* 2007) or, more commonly, as surface residues (Evershed 2008). The last, most frequent occurrence is that of absorbed residues preserved within the vessel wall, which have been found to survive in >80% of domestic cooking pottery assemblages worldwide (Evershed 2008).

4.12.3 The application of modern analytical techniques enables the identification and characterisation of these sometimes highly degraded remnants of natural commodities used in antiquity (Evershed 2008). Often, data obtained from the organic residue analysis of pottery or other organic material provides the only evidence for the processing of animal commodities, aquatic products or plant oils and waxes, particularly at sites exhibiting a paucity of environmental evidence. To date, the use of chemical analyses in the reconstruction of vessel use at sites worldwide has enabled the identification of terrestrial animal fats (Evershed *et al*. 1997a; Mottram *et al*. 1999), marine animal fats (Copley *et al*. 2004; Craig *et al*. 2007), plant waxes (Evershed *et al*. 1991), beeswax (Evershed *et al.* 1997b) and birch bark tar (Charters *et al.* 1993; Urem-Kotsou *et al.* 2002). This has increased our understanding of ancient diet and foodways and has provided insights into herding strategies and early agricultural practices. Organic residue analysis has also considerably enhanced our understanding of the technologies involved in the production, repair and use of ancient ceramics.

4.12.4 Preserved animal fats are by far the most commonly observed constituents of lipid residues recovered from archaeological ceramics. This demonstrates their considerable significance to past cultures, not just for their nutritional value but also for diverse uses such as binding media, illuminants, sealers, lubricants, varnish, adhesives and ritual, medical and cosmetic purposes (Mills and White 1977; Evershed *et al.* 1997a).

4.12.5 Today, the high sensitivities of instrumental methods such as gas chromatography and mass spectrometry allow very small amounts of compounds to be detected and identified. Furthermore, higher sensitivity can be achieved using selected ion monitoring (SIM) methods for the detection of specific marine biomarkers (Evershed *et al.* 2008; Cramp and Evershed 2013). The advent of gas chromatography-combustion-isotope ratio mass spectrometry in the 1990s introduced the possibility of accessing stable isotope information from individual biomarker structures, opening a range of new avenues for the application of organic residue analysis in archaeology (Evershed *et al.* 1994; 1997a).

4.12.6 This stable carbon isotope approach, using GC-C-IRMS, is employed to determine the δ13C values of the principal fatty acids (C16 and C18), ubiquitous in archaeological ceramics. Differences occur in the δ13C values of these major fatty acids due to the differential routing of dietary carbon and fatty acids during the synthesis of adipose and dairy fats in ruminant animals, thus allowing ruminant milk fatty acids to be distinguished from carcass fats by calculating δ13C values (δ13C18:0 - δ13C16:0) and plotting that against the δ13C value of the C16:0 fatty acid. Previous research has

shown that by plotting δ13C values, variations in C3 versus C4 plant consumption are removed, thereby emphasizing biosynthetic and metabolic characteristics of the fat source (Dudd and Evershed 1998; Copley *et al*. 2003).

Aims and objectives

4.12.7 The objective of this investigation was firstly to determine whether absorbed organic residues were preserved in the large pottery vessels which were set into pits, and thus ascertain their possible function. It is hypothesised that these are functional storage or cooking containers set into the ground in such a way to make them immovable, and more secure. Coarse middle Bronze Age pots of all regional varieties can be large, cumbersome and poorly fired with friable fabrics, making them unsuited to being regularly moved, and setting them in pits might be functionally more desirable. Heat cracked stones, or pot boilers, have been found in some of the pots at Nerrols Farm, suggesting the pots set into the ground were used as cooking vessels or hot water basins, with hot stones used to heat liquids contained within. Analysis of three of these stones was also carried out to investigate whether they retained traces of lipids from cooking events.

4.12.8 A further assemblage of both similar and different types of pots from different contexts at the site were also analysed to determine whether there were any differences in vessel use between these two groups. Potsherds from different parts of some of the vessels were analysed to investigate possible modes of cooking.

Analytical methods

4.12.9 Lipid analysis and interpretations were performed using established protocols described in detail in earlier publications (Correa-Ascencio and Evershed 2014). Briefly, ~2 g of potsherd were sampled and surfaces cleaned with a modelling drill to remove exogenous lipids. The cleaned sherd powder was crushed in a solvent-washed mortar and pestle and weighed into a furnaced culture tube (I). The pot boiler stones were placed in beakers in a methanolic acid solution for 24 hours, which was then transferred to furnaced culture tubes (I). An internal standard was added (20 µg *n*-tetratriacontane; Sigma Aldrich Company Ltd) together with 5 mL of H2SO4/MeOH 2 to 4% (δ13C measured) and the culture tubes were placed on a heating block for 1 hour at 70 °C, mixing every 10 min. Once cooled, the methanolic acid was transferred to test tubes and centrifuged at 2500 rpm for 10 min. The supernatant was then decanted into another furnaced culture tube (II) and 2 mL of DCM extracted double-distilled water was added. In order to recover any lipids not fully solubilised by the methanol solution, 2 x 3 mL of *n*-hexane was added to the extracted potsherds contained in the original culture tubes, mixed well and transferred to culture tube II. The extraction was transferred to a clean, furnaced 3.5 mL vial and blown down to dryness. Following this, 2 x 2 mL *n*-hexane was added directly to the H2SO4/ MeOH solution in culture tube II and whirlimixed to extract the remaining residues, then transferred to the 3.5mL vials and blown down until a full vial of *n*-hexane remained. Aliquots of the TLE's were derivatised using 20 µl BSTFA, excess BSTFA was removed under nitrogen and the derivatised TLE was dissolved in *n*-hexane prior to GC, GC-MS and GC-C-IRMS. Firstly, the samples underwent high-temperature gas chromatography

using a gas chromatograph (GC) fitted with a high temperature non-polar column (DB1-HT; 100% dimethylpolysiloxane, 15 m x 0·32 mm i.d., 0.1 µm film thickness). The carrier gas was helium and the temperature programme comprised a 50°C isothermal followed by an increase to 350° at a rate of 10° min^{-1} followed by a 10 min isothermal. A procedural blank (no sample) was prepared and analysed alongside every batch of samples.

4.12.10 Further analysis was carried out using the solvent extraction method. An internal standard was added to the sherd powder and they were solvent extracted by ultrasonication (chloroform/methanol 2:1 v/v, 30 min, 2 x 10ml). The solvent was evaporated under a gentle stream of nitrogen to obtain the total lipid extract (TLE). Aliquots of the TLE were trimethylsilylated (N,O-bis(trimethylsilyl)trifluoroacetamide 20 µL, 70° C, 1 h), and submitted to analysis by HTGC and HTGC-MS.

4.12.11 All FAMEs initially underwent high-temperature gas chromatography using a gas chromatograph (GC) fitted with a high temperature non-polar column (DB1-HT; 100% dimethylpolysiloxane, 15 m x 0·32 mm i.d., 0.1 µm film thickness). The carrier gas was helium and the temperature programme comprised a 50°C isothermal hold followed by an increase to 350°C at a rate of 10°C min^{-1} followed by a 10 min isothermal hold. A procedural blank (no sample) was prepared and analysed alongside every batch of samples. Further compound identification was accomplished using gas chromatography-mass spectrometry (GC-MS). FAMEs were then introduced by autosampler onto a GC-MS fitted with a non-polar column (100% dimethyl polysiloxane stationary phase; 60 m x 0.25 mm i.d., 0·1 µm film thickness). The instrument was a ThermoFinnigan single quadrupole TraceMS run in EI mode (electron energy 70 eV, scan time of 0·6 s). Samples were run in full scan mode (*m/z* 50-650) and the temperature programme comprised an isothermal hold at 50°C for 2 min, ramping to 300°C at 10° min^{-1}, followed by an isothermal hold at 300°C (15 min). Data acquisition and processing were carried out using the HP Chemstation software (Rev. C.01.07 (27), Agilent Technologies) and Xcalibur software (version 3.0). Peaks were identified on the basis of their mass spectra and gas chromatography (GC) retention times, by comparison with the NIST mass spectral library (version 2.0).

4.12.12 Carbon isotope analyses by GC-C-IRMS were also carried out using a GC Agilent Technologies 7890A coupled to an Isoprime 100 (EI, 70eV, three faraday cup collectors m/z 44, 45 and 46) via an Isoprime GC5 combustion interface with a CuO and silver wool reactor maintained at 850°C. Instrument accuracy was determined using an external FAME standard mixture (C11, C13, C16, C21 and C23) of known isotopic composition. Samples were run in duplicate and an average taken. The δ13C values are the ratios 13C/12C and expressed relative to the Vienna Pee Dee Belemnite, calibrated against a CO2 reference gas of known isotopic composition. Instrument error was ±0.3‰. Data processing was carried out using Ion Vantage software (version 1.6.1.0, IsoPrime).

Results

4.12.13 Lipid analysis and interpretations were performed using established protocols described in detail in earlier publications (e.g. Dudd and Evershed 1998; Correa-Ascencio and Evershed 2014). A total of 42 potsherds from 25 vessels from the site

were analysed, with a lipid recovery rate of 45% (n=19, interpretable profiles). The mean lipid concentration from the sherds (Table 11) was 1.2 mg g-1, with a maximum lipid concentration of 7.7 mg g-1 for sherd number NRL04. A further four sherds, NRL09, NRL12, NRL16 and NRL17 also yielded high lipid concentrations at 2.8, 2.4, 3.5 and 1.5 mg g-1, respectively. This likely indicates that these vessels were subjected to sustained use in the processing of high lipid-yielding commodities. The extracts comprised lipid profiles dominated by free fatty acids, palmitic (C16:0) and stearic (C18:0), typical of a degraded animal fat (Graph 4; Evershed *et al*. 1997a; Berstan *et al.* 2008).

4.12.14 GC-C-IRMS analyses were carried out on the sherds (n=19; Table 11) to determine the δ13C values of the major fatty acids, C16:0 and C18:0, and ascertain the source of the lipids extracted, through the use of the Δ13C proxy. The δ13C values of the C16:0 and C18:0 fatty acids from the lipid profiles are plotted onto a scatter plot along with the reference animal fat ellipses (Graph 5a). It has been established that when an extract from a vessel plots directly within an ellipse, for example, ruminant dairy, ruminant adipose or non-ruminant adipose, then it can attributed to that particular source. If it plots just outside the ellipse then it can be described as predominantly of that particular origin. However, it should be noted that extracts commonly plot between reference animal fat ellipses and along the theoretical mixing curves, suggesting either the mixing of animal fats contemporaneously or during the lifetime of use of the vessel due to the processing of different animal products (Mukherjee 2004; Mukherjee *et al*. 2005).

4.12.15 The majority of sherds (n=12) plot within the dairy reference ellipse (Graph 5a), suggesting these vessels were solely used to process dairy products. Two lipid residues (NRL28 and NRL34) plot inside the ruminant (cattle, sheep or goat) adipose ellipse (Graph 5a) suggesting these vessels were used to process solely ruminant carcass products, and a further two vessels plot between the ruminant adipose and dairy ellipses (NRL09 and NRL33) suggesting some mixing of these products either contemporaneously or during the lifetime of use of the vessel. A further two vessels (NRL01 and NRL13) plot between the ruminant and non-ruminant ellipses, suggesting mixing of these products in the vessels. Finally, vessel NRL29 plots close to the non-ruminant ellipse.

4.12.16 Ruminant dairy fats are differentiated from ruminant adipose fats when they display Δ13C values of less than -3.1 ‰, known as the universal proxy (Dunne *et al.* 2012; Salque 2012). Significantly, all vessels save five (NRL01, NRL13, NRL28, NRL29 and NRL34) plot within the ruminant dairy region (Table 11), confirming they were used to process dairy products, such as milk, butter and cheese, from ruminants. It should be noted that sherd NRL09, with a Δ13C value of -3.3 ‰, plots at the top of the dairy range suggesting possible minor mixing with carcass products.

4.12.17 Four sherds, NRL01, NRL13, NRL28 and NRL34, with Δ13C values of -2.4, -2.1, -2.2 and -2.5 ‰, respectively, plot firmly within the ruminant carcass region. The remaining sherd, NRL29 with a Δ13C value of 0.2 ‰, plots within the non-ruminant region, although at the extent of the range, confirming it was used mainly to process non-ruminant products, presumably pig (Graph 5b).

Vessel use

4.12.18 Vessels 36 (sherds NRL11 and NRL12, wall and base), 37 (sherds NRL14 and NRL15, middle wall and lower wall) and 74 (sherds NRL41 and NRL42, both middle wall) all displayed very closely correlated Δ13C values (Table 12), suggesting dairy product processing. Interestingly, lipid concentrations for the wall and base sherds for vessel 36 were markedly different (Table 12) at 82.3 and 2425.2 µg g-1 for the wall and base, respectively.

4.12.19 This may suggest the placement of a dairy product on the base of vessel 36, leading to some very minor capillary action of the product up the vessel wall, but no actual processing (cooking). The high lipid concentration in the base suggests prolonged use so this vessel may have been used to store dairy products over a long period. Alternatively, dairy products, such as butter, cheese and yoghurt, could have been placed in the vessel, probably just covering the base, being processed at very low temperatures, which, again, may inhibit significant capillary action. A similar lipid distribution occurs for vessel 37 although the lipid concentration in the lower wall is significantly lower than that of vessel 36 (Table 12). This may suggest a smaller amount of dairy product was placed in the vessel or that it was used less. Lastly, the sherds analysed from vessel 74 both came from the middle wall. However, distributions were again different, but it may be that one of the sherds came from a lower part of the vessel than the other or that fats were preferentially absorbed into particular areas of the vessel wall. If available, further information on these sherds would be helpful. However, the above comments come with a caveat that we know (experimentally) these concentrations are vastly lower than we know the uptake capacities of such ceramics to be – so all will have been affected by degradation and leaching over time.

4.12.20 However, the lipid results from vessels 58 and 65 are significantly different (Table 13). Two wall sherds from vessel 58 were analysed, revealing Δ13C values which suggest the vessel was used to process different commodities, i.e. sherd NRL28 suggests the vessel was used to process ruminant carcass products and sherd NRL29, non-ruminant products (Table 13). This may suggest that the sherds are not, in fact, from the same vessel. Alternatively, the vessel may have been predominantly used for ruminant carcass processing but, on occasion, non-ruminant products were processed, with fat from these preferentially absorbing into particular areas of the vessel wall. Interestingly, it is the non-ruminant (pig) products which display a higher lipid concentration.

4.12.21 Vessel 65, which is one of the seven large vessels set into a pit in the roundhouse, comprised two lower wall sherds, that yielded Δ13C values (Table 13) showing ruminant dairy (-3.7 ‰, NRL33) and ruminant adipose (-2.5 ‰, NRL34). Due to their context, it can safely be assumed that these sherds did come from the same vessel, however, it would be useful to know the exact position of the sherds in the vessel wall to further investigate this. It is interesting that the ruminant dairy Δ13C values are at the extent of the range so this vessel may have been used to process both types of products (dairy and meat), whether contemporaneously or at different times, with preferential absorption, and possible overprinting, into some parts of the vessel.

4.12.22 The pot boiler stones did not yield any lipids.

Conclusion

4.12.23 The objective of this investigation was to determine whether organic residues were preserved in 42 Trevisker-related group potsherds, from 25 vessels, from the middle Bronze Age phase at Nerrols Farm. Of these, 19 sherds from 14 vessels yielded lipid profiles indicative of a degraded animal fat, making a lipid recovery rate of 45%. Sherds from different parts (rim, body, base) of five vessels were analysed.

4.12.24 Of these, GC, GC-MS and GC-C-IRMS analyses demonstrated that 14 potsherds were used to process predominantly dairy products, four potsherds comprised ruminant carcass products and one potsherd was used to process non-ruminant products. These results demonstrate the majority of vessels (63%) were used to process dairy products. However, these data are complicated by the results from the five potential vessels where two sherds were analysed. Of these, three were shown to have been used for processing dairy products, but sherds from the other two vessels, 58 and 65, yielded differing results, requiring further investigation. It would firstly be helpful to confirm these potsherds came from the same vessel. Following confirmation of this, analysis of more sherds from different areas of the vessels may shed further light on this.

4.12.25 Sherds (n=5) from three of the seven vessels (numbers 53, 65 and 74) set into the ground all yielded results, with 53 and 74 being used to process or store dairy products. As discussed, the two sherds from vessel 65 yielded both ruminant dairy and ruminant adipose Δ13C values suggesting the vessel may have been used to process both types of products (dairy and meat).

4.12.26 Of the other vessels analysed (six sherds from vessel numbers 5, 9, 39, 58 and 70), of the same type as those set into the pits, three yielded ruminant dairy Δ13C values (vessels 9, 39 and 70) and one ruminant adipose (vessel 5). The remaining vessel, number 58, yielded two sherds with Δ13C values which suggest the vessel was used to process different commodities, i.e. ruminant and non-ruminant carcass products.

4.12.27 Sherds from vessels that were of different type to those set into the ground (eight sherds from six vessels 10, 27, 35, 36, 37 and 38) all yielded ruminant dairy profiles, save for vessel 35 which was used to process ruminant adipose products.

4.12.28 Lipid concentrations from sherds from vessels 36 and 37 suggest the placement of a dairy product on the base of the vessel, leading to some very minor capillary action of the product up the vessel wall, but with no actual processing (cooking) occurring in the vessel. The high lipid concentration in the base suggests prolonged use so these vessels may have been used to store dairy products over a long period.

4.12.29 Interestingly, two rim sherds were supplied for analysis (vessels 10 and 38). Both yielded high concentrations of lipids at 7.7 and 3.5 mg g-1 from ruminant dairy processing. This suggests, in contrast to vessels 36 and 37, that these vessels were either filled to the rim with butter or may have been used for the boiling of dairy products, where lipids were preferentially absorbed into the rim. Analysis of more sherds from different parts of the vessel may help shed light on this.

4.12.30 Finally, lipid concentrations from those pots set into the ground (NRL25, NRL33/34 and NRL 41/42), hypothesised to be storage or processing (using pot boiler stones) vessels, do appear to contain lower concentrations of lipid than other vessels from the site. This appears to bear out the hypothesis although it should be noted that this is a small dataset and may be a feature of degradation processes. The pot boiler stones themselves did not yield any lipids although it is difficult to hypothesise why. Any lipids originally present may have been in low concentrations and have undergone degradation in the burial environment or may simply have not adhered to the pot boilers during processing.

Lab number	Vessel Number	Context	Part of the pot	Context type	Pot context type	Lipid concentration (ug g^{-1})	Total lipid in extract (ug)	$\delta^{13}C_{16:0}$	$\delta^{13}C_{18:0}$	$\Delta^{13}C$	Attribution
NRL01	5	1057	Wall	Main enclosure ditch	Same as set into ground	119.0	265.3	-27.9	-30.3	-2.4	Ruminant adipose
NRL03	9	1069	Wall	Main enclosure ditch	Same as set into ground	231.3	501.2	-29.0	-34.6	-5.6	Ruminant dairy
NRL04	10	1074	Rim/Wall	Main enclosure ditch	Different to set into ground	7723.2	9688.7	-28.2	-32.7	-4.5	Ruminant dairy
NRL09	27	1258	Wall	Main enclosure ditch	Different to set into ground	2765.6	5148.0	-28.3	-31.6	-3.3	Ruminant dairy
NRL11	36	1268	Wall	Main enclosure ditch	Different to set into ground	82.1	141.7	-28.5	-33.4	-4.9	Ruminant dairy
NRL12	36	1268	Base?	Main enclosure ditch	Different to set into ground	2425.2	2833.1	-28.0	-32.7	-4.7	Ruminant dairy
NRL13	35	1268	Lower Wall	Main enclosure ditch	Different to set into ground	147.7	307.2	-27.6	-29.7	-2.1	Ruminant adipose
NRL14	37	1269	Middle Wall	Main enclosure ditch	Different to set into ground	99.3	207.3	-29.0	-34.0	-5.0	Ruminant dairy
NRL15	37	1269	Lower Wall	Main enclosure ditch	Different to set into ground	327.8	682.5	-28.6	-33.5	-4.9	Ruminant dairy
NRL16	38	1269	Rim	Main enclosure ditch	Different to set into ground	3483.5	4787.7	-28.6	-33.0	-4.4	Ruminant dairy
NRL17	39	1269	Wall	Main enclosure ditch	Same as set into ground	1456.0	3090.4	-29.6	-33.6	-4.1	Ruminant dairy
NRL25	53	1313	Base	Pit inside roundhouse	Set into ground	110.0	299.0	-29.1	-33.7	-4.6	Ruminant dairy
NRL28	58	1327	Wall	Main enclosure ditch	Same as set into ground	369.4	1217.6	-29.7	-31.9	-2.2	Ruminant adipose
NRL29	58	1327	Wall	Main enclosure ditch	Same as set into ground	764.4	993.7	-27.8	-27.6	0.2	Non-ruminant adipose
NRL33	65	1360	Lower Wall	Pit inside roundhouse	Set into ground	829.4	1078.9	-28.8	-32.4	-3.7	Ruminant dairy
NRL34	65	1360	Lower Wall	Pit inside roundhouse	Set into ground	357.5	996.3	-29.3	-31.8	-2.5	Ruminant adipose
NRL38	70	1382	Wall	Pit inside roundhouse	Same as set into ground	271.9	629.6	-28.6	-32.8	-4.2	Ruminant dairy
NRL41	74	1387	Middle Wall	Pit inside roundhouse	Set into ground	73.7	212.8	-28.0	-33.1	-5.1	Ruminant dairy
NRL42	74	1387	Middle Wall	Pit inside roundhouse	Set into ground	464.8	912.4	-28.5	-33.5	-5.0	Ruminant dairy

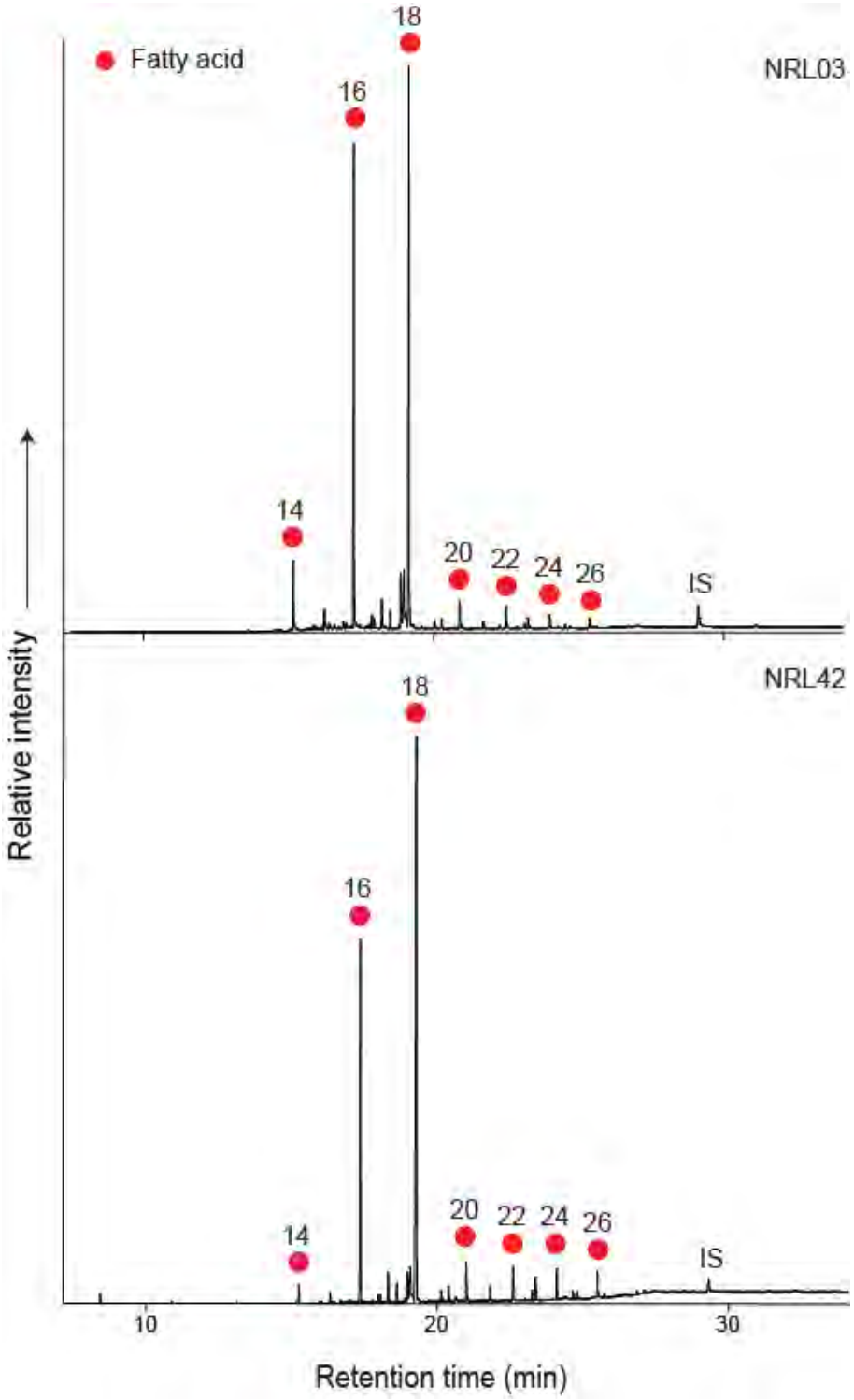
Table 11: Laboratory number, vessel number, context, part of vessel, context type, pot context type, lipid concentrations (µg g^{-1}), total lipid concentrations in extracts (µg), $\delta^{13}C$ and $\Delta^{13}C$ values and attributions of vessels from Nerrols Farm. Colours denote vessels with more than one sherd

Vessel number	Lab number	Part of the pot	Pot context type	Lipid concentration (ug g^{-1})	$\Delta^{13}C$	Attribution
36	NRL11	Wall	Different to set into ground	82.1	-4.9	Ruminant dairy
36	NRL12	Base?	Different to set into ground	2425.2	-4.7	Ruminant dairy
37	NRL14	Middle Wall	Different to set into ground	99.3	-5.0	Ruminant dairy
37	NRL15	Lower Wall	Different to set into ground	327.8	-4.9	Ruminant dairy
74	NRL41	Middle Wall	Set into ground	73.7	-5.1	Ruminant dairy
74	NRL42	Middle Wall	Set into ground	464.8	-5.0	Ruminant dairy

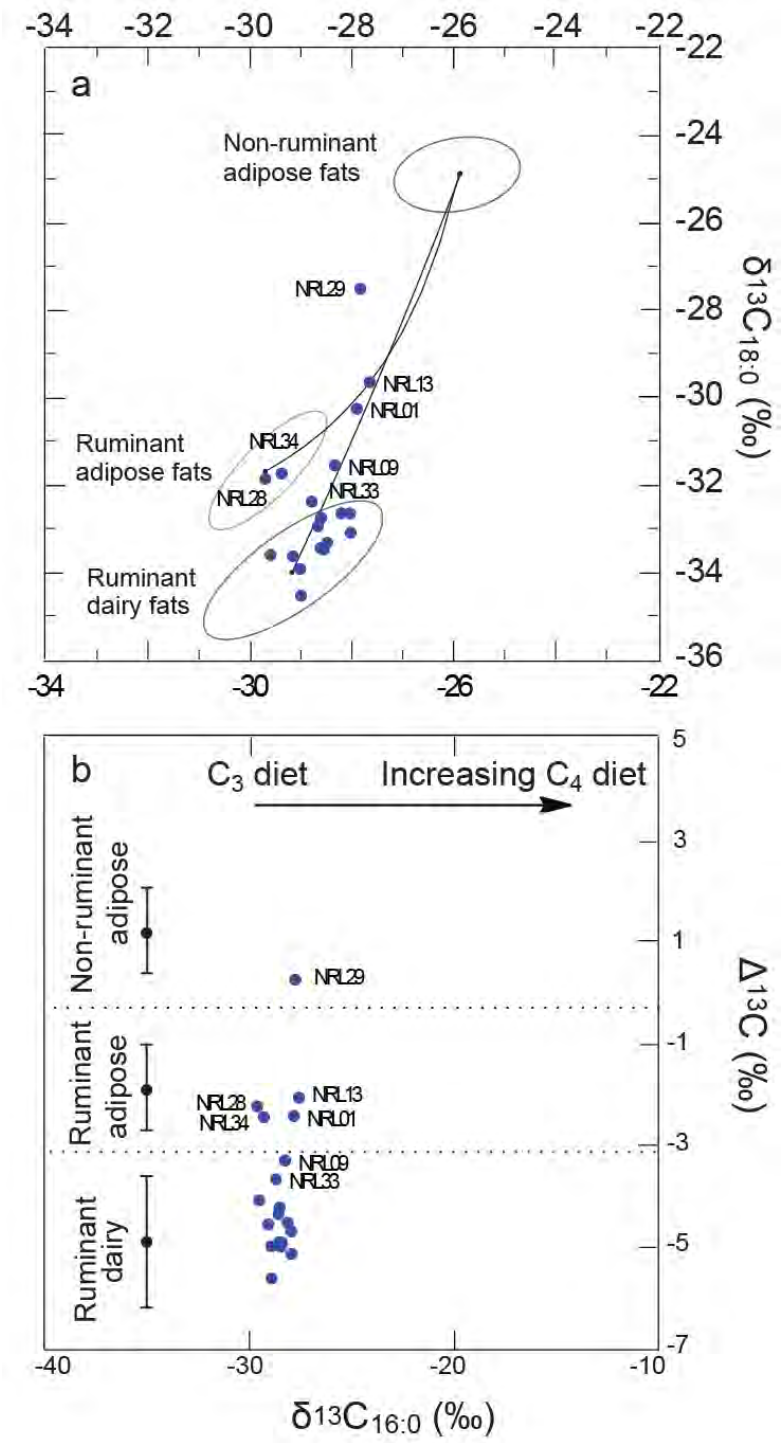
Table 12: Subset of pottery vessels with two sherds from the same vessels, showing vessel number, lab number, part of the pot, pot context type, lipid concentrations (µg g-1), Δ13C values and attributions of vessels from Nerrols Farm

Vessel number	Lab number	Part of the pot	Pot context type	Lipid concentration (ug g^{-1})	$\Delta^{13}C$	Attribution
58	NRL28	Wall	Same as set into ground	369.4	-2.2	Ruminant adipose
58	NRL29	Wall	Same as set into ground	764.4	0.2	Non-ruminant adipose
65	NRL33	Lower Wall	Set into ground	829.4	-3.7	Ruminant dairy
65	NRL34	Lower Wall	Set into ground	357.5	-2.5	Ruminant adipose

Table 13: Subset of pottery vessels with two sherds from the same vessels, showing vessel number, lab number, part of the pot, pot context type, lipid concentrations (µg g^{-1}), $\Delta^{13}C$ values and attributions of vessels from Nerrols Farm



Graph 4. Partial gas chromatograms of trimethylsilylated FAMEs from Nerrols Farm Middle Bronze Age pottery extracts NRL03 (vessel 9) and NRL42 (vessel 74), circles, *n*-alkanoic acids (fatty acids, FA); IS, internal standard, C_{34} *n*-tetratriacontane.



Graphs 5a and 5b. **a**. $\delta^{13}C$ values for the $C_{16:0}$ and $C_{18:0}$ fatty acids for archaeological fats extracted from Nerrols Farm potsherds. The three fields correspond to the P = 0.684 confidence ellipses for animals raised on a strict C_3 diet in Britain (Copley *et al.* 2003). Each data point represents an individual vessel. **b** shows the $\Delta^{13}C$ ($\delta^{13}C_{18:0} - \delta^{13}C_{16:0}$) values from the same potsherds. The ranges shown here represent the mean ± 1 s.d. of the $\Delta^{13}C$ values for a global database comprising modern reference animal fats from Africa (Dunne *et al.* 2012), UK (animals raised on a pure C3 diet) (Dudd and Evershed, 1998), Kazakhstan (Outram *et al.* 2009), Switzerland (Spangenberg *et al.* 2006) and the Near East (Gregg *et al.* 2009), published elsewhere

5 DISCUSSION

5.1 Early Neolithic

5.1.1 The early Neolithic pit cluster consisted of seven closely spaced pits that had clearly been purposefully arranged over an area of less than 3m. Three more scattered pits elsewhere on the site could also be of the same date. The finds assemblage from the pit cluster is limited, including lithics and pottery sherds of probable Plain Bowl type, and does not particularly suggest any purposeful deposition. The Plain Bowl tradition is thought to have commenced in southern Britain between 3970 and 3715 cal BC and ended between 3375 and 3095 cal BC (Whittle *et al*. 2011). The presence of flint, Greensand chert and Portland chert shows that a variety of lithic resources were used, with the Portland chert deriving from *c* 70km away on the Isle of Portland, or possibly from other smaller deposits in Dorset or Wiltshire (Stewart 2015). Hazelnuts were gathered for food, and alder wood used for fuel.

5.1.2 Clusters of early Neolithic pits containing Plain Bowl pottery have been recognised elsewhere in Somerset. At Ham Hill, seven pits were found over *c* 7m, although these were arranged in a less orderly fashion (Brittain *et al.* 2014, 12–13, fig. 6). At Milsoms Corner, four pits were found over *c* 6m with a fifth *c* 8m distant (Tabor and Randall 2017, fig. 2). At neighbouring Cadbury Castle, the early Neolithic pits were more dispersed (Tabor and Randall 2017, fig. 8). The Milsoms Corner pits were interpreted alongside stake holes, a hollow and an occupation layer as being part of a single or a few near-contemporary domestic occupation events (ibid., 44). The radiocarbon dates could support activity of a very limited span. The close spacing and purposeful arrangement of the pits at Nerrols Farm also suggests they were dug and filled within a short period of time to one another.

5.1.3 The fragmentary Neolithic evidence from excavations and evaluations in the environs of the site does perhaps hint at activity beyond the domestic level. Three linear ditches have been dated to the period, with the finds assemblages from the early Neolithic example at Nerrols Farm (north-west; Cox and Samuel 2001, 58) and the middle Neolithic ditch at Monkton Heathfield (Oxford Archaeology 2004, 12) in particular suggesting the features genuinely are of this early date. The ditch at Staplegrove (East; Cotswold Archaeology 2016) might be later and the Neolithic finds residual. Neolithic ditches are almost always associated with funerary and/or ceremonial monuments, and the presence of two or three linear ditches within a single landscape alongside multiple areas of pits hints at the possibility of a complex of features. There are numerous undated cropmarks to the north of Taunton, and two respectively *c* 320m (HER 44451) and *c* 1km (HER 44238) to the north of Nerrols Farm might be relevant. These are elongated rectangular features, measuring *c* 48m by 25m and *c* 57m by 23m respectively. This can be compared to the middle Neolithic enclosure at Netherfield Farm, measuring *c* 85m by 20m (Mudd and Brett 2012, 12). The cropmarks could, of course, be later prehistoric or Roman in date. Numerous archaeological works in the environs of the site have generally not uncovered Neolithic evidence and the quite wide spacing of the ditches, over *c* 3.4km, diminishes the possibility of a complex of Neolithic features.

5.2 Early Bronze Age

5.2.1 The small ring ditch at the northern edge of the site has produced a radiocarbon date of 1895–1745 cal BC, though as this derived from the upper fill it is possible that that the ring ditch was first constructed at an earlier stage of the late Neolithic/early Bronze Age. Finds were limited to a few lithics and small residual sherds of early Neolithic pottery. The ring ditch may well have had a funerary purpose, though no bone was recovered. Bone survival on the site was however very poor, and any central burial within the area enclosed by the ring ditch would have been obliterated by the post-medieval ditch cutting through the centre of the feature.

5.2.2 Cropmarks that may relate to ring ditches are not common in the vicinity of the site, although a larger (19m diameter) example was discovered in a nearby evaluation at Staplegrove (East), associated with four cremation burials of probably early to middle Bronze Age date (Cotswold Archaeology 2016). Early Bronze Age pottery and possible flint of the period have also been found close to the site, demonstrating the presence of other early Bronze Age activity in the area.

5.3 Middle Bronze Age

Settlement form

5.3.1 The middle Bronze Age enclosure showed two phases of construction, the initial phase comprising an L-shaped ditch. Similar L-shaped middle Bronze Age enclosures have been identified in many parts of southern Britain (eg Lambrick 2009). It is possible that the enclosure circuit was completed by a bank or some other form of barrier that has left no archaeological trace. In its second phase the enclosure was subrectangular with entrances on its eastern and western sides. Radiocarbon dates obtained from the second phase enclosure ditch indicate that it was in use for a relatively limited period during the 14th century cal BC (see below). The enclosure contained a probable roundhouse and a small number of other features, but no features of this period could be identified outside of the enclosure.

5.3.2 Until recently, middle Bronze Age settlement was virtually unknown in Somerset, other than the coastal site at Brean Down (Bell 1990). Development-led excavation has however dramatically changed this picture in the last few years. Subrectangular middle Bronze Age enclosures comparable to that at Nerrolls Farm have been excavated at Rodway (Hart and Mudd 2018) and Aller (Allen *et al.* forthcoming), and a larger complex of conjoined settlement enclosures has been investigated 9.5km to the north-east of Nerrols Farm at Bridgwater Gateway (Simmonds in prep.). As at Nerrols Farm, the middle Bronze Age enclosures at all of these sites were preceded by early Bronze Age activity – taking the form of a funerary enclosure at Aller and pits at Rodway and Bridgwater Gateway – but no late Bronze Age activity was evident. More locally, a pair of subrectangular middle Bronze Age enclosures have recently been excavated 1.5km to the east of Nerrols Farm at Hartnells Farm, Monkton Heathfield (Andrew Mudd pers. comm.). In addition, there are at least two dozen rectilinear cropmark enclosures recorded in the HER within *c* 2.5km of the site, many of which are of comparable size to the Nerrols Farm enclosure (*c* 30–57m by *c* 18–48m) and could potentially be of similar date.

5.3.3 The fill sequence in some of the slots of the second phase enclosure ditch suggest that the early deposits derived from outside of the enclosure. This pattern was far from clear as most slots showed even filling, and one appeared to show deposition mainly from the internal side. This fill sequence may tentatively suggest the presence of an external bank, although this is far from certain. An external rather than internal bank would be a rare feature for a later prehistoric enclosure, being more usually associated with Neolithic and early Bronze Age ceremonial monuments. However, there is good evidence for an external bank at the much larger middle Bronze Age hilltop enclosure at Norton Fitzwarren 4.5km to the west (Ellis 1989, 63). This led to the tentative interpretation that the site was 'deliberately non-defensive but ?ceremonial' (ibid., 66). If the bank was positioned outside of the ditch at Nerrols Farm, this would suggest that the enclosure had a similar non-defensive role, and possibly referenced earlier prehistoric monuments.

5.3.4 Analysis of the pottery from the second phase enclosure ditch shows that the sherds in the higher fills tend to be larger and better preserved than those in the lower fills. If it is assumed that pottery in the lower parts of the ditch was deposited during the life of the settlement and that in the upper fills at or after its abandonment, this might suggest that the ditch was deliberately backfilled, in part using relatively fresh midden material. If, on the other hand, the ditch slowly silted after abandonment, it might be expected that the pottery would be more broken and abraded due to longer periods of weathering. It is possible that pots were smashed and deposited as part of this backfilling event, although there is no other specific evidence for this. There is a very small amount of vitreous material that may be from a destruction-conflagration event from upper fill of ditch 1414, although what this material relates to is very uncertain.

5.3.5 The putative roundhouse within the enclosure comprised a C-shaped gully surrounding an irregular cluster of postholes and pits, some of which contained pots that had been deliberately set upright into the ground (see below). Middle Bronze Age roundhouses from lowland southern Britain are generally defined by post-rings rather than gullies. However, houses of very similar form – with C-shaped gullies surrounding a cluster of internal features – have been uncovered at Bridgwater Gateway (two examples) and Sutton Bridge, Queen Camel, Somerset (Wessex Archaeology 2015). This may thus represent a local roundhouse 'type', though the exact constructional form that these buildings took is not clear. Some of the pits within the Nerrols Farm roundhouse intercut, which could suggest that the building was occupied for a significant length of time, but it is also possible that not all of the features ostensibly associated with this structure were actually contemporary with its primary use. Elsewhere in the South-West Peninsula, investigation of middle Bronze Age roundhouses with stratified deposits has shown that these buildings could have complex histories; artefacts could be deposited or new features dug during abandonment rituals (see below), or when the site of the abandoned building was later reused for a different purpose. For example, at Scarcewater, Cornwall, a ring gully was dug around part of a roundhouse only *after* this building had fallen out of use, as part of a sequence of ritualised acts of closure (Jones 2015).

Economy and diet

5.3.6 Charred plant remains were generally sparse from middle Bronze Age contexts, suggesting that crop processing was not a major activity at this settlement. Emmer wheat and barley were identified, however, and a fragment of a saddle quern also suggests the consumption of cereals. The bronze sickle previously recovered as a stray find from Nerrols Farm is likely to date to the late Bronze Age, and thus does not evince agricultural activity contemporary with the enclosure.

5.3.7 No animal bones had survived the harsh soil conditions, but indirect evidence for livestock farming was obtained from the residue analysis of the middle Bronze Age pottery. Residues of dairy fats were present on the majority of the sampled vessels, with residues of ruminant (probably cattle, sheep or goat) and non-ruminant (probably pig) fats also present on some vessels. These results echo those from the coastal middle Bronze Age settlement at Brean Down, where again more than half of the sampled vessels had dairy fat residues (Bell 1990). Isotopic analysis of cattle and sheep bones from Brean Down and from Redwick and Peterstone on the Gwent levels suggest that livestock was grazed on the coastal saltmarshes, leading Bell to argue for a "correlation between cattle herding, saltmarsh grazing and a dairying economy in the Bronze Age Severn Estuary" (ibid., 263–4). The demonstration that dairying was also a major element of the economy at Nerrols Farm – a site located well away from the coastal saltmarshes – is therefore of significant interest. We have no evidence to show whether livestock husbandry also provided the inhabitants of Nerrols Farm with wool; there was a notable absence of the cylindrical loomweights that are found at many middle Bronze Age settlements, as at Queen Camel (Newton 2018), Bridgwater Gateway and Aller in Somerset.

Metalworking

5.3.8 The most notable artefact recovered from the middle Bronze Age settlement was a fragment of a fired clay mould that had been used for casting a bladed implement, possibly a rapier. The same context also contained a fired clay block that could perhaps have been used as some form of hearth or oven furniture, though the lack of vitrification or visible metal residues means that there is no evidence it was used in the metalworking process.

5.3.9 Somerset is well known for its middle Bronze Age metalwork, specifically from the Taunton phase (*c* 1400–1275 BC). Despite this, the mould fragment from Nerrols Farm represents the first evidence for bronze casting from an excavated middle Bronze Age site in Somerset; a bronze mould for casting spearheads from East Pennard was unstratified. Moulds or crucibles have however been recovered from a number of settlements elsewhere in southern Britain. Such remains typically occur as single fragments or small assemblages suggestive of small-scale casting events, though whether these represent the activities of resident part-time craftworkers or the visits of itinerant smiths is uncertain. If the clay mould from Nerrols Farm was indeed for a rapier, it would be slightly unusual, as most known rapier moulds are made of stone (Webley *et al*. 2020).

Pots set into the ground

5.3.10 Another significant feature of the site was the discovery of seven pottery vessels set into the ground. Five of these within the roundhouse, with two instances where one pot cut another. Only the lower parts of the vessels were discovered. The site has witnessed substantial truncation with only those features dug into the natural surviving. It is assumed that complete vessels were originally placed within the pits, possibly standing proud of the ground surface, but middle and upper portions were subsequently destroyed. A rim sherd was only found in one of the vessels and it is not certain that this belonged to the same pot.

5.3.11 While urned cremation burials are a frequent feature of the middle Bronze Age and often utilised the same types of pots used in the domestic sphere (Ellison 1980), none of the vessels set into the ground at Nerrols Farm contained cremated remains. Pots in such settings without cremated remains are a recurring if not particularly frequently feature of middle Bronze Age sites of the South-West Peninsula (Cornwall, Devon and Somerset), and more widely in southern Britain. Indeed, urned cremation burials in the south-west appear to be less frequent than non-funerary pots set into the ground, with very few true cremation urns excavated in the south-west in the modern era where a middle Bronze Age date is secure (Caswell and Roberts 2018, data). Urned cremation burials are in fact very rare from settlements in the south-west, and in cases where middle Bronze Age cremation burials and settlement are present on the same sites, the burials tend to precede the settlement activity and are not strictly associated (Scarcewater: Jones and Taylor 2010, 26; Bridgwater Gateway: Simmonds in prep.). It seems unlikely that the pots set into the ground at Nerrols Farm are part of some form of funerary activity, such as a cenotaph burial.

5.3.12 Middle Bronze Age domestic sites in the south-west with similar pots set into the ground include Bridgwater Gateway (Simmonds in prep.), Crablake Farm (Mudd and Joyce 2014, 34), Tolgarrick Farm (Hughes and Farnell 2016, 12–13), Topsham Road (JMHS 2008, 49; Raymond 2008, 54, although it is uncertain if this was in a ditch or a pit), Chudleigh (Quinnell forthcoming a), and probably Aller Court Farm (Allen *et al.* forthcoming). The examples from Chudleigh and Topsham Road are particularly comparable as, like vessel 69 from Nerrols Farm, the Chudleigh example was filled with stone which, also like vessel 69, comprised examples that had been subject to thermal shock, as well as possible muller (Quinnell forthcoming a). The pit at Aller Court Farm containing the base of a pottery vessel also produced a perforated stone object (Allen *et al.* forthcoming). The Topsham Road vessel also contained a fragment of quern stone (JMHS 2008, 49), and like vessel 69 had an internal fingertipped cross cordon on the base. The Tolgarrick Farm pot was also associated with a worked stone object (Hughes and Farnell 2016, 12–13). Outside of the south-west peninsula, middle Bronze Age pots set into the ground not containing cremated remains are also known on settlements, for example in Berkshire (Barnes and Cleal 1995, 13; Simmonds *et al.* 2009, 17) and Greater London (Framework Archaeology 2010, 181).

5.3.13 If the pots from Nerrols Farm did not have a funerary role, three possible purposes present themselves. Firstly, the presence of heat-cracked stones within one of the pots raises the possibility that they were used for heating water; in other words, the stones were heated in a fire and then used as ‘pot boilers’. The practicality of using ‘pot boilers’ in this way has been questioned (Seager Thomas 2010), however, and it should

also be stressed that none of the other pots contained heat-affected stones, and such stones were in fact essentially absent from the rest of the site.

5.3.14 The second possibility is that the pots served for storage, perhaps for foodstuffs or water, or for some kind of food processing. It is notable that there are otherwise no obvious storage pits or granary structures at this site. Burying storage pots would serve to make the vessels immovable, but more secure. Coarse middle Bronze Age pots of all regional varieties can be large, cumbersome, and poorly fired with friable fabrics making them unsuited to being regularly moved, and setting them in pits might be functionally more desirable. One of the pots, vessel 65 in setting 1359, was missing its base, although the junction between the lower wall and the base was present showing that the pot was placed upright in the feature. In this case the incomplete pot may have served more as a pit liner, stabilising both the environment within the pit and the pit walls. A similar pot apparently missing its base is reported from Crablake Farm, although the base appears to be present in the accompanying photograph (Mudd and Joyce 2014, 34, fig. 2.22).

5.3.15 The selection of vessel 69 for use as a buried storage vessel may seem incongruous, as the unusual decoration on its base would have been covered up by whatever was contained in the vessel. This could however have been quite deliberate – in other words, the decoration was intended to usually be hidden, but to be revealed at certain times to certain people.

5.3.16 If the sunken pots were used for storage, then it is notable that there was no consistent difference in the lipid residues from these vessels compared to those that were not buried in the ground. This might suggest that the pots in the ground had a use-life prior to being buried; or that pots could be used for the same storage or food processing function whether sunken or not; or that different activities produced similar lipid signatures. For example, a pot used to store butter might produce a similar lipid signature to one that was used in the production of yoghurt.

5.3.17 The third possible interpretation of the sunken pots is that they were buried as offerings or in some other ritualised gesture. The observation that some of the pots within the roundhouse intercut could suggest that vessels were deposited at different stages of the history of the building. This could mirror practices observed elsewhere in the South-West Peninsula and more widely across southern Britain, in which offerings were made to mark different stages in the life-histories of houses and the people that inhabited them (Brück 1999; Nowakowski 2001; Jones 2015). Under this interpretation, pot 74 could have been deposited to mark the foundation of the household or an early stage of its development, and its location was remembered and selected for the deposition of vessel 69 at a later date, perhaps when the building was abandoned. Vessel 69 may have been selected for this purpose due to its unusual decoration. The subsequent filling of vessel 69 with burnt stones and a fragment of a quern imported from Cornwall could also have formed part of this closure rite. Examples from elsewhere in the south-west of pots placed in roundhouses as part of ‘ritualised’ practices include Tolgarrick Farm, Cornwall. Here a pot appears to have been deposited as part of an abandonment rite as it was placed within a structural posthole of the roundhouse, apparently after the post had been removed. The house was then burnt down (Hughes and Farnell 2016, 12–13, 56). This pot differs from the

Nerrols Farm examples as it was not set snugly within the feature, the pot being much smaller than its receptacle.

5.3.18 The question of the purpose of the sunken vessels at Nerrols Farm cannot be conclusively resolved. However, it can be suggested that they are most likely to have had a purpose in food storage and/or processing, with the residue evidence suggesting that this often involved dairy products. This does not preclude the pots then subsequently becoming involved in ritualised abandonment practices, as may have happened in the case of vessel 69.

Settlement horizon in the 14th century

5.3.19 Radiocarbon dating indicates that the enclosure ditch probably belonged to the 14th century cal BC. Analysis of radiocarbon dates from middle Bronze Age settlements in the south-west shows that the 14th century is disproportionately favoured, with far fewer sites mainly dating to the 15th, 13th or 12th centuries cal BC. This includes the Somerset sites of Bridgwater Gateway (Simmonds in prep.), possibly Norton Fitzwarren (Ellis 1989, if the Taunton hoard is contemporary with the enclosure), Field Farm (Leach 2009, 60; see Davies in prep.), and Rodway (Hart and Mudd 2018; Field Farm and Rodway probably also extend into the 13th century cal BC). Queen Camel appears to date mainly to the 15th century cal BC (Barclay and Wyles 2018). The extent that this represents a population boom or a period where settlement was more visible is not known, and it is likely that both factors are partly responsible. The preceding early Bronze Age is characterised by settlements that have very poor archaeological visibility, and it is possible that less visible settlement patterns were also apparent in the latter part of the second millennium BC.

5.3.20 This surge in settlement visibility around the 14th century is mirrored by metalwork. The Taunton phase mainly dates to this century (*c* 1400–1275 BC; Needham *et al.* 1997, 82), with items and hoards in Somerset belonging to the Taunton phase much more numerous than metalwork of the preceding Acton phase or subsequent Penard phase (compare Needham 2017, fig. 4; Roberts 2007, fig. 5). At first sight this might again suggest a population spike in the 14th century cal BC, although archaeological metalwork assemblages are also subject to high levels of selectivity and these are not straightforward proxies for material in ancient circulation. While further evidence is needed to securely interpret population fluctuations, increased settlement and metalwork visibility might still be related. The same social processes may have driven the construction of both the enclosure ditches that make settlements of the period particularly visible, and deposition of metalwork, particularly the ornaments that characterise the period.

5.4 Middle Iron Age

5.4.1 Evidence for middle Iron Age settlement comprised two roundhouses and number of possibly associated pits and postholes. This could represent the continuation of an Iron Age site previously investigated 200m to the west (Cox and Samuel 2001). The sparse finds assemblage included a small amount of pottery – of which one vessel was in the South Western Decorated style – and burnt animal bone. The scant quantities of charred plant remains recovered from the environmental samples provides no

indication that crop processing was a major activity. Similar roundhouses defined by penannular gullies are known from middle and late Iron Age settlements elsewhere in Somerset, as at Bridgwater Gateway/Huntworth (Simmonds in prep.; Powell *et al*. 2008).

5.5 Early medieval

5.5.1 Features of early medieval date comprised two pits, one of which contained an iron whittle-tang knife while the other produced a radiocarbon date that could be contemporary (cal AD 665–770). A number of undated pits, postholes and ditches lay nearby and might also belong to the same period, though equally they could have been associated with the adjacent middle Iron Age settlement. Traces of earlier medieval activity were also slight from the immediately neighbouring investigations, though an earlier radiocarbon date of cal AD 425–645 has been obtained from the site just to the west at Nerrols Farm (north-west; Cox and Samuel 2001, 56), and a later date of cal AD 890–985 from the excavation a short distance to the south at Nerrols Farm phase 1 (Rainbird forthcoming). This dating evidence could suggest that the area around Nerrols Farm saw periodic settlement shifts during the course of the early medieval period.

5.5.2 While the remains from Nerrols Farm are sparse, they are of some interest: early medieval settlement evidence pre-dating the 10th century is rare in Somerset due to the absence of pottery and scarcity of other datable finds (Webster 2000; 2007). More substantial remains from this period have recently been excavated at Bridgwater Gateway, comprising a ditched enclosure radiocarbon dated to the 6th-7th century cal AD and a group of iron smelting furnaces dated to the 5th-7th century cal AD. Notably, none of these features produced any material culture other than iron slag or charcoal (Simmonds in prep.). The discoveries at Nerrols Farm and Bridgwater Gateway underline the need in this region for radiocarbon dating to identify early medieval sites that may otherwise go unrecognised.

6 PUBLICATION AND ARCHIVING

6.1 Publication

6.1.1 An edited version of this report will be submitted to the *Proceedings of the Somerset Archaeological and Natural History Society*.

6.2 Archiving, retention and dispersal

6.2.1 The site archive is currently held by OA and will be deposited in due course with the South West Heritage Trust under the site code TTNCM:32/2019.

6.2.2 It is recommended that the finds from the site be retained in the archive, other than those from the post-medieval features.

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APPENDIX A SITE SUMMARY DETAILS

Site name:	Nerrols Farm, Cheddon Fitzpaine, Somerset
Site code:	TTNCM: 32/2019
Grid reference	ST 2415 2680
Type:	Excavation
Date and duration:	May–July 2019. Seven weeks
Area of site	1.6ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, and will be deposited with the South West Heritage Trust in due course, under the following accession number: TTNCM:32/2019
Summary of results:	Excavations at Nerrols Farm, Cheddon Fitzpaine, uncovered a middle Bronze Age enclosure measuring 44m by 38.5m. The enclosure had two phases and contained a roundhouse defined by a curving ditch surrounding pits and postholes. The associated pottery belongs to the Trevisker-related series primarily found in Somerset. Seven pits within the roundhouse and elsewhere within the enclosure were found to contain snugly fitting pottery vessels. No cremated remains were discovered, and these were probably used as sunken storage vessels. A programme of lipid analysis on the pottery demonstrates that dairying was an important element of the site economy. Another significant find was a fragment of a clay mould used for casting a bladed implement, possibly a rapier. A sequence of radiocarbon dates was taken through the enclosure ditch, demonstrating that it dated to the 14th century cal BC. Other discoveries include a group of early Neolithic pits, an early Bronze Age ring ditch, two middle Iron Age roundhouses, and two early medieval pits, one containing an iron knife and the other producing a radiocarbon date in the 7th–8th century cal AD. .

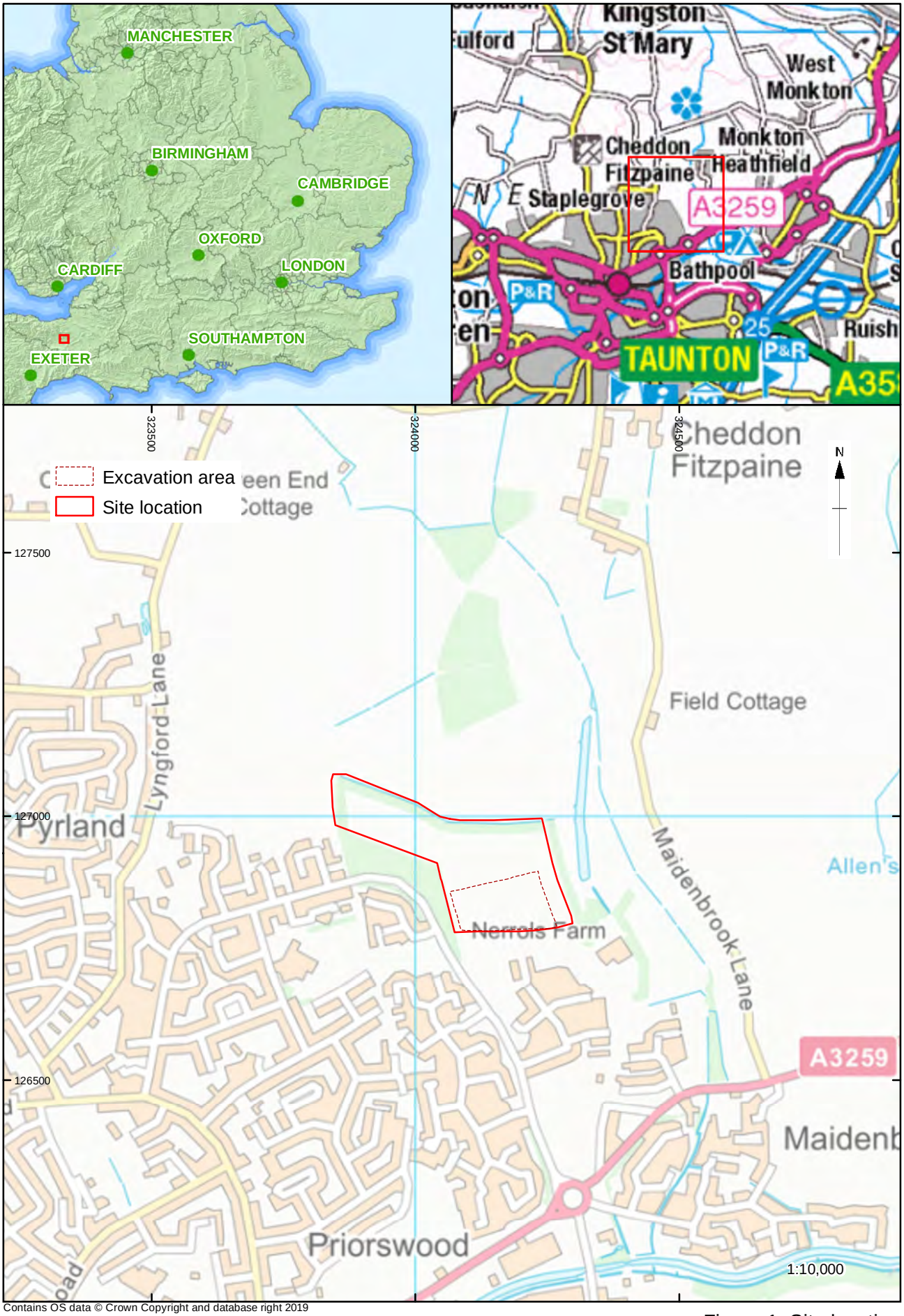

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Figure 1: Site location

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Figure 2: Archaeological features and interventions

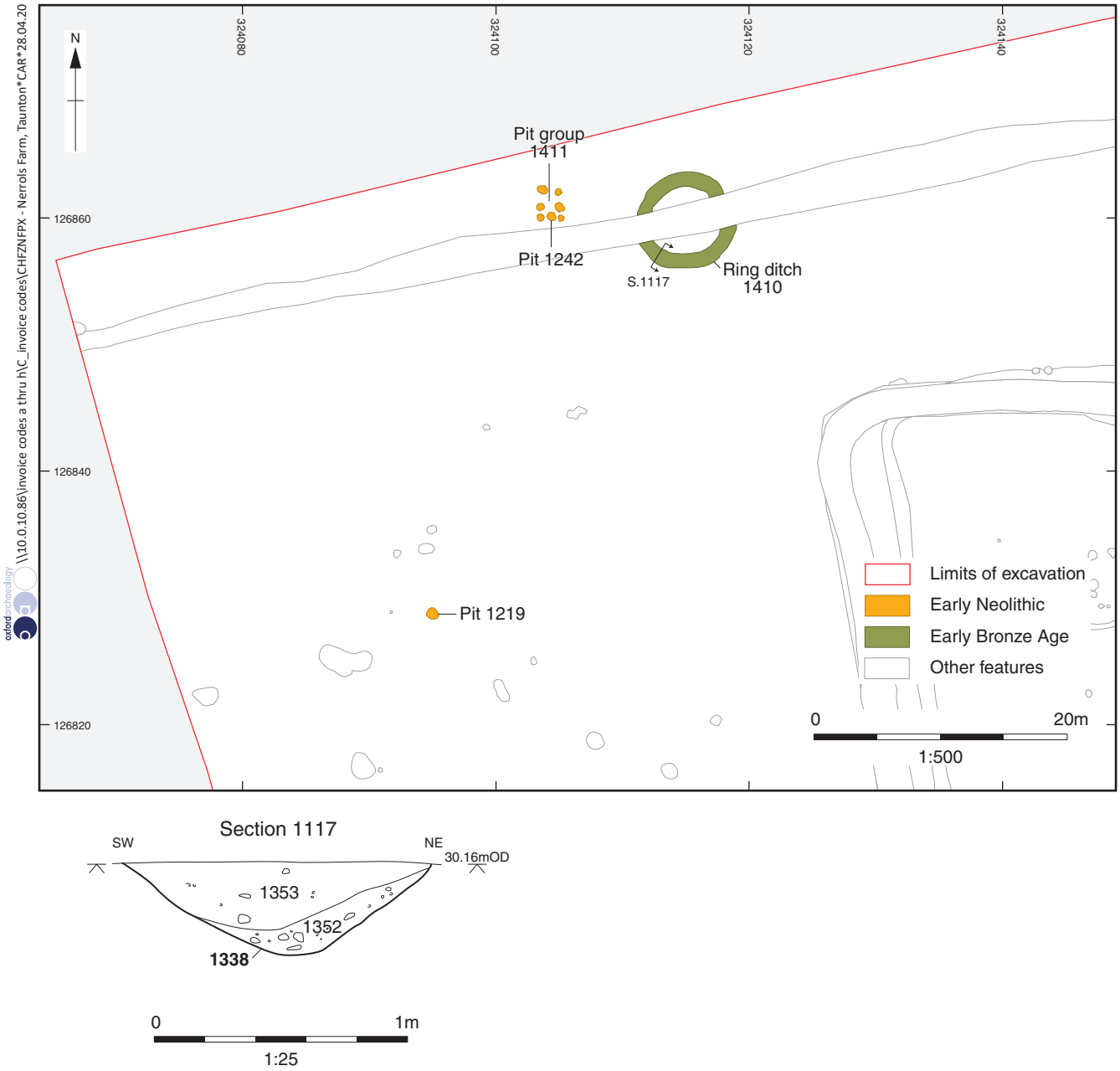

Figure 3: Early Neolithic and early Bronze Age features in the western part of the site

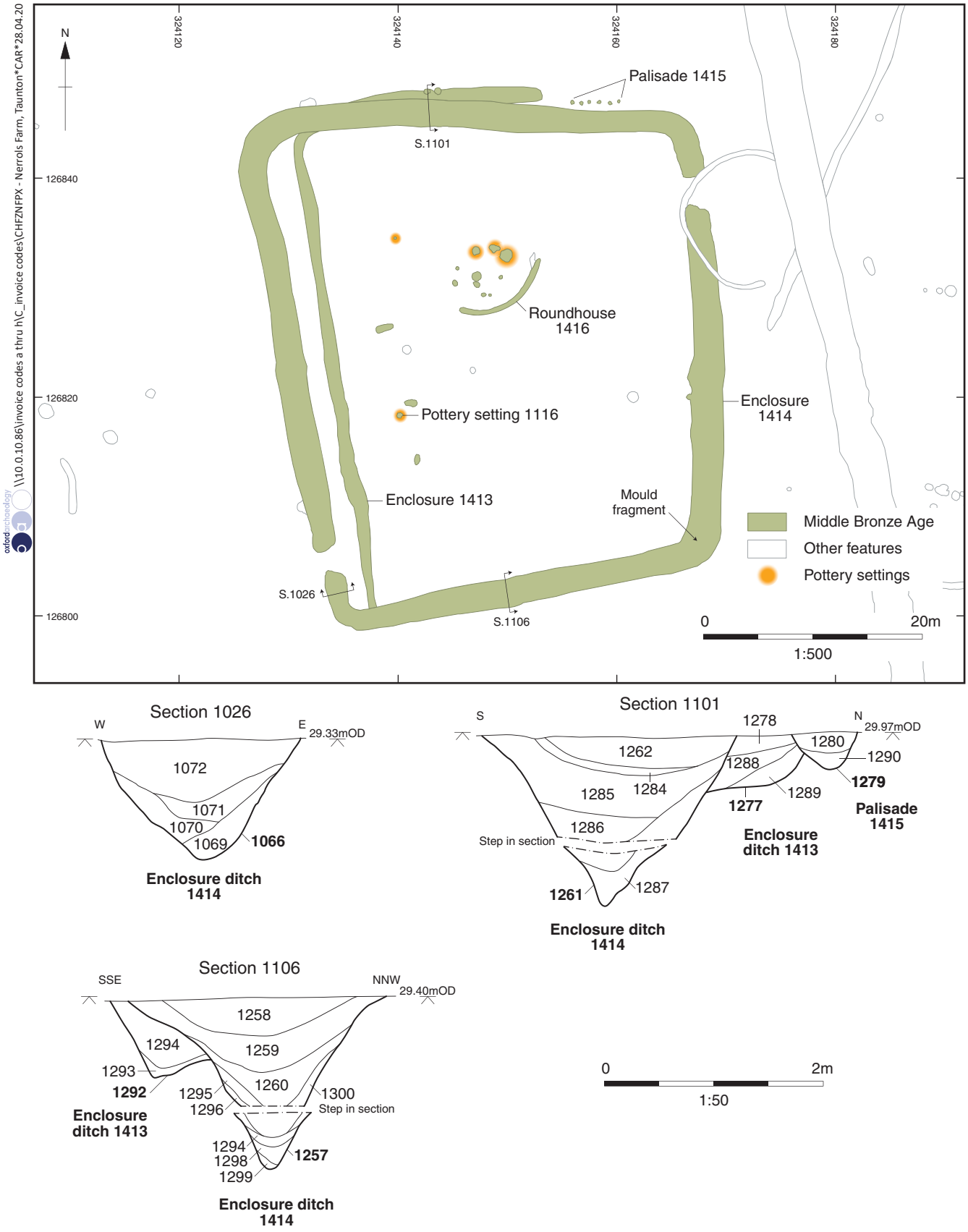

Figure 4: Middle Bronze Age features

Figure 5: Roundhouse 1416 and internal features

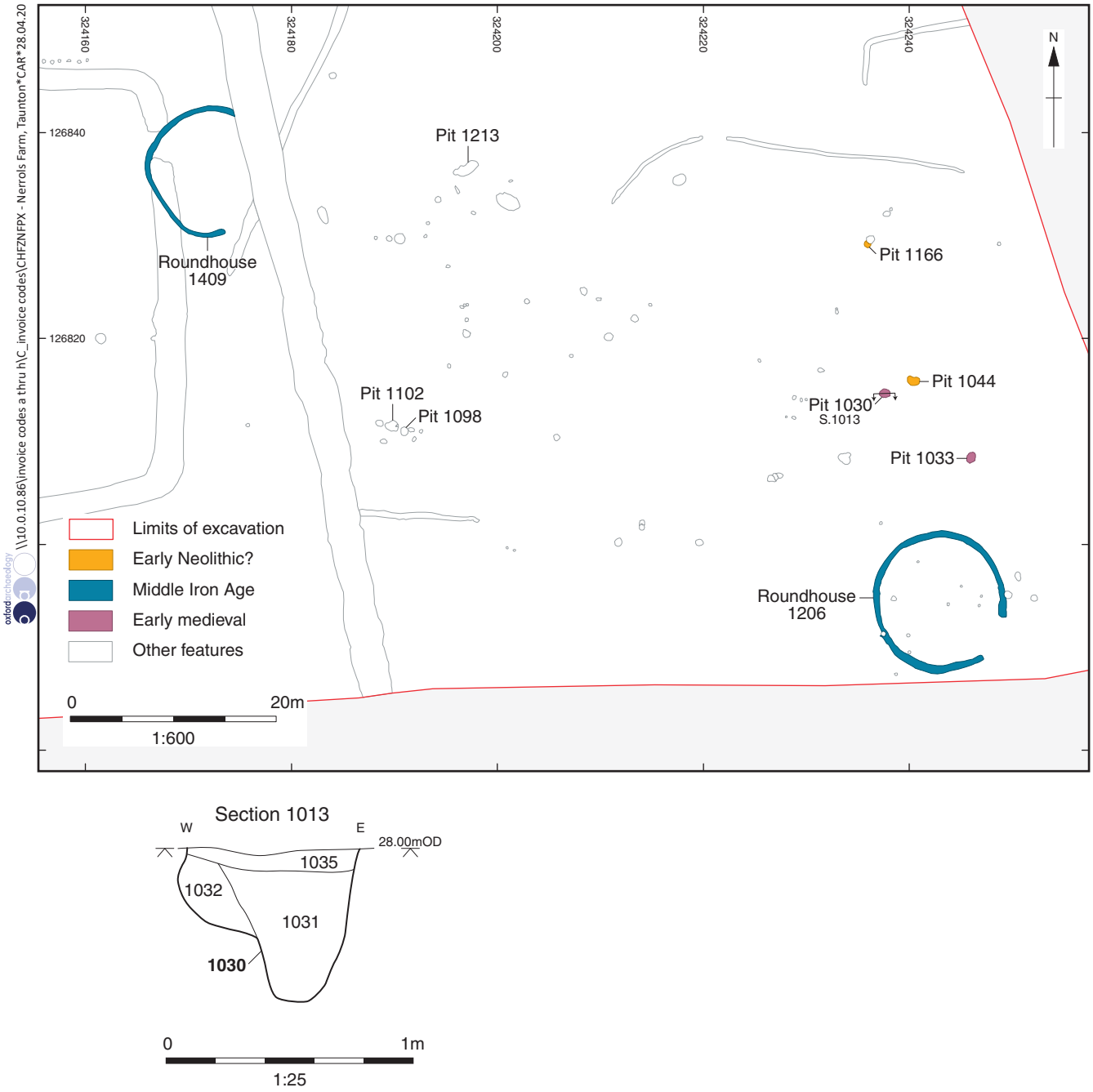

Figure 6: Early Neolithic, middle Iron Age and early medieval features in the eastern part of the site

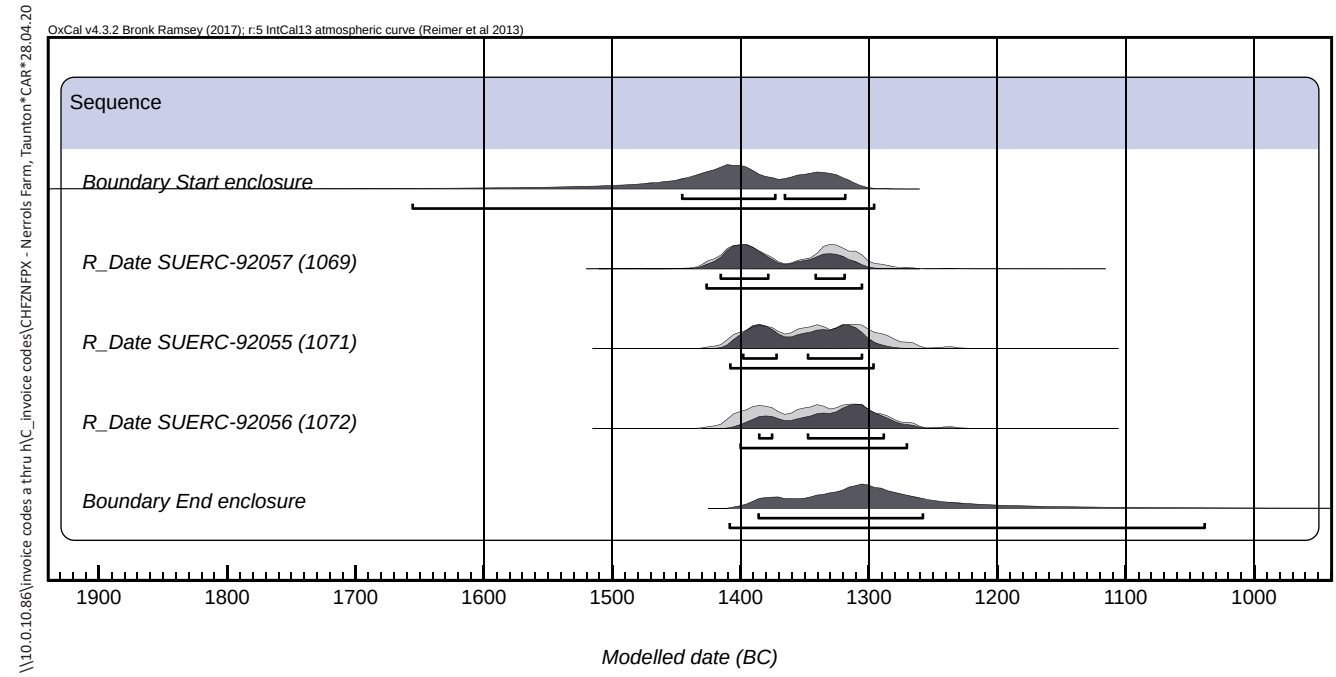

Figure 7: Bayesian model of radiocarbon dates through enclosure ditch 1414

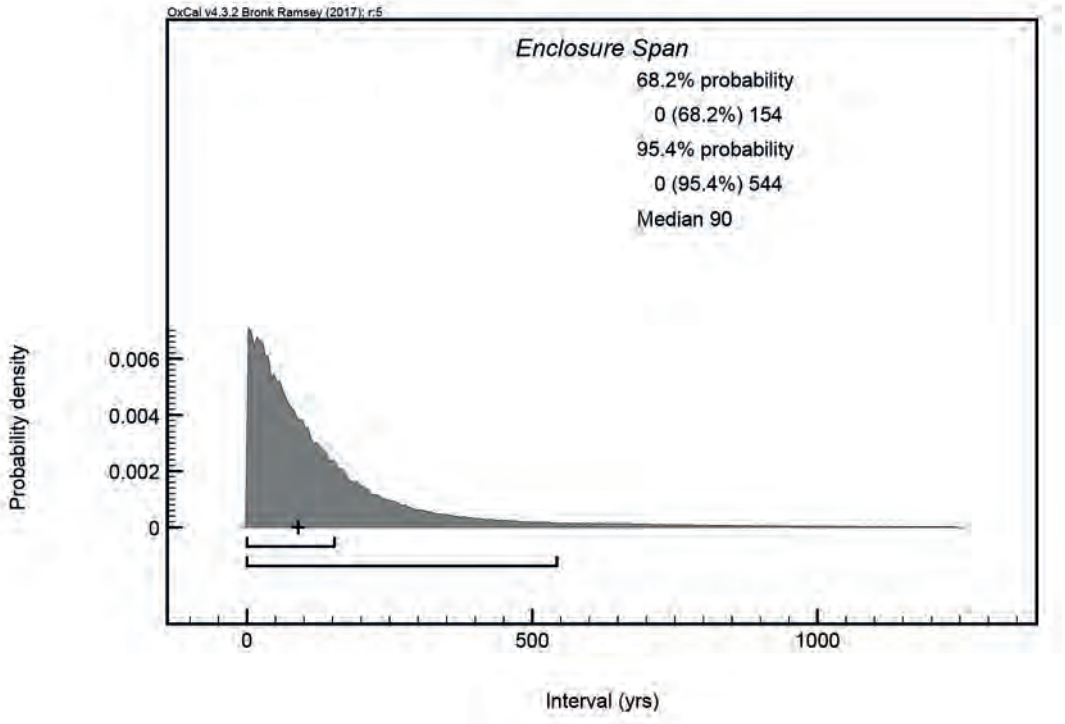

Figure 8: Estimated span of enclosure ditch 1414

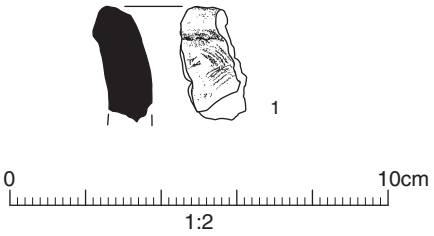

Figure 9: Early Neolithic pottery

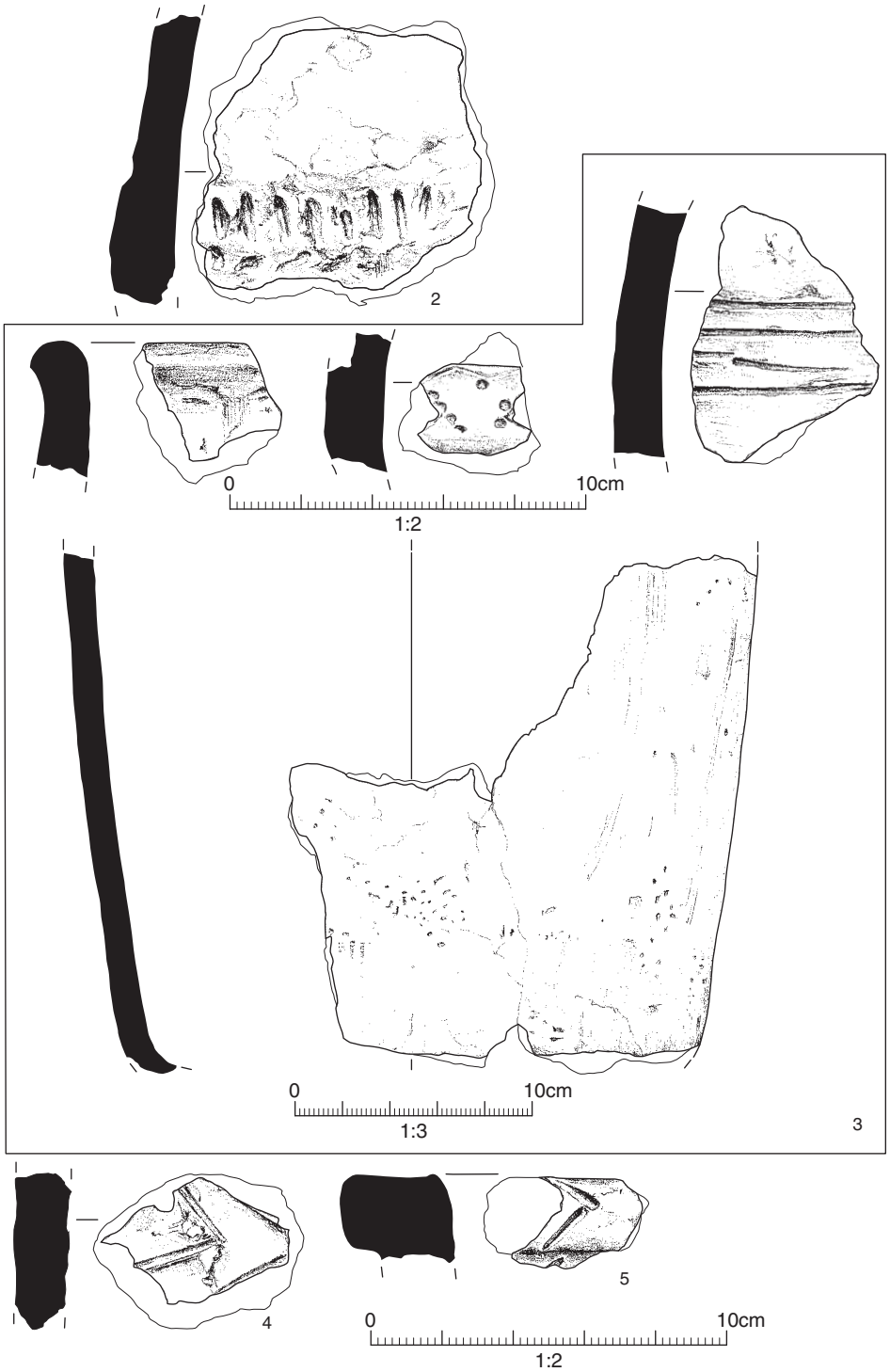

Figure 10: Middle Bronze Age pottery from pottery settings

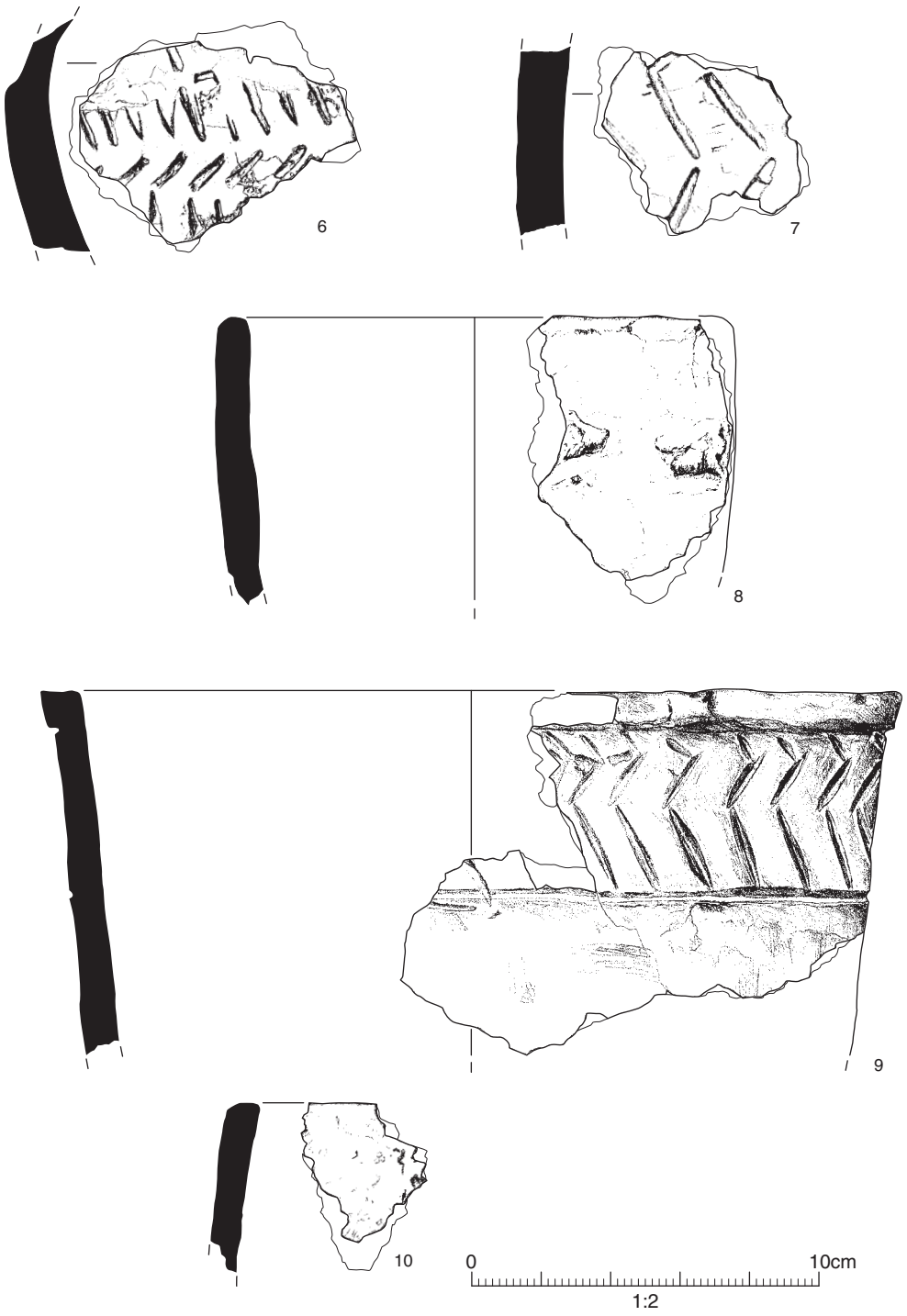

Figure 11: Middle Bronze Age pottery from pit 1362 (6), and enclosure ditch 1414 (7-10)

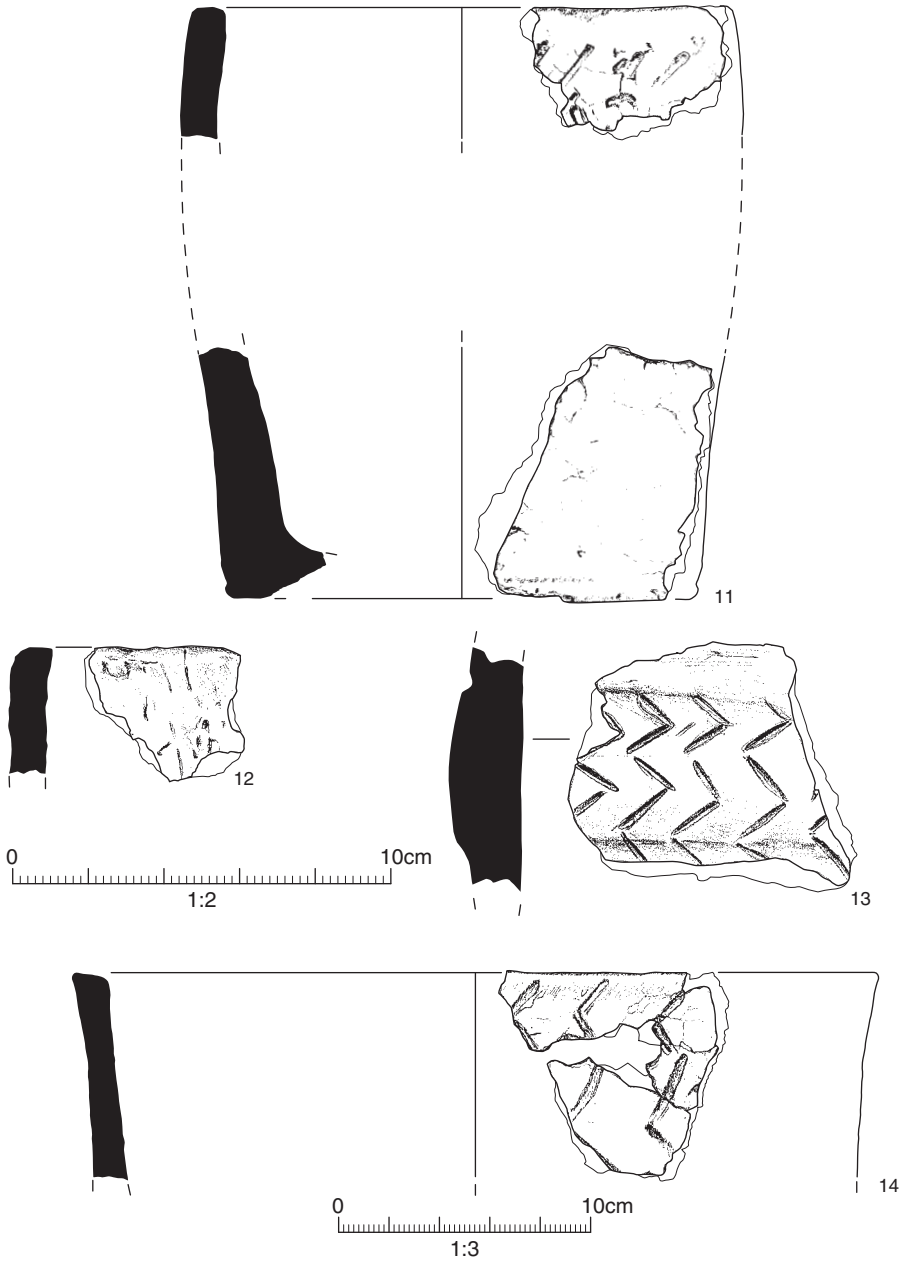

Figure 12: Middle Bronze Age pottery from enclosure ditch 1414

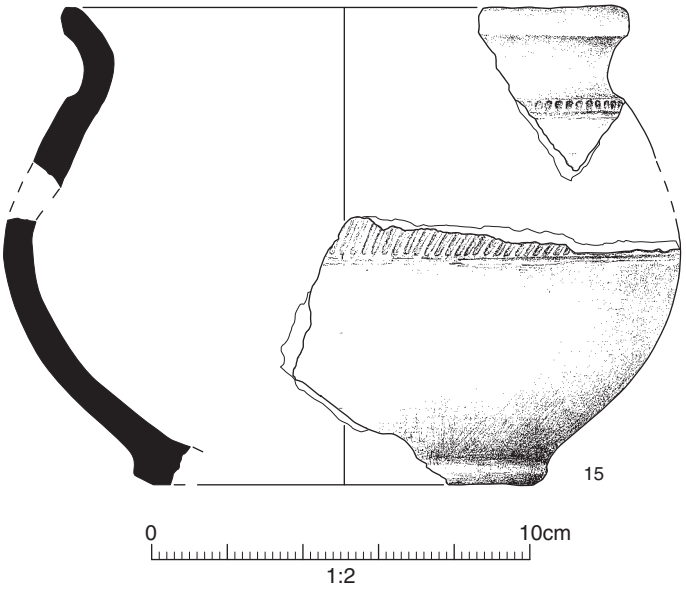

Figure 13: Middle Iron Age pottery

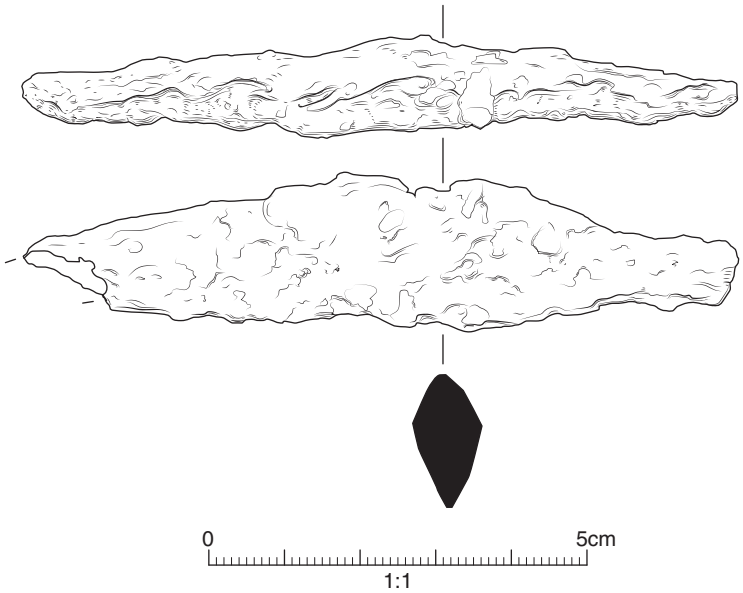

Figure 14: Early medieval knife

Plate 1: Early Neolithic pit 1242

Plate 2: Early Neolithic pit 1219

Plate 3: Aerial photograph of enclosure 1413 1414, looking south

Plate 4: Pottery vessel 69 in setting 1375

Plate 5: Decorated pottery

Plate 6: Pottery vessel 46 in setting 1303

Plate 7: Pottery vessel 65 in setting 1359

Plate 8: Pottery vessel 69 in setting 1375

Plate 9: Pottery vessel 74 in setting 1386 discovered after removal of vessel 69

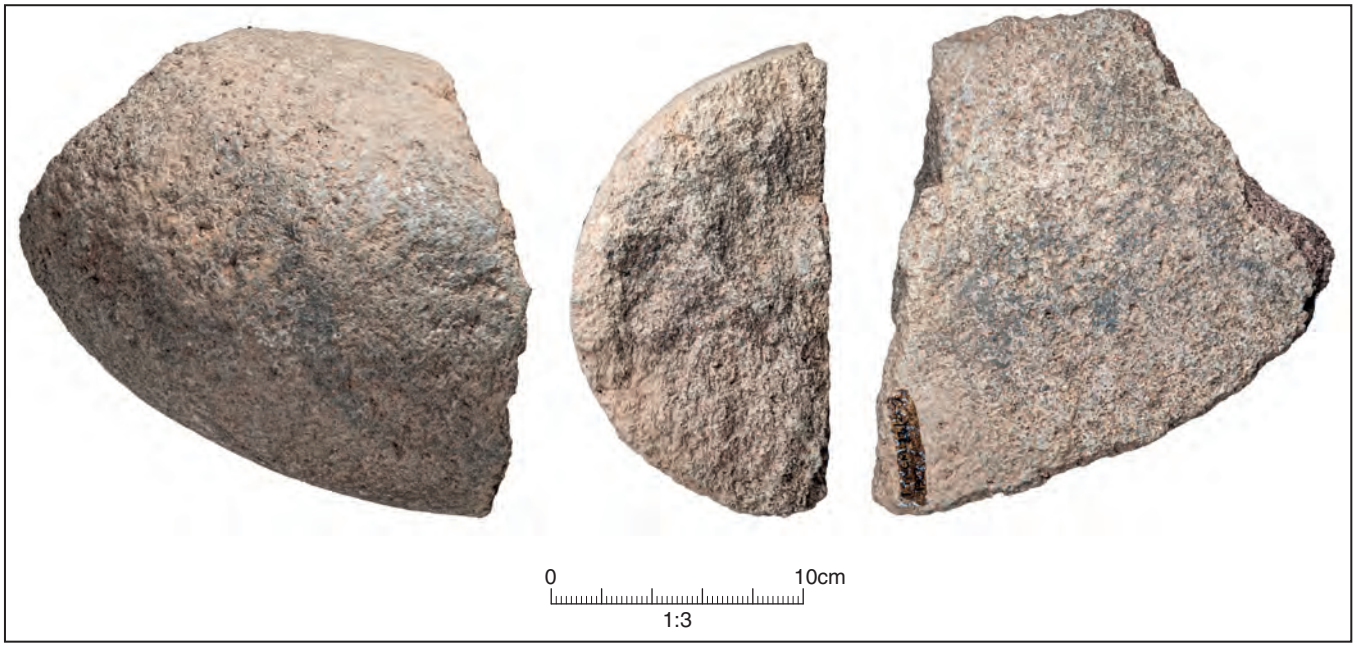

Plate 10: Quern fragment from vessel 69, fill 1383

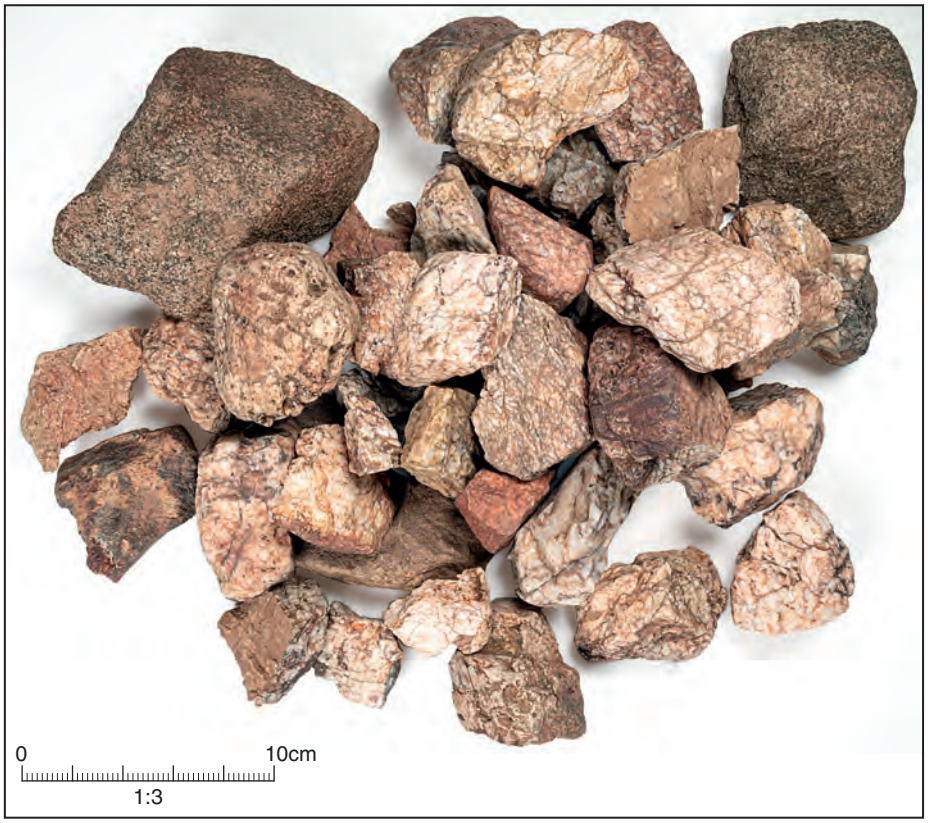

Plate 11: Stones from within vessel 69, fill 1386

Plate 12: Metalworking mould

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